

Data for Healthy Insights –Achieving a Culture of Health through Big Data and Analytics

About the Project

Health of South Carolina

South Carolina trails the rest of the nation in overall health. With high rates of obesity, heart disease, and diabetes, South Carolinians live sicker, shorter lives than their peers in other states. Poor health has many negative societal impacts, such as detracting from a student's ability to pay attention in class and a worker's ability to perform on the job, which in turn, hurts the productivity essential for generating the resources and opportunities that empower people to lead healthy, fulfilling lives.

Improving social and economic conditions lays the foundation for good health. With this mission in mind, the South Carolina Association for Community Economic Development and the MITRE Corporation, with support from the Robert Wood Johnson Foundation, launched the *Data for Healthy Insights* initiative and developed the *Healthy Insights* data visualization and analytic tool to enhance public health impact in South Carolina and beyond.

- South Carolina is the 7th most obese state in the country and lags behind the rest of the nation in overall health measures [1].
- South Carolina ranks 42nd in standard public health measures, including prevalence of obesity, heart disease, and diabetes [2].
- South Carolina ranks 4th in the nation for adult population with diabetes and 3rd for African American adults with disabilities [3].
- **It is estimated that the state spends \$1.2 billion on care of patients with conditions related to obesity [3].**
- **If South Carolina would halt the increase in obesity, and simply maintain today's levels, it would save the state approximately \$3 billion by 2018 [1].**

Data for Healthy Insights

The *Data for Healthy Insights* initiative aims to strengthen efforts to combat obesity in South Carolina.

A joint partnership between the MITRE Corporation and the South Carolina Association for Community Economic Development (SCACED), supported by the Robert Wood Johnson Foundation (RWJF), *Data for Healthy Insights* leverages the strengths of each organization to help communities in South Carolina achieve a Culture of Health.

Guiding this initiative is the *Healthy Insights* tool, which harnesses publicly available sources across multiple sectors to identify communities most in need of access to healthy lifestyle resources and to pinpoint potential opportunities for interventions and investment.

About Healthy Insights

What is *Healthy Insights*?

Healthy Insights is an open-source based mapping tool that allows users to visualize, at a very local level, the population disease burden, health shaping factors, and resources in their community. With this information, users can begin a conversation among community leaders to generate and prioritize interventions and investment.

Who are the intended users?

The foundational data analytic capability of the *Healthy Insights* tool was developed to be utilized by individuals, service providers, community groups, faith-based organizations and other actors who are working to make South Carolina a healthier place to live. So that others may benefit as well, the initiative partners envision sharing lessons learned and transitioning the data analytics capability to support other interested communities and stakeholders.

What is the potential impact of *Healthy Insights*?

Healthy Insights empowers users to gain local level insight into public health issues by simultaneously mapping dietary related disease burden together with social and environmental characteristics that influence health, such as median income, education, access to food resources, and physical activity opportunity. *Healthy Insights* communicates the relationship between these community risk factors and disease burden in a variety of formats (maps, scatterplots, and bar-charts) that allow users to visualize the health impact of making changes to these risk factors.

With an additional feature that maps the locations and community reach of local organizations, *Healthy Insights* not only facilitates the specific identification of the social and environmental conditions in need of improvement and the neighborhoods in need of assistance, but also the community resources that could be leveraged for intervention and investment.

About the Team

The MITRE Corporation

The MITRE Corporation is a not-for-profit organization working in the public interest that operates federally funded research and development centers to provide innovative solutions to national problems. For the purposes of the *Data for Healthy Insights* pilot project, MITRE demonstrates how big data and analytics can expand public health impact and contribute to a Culture of Health. By applying advanced analytics to multiple publicly available data sources, MITRE built the tool, *Healthy Insights*, which supports queries and geospatial visualizations in order to identify vulnerable communities and potential opportunities to mobilize community resources.

The South Carolina Association for Community Economic Development

Through a network of members and partner organizations, the South Carolina Association for Community Economic Development (SCACED) promotes community economic development to improve quality of life and health outcomes for low wealth communities. With South Carolina trailing the nation in overall health measures, SCACED designed the Healthy Food Access Initiative to increase healthy food access in underserved communities, engage community members in the process of building a Culture of Health, and decrease dietary related disease risk.

