Developing a Measured Approach to Assessing Public Health Impacts in Transportation

*Putting the Transportation and Health Tool to Work*

August 24, 2017
Today’s Presentation

• **Background**
  – Current Health initiatives
    • DE-HEAL
    • Plan4Health
    • Delaware Greenways
    • PLUS (Preliminary Land Use Service)
  – Prioritization Process
    • Decision Lens

• **Workshop**
  • description, attendees and activities

• **Where do we go from here?**
Background
DeIDOT currently collaborates with other health based organizations and coalitions.
• Vision
• To transform the culture of Delaware to make healthy eating and active living a priority

• Mission Statement
• Delaware HEAL supports and encourages programs, environments and resources that promote healthy eating and active living to reduce the prevalence of overweight, obesity and related chronic diseases.
Safe Bike Lanes

Active Recreation

Healthy Foods

Delaware PLAN4Health
An American Planning Association Project

- Active Transportation
- Active Recreation
- Access to Affordable Healthy Foods
Kent County and Dover Planning Health Weeks (aka charrette) Spring and Summer of 2016
Delaware Greenways focuses on Creating Outdoor Connections for Active Living and Healthy Eating through three primary initiatives: Trails and Pathways, Byways and Historic Penn Farm.
The **Preliminary Land Use Service** outlined in Chapter 92 of Title 29 of the Delaware Code,

- Provides for state agency review of major land use change proposals prior to submission to local governments.
- Recently incorporated health indicators.
Decision Lens

DelDOT’s prioritization process

Competing Interests

- Politicians
- Engineers
- Riders
- Taxpayers
- Feds
- Environmentalists
- Employees

You
Decision Lens

DelDOT Prioritization process:

• was recently enhanced for greater transparency and accountability and:
  – Better aligns with Vision, Mission and Goals
  – Utilizes Decision Lens for project prioritization based on DE Code
    • Formula-based process
  – Aligns with long range transportation plan

• is seeking to develop a qualitative approach for assessing health impacts to the public
Prioritization Criteria Weighting

DeLDOT Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Operating Efficiency</td>
<td>24.8%</td>
</tr>
<tr>
<td>Safety</td>
<td>33%</td>
</tr>
<tr>
<td>Environmental Impact/...</td>
<td>6.5%</td>
</tr>
<tr>
<td>Revenue Generation/...</td>
<td>7.9%</td>
</tr>
<tr>
<td>Multi-Modal Mobility/F...</td>
<td>15.6%</td>
</tr>
<tr>
<td>Impact on the Public/...</td>
<td>7.2%</td>
</tr>
<tr>
<td>System Preservation</td>
<td>5%</td>
</tr>
</tbody>
</table>
The Workshop

- Who
- What

- Methods
- Implementation
What is the Transportation and Health Tool?

The Transportation and Health Tool (THT) was developed by the U.S. Department of Transportation and the Centers for Disease Control and Prevention to provide easy access to data that practitioners can use to examine the health impacts of transportation systems.

The tool provides data on a set of transportation and public health indicators for each U.S. state and metropolitan area that describe how the transportation environment affects safety, active transportation, air quality, and connectivity to destinations. You can use the tool to quickly see how your state or metropolitan area compares with others in addressing key transportation and health issues. It also provides information and resources to help agencies better understand the links between transportation and health and to identify strategies to improve public health through transportation planning and policy.

How to Use the Tool

- View indicator data
- Learn more about the indicators used in the tool
- Identify strategies to improve transportation and health outcomes
- Explore information, resources, and research about the relationship between transportation and health
### Transportation and Health Indicators - Delaware

#### Commute Mode Share

- **Auto**: Raw Value = 50.7, Score = 39
- **Transit**: Raw Value = 25.5, Score = 53
- **Bicycle**: Raw Value = 0.3, Score = 27
- **Walk**: Raw Value = 2.3, Score = 29

