Critical to the Health of Our Children: Missouri's Actions for Addressing Childhood Obesity

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Subcommittee on Childhood Obesity
State of Missouri Children's Services Commission

About the Subcommittee

The Subcommittee on Childhood Obesity was created in 2013 by the Missouri Children's Services Commission to review the issue of childhood obesity and compile recommendations for a comprehensive response.

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Dear Partners,

Imagine a Missouri by 2030 in which $12 billion a year is spent on obesity-related health care, resulting from an alarming increase in childhood obesity. According to research by the Robert Wood Johnson Foundation, that is where Missouri is heading. Now, imagine a vision and strategic plan to make Missouri a national leader in the reduction of childhood obesity, saving the state billions of dollars longitudinally and increasing the quality of life for children and their families.

Such a plan would innovatively contribute to real health care reform, as health care costs would be dramatically reduced, school performance would be measurably increased, and quality of life for affected children and their families would significantly improve.

This vision also represents an approach to health care reform that provides bi-partisan solutions to Medicaid reform and transformation. Improving outcomes for children at-risk and saving public/private health care costs is possible.

To be clear, this is not a call for another big government program. It is a vision for strategic implementation of an innovative plan to reduce state, federal and private sector costs for health care, improving quality of life for children and their families.

The findings and recommendations in this report to reduce childhood obesity in Missouri now has the potential to become a reality, thanks to the excellent work of the Subcommittee on Childhood Obesity that was created by the Missouri Children's Services Commission in 2013.

We want to thank each member of the subcommittee, and their staff, for the valuable contributions they made. We also thank the Missouri Foundation for Health and the Health Care Foundation of Greater Kansas City for funding this groundbreaking project. We also recognize and thank members of the general public who provided their expertise and experiences with obesity and its impact on children.

Sarah Hampl, MD, and Denise Wilfley, PhD, earn special recognition for their leadership role as co-chairs for the subcommittee. The subcommittee co-chairs and members provided a depth of insight and dedicated much time to review best approaches Missouri can take to align and amplify efforts to prevent and treat childhood obesity.

It is also noted that there was valuable input from many Missourians throughout the state who attended four public forums where preliminary recommendations were presented and thoughtfully discussed. Public involvement and guidance was critical to the group's efforts to finalize the recommendations in a manner responsive to the needs of those impacted by this issue.

The subcommittee thoroughly reviewed evidence and a host of variables, and extensively discussed differences in what are regarded as best approaches. The debate and discussion between the members and input from the public led to formulation of findings and recommendations that were submitted to the Missouri Children's Services Commission. We strongly recommend that the Governor and General Assembly support their implementation.

Missouri has a history of firsts in public policies affecting children.

- Tim Decker—Director of the Missouri Division of Children's Services and a regular representative of the Missouri Department of Social Services (DSS) at bi-monthly meetings of the Missouri Children's Services Commission—is the former Director of the Division of Youth Services (DYS) in DSS. DYS is known nationally as having gone from worst to first, with a Division of Youth Services that has been recognized as best in the nation.
- Dr. Keith Schafer—the retiring Director of Missouri's Department of Mental Health (DMH)—is also a member of the Missouri Children's Services Commission. This year, through DMH's Division of Developmental Disabilities, Missouri will become the first state in the nation to have eliminated a waiting list for in-home services for persons with developmental disabilities. That list stood at well over 5,000 persons just six years ago. With the budget passed last year for the current fiscal year, that wait list will reach zero. It will be a first nationally and a historic milestone accomplishment for Missouri.

With Missouri firsts in mind, we want the Show-Me State to show the nation leadership on reducing childhood obesity. Please join us in pursuing this non-partisan vision for Missouri to become a national leader in the reduction of childhood obesity. These findings and recommendations of the Missouri Children's Services Commission's Subcommittee on Childhood Obesity have the potential to help catalyze and perpetuate meaningful change through implementation of innovative strategies for public and private partnership.

The vision to reduce childhood obesity in Missouri—with the multiple benefits that would bring higher quality of life for Missouri's children and their families—has the potential to help drive a course-altering movement. We can realize billions of dollars per year in future health care cost savings, as well as evidence-based improvements in health and quality of life for children, their families and our communities. Thank you for your participation in and contributions to this process.

With you for Missouri's children,

Jeff Grisamore
Former Chairman, Missouri Children's Services Commission

Representative Sue Meredith
Chairman, Missouri Children's Services Commission

Former Representative Jeff Grisamore, a four-term member of the Missouri House of Representatives, served as Chairman of the Missouri Children's Services Commission from 2008 to January 7, 2015. At that time, Representative Sue Meredith assumed the chair of the Missouri Children's Services Commission.

Executive Summary

Background

The recommendations embrace the dual strategies of prevention and treatment, and build on current evidence, strategies outlined by the Missouri Council for Activity and Nutrition (MoCAN), and thoughtful discussion throughout 2014.

