

# Does Knowledge of the Risk Factors of Glaucoma Impact Adherence

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## in Patients of African Descent?



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### BACKGROUND

- ❖ Glaucoma is commonly known as the deterioration of the optic nerve.
  - Approximately 3 million Americans suffer from glaucoma<sup>3</sup>
- ❖ Primary open-angle glaucoma (POAG) is the most common form of glaucoma in the US. <sup>1</sup>
  - People of African descent (AD) are disproportionately affected by POAG
  - Mainly age group of over 50 <sup>1</sup>
  - Leading cause of irreversible blindness <sup>2</sup>
- ❖ The first line of treatment for POAG is the daily use of eye drops.
  - Adherence to this regime is known to be challenging for patients.
- ❖ How well a patient follows treatment is the definition of adherence.
- ❖ We hypothesized that knowledge of the risk factors of glaucoma would result in better adherence.

### PURPOSE

- ❖ To determine whether knowledge of the risk factors (RF) associated with glaucoma translates into better adherence.

### RESULTS

- ❖ While there was an overall trend for higher adherence in patients with more knowledge, statistical significance was not reached in any of our categories.
- ❖ In **Figure 1**, patients who reported at least one true risk factors (n=18) had similar adherence ( $73.39 \pm 25.94\%$ ) to those who reported no true risk factors (n=11) ( $55.91 \pm 33.10\%$ ).
  - There was no significance found in this group (p=0.12)
- ❖ In **Figure 2**, patients who reported race as a risk factor (n=6) had similar adherence ( $76.50 \pm 24.94\%$ ) to those who did not report race (n=23) ( $64.22 \pm 30.64\%$ ).
  - There was no significance found in this group (p=0.37)
- ❖ In **Figure 3**, patients who reported any risk factor at all (n=22) had similar adherence ( $70.36 \pm 26.89\%$ ) to those who did not report any risk factor at all (n=7) ( $55.43 \pm 36.78\%$ ).
  - There was no significance found in this group (p=0.25)

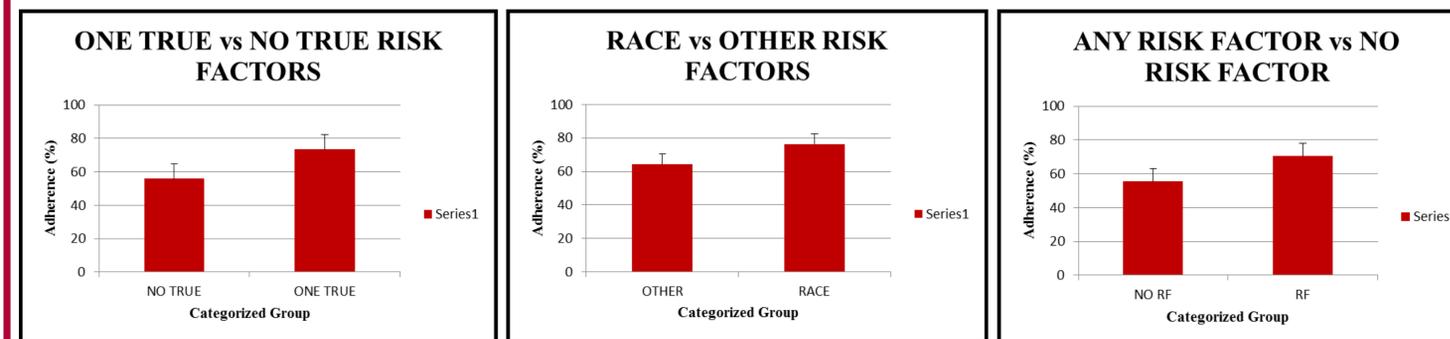
### MEMS BOTTLE



### METHODS

- ❖ 29 patients with POAG were included in the study.
  - Average age of  $60.38 \pm 9.93$  years
  - Self-identified as African descent (AD)
- ❖ Medical Event Monitoring System (MEMS) bottles were used to measure adherence.
- ❖ To access knowledge about RF, we used the following question from the 9-item Brief Illness Perception questionnaire: “Please list in rank-order the three important factors that you believe caused your illness”
- ❖ Results from the questionnaire were categorized into three groups:
  - One true RF vs no true RF
  - Race as a RF vs other RF not related to race
  - Any RF listed at all vs no RF listed
- ❖ “True” RF were defined as those accepted by the American Academy of Ophthalmology.
- ❖ Groups were compared using two-tailed t-tests on Excel.

### GRAPHS



**Figure 1:** No significant difference was observed absolute between patients who reported at least on true risk factor, compared to those who reported zero true risk factors.

**Figure 2:** No significant difference was observed absolute between patients who reported race as a risk factor, compared to those who did not report race as a risk factor.

**Figure 3:** No significant difference was observed absolute between patients who reported any risk factors at all (rather true or false), compared to those who did not report a risk factor.

### CONCLUSIONS

- ❖ Our results suggest that knowledge of the risk factors (RF) of glaucoma does not impact adherence.
- ❖ Future studies will investigate whether educating patients can improve adherence.