#### Complete Streets Policies

- Raw Value = Policy in place, Score = 100

#### DUI/DWI Fatalities per 100,000 Residents

- Raw Value = 3.7, Score = 43

#### Person Miles of Travel by Private Vehicle

- Raw Value = 5,404, Score = 9

#### Person Miles of Travel by Walking

- Raw Value = 167, Score = 31

#### Physical Activity from Transportation

- Raw Value = 6.51, Score = 21

#### Proximity to Major Roadways

- Raw Value = 0.07%, Score = 100

#### Road Traffic Fatalities per 100,000 Residents - Auto

- Raw Value = 9.5, Score = 56

#### Road Traffic Fatalities per 100,000 Residents - Bicycle

- Raw Value = 0.4, Score = 1

#### Road Traffic Fatalities per 100,000 Residents - Pedestrian

- Raw Value = 2.3, Score = 3

#### Road Traffic Fatalities Exposure Rate - Auto

- Raw Value = 10.6, Score = 59

#### Road Traffic Fatalities Exposure Rate - Bicycle

- Raw Value = 13.7, Score = 4

#### Road Traffic Fatalities Exposure Rate - Pedestrian

- Raw Value = 101.6, Score = 10

#### Seat Belt Use

- Raw Value = 88.8, Score = 62

#### Transit Trips per Capita

- Raw Value = 40.1, Score = 87

#### Use of Federal Funds for Bicycle and Pedestrian Efforts

- Raw Value = 3.7%, Score = 97

#### Vehicle Miles Traveled per Capita

- Raw Value = 9,942, Score = 30

---

A lower score and shorter bar indicates a lower health performer. A higher score and longer bar indicates a better health performer.

- Lowest performer
- 25th percentile
- 50th percentile
- 75th percentile
- Top performer
The Transportation and Health Tool

### Delaware

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Raw Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commute Mode Share - Auto</td>
<td>89.7</td>
<td>39</td>
</tr>
<tr>
<td>Commute Mode Share - Transit</td>
<td>2.5</td>
<td>53</td>
</tr>
<tr>
<td>Commute Mode Share - Bicycle</td>
<td>0.3</td>
<td>27</td>
</tr>
<tr>
<td>Commute Mode Share - Walk</td>
<td>2.3</td>
<td>29</td>
</tr>
<tr>
<td>Complete Streets Policies</td>
<td>Policy in place</td>
<td>100</td>
</tr>
<tr>
<td>DUI/DWI Fatalities per 100,000 Residents</td>
<td>3.7</td>
<td>43</td>
</tr>
<tr>
<td>Person Miles of Travel by Private Vehicle</td>
<td>37,404</td>
<td>9</td>
</tr>
<tr>
<td>Person Miles of Travel by Walking</td>
<td>167</td>
<td>31</td>
</tr>
<tr>
<td>Physical Activity from Transportation</td>
<td>6.51</td>
<td>21</td>
</tr>
<tr>
<td>Proximity to Major Roadways</td>
<td>0.07%</td>
<td>100</td>
</tr>
<tr>
<td>Road Traffic Fatalities per 100,000 Residents - Auto</td>
<td>9.5</td>
<td>56</td>
</tr>
<tr>
<td>Road Traffic Fatalities per 100,000 Residents - Bicycle</td>
<td>0.4</td>
<td>1</td>
</tr>
<tr>
<td>Road Traffic Fatalities per 100,000 Residents - Pedestrian</td>
<td>2.3</td>
<td>3</td>
</tr>
<tr>
<td>Road Traffic Fatalities Exposure Rate - Auto</td>
<td>10.6</td>
<td>59</td>
</tr>
<tr>
<td>Road Traffic Fatalities Exposure Rate - Bicycle</td>
<td>137.0</td>
<td>4</td>
</tr>
<tr>
<td>Road Traffic Fatalities Exposure Rate - Pedestrian</td>
<td>101.6</td>
<td>10</td>
</tr>
<tr>
<td>Seat Belt Use</td>
<td>0.88</td>
<td>62</td>
</tr>
<tr>
<td>Transit Trips per Capita</td>
<td>40.1</td>
<td>87</td>
</tr>
<tr>
<td>Use of Federal Funds for Bicycle and Pedestrian Efforts</td>
<td>3.70%</td>
<td>97</td>
</tr>
<tr>
<td>Vehicle Miles Traveled per Capita</td>
<td>9,943</td>
<td>30</td>
</tr>
<tr>
<td>Transportation</td>
<td>Health</td>
<td>Policy</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>3. VMT per Capita</td>
<td>10. Road Traffic Fatalities by Mode</td>
<td>14. Use of Federal Funds for Bicycle and Pedestrian Efforts</td>
</tr>
<tr>
<td>4. Public Transportation Trips per Capita</td>
<td>11. Road Traffic Fatalities Exposure Rate</td>
<td></td>
</tr>
<tr>
<td>5. Proximity to Major Roadways</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Land Use Mix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Housing and Transportation Affordability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Study Locations

Dover

M.O.T.

