FoodRx: Exploring Disparities in Food Insecurity and Eye Health Conditions

Gloria V. Cabrero,[1,2] LaKeisha Boyd[3], Deanna Reinoso,[1] Richard J. Holden[2,4], Daniel O. Clark[1,2], Titus K. Schleyer[1,2], Rebecca L. Rivera[1,2]

[1]Department of Medicine, Indiana University School of Medicine; [2]Regenstrief Institute, Inc.; [3] Department of Biostatistics and Health Data Science, Indiana University, Indianapolis, IN; [4]Department of Health and Wellness Design, Indiana University School of Public Health, Bloomington, IN

Background: Good nutrition and chronic disease management are important for eye health; however, little is known about the relationship between food insecurity and eye health outcomes. Marion County is designated as a medically underserved area, and 25% of families rely on food assistance. Additionally, Indianapolis is considered one of the least accessible American cities in terms of healthy food options.

Objective: My central research objective was to understand how food insecurity impacts eye health in medically underserved populations. This project had three specific aims: 1) understand the process of identifying food insecurity in an eye clinic setting; 2) implement food insecurity screening in a student run eye clinic; and 3) determine associations of food security status with eye health outcomes among Eskenazi Health patients.

Methods: In *Aims 1* and *2*, I consulted the literature and clinicians from the Eskenazi Health Department of Ophthalmology. I developed a protocol implementing food insecurity screening into the electronic health record of a student-run eye clinic using the clinic-based Hunger Vital Sign (HVS) 2-question screener. For *Aim 3*, I worked with a Regenstrief Data Core analyst to extract patient and community demographic information, eye health conditions, and food insecurity status from the Eskenazi Health Data Warehouse.

Results: I implemented the food insecurity protocol as a quality improvement project into the student-run eye clinic and to date n=12 patients were screened. Additionally, I developed an analytical plan which included consolidating 1,073 eye-related ICD-10 codes into two groups: “nutrition-related eye disease” or “other eye disease.”

Conclusion: These exploratory study findings will generate future research questions and quality improvement initiatives to further investigate tailored clinic-community prevention initiatives, such as extending the food insecurity screener to other healthcare settings and integrating community resources with health care.