Public Health Considerations for Greenways in Henderson County

Henderson County Environmental Advisory Committee
December 3, 2015

Henderson County Department of Public Health – Steve Smith
Definition of Public Health

What society does collectively to assure the conditions for people to be healthy.

- Institute of Medicine, *The Future of Public Health*, 1988
The Public Health System

- Schools
- Neighborhood Orgs.
- Civic Groups
- Non-Profit Organizations
- Nursing Homes
- Community Centers
- EMS
- Hospitals
- Doctors
- CHCs
- Drug Treatment
- Law Enforcement
- Tribal Health
- Employers
- Corrections
- Elected Officials
- Home Health
- Mental Health
- Faith Institutions
- Fire
- Transit
Perspectives on Greenways

• A connected system of parks and parkways is manifestly far more complete and useful than a series of isolated parks.
  – Frederick Law Olmstead, 1822-1903

• Greenways are about connections: connections between people and the land, between public parks, natural areas, historic sites, and other open spaces, between conservation and economic development and between environmental protection and our quality of life.
  - Chuck Flink & Robert Searns, Greenways, 1993
Perspectives on Greenways

• Those who do not find time for exercise will have to find time for illness.
  - Proverb

• Without health there is no happiness. An attention to health, then, should take the place of every other object.
  - Thomas Jefferson, 1787
Greenways
What Works for Health

Health Behaviors (30%)
- Tobacco Use
- Diet & Exercise
- Alcohol & Drug Use
- Sexual Activity

Clinical Care (20%)
- Access to Care
- Quality of Care

Social & Economic Factors (40%)
- Education
- Employment
- Income
- Family & Social Support
- Community Safety

Physical Environment (10%)
- Air & Water Quality
- Housing & Transit

http://www.countyhealthrankings.org/roadmaps/what-works-for-health
Factors that Affect Health

- **Smallest Impact**
  - Counseling & Education
  - Clinical Interventions
  - Long-lasting Protective Interventions
  - Changing the Context to make individuals’ default decisions healthy
  - Socioeconomic Factors

- **Examples**
  - Eat healthy, be physically active
  - Rx for high blood pressure, high cholesterol, diabetes
  - Immunizations, brief intervention, cessation treatment, colonoscopy
  - Fluoridation, 0g trans fat, iodization, smoke-free laws, tobacco tax
  - Poverty, education, housing, inequality

- **Largest Impact**
Adult Obesity Rates (2014) NC = 29.7%
Poverty

- In Henderson County, WNC and NC the total poverty rate increased overall throughout the period cited.
- The total poverty rate in Henderson County was lower than the comparable regional rate and state rate in each period cited.

Estimated Poverty Rate

<table>
<thead>
<tr>
<th>County</th>
<th>Percent Total Population Below 100% Poverty Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henderson County</td>
<td>12.7</td>
</tr>
<tr>
<td>WNC Region</td>
<td>15.7</td>
</tr>
<tr>
<td>State of NC</td>
<td>15.5</td>
</tr>
</tbody>
</table>

Source: US Census Bureau
Health Insurance

• The percent of uninsured adults age 18-64 in Henderson County, WNC and NC increased overall between 2009 and 2012 but have decreased since. Throughout the period cited, the WNC Region had the highest proportion of uninsured adults.

