

Public Health Considerations for Greenways in Henderson County

Henderson County Environmental Advisory Committee

December 3, 2015

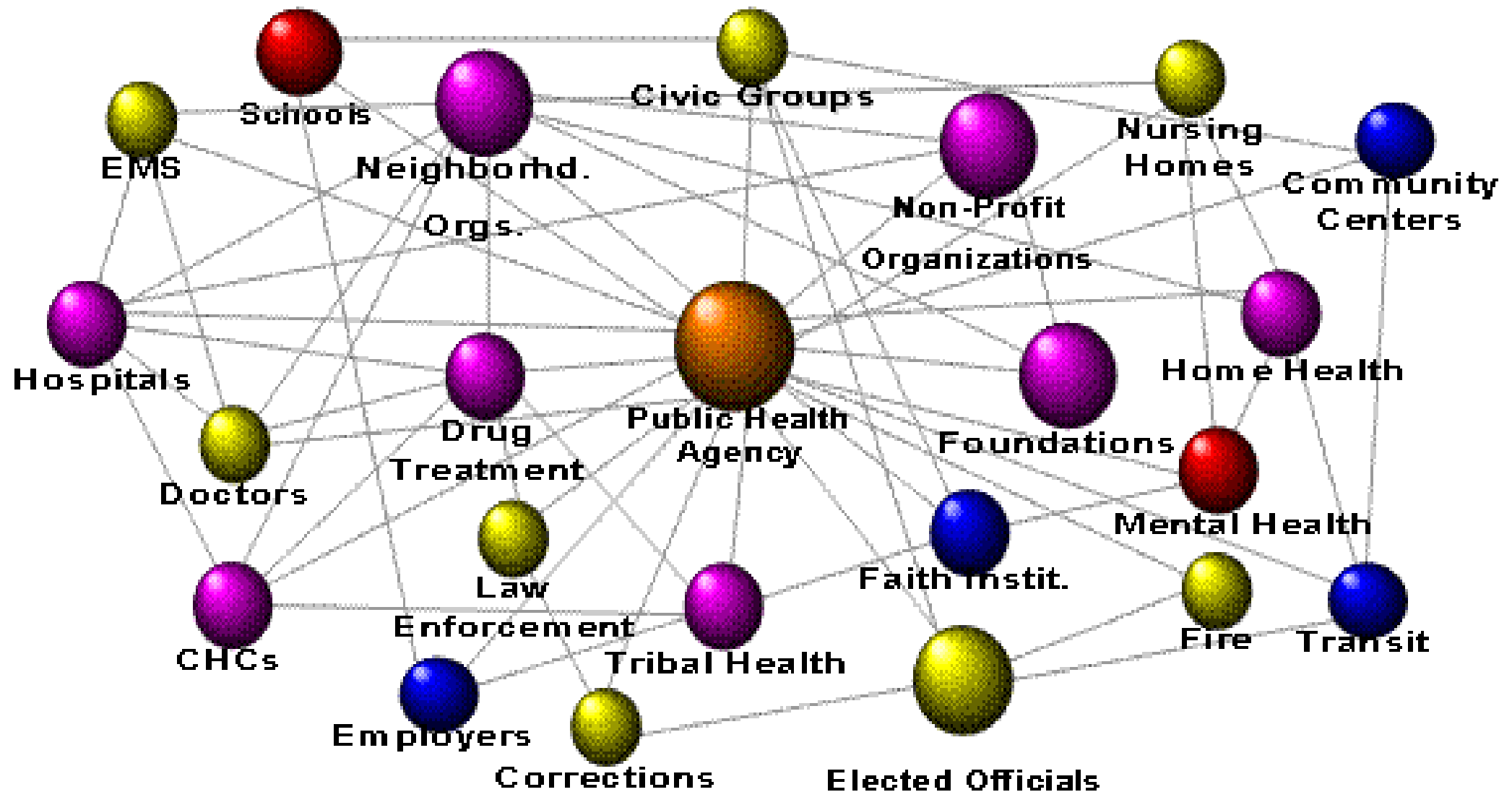
Henderson County Department of Public Health – Steve Smith