Kent Co.

Georgetown
Transportation & Health Indicators in the (THT) City

1. Commute Mode Shares
2. Complete Streets Policies
3. Alcohol-Impaired Fatalities
4. Proximity to Major Roadways
5. Housing and Transportation Affordability
6. Person Miles Traveled by Mode
7. Physical Activity from Transportation
8. Road Traffic Fatalities by Mode
9. Public Transportation Trips per Capita
10. Road Traffic Fatalities Exposure Rate
11. Seat Belt Use
12. Use of Federal Funds for Bicycle and Pedestrian Efforts
13. Vehicle Miles Traveled per capita
14. Land Use Mix
## THT Indicators and Local Data Sources for Each Geographic Location

<table>
<thead>
<tr>
<th></th>
<th>Dover</th>
<th>Kent County</th>
<th>Georgetown</th>
<th>MOT</th>
</tr>
</thead>
</table>
| **Person Miles Traveled by Mode** | - State level: bike counts  
- DE Natural Resources and Environmental Control has trail network counts  
- DelDOT customer survey | **Commute Mode Shares**  
- Transportation Analysis Zones  
- DelDOT  
- Kent Metropolitan Planning Organization | **Proximity to Major Roadways**  
- Certificate of occupancy  
- Building permits  
- Demolition permits  
- Seasonal traffic count | **Commute Mode Shares and Land Use Mix**  
- Travel demand model  
- DelDOT Household travel survey  
- Land use land cover layer  
- GIS Map – First Map – parcel layer  
- Vacant parking spaces or park n’ ride spaces used |  

| **Housing and Transportation Affordability** | - State level housing needs assessment provides: affordability, income, parcel based data and building value | **Use of Federal Funds for Bicycle and Pedestrian Efforts**  
- DelDOT data  
- Bike Delaware  
- Bike Coalition | **Housing and Transportation Affordability**  
- State housing study  
- DART inventory count  
- Sussex County Association of Realtors  
- Unemployment Office  
- SNAP data  
- Medicare and Medicaid data  
- School lunch / community eligibility | **Housing and Transportation Affordability**  
- Center for Neighborhood Technology: transport + housing costs  
- Connectivity index |  

| **Use of Federal Funds for Bicycle and Pedestrian Efforts** | - Every non-interstate project adding bike lanes or sidewalks  
- CMAQ dollars for measuring emissions reduction | **Vehicle Miles Traveled per Capita**  
- FHWA update  
- DelDOT GIS maps  
- Plus Process | **Physical Activity from Transportation**  
- DART bus loop  
- DART bus bike rack usage  
- DelDOT accident data  
- Bike/ped counts  
- Motivate the first state  
- Green “desert” maps  
- Walk/bike sheds  
- Sidewalk inventory | **Physical Activity from Transportation**  
- Number of trips (bike/ped/transit)  
- Pedestrian priority network analysis  
- Strava, Inc. heat maps in conjunction with trip purpose  
- Missing sidewalk link data  
- Sidewalk walking areas |  

| **Land Use Mix** | - State level: destination data (can set distances with sidewalk and trail info) | **Land Use Mix**  
- Office of State Planning  
- DE Natural Resources and Environmental Control  
- Institute for Public Administration  
- Kent County |  |  |

**Acronyms found in Table 1**: CMAQ - Congestion Mitigation and Air Quality Improvement Program, DART - Delaware Authority for Regional Transit, DE - Delaware, DelDOT - Delaware Department of Transportation, FHWA - Federal Highway Administration, GIS - Geographic Information System, MOT - Middletown/Odessa/Townsend Area, SNAP - Supplemental Nutrition Assistance Program
Next Steps

- Including health as a sub-criterion
- Going before Council on Transportation for vote
Thank you!

Ann Gravatt
Planning Supervisor
DelDOT, Division of Planning
Ann.Gravatt@state.de.us