

Incorporating Health into Long-Range Transportation Planning in North Central Texas

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The North Central Texas Council of Governments (NCTCOG), the metropolitan planning organization for the Dallas-Fort Worth region, has integrated health into its transportation planning process, including its most recent long-range transportation plan. By considering health in the transportation planning process, NCTCOG recognized the health benefits of initiatives it was already pursuing, such as those related to safety and air quality. NCTCOG is also using data on health-related indicators to assess the health of counties today and to measure changes in the future.

Considering existing health efforts

In the summer of 2013, NCTCOG began to think through how many of its transportation initiatives and policies related to health. NCTCOG had completed an update of its long-range transportation plan, *Mobility 2035*, in June 2013, and wrote an internal white paper on the elements of the plan that impact health. The white paper framed transportation initiatives related to health as programs that would support sustainability, quality of life, and livable communities. Health-related programs in the plan included:

- **Air quality.** Through working with partners to adopt energy-efficient and low-emitting fleets, advancing clean technologies, and encouraging changes to daily behaviors, NCTCOG aimed to reduce emissions and improve air quality.
- **Active transportation.** The plan aimed to increase physical activity through developing bicycle and pedestrian facilities, including improving infrastructure near schools through the Safe Routes to Schools Program, and developing a regional “Veloweb” network of off-street shared-use paths.
- **Sustainable development.** The plan incorporates economic development, environmental protection, and social equity considerations into planning and programming. This includes a Sustainable Development Funding Program that allocates transportation funds to land-use projects that promote alternative transportation modes or reduced automobile use.

Health indicators and strategies

When it came time to develop its next long-range transportation plan, [Mobility 2040](#), NCTCOG put a strong effort into incorporating health into its process. NCTCOG used resources developed by the Centers for Disease Control and Prevention (CDC) to evaluate how counties in the region compared to peer counties in terms of specific health indicators, and to identify strategies that NCTCOG was already pursuing that improve health outcomes.

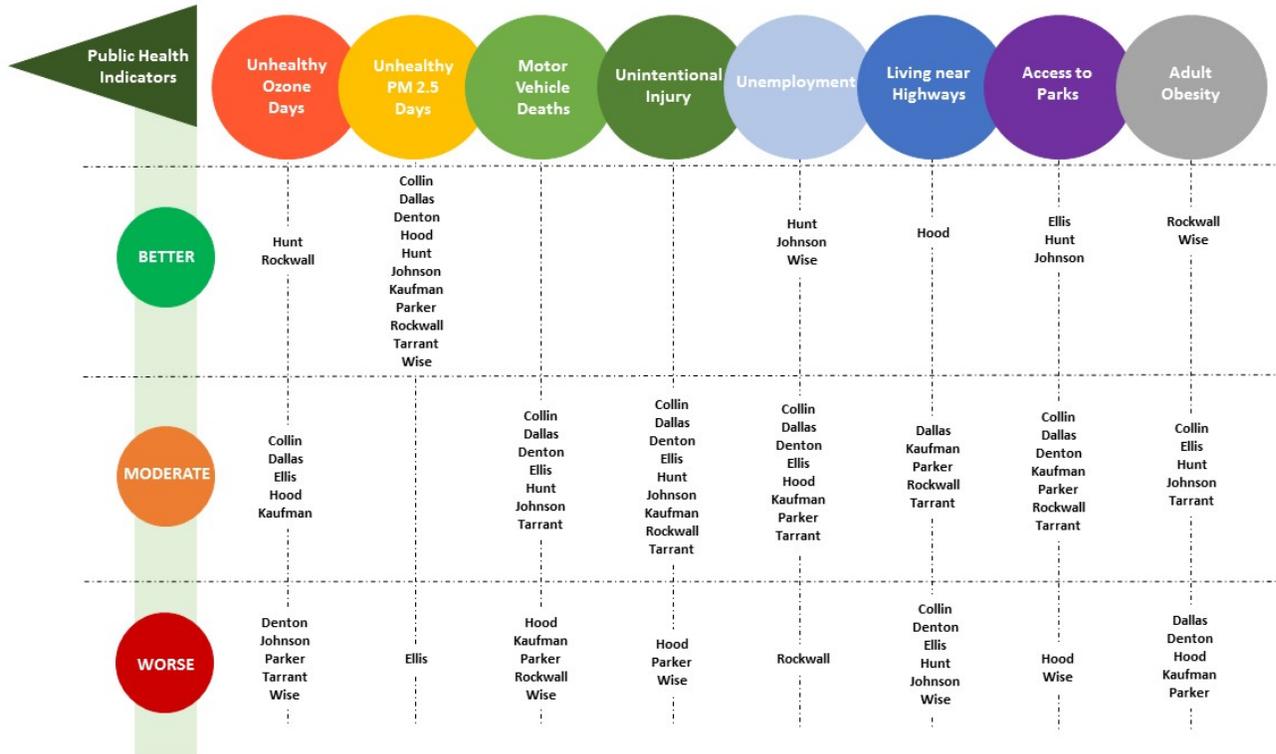
NCTCOG collected data from the CDC’s [Community Health Status Indicators](#) dataset, which allowed them to move beyond the limited set of public health indicators they had used previously, such as those related to air quality, to a broader set of measures. Out of over 40 indicators included in the dataset, NCTCOG selected eight that it thought could be affected by transportation programs:

- Unhealthy ozone days;
- Unhealthy fine particulate matter (PM2.5) days;

- Motor vehicle deaths;
- Unintentional injury (including motor vehicle injuries);
- Unemployment;
- Living near highways;
- Access to parks; and
- Adult obesity.

