



**Shriners Hospitals
for Children®**
Love to the rescue.™

SHC Community Health Needs Assessment Report

Shriners Hospitals for Children® — Greenville

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Mission and Vision

Mission

- Provide the highest quality care to children with neuromusculoskeletal conditions, burn injuries and other special healthcare needs within a compassionate, family-centered and collaborative care environment.
- Provide for the education of physicians and other healthcare professionals.
- Conduct research to discover new knowledge that improves the quality of care and quality of life of children and families.

Vision

- Shriners Hospitals for Children® will be the unquestioned leader, nationally and internationally, in caring for children and advancing the field in its specialty

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Our Commitment to the Community Introduction

Shriners across the globe have dedicated their time, talent, and treasure to building a healthcare system of 22 specialty hospitals, which are devoted to improving the lives of children with orthopaedic, cleft lip and palate conditions, spinal cord injuries, and burns. Shriners Hospitals for Children® provides care to children up to the age of 18 years old, regardless of the family's ability to pay. Since our inception, more than one-million children have received specialty care in one of our family-centered facilities across North America, Canada, and Mexico.

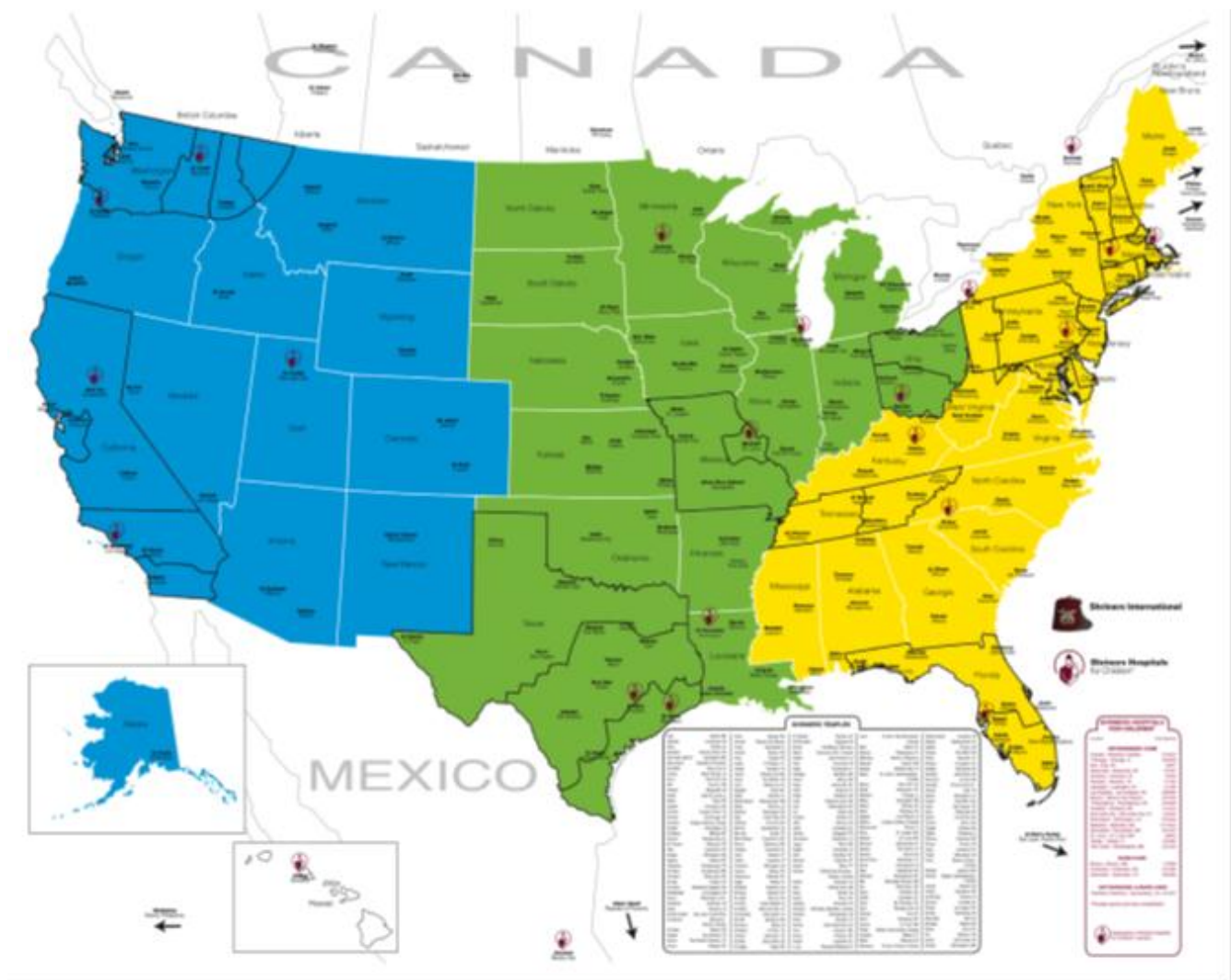
The orthopaedic conditions and disorders we treat at Shriners Hospitals for Children® are wide-ranging and diverse. Whether we are treating bone deformities, such as clubfoot, neuromuscular conditions, such as cerebral palsy, or genetic anomalies, such as achondroplasia, our goal is to help each child become as functional and healthy as possible. From physical and occupational therapy, to training and fitting adaptive devices, and providing support for transitioning back to the school or community, Shriners Hospitals for Children provides comprehensive care that helps children lead a full, active, and healthy lifestyle. With the largest full-time staff of pediatric orthopaedic surgeons in the United States, as well as a comprehensive team of physical, occupational, speech and other therapists, we are able to treat each child with a customized approach based on their overall health and medical conditions.

