

## Appendix B THE HEALTH OF OUR CITIZENS

It has been proven that regular physical activity promotes health by exercising muscles and the cardiovascular system, improving flexibility, and strengthening joints. It is thought to improve the functioning of the immune system and halt aging-related deterioration of cognitive function.<sup>1</sup>

Physical activity also aids digestion by promoting peristalsis, or the movement of food through the digestive tract. Increasing one's physical activity can reduce the risk of developing several diseases that lead to premature death and disability including obesity, cardiovascular disease, high blood pressure, type 2 diabetes and possibly colon and breast cancer (CDC, 2003)<sup>2</sup>.



*Unless you address obesity, you're never going to address rising health costs.*  
-Eric Finkelstein  
RTI International health economist

A growing number of individuals with weight issues (overweight and obese), including males and females ranging in ages from children to the elderly are being diagnosed with asthma, chronic breathing problems, or sleep apneas made worse by high levels of body fatness. Some of these disorders have been linked to increased deaths in the U.S. in recent decades.

A July 2009 news article<sup>3</sup> on a recent government study included the following findings:

- Medical spending averages \$1,400 more a year for an obese person than for someone of normal weight.
- Medicare reports they spend nearly \$600 more a year on prescriptions for an obese beneficiary than a normal-weight one.
- Obesity-related conditions now account for 9.1% of all medical spending, up from 6.5% in 1998.

*Health care costs are dramatically higher for people who are obese and it doesn't have to be that way. We have ways of changing behavior and changing those health outcomes so that we don't have to deal with the medical consequences of obesity.*

- Jeff Levi of Trust for America's Health who advocates community-based programs that promote physical education and better nutrition

- About a third of adult Americans are obese, and the obesity rate rose 37% between 1998 and 2006.

### HOW DO SOUTHWEST VIRGINIANS CURRENTLY MEASURE UP COMPARED TO OTHER COMMUNITIES?

The use of Community Health Status Indicators as a means of analysis for our group of SW Virginia counties undertaking trail development initiatives is useful in providing information on the current status (baseline), targets for improvements, and even strategies to get there in the arena of important behaviors such as exercise, with its previously mentioned relationship to physical and mental health, productivity, and possibly even learning. County population, poverty levels, age distribution, and population density are employed in the stratification process. Dr. Anthony Delucia, Professor of Surgery at East Tennessee State University, has conducted a comparative analysis of the seven county study area's overall public health<sup>4</sup>. What he found was disturbing.

## Appendix B: THE HEALTH OF SOUTHWEST VIRGINIA

Using an eighty-eight strata system ranging from the urbanized “mega” counties to the smallest of rural counties, “peer communities” were found for each of the counties within the Spearhead Trails study area and the City of Norton and rated according to overall public health. Below is a chart that shows where each of the communities within the study area ranked among their peer communities noting those who ranked the highest (most healthy) and those who ranked the lowest (poorest health). Please note that two counties in the Spearhead Trails study area actually ranked the lowest nationally compared to all of the other communities in their peer group.

COMPARISON OF WISE COUNTY TO COUNTIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS								
Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
32 Lowest	Wise County, VA	41,997	23.2	13.4	19.4	104	73.4	Adult obesity rate of 32%
32 Highest	Whitman, WA	40,170	21.5	9.4	15.8	19	80.1	87% of adults exercise regularly*

Wise County had the poorest health of all the communities in their peer group.

Levels of inactivity in Wise County are 3 times (33%) higher than those living in Boulder Colorado. With adult obesity levels of 32% of the population, Wise County was in the top 10% for being the worst!  
*\*Whitman County has a program called “Blazing trails to Fitness” encouraging use of their many trails.*

COMPARISON OF THE CITY OF NORTON TO CITIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS								
Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
41 Lowest	5 counties have low findings. AR (1), GA (2), VA (2)	Average 28,338	25.9	n/a	14.6	100	73.3	All-cause mortality rate 18% higher than U.S. average
41	City of Norton, VA	3,677	21.9	n/a	18.1	488	73.4	All-cause mortality rate 24% higher than U.S. average
41 Highest	Williamsburg, VA	11,751	24.7	n/a	17.5	1376	79.9	87% of adults exercise regularly*

The City of Norton has a higher all-cause mortality rate than all five of the comparable communities that ranked lowest in overall health in the nation.

