

The Demographic Burden of Pediatric Blepharokeratoconjunctivitis (BKC).

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BACKGROUND

- Diagnosis of pediatric BKC is challenging and treatment is often delayed.¹
- Chronic recurrent corneal inflammation form BKC leads to vision loss, especially during the amblyogenic period.¹⁻³
- Risk factors and outcomes of pediatric BKC are not clearly characterized.
- This large international multicenter study aims to determine risk factors associated with poor visual outcome in patients with pediatric BKC.

METHODS

- Multi-center retrospective case series of 493 pediatric patients (mean age 8 ± 4 years, range 2 months – 17 years) with BKC who presented between 2011-2022.
- Only patients meeting the defined criteria for eyelid, corneal, and conjunctival involvement were included.
- Study participant demographics, visual acuity (VA) at initial visit, and follow up visits were collected from the EMR.
- Comparative demographics of all non-BKC pediatric ophthalmology patients were collected.
- Straight-line distance in miles between patient home zip code and academic institution zip code was calculated.

Children with blepharokeratoconjunctivitis are more likely to be Hispanic, Spanish-speaking, have public health insurance.

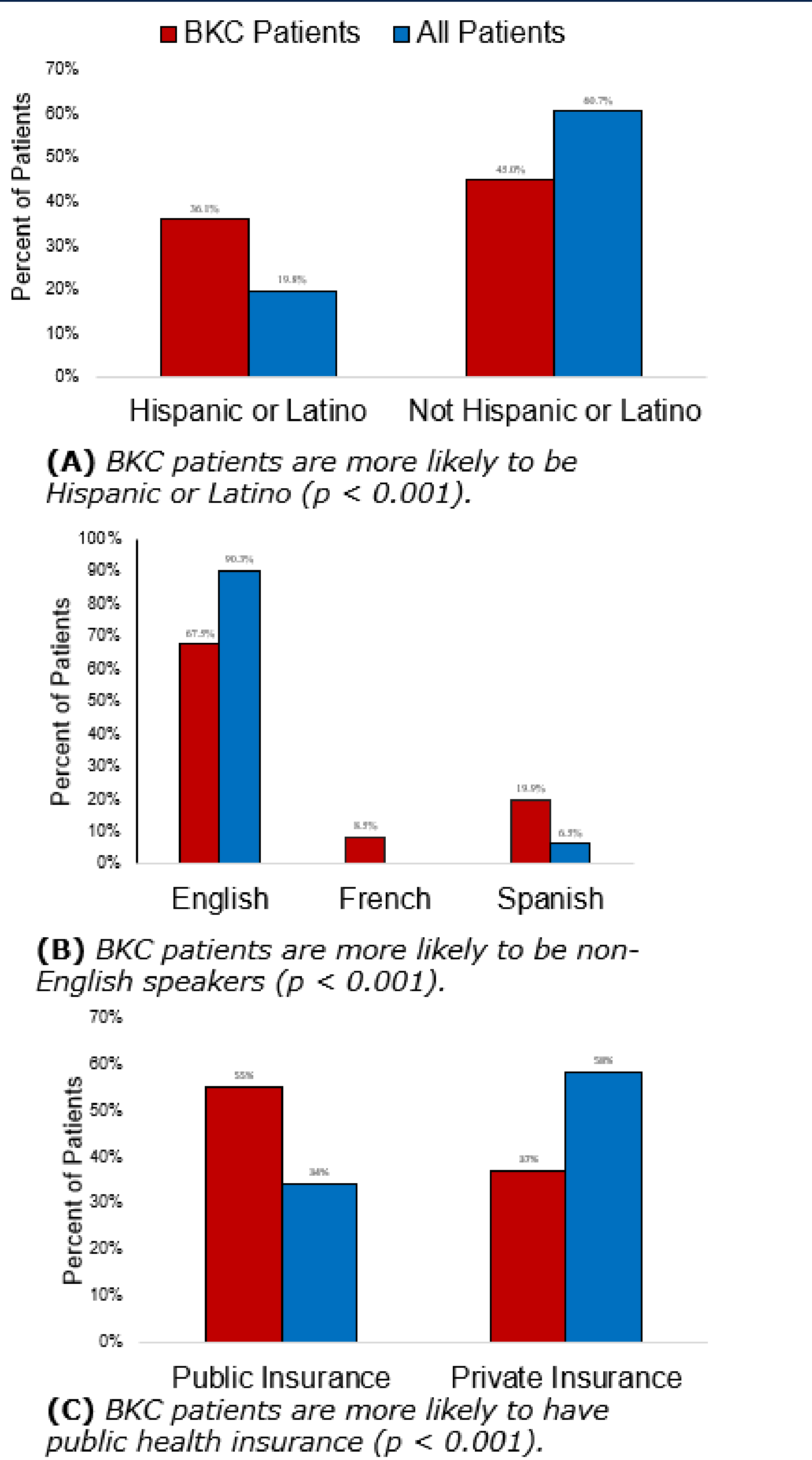


Figure 1. Comparison of BKC patients (red) and all pediatric patients who were seen within the ophthalmology department (blue) across the following demographics: patient-reported ethnicity (A), preferred language (B), and health insurance type (C). P values were determined using a chi-square goodness of fit test.