Patients with a cleft lip and/or palate are treated by a multi-disciplinary group of experts who work together to improve the child's ability to eat, communicate, breathe, and even feel good about their personal appearances. Each patient's unique treatment plan may include surgery, orthodontics, and hearing, or speech and psychological therapies to restore them to optimal function and appearance.

Shriners Hospitals for Children® was the first health care system in the country to develop spinal cord injury rehabilitation centers designed specifically for children. Our groundbreaking research has educated the medical community about the unique needs of children with spinal cord injuries and led to innovative treatment techniques for both children and adults.

Shriners Hospitals for Children® has been a pioneer in burn care since we first started treating burn survivors in the 1960s. In fact, some of the most significant advancements in burn care – such as skin grafting and the development of engineered skin – were first made at Shriners Hospitals for Children®. Patients receive advanced care for burn injuries and related scarring, along with physical rehabilitation and emotional support to help them cope with re-entering their school or community after their injury.

Every day, Shriners Hospitals for Children® helps children overcome severe medical challenges; often improving their lives beyond what others thought possible. Additionally, Shriners Hospitals for Children® leads the way in medical research and physician education, which provides an overall body of medical knowledge for the care and treatment of a wide range of pediatric and young adult conditions worldwide. At Shriners Hospitals for Children® we believe in family-centered care. Here, the child and family are at the heart of our medical team. Every treatment we choose, every decision we make is geared toward giving a child the skills and abilities to live a healthy, productive life. Many techniques and treatments that are common in hospitals around the country today were pioneered at Shriners Hospitals for Children®.



Background

Shriners Hospitals for Children® — Greenville is a 50 bed, pediatric orthopaedic hospital on the same campus as Greenville Health System, which is located in the center of Greenville, South Carolina. For more than 85 years Shriners Hospitals for Children® — Greenville's expert physicians, surgeons, and other medical staff have been committed to helping children with orthopaedic conditions live their lives to the fullest. We have special expertise in caring for children diagnosed with:

- Cerebral palsy (ambulatory and non-ambulatory)
- Clubfoot
- Hip dysplasia and other hip conditions
- Limb deficiencies (congenital or acquired)
- Osteogenesis imperfecta
- Scoliosis
- Spina bifida
- Upper and lower extremity abnormalities (congenital or post-trauma)

Our Motion Analysis Lab, one of the first accredited labs in the country, provides research based gait analysis that is instrumental in developing the plan of care for many patients. Also, we have specialty multidisciplinary clinics for Genetics, Limb deficiency, Rheumatology, Spina bifida, and Tone management.

A provision of the Health Care Bill requires all tax exempt hospitals to conduct a community health needs assessment (CHNA) every three years. Shriners Hospitals for Children® — Greenville has complied with this new provision in FY 2013, using data collected from several outside entities. The information and action plan were presented and approved by our local board of governors in May 2013. The CHNA will be filed on the 2014 IRS form 990 and made widely available to the public on Shriners Hospitals for Children® - Greenville's website:

<http://www.shrinershospitalsforchildren.org/Hospitals/Locations/Greenville.aspx>

The assessment has three main objectives:

1. Assess/Identify top health related needs/issues in the community.
2. Assess the issues to find underlying factors.
3. Address these issues with possible solutions.

