Connecting Transportation and Public Health

TOD Forum: Transit-Oriented Development and Public Health

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Lead by example through MnDOT Sustainability Efforts

Reduce Transportation Carbon Pollution

Support Transportation that Improves Public Health

Improve Resilience of the Transportation System

Develop Strategic External Partnerships to Expand Innovation
Differing perspectives on creating health

I'm looking for help in creating a healthy Minnesota

Transportation
Why ask me? We build roads.

Public Health
Please, can we be part of the team?

Medical Care
Look no further, it is our job.

Traditional silos getting in the way?

Source: MDH Commissioner Ehlinger, 2013 Transportation Research Conference
MnDOT Vision

Minnesota’s multimodal transportation system maximizes the health of people, the environment, and our economy.

MN transportation system:

- One of the top 5 largest transportation systems in the U.S. – total public miles owned by MnDOT and partners
- MnDOT owns/operates ~10% of all roads in MN
- Transportation is the #1 source of carbon pollution
- Car ownership cost ~$11,000/yr
MN Transportation System Context

Trucks, Buses, Limos STS
Transit
Cars
Rail
Aeronautics
Waterways
Bikes
Pedestrians
Minnesota’s multimodal transportation system maximizes the health of people, the environment, and our economy.

MN community context

- Anticipated to gain 1.1M new residents between 2018 and 2070
- 65+ population anticipated to double between 2010 and 2030
- ~30% growth in Communities of Color since 2010, ninth highest among states
- One of the healthiest states in the country, yet some of the worst health disparities
Transportation, Health, and Equity Connections

Traffic Fatalities & Safety

**What:** Safe transportation for all

**Higher Risk:** People walking, biking or taking transit, older drivers, rural communities, Communities of Color

Obesity & Heart Disease

**What:** Active transportation options

**Higher Risk:** People without access to physical activity or, healthy diet options, children, men, American Indian populations

Breathing Impacts

**What:** Air pollution

**Higher Risk:** People with respiratory or cardiovascular conditions (i.e., asthma, bronchitis), Communities of Color, people living near freeways

Heat-Related Illness

**What:** Heat islands

**Higher Risk:** Children, older adults, people with chronic medical conditions, people who work outdoors
The Social Determinants of Health (SDoH)

How non-medical factors influence health outcomes. SDoH are the conditions in which we live, play, learn, and work.
Good health starts long before the doctor’s office. Health is created where we live, learn, work, and play. Healthy communities make healthy people.
“If you’re going to live up here you need a car or you’ll be homebound.”
- District 2 Community Member

“It’s a challenge for those who have low income or people with disability that do not drive. It’s very difficult for them to get where they need to go. The way we’ve built our communities makes it difficult”
- District 4 Community Member

“There aren’t enough options for affordable transportation and access for our members to conduct daily activities.”
- District 1 Community Member

“Transit reliability, transit access, and safe walking and [bicycling] options prevent some in our community...from regularly seeing a doctor.
- District 6 Community Member
Health and Transportation Nexus Research – Key Questions

• What **pathways** between transportation and public health are important to promote in collaborative transportation and health planning?

• What can we learn from **peer organizations** that are prioritizing transportation and public health?

• How can we conceptualize a **framework** to navigate these pathways and inform MnDOT’s approach moving forward?
Health and Transportation Nexus - Research Tasks

**Literature Review**
- Identified 8 frameworks & 3 tools
- Result: a new, transportation-specific comprehensive framework

**Semi-structured Interviews**
- Looked at all 50 states and identified 6 pioneers. Conducted interviews with 6 states.
- Result: 4 recommendations for MnDOT

**Public Report**
- Published report: www.dot.state.mn.us/research/TRS/2022/TRS2201.pdf
A Unified Model of the Health and Transportation Nexus

**Neighborhood & Built Environment**
Reduce emissions and provide access to clean air, nutritious food, and greenspace

**Behavioral Health**
Opportunities for physical activity, social interaction, nutritious food, and healthcare

**Social Inclusion**
Access to places, people, and power

**Economic Stability**
Provide access to options related to employment and building wealth

**Environmental Health**
Safety from crashes, noise, crime, disproportionate enforcement, pollution, and climate change

**Social & Community Context**
Provide connection with community to support social, physical, and mental wellbeing

**Healthcare**
Provide access to preventative health services, medical treatment, and emergency care

**Education**
Provide access to learning and training opportunities for all ages
MnDOT’s commitment to Complete Streets

- One of the first DOTs to develop a statewide Complete Streets Policy (2013)
- Address safety and access needs for users of all ages and abilities
- Flexible, multimodal approach for any transportation project, any context
- Updated Policy (2022) - new implementation tools and performance measures

Hwy 61 in Lake City, MN, 2020
Thank You!

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www.dot.state.mn.us/sustainability/public-health.html