Then, NCTCOG used the CDC data to compare how the 12 counties within the region were performing on these indicators as compared to peer counties.¹ This analysis showed that, in general, many of the counties within the Dallas-Fort Worth region are performing the same or better than peer counties on the selected public health indicators. However, some of the counties scored worse than their peers on particular indicators, highlighting potential areas for improvement (see Figure 1).

Figure 1: Public health indicators by county for counties within the Dallas-Fort Worth region. (Source: NCTCOG).



NCTCOG also incorporated into Mobility 2040 six transportation strategies to improve health outcomes based on the CDC’s [Transportation Health Impact Assessment Toolkit](https://www.cdc.gov/TransportationHealthImpactAssessmentToolkit), which identifies transportation

¹ The CDC developed a method and variables for peer county groupings based on an iterative process guided by subject matter experts. For more information on this methodology, see <https://www.cdc.gov/CommunityHealth/info/HowtoUseReport/TX/Bosque/#PeerComparison>.

design and infrastructure strategies that promote positive health outcomes and/or reduce negative health outcomes. The strategies are:

- Reduce vehicle miles traveled (VMT);
- Expand public transportation;
- Promote active transportation;
- Incorporate healthy community design features;
- Improve safety for all users; and
- Ensure equitable access to transportation networks.

NCTCOG identified how the policies, programs, and initiatives included in Mobility 2040 support these six strategies, and summarized the findings in an [appendix](#). For example, for the strategy of reducing VMT, Mobility 2040 includes policies and programs related to implementing travel demand management, such as an employer trip reduction program, a regional vanpool program, and park-and-ride facilities (see Figure 2). Related to active transportation, Mobility 2040 includes a goal of supporting the planning and design of a multimodal transportation network that promotes walking and bicycling as equals with other transportation modes. It also includes programs and activities that promote pedestrian and bicycle safety.

By applying the CDC indicators and strategies to its long-range transportation plan, NCTCOG was able to consider how many of the policies and programs throughout its plan support improved health outcomes, even if they do not explicitly focus on health.

Figure 2: Mobility 2040 policies and programs that support the strategy of reducing vehicle miles traveled. (Source: NCTCOG)

Reduce Vehicle Miles Traveled (VMT)
TDM3-001: Support the Congestion Management process, which includes explicit consideration and appropriate implementation of Travel Demand Management, Transportation System Management, and Intelligent Transportation Systems strategies during all stages of corridor development and operations.
TDM3-002: Support an integrated planning process that maximizes existing transportation system capacity before considering major capital infrastructure investment in the multimodal system.
TDM3-003: Request local agency staff and North Central Texas Council of Governments staff to meet with all major employers (defined as employers of 250 or more employees) to discuss and encourage the implementation of voluntary employer trip reduction programs.
TDM2-100: Employer Trip Reduction Program
TDM2-200: Regional Vanpool Program
TDM2-300: Park-and-Ride Facilities
TDM2-400: Transportation Management Associations
TSMO2-001: Intersection Improvement Program
TSMO2-003: Bottleneck Improvement Program
TSMO2-004: Special Events Management Program
TSMO2-005: Bottleneck Program for Regional Corridors
TSMO2-006: Intelligent Transportation Systems Implementation Program
TSMO2-007: Regional Intelligent Transportation Systems Architecture Program
TSMO2-008: Advanced Traveler Information System Implementation Program
TSMO2-009: Advanced Traffic Management System Implementation Program

TSMO2-010: Advanced Public Transportation System Implementation Program

TSMO2-011: Intelligent Transportation Systems Interoperability Program

FT3-007: Additional and improved interchanges, frontage roads, and auxiliary lanes should be considered and implemented as appropriate on all freeway/tollway facilities in order to accommodate a balance between mobility, access, operational, and safety needs.

SD3-001: Support mixed-use, infill, and transit-oriented developments that utilize system capacity, reduce vehicle miles of travel, and improve air quality through improved rail mobility and access management.

Next steps

By using data and resources developed by the CDC, NCTCOG was able to apply a health lens to its long-range transportation plan and identify how many of the transportation strategies it was already pursuing improve the health of the region. NCTCOG will continue to include health indicators and strategies in its next long-range transportation plan. It is also interested in coordinating with public health professionals on shared research goals and to ensure that transportation planners and public health professionals are speaking a common language. Eventually, NCTCOG is considering developing public health performance measures to incorporate into its planning process.