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



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

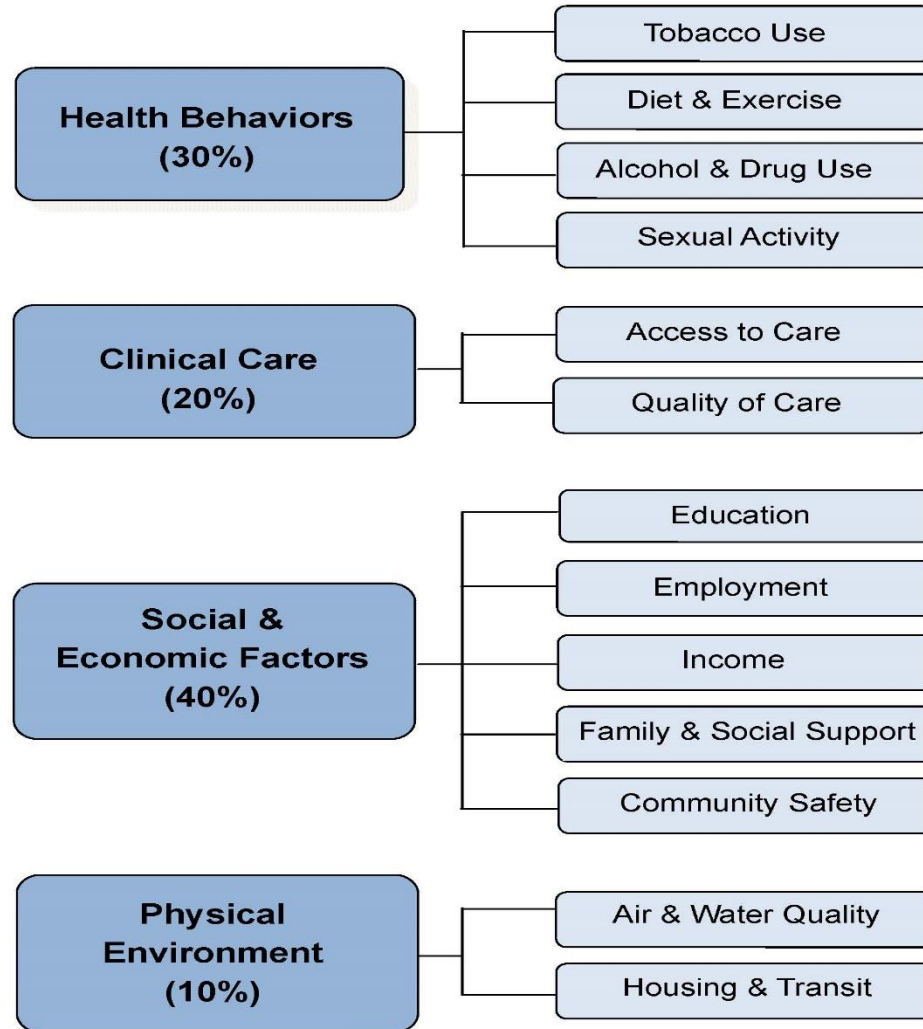
Perspectives on Greenways

- 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

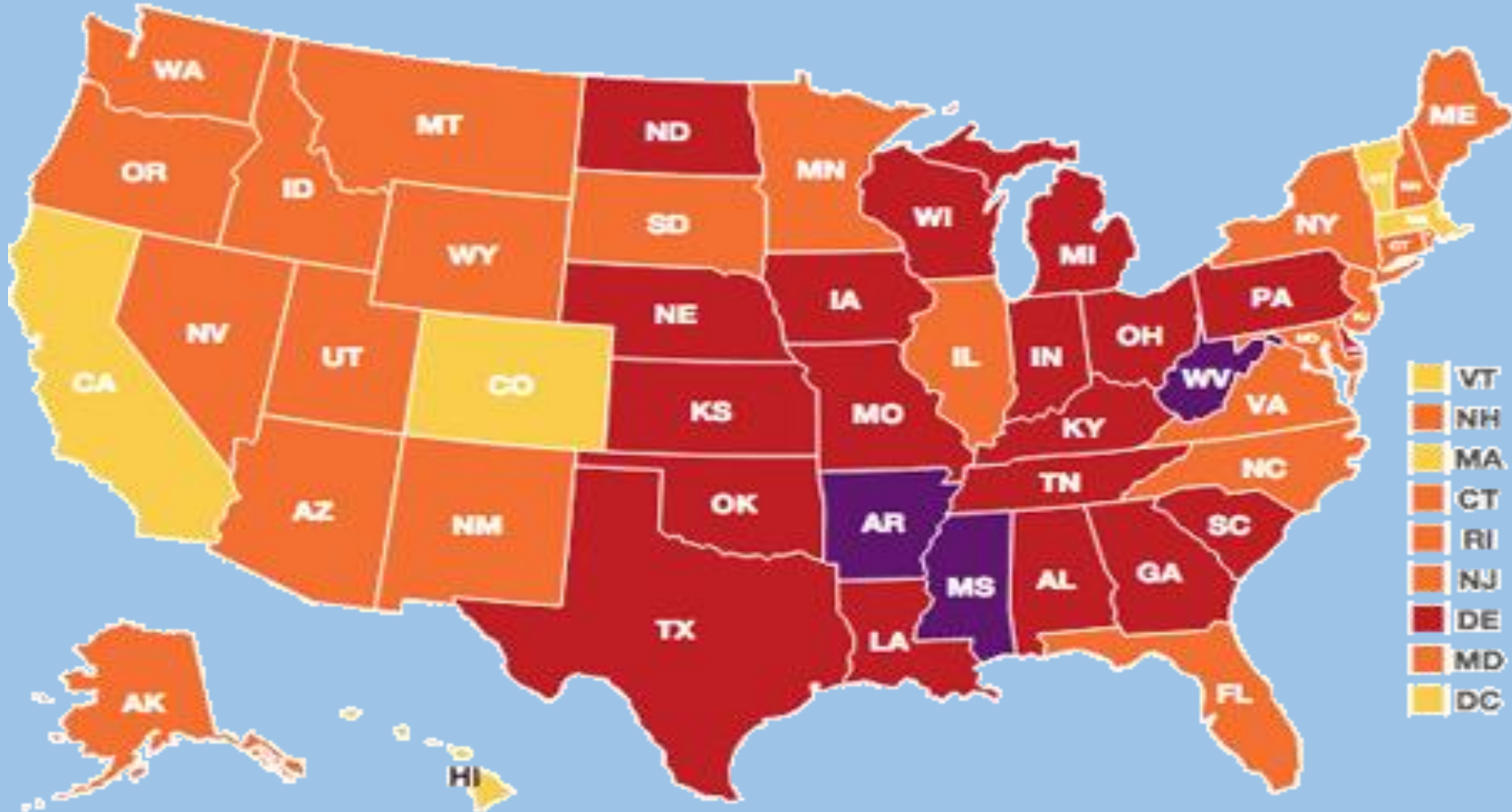


Factors that Affect Health



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

County	Percent Total Population Below 100% Poverty Level			
	2006-2010	2007-2011	2008-2012	2009-2013