Although we serve a catchment area of six states including South Carolina, North Carolina, Georgia, Tennessee, Alabama, and Virginia, further drill down demonstrates that the majority of our patients live in the surrounding counties of Oconee, Pickens, Spartanburg, and Laurens (Please specify the state

associated with these counties for clarification). Multiple healthcare facilities and services are readily available in each of these surrounding counties. Recognizing that our mission focuses on specialty care and our ability to develop programs to fully impact the well-being of residents within our community is strongest for those living closest to our hospital, for purposes of this CHNA, Shriners Hospitals for Children® — Greenville has defined our community as Greenville County.

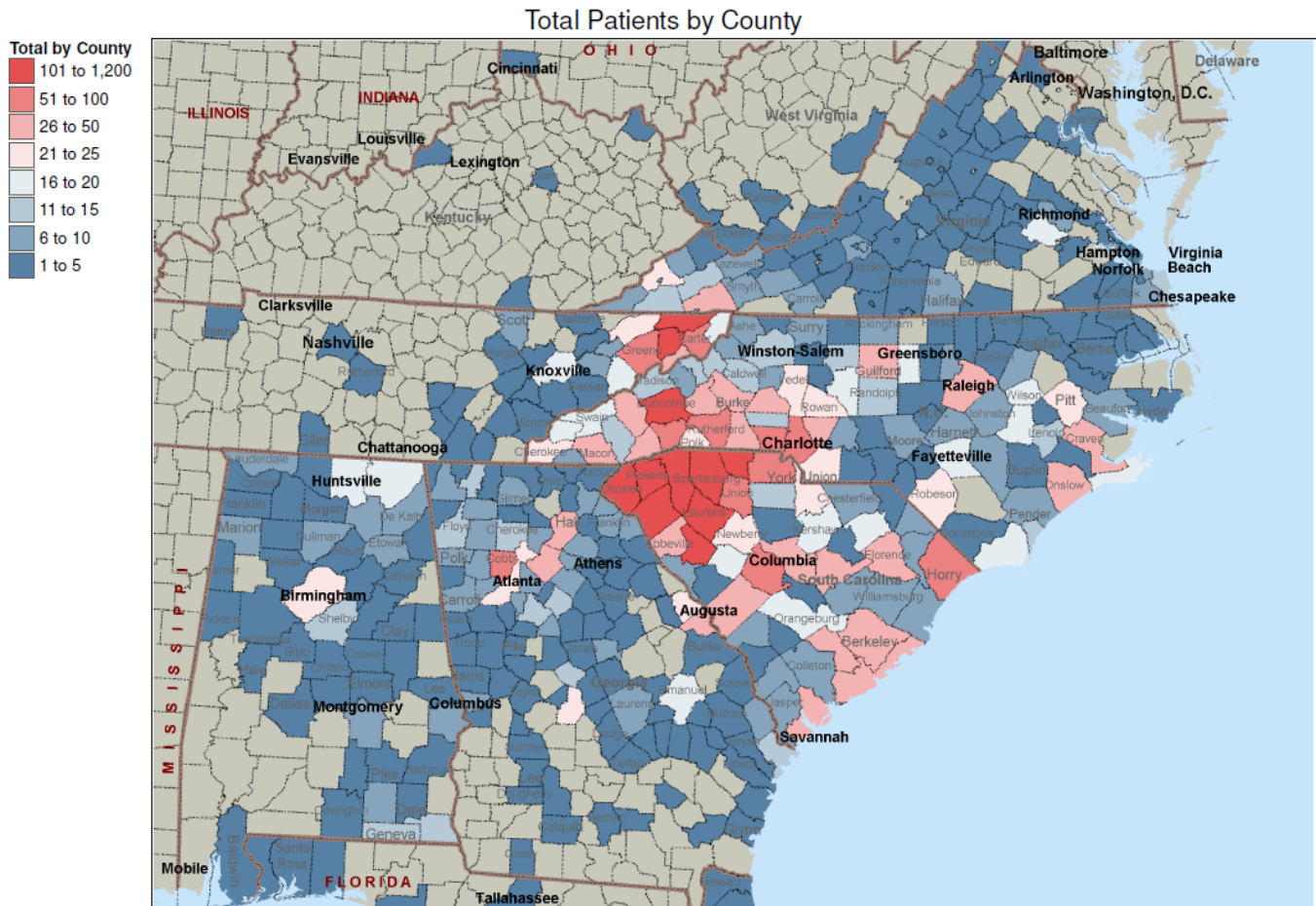


Figure 1

A demographic snapshot of Shriners Hospitals for Children® — Greenville’s market area is included in this assessment for general information. In general, the percent of growth since 2000 has been higher than the national average, with the majority of residents being between the ages of 25 and 54 years. Adult education levels are similar in distribution when compared to those of the entire United States, yet the household income distributions shows that Greenville falls behind the country when looking at incomes over \$100,000. Almost 63% of the residents’ race/ethnicity is white, non-Hispanic.

