Can Subsidized Transportation Options Slow Diabetes Progression?

Mobility Solutions to Better Health
Healthcare and Food Access under COVID-19

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

Research-in-Progress Webinar
November 11, 2020
12-1pm ET
Welcome: Chris Lyttle, JD  
*S4A Deputy Director*

Presenters: Fei Li, PhD and Christopher Wyczalkowski, PhD  
*Georgia State University*

Commentary: Katie Mooney  
*Grady Health System*

Q&A: Chris Lyttle, JD
Dr. Li is an Assistant Professor in the Urban Studies Institute. Her work explores how individuals and markets react to and interact with policy. She is broadly interested in contemporary urban issues related to housing, transportation, segregation, inequality, public health, and the social impacts of emerging technologies.

Fei Li, PhD
Dr. Wyczalkowski is a Visiting Assistant Professor in the Department of Public Management and Policy, and affiliate faculty 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. His current research agenda is focused on the effects of transportation systems on neighborhood change, particularly micromobility, and disaster recovery.
Katie Mooney works in Grady Health System’s Planning and Population Health 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.
**Renee Ogoun** has always had a passion for taking care of people. Currently, Renee serves as the Patient Navigator for the Food as Medicine Program. She started her career as a Nurse Assistant with over six years of experience. After graduating from Georgia State University in 2019 with a Bachelors in Public Health, she knew she wanted to continue to help people. She went on to become a Patient Navigator at Grady Memorial Hospital, a position designed to help connect patients to the right care in a timely manner. She loves advocating for her patients and will continue to do so for as long as she can.

**Marissa Fallico** is a master’s student in the Urban Studies Institute. Recently, she received her B.A. in Environmental Studies at Northeastern University in Boston. She has done research on shoreline hardening, lobster migration patterns, mangroves, and gentrification.

**Kara Tsukerman** is a PhD student in the Department of Sociology at Georgia State University. Kara has received her graduate certificate in Public Health, a Master of Arts in Sociology, and a Bachelor’s in Sociology from Georgia State as well. She is an instructor and research and teaching assistant at Emory and Georgia State University. Her subjects of research include housing inequality, social determinants of health, homelessness, and mental health.
Life Expectancy at Birth in Atlanta, GA

Problems

- Mobility and accessibility as a social determinant of health
  - Access to medical care
  - Access to healthy food
  - Access to essential services
  - Independent living and social support

- Transportation inequalities could shape health-related behavior and lifestyles, which in turn contribute to health disparities
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 reducing transportation barriers or enhancing mobility may affect health outcomes
Research Objectives

- Test the causal linkage between transportation barriers and physical & mental health
- Compare alternative solutions to enhance mobility
- Examine the inter-system gaps that impede access and utilization of health care and social services among low-income, chronically ill individuals
A Cross-Sector Partnership
Food as Medicine (FAM)

Addressing Food Insecurity & Chronic Disease Management

Spearheaded by Grady, Food as Medicine is a collaborative program involving key partners including the Atlanta Community Food Bank and 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.
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

Public Transit Access

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

• Randomized Controlled Trial (RCT)
  o 12 months
  o 4 groups
  o 5 waves of data collection
    • Surveys on travel patterns, health-related behavior, and self-reported health
    • Health outcomes measured by Grady

• Mixed methods

• Target participants: Grady patients with food insecurity and uncontrolled diabetes (hemoglobin A1c > 9)
Alternative Solutions to Enhance Mobility

• Public transit subsidies
• 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
Mobility Support (Systems for Action)
Transit, cash, or mobility counseling

Food as Medicine
Food prescriptions
Biweekly grocery pickups
Nutrition & cooking classes

Healthcare Utilization
Primary and routine care
Emergency care

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

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, waist circumference, # of days feeling unwell in the past month
Depression and anxiety
Participants entering the Food as Medicine program: eligibility check & recruitment (n = 480)

Baseline survey

Random assignment

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

6-month follow up survey

- 10 rides per month
- $25 per month
- Mobility counseling

9-month follow up survey

- 10 rides per month
- $25 per month
- Mobility counseling

12-month follow up survey

Intention-to-treat analysis: as-treated analysis: attrition analysis
Impacts of the COVID-19 Pandemic

- Mobility and accessibility needs
- Healthcare and service utilization
- Confounding factors affecting health and other outcomes
- Facility and protocols
COVID Adjustments

- Mobility solutions
  - Public transit
  - Rideshare
  - Mobility counseling

- Data collection
  - Pre-COVID and post-COVID behavior
  - Telephone surveys

- Time frame

- Eligibility Expansion: Stage 2 hypertension (BP above 140/90)
Timeline

- May 2019: Conversion for the research site (Grady Food Pharmacy)
- Aug 2019: Recruit & train personnel
- Mar 2020: IRB
- Sept 2020: Develop & test mobility counseling
- COVID delays
- Adjustments
- Randomized Controlled Trial
- Data collection
- Mar 2022: Analyze data & disseminate research findings
- Aug 2022
Source: Baseline survey (N = 35)
Preliminary Analysis

Do you have access to a car?

- No
- Yes, I currently own a vehicle
- Yes, owned by someone else
- Yes, other

How Often Did you Leave Your Home?

In the Past Month

- 2-3 times
- A few times a week
- Daily / Almost daily
- Never
- Once a week
- Only once

Source: Baseline survey (N = 35)
Preliminary Analysis

Source: Baseline survey (N = 35)
Preliminary Analysis

Source: Baseline survey (N = 35)


Commentary

Katie Mooney
Community Benefit Manager | Grady Health

Grady
Questions?

www.systemsforaction.org

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December 9th | 12pm ET

Financing Coordinated Medical and Social Services for Patients with Psychosis

Yuhua Bao, PhD | Cornell University

Last ResProg of 2020!
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