Henderson County	12.7	12.6	13.5	14.1
WNC Region	15.7	16.1	16.9	18.0
State of NC	15.5	16.1	16.8	17.5

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

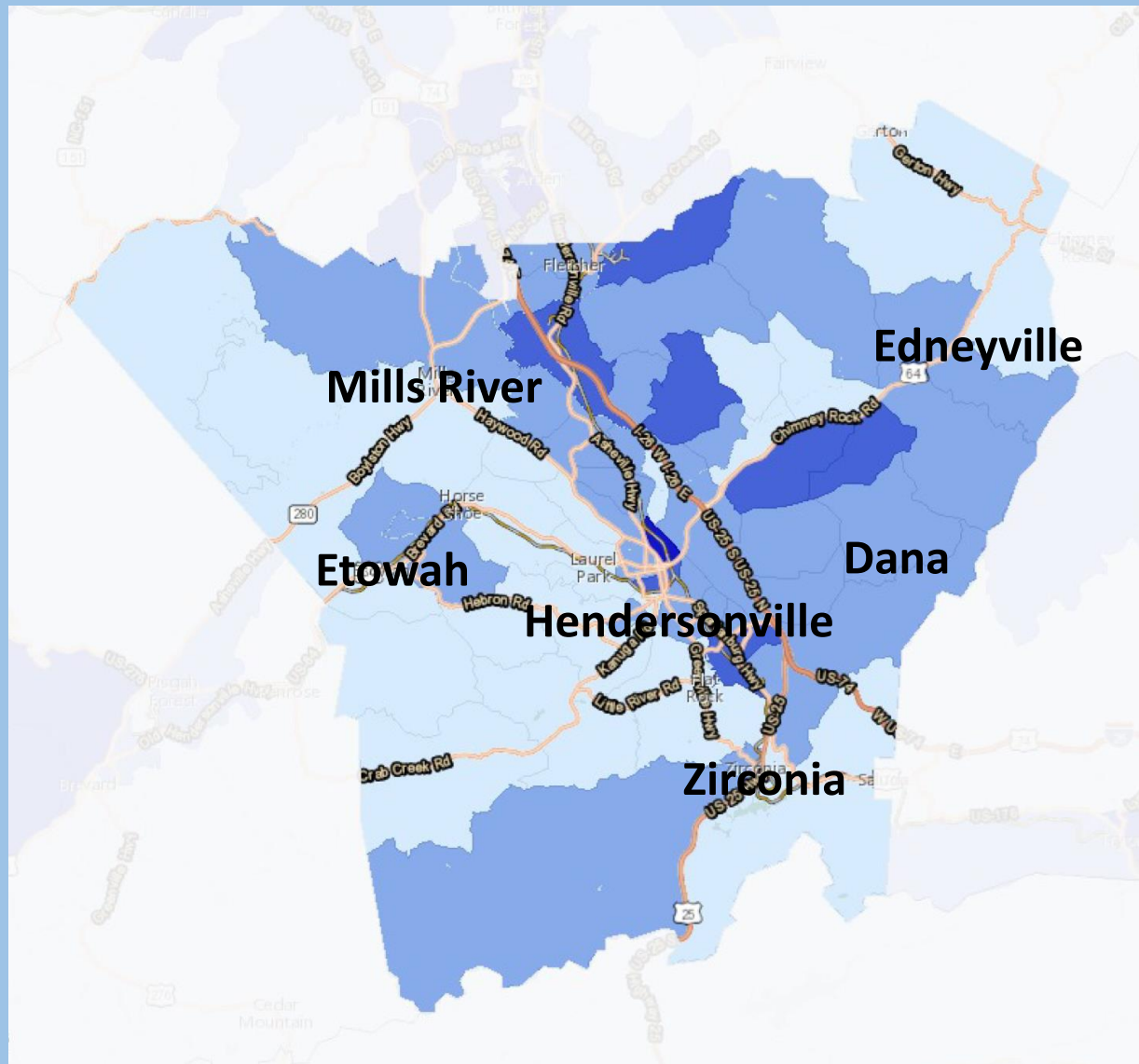
County	2009		2010		2011		2012		2013	
	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64
Henderson County	10.4	23.8	10.0	21.6	9.2	25.1	9.7	26.1	8.2	24.6
WNC Region	9.9	24.2	9.7	26.0	9.1	25.2	9.3	25.4	8.6	25.0
State of NC	8.7	21.9	8.3	23.5	7.9	23.0	7.9	23.4	6.9	22.5

