Strategies to Achieve Alignment, Collaboration, and Synergy Across Delivery and Financing Systems

Can Subsidized Transportation Options Slow Diabetes Progression?

Research In Progress Webinar
November 6, 2019
12:00-1:00 pm ET/9:00-10:00am PT
Welcome: Sara Brandspigel, MPH

Presenters: Fei Li, PhD, Assistant Professor, Georgia State University and Christopher Wyczalkowski, PhD, Postdoctoral Researcher, Georgia State University

Commentary: Katie Mooney, Community Benefit Manager, Grady Health System

Q&A: Sara Brandspigel, MPH
Fei is an assistant professor at the Urban Studies Institute, Georgia State University (GSU). Fei has extensive research interests and experience in transportation and mobility research, including individuals’ and households’ travel behavior, traffic safety, smartphone-app-based ridesharing services such as Uber and Lyft, parking and land use, transportation accessibility and its social equity implications, and the linkages between mobility and health. Prior to the Systems for Action project, Fei started examining public transportation and healthcare access in urban, suburban and rural communities in Georgia. She is currently working on a study on the mobility and healthcare utilization of senior individuals in collaboration with colleagues at Emory University and GSU School of Public Health. Fei obtained her PhD degree in Public Administration from New York University.
Dr. Christopher Wyczalkowski is a Postdoctoral Researcher with the Urban Studies Institute at Georgia State University. Chris is an urban policy scholar with research interests related to the interaction of society with the evolving urban environment. In his current role, he organizes cross-university research collaborations, addressing complex urban problems related to mobility and access in cities. In addition to funding from the Robert Wood Johnson Foundations for work aligning the transportation and health systems, Chris is collaborating on research teams addressing complex micromobility, neighborhood change, and transportation access, from interdisciplinary perspectives such law, sociology, transportation, planning, computer science, GIS, non-profit and urban studies. His work has been published in top economic and sociology journals, including Regional Science and Urban Economics and City & Community, and cited in local and national popular media such as CityLab, Christian Science Monitor, and the Atlanta Journal Constitution. Chris is a long time Atlanta resident and transit advocate, and was co-founder and first president of an influential grassroots Atlanta advocacy group, Citizens for Progressive Transit. He holds a doctoral degree jointly from the Georgia State University and the Georgia Institute of Technology in Public Policy; a M.S. Degree in Housing and Consumer Economics from the University of Georgia; and a B.S. in Meteorology from the Pennsylvania State University. Chris teaches courses in Geographic Information Systems, evaluation, and research methods.
Katie works in Grady Health System’s Planning and Business Development Department where she serves as Grady’s first Community Benefit Manager. In her role, she oversees the development of the triennial Community Health Needs Assessment and manages the implementation of the Community Health Improvement Plan. Katie works across the health system and with a range of community partners to strategically align resources to improve both patient and community health. She graduated from the University of Georgia with an MPH in Health Policy and Management and a BS in Health Promotion and Behavior. Prior to joining Team Grady, Katie worked at Danya International where she managed several CDC communication contracts related to domestic and global HIV and Tuberculosis, school health, and tobacco.
Problems

• Transportation as a social determinant of health

• Uneven development of transportation infrastructure and individual mobility could contribute to differences in health-related behavior and lifestyles

• Health disparities in metro Atlanta
What We Know

• Transportation barriers can hinder healthcare utilization [1, 3, 5]
• Lack of transportation limits low-income households’ access to healthy food [6, 8]
• Public transit services can be absent or inadequate in neighborhoods in need [2, 7]
• Limited mobility of senior, chronically ill individuals [4]
• Little evidence on how transportation barriers or enhanced mobility affect health outcomes
Research Objectives

- Test the causal linkage between transportation barriers and physical & mental health
- Explore the effectiveness of alternative solutions
Alternative Solutions to Enhance Mobility

- Public transit rides
- Rideshare credits
- Cash subsidies
- Mobility counseling
Mobility Counseling

• Solution-Focused Therapy (SFT): help individuals frame their own goals, identify possible steps towards the goals and take actions

• Improve the utilization of existing services and resources

• May alleviate anxiety and improve mental health

• Qualitative data on transportation barriers and how different systems can better work together to meet mobility needs
Systems Alignment

- Medical care
- Transportation
- Food
- Public Health
- Financial Services
A Research Partnership
Grady - A Place of Big Numbers and Big Impact

25% of Georgia physicians received some of their training at Grady

Grady EMS responded to more than 140,000 911 calls

35,000 admissions

7,000+ employees

1,800+ patient visits/day

153,000+ ED visits annually (400+/day)

1,000+ physicians and residents through Emory and Morehouse partnerships

Medicaid 27%

Uninsured

Medicare 27%

Commercial 16%

PAYER MIX
Addressing Food Insecurity & The Food as Medicine Partnership: Chronic Disease Management