Demographics Expert 2.7										
2012 Demographic Snapshot										
Area: SHC Greenville Market Area										
Level of Geography: ZIP Code										
DEMOGRAPHIC CHARACTERISTICS										
			Selected Area	USA				2012	2017	% Change
2000 Total Population			14,844,405	281,421,906		Total Male Population		8,701,589	9,257,735	6.4%
2012 Total Population			17,788,050	313,095,504		Total Female Population		9,086,461	9,649,931	6.2%
2017 Total Population			18,907,666	325,256,835		Females, Child Bearing Age (15-44)		3,675,403	3,683,547	0.2%
% Change 2012 - 2017			6.3%	3.9%						
Average Household Income			\$61,585	\$67,315						
POPULATION DISTRIBUTION					HOUSEHOLD INCOME DISTRIBUTION					
Age Distribution						Income Distribution				
Age Group	2012	% of Total	2017	% of Total	USA 2012 % of Total	2012 Household Income	HH Count	% of Total	USA % of Total	
0-14	3,707,670	20.8%	3,928,763	20.8%	20.2%	<\$15K	953,494	13.9%	13.0%	
15-17	742,661	4.2%	759,730	4.0%	4.3%	\$15-25K	777,122	11.4%	10.8%	
18-24	1,654,487	9.3%	1,795,786	9.5%	9.7%	\$25-50K	1,964,869	28.7%	26.7%	
25-34	2,395,104	13.5%	2,361,143	12.5%	13.5%	\$50-75K	1,373,970	20.1%	19.5%	
35-54	5,152,555	29.0%	5,170,800	27.3%	28.1%	\$75-100K	762,239	11.1%	11.9%	
55-64	2,013,543	11.3%	2,308,826	12.2%	11.4%	Over \$100K	1,012,737	14.8%	18.2%	
65+	2,122,030	11.9%	2,582,618	13.7%	12.9%	Total	6,844,431	100.0%	100.0%	
Total	17,788,050	100.0%	18,907,666	100.0%	100.0%					
EDUCATION LEVEL					RACE/ETHNICITY					
Education Level Distribution					Race/Ethnicity Distribution					
2012 Adult Education Level	Pop Age 25+	% of Total	USA % of Total		Race/Ethnicity	2012 Pop	% of Total	USA % of Total		
Less than High School	723,218	6.2%	6.3%		White Non-Hispanic	11,339,985	63.8%	62.8%		
Some High School	1,168,900	10.0%	8.6%		Black Non-Hispanic	4,121,692	23.2%	12.3%		
High School Degree	3,388,079	29.0%	28.7%		Hispanic	1,458,621	8.2%	17.0%		
Some College/Assoc. Degree	3,271,344	28.0%	28.5%		Asian & Pacific Is. Non-Hispanic	497,715	2.8%	5.0%		
Bachelor's Degree or Greater	3,131,691	26.8%	27.8%		All Others	370,037	2.1%	2.9%		
Total	11,683,232	100.0%	100.0%		Total	17,788,050	100.0%	100.0%		
© 2012 The Nielsen Company, © 2012 Truven Health Analytics Inc.										

Figure 2

Process and Methods

The task of conducting our CHNA was performed with representation from administration, performance improvement, risk management, and staff development personnel, which involved reviewing existing data, defining our community, and developing an action plan that took into consideration health need priorities and available resources. We determined that our goals in this CHNA process were to identify healthcare needs that were: consistent with the mission of Shriners Hospitals for Children® — Greenville, considered relevant, could be supported by existing community resources and initiatives, and within our available resources to make a positive impact. Weekly phone calls with other CHNA team leaders within the Shriners Hospitals for Children® system took place for process support. We also had phone conferences with members of the CHNA team at Greenville Health System to ensure our assessments were collaborative in nature. Based on results from a literature search and our goals, the workgroup concluded that the best course of action was to focus on the epidemic problem of childhood obesity. The plan was made to utilize the health needs assessment collected by Greenville Forward, a community group whose mission is to enhance the quality of life for Greenville County by engaging citizens and creating partnerships to continually update, promote, and facilitate a community vision for 2025 and beyond. This assessment involved individual expert interviews, focus groups, phone surveys, and online surveys with over 5,500 community residents and businesses. Partners in the Greenville Forward project include The United Way of Greenville County, Greenville Health System, Bon Secours St. Francis Health System, Piedmont Health Foundation, and our Department of Health and Environmental Control. The findings from Greenville Forward's Health Assessment were consistent with other data reviewed and previously recommended initiatives from entities such as Healthy People 2020, Centers for Disease Control and Prevention, and the Institute of Medicine, but were specific to our identified community of Greenville County.