- 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.

Leading Causes of Death: Race Comparison

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

Population of Ethnic and Racial Minorities in Henderson County



Population, All Minority, Total by Block Group,
US Census 2010

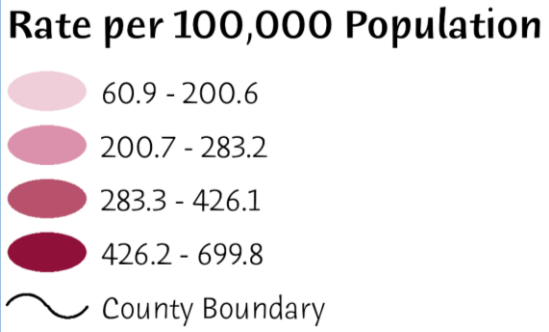
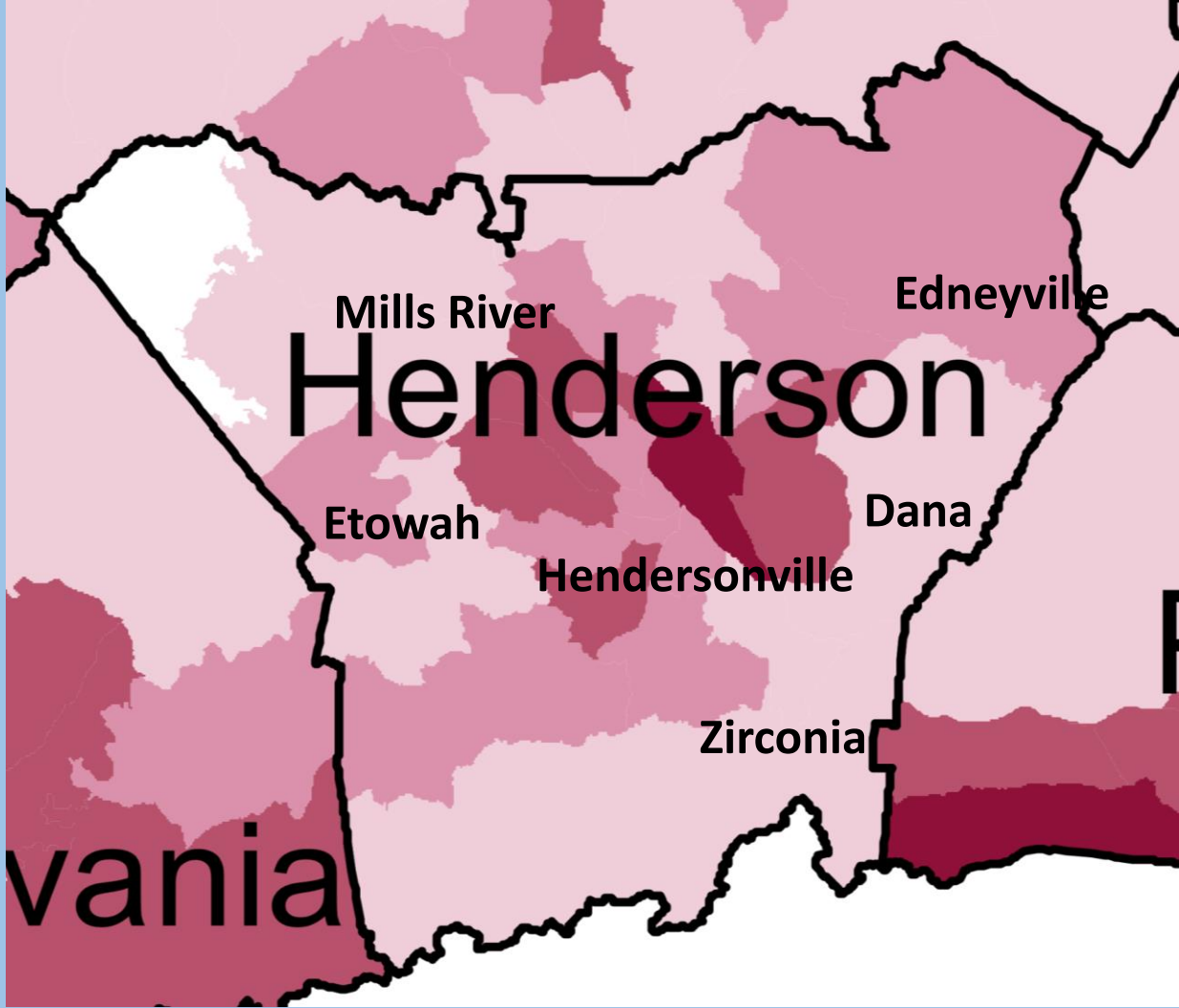
- Over 600
- 301 - 600
- 101 - 300
- Under 101
- No Population or No Data

