2013 Diabetes and Eye Disease Fact Sheet

Diabetes is the leading cause of new cases of blindness among United States adults.\textsuperscript{1-3} As Georgia’s population ages and diabetes prevalence increases, eye disease will continue to be a major public health problem leading to blindness and reduced quality of life.

Compared to adults without diabetes, adults with diabetes have a greater prevalence of many visual impairment-related diseases, including diabetic retinopathy, macular degeneration, cataracts, and glaucoma.\textsuperscript{4} Diabetic retinopathy, characterized by the degradation of retinal blood vessels, has no warning and can interfere with living well.\textsuperscript{5,6}

Successfully managing glucose control and receiving a routine comprehensive dilated eye exam at least once a year can reduce the risk of eye disease by 54% to 76% and lead to the early detection of eye disease.\textsuperscript{7,8}

VISUAL IMPAIRMENT AMONG ADULT DIABETICS IN GEORGIA

In 2010, among adult diabetics in Georgia, an estimated*:  
- 9.1% (55,200 adults) were informed by an eye doctor or other healthcare professional that they had glaucoma  
- 17.6% (107,700 adults) were informed by an eye doctor or other healthcare professional that they had cataracts  
- 4.9% (30,000 adults) were informed by an eye doctor or other healthcare professional that they had age-related macular degeneration**

In 2011, an estimated 20.6% of Georgia adult diabetics, or 154,500 persons, were told by a doctor that diabetes had affected their eyes or that they had retinopathy.

The following Public Health Districts had the greatest prevalence of retinopathy during 2008-2010(Map 1):  
- 3-3 (Clayton) at 24.7%, or 3,400 persons  
- 3-4 (Lawrenceville) at 30.0%, or 14,500 persons  
- 8-1 (Valdosta) at 28.2%, or 7,000 persons  
- 8-2 (Albany) at 26.3%, or 9,300 persons

*Data Source: Behavioral Risk Factor Surveillance System (2010)  
**Only adults 40 years of age or older
ANNUAL DILATED EYE EXAMS

Many causes of visual impairment are readily diagnosed and at least 40% of blindness and visual impairment is treatable or preventable.6,9

Due to the impact of eye disease on diabetics, Healthy People 2020 has the following objective: Increase the proportion of adults with diabetes who obtain an annual dilated eye examination.10

<table>
<thead>
<tr>
<th>Time since Last Dilated Eye Exam among Adult Diabetics in Georgia, 2011</th>
<th>Percent % (95% CI)</th>
<th>Estimated Number of Diabetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>66.5 (59.2, 73.2)</td>
<td>472,600</td>
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<tr>
<td>Between 1 and 2 years</td>
<td>17.1 (12.3, 23.3)</td>
<td>121,600</td>
</tr>
<tr>
<td>More than 2 years</td>
<td>16.3 (10.9, 23.7)</td>
<td>116,000</td>
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</tbody>
</table>

Data Source: Behavioral Risk Factor Surveillance System (2011)

In 2011, the percentage of adult diabetics in Georgia who had a dilated eye examination (66.5%) within the previous 12 months was greater than the Healthy People 2020 target percentage of 58.7%.

Geography
The following Public Health Districts had the lowest prevalence of adult diabetics who had received a dilated eye exam in the previous 12 months:
- 5-1 (Dublin) at 50.5%, or 4,300 persons
- 1-2 (Dalton) at 64.2%, or 16,300 persons
- 9-2 (Waycross) at 65.0%, or 15,600 persons
- 5-2 (Macon) at 65.6%, or 24,200 persons
- 8-2 (Albany) at 67.6%, or 22,200 persons

The following Public Health Districts had the highest prevalence of adult diabetics who had received a dilated eye exam in the previous 12 months:
- 3-2 (Fulton) at 77.5%, or 29,000 persons
- 3-4 (Lawrenceville) at 82.3%, or 38,500 persons
- 3-5 (DeKalb) at 80.0%, or 26,000 persons
- 7 (Columbus) at 82.0%, or 23,800 persons
Time Trend

Figure 1. Prevalence (%) of Annual Dilated Eye Exams among Georgia Adult Diabetics by Year, 2000-2010

- Between 2000 and 2010, the percentage of adult diabetics in Georgia who received an annual dilated eye exam did not increase significantly. (Figure 1)

Demographics

Figure 2. Prevalence (%) of Annual Dilated Eye Exams among Georgia Adult Diabetics by Demographics, 2011

- There were no significant differences in the prevalence of annual dilated eye exams among adult Georgia diabetics by gender, race/ethnicity, or age group. (Figure 2)
Adult diabetics that were high school graduates (71.7%; 151,700 persons) or had completed some college or more (73.4%; 202,000 persons) had a 35% and 38% greater prevalence, respectively, of having had an annual dilated eye exam than diabetics that had not graduated from high school.

Compared to diabetics in households with annual incomes less than $25,000 (58.7%; 194,000 persons), diabetics in households with annual incomes greater than $50,000 (78.3%; 96,340 persons) had 33% greater prevalence of having had an annual dilated eye exam.

Compared to diabetics out of work (58.7%; 22,500), employed diabetics (71.9%; 180,000) had 22% greater prevalence of having had an annual dilated eye exam.

Adult diabetics in Georgia without health coverage (46%; 40,900 persons) had a 40% lower prevalence of having had an annual dilated eye exam than those with any health coverage (76.7%; 435,700 persons). (Figure 3)
BARRIERS TO RECEIVING EYE CARE

Figure 4. Primary Reason for Not Visiting an Eye Care Professional in the Past 12 Months, Georgia Adult* Diabetics, 2010

- Among adult diabetics in Georgia, cost or insurance (34%; 58,000 persons) is the most cited reason for not visiting an eye care professional in the previous 12 months.
- 29% (48,000 persons) of Georgia adult diabetics stated that they had no reason to go to an eye care professional or did not have a problem.

NATIONAL EYE DISEASE PREVENTION RECOMMENDATIONS

Every percentage point decrease in A1c values can reduce the risk of diabetes-related eye, kidney and nerve disease complications by 40%. 7

- The development of severe vision loss due to diabetic eye disease can be reduced by an estimated 50% to 60% through scatter laser therapy. 1
  - Laser therapy works best in the early stages of diabetic retinopathy
  - Annual dilated eye exams allow eye care professionals to detect diabetic retinopathy in the earlier stages 11
- Appropriate eyeglasses may be able to help approximately 65% of adults with diabetes and poor vision. 1
- The progression of diabetic retinopathy may be prevented through control of blood glucose, blood pressure, and blood cholesterol. 11
REFERENCES

4. Centers for Disease Control and Prevention, Division of Diabetes Translation, Vision Health Initiative (Available at: http://www.cdc.gov/visionhealth/data/national.htm)
5. Institute of Medicine of the National Academies. “Living Well with Chronic Illness: A Call For Public Health Action.” Committee on Living Well with Chronic Disease: Public Health Action to Reduce Disability and Improve Functioning and Quality of Life. (Available at: http://www.nap.edu/catalog.php?record_id=13272)