

Health priorities to shape transportation investment

DELAWARE DEPARTMENT OF TRANSPORTATION



DELAWARE'S DEPARTMENT OF TRANSPORTATION (DELDOT) actively pursues ways for public health to play a dominant role in its transportation funding decisions. One approach to addressing public health impacts of transportation is by explicitly considering health impacts as a criteria in the process for selecting and funding transportation projects. Currently, DelDOT selects its proposed transportation projects based on how they align with seven prioritization criteria.



"The inclusion of health indicators in determining the ranking for transportation projects will have a positive impact on the health and quality of life for all Delawareans and visitors for years to come."

— Ann Gravatt,
Byways Program Coordinator,
Delaware Department of
Transportation

DelDOT is interested in incorporating public health factors into its prioritization process. For this reason, DelDOT was selected by CDC, Federal Highway Administration and APHA to host a Transportation and Health Tool (THT) implementation workshop in August 2016. The THT workshop was held at the DelDOT state office and attended by participants from federal, state, and local transportation agencies, public health organizations, and university faculty. The purpose of the workshop was to illustrate how THT indicators and strategies could be applied in Delaware's transportation and health framework, specifically focusing on how it could be used to inform DelDOT's project prioritization process. Participants gained understanding of health and transportation linkages through consensus building, exploration of the THT, and breakout sessions applying the THT indicators and strategies to four regional scenarios. DelDOT provided a demonstration of its prioritization process, and afterwards there was a discussion on how to incorporate THT indicators into the prioritization process.

THT APPLICATION EXERCISE

To gain familiarity with the THT indicators and strategies, participants were divided into four groups that DelDOT selected for the workshop. In each group participants:

- Identified the 3-4 most relevant THT indicators,
- Discussed THT and related data for the selected indicators, and
- Determined implementable THT strategies.

Groups applied the THT to four different scenarios or geographic areas: Dover, Kent County, Georgetown, and Middletown/Odessa/Townsend.

DelDOT provided participants the following background information as a starting point for applying the THT to each scenario:

- **Dover** — This area encompasses the city of Dover and was part of a [Plan4Health](#) planning study, which sought to include health and equity considerations in comprehensive community plans.
- **Kent County** — This area is southeast of Dover and encompasses small towns, subdivisions, and rural areas. This area was also part of the Plan4Health planning study.
- **Georgetown** — This area includes the town of Georgetown and surrounding rural areas. It has a large Hispanic population.
- **Middletown/Odessa/Townsend (MOT) Area** — For the purposes of the workshop, the MOT area was expanded northward to include White Hall, a master planned community. This area is south of the C&D Canal, a manmade waterway that carries cargo ships from Baltimore to the Atlantic Ocean. It is a rapidly growing area and will soon be divided by a new limited access road.

After the breakout groups selected the most relevant indicators for their geographic scenario, they reviewed the data sources used for the THT indicators. Participants then identified additional local, regional, and state data sources that could complement THT indicator data. The selected THT indicators and complementary data sources for the four geographic areas are summarized in the table below.

Table 1: Relevant THT Indicators and Pertinent Local Data Sources for Each Geographic Scenario