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

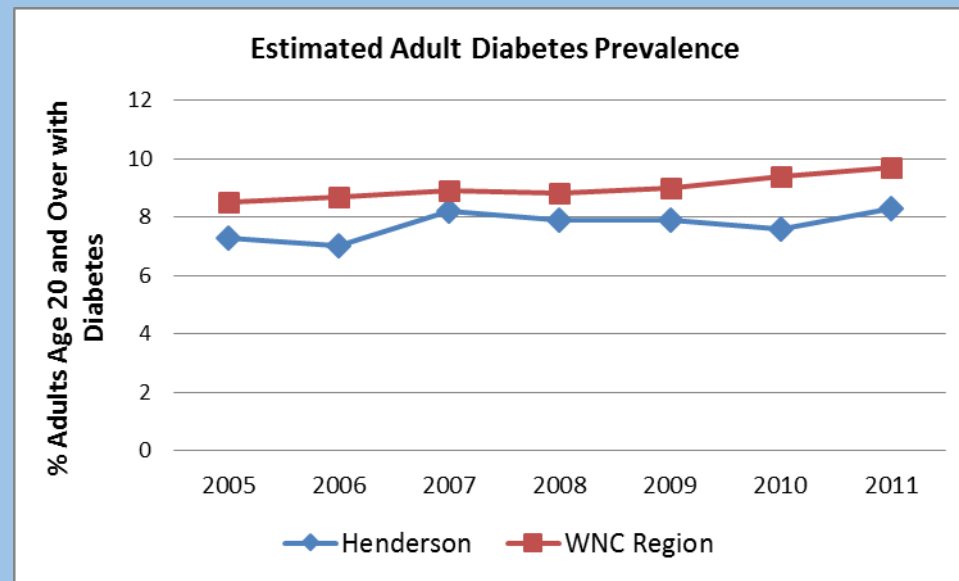
Geographic Unit: Census tract

Map produced by the NC State Center for Health Statistics

Rates are not age adjusted.