These recommendations were designed to:

- Be actionable by the state legislature or governmental agencies
- Be reasonable to achieve in the next two years
- Be impactful as supported by the evidence
- Have the potential to be statewide in reach

The draft recommendations were presented at four public forums across the state, in which valuable public testimony was gathered and used to finalize the approaches. The Subcommittee on Childhood Obesity believes that these recommendations, if enacted in a comprehensive manner, offer an effective way to address obesity with Missouri's children.

About Childhood Obesity

Obesity in children is the number one health concern among parents in the United States.[1] Nationally, one in three children is either obese or overweight. Obesity rates have more than doubled for children and quadrupled for adolescents in the past 30 years.[2]

Shifts in the Food and Fitness Environment: Today's children are generally less active at school and child care due to decreases in the amount of physical education, recess time and active play time offered each week. Some children have limited access to healthy food at home, school or child care and many are bombarded with unhealthy food offerings.

Health Consequences: Obesity can affect nearly every body system and the organs within those systems–the brain, heart, lungs, kidneys, pancreas, liver, gall bladder, muscles and bones.[3] Children with obesity are being diagnosed with diseases such as heart disease[4] and type 2 diabetes, conditions that had previously been diseases of adulthood.[5]

Costs of Inaction: The goal is to prevent obesity, to detect risks early and, if needed, provide effective treatment. Many Missouri families are unable to access treatment for obesity due to costs and limited availability. When obesity is left untreated, children are at higher risk for developing health conditions, and the cost of treating these illnesses is significant. If trends continue, Missouri will spend $12 billion annually on obesity-related health care by 2030.[6]

The Good News!

Childhood obesity, and the related health conditions and health care costs, often is preventable. Missouri can improve the food and fitness environment for our children. We can begin to impact the high rates and rising costs of this complex disease through implementing policies that support school and child care settings, improve access to treatment and build statewide infrastructure for prevention and treatment.

Five Policy Actions to Improve Children's Health

The Missouri Children's Services Commission, Subcommittee on Childhood Obesity Recommendations

1. Update child care licensing rules on feeding practices, nutrition, physical activity and screen time. Assure training and support services for child care providers to meet new standards.
2. Establish an Office of Student Wellness to maintain expectations for health and physical education curricula. Modify school accreditation by including a voluntary health and wellness component. Provide support to schools to implement best practices and school wellness policies.
3. Reimburse licensed professionals with specialized training to provide family-centered evidence-based multi-component weight reduction programs through Medicaid.
4. Establish Centers of Excellence to provide and improve access to evidence-based weight management services, build community-based capacity for treatment and prevention, and evolve prevention and treatment approaches.
5. Establish a commission to oversee implementation, study effectiveness and provide a forum for education and future actions.

Prevention in Early Childhood

Update child care licensing rules to align with the latest evidence on feeding practices, nutrition, physical activity and screen time. Assure training and support services for child care professionals to meet new standards.

Rationale: Risk for obesity begins in early childhood, when habits and patterns are first forming. Missouri rates for overweight and obesity in low-income children are 29 percent.[7] Children who are overweight or obese as preschoolers (2-5 year olds) are five times more likely to be overweight or obese at 12 years old when compared to their normal weight peers.[8]

Missouri child care licensing regulations for nutrition and physical activity have not been updated since 1993. Current regulations meet only five of the 47 nationally recommended standards for preventing childhood obesity in child care.

How it would work: Physical and social environments are important influences on young children's eating and activity patterns.[9] Updating child care licensing rules will enhance prevention strategies during this critical child development period.

The Missouri Department of Health and Senior Services (DHSS) would work with child care community stakeholders to update licensing rules to align with the latest evidence on standards for nutrition, feeding practices, physical activity and screen time. Through a network of collaborating partners, the department would assure training and support services would be available for child care professionals to achieve the new standards.

School-Based Prevention Strategies

Establish an Office of Student Wellness to maintain up-to-date standards for health and physical education curricula. Modify school accreditation by creating and maintaining a health and wellness component. Train and support school staff to implement best practices and school wellness policies related to nutrition, physical activity, physical education and family engagement.

Rationale: When children enter school, the rates of overweight and obesity jump to 34.2 percent for 6-11 year olds and to 34.5 percent for 12-19 year olds compared to 22.8 percent for 2-5 year olds, nationally.[2]

Children with obesity perform worse in school, miss more school days, have lower self-esteem and are more often the targets of bullying compared to their healthy weight peers.[10,11]

Schools provide opportunities for students to learn about and practice healthy eating and physical activity behaviors.[12]

How it would work: The Missouri Department of Elementary and Secondary Education (DESE) would establish the Office of Student Wellness with staff dedicated to maintaining up-to-date grade-level expectations for the health and physical education curricula.

In addition, DESE would modify the school accreditation scoring guide by creating and maintaining a health and wellness component that provides an incentive for schools to voluntarily implement obesity prevention strategies. The Office of Student Wellness, working in collaboration with DHSS and a network of collaborating partners, would assure training and technical assistance for educators and school administrators to implement best practices and school wellness policies.