Existing Data and Literature Review

Multiple sources of data were reviewed and analyzed to identify and prioritize the top health needs of our community. A review of the literature for obesity and childhood obesity pulled up *The Call to Action to Prevent and Decrease Overweight and Obesity*, which was released in 2001 by the U.S. Surgeon General in an effort to encourage nationwide actions plans to address this public health problem. Fact Sheets from the Institute of Medicine and their report, *Preventing Childhood Obesity: Health in the Balance* were also used to help identify the need and plan of action. Other resources that were beneficial included the *Healthy People 2020* report, an infographic factsheet by the American Cancer Society, and the Greenville Forward 2012 report.

Key Findings

Healthy People is released by the U.S. Department of Health and Human Services every ten years. It includes goals and measurable objectives that can be used to develop initiatives to improve the overall health of citizens. High priority health issues are identified to guide collaborative actions across the national, state, and local levels. The top leading health indicators are grouped into twelve topic areas and include:

1. Access to Health Services
2. Clinical Preventive Services
3. Environmental Quality
4. Injury and Violence
5. Maternal, Infant, and Child Health
6. Mental Health
7. Nutrition, Physical Activity, and Obesity
8. Oral Health
9. Reproductive and Sexual Health
10. Social Determinants
11. Substance Abuse
12. Tobacco

This report states that obesity is a problem throughout the nation and recognizes that there are both social and physical determinants of weight. Preventative measures should be multi-focal and address multiple approaches.

Adult obesity has steadily increased through the decades, as noted by the CDC.