Spearheaded by Grady, Food as Medicine is a collaborative program involving key partners the Atlanta Community Food Bank, Open Hand Atlanta. The Food as Medicine Partnership will address both food insecurity and chronic disease among Grady’s patients, with benefits that extend to children, families, visitors and staff.
Atlanta Regional Commission (ARC)

- Plan new transportation options
- Encourage the development of healthy, livable communities
- Wisely manage precious water resources
- Provide services for the region’s older adults and individuals with disabilities
- Develop a competitive workforce
- Provide data to inform leaders and decision-makers
- Cultivate leaders to meet the region’s challenges
- Coordinate with local first responders in preparing for a secure region
- Engage the public on key regional issues
Align partners and resources

Prototype new ways of working

Foster funding innovation

Advocate for Policy Change

Improved Population Health in Atlanta
Marta

- 9th largest public transit system in the United States
- Operating heavy rail, bus, and streetcar systems
- Service area largely overlaps with that of Grady Memorial Hospital
  - Vulnerable, low-income communities
- Co-sponsoring transit access to part of the study participants
A Research Partnership
Target Community

- Approximately 80 percent of Grady patients reside in Fulton and DeKalb Counties
- Approximately 60 percent of these patients are uninsured or underinsured
- Many of these patients live in communities defined by the CDC as vulnerable to health problems caused by external stresses (homelessness, etc.)
- High prevalence of chronic diseases (diabetes, hypertension, etc.) that also correlate to areas with high social needs

Census Tract in Fulton and DeKalb counties with Social Vulnerability Index (SVI) score > 0.8 (top 20% most vulnerable census tracts in GA)

Public Transit Access

Source: Easy Analytic Software, Inc. (EASI) - Census Database, Enhanced Master Database.
Defining Outcomes

• Intermediate outcomes
  – Healthcare utilization: primary care (+), emergency care (-)
  – Out-of-home activities & trip making (+)
  – Physical activities (+)
  – Grocery shopping (+), fruits & vegetables consumption (+)

• Health outcomes
  – Mental health: depression (-), financial anxiety (-)
  – Physical health: blood sugar (-), blood pressure (-), BMI (-), waist circumference (-)
Mobility Support (Systems for Action)
Transit subsidies, rideshare credits, cash, or mobility counseling

Food as Medicine
Food prescriptions
Access to healthy, affordable foods
Nutrition education

Healthcare Utilization
Primary and routine care
Emergency care

Activities Enhancing Physical & Mental Well-Being
Physical activities
Social activities
Utilization of other social supports

Dietary Behavior
Indicator foods
Nutrition intake
Food security

Physical & Mental Health Outcomes
Diabetes control: blood glucose, hemoglobin A1c
Complications and general health: BMI, blood pressure, blood cholesterol, hemoglobin, hematocrit, # of days feeling unwell in the past month
Depression and anxiety
Eligibility

• Food as Medicine
  – Patients at Grady primary care clinic
  – Food insecurity
  – Uncontrolled diabetes

• Mobility Solutions to Better Health
  – 18 or older
  – English speaker
  – Able to make independent decisions (not mentally disabled or cognitively impaired)
Participants entering the Food as Medicine program: eligibility check & recruitment (n = 600)

Baseline survey

Random assignment

Group 1 Transit (n = 120)
10 rides per month

Group 2 Rideshare (n = 120)
$25 credit per month

Group 3 Cash (n = 120)
$25 per month

Group 4 Counseling (n = 120)
Mobility counseling

Group 5 Control (n = 120)

3-month follow up survey

10 rides per month

$25 credit per month

$25 per month

Mobility counseling

6-month follow up survey

10 rides per month

$25 credit per month

$25 per month

Mobility counseling

9-month follow up survey

10 rides per month

$25 credit per month

$25 per month

Mobility counseling

12-month follow up survey

Intention-to-treat analysis; as-treated analysis: attrition analysis

Analysis

Recruitment
Timeline

- **May 2019**: Conversion for the research site (Grady Food Pharmacy)
- **Aug 2019**: Recruit & train personnel
- **IRB**
- **Jan 2020**: Develop & test mobility counseling

**Data collection**

- **May 2021**: Implement transportation subsidies
- **Oct 2021**: Analyze data & disseminate research findings
References


Upcoming Webinars

**November 20\textsuperscript{th}, 2019 12 p.m., ET**

Systems for Action Individual Research Project

*Closing Gaps in Health and Social Services for Low-Income Pregnant Woman*

Irene Vidyanti, PhD, Data Scientist, County of Los Angeles Department of Public Health and William Nicholas, PhD, Lecturer, Health Policy and Management, UCLA Fielding School of Public Health

**December 4\textsuperscript{th}, 2019 12 p.m., ET**

Systems for Action Individual Research Project

*Strengthening the Carrying Capacity of Local Health and Social Service Agencies to Absorb Increased Hospital/Clinical Referrals*

Danielle M. Varda, PhD, Associate Professor, School of Public Affairs, and Director, Center on Network Science, University of Colorado Denver, and Katie Edwards, MPA, Executive Director, The Nonprofit Centers Network
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