Reimbursement for Treatment

Reimburse licensed professionals with specialized training in family-centered, evidence-based, multi-component weight reduction programs through all Medicaid plans. Reimburse services provided in health care or community settings for children who are overweight or obese.

Rationale: About 60 percent of children who were overweight or obese had one risk factor for heart disease; and 25 percent had two or more risk factors, according to a study of children ages 5-10 years old.[4] Type 2 diabetes accounts for as many as half of all new cases in children in certain U.S. populations.[5]

Expert groups recommend comprehensive multi-component treatment for childhood obesity;[13] however, most children in Missouri do not receive this evidence-based treatment.

Many insurers in Missouri do not provide adequate coverage for childhood obesity treatment despite substantial evidence that obesity warrants early and comprehensive treatment.

How it would work: The Missouri Department of Social Services, through MO HealthNet, would assure that all Medicaid plans provide reimbursement for services provided by licensed professionals (e.g., physicians, psychologists, social workers, registered dietitians) with specialized training in Medicaid-approved evidence-based multi-component weight reduction programs.

Children with a body mass index (BMI) at or above the 85th percentile for age and gender would be eligible for reimbursed services, whether or not they had co-morbid conditions.

Infrastructure through Centers of Excellence

Establish Centers of Excellence across Missouri to assure regional, coordinated access to treatment; provide evidence-based weight management services; train health care providers, school staff and others about screening, treatment, referral coordination and prevention strategies; and support research to improve approaches.

Rationale: Although obesity is one of the most common childhood problems seen by primary care providers, many are not trained to screen accurately and intervene early.[14] Establishing Centers of Excellence would provide much needed infrastructure and capacity-building, so that children and their families across the state can access evidence-based prevention and treatment services.

The Centers of Excellence model for children with autism spectrum disorders has increased services and improved clinical and community capacity, allowing families to access a full continuum of care across Missouri.

How it would work: The Centers of Excellence for Children with Obesity would build on this proven Missouri model to improve access, quality and outcomes for children with obesity. DHSS would define key functions and contract with qualified organizations to establish at least three Centers of Excellence across Missouri that meet standards to provide evidence-based, multi-component weight reduction programs. Through a state and regional network of affiliated partners (e.g., schools, non-profit organizations, health centers, child care facilities), each center would support effective prevention efforts and coordinate access to treatment. The centers would provide training on screening, treatment options, prevention strategies, and referral coordination for children who are overweight or obese and support research to improve approaches.

Commission on Child Health and Wellness

Establish a commission to oversee implementation of the subcommittee's recommendations, study effectiveness of prevention strategies, and provide an ongoing forum for education and future actions.

Rationale: Obesity is a complex medical, social and environmental problem. A statewide commission with diverse representation can provide expertise and guidance to advance and monitor sustainable, evidence-based strategies for decreasing childhood obesity.

Statewide commissions provide an opportunity for joint planning, system-wide problem solving and policy development. From 2001 to 2012, 24 states have enacted legislation that established state-level childhood obesity commissions.[15]

How it would work: DHSS will create the commission to provide leadership, expertise and guidance to advance actions to decrease childhood obesity and track progress over time. Based on results, changing needs and members' expertise, the commission will guide continuing efforts to lower childhood obesity rates and improve health outcomes. DHSS will make appointments to assure diverse representation from relevant state agencies, health care providers, community agencies, local governments, industry and the public.

Conclusion

Nationally, one in three children is overweight or obese.[2] Obesity is a complex condition that begins early in life, and very often continues through adolescence and into adulthood. Childhood obesity often results in serious health consequences and accompanying health care costs in childhood and throughout the lifespan. If current trends continue, Missouri will expend $12 billion annually on obesity-related health care by 2030.[6]

Background and Statistics on Childhood Obesity

Definitions

Overweight: Children and adolescents (ages 2-19 years) with a BMI between the 85th and 94th percentile are considered overweight. A child's weight, height, age and gender are used to determine the BMI. An adult who has a body mass index (BMI) between 25-29.9 is considered overweight.

Obese: Children and adolescents (ages 2-19 years) with a BMI at or above the 95th percentile are considered obese. A child's weight, height, age and gender are used to determine the BMI. An adult who has a body mass index (BMI) of 30 or higher is considered obese

Body Mass Index (BMI): A number calculated from a person's measured weight and height. BMI is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems.

Childhood obesity is at epidemic proportions and now the number one health concern among parents in the United States; it is more concerning to them than smoking or drug abuse.[1] More than 12 million American children and adolescents are obese (16.9%), and more than 23 million are either obese or overweight (31.8%).[2] In the past 30 years, the prevalence of obesity has doubled for children and quadrupled for adolescents. Based on 2011-2012 national data; 8.4 percent of 2-5 year olds, 17.7 percent of children 6-11 years and 20.5 percent of 12-19 year olds were obese.[3]

While the national statistics are staggering, Missouri rates are equally alarming with 28 percent of 10-17 year olds being overweight or obese.[4] Furthermore, 12.9 percent of Missouri's low income 2-5 year olds, the most at-risk for disease and health disparity, are obese.[5] Even more are overweight. Research has shown that preschoolers (2-5 year olds) with obesity are five times more likely to be overweight or obese as adults.[6,7] Reversing this trend with effective obesity prevention strategies and evidence-based treatment is critical to the health of our children now and the adult population many decades later.