Percent of Population Without Health Insurance, by Age Group

<table>
<thead>
<tr>
<th>County</th>
<th>2009</th>
<th></th>
<th>2010</th>
<th></th>
<th>2011</th>
<th></th>
<th>2012</th>
<th></th>
<th>2013</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-18</td>
<td>18-64</td>
<td>0-18</td>
<td>18-64</td>
<td>0-18</td>
<td>18-64</td>
<td>0-18</td>
<td>18-64</td>
<td>0-18</td>
<td>18-64</td>
</tr>
<tr>
<td>Henderson County</td>
<td>10.4</td>
<td>23.8</td>
<td>10.0</td>
<td>21.6</td>
<td>9.2</td>
<td>25.1</td>
<td>9.7</td>
<td>26.1</td>
<td>8.2</td>
<td>24.6</td>
</tr>
<tr>
<td>WNC Region</td>
<td>9.9</td>
<td>24.2</td>
<td>9.7</td>
<td>26.0</td>
<td>9.1</td>
<td>25.2</td>
<td>9.3</td>
<td>25.4</td>
<td>8.6</td>
<td>25.0</td>
</tr>
<tr>
<td>State of NC</td>
<td>8.7</td>
<td>21.9</td>
<td>8.3</td>
<td>23.5</td>
<td>7.9</td>
<td>23.0</td>
<td>7.9</td>
<td>23.4</td>
<td>6.9</td>
<td>22.5</td>
</tr>
</tbody>
</table>

• The age group 0-18 has a significantly lower percentage of uninsured than the adult age group, due at least partly to their inclusion in NC Health Choice. Nevertheless, throughout the period cited except for 2013 Henderson County had the highest proportion of uninsured youth.

Source: US Census Bureau
Leading Causes of Death: Race Comparison

<table>
<thead>
<tr>
<th>Henderson County Rank by Descending Overall Age-Adjusted Rate (2009-2013)</th>
<th>Rate Among non-Hispanic Whites</th>
<th>Rate Among non-Hispanic Blacks</th>
<th>% Black Rate Difference from White Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total Cancer</td>
<td>155.9</td>
<td>192.8</td>
<td>+4.5%</td>
</tr>
<tr>
<td>2. Diseases of the Heart</td>
<td>149.7</td>
<td>268.0</td>
<td>+79.0%</td>
</tr>
<tr>
<td>3. Chronic Lower Respiratory Disease</td>
<td>43.7</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>4. All Other Unintentional Injuries</td>
<td>40.2</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>5. Cerebrovascular Disease</td>
<td>35.4</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>6. Alzheimer’s Disease</td>
<td>30.8</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>7. Suicide</td>
<td>17.7</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>8. Pneumonia and Influenza</td>
<td>14.8</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>9. Chronic Liver Disease and Cirrhosis</td>
<td>12.3</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>10. Unintentional Motor Vehicle Injuries</td>
<td>13.0</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>11. Diabetes Mellitus</td>
<td>11.4</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>12. Nephritis, Nephrotic Syndrome, Nephrosis</td>
<td>9.3</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>13. Septicemia</td>
<td>6.5</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>14. Homicide</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>15. AIDS</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: NC State Center for Health Statistics
Population of Ethnic and Racial Minorities in Henderson County

Source: US Census 2010
Geographic Unit: Block Group
Map produced with Community Commons
Henderson County Heart Disease Mortality Rates 2009-2013

Source: NC State Center for Health Statistics 2009-13

Geographic Unit: Census tract

Map produced by the NC State Center for Health Statistics

Rates are not age adjusted.
Adult Diabetes

• The average self-reported prevalence of Henderson County adults with diabetes was 7.7% in the period from 2005 - 2011.

• Over the same period the WNC average was 9.0%.

• Prevalence of self-reported adult diabetes has been rising over time in both jurisdictions.

Source: Centers for Disease Control and Prevention, via BRFSS
North Carolina Costs

The Cost of Unhealthy Lifestyles in North Carolina
Total= $57.36 billion

Excess Weight, $15.57
Physical Inactivity, $11.90
Tobacco Use, $4.27
Diabetes, $3.71
Low Fruit/Vegetable Intake, $3.07
Depression, $3.93
Tobacco Use, $4.27
Hypertension, $4.58
High Cholesterol, $10.33

Source: Tipping the Scales: How Obesity and Unhealthy Lifestyles have become a Weighty Problem for the North Carolina Economy. Be Active North Carolina. Available at: www.beactive.org
Estimated Adult Obesity-Attributable Medical Expenditures (2003 dollars in millions)

