
Transportation and Health: Progress on the Road to Healthy Communities

Ruth Petersen, MD, MPH

Chief, Chronic Disease and Injury Section



Overview

- Brief background on health impact of the built environment
 - Review the policy issues and potential solutions from the policy analysis conducted with the Healthy Environments Collaborative
 - Discuss the issues and potential solutions
-

Physical Activity Recommendations

- Adults needs a minimum of 150 minutes of moderate physical activity each week
 - Children and adolescents need 60 minutes or more of physical activity daily
 - Generally, the more you do, the more benefits you receive
-

Meeting the Recommendations

- Physical Activity recommendations can be met in small doses of at least 10 minutes at a time
 - Recreation, active transportation (walking, biking), exercise
-

Behaviors and Health

For Chronic Disease:

- Overweight/Obesity
- Type II Diabetes
- Heart Disease
- Stroke
- Hypertension
- Colon, breast cancers

Inactivity = a strong independent risk factor

Source: U.S. Department of Health and Human Services, 2008

Land Use: Health Impact

- ❑ The more facilities that are available and **destinations** that are close by, the more people walk
- ❑ People who live within walking **distance of trails, parks or stores** report higher walking than those who do not



Place Matters: Health Impact

Communities that Support Active Living could...

- Generate 2 more walk/bike trips per person per week
- Prevent up to 1.7 pounds of weight gain per year; 35% lower risk of obesity
- Increase total minutes of physical activity (40% more)
- Increase life expectancy by 4 years



Public Transportation: Health Impacts

- ❑ Most trips begin and end with small doses of physical activity.
- ❑ People who used public transportation for any reason were less likely to be sedentary or obese than adults who did not use public transportation.
- ❑ According to one study of obesity-related medical costs, the extra walking related to transit use was estimated at a lifetime savings of \$5,500 per person in 2007 dollars.

–Robert Wood Johnson report



Healthy Environments Collaborative (HEC)

- NC Departments of:
 - Transportation
 - Commerce
 - Environment and Natural Resources
 - Health and Human Services
- Mission: Integrate and influence interdepartmental efforts to improve the health of North Carolina's people, environments and economy.



Policy Analysis – Purpose



- To understand the state policy landscape that shapes built environments for physical activity in our state

How can we shape state policy to improve North Carolina's infrastructure for physical activity and help people to be more active?

Policy Analysis – Components

- Inventoried 374 policies in DHHS, DOT, Commerce and DENR that directly or indirectly influence built environments for physical activity

 - Interviewed state and local agencies
 - State leaders and staff (n=14; six from NCDOT)
 - Local municipal teams (n=9)
 - Produced 190 policy issues
-

Policy Analysis – Outputs

- Report describing the top **policy issues** identified in stakeholder interviews

What policy issues need to be addressed for state agencies to improve our infrastructure for physical activity?

- Report listing **potential solutions** to the policy issues
-

Policy Issues & Potential Solutions: *Focus on Transportation*



Policy Issues & Potential Solutions: *Themes*

1. Interagency data collection and sharing
 2. Funding for active living infrastructure
 3. Regulatory policy
 4. Land use planning
 5. Transportation planning
 6. Assessing the impact of policy & projects on health
-

1. Interagency Data Collection & Sharing: *Policy Issues*

- NC agencies need to work better together to collect and share data on active transportation infrastructure

How can we collect and share GIS data on sidewalks, bicycle features, multi-use paths, trails, parks and open space?



1. Interagency Data Collection & Sharing: *Policy Issues*

- NC agencies need methods and indicators to assess economic impacts of active transportation

When there is a plan or project that improves connectivity or multimodal access, such as a Complete Street, how can NC DOT and NC DPH assess the health and economic impacts?

1. Interagency Data Collection & Sharing:

Potential Solutions

- Amend select programs and/or processes (e.g., Complete Streets, or Bike/Ped Plan) to include data collection (such as miles of sidewalk or multi use paths) that contributes to an infrastructure inventory
-

1. Interagency Data Collection & Sharing:

Potential Solutions

- ❑ DHHS and DOT collaboration to develop health impact data systems
 - ❑ State-local collaboration to include baseline community health metrics in Comprehensive Transportation Plans and Long Range Transportation Plans
 - ❑ State-local collaboration to develop requirements for municipalities and RPOs/MPOs to inventory and share ped/bike facilities data
-

2. Funding for Active Living Infrastructure: *Policy Issues*

- State funding for trails, sidewalks, ped/bike planning, etc., is limited
 - Fuel tax revenues are decreasing
 - Larger scale ped/bike projects such as greenways sometimes compete with roadway projects

How can multimodal projects “compete” with other, more data-driven priorities?