A comprehensive and coordinated set of strategies is needed to achieve reductions in the prevalence of childhood obesity due to the multiple causes of this condition. Leadership is needed in the areas of policy and regulation; prevention and treatment services must be expanded and evaluated critically; and investments in innovative research will inform future programs that are more effective and efficient.

Children are prime targets for over-consumption of high-calorie, nutrient-poor foods. They have a limited capacity to make informed choices about what is healthful and what is not. This premise supports the rationale for modifying children's environments to make it easier for them to be physically active and to make healthful food choices, thus reducing their chances of becoming obese. The built environment, social interactions and food quality are the cornerstones for both prevention and treatment interventions.[8] In order to prevent and treat obesity, a systems approach to support behavior change is needed.

The healthy choice needs to be not only easy but also feasible and affordable. Childhood obesity is estimated to cost the United States more than $14 billion annually,[9] a figure that jumps to approximately $168 billion when examining the cost of adult obesity.[10] Failure to invest now in evidence-based prevention and treatment strategies results in tremendous costs for the health care system as well as many other parts of society, including national security and workforce development.

$14b *spent annually in the U.S. on childhood obesity*

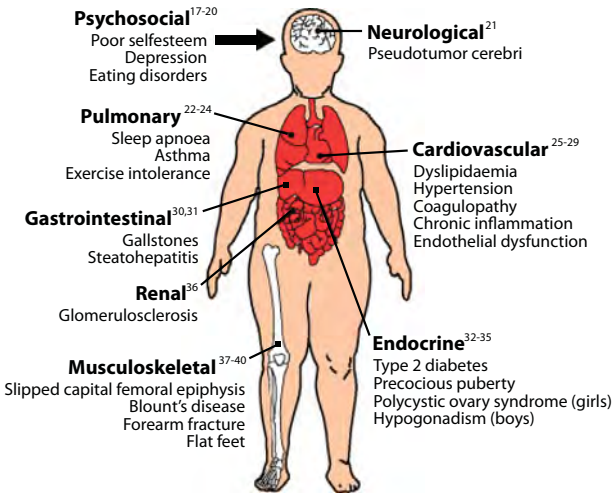
add the *cost of adult obesity in U.S.* **=$168b**

Consequences of Childhood Obesity

Obesity is one of the most common problems seen by pediatric primary care providers, with one out of three children seen being outside the healthy weight range. Research studies have consistently demonstrated that youth who are overweight or obese have substantially higher odds of remaining obese in adulthood—70 percent to 80 percent of these children will be obese adults.[11,12] Childhood obesity sets up a high probability for a potential lifetime of costly diseases (e.g., diabetes, heart disease, cancer), diminished quality of life and disability.[13] If current trends continue, Missouri will expend $12 billion annually on obesity-related health care costs by 2030.[14]

Obesity can affect nearly every body system in a child, having a direct and deleterious impact on the organs within those systems—the brain, heart, lungs, kidneys, pancreas, liver, gall bladder, muscles and bones.[15] The array of complications of childhood obesity are shown in Figure 1. An ultrasound study done at Children's Mercy Hospital in Kansas City found that adolescents with obesity had narrowing in major arteries similar to that seen in 45 year old adults.[16] In addition to cardiovascular system changes, obesity may alter the hormones that regulate puberty and blood sugar.[15]

Figure 1. Complications of Childhood Obesity[15]



While the medical consequences are serious and costly, they are only part of the picture. Children who are overweight or obese frequently suffer socially and emotionally, too. These children are highly stigmatized and frequent targets of teasing and rejection by their peers. They are more likely to have depression and low self-esteem and to be the targets of bullying or to bully other children.[17] Research has shown that these feelings of sadness, loneliness, stress and worry start early, as young as age six, and escalate as the child grows older.[17] Children with obesity have reported their quality of life is similar to that of children diagnosed with life-threatening illnesses such as cancer.[18]

Few problems in childhood have as significant an impact on development as being overweight or obese. The scientific literature has documented higher rates of absenteeism and poorer academic performance for school-age children with obesity.[19,20] These issues seem to worsen as the child matures. One study followed a group of 16-24 year old females who were overweight and found that seven years later, they had completed less school, earned less money, were less likely to be married and had higher rates of household poverty.[21] Furthermore, overweight is now the leading medical reason for rejecting male and female recruits into military service.[22]

What is Needed for Children with Obesity?