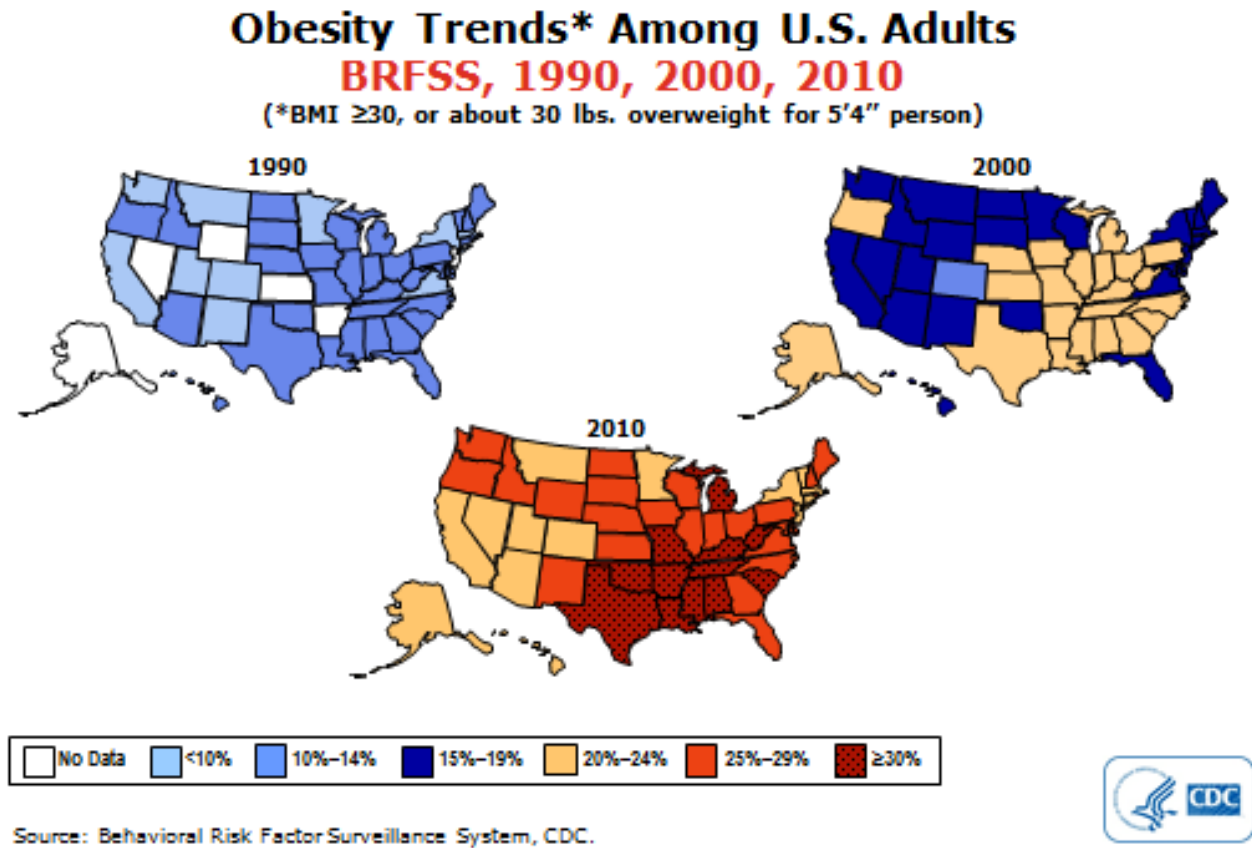
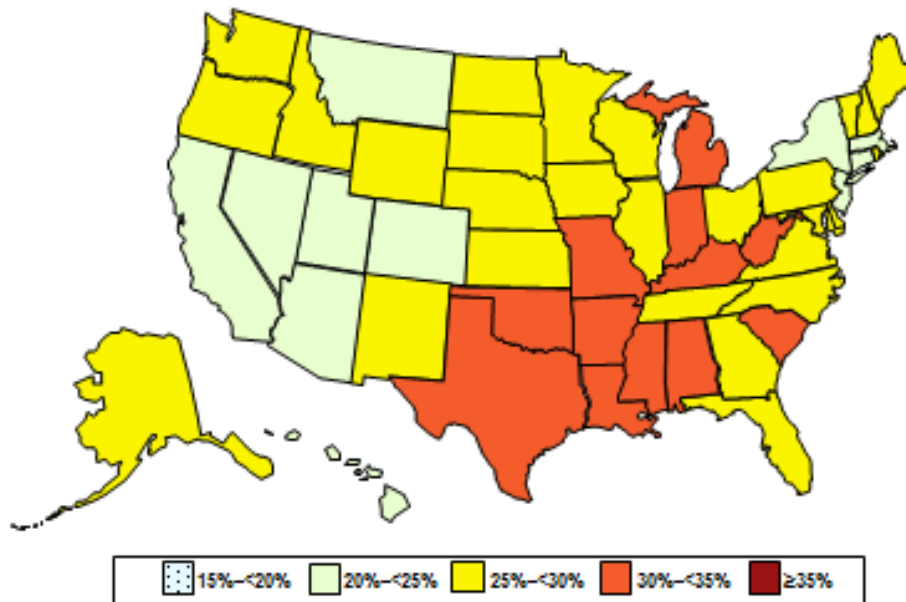


Figure 3

Prevalence* of Self-Reported Obesity Among U.S. Adults BRFSS, 2011

*Prevalence reflects BRFSS methodological changes in 2011, and these estimates should not be compared to previous years.



Source: Behavioral Risk Factor Surveillance System, CDC.



Figure 4

Recognizing that adult obesity originates from behaviors developed in childhood, the following year, in 2002, a specific charge was made to the Institute of Medicine (IOM) to develop prevention action plans that focused on obesity in children and youth. At the time, childhood obesity was ranked as being a critical public health threat, posing both physical and emotional risks. In 2004, the Institute of Medicine reported that over a 30 year span, the prevalence of obesity had increased in preschool children aged 2 – 5 years (5 percent to 10.4 percent), in children aged 6 – 11 years (4 percent to 15.3 percent), and in adolescents aged 12 – 19 years (6.1 percent to 15.5 percent). In 2005, the Institute of Medicine reported that nine million children over the age of 6 years were obese. The risks to physical and emotional health are significant. It has been estimated that 30 – 40 percent of children in the United States are at risk for developing type 2 diabetes. The American Cancer Society has stated that obesity can raise a person’s risk of getting at least 13 different kinds of cancer and in 2013, they estimate that two-thirds of Americans are overweight or obese.