2. Funding for Active Living Infrastructure: *Potential Solutions*

- Update the state's Powell Bill
 - Amend rules to decrease reliance on diminishing gas tax revenue
 - Amend rules to encourage local expenditure on projects which align with local health goals to increase physical activity infrastructure
-

2. Funding for Active Living Infrastructure: *Potential Solutions*

- ❑ Promote use of legislation to acquire land for physical activity infrastructure such as sidewalks and multi-use paths when appropriate
 - ❑ HEC agencies collaborate to simplify and standardize processes that serve local communities such as grant reporting requirements, integrated planning processes
-

3. Regulatory Policy: ***Policy Issues***

- ❑ Complex state regulatory landscape for land use and transportation planning puts smaller, lower capacity local governments at a disadvantage
- ❑ Interpretation of design guidelines can be confusing to locals when their needs and goals are not being met

How can local government and regional state agency staffs work more collaboratively and efficiently to make multimodal designs a reality?

Regulatory Policy Spotlight: *Greenways*

- Permitting can be highly contextual
 - NCDOT recommends 10' greenways for safety
 - DENR recommends 6'-8' foot greenways for environmental protection



3. Regulatory Policy: *Potential Solutions*

- HEC member agencies develop capacity of local clients and grant recipients to request and contract for multimodal transportation improvements
 - Amend rules to standardize attention to multimodal transportation throughout the agency
 - Update requirements
 - Clarify roles and responsibilities
 - Develop guidelines for discretionary decisions at Division Offices
-

4. Land Use Planning: *Policy Issues*

- North Carolina does not require municipal land use plans
 - Complete Streets might be difficult to implement in municipalities lacking updated land use plans

How can we incentivize local land use planning that supports active transportation?

4. Land Use Planning:

Potential Solutions

- ❑ Amend rules or enact new rule requiring land use planning or land development plan with minimum standards as a pre/co-requisite for technical assistance for transportation planning
 - ❑ Enact rule requiring effective land-use planning and implementation as a pre-requisite to NCDOT's commitment to Complete Streets planning for that locality
-

4. Land Use Planning: *Potential Solutions*

- ❑ Include “enacted land use plan” as TIP project scoring criterion
 - ❑ Incentivize land use planning through bicycle and pedestrian planning grant program or other programs
 - ❑ NCDOT, DENR and Commerce’s Community Planning Division could collaborate to develop an integrated planning service for municipalities
-

5. Transportation Planning: ***Policy Issues***

- ❑ Transportation divisions across the state could encourage locals to engage in more ped/bike planning
- ❑ Local funding match for ped/bike projects is a hardship for small municipalities

How can ped/bike planning become a routine part of the transportation planning process in communities?

5. Transportation Planning: *Policy Issues*

□ The public needs to see more multimodal and Complete Streets projects statewide to lend support and create demand



How can limited funding for Complete Streets be leveraged for maximum impact?

5. Transportation Planning: *Policy Issues*

- ❑ No federal or state authority exists requiring active transportation improvements when developing or renovating built environments
- ❑ Successful implementation of Complete Streets will require guidelines that span DOT functions and geographic areas

How might funding and permitting regulations linked to traditional design standards be adjusted to support Complete Streets?

5. Transportation Planning: *Potential Solutions*

- ❑ Amend next version of Prioritization 2.0 to enhance multimodal considerations
 - ❑ Develop eligibility and selection criteria for multimodal demonstration projects
-

5. Transportation Planning: *Potential Solutions*

- ❑ Develop incentives for planners and engineers to embrace multimodal planning and project design
 - ❑ Enact rule that hold engineers and Division Office leadership accountable to implementing multimodal planning and design
 - ❑ Develop Complete Streets guidelines that ensure that all staff incorporate multimodal solutions when identified as a need by the community
-

6. Assessing the Health Impact: ***Policy Issues***

- Opportunities and barriers to making healthy choices are created by the natural and built environment. Therefore, health is impacted by policies from many government agencies and the private sector.

How can we demonstrate that health is impacted by all policy?

6. Assessing the Health Impact: *Policy Issues*

- Standard impact assessments (such as Environmental Assessments and/or CIA) do not include health indicators such as “physical activity”

How can the environmental assessment or CIA process include health impact indicators?

What about projects that bypass the CIA process (e.g., small rural bridges)?

6. Assessing the Health Impact: *Policy Issues*

- Mitigation projects could potentially have positive or negative health impacts
 - **Positive impact example:** An EEP project could be coordinated with a greenway project
 - **Negative impact example:** A park built to offset a highway expansion is built too close to the highway for healthy air quality

How can health become part of the equation when planning for mitigation projects?

6. Assessing the Health Impact: *Potential Solutions*

- DOT could pilot incorporating Health Impact Assessment methods in CIA project studies
 - HEC agencies adopt/amend rules
 - Requiring assessment of health-related impacts
 - Requiring description of “anticipated health impacts” (e.g. physical activity opportunities) whenever design variances are required
-

6. Assessing the Health Impact: *Potential Solutions*

- Include a health perspective within key NCDOT guidance documents
 - Complete Streets implementation guidelines
 - 2040 plan
 - Sustainability Blueprint
 - Provide local transportation professionals with resources that help them link their work to its impact on population health
-