As the obesity epidemic persists, policy change is urgently needed in the State of Missouri to improve access to and payment for comprehensive, evidence-based obesity prevention strategies and treatment. Nationally, the U.S. Preventive Services Task Force has recommended that all children six years and older be screened for obesity and be offered or referred to comprehensive, intensive behavioral interventions to promote improvement in weight status.[23] In 2007, an Expert Committee (convened by the American Medical Association, Health Resources and Service Administration and Centers for Disease Control and Prevention and consisting of representatives from 15 national health care organizations; namely, The American Academy of Pediatrics, The American Academy of Family Physicians, The Academy of Nutrition and Dietetics, American Psychological Association, and others) developed comprehensive recommendations for the prevention, assessment and treatment of children with overweight and obesity. These important recommendations underscore the need for body mass index (BMI) screening in the primary care setting and referral for evidence-based multi-component (EBMC) treatment when needed.[24]

Despite sound national recommendations, most children with obesity in Missouri do not receive evidence-based treatment. There are two major barriers: 1) ability to pay and 2) availability of accessible services. Therefore, changes to Missouri's policy regarding access to comprehensive evidence-based obesity treatment services needs to address mechanisms for assuring reimbursement for these services.

Obesity prevention must be a high priority—starting at birth for all children.[24] If the efforts that promote healthy eating and physical activity are supported early in life, these behaviors can protect children from obesity in the future.

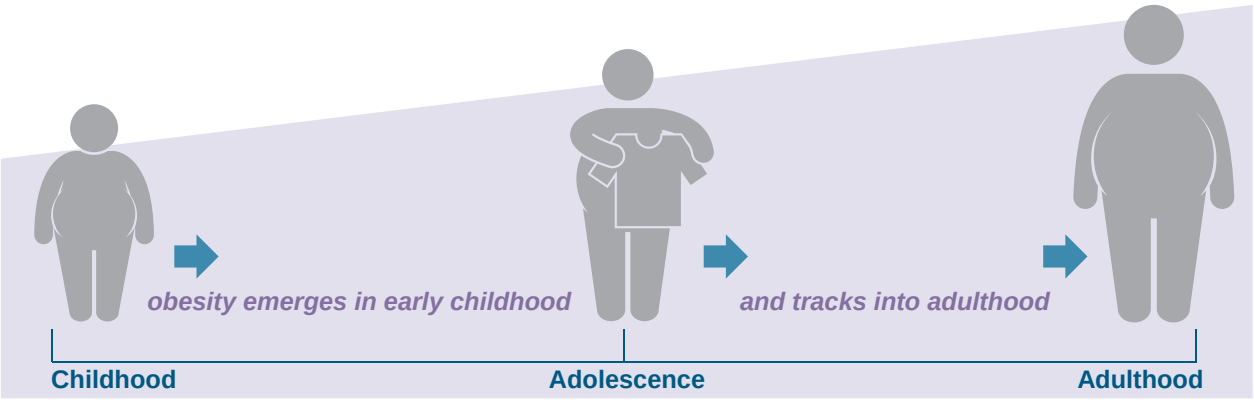
The emerging science tells us that obesity is a complex condition that emerges in the early years, tracks through adolescence and into adulthood. In Missouri, this urgent public health priority needs alignment of evidence-based prevention and treatment efforts in order to build a comprehensive approach to conquer this public health problem. The high prevalence of children with obesity, paired with severe medical and mental health consequences, has been a disturbing trend. Investing in our children now will help them realize their best possible health outcomes, academic achievements, military readiness, earning potential and overall quality of life now and for the rest of their lives.

Developing the Priority Recommendations for Children with Obesity

The subcommittee has carefully considered the needs of children in Missouri and has outlined the highest priorities to improve the health of Missouri's children within this report. These recommendations embrace the dual strategies of prevention and treatment of children with obesity. Current scientific evidence is the foundation for all recommendations.

The volunteer members of the subcommittee participated in 11 meetings during 2014. These were engaging meetings, as subcommittee members were highly motivated throughout the process of preparing and advancing the development of these recommendations. In addition, more than 120 Missourians provided comment at four public forums across the state. This exchange and testimony served as valuable feedback to the subcommittee and was used to finalize the recommendations contained herein.

The subcommittee recommendations were designed to be *actionable* by the state legislature or governmental agencies, *feasible* and reasonable to achieve in the next two years, *impactful* as supported by the evidence, and capable of achieving *statewide* reach. The Subcommittee on Childhood Obesity believes the coordinated implementation of the recommended actions offers an effective means to address obesity in children for the State of Missouri.



Recommendation: Prevention in Early Childhood

The Missouri Department of Health and Senior Services (DHSS) updates child care center and home licensing rules to align with the latest evidence on standards for feeding practices, nutrition, physical activity, and screen time limitations to prevent obesity and support long-term health. Through a network of collaborating partners, the department assures training and support services are available for child care professionals to achieve full compliance with new standards.

Support and Rationale

One of the best places to reach young children is in the early child care setting. In the State of Missouri, it is estimated that approximately 115,600 children under age six are cared for by licensed child care facilities.[26] These facilities often become "the home away from home" as preschool age children spend on average 35 hours per week in child care or non-parental care.[27] The infant, toddler and preschool developmental periods are very important for habit formation, and the early child care environment lays the foundation for health practices. Key areas of impact for obesity prevention and overall healthy development in young children include:

1. Nutrition and feeding practices;
2. Physical activity; and
3. Screen time (i.e., passive time spent with a computer, television or other electronic device).

