The National Center for Health Statistics estimates that 16.9 percent of children and adolescents ages 2 to 19 years are obese.

These most recent data follow a trend in increased prevalence of overweight or obesity spanning the last 30 years (Ogden & Carroll, 2010). An array of private and public sector organizations, chief among them children’s hospitals, are responding to what is often called the “obesity epidemic.” Children’s hospitals find themselves on the frontlines of obesity diagnosis, treatment and prevention with pediatric obesity affecting virtually every clinical unit in the hospital.

Children’s hospitals are uniquely positioned as a powerful resource in the fight against obesity. In addition to treating the complex medical issues resulting from obesity, children’s hospitals have been at the forefront of obesity prevention.

The White House Task Force on Childhood Obesity, May 2010 report, highlights the importance of focusing on both prevention and treatment in order to solve the problem of childhood obesity. Children’s hospitals are among the few institutions equipped with the commitment, resources and expertise to be leaders in both these areas. The research expertise of children’s hospitals also enables them to rigorously evaluate interventions and share best practices.

Children’s hospitals have responded to the serious threat childhood obesity poses to children’s long-term health and quality of life through initiatives that span their four-fold mission:
• to provide superior clinical care
• to use evidence-based research to inform clinical practice and advance treatments
• to advocate for the health of patients
• to educate the future pediatric workforce.
PROVIDING CLINICAL CARE

Obesity is a complex public health issue and is the result of varied social, emotional, genetic and medical conditions. The nation’s children’s hospitals have developed comprehensive obesity programs to address these factors, with medical intervention as the core to their approach.

More than 30 medical conditions are associated with obesity, including diabetes, high blood pressure, high cholesterol, sleep apnea and even cancer. Additionally, mental health issues including poor self-esteem and depression are real, immediate risks for these children. Obese children are more than twice as likely to have an inpatient admission compared to their non-obese peers, thus costing the nation more than $127 million per year in hospital costs.

Children’s hospitals are uniquely qualified to be able to provide the entire spectrum of care, from community-based prevention and weight-loss programming, to medical monitoring in obesity clinics, to bariatric surgery. Most children’s hospitals utilize a combination of these interventions in a coordinated, comprehensive approach.

For example:

For children with complicating medical and/or psychological factors, Walt Disney Pavilion at Florida Hospital for Children in Orlando offers one-on-one medical intervention with physicians and/or nurse practitioners at a hospital-based obesity clinic. The clinic is staffed by bariatric pediatricians, dietitians, exercise physiologists and psychologists.

American Family Children’s Hospital in Madison, WI, is responding to an increase in polycystic ovarian syndrome among adolescent girls by holding a specific clinic with a research component to demonstrate the role of multidisciplinary treatment for both obesity and the co-morbid conditions that can accompany it.

Adolescents at greatest risk, who have exhausted all other options, turn to children’s hospitals such as A. I. duPont Hospital for Children in Wilmington, DE, for bariatric surgery, which is reserved for a small percentage of youth whose co-morbid conditions can be cured with surgery.

Clinical care is not always provided in the typical health care setting. Children’s hospitals are taking expertise to children in their communities and in nontraditional venues.

For example: Cincinnati Children’s Hospital Medical Center in Ohio established a week-long overnight camp for kids ages 9 – 13. Children participate in typical camp activities with a focus on good nutrition and physical activity as well as education sessions throughout the week. On the last day, a family education component is offered for parents, siblings and others.

Lucile Packard Children’s Hospital at Stanford in Palo Alto, CA, combats childhood obesity through community-based treatment programs in local recreation centers, schools and community centers. In these programs, the children benefit from the services of trained professionals such as dietitians, exercise physiologists, social workers, psychologists, as well as weight-loss “coaches.” The program works to treat children through individualized methods.
IMPROVEMENTS THROUGH RESEARCH

In addition to providing high quality clinical care, children’s hospitals have a focus and dedication to academic and public health research. With the ultimate goal of unlocking mysteries that can lead to fewer children with obesity, children’s hospitals focus on clinical, translational, basic and health services research.

For example: Arkansas Children’s Hospital Research Institute (ACHRI) in Little Rock conducts National Institutes of Health (NIH) and Department of Agriculture (USDA) funded research studies addressing environmental risk factors for obesity and related chronic diseases; school-, worksite-, and community-based obesity prevention interventions; and methodological issues in dietary and physical activity assessment. These studies target primarily high-risk populations, including rural, low income, lower education and minority groups.