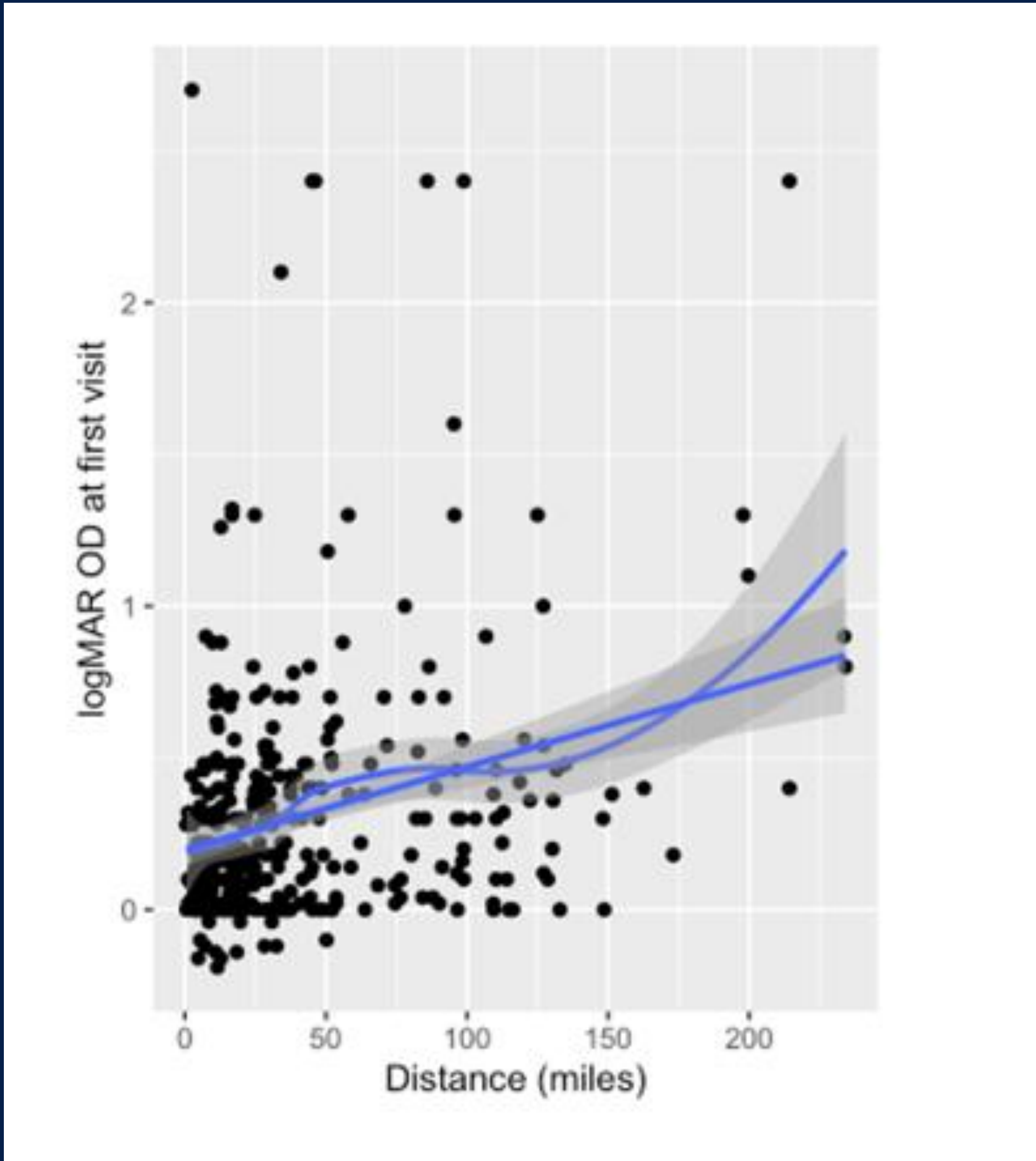


Figure 2. For BKC patients, VA at initial visit is compared to the distance between patient home and academic institution. Points represent individual patient measurements and lines represent a linear fit and a semi-parametric, locally weighted regression (LOESS) fit. For every 10 miles increase in distance from an academic institution, initial VA worsened by 0.02 logMAR (95% CI 0.01 to 0.03).

