Utilizing Geographic Information Systems (GIS) and Data Visualization to Address Obesity

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INTRO:

- Typical aggregation of health-related needs assessment data at the community or county level does not provide detailed information on locations within communities or counties where interventions would be supported. **Communities or counties exhibiting diverse socioeconomic characteristics would benefit from a more detailed spatial analysis of needs.**

OBJECTIVE:

- The purpose of this research was to utilize geographic information systems (GIS) mapping and **spatial analysis to provide greater detail of survey data** and identify priority populations where needs are most prevalent.
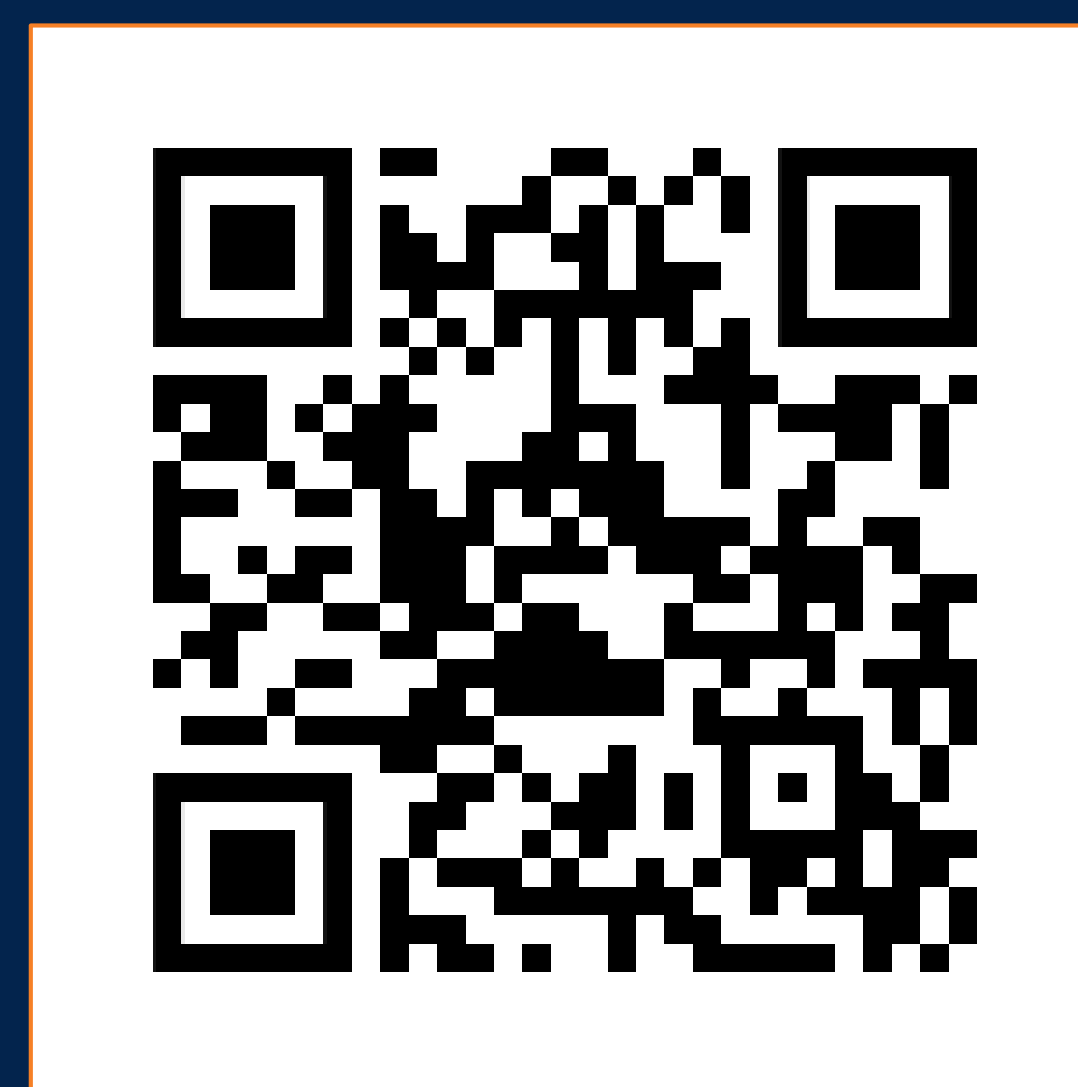
METHODS

- Surveys were mailed to a **random sample of residents in 14 Alabama counties** with an adult obesity prevalence of greater than 40%. Survey questions elicited responses from residents concerning a variety of health-related topics including healthy food access, constraints to participating in physical activity and priority for potential interventions to decrease obesity.

RESULTS

- 1,243 survey responses were received from residents in 14 high-obesity Alabama counties. Results were analyzed using GIS and spatial analysis techniques **to locate specific areas and priority populations within counties where interventions addressing obesity are most needed**. Maps displaying these results can assist local community coalitions in prioritizing interventions when creating plans to increase health within a community.

Data visualization and **spatial analysis** can provide greater **geographic detail** to survey responses and **community assessment** data.

Snap a picture with your smartphone to learn more about the ALProHealth project where this data analysis method was utilized.

Respondents to Outdoor Recreation Survey

Constraint to Outdoor Recreation: Not enough nearby facilities

Priority for Potential Community Projects: Paved Walking Trails

Constraint to Outdoor Recreation: Not enough nearby facilities

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