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Frequency of ocular examinations in high-risk population groups



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Purpose

- To present the 3 year data from the Friends of the Congressional Glaucoma Caucus Foundation (FCGCF) public vision screening database in examining factors affecting the frequency of ocular examination with respect to ethnicity, age, and gender.

Methods

- The glaucoma screening data from the Friends of the Congressional Glaucoma Caucus Foundation for the time period from April 2001 to November 2004 was analyzed retrospectively – Database included 40,133 individuals
- Locations of screenings
 - 27 US states, District of Columbia, Puerto Rico, and the US Virgin Islands
 - Fixed sites were supplemented by mobile screening vans as locations for the screenings
 - Locations were targeted to high-risk population areas
 - Older age, African-American, Hispanic



- Basic Screening Components
 - Glaucoma risk factor questionnaire
 - Age
 - Ethnicity
 - Gender
 - Family history of glaucoma
 - Diabetes
 - Hypertension
 - Length of time since last eye exam
 - Tamms distance visual acuity
 - Visual field defects – Frequency Doubling Technology (FDT)
- Statistical methods
 - Chi-squared analysis to compare categorical variables

Support

- Research support came from unrestricted grants from:
 - Research to Prevent Blindness
 - Friends of the Congressional Glaucoma Caucus Foundation

Demographics

- Any entries that did not include age, ethnicity, or gender were excluded from analysis – 33,853 entries were included in the analysis
- Ethnic distribution
 - African-American 31%
 - Caucasian 20%
 - Hispanic 44%
 - Other (including Asian) 6%
- Mean age on screening date: 53 years
- Gender distribution of FCGCF database
 - Approximately 2:1 Female-to-Male

Figure 1
 Ethnic Characteristics of FCGCF Database

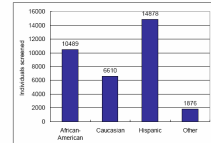


Figure 2
 Age Distribution of FCGCF Database

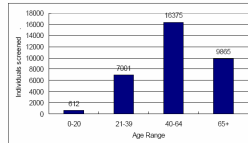
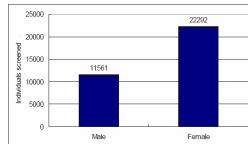


Figure 3
 Gender Distribution of FCGCF Database



Results

- A higher proportion of Hispanics reported never having had an eye exam (Figure 5)
- Of the population studied, 94% of those older than 65 years of age reported they either did not have an eye exam in the last 2 years or never had an eye exam (p<0.0001)
- By self-reported ethnicity, these proportions were (shown in Figure 6)
 - 29% among African-Americans over 65
 - 35% among Caucasians over 65
 - 38% among Hispanics over 65

Figure 4
 Stratified Analysis

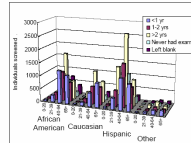


Figure 5
 Overall Frequency of Last Eye Exam by Ethnicity (p<0.0001)

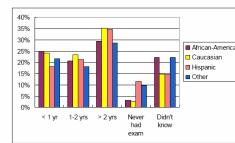
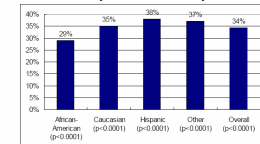


Figure 6
 Proportion of individuals 65 years and older with no eye exam within 2 years*

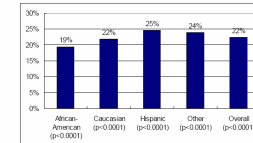


*Includes those who reported they never had an eye exam or did not remember when they had their last eye exam. Blank entries were excluded.

Individuals between 40-64 years

- Among all individuals in the 40-64 years of age range
 - 22% reported they had an eye exam either more than 5 years ago or never at all. (p<0.0001)
- By self-reported ethnicity, these proportions were (shown in Figure 7)
 - 19% among African-Americans 40-64 years of age
 - 22% among Caucasians 40-64 years of age
 - 25% among Hispanics 40-64 years of age

Figure 7
 Proportion of individuals between 40-64 years with no eye exam within 5 years*

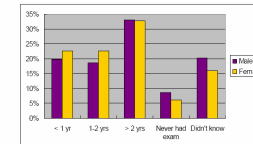


*Includes those who reported they never had an eye exam or did not remember when they had their last eye exam. Blank entries were excluded.

Stratified Analysis of Other Screening Variables

- Up to 28% of all individuals referred for glaucoma consultation had a family history of glaucoma regardless of ethnicity. (p<0.0001)
- Females were more likely to have had a recent eye exam than the males studied (p<0.0001)

Figure 8
 Gender distribution of eye exam frequency



American Academy of Ophthalmology



Policy Statement on Frequency of Ocular Examinations

- "Individuals from age 40 to 64 should be examined by an ophthalmologist every 2 to 4 years."
 - 22% self-reported noncompliance
- "Individuals 65 years or older should have an examination performed by an ophthalmologist every 1 to 2 years."
 - 34% self-reported noncompliance

Discussion

- Older individuals were more likely to have had a recent eye exam
- However, the proportion of self-reported individuals who did not meet with American Academy of Ophthalmology guidelines was significant among all groups studied
- African-Americans were much more likely to have had an eye exam than other ethnicities
 - However, given the significantly higher risk of blindness among African-Americans, we should strive to drive these proportions down even further
- Even though there was no gender correlation,

Conclusions

- These data suggest a significant proportion of high-risk population groups, such as older individuals, Hispanics, African-Americans, and those individuals with a family history are not undergoing comprehensive exams, thus underscoring the importance of public education programs regarding glaucoma and other ocular diseases.