Additionally, children who are obese face the risk of developing psychosocial difficulties from the stigmatization placed on them. Healthcare costs for children with obesity-associated issues rose from \$35 million to \$127 million between 1979 and 1981, according to the 2005 report, *Preventing Childhood Obesity: Health in the Balance* by the Institute of Medicine. Likewise, in 2004, the healthcare costs for adults were as high as \$129 billion. Recommendations to address the epidemic of obesity included developing preventative initiatives with the goal of achieving and maintaining a healthy weight beginning in childhood. The Institute of Medicine identified that multiple stakeholders needed to be involved, including schools and healthcare professionals. The suggestion was for professional organizations to disseminate evidence-based clinical guidance and information pertaining to the prevention of childhood obesity.

In 2011, the Centers for Disease Control and Prevention published the *School Health Guidelines to Promote Healthy Eating and Physical Activity*. In this report, multiple sectors of society, including schools and healthcare providers, are identified as having roles in improving the health of children. One of the key recommendations noted, is the provision of annual professional development opportunities for school staff members who may impact the students' healthy behaviors.

Previous health assessments in 2005 by Greenville Forward found 37% of our local residents were dealing with issues, such as lack of insurance, cost of care, or lack of access, and thus were potentially medically underserved. Some of the initiatives and programs implemented based on the earlier assessments included:

1. City-wide smoking ban in 2007 – Greenville was the first city in South Carolina to implement this ordinance.
2. LiveWell Greenville partnership – Created to focus initially on improving obesity rates.
3. Health Help Line 211 – Greenville's source of information about human service agencies and community resources.
4. AccessHealth – Efforts to improve access and coordination of health care resources for the county's uninsured were funded by a Duke Endowment grant.
5. Neighborhood Community Gardens – Created in neighborhoods with the greatest need, these gardens have grown in number to more than 70.
6. Nurse Family Partnership – Health services and support are being brought into the homes of our community's most vulnerable families.
7. USC School of Medicine – Greenville – Opened in 2012.
8. Oral Health, Bon Secours St. Francis Health System – Improves access to oral health services to underserved residents.

The 2012 assessment reflected an increase in initiatives and programs that led to an improvement in the health of our community. Positive, neutral, and negative trends in Greenville’s health were captured in the domains of Demographics, Death and Disease, Health and Wellness, Healthcare Access, and Focused Population.

	Positive Trend	Neutral or Mixed Trend	Negative Trend
Demographics	<ul style="list-style-type: none"> Growth and revitalization Residents believe Greenville is a great place to live and to raise a family 	<ul style="list-style-type: none"> Rapid growth of senior population Population continues to grow at a rate faster than the state and nation Hispanic population continues to grow at a rapid pace 	<ul style="list-style-type: none"> Divide between the wealthy and the poor is getting bigger (the “have’s vs. the have-not’s”) Transportation With rapid growth...concerns regarding crime, pollution and preserving green space is growing Unemployment has doubled since 1998
Death and Disease	<ul style="list-style-type: none"> Overall cancer deaths decreasing Colorectal cancer also decreasing Stroke death rates decreasing 	<ul style="list-style-type: none"> Lung cancer COPD Breast cancer Prostate cancer HIV/AIDS STD’s 	<ul style="list-style-type: none"> Heart disease Infant mortality slightly rising
Health and Wellness	<ul style="list-style-type: none"> Decrease in smoking Expansion of parks, recreation, exercise opportunities and wellness events Increase community focus on “total health” Decrease in teen pregnancy 	<ul style="list-style-type: none"> Sedentary lifestyle Costs of health facilities, health eating, etc. 	<ul style="list-style-type: none"> Costs related to chronic and preventable illness continue to rise (over \$300 million) Childhood obesity Children - Increase in diabetes, respiratory and other chronic illness in children Adult obesity Adult diabetes
	Positive Trend	Neutral or Mixed Trend	Negative Trend
Healthcare Access	<ul style="list-style-type: none"> Residents continue to report healthcare as being convenient Growth in number and quality of healthcare facilities and specialty centers Expansion of community health centers, free clinic and clinic hospitals New dental facility/partnership to serve dental needs of underserved children and adults 	<ul style="list-style-type: none"> Community health centers and clinics have expanded, but due to limited resources and capacity continue to only touch the surface of serving all those in need ER continues to struggle with misuse (people coming for non-emergent care) Young adults most likely to be uninsured. Majority of uninsured are employed. 	<ul style="list-style-type: none"> Increase in the number of uninsured and medically underserved Soaring healthcare costs – healthcare, prescription drugs, health insurance Employers struggle with rising health insurance costs; employees paying more out of pocket Increase in number of people postponing care due to cost Health literacy – understanding how to maneuver and appropriately use the system Lack of services and/or broken system for mental health (cited often in focus groups)/difficulty getting mental health services (survey respondents) Lack of services and/or broken system for substance abuse (cited often in focus groups)/ difficulty getting substance abuse treatment (survey respondents) Increase in respondents reporting difficulty in getting nursing care home for elderly ER use for mental health and substance abuse issues
Focused Populations	<ul style="list-style-type: none"> Increase in translation services for Hispanic/Latino populations 	<ul style="list-style-type: none"> Cost of care remains a struggle for underserved Those without insurance are less healthy and less likely to have a medical home 	

