Envisioning Opportunities: Identifying vision care needs among inpatients with diabetes

Janaki J. Patel¹, Vineet M. Arora¹, Allison Louis¹, Victoria Moreira², Seenu Hariprasad¹, David O. Meltzer¹, Valerie G. Press¹  
¹University of Chicago Medicine, Chicago, IL, ²Medical College of Georgia at Augusta University, Augusta, GA

Background

- Poor vision is common during hospitalization & negatively affects outcomes and self-management [1,2]  
- Diabetes (DM) is an important contributor to the burden of preventable vision loss in US adults [3]  
- Current guidelines recommend yearly eye exams for individuals with DM [4]  
- Empowerment can play critical role in DM self-management [5]

Aims

- Identify vision status & perceptions of inpatients with diabetes  
- Study empowerment for self-managed care  
- Study knowledge & prevention of DM-related eye disease

Methods

- Eligible: ≥18YO, English-speaking, cognitively intact, hospitalized on general medicine service  
- Design: ongoing, observational, prospective study of quality of care  
- Study components:  
  1. Presenting near vision assessment (with corrective lenses if available) using pocket Snellen chart  
  2. Sufficient vision defined as better than or equal to 20/40 in better or both eyes  
  3. Patients with diabetes identified by self-report, chart review, or HbA1c ≥ 6.5  
  4. Survey tools (Table 1)

Table 1: Survey Tools

<table>
<thead>
<tr>
<th>Survey Tool</th>
<th>Description</th>
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<tbody>
<tr>
<td>Hospitalist questionnaire</td>
<td>Ongoing study of quality of care and outcomes</td>
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<tr>
<td>Vision care questionnaire</td>
<td>Perceptions and attainment of vision care and vision needs</td>
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<tr>
<td>Patient’s history of DM</td>
<td>Current vision problems, HbA1c, DM management</td>
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<td>Diabetes Empowerment Scale-Short Form (DES-SF)</td>
<td>Self-management and self-efficacy measurement</td>
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<td>Diabetes &amp; Vision Knowledge Test (DVKT)</td>
<td>(1) People with DM should have vision checks; (2) People with DM often have vision problems including serious eye disease; (3) Frequency of recommended dilated eye exams; (4) What eye problems or diseases do people with DM get?</td>
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</table>

Results

- n=2,658 participants  
  - Mean age: 51±18 years; Majority female (59%) and African American (79%)  
  - Insufficient vision affected 1138/2658 (43%)  
  - Participants with DM (n=959, 36%) more likely to be African American (87% vs 76%, p<0.001) and older (mean age 56±16 vs. 48±19, p<0.001)  
  - median HbA1c=7.6% (n=455), median blood glucose=151 (n=497); no significant difference in HbA1c based on vision status, after controlling for age (p=0.2)

- Participants with DM are more likely to have insufficient vision than those without diabetes (p<0.001)

Conclusions

- Insufficient vision affected over ½ of inpatients with diabetes  
- Corrective lenses and self-report of obtained vision care ≠ sufficient visual acuity during hospitalization  
- Vision correction during hospitalization may have widespread impact  
- Insufficient vision associated with lower empowerment but adequate knowledge regarding vision-related care  
- Further work needed to evaluate effects of lower empowerment among inpatients with DM

References


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