The Sheikh Zayed Institute for Pediatric Surgical Innovation at Children’s National Medical Center in Washington examines muscle, liver and fat tissue samples in patients before and after weight loss surgery to identify the molecular pathways important for successful extreme weight loss. The hypothesis is that the same pathways will be important for weight gain. Once identified, patients can be targeted with prevention strategies and therapies, perhaps making surgery unnecessary.

Seattle Children’s has assessed the impact of school-based wellness policies. It helped contribute to the development of a national online tool (www.wellsat.org) to assess school wellness policies and their effects.

In addition to working in their own regional communities, children’s hospitals work collaboratively as a national community of pediatric providers through efforts such as the Children’s Hospital Association’s FOCUS on a Fitter Future, which brought together multidisciplinary teams from 25 children’s hospitals. Through their efforts, these hospitals are working to establish a practice-based research network and to build a national registry of patient-level data to further expand knowledge about successful strategies to treat childhood obesity.

ADVOCATING FOR ALL CHILDREN

Advocacy on behalf of children takes many forms. From building broad-based coalitions of community stakeholders to offering free outreach programs to lobbying for improvements in school nutrition, built environment and more, children’s hospitals engage in a variety of advocacy efforts to prevent and reduce childhood obesity.

For example: University of Michigan C.S. Mott’s Children’s Hospital in Ann Arbor, MI, is a steering committee member of Healthy Kids Healthy Michigan (HKHM), a statewide multi-stakeholder coalition dedicated to reducing childhood obesity in Michigan through strategic policy initiatives. HKHM comprises executive-level decision makers from more than 120 organizations representing government, public and private sectors, school districts, health care and nonprofit organizations from across the state of Michigan.

St. Louis Children’s Hospital in Missouri has focused on community-based, obesity prevention programs in the schools. These programs offer education and tools on nutrition and physical activity, providing resources to teachers and school nurses — those who can reach large numbers of children directly each day.

City kids who live in a community where 50 percent of children are overweight or obese learn about healthy eating at the hospital-based green market.
The **Floating Hospital for Children at Tufts Medical Center** in Boston works closely with the Be Our Kids’ Success (BOKS) program, which provides free before-school physical activity programs in 23 elementary schools in the Boston-metro area. Healthy nutrition messaging accompanies the fun physical activities that children engage in two to three times a week during this 11-week program.

Promoting good health through policy change happens within the children’s hospital in addition to in the community. In Columbus, OH, **Nationwide Children’s Hospital** promotes the value of health and well-being for patients, families and staff by eliminating all sugar-sweetened beverages from its campus and by providing healthier alternatives. The policy applies to the hospital cafeterias, gift shops, vending machines, patient room service and on-site catering service.

**SPREADING THE WORD THROUGH EDUCATION**

Education is an important component of the prevention and treatment of childhood obesity. While education is a tool of empowerment for families and children, educational resources regarding childhood obesity are not solely aimed at patients and families. Children’s hospitals are a significant source of education for the providers as well, serving as the training ground for the next generation of pediatricians and pediatric subspecialists. As more and more children present with obesity and the complicating co-morbid conditions, the more they rely on these clinicians for their care.

*For example:* **Kosair Children’s Hospital** in Louisville, KY, partnered with University of Louisville’s Healthy for Life Weight Management Clinic to provide continuing education for primary care physicians (PCP) throughout the state of Kentucky. The continuing education is customized for the treatment of obesity and associated co-morbidities in the PCP clinic. In addition, Kosair rotates medical students, psychology students, dietary students, and nurse practitioners through its weight management clinic.

Residents trained at **Connecticut Children’s Medical Center** in Hartford engage in a long-term project in the local community, such as advocating successfully for new legislation to promote healthier food choices in schools.

**A WINNING COMBINATION**

Children’s hospitals are completely invested in being leaders in solving the numerous challenges posed by childhood obesity. The unique needs of the obese patient are best met by children’s hospitals because of their combination of an educated workforce specializing in obesity treatment and their focus on cutting edge evidence-based research and treatment.

Through community partnerships with schools, businesses, YMCAs, local health departments and other allies, children’s hospitals have helped drive prevention efforts and have been an invaluable resource on the most effective ways to preempt the further escalation of childhood obesity. The importance of this kind of multi-disciplinary, collaborative approach to tackle childhood obesity cannot be overemphasized.

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**References:**