Estimated Annual Obesity-Attributable Medical Expenditures for Adults

N.C. is 10th Highest for Obesity-Attributable Costs

Estimated Annual Obesity-Attributable Medical Expenditures for Adults
The 10 Most Expensive States

LEVELS OF PREVENTION

- Primordial prevention: establish or maintain conditions to minimise hazards to health
  - Advocacy for social change to make physical activity easier

- Primary prevention: prevent disease well before it develops
  - Primary care advice as part of routine consultation

- Secondary prevention: early detection of disease (e.g., Screening & Intervention for Pre diabetes)
  - e.g., primary care risk factor reduction for those at risk of chronic disease, falls, injury

- Tertiary prevention: treat established disease to prevent deterioration
  - e.g., exercise advice as part of cardiac rehabilitation
Health Impact Assessments

HIA is a combination of procedures, methods and tools that systematically judges the potential and sometimes unintended effects of a proposed project, plan or policy on the health of a population and the distribution of those effects within the population.

HIA identifies appropriate actions to manage those effects HIA’s involve six main steps, including:

Screening, Scoping, Assessment, Recommendations, Reporting and Monitoring/Evaluation.

Community involvement is encouraged at every step of the HIA.


National Academies for the Sciences.
HIA Excerpts

- Based on the literature, the Eastside Greenway has the potential to promote health equity and mitigate health disparities. Developing the ESG through the diverse communities on the Eastside of Cuyahoga County could:

- Increase access to physical activity, recreation, and social connection for over 275,000 people living within a ½ mile of the proposed trail system, of which more than half (139,121) are African American.

- Increase physical activity and decrease the odds of overweight while contributing to decreases in health disparities.
Based on literature, having a developed network of trails and park systems such as the ESG, will increase opportunities for relaxation and social interaction, in turn, reducing stress, improving health behaviors, and improving mental health for residents.

Residents living in close proximity (½ mile radius) to the ESG will have improved social connections with neighbors as compared with those living in car-oriented suburbs.
HIA Excerpts

Access to recreation and transportation based physical activity opportunities correlates with healthier communities.

It is about creating contexts for healthy behaviors within the region’s communities.

This study suggests that changing communities by making them safer and offering people access to community parks, public recreation facilities, and walking and biking trails may help reduce the prevalence of overweight by promoting physical activity and healthy lifestyles.
In southeastern Missouri, 55 percent of trail users (who responded to the Bootheel and Ozark Health Projects survey) are exercising more now than before they had access to a trail.

The Indiana Trails Study, which surveyed trail users on six different trails in Indiana, found that in all six locations, over 70 percent of trail users reported that they were getting more exercise as a direct result of the trail.
HIA Excerpts

...influence the following factors of health:
- access to food choices
- access to health care
- access to physical activity opportunities

...impact the following health outcomes of the community:
- obesity & related disease
- injury
- quality of life
- mortality
- mental health
- asthma & respiratory conditions
HIA Excerpts

One study found that thirty percent of people who are physically active exercise in public parks and another found that people who live near trails are 50% more likely to meet physical activity guidelines.

Individuals are more likely to utilize parks if they are close to where they live, are safe, and are regularly maintained.

Recent studies calculated that use of greenway trails can provide per capita medical benefit of $564.
Lack of pedestrian- and bicycle-friendly streets and trails is recognized as one of the leading systemic causes for failure to achieve minimum recommended amounts of physical activity.
HIA Excerpts

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References

- The State of Obesity – Robert Wood Johnson Foundation
  www.stateofobesity.org

- Eastside Greenway Health Impact Assessment – Executive Summary

- Health Impact Assessment – Delaware
  http://delawaregreenways.org/media/Exec%20Summ_HIA_V6_Shortened.pdf

- Mid-South Regional GreenPrint Health Impact Assessment

- Rails to Trails Conservancy – Health and Wellness Benefits
  https://www.railstotrails.org/resourcehandler.ashx?id=3070

- Increasing Physical Activity Through Community Design

- Middlesex Greenway Access Plan Health Impact Assessment

- East Bay Greenway Health Impact Assessment