## Appendix B: THE HEALTH OF SOUTHWEST VIRGINIA

*\*Please Note: Williamsburg Va offers numerous hiking, biking, mountain biking, kayaking, canoeing, horseback riding opportunities for their citizens*

COMPARISON OF TAZEWELL COUNTY TO COUNTIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS								
Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
50 Lowest	Union SC	Average 20,539	24.2	n/a	14.3	56	73	Diabetes rate of 12.5%
50	Tazewell	44,795	21.6	n/a	15.5	86	74.7	Diabetes rate of 8.9%
50 Highest	McDonough, IL	31,966	21.5	n/a	15.9	54	78.8	Diabetes rate of 5.1%*

Tazewell County has a diabetes rate of 8.9% which is not as high as Union SC which has the highest rate of all in their common peer group at 12%. But it is considerably higher than McDonough, IL.

*\*Please Note: McDonough County offers hiking, biking, nature walks, horseback riding and lots of golf.*

COMPARISON OF RUSSELL & BUCHANAN COUNTIES TO COUNTIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS								
Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
52 Lowest	Marlboro, SC	Average 28,021	25.4	n/a	20.2	58	69.6	Only 57% of adults exercise regularly
52	Russell	28,949	21.7	n/a	16.7	61	74.1	Adult obesity rate of 30% in nation's worst 12%
52	Buchanan	24,755	20.7	n/a	21.6	49	72.8	Adult obesity rate of 33% in nation's worst 4%
52 Highest	Caldwell, TX	36,523	22.8	n/a	14.7	67	76.4	Low % of Diabete Cases

Russell County has an adult obesity level of 30% of the population which makes them in the nation's worst 12%. Buchanan County fared even worse. With 33% of their adult population considered obese, Buchanan County is in the top 4% worse in the nation!

## Appendix B: THE HEALTH OF SOUTHWEST VIRGINIA

*Obesity appears to have a stronger association with the occurrence of chronic medical conditions, reduced health-related quality of life, and increased health care and medication spending than smoking or problem drinking has.*

*Sedentary lifestyle is an unmeasured variable highly correlated with obesity...<sup>5</sup>*

*- Roland Sturm, Health Affairs, 2002*

### COMPARISON OF SCOTT COUNTY TO COUNTIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS

Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
64 Lowest	McNairy, TN	Average 25,285	24.1	n/a	15.6	45	73	Diabetes rate of 7.9%
64	Scott	24,292	20.4	n/a	15.3	49	75.3	Diabetes rate of 9.0%
64 Highest	Madison, NC	20,256	22.9	n/a	15.2	45	77.5	Diabetes rate of 4.5%*

Although Scott County was not lowest in overall health, it did have a 9% diabetes rate which puts it higher than McNairy TN which did have the distinction of being in the poorest health.

*\*Please Note: Madison County NC offers lots of hiking, biking, horseback riding, rafting and is especially known for the mountain biking trails within their county.*

### COMPARISON OF DICKENSON COUNTY TO COUNTIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS

Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
69 Lowest	Crisp, GA	Average 22,017	28.9	n/a	23.1	80	72.5	All-cause mortality rate 26% higher than US average
69	Dickenson	16,243	21.4	n/a	18.4	45	74.1	All-cause mortality rate 17% higher than US average
69 Highest	Hardee, FL	28,286	29	n/a	23.1	44	77.6	All-cause mortality low and 18.2% adult smoking rate is below average*

Dickenson County has an all-cause mortality rate 17% higher than the national average.

*\*Hardee County Florida offers a number of areas to walk and ride.*

## Appendix B: THE HEALTH OF SOUTHWEST VIRGINIA

COMPARISON OF LEE COUNTY TO COUNTIES ACROSS THE U.S. WITH SIMILAR CHARACTERISTICS								
Stratum ID	County Name	Population	% Age under 19	% Age	Poverty (%)	Density pop/mi <sup>2</sup>	Life Expectancy	Notable health findings
73 Lowest	Lee	Average 23,686	22.7	n/a	21.4	54	73.2	Very high levels of adult inactivity at 39%
73 Highest	Upshur, WV	23,712	23.4	n/a	18.8	67	75.8	Offers hiking and biking opportunities in their county