115,600 children under age six

are cared for by licensed child care facilities in Missouri

Risk for obesity begins in early childhood years. The most recent national data finds that one in four (22.8%) 2-5 year olds are overweight or obese, and low-income children are disproportionately affected.[28] In the State of Missouri, rates for overweight and obesity for low-income children are even higher at 28.9 percent.[28] Research has shown that the health consequences of obesity begin very early and track into adulthood; a seven-year old child with obesity has an 70 percent to 80 percent chance of carrying obesity into adulthood.[12,29] Notably, one study found children who were overweight (BMI ≥85th percentile) at 2, 3 or 4 ½ years were five times as likely to be overweight at 12 years when compared to their normal weight peers.[6] Left unaddressed, overweight in the early years of life forecasts a high risk trajectory of chronic and costly diseases.[3o,31]

Under the Missouri Code of State Regulations, licensing rules define and set forth the requirements for operation of home child care or child care centers. The licensing rules for nutrition and physical activity standards in Missouri child care centers have not been updated since 1993 and do not align with the current evidence for healthy weight promotion in the report as recommended by the American Academy of Pediatrics, the American Public Health Association and the National Resource Center for Health and Safety in Child Care and Early Education.[32] Updating the licensing rules and regulations to align with evidence-based standards for nutrition and feeding practices, physical activity, and screen time would improve quality of licensed care facilities in Missouri. These practices lay foundation for healthy behaviors and reduced risk for obesity along with its associated co-morbidities for children in licensed care.

Currently, Missouri licensing regulations fully meet only five of the 47 standard components for preventing childhood obesity in Caring for Our Children: National Health & Safety Performance Standards for Early Care and Education Programs (see Appendix A on page 38). Current Missouri standards do well in addressing adequate inside and outside space for play, not withholding play time from children who misbehave, serving age-appropriate portions and offering fruits of several varieties. Examples of Missouri's child care licensing standards that are inadequate include:

- Infant feeding practices, such as supporting breastfeeding through onsite arrangements for moms to breastfeed; feeding infants on cue; avoiding feeding infants beyond satiety; and introducing age appropriate solid foods at the appropriate age;
- Nutrition and beverage standards such as choosing mono- and polyunsaturated fats and avoiding trans fats; saturated fats and fried foods, avoiding salty foods and concentrated sweets; adults eating items that meet standards with children; teaching children appropriate portion sizes; and not forcing or bribing children to eat; and
- Physical activity and media practices such as orientation and annual training opportunities for caregivers/teachers to learn age-appropriate gross motor activities and games that promote physical activity; avoiding media (TV, video, DVD) viewing and computer use with children younger than two years; limiting total media time for two year olds and older to no more than 30 minutes/week; and limiting media time to only for educational purposes or physical activity.

Nutrition and Feeding Practices

Poor diet is a primary contributor to the obesity epidemic. Given the hours of operation for child care centers, children may consume a large portion of their daily calories in the child care setting.[33] Data on the nutritional quality and intake of children in licensed care facilities is limited; however, one study noted that the food components most often missing from meals and snacks were fruits and vegetables.[33,34] For example, only 28 percent of afternoon snacks included any fruit; while only 2.5 percent included any vegetables.[34] In order to achieve and maintain healthy weight, children need the opportunity to consume healthy diets that emphasize fruits, vegetables, low-fat dairy, whole grains and lean sources of protein while limiting the amount of fat and added sugars. The current licensing rules support the Child and Adult Care Food Program (CACFP) meal pattern, but there is a need for additional guidelines to improve nutritional quality.

Further, early child care settings can support breastfeeding as an optimal nutrition and feeding practice. Breastfeeding provides many important and positive health outcomes for both the mother and the baby. Several studies have looked at the relationship between breastfed infants and children with obesity and found that a small but consistent protective effect against obesity results for breastfed infants.[35]

Physical Activity

Physical inactivity significantly contributes to the obesity epidemic. Moreover, adequate physical activity is critical to fine and gross motor development, social and psychological development, overall health and obesity prevention.[37] Children in early child care settings spend 70 percent to 87 percent of their time being sedentary, i.e., sitting or lying down.[36,37]

Screen Time Limitations

Television viewing is a known risk factor for overweight.[38] At this time, Missouri licensing rules do not address media or screen time use in licensed child care homes or child care centers. However, very young children are exposed to television and video viewing both at home and in the child care setting. One survey found that by three months of age, about 40 percent of infants regularly watched television, DVDs or videos, and by 24 months, 90 percent watch these various forms of media.[34,39] Children in child care homes watch four-times more television than those in centers (1.39 hours vs. 0.36 hours, respectively).[40] It is important for very young children to be given the greatest opportunities for positive social interactions and avoid screens for social or cognitive engagement.

