Prenatal Trip Assistance
Concept of Operations
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TODAY’S AGENDA

01 | PURPOSE OF THIS WEBINAR
   • Share concept development activities from Smart Columbus with stakeholders

02 | WEBINAR CONTENT
   • Smart City Challenge Overview
   • Smart Columbus Program Overview
   • Prenatal Trip Assistance Project Overview
   • Smart Columbus Prenatal Trip Assistance Project Concept of Operations
   • How to Stay Connected
   • Stakeholder Q&A

03 | WEBINAR PROTOCOL
   • All participant lines have been muted during the webinar in order to reduce background noise
   • Questions are welcome via chatbox during the Q&A Section
   • The webinar recording and presentation materials will be posted on the Smart Columbus website
$40 MILLION

78 APPLIED • COLUMBUS WON
SMART COLUMBUS OVERVIEW
To empower our residents to live their best lives through responsive, innovative and safe mobility solutions.
MISSION

To demonstrate how an intelligent transportation system and equitable access to transportation can have positive impacts on every day challenges faced by cities.
OUTCOMES

SAFETY  MOBILITY  OPPORTUNITY  ENVIRONMENT  AGENCY EFFICIENCY  CUSTOMER SATISFACTION
PROJECT PHASES AND TIMELINE

WHERE WE ARE GOING
USDOT PORTFOLIO

ENABLING TECHNOLOGIES
- CONNECTED VEHICLE ENVIRONMENT

ENHANCED HUMAN SERVICES
- MULTIMODAL TRIP PLANNING/ COMMON PAYMENT SYSTEM
- SMART MOBILITY HUBS
- MOBILITY ASSISTANCE
- PRENATAL TRIP ASSISTANCE
- EVENT PARKING MANAGEMENT

EMERGING TECHNOLOGIES
- CONNECTED ELECTRIC AUTONOMOUS VEHICLES
- TRUCK PLATOONING
OPERATING SYSTEM BIG PICTURE

Data Inputs

- Workers
- Citizens
- Public & Private Systems
- Devices & Things

Data Capture & Analysis

- Data Scientist & Researchers

Data Consumption

- Public
- Entrepreneur
- Universities
- Commercial Partners
- City
- USDOT
- Independent Evaluators
PRENATAL TRIP ASSISTANCE

ARRIVE AT DR. APPOINTMENT @ 4:45 PM

Source: City of Columbus
Every baby deserves to celebrate his or her first birthday, regardless of race, address or family income
Every baby deserves to celebrate his or her first birthday, regardless of race, address or family income.

2017 Infant Mortality Rates

Communities with high infant mortality rates may have higher medical care, education and workforce costs.

<table>
<thead>
<tr>
<th></th>
<th>18,800 babies were born in Franklin County</th>
<th>6,658 babies or 35% were born in CelebrateOne neighborhoods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>155 babies died in Franklin County</td>
<td>79 babies or 51% died in CelebrateOne neighborhoods</td>
</tr>
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</table>

Goals

40% Reduction in Infant Mortality Rate by December 2020

50% Decrease in Racial Disparity Between African American and White Babies by December 2020
PRENATAL HEALTH FACTORS

Clinical care
Such as prenatal care quality and access

Social, economic and physical environment
Such as:
- Housing
- Transportation
- Education
- Employment

Health behaviors
Such as tobacco use and nutrition

Underlying drivers of inequity: Poverty, racism, discrimination, trauma, violence and toxic stress

Source: Health Policy Institute of Ohio, December 2017
• Increase prenatal trips to the doctor for women living in these CelebrateOne target zip codes, where Franklin County infant mortality rates are persistently high.
• Focus groups with expectant women
• CelebrateOne
• Managed Care Organizations (MCOs)
• Ohio Department of Medicaid
• Franklin County Department of Job and Family Services
• The Ohio State University
• Major medical doctors/facilities
• Technology Vendors/Transportation Brokers
• Moms2B
• StepOne
• COTA
THE PROBLEM TODAY*

- Communication challenges between all parties
- Arrival time of ride
- There are no car seats for her kids
- The woman is frustrated and decides it’s not worth the hassle of going to the doctor

*Based on interviews, focus groups, partner conversations and prior research
• NEMT trip scheduling only available through call center
• On-demand transportation is limited
• Real-time trip optimization not available for all NEMT
• Lack of communication between players
• B-trip return time difficult to estimate
• Driver information unavailable to the Prenatal Traveler
  • Vehicle
  • Real-time location
• Feedback options need to be more reliable and immediate for all parties
THE VISION

1. Pregnant woman sets doctor appointment
2. She schedules a trip via call center, smartphone app or website
3. Services are available on-demand
4. She receives multiple notifications via her preferred communication method
5. Notifications via text and email have easy trip confirmation, cancellation or change options
6. Driver location is available in real-time before pick-up
7. Doctor’s office is notified if the trip running late
8. On-demand return trips can also be set via call, smartphone app or website
9. Pregnant woman and driver have feedback options available immediately via app, website or by calling a designated number provided by MCOs
10. Driver performance and member usage data is immediately available to MCOs
PROPOSED SYSTEM