Dover	Kent County	Georgetown	MOT
<p>Person Miles Traveled by Mode</p> <ul style="list-style-type: none"> • State level: bike counts • DE Natural Resources and Environmental Control has trail network counts • DelDOT customer survey 	<p>Commute Mode Shares</p> <ul style="list-style-type: none"> • Transportation Analysis Zones • DelDOT • Kent Metropolitan Planning Organization 	<p>Proximity to Major Roadways</p> <ul style="list-style-type: none"> • Certificate of occupancy • Building permits • Demolition permits • Seasonal traffic count 	<p>Commute Mode Shares and Land Use Mix</p> <ul style="list-style-type: none"> • 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
<p>Housing and Transportation Affordability</p> <ul style="list-style-type: none"> • State level housing needs assessment provides: affordability, income, parcel based data and building value 	<p>Use of Federal Funds for Bicycle and Pedestrian Efforts</p> <ul style="list-style-type: none"> • DelDOT data • Bike Delaware • Bike Coalition 	<p>Housing and Transportation Affordability</p> <ul style="list-style-type: none"> • State housing study • DART inventory count • Sussex County Association of Realtors • Unemployment Office • SNAP data • Medicare and Medicaid data • School lunch / community eligibility 	<p>Housing and Transportation Affordability</p> <ul style="list-style-type: none"> • Center for Neighborhood Technology: transport + housing costs • Connectivity index
<p>Use of Federal Funds for Bicycle and Pedestrian Efforts</p> <ul style="list-style-type: none"> • Every non-interstate project adding bike lanes or sidewalks • CMAQ dollars for measuring emissions reduction 	<p>Vehicle Miles Traveled per Capita</p> <ul style="list-style-type: none"> • FHWA update • DelDOT GIS maps • Plus Process 	<p>Physical Activity from Transportation</p> <ul style="list-style-type: none"> • 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 	<p>Physical Activity from Transportation</p> <ul style="list-style-type: none"> • 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
<p>Land Use Mix</p> <ul style="list-style-type: none"> • State level: destination data (can set distances with sidewalk and trail info) 	<p>Land Use Mix</p> <ul style="list-style-type: none"> • 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

Participants then reviewed the 25 evidence-based policies, strategies, and interventions (“THT strategies”) that transportation practitioners can use to address health. THT strategies align with one or more THT indicators (linkages are shown on the THT), so that indicator data directly tie to actions for improving health outcomes through transportation.

For each geographic scenario, participants identified THT strategies that have already been applied and those that would be beneficial to apply in the future, taking into account available resources and effectiveness of previously applied strategies. Table 2 lists the 25 THT strategies and shows previously implemented and needed strategies for the four geographic areas. In addition to the available THT strategies, the Kent County group noted that providing more recreational opportunities and farmers markets could be used to achieve desired transportation and health outcomes.

Table 2: Implemented and Needed Strategies for Each Geographic Scenario

THT Strategy*	Dover County	Kent County	Georgetown	MOT
Built environment strategies to deter crime				<input type="checkbox"/>
Child passenger safety laws				
Clean freight (reduce diesel emissions)				<input type="checkbox"/>
Complete Streets	<input type="checkbox"/>	<input type="checkbox"/>		
Distracted driving				
Encourage safe bicycling and walking	<input type="checkbox"/>	<input type="checkbox"/>		
Expand bicycle and pedestrian infrastructure	<input type="checkbox"/>	<input type="checkbox"/>		
Expand public transportation			<input type="checkbox"/>	
Graduated driver licensing systems				
Health impact assessment (HIA)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health performance metrics		<input type="checkbox"/>	<input type="checkbox"/>	
High-occupancy vehicle lanes				<input type="checkbox"/>
Impaired driving laws				
Improve roadway safety	<input type="checkbox"/>		<input type="checkbox"/>	
Improve vehicles and fuels				
Integrate health and transportation planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In-vehicle monitoring and feedback				
Multimodal access to public transportation	<input type="checkbox"/>		<input type="checkbox"/>	
Promote connectivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ride sharing programs		<input type="checkbox"/>	<input type="checkbox"/>	
Rural public transportation systems		<input type="checkbox"/>	<input type="checkbox"/>	
Safe Routes to School programs		<input type="checkbox"/>		
Seat belt laws				
Strengthen helmet laws				
Traffic calming to slow vehicle speeds			<input type="checkbox"/>	

Implemented Strategies Needed Strategies

*Additional information about each THT strategy is available at <https://www.transportation.gov/mission/health/strategies-interventions-policies>



“In alignment with DelDOT’s Mission, Vision, and Goals, the ability to assess the health benefits of specific projects is needed to improve the overall health and quality of life outcomes in transportation projects statewide.”

— Ann Gravatt,
Byways Program Coordinator,
Delaware Department of
Transportation

The Transportation and Health Tool is an online resource that provides state and metropolitan area transportation professionals with easy access to data and strategies to improve public health through transportation planning and policy. The tool was developed by the Centers for Disease Control and Prevention and the U.S. Department of Transportation, in partnership with the American Public Health Association.