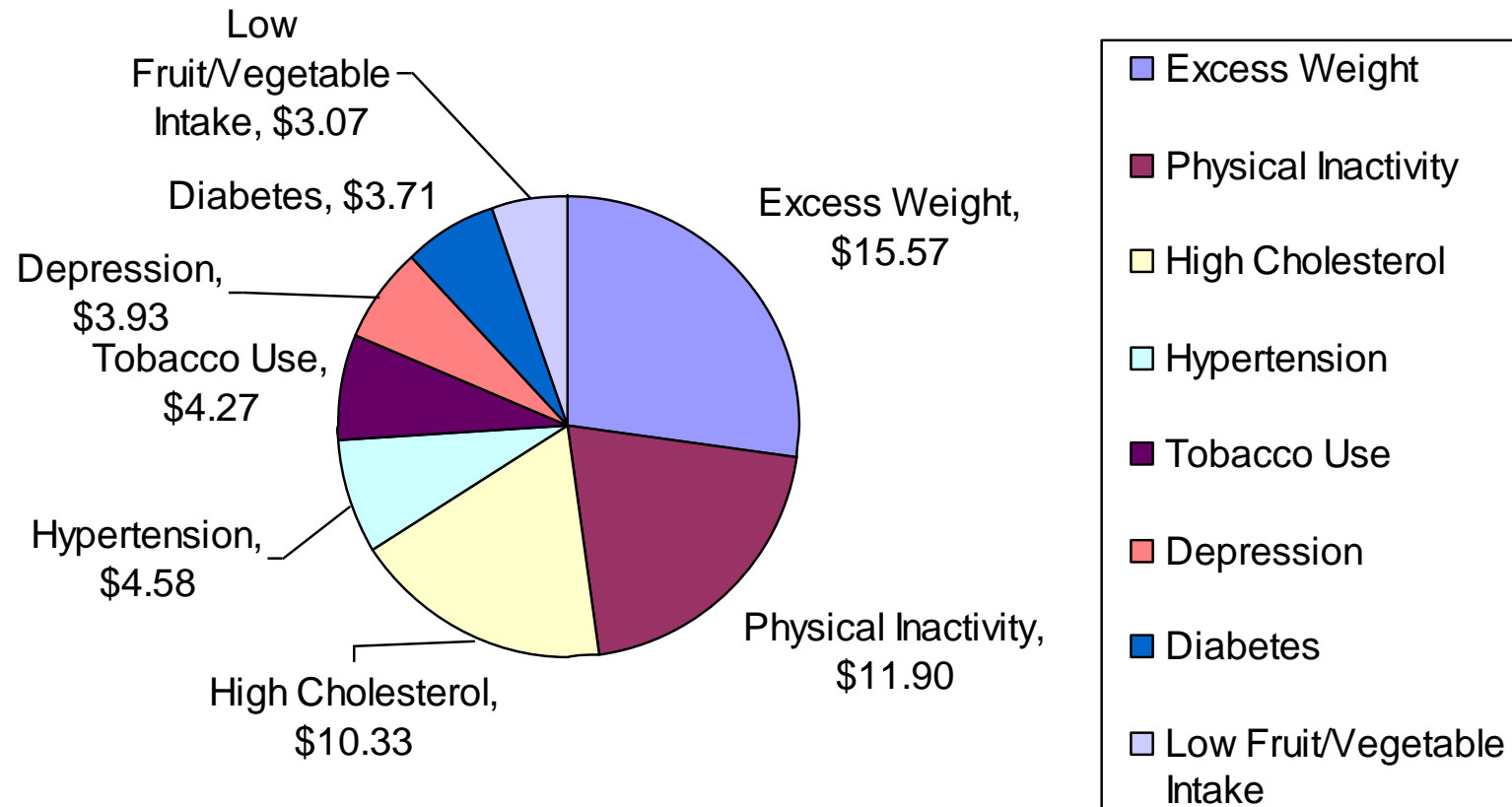
Adult Diabetes

- 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.



North Carolina Costs

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



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)

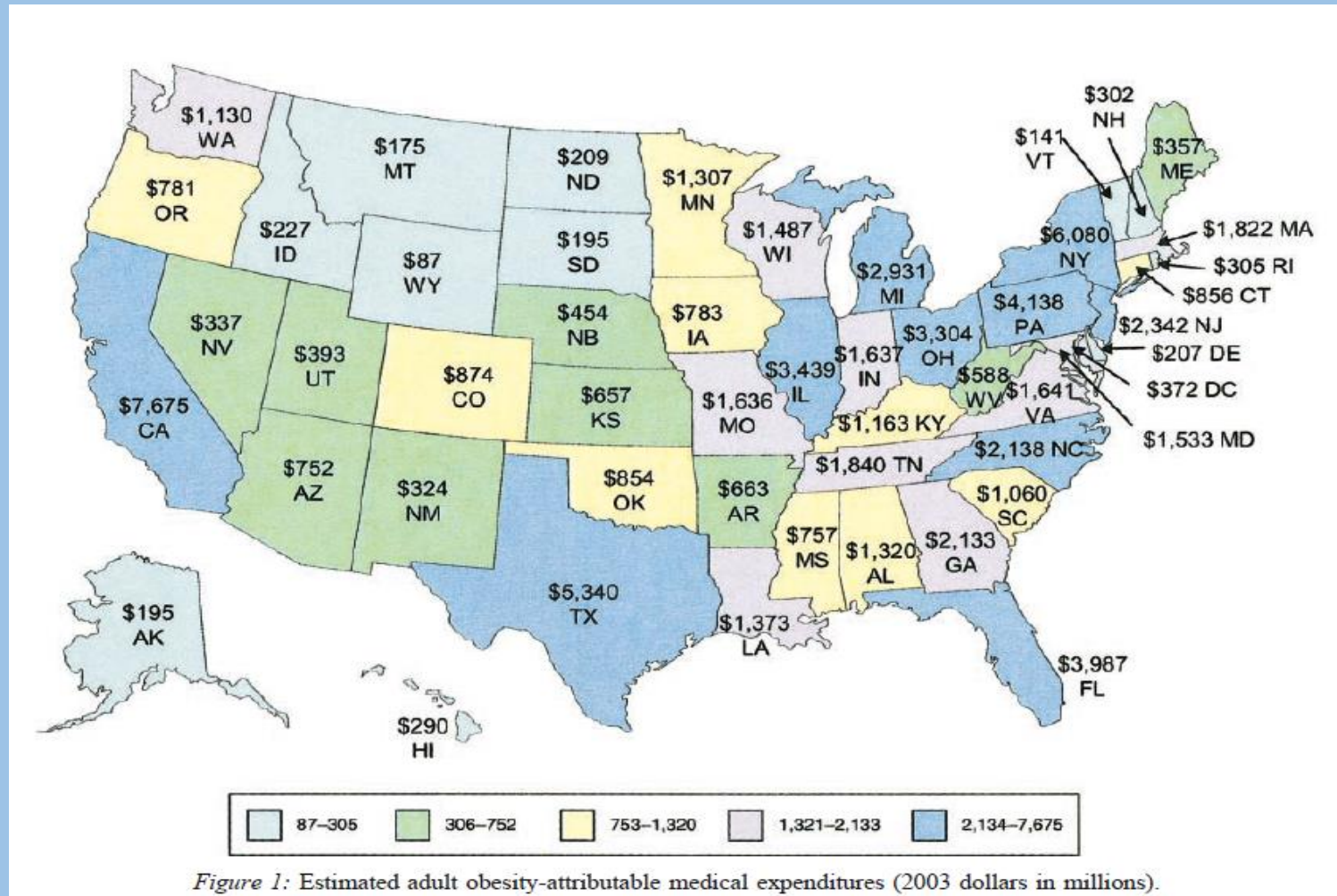
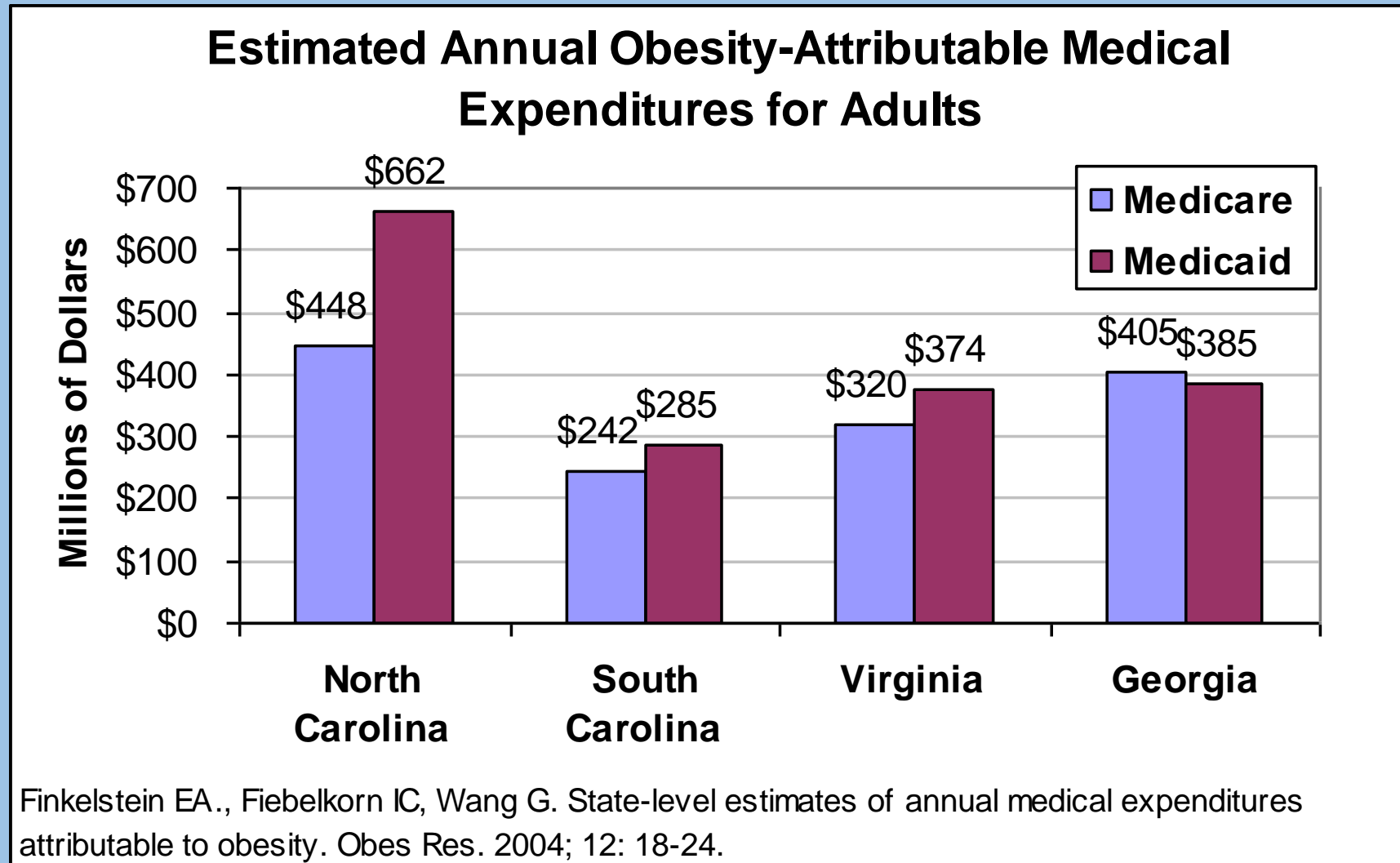
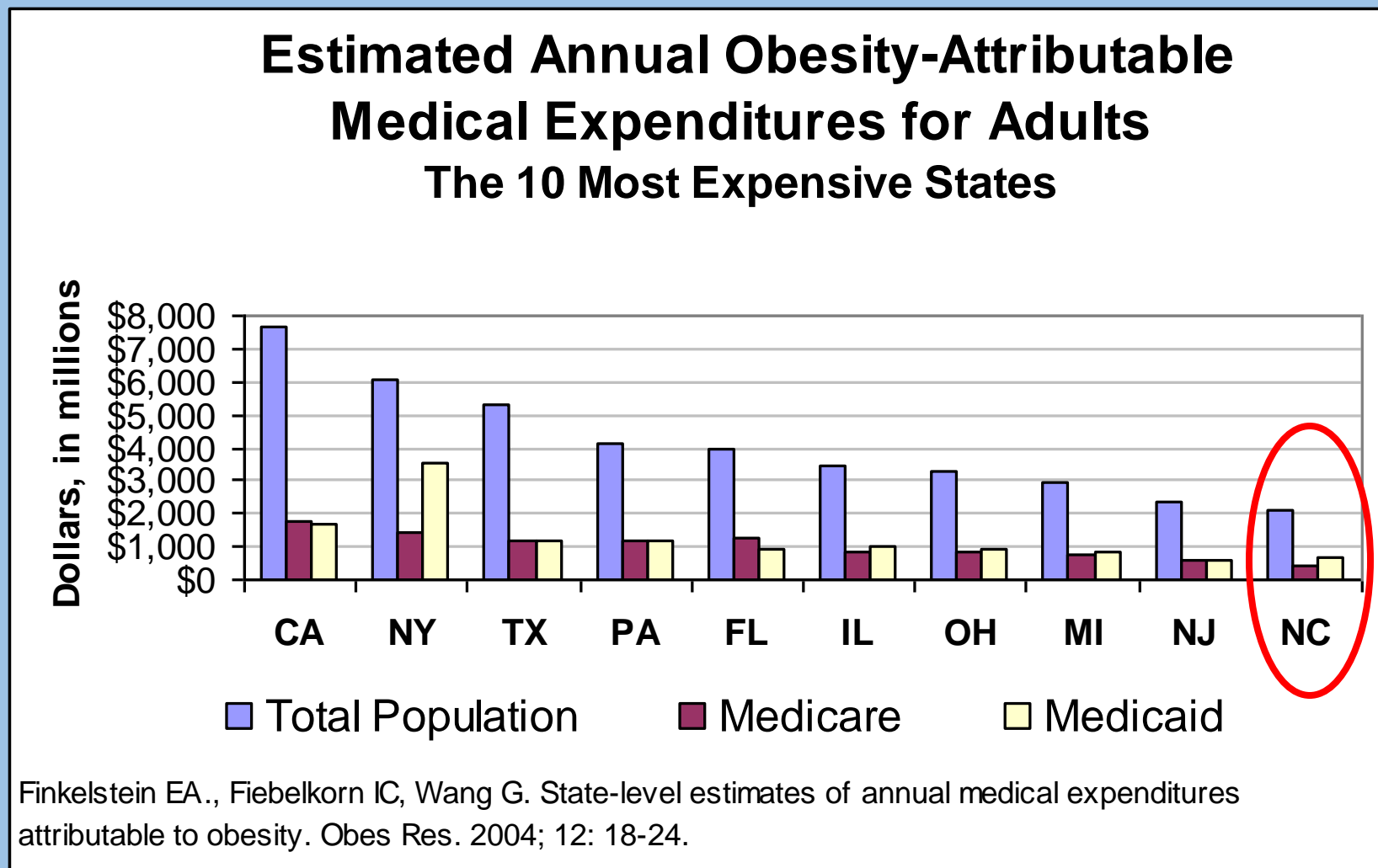