Prenatal Traveler

Traveler Equipment/Interface
- Call Center
- Web Portal
- Smartphone App

Medical Offices
MCOs

PTA System
Technology Vendor/
Transportation Broker

Operating System

NEMT Mobility Providers

Data Consumers
- Third Party Users
- City of Columbus
HOW DOES THIS WORK WITH CORE PARTNERS?
STUDY PROTOCOL

• Study Aims
• Study Design
• Study Outcomes
• Data Collection
• Analytic Plan
• Timeline

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Associate Professor
OBGYN and Epidemiology

Erinn M. Hade, PhD
Assistant Professor
Biomedical Informatics and OBGYN

THE Ohio State University
COLLEGE OF MEDICINE
STUDY DESIGN

• Randomized controlled trial
• Randomly assign 500 women to:
  • Existing transportation services from their MCO or
  • Expanded “smart” transportation services (the intervention)

Expanded “smart” trips include standard NEMT trips provided by MCOs, with the addition of:
  1. Freestanding pharmacy trips
  2. Trips to the food bank/grocery store
Primary Aim

- To examine women’s satisfaction with transportation services in those assigned to expanded “smart” transportation compared to those assigned to existing transportation services.
SECONDARY AIMS

- To examine adequacy of prenatal care as measured by the Kotelchuck Index between groups
- To examine rates of preterm delivery (<37 weeks) between groups
- To examine rates of infant mortality between groups
ELIGIBILITY CRITERIA

- Pregnant women aged 18+ years
- Less than 32 weeks of gestation
- Enrolled in a participating Medicaid managed care plan
- Needs non-emergency medical transportation (NEMT)
- Lives in a CelebrateOne zip code at the time of enrollment
- Ambulatory at enrollment
- No plans to move out of Franklin County prior to delivery
- Able to speak and understand English
• Enrollment targets
• Informed consent for participation
• Stratified permuted block randomization
• Follow-up through pregnancy and two months following delivery

### INFORMED CONSENT & ENROLLMENT

<table>
<thead>
<tr>
<th>Race/ethnicity of mother</th>
<th>% of target area births</th>
<th>Enrollment target</th>
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<tbody>
<tr>
<td>Non-Hispanic black</td>
<td>54%</td>
<td>270</td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>32%</td>
<td>160</td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td>14%</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>500</td>
</tr>
</tbody>
</table>
• Study staff will administer a baseline questionnaire

• Follow-up questionnaires every 30 days to assess interim satisfaction with transportation services

• Final (exit) questionnaire at two months after delivery to more thoroughly assess satisfaction with transportation

• Pregnancy and Infant outcomes
PARTICIPANT RETENTION

• Cash (gift card) incentives
  • $20 at enrollment following the baseline questionnaire
  • $10 per trimester of follow-up questionnaire completion
  • $20 delivery notification
  • $30 final (exit) questionnaire

• Non-cash incentives
  • Magnets with study logo
  • Water bottle with study logo
  • Delivery baskets (focused on items for mom)
Data will be collected in a secure HIPAA-compliant REDCap database.

Data transfer between partners (e.g., enrollment status) will occur via secure FTP.

Primary analyses comparing satisfaction, adequacy of prenatal care and rates of PTB will be under an ‘intent to treat’ principle.

Secondary analyses will explore how results may differ by treatment received.
STUDY TIMELINE AND MILESTONES

• Nov 2018 – Identification of project vendor
• Nov-Dec 2018 – Questionnaire development and review
• Jan 2019 – Institutional Review Board application submitted
• Mar-Apr 2019 – Staff training
• Jun 2019 – Enrollment begins
• Oct-Nov 2019 – Enrollment ends
• Nov 2020 – Follow-up ends
• Dec 2020 – Analysis and report preparation
• Bring Primary Stakeholders Together Early
• Project Scope Growth
• Health Care is a Complex System… Rely on the Experts!
Public comment period open for the PTA Concept of Operations:

- November 7th to November 21st

Where to find it:

1. View the ConOps at: [https://smart.columbus.gov/projects](https://smart.columbus.gov/projects)
2. Click PRENATAL TRIP ASSISTANCE
3. Direct link to file: [https://smart.columbus.gov/uploadedFiles/Projects/SCC-B-ConOps_PTA_FINAL%2020180911.pdf](https://smart.columbus.gov/uploadedFiles/Projects/SCC-B-ConOps_PTA_FINAL%2020180911.pdf)

How to comment:

1. Please email comments to: kdepenhart@columbus.gov
2. Subject line: PTA Comments
3. Include your contact information
4. State whether or not you represent a vendor interest
USDOT SMART CITY CHALLENGE PROGRAM INQUIRIES:
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SMART COLUMBUS INQUIRIES:
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Upcoming Smart Columbus Webinars:
• Event Parking Management System Requirements
• Common Payment System System Requirements
• Overview of Emerging Technologies: Connected Electric Autonomous Vehicles and Truck Platooning

Webinar recording and materials will be available at itsa.org and smart.columbus.gov
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Contact:
SmartColumbus@columbus.gov

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QUESTIONS?