Collaboration & Training

Currently, licensed child care facilities are required by Missouri licensing rules to ensure all staff receive a minimum of 12 hours of training per year. All child care trainings for licensed facilities must be approved and monitored by the Department of Health and Senior Services, Section for Child Care Regulation. This is done through the Missouri Workshop Calendar, a statewide online tool administered by Child Care Aware® of Missouri. A robust set of state agencies, organizations and individuals post state- approved training related to early care and education on the Missouri Workshop Calendar. These entities include the Department of Health and Senior Services' Bureau of Community Food and Nutrition Assistance, Child Care Health Consultation Program and Section for Child Care Regulation. Additionally, The University of Missouri Extension, local health departments and Child Care Aware® of Missouri, among others, contribute to child care training offerings. Child Care Aware® of Missouri is also charged by the Department of Social Services with the coordination of these various partners that is done through Regional Collaboration Meetings held several times each year.

This existing network of training partners will be critical to coordinating training, on-site technical assistance, and other needed resources for child care professionals to implement new child care regulation changes. With Missouri's system of training approval in place, child care professionals are offered increased opportunities to learn and apply new knowledge and skills through training received. This sets the stage for further collaboration and more supports to enable child care facilities to establish best practice procedures at their facilities.

Conclusion

The physical and social environment are important influences on young children's eating and activity patterns.[41] Updating the licensing rules for child care centers will allow evidence-based obesity prevention strategies to be put in place during this critical child development period. Changing these standards at child care facilities also provides opportunities for families to be engaged in identifying approaches to implement these standards and reinforce these practices at home. As obesity takes hold in the early childhood years, updating Missouri's child care center and home licensing rules to meet all components of the Caring for Our Children best practices would improve children's health and development, and help prevent obesity within this key setting.

Recommendation: School-Based Prevention Strategies

Missouri public schools *open their doors every day to* **888,000 children**

Missouri Department of Elementary and Secondary Education (DESE) establishes an Office of Student Wellness with staff dedicated to maintaining up-to-date grade-level expectations for health and physical education curricula. In addition, DESE modifies the school accreditation scoring guide by creating and maintaining a health and wellness component that provides an incentive for schools to voluntarily implement obesity prevention strategies. Working in collaboration with the Department of Health and Senior Services (DHSS), the Office of Student Wellness provides training and technical assistance for educators and school administrators to implement best practices and school wellness policies related to family engagement, nutrition, physical activity and physical education.

Support and Rationale

When children enter school, the rates of overweight and obesity surge for 6-11 year olds (34.2%) and 12-19 year olds (34.5%) compared to 2-5 year olds (22.8%).[2] While schools alone cannot resolve the obesity problem, it is highly unlikely that the crisis can be ended without their strong involvement. Schools are natural hubs to address the obesity crisis in our state. Schools can take a multi-pronged approach to obesity prevention as they:

1. have access to students every day for long periods of the day,
2. have the primary goal of teaching,
3. manage school environments to support nutrition and physical activity behaviors, and
4. have the ability to reach beyond their walls to parents, caregivers and community members at-large to achieve a common goal.

Healthy students are better learners. In Missouri, public schools open their doors every day to more than 888,000 children[42]; this presents a vast opportunity for the Office of

School Wellness to promote and provide support for evidence-based obesity prevention strategies that improve children's health behaviors and academic achievement.

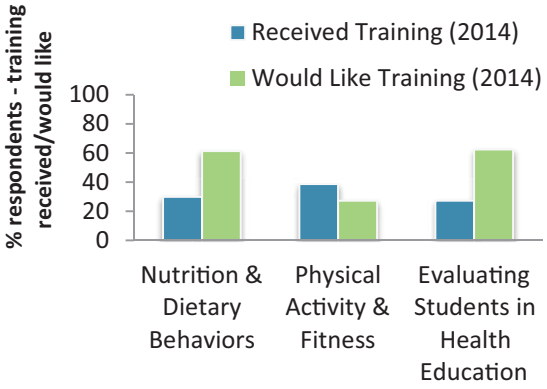
Improvements in nutrition and physical activity at school give all children the opportunity to lead healthier, more productive lives.[43] In Missouri, more than one in four (28.4%), 10-17 year olds are overweight or obese.[4] Many studies have demonstrated that children with obesity perform poorer academically when compared to their normal weight peers.[20,21] In addition, children with obesity have higher absenteeism, lower self-esteem and are the targets of bullying.[17,19] All of these factors take a tremendous toll on young people as they are growing and developing. As DESE strives to provide top-quality education for Missouri's children, there is a compelling need to include student health and wellness, especially as it is related to academic achievement.

Compelling Need for Office of Student Wellness

The areas of nutrition, physical activity and physical education are ever-evolving subject areas and health education curriculum is critical to equip students with the knowledge, attitudes and skills they need to support life-long health practices. Missouri law gives deference to local school board authority, acknowledging that the individuals closest to the students and most knowledgeable about a school are best suited to making important decisions about its operation, leadership, and teaching.