Figure 1: Estimated adult obesity-attributable medical expenditures (2003 dollars in millions).

Obesity-Attributable Medical Costs Southeastern States



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



LEVELS OF PREVENTION

Whole population
through public health
policy

PRIMORDIAL PREVENTION

establish or maintain
conditions to minimise
hazards to health

Advocacy for social
change to make physical
activity easier

Whole population
selected groups and
healthy individuals

PRIMARY PREVENTION

prevent disease well
before it develops
Reduce risk factors

Primary care advice
as part of routine
consultation

Selected individuals
with high risk patients

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

Patients

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.

- From Improving Health in the United States: The Role of Health Impact Assessment, 2011.

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.

HIA Excerpts

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 ($\frac{1}{2}$ 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.

HIA Excerpts

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

HIA Excerpts

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

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- quality of life
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- mental health
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References

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- Mid-South Regional GreenPrint Health Impact Assessment
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- Rails to Trails Conservancy – Health and Wellness Benefits
- <https://www.railstotrails.org/resourcehandler.ashx?id=3070>

- Increasing Physical Activity Through Community Design
- http://www.bikewalk.org/pdfs/2010/IPA_full.pdf

- Middlesex Greenway Access Plan Health Impact Assessment
- <http://njhic.rutgers.edu/wp-content/uploads/2014/03/Middlesex-Greenway-HIA.pdf>

- East Bay Greenway Health Impact Assessment
- <http://www.urbanecology.org/greenway/GreenwayHealthImpactAssesment.pdf>