The Funder

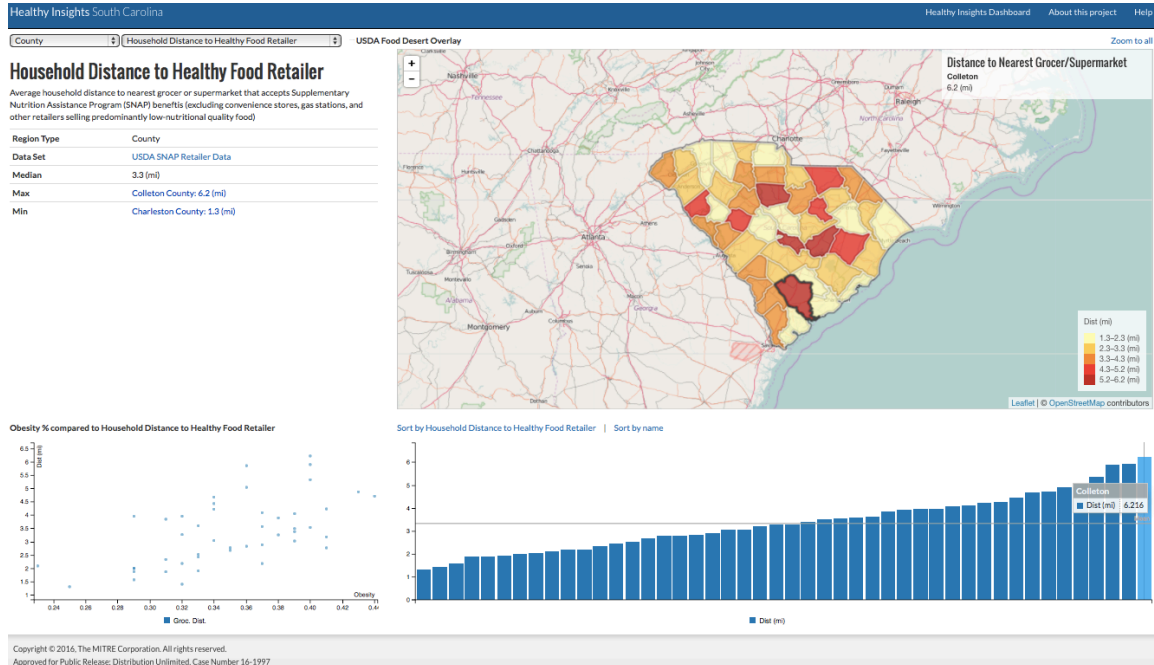
The Robert Wood Johnson Foundation

For more than 40 years the Robert Wood Johnson Foundation has worked to improve health and health care. The Foundation is working with others to build a national Culture of Health enabling everyone in America to live longer, healthier lives. For more information, visit www.rwjf.org.

About the Tool

Healthy Insights

www.healthyinsight.org



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Data Sources

Healthy Insights was made possible by the application of advanced analytics to numerous secondary data sources. MITRE obtained information from publically available data with additional support from SCACED, which contributed data about the locations and areas served by community organizations.

US Census American Community Survey (ACS)
http://www2.census.gov/acs2012_5yr/summaryfile/

US Census Demographic Profile (DP1)
<http://www.census.gov/2010census/data/>

US Census Topologically Integrated Geographic Encoding and Referencing (TIGER)
<https://www.census.gov/geo/maps-data/data/tiger.html>

RWJF County Health Rankings
<http://www.countyhealthrankings.org/rankings/data>

USDA Food Environment Atlas
<http://www.ers.usda.gov/data-products/food-environment-atlas/>

USDA SNAP Retailers
<http://www.fns.usda.gov/snap/retailerlocator>

South Carolina Department of Agriculture
<https://agriculture.sc.gov/where-to-buy-local/>

South Carolina Conference of the United Methodist Church
http://www.umcsc.org/data/wp_gscmap.php

Let's go! South Carolina
<http://www.letsgosc.org/options-near-you>

South Carolina Credit Union League
<http://mapping.ncua.gov/ResearchCreditUnion.aspx>

South Carolina Bankers Association

<https://netforum.avectra.com/eweb/DynamicPage.aspx?Site=SCBA&WebCode=OrgResult&FromSearchControl=Yes&FromSearchControl=Yes>

South Carolina CAP Association

http://www.scacap.org/sc_affiliates0.aspx

South Carolina Technical College System

<http://www.sctechsystem.com/colleges.html>

South Carolina Alliance of YMCAs

<http://www.scymcas.org/>

References

1. Access to Healthy Food in South Carolina: A Report by the South Carolina Food Access Task Force (2014).
2. United Health Foundation (2014). America's Health Rankings.
<http://www.americashealthrankings.org/SC>
3. South Carolina Department of Health and Environmental Control (2011).
<http://www.scdhec.gov/Library/ML-025328.pdf>