

Developing Tools for Social Workers, Engineers, and Planners to Address Mobility Gaps Collaboratively

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A NITC report explores strengthening collaboration between disciplines, to build a transportation system that better serves everyone.

Transportation planners and engineers often struggle to serve at-risk communities and environmental justice (EJ) populations. EJ populations can include older adults, people with low income, low socioeconomic status, racial and ethnic minorities, and individuals with disabilities—all groups who are at an increased risk for transportation disadvantage. Evidence of these struggles manifest as unequal transportation system outcomes related to access and opportunity.

Meanwhile, social workers often struggle to connect with the planners and engineers whose transportation designs impact the individuals and communities they work with.

Noelle Fields, a researcher in the University of Texas at Arlington (UTA) School of Social Work, headed an interdisciplinary research team with co-investigators Courtney Cronley, Kate Hyun and Stephen Mattingly of UTA. Adequately serving EJ populations requires re-evaluating long-held assumptions and practices within the transportation and social work professions—specifically understanding their mobility gaps. Collecting data on their needs and how these vulnerable populations currently use transportation helps both sides reframe assumptions.

DATA COLLECTION

To gather that travel data, the research team created strategies for using two Android apps (Safe Activity and My Amble) developed at UTA. These apps improve upon traditional pen-and-paper-based daily transportation diaries in terms of quantity and quality of data collected.

Researchers held six focus groups involving social workers, transportation planners and civil engineers to discuss barriers and opportunities they each face in serving these EJ populations. They were also asked how they could utilize data features with Safe Activity and MyAmble to accomplish their jobs most effectively.

EMERGING THEMES

The first theme that emerged was **collecting longitudinal data**. One social work participant stated, “It still has been one of the major barriers to getting the data, getting the follow up data, getting 12 month follow ups.” Another social worker echoed similar sentiments, “As for our families who’re trying to change how we provide services for our families, particularly ones in our suburban areas, that would be good data to have in order to support our claim that this is not just an isolated example or situation with one particularly unique family, but that this is a pattern and a lot of our funding sources have to have supporting data to fund such changes.”

The second theme to come from the focus group participants stressed the benefits of **crowd-sourced and real-time data**. A civil engineer participant shared that this

“platform allows you to be flexible with your questioning (...) you can kind of tailor the questions to what you’re trying to find out about their situation and make it relevant to the planning process or the engineering process. It would definitely be useful in that regard, and it would probably play a good role for us as planners in like a validation role, so how do we validate our plans and the part of the modeling that we do and when we try to incorporate these populations.”

Lastly, a social worker participant stressed the importance of capturing the data in real-time allows the traveler to report their transportation need in the moment, rather than only what they did:

“Especially people who have never driven, who have disabilities and have never really had the freedom of deciding, ‘Oh, I want to go to Walmart. Think I’ll go get in my car and drive there.’” “To give them the opportunity to look at their daily life and capture what they would’ve done or would have liked to have done but couldn’t would be valuable.”

FUTURE OPPORTUNITIES

The findings also indicated that there was a clear overlap in skills-based needs in connecting with stakeholders and public engagement for both social workers and transportation experts. An area ripe for interdisciplinary collaboration may be in writing and creating policy recommendations. With an eye towards training the next generation of professionals,, the team also established a background for developing an interdisciplinary course between the UTA College of Engineering and the UTA School of Social Work to address transportation equity and activity scheduling of EJ populations.

This interdisciplinary framework was also actively applied by Fields and fellow NITC researchers on two other equity-focused NITC projects that will be coming out soon: **Evaluating Improved Transit Connections for Ladders of Opportunity** and **Access to Opportunities: Redefining Planning Methods and Measures for Disadvantaged Populations**.

ABOUT THE AUTHORS

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THE FULL REPORT and ONLINE RESOURCES

For more details about the study **How Can Interdisciplinary Teams Leverage Emerging Technologies to Respond to Transportation Infrastructure Needs? A Mixed-Methods Evaluation of Civil Engineers, Urban Planning, and Social Workers’ Perspectives**, download the full report at <https://nitc.trec.pdx.edu/research/project/1176>

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