Source: Greenville Forward, 2012

Figure 5

The key points of the 2012 Health Needs Assessment are:

1. Greenvillians say Greenville is a very good place to live (87%)
2. Demographic changes are putting pressure on the healthcare system
3. Self-reported individual health has steadily declined the last 15 years with obesity reaching an epidemic level, with two out of three Greenvillians reporting as being overweight or obese
4. Heart disease and cancer rates remain high
5. Uninsured rates have increased to 17% (up 68% since 1998)
6. More people are postponing getting medical care, primarily due to cost
7. Transportation remains a significant issue, especially for lower income individuals.

Focusing on the domains of Death and Disease, Health and Wellness, and Healthcare Access while reviewing the areas identified as having negative trends, we were able to prioritize the healthcare needs that Shriners Hospitals for Children® — Greenville could reasonably address. Remaining cognizant of our mission and status as a specialty hospital, available resources, and existing local initiatives helped guide our decisions.

- Death and Disease / Access to Healthcare domains – Both local tertiary hospitals, Greenville Health System and Bon Secours St. Francis Health System have staff with expertise and facilities to treat community residents with heart disease, mental health issues, substance abuse, and to address infant mortality. They provide care in the ER, Outpatient, and ICU levels of care. Therefore, Shriners Hospitals for Children® — Greenville will not be addressing these needs.
- Health and Wellness domain - Both local tertiary hospitals, Greenville Health System and Bon Secours St. Francis Health System have staff with expertise and facilities to treat community adults and children with diabetes and children with respiratory and other chronic illnesses. Given that we are a pediatric hospital, and community resources exist, Shriners Hospitals for Children® — Greenville will not be addressing these needs. Rising costs related to chronic illnesses is an issue that Shriners Hospitals for Children® — Greenville continually addresses. We provide care to patients with specialized orthopaedic conditions, regardless of their ability to pay and are very attuned to the need of containing costs. Childhood obesity was also identified in the Greenville Forward Health Assessment. Recognizing that childhood obesity also impacts the quality of life in our patient population, we chose to embrace this healthcare need and developed an action plan. It is consistent with our mission and the expertise and resources that are available to us.

Conclusion

The epidemic of childhood obesity is continuing to grow and is a priority in our community, which needs to be addressed through the development of prevention focused actions and collaborations. The findings from the literature and the Greenville Forward Health Needs Assessment provided direction for our workgroup in the identification of childhood obesity as being a priority that Shriners Hospitals for Children® — Greenville could address, given our mission and resources. By incorporating into our services the recommendations from the reports reviewed and collaborating with local resources and schools, we can help support the goal of improving the health of children living in our community.

Action Plan

The final action plan was developed by Shriners Hospitals for Children® — Greenville's CHNA workgroup after taking into consideration the local initiatives to address all of the health needs for our community which are already in place through the Greenville Forward partnership and two hospital systems, Greenville Health System and Bon Secours St. Francis Health System. Choosing to implement a strategy to support the Greenville Forward goal of improving the quality of life for community residents by helping children, adolescents, and adults reach and maintain a healthy weight was realistic and consistent with our mission.

The plan is designed to evolve over a three year timeframe and will be a living document that can be reviewed and enhanced at least annually.

2013

- Develop and begin distributing packets with educational information on childhood obesity to local school nurses and patients.
- Begin taking heights and weights on all patients
- Refer all patients > 95th percentile on growth charts to local nutritional consultant / program.
- Join Greenville Forward Partnership

2014

- Coordinate and host a seminar on childhood obesity for local school nurses.

2015

- Collaborate with local schools to participate in health week activities to provide students / families with information about obesity and ways to improve health.

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