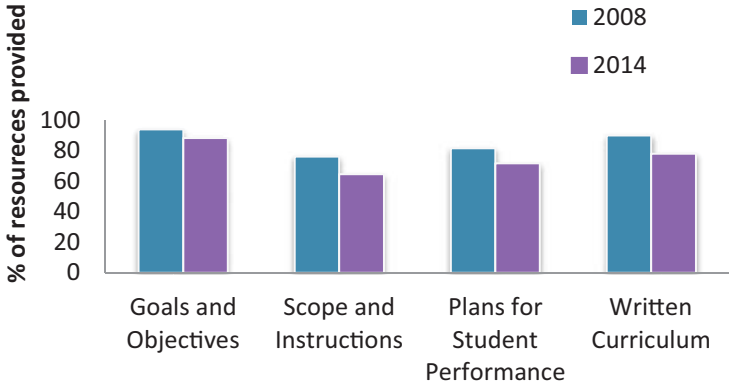
In addition to providing curriculum support to local school districts, DESE's Office of Student Wellness would collaborate with DHSS to provide training and technical assistance for school personnel, including administrators, teachers, food service staff and nurses. The Missouri School Health Profiles survey revealed that Missouri teachers are receiving significantly less health education training than they indicate they need.[44] For example, slightly more than 60 percent of the lead health education teachers in high schools would like training in nutrition and dietary behaviors, but less than 30 percent actually received that training (See Table 1).

Table 1. Demand for Health Education Training by Teachers



While demand for training is increasing, the available training resources are decreasing. Table 2 on page 20 highlights the percentage of different types of health education resources provided to those teaching health education in secondary schools; all areas show a downward trend from 2008 to 2014. One of the most concerning areas is the decreasing availability of a written health education curriculum, which fell from 90 percent to 78 percent between 2008 and 2014. Given the overabundance of information available on health and wellness, individual teachers may not have sufficient time to assess, align and produce comprehensive written health education curriculum. This underscores the need for the Office of Student Wellness with dedicated staff to develop a variety of the most accurate and age-appropriate curriculum for local school districts to consider implementing.

Table 2. Resources for Teachers in Health Education



Training and health education teacher resources are decreasing in Missouri schools.

Improving Our Schools—Health and Wellness as part of the Accreditation Guide

Missouri's school standards are among the highest nationwide. The state's goal is to be in the top 10 educationally by the year 2020. In order to achieve this, schools must take actions to improve student health and wellness.

Several studies have looked at school performance in children who are overweight or obese. The grim news is that in every age category, overweight and obesity has a negative impact on school performance:

- Kindergartners and first-graders who were overweight, on average, scored lower in math and reading than students who were of average weight.[45]
- A study of 7,000 third graders who had originally been tracked in kindergarten showed those children who were obese were more likely to repeat a grade than their classmates who maintained a healthy weight.[46]
- Adolescent girls who were overweight or obese not only were significantly more likely to score lower on math and reading tests, but also struggled with their social and emotional behaviors.[46] These girls had difficulty interpreting and communicating their feelings appropriately as well as connecting with their peers.

Providing access to healthy foods and physical activity during the school day plays a vital role in academic achievement and behavior.[47] Looking further at the evidence linking school performance and health behaviors, the following has been noted:

- Students who are physically active tend to have better grades, school attendance, cognitive performance (e.g., memory), and classroom behaviors (e.g., on-task behavior);
- More participation in physical education class has been associated with better grades, standardized test scores, and classroom behavior (e.g., on-task behavior);
- Deficits in certain nutrients (i.e., vitamins A, B6, B12, C, folate, iron, zinc and calcium) are associated with lower grades and higher rates of absenteeism and tardiness among students.

The link between academic achievement and children's nutrition and physical activity behaviors is strong. Given this evidence, incorporating a voluntary health and wellness component as part of school accreditation could provide tremendous support in "the ultimate goal of all students graduating ready for success in college and careers."[48]

Collaboration for the Health of our Schools and Students

DESE and DHSS have a strong history of collaborating. These projects include the Youth Risk Behavior Survey (YRBS), School Health Profiles survey and past actions to support school wellness policies. While these are very important statewide initiatives, it is more important than ever that a comprehensive and rigorous approach for children's health and wellness be supported statewide. The Office of Student Wellness would provide much needed leadership and further strengthen the impact of the efforts for healthy students and healthy school environments. Integral parts of this role would include but not be limited to:

1. Deliver training and technical assistance for educators and school administrators to implement best practices related to nutrition, physical activity and physical education.
2. Provide professional development and technical assistance on enhancing healthy school environments, nutrition and food service, and physical education and activity during the school day.
3. Educate parents and key stakeholders consistently on the connection among healthy eating, physical activity and academic achievement.
4. Provide support to schools to engage caregivers in the development and implementation of wellness policies that are needed for their children's school.
5. Develop and support implementation of written, current health education curricula.

The Importance of School Wellness Policies

In a review of the childhood obesity policy research and practice literature, school wellness policies were identified as a promising intervention strategy due to their effectiveness and population impact.[8] Furthermore, