Topic Brief

Performance Measurment for Active Transportation

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Over the last few years there has been an ever increasing interest in public health as it relates to transportation. Encouraging active travel is an important tool for public health because it offers a way of changing the context of behavior and can influence whole populations. There is a logical connection between the planning of public space and infrastructure at the local level and how those plans influence activity and health outcomes.

For their part, transportation planners want to build and maintain communities that offer options for safe and active travel. Transportation systems that encourage walking or bicycling can help people to increase their levels of physical activity, which has many benefits, but also bring neighborhoods together, improve children's performance in school (***Insert citation), and improve access for vulnerable or disadvantaged parts of the community.

Health inspired planning intersects with livability, sustainability, air quality and safety in important ways. For example, health promoting policies include Complete Streets, Safe Routes to School, and Multi-modal level of service analysis (LOS). Smart growth policies, accessible design, and transit oriented development promote active travel. Coordinating these programs and plans is part of the challenge of incorporating planning for health into the urban planning activities.

Understanding how land-use and the built environment impact health and activity levels of people in a community is key. Transportation infrastructure is a critical aspect of the built environment—but so is having places to go within walking distance. The presence of sidewalks, bike lanes, bike trails, and transit in addition to the accessibility of trip generators such as employers, shopping centers, and recreational facilities can influence whether the public uses vehicles or chooses healthier alternatives such as walking and biking in their daily travel.

Developing Data for Active Transportation Planning and Performance Measurement

The first step in establishing a data system for understanding active travel is an inventory of facilities and programs related to physically active travel options, such as walking and bicycle, but can also include access to parks and recreational opportunities. A complete inventory would include what kind and how many miles of sidewalks, paths, and trails are available, crosswalks and intersection treatments, and other design attributes to support for walking and bicycling in the community. In the inventory process, gaps and barriers can be identified and corrected to enhance and complete the connectivity of the network. These baseline data are an important first positive step for identifying the current conditions and developing goals and performance measures related to incorporating health indicators into mobility plans.

The next logical step is information on the amount and type of current active travel, if possible by different population groups (e.g. children, workers, older people). Regular counts of pedestrian activity on links or at intersections are critical for design and safety planning. But for population estimates—so valuable in developing health indicators--sample surveys like household travel surveys are necessary. The data in sample surveys are valuable to help understand active people and the

purpose, trip length, and timing of their activity, and—equally important--identify the characteristics of the most sedentary groups. In measuring active travel, planners should include walk access to transit, and activities often not considered 'trip' such as walking the dog.

Common indicators used as measures of active travel include the daily per capita minutes and miles of activity, the percent of the population (in groups, if possible) that achieve various levels of activity—such as 10 minutes, 20 minutes, or 30 minutes of active travel or more per day, the percent of children within two miles of school who walk or bike, and the percent of adults who report no active travel at all (sedentary). Some local surveys have begun to obtain height and weight of respondents. The biggest concern about sample surveys is the dependence on self-reported activity levels—which may not be reliable. The advent of wearable GPS devices to help capture incidental trips, including walking and biking activity, has a lot of promise for improving the measurement of trip-making and activity levels.

Estimating the amount and type of active travel in a community is a critical step in establishing a baseline against which to set goals, measure progress, and thereby identify the policies and programs that are most effective in encouraging people to walk and bike more. But for most metropolitan planning organizations, obtaining estimates of pedestrian and bicyclist activity can be a challenge.

Because of this, many areas turn to available data to set baseline activity, and use these data as part of the performance measurement. For example, larger geographic areas, such as counties, data provided regularly by the American Community Survey may be employed in performance measures, such as the percent of workers who usually walk or bike to work. But this may be a bit of "everything looks like a nail because I have a hammer". The work trip is the least likely of all travel to be made by walking or biking, for many reasons, including that it is typically the longest trip of the day.

As shown in Table 1, at the national level fewer than 80 percent of those usually walk to work actually walked to work on their travel day. This is a common phenomenon for all modes of travel in that the typical day does not represent actual behavior activity levels for all people. Likewise less than 70 percent of those who usually take transit actually took transit on their travel day. This shows that the usual mode data can overestimate the level of walking and biking to work, but note that some people who do not typically walk or bike to work do so on their travel day. For example, over 10 percent of workers who usually use transit actually walked to work on their travel day.

Insert Usual versus Actual Table Here**********

The relationship between walking, biking, trip making, and land use are complex, co-vary with key demographic characteristics, and are highly integrated into daily and weekly activity patterns. In addition to the number and length of walking and biking trips, another important measure is the percent of people who make have no reported active travel at all. The data show that….

Insert Percent of People with No Reported Walk Trips 'Last Week' here**********

The population groups identified as sedentary can be encouraged through public outreach and advocacy activities, as well as through personal goals, to engage in e in walking or biking as part of their daily travel.

***These are from the National Physical Activity Plan, at: www.physicalactivityplan.org/
**Need edits to reduce redundancy and so as not to be “recommendations”

To achieve the goals of safe and active transportation, local planners can:

- Support and increase incentives for community projects to create safe and accessible active transportation networks, including not just roadways with pedestrian, bicycle, and transit accommodation, but also networks of greenways, trails, and multi-use pathways
- Support and increase incentives for the adoption of policies that support “complete streets” standards in the planning and development of transportation networks.
- Support and increase incentives for the adoption and expansion of “safe routes” initiatives such as “Safe Routes to School,” “Bike-to-Work,” and other active transportation programs.
- Increase incentives for locating public facilities (e.g., schools, parks, post offices, etc.) within convenient walking distance of major residential areas.
- Support the awarding of transportation funding based on the anticipated positive impact on active transportation levels and related benefits, such as safety improvements, congestion reduction, air quality enhancement, and overall health benefits.
- Create competitive grants or incentives to implement health impact assessments in planning processes as stand alone requirements or woven into existing permitting steps (such as transportation and environmental review).
- Create priority funding to revitalize economies in small and rural communities that integrate land-use, transportation, community design and economic development planning in projects that support increased physical activity and improved health outcomes.
- Institute a recognition and awards process that would create incentives for planning and projects that accommodate desired “standards of practice” that seek to create or enhance activity-friendly environments and systems.
- Enhance traffic safety in areas where persons are or could be more physically active (e.g., schools, parks, recreation areas).
- Improve access to public transportation.
- Identify standards and methods (e.g., CPTED – “Crime Prevention Through Environmental Design”) to enhance personal safety and increase physical activity.

Resources

There are many resources available to urban planners related to health and transportation at the larger level, and transit access, pedestrian, and bicycle policy and planning, at the local level including:

Basics about the Health Impact Assessment from the CDC: http://www.cdc.gov/healthyplaces/hia.htm

Health Impact Projects description and funding information: http://www.healthimpactproject.org/

FHWA Report on best practices for bringing health into MPO planning:
http://www.planning.dot.gov/documents/Volpe_FHWA_MPOHealth_12122012.pdf

Using transportation/travel data and model outputs as inputs into analysis of public health outcomes. For example, see the use of travel information in the Health Impact Modeling Tool (ITHIM):
http://www.mtc.ca.gov/news/press_releases/rel595.htm

This site lets you rank your county across a number of health indicators:
http://www.countyhealthrankings.org/health-factors/built-environment

Prevention.org has case studies of neighborhood level improvements that promote active transportation:
http://www.preventioninstitute.org/index.php?option=com_jlibrary&view=article&id=114&Itemid=127

Bicycle Planning Best Practices and Count Methodology:
http://www.psrc.org/assets/5430/UDP_Bicycle_Studio_Final_20110111.pdf

NCHRP Report 797 Guidebook on Pedestrian and Bicycle Volume Data Collection
http://www.trb.org/main/blurbs/171973.aspx