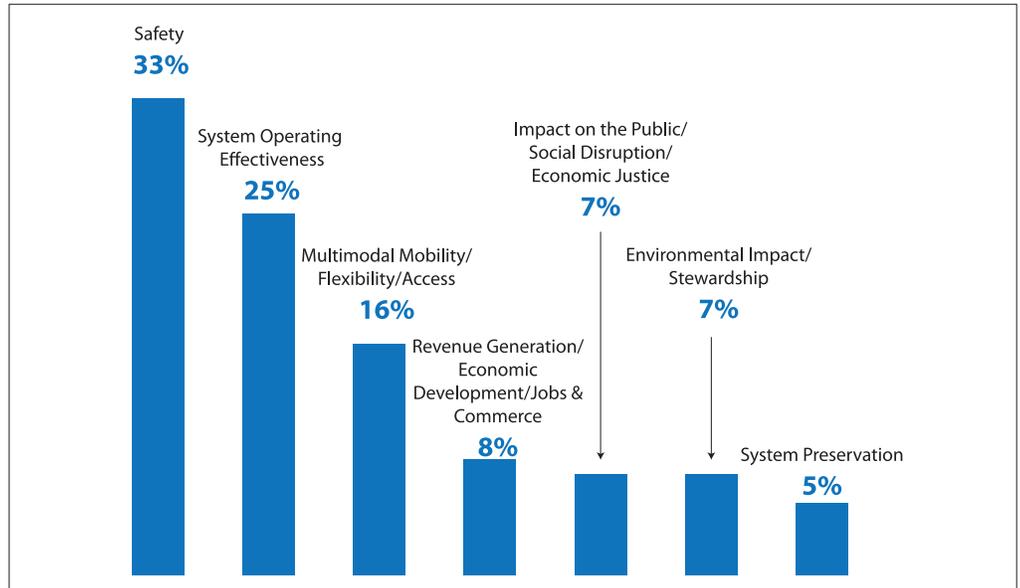
THT APPLICATIONS

- Use THT strategies to advance the transportation and health dialogue.
- Discuss incorporating health factors into DelDOT’s project prioritization process.

CAPITAL PROJECT PRIORITIZATION PROCESS DEMONSTRATION

After the THT application exercise, attendees received a demonstration of the Capital Project Prioritization Process, DelDOT’s methodology for prioritizing which projects receive funding. In Delaware, each proposed project is ranked based on the extent to which it meets the seven criteria shown in Figure 1. The criteria and their level of importance are based on DelDOT’s mission, vision and goals.

Figure 1: DelDOT’s Seven Prioritization Criteria and Their Weights



The THT workshop helped motivate DelDOT to explicitly address health in its project prioritization process. To date, DelDOT has identified two options for doing so: developing a new quantitative health criterion or adding health sub-elements to its existing criteria. A description of how these changes would affect DelDOT’s prioritization process is provided below.

Option A: New Qualitative Health Criterion. Under this option, DelDOT would develop a stand-alone health criterion that could be used to evaluate whether a project improves, has no effect, or worsens the physical health of the population. By establishing a health criterion in its prioritization process, DelDOT can prioritize human health in its project selection process.

Option B: Add Health Sub-elements to Existing Criteria. Under this option, the seven criteria in DelDOT’s prioritization process would remain the same; quantitative or qualitative health considerations would be added as sub-elements to existing criteria (e.g., Safety, Multi-Modal Mobility, Impact on the Public, or Environmental Impact). This would enable the overarching architecture of the criteria to remain intact, while the base formulas that determine the selected criteria would be adjusted to account for health considerations.

During this exploration phase, DelDOT is evaluating whether a stand-alone health criterion or health sub-elements more effectively fit into its mission, vision, and goals. Upon reaching agency consensus, DelDOT will provide its decision to Delaware’s Council on Transportation and make recommendations for any prioritization process enhancements.