# Visual Impairment and the Need for Rehabilitation Services in Arkansas

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Work supported in-part by unrestricted grants from Research to Prevent Blindness and the Pat & Willard Walker Eye Research Center. The authors acknowledge no financial interests.

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## Abstract

**Purpose:** To assess the statewide burden of visual impairment.
**Methods:** Adults 40 years and older (N=4193) were surveyed through the random digit dialing method. Disparities in visual impairment by age, race, sex, education, income, health insurance, and the presence of prior eye conditions were assessed.
**Results:** Weighted analysis showed that 33% of adults had some degree of visual function loss. Adults less than 65 years of age, females, minorities, and those with prior eye conditions reported greater loss of visual function (P< .05).
**Conclusion:** The results will help identify vulnerable risk groups and plan vision rehabilitation services in the state.

## Background

- Visual impairment is one of the most significant causes of disability in the United States (1). It has been associated with diminished quality of life, increased mortality, increased risk of depression, and increased risk of falls and hip fractures (2). In addition, blindness and visual impairment cost the federal government more than $4 billion annually in benefits and lost taxable income (3). Due to the aging of the population and the increasing incidence of diabetes, the prevalence of vision loss is likely to increase.
- The major causes of vision loss in U.S. adults age 40 and older are: diabetic retinopathy (DR), cataracts, age-related macular degeneration (ARMD) and glaucoma.
- The Centers for Disease Control (CDC) Behavioral Risk Factor Surveillance System (BRFSS) vision module is a tool used to determine the self-reported prevalence of visual impairment, eye disease, eye injury, and lack of eye-care insurance and eye examinations among persons aged 40 and over.
- To determine the statewide burden of visual impairment in Arkansas, we analyzed results from the 2006 statewide BRFSS vision module.

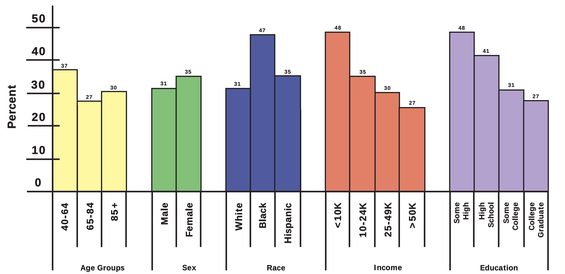
## Methods

- The BRFSS is a state-based, random-digit dialed telephone survey of the noninstitutionalized, U.S. civilian population.
- The vision module (10 questions) of the BRFSS was administered to respondents classified as having visual impairment.
- Visual impairment was determined if the respondent indicated they had any difficulty in reading print in a newspaper, magazine, recipe, menu or numbers on the telephone while wearing their usual corrective lenses (if needed).
- Disparities in visual impairment by age, race, sex, education, income, health insurance, and the presence of prior eye conditions were assessed.
- Weighted analysis of the data was conducted so that the results were representative of Arkansas adults age 40 years and older.

## Results

- Of the 4193 adults 40 years and older who were surveyed, 33% had some degree of visual impairment.
- Adults less than 65 years of age, females, minorities, and those with prior eye conditions reported greater loss of visual function (P<.05).

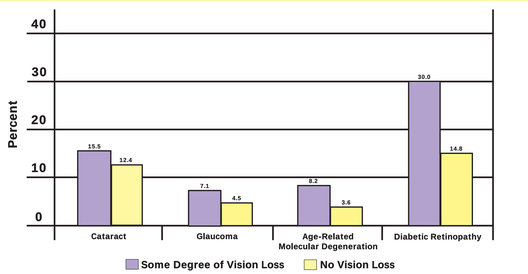
**Figure 1: Demographic Characteristics* of Adults 40 Years and Older With Some Degree of Visual Impairment**




Source: Vision module, 2006 BRFSS survey * The group differences were statistically significant (p<0.0001)

## Results

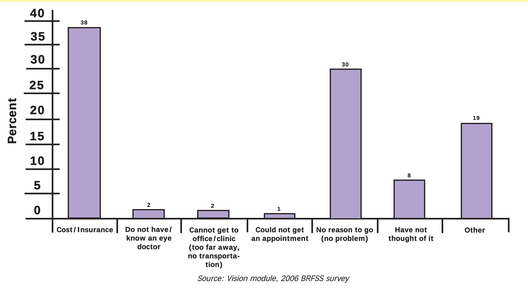
**Figure 2 : Prior Eye Conditions* Among Adults 40 Years and Older With and Without Some Degree of Vision Loss**




Source: Vision module, 2006 BRFSS survey * The group differences were statistically significant (p<0.0001)

- 49% of adults 40 years and older who had some degree of visual impairment had not seen their eye care professional in the past 12 months.

**Figure 3: The Main Reasons Adults With Some Degree of Visual Impairment Had Not Visited an Eye Care Professional in the Past 12 Months**




Source: Vision module, 2006 BRFSS survey

## Discussion

- This is the first study that determines the prevalence of self-reported visual impairment among Arkansas adults age 40 and older.
- The 33% prevalence of self-reported visual impairment among Arkansas adults age 40 and older is higher than results from a study comparing BRFSS vision module data for adults age 50 and older from 5 states (Iowa, Louisiana, Ohio, Tennessee and Texas); their prevalence's ranged from14.3 to 20.5% (4).
- Nearly half of all respondents with visual impairment failed to have an eye exam in the previous year; the majority of these patients cited lack of insurance or "no reason to go" as their explanation. This would imply that access to eye care and education regarding the need for eye care are each significant barriers to Arkansas adults with visual impairment.
- This study is limited by its use of self-reported data regarding visual impairment and eye diseases.

## Conclusion

Knowledge of the prevalence of visual impairment, eye disease, and use of eye-care services among adults in Arkansas will help identify vulnerable risk groups and plan vision rehabilitation services in the state.

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