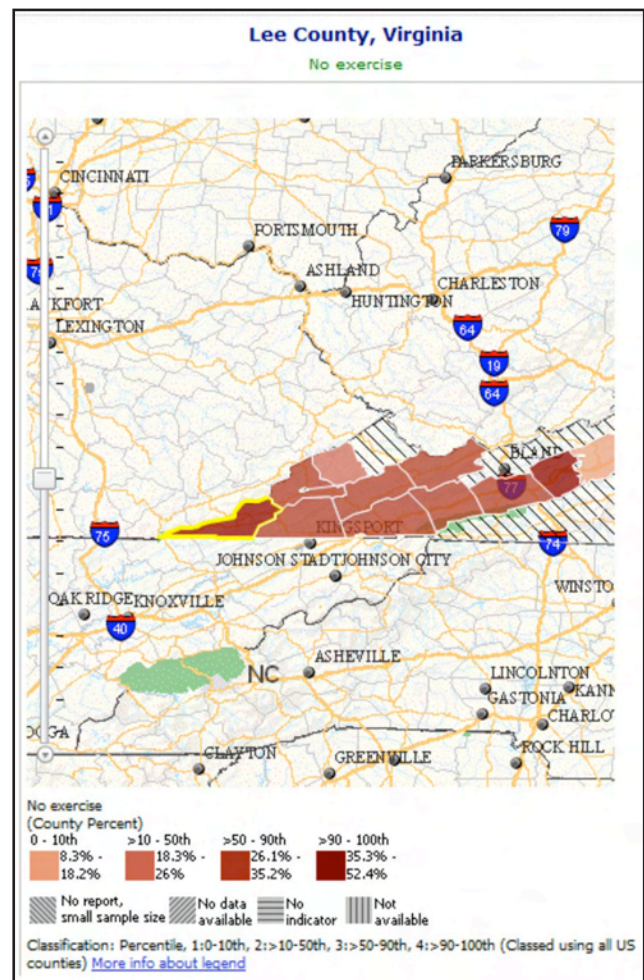
Lee County had the very highest level of adult inactivity (39% of its population) of all the communities in its peer group.

Both intra- (among the seven counties and the City of Norton) and extra-group comparisons are provided readily from CDC (Centers for Disease Control) generated from peer county groupings of the Community Health Status Indicator (CHST) project.

Example reports for counties are available at [www.communityhealth.hhs.gov](http://www.communityhealth.hhs.gov). A GIS version is available with mapping and tabular data displays at <http://gis.cdc.gov/chsi/>. The tabular data are also available (in toto for 3000 plus counties) as a downloadable set of files in the comma separated values format, which can be easily converted to Microsoft Excel spreadsheets.

Using Lee County as an example, a data map showing Lee (highlighted in yellow) and neighboring counties for percent of adults not exercising is shown. At 39% inactive adults, Lee County is in the 90-100% of worst counties nationally. Wise, Scott, Russell and Tazewell rank in the 50th to 90th percentage. Only Dickenson reports a better than average percentile.

Among the statistics revealed for comparison are: basic demographics, such as age distribution and race/ethnicity, but also birth measures, infant mortality, and death measures.



Death rates from breast and colon cancer, coronary heart disease, and stroke are amenable to prevention and treatment through exercise opportunities that people may choose to engage in outdoors at low, or even no cost.

## Appendix B: THE HEALTH OF SOUTHWEST VIRGINIA

The chart below shows the breakdown of counties from within Virginia itself, neighboring regional states, and more distant states as far as possession of a peer county with similar findings as Lee County, including some states where finding “matching” counties is very difficult:

States with a shared border with the Southern Appalachian region of Virginia with # of peer counties given in ( )	Other Southern or Midwestern states with a high number of peer counties:	States with some, but few overall (1-2) peer counties with a county from the Spearhead trails region:
Tennessee (8)	Alabama (6)	California, Illinois, Kansas, Louisiana, Maryland, Maine, Michigan
Kentucky (8)	Arkansas (6)	Missouri, New York, Oklahoma, Pennsylvania, Vermont, Washington, and Wyoming
West Virginia (7) – same as host state	Georgia (6)	
	Mississippi (6)	
	Ohio (5)	
	South Carolina (5)	
	Florida (4)	
	Texas (4)	



*Peer Counties Shown for Lee County, VA*



An additional astounding resource from the CHSI (and useful therefore in marketing, education, communication, and research/grantsmanship) is the enumeration of vulnerable populations such as those without a high school diploma, those severely work disabled, existence of major depression, and recent history of substance abuse.

### Vulnerable Populations Include Lee County, Virginia

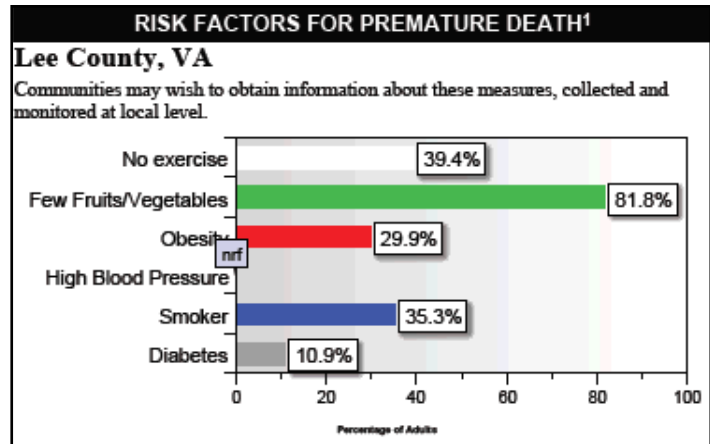
Have no high school diploma (among adults age 25 and older)	6,508
Are unemployed	455
Are severely work disabled	1,305
Have major depression	1,376
Are recent drug users (within past month)	1,104

## Appendix B: THE HEALTH OF SOUTHWEST VIRGINIA

Lastly, though the data are often absent or incomplete for very small counties, occurrence of risk factors among the population (no exercise, eating few fruits/vegetables, smoking, high blood pressure, obesity, and diabetes) reveals how healthy or unhealthy parts of SW Virginia relate to comparable national peers.

*"Let's work together to get America moving on both legs and on two wheels, and have a good time while we do it!"*

*- Federico Pena,  
Secretary of Transportation, 1994.*



### HOW TO IMPROVE SOUTHWEST VIRGINIAN'S HEALTH

Improving the health of SW Virginians through physical activity will help to reduce health costs for the entire region. Trails can provide a great variety of physical activities for communities at a relatively low cost to the user and require limited maintenance and oversight.

#### Trails also promote quality of life and community livability:

Developing greenways and bicycle paths for communities can help to conserve energy and reduce green house gas emissions by providing alternatives to driving. These and other types of both nonmotorized and motorized trail systems:

- Provide transportation choices and offer access to community destinations,
- Provide recreation opportunities and links to parks, open spaces and communities,
- Provide people of all ages, skill levels and both mental and physical capabilities with opportunities to become more physically active,
- Maintain biodiversity through greenway habitat conservation,
- Create a synergy of clean, healthy living,
- And promote community interaction with the outdoors and with each other.

*"Hitting the nation's many trails and pathways is a great way for all Americans to have fun and, at the same time, get some valuable exercise."*

*- Julie L. Gerberding, MD, MPH,  
Director-Centers for Disease Control  
U.S. Dept of Health*



Recognizing the health benefits of trails, the Centers for Disease Control and Prevention (CDC) has developed a Trails for Health Initiative to promote trail use as a means for increasing physical health and making it an integral part of community life. This initiative supports the Department of Health and Human Services' STEPS to a Healthier U.S. initiative ([www.cdc.gov/nccdphp/dnpa](http://www.cdc.gov/nccdphp/dnpa)) which has taken off and been supported in many communities across the United States<sup>7</sup>.

**RECOMMENDATION:** Dr. DeLucia was a tremendous help in developing this chapter. Each of the counties within the seven county study area and the City of Norton should consider asking Dr. DeLucia to conduct further study of the current health status of their communities. This information would be greatly beneficial in setting a benchmark from which to try to improve. It could also provide a strong case for funding the development of trails. If one can show that a community is currently at a serious health risk and that by building trails and encouraging their use could help to lower the overall health costs for employers, for the community and for the state, people may be more supportive of the cause.

### BIBLIOGRAPHY

- <sup>1</sup> *Thurston Regional Trails Plan, Thurston Regional Planning Council, December 2007.*
- <sup>2</sup> *Fastest Growing Health Threat in U.S, Center for Disease Control, July 2003.*
- <sup>3</sup> *Nearly 10 percent of health spending for obesity, Associated Press , July 27, 2009.*
- <sup>4</sup> Anthony J. DeLucia, Ph.D., Professor of Surgery, James H. Quillen College of Medicine, East Tennessee State University, Johnson City, TN 37614-0575
- <sup>5</sup> Sturm, R., *The Effects of Obesity, Smoking and Drinking on Medical Problems and Costs, Health Affairs, March/April 2002.*
- <sup>6</sup> Thorpe, K.E., Florence, C.S., and Joski,P., *Which Medical Conditions Account for the Rise In Health Care Spending?* Health Affairs, 2004.