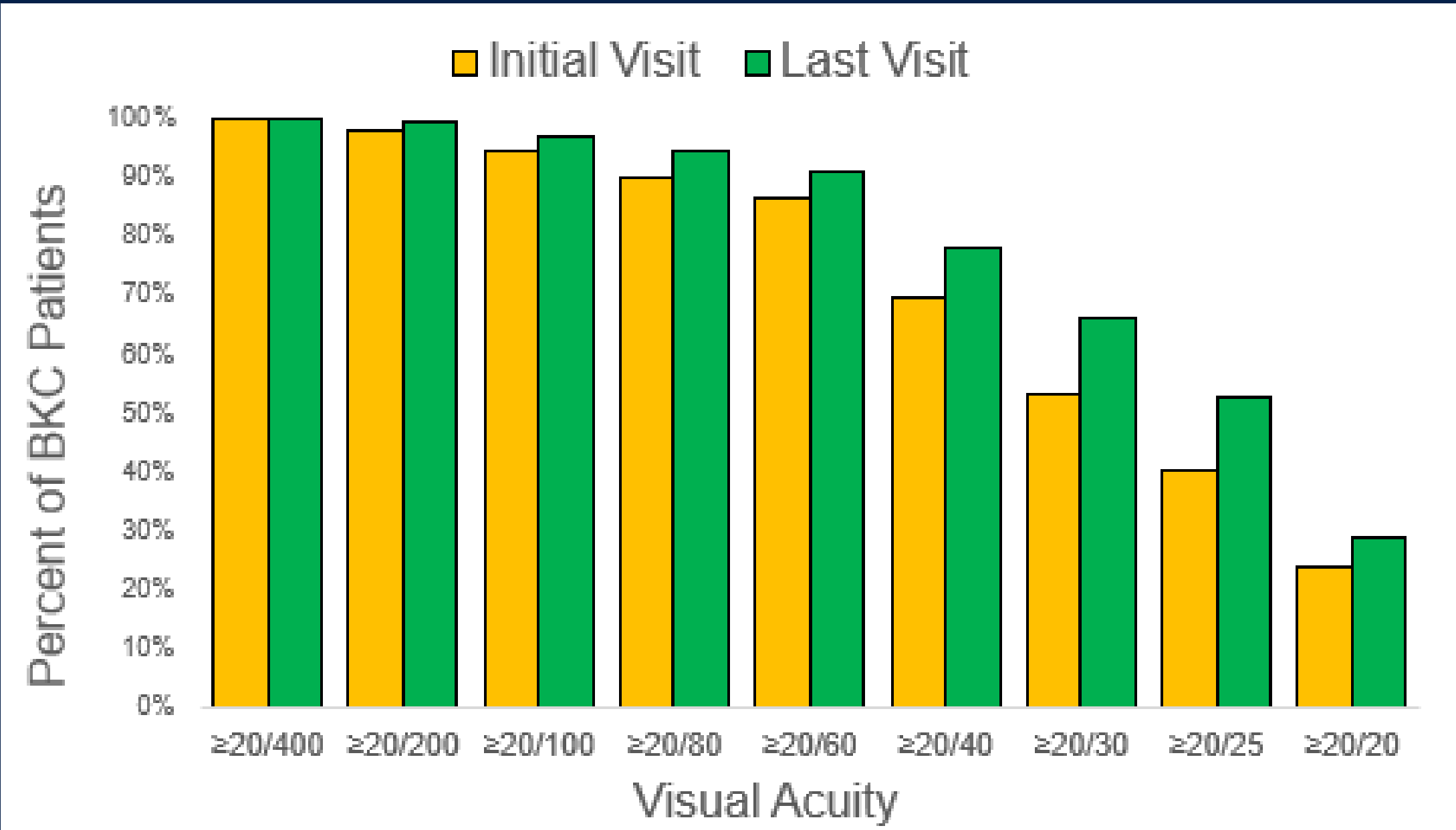


Figure 4. BKC patients had greater visual acuity at their last visit compared to initial visit. The mean VA was 20/40 at the initial visit and 20/32 at the last visit.

RESULTS

- BKC patients are more likely to be female ($p < 0.0001$). P value was determined by a chi-square goodness of fit test.
- The median and interquartile range for follow up length was 9 months (3, 24). The maximum follow up length was 11 years.

DISCUSSION

- Pediatric BKC disproportionately affects female patients.
- In comparison to the general pediatric ophthalmology population, children with BKC are more likely to be Hispanic, Spanish-speaking, and have public health insurance.
- VA of pediatric BKC patients improved following treatment.
- Greater distance between patient home and academic institution is associated with worse initial VA.

REFERENCES

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