Florida Department of Transportation Research

Applying Gap Modeling to Inform Improvement of Transportation Services for Vulnerable Populations at the Local and Regional Levels

January 2022

Project Number
BDV31-977-106

Project Manager
Gail M. Holley
FDOT Traffic Engineering and Operations Office

Principal Investigators
Ilir Bejleri
Ruth Steiner
University of Florida

Current Situation

Transportation is critical for virtually everyone, but many are not able to meet their own transportation needs, often due to age, ability, or income. The Florida Department of Transportation in partnership with the University of Florida – as part of the Safe Mobility for Life program – developed FindaRideFlorida.org to help these vulnerable individuals find available transportation providers to help them get around their community. These rides are given by local agencies and providers, yet the availability of these services can vary by location, and gaps remain. Understanding where these gaps are and why they occur is critical to better serving vulnerable populations throughout the state.

Access to transportation is vital to meet the mobility needs of vulnerable populations.

Research Objectives

University of Florida researchers applied geospatial modeling and mapping to identify and examine the gaps in transportation services for vulnerable populations and developed recommendations for closing such gaps at the local and regional levels.

Project Activities

The researchers began with a review of the framework elements of the Find-a-Ride service: the FindaRideFlorida.org website and the transportation services database. An important objective of this project was to evaluate the usefulness of the gap software and its maps, which would help stakeholders address gaps. Currently however, stakeholders do not have access to gap maps that are produced by the model. Therefore, the research team proposed options for disseminating the products of the gap model to stakeholders, including static maps, interactive maps, and an interactive website.

To evaluate the gap model and the usefulness of its products, it was applied to three specific areas, and a series of meetings was arranged with agency staff in these areas to describe the model and share results showing the gaps between the available transportation services and the needs of the vulnerable population in their areas.

Meetings were held with local agencies in Alachua and Orange counties and the regional agencies MetroPlan Orlando and the Lake-Sumter Metropolitan Planning Organization. The researchers sought feedback on the accuracy and usefulness of the gap maps in their areas to help improve transportation services. The researchers also asked agency representatives how the products could be improved to better meet local needs, including the preferred method of accessing the gap maps to support their work. Generally, the representatives found the maps and data produced by the gap model potentially useful. They also suggested improvements to the types of data offered and expanding the software to allow analysis of alternative scenarios.

Based on the project tasks, the researchers made several recommendations for improvements in the Find-a-Ride system, the gap model, providing access to the gaps maps, and formalizing regular production of the data and maps for agency use.

Project Benefits

The results of this project can help local, regional, and state agencies in responding more completely to the needs of Florida's most vulnerable populations.

For more information, please see www.fdot.gov/research/.