Health and Equity Performance Measures and Goals

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AMPO
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Integrating Public Health Data and Goals

Nashville Area
1) Criteria on health and social equity
2) Data collection
3) Communicating anticipated changes in health outcomes with ITHIM
4) Where do we start? Bike/ped latent demand study

Southeast Michigan

Virginia DOT
History of Expansive Development

Strong Cross-County Commuting Patterns
Growing Costs of Traffic Congestion
Household Budgets Consumed by Transportation Costs
Longer Travel Times
Few Options for Seniors
Dangerous by Design
Housing Choices
Worsening Personal Health / Increasing Costs
Policy: Public Opinion

1. A Bold, New Vision for Mass Transit
2. Support for Active Transportation & Walkable Communities
3. Preservation & Enhancement of Strategic Roadways
Prioritization: Scoring Criteria

2040 Plan Projects Scored on Criteria – 100 points

- Quality Growth and Sustainable Development – 15pts
- Multi-Modal Options – 15pts
- Health & Environment – 15pts
- Safety & Security – 20pts
- Congestion Management – 15pts
- System Preservation & Enhancement – 10pts
- State & Local Support/ Investment – 5pts
- Freight & Goods Movement – 5pts
Prioritization: Health Priority Areas

Health Priority Areas
3 out of 4:
- Poverty
- Unemployment
- Carless Household
- Aging (over age 65)
Data Collection: Middle Tennessee Transportation and Health Study

Transportation, Physical Activity and Health Data Collection and Analysis

www.middletnstudy.com
ITHIM is a comprehensive health impact model

- Health benefits of physical activity
- Health benefits of reduced air pollution
- Health risks of bike/ped vs auto accidents

- Age/Gender effects
## Diseases and Exposures

<table>
<thead>
<tr>
<th>Physical Activity</th>
<th>Air Pollution</th>
<th>Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic Heart Disease</td>
<td>Respiratory Infections</td>
<td>Auto</td>
</tr>
<tr>
<td>Depression</td>
<td>Cardiovascular Disease</td>
<td>Bicycle</td>
</tr>
<tr>
<td>Dementia</td>
<td>Hypertensive Heart Disease</td>
<td>Pedestrian</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Inflammatory Heart Disease</td>
<td>Bus</td>
</tr>
<tr>
<td>Colon Cancer</td>
<td>Lung Cancer</td>
<td>Truck</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>Respiratory Disease (kids)</td>
<td>Highway</td>
</tr>
<tr>
<td>All-Cause Mortality</td>
<td>Stroke</td>
<td>Arterial</td>
</tr>
</tbody>
</table>

### ROAD TYPE
- Local
- Fatal
- Non-Fatal

### SEVERITY
- MODE
- Auto
- Bicycle
- Pedestrian
- Bus
- Truck
- Highway
- Arterial
- Local
- Fatal
- Non-Fatal

nashvillempo.org
Happening Now: Integrated Transport and Health Impact (ITHIM)
## Monetization: Impacts of Physical Activity via Transportation on Health

<table>
<thead>
<tr>
<th>Moderate Scenario</th>
<th>Change in disease burden</th>
<th>Change in DALYs per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular Diseases</td>
<td>10.4%</td>
<td>1442</td>
</tr>
<tr>
<td>Diabetes</td>
<td>11.2%</td>
<td>1252</td>
</tr>
<tr>
<td>Depression</td>
<td>2.7%</td>
<td>460</td>
</tr>
<tr>
<td>Dementia</td>
<td>3.9%</td>
<td>879</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>2.8%</td>
<td>124</td>
</tr>
<tr>
<td>Colon Cancer</td>
<td>2.6%</td>
<td>94</td>
</tr>
</tbody>
</table>

Savings: **$200 Million** per year in health care costs
Bike/Pedestrian Latent Demand: Green Hills

Existing Conditions
Bikeways, Sidewalks Greenways

**2009 to 2014**

**Sidewalks** – ~47% increase: 
~322 miles to 472 miles in 5 counties

**Bikeways** – ~72% increase: 
~213 miles to 367 miles in 5 counties 
(bike lanes, buffered bike lanes, bike routes and sharrows)

**Greenways** – 27% increase: 
141 miles to 179 miles in 5 counties 
(greenways, multi-use trails and park trails)
PLOS Results

There are over 500 miles of sidewalks in the MPO area.

63% of all inventoried roads (2,044 miles) have a PLOS of C or better.

Correspondingly, 1,225 miles of inventoried roadways have a PLOS of D or worse.
Increase access to core services through transportation planning throughout Southeast Michigan
SEMCOG: Outcomes

- Develop **common measures** of accessibility.
- Identify **gaps** in accessibility.
- Set regional **policies & local implementations actions**.
- Establish **performance measures** and benchmarks.
- Use accessibility to **set priorities** in regional plans.
Gathering Input: Access to Core Services Task Force

- State & Federal agencies
- Local Government
- Education
- Social Service Organizations
- Transportation Providers
- Healthcare
- Other Key Partners

Over 50 regional stakeholders
SEMCOG: Core Services

- Transit
- Jobs / Employment
- Health Care Services
- Grocery Stores / Healthy Food Access
- Recreation opportunities (Parks & Trails)
- Schools; Education facilities; Libraries
- Housing (affordable, subsidized, assisted)
SEMCOG: “Accessibility”

Measuring the “ease” of reaching destinations:
- All modes - automobile, transit, walking, biking

Focused on number of valued destinations within a given travel time
- In “x” minutes, a household can access “y” places

Accessibility = Opportunity
SEMCOG: Identifying gaps in accessibility

Where are areas with “low” access to core services?

Identified geographic areas of region where access is limited

Who is most affected?

Households without cars; households with fewer cars than workers; households in poverty; seniors (age 65+); youth (age <16)
Where do you need to go?
How do you get where you need to go?
Why can’t you easily get where you need to go?
Community Conversations

Community Health and Social Services Center
CHASS

Programs to Educate All Cyclists
PEAC
Community Conversations

Youth Voice

Urban Neighborhood Initiatives
Community Conversations: Inspirational Kick-off Meeting
Community Conversations

On the Street + Standing Meetings
Virginia: Economic Impacts

Economic measures
- Consistent with economic development plans
- Improves intermodal connections
- Travel time reliability

Access to opportunity measures
- Transit’s ability to get people to work within 60 minutes
- Access for disadvantaged populations
- Multimodal connections
Performance Measures Academy

Transportation Leadership Academy 2016 on Performance Measures

U.S. Department of Transportation
Federal Highway Administration
Transportation for America

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