Building a smart and connected rural community for improved healthcare access through the deployment of integrated mobility solutions

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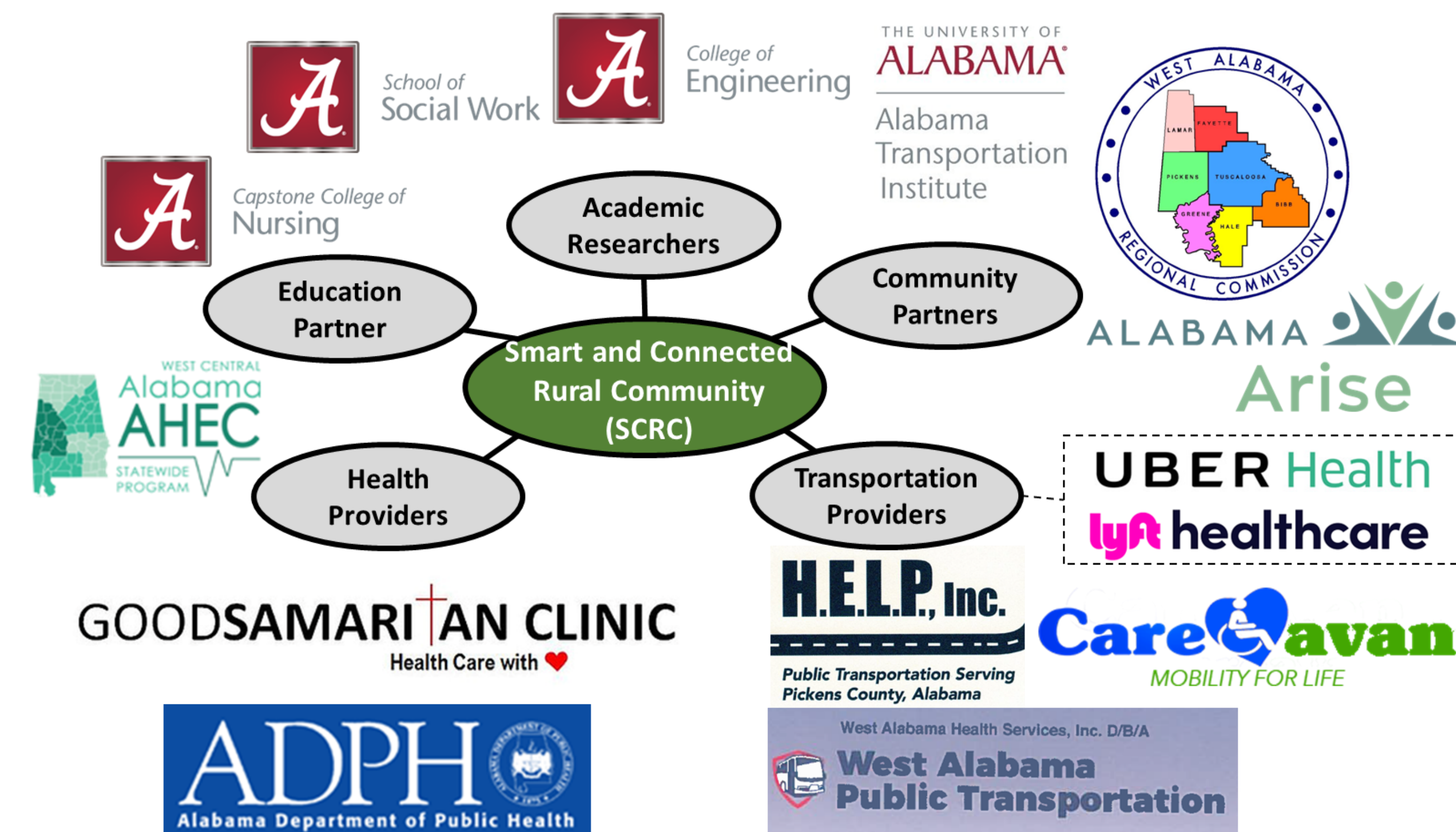
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Project Challenge

This project aims to understand and address the transportation-related technological, social, and behavioral barriers to preventive healthcare services among uninsured or under-insured patients in disadvantaged rural communities.

Research Question – How (or can) the deployment of affordable mobility services significantly reshape the preventive care-seeking beliefs and behaviors among people in rural communities?

This project will create a Smart and Connected Rural Community (SCRC) comprised of interdisciplinary researchers, health care providers, transportation network companies (TNCs), local transportation providers, and community stakeholders to promote preventive healthcare services through deploying on-demand mobility services.
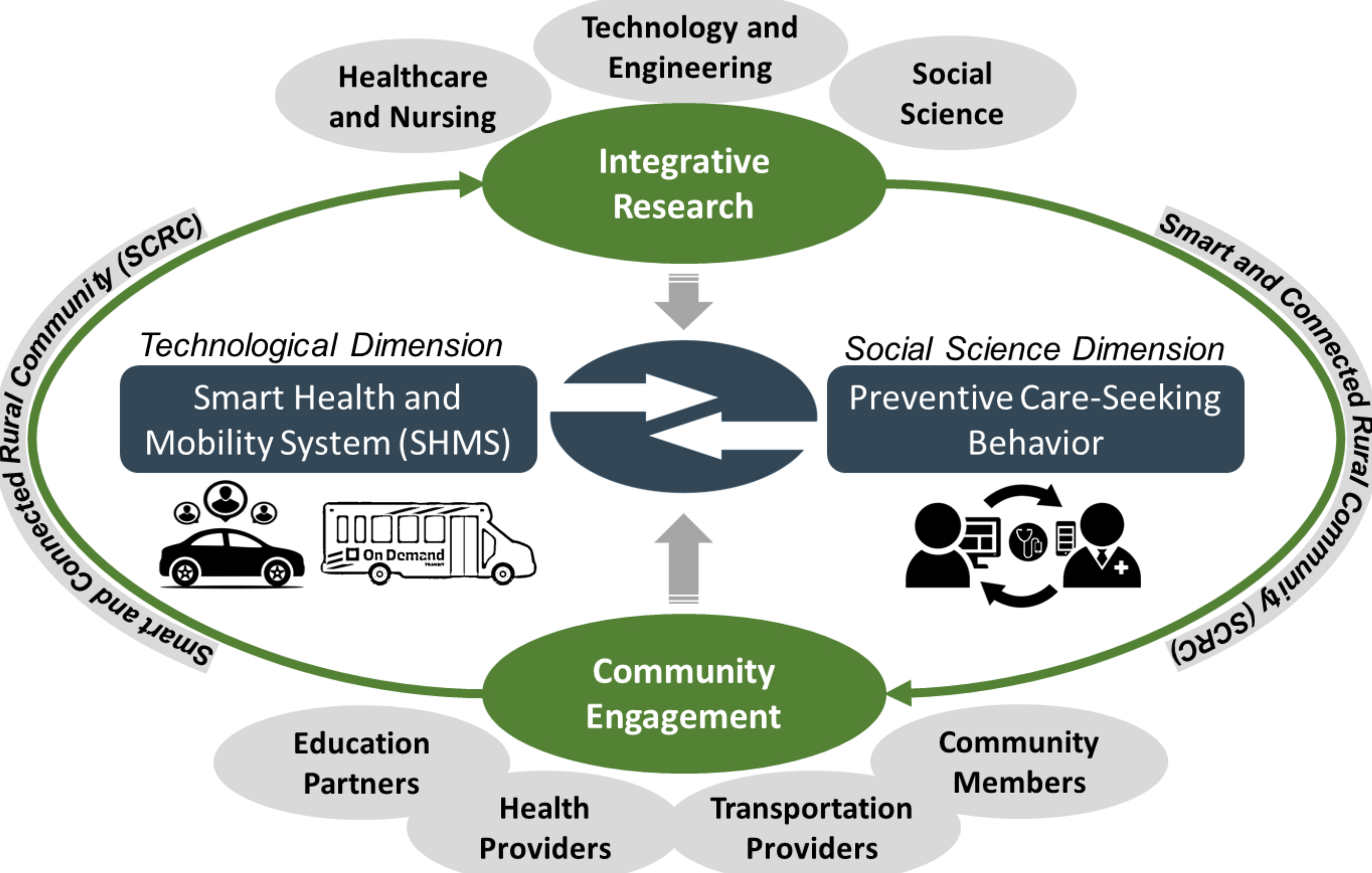
Geographic Area. The project has identified seven counties in West Alabama as the geographic study area.

University of Alabama
Alabama
Study Region

Community Partners

INTEGRATIVE RESEARCH

- **Technological Dimension** – By partnering with local health providers and transportation providers as well as TNCs, this project will develop a Smart Health and Mobility System (SHMS) to integrate existing transportation resources within the study area to offer on-demand mobility services to patients and doctors/nurses in need of traveling between medical facilities and patient homes.

- **Social Science Dimension** – Through community engagement activities (e.g., meetings, focus groups, and surveys), this project will explore the impacts of on-demand mobility services on preventive care-seeking behaviors among uninsured or under-insured patients.

Major Outcomes/Progress

- An online survey questionnaire has been designed and hosted on Qualtrics. This survey has been distributed to rural communities across the country. We anticipate that the survey will be completed by the end of Feb 2024, and we should have preliminary survey results available in March.

- We are invited to present the work supported by this grant at the 2024 Alabama Rural Health Conference, on March 7-8, 2024, in Montgomery, Alabama. Our presentation is titled "*Exploring the Role of Emerging Mobility Solutions in Shaping Care-Seeking Behaviors in Rural Communities.*"

Intellectual Merit

The project will develop a state-of-the-art smart health and mobility system that is specifically designed for disadvantaged rural communities with economic, technological, and transportation-related health barriers. This project will significantly advance the knowledge of rural community health behaviors by exploring the impacts of mobility services on care-seeking behaviors in disadvantaged rural communities.

Broader Impact

Rural Health: The fundamental knowledge generated from this project will help healthcare providers, nursing professionals and stakeholders make informed decisions to leverage disruptive mobility technologies to deliver cost-effective preventive healthcare services and improve quality of life in disadvantaged rural communities. Mobility System: This project will provide insights for designing and deploying affordable mobility services to support rural healthcare systems by considering the economic, technological, and transportation-related health barriers faced by underserved population in rural areas. Health Equity: This project will reinforce the healthcare equity by reducing the health disparities linked with unfair economic, social, or environmental disadvantage and ensuring the equal adoption of disruptive mobility technologies across diverse communities.

Future Goals

Community Engagement: Engaging with community partners to discuss rural healthcare transportation solutions.

System Design: Designing on-demand mobility services for medical facility and patient home travel.

Presentation/Publication: Presenting findings at conferences (e.g., Alabama Rural Health Conferences and the Transportation Research Board Annual Meeting), and publishing in peer-reviewed journals.

SCC-IRG Proposal Preparation: Collaborating on a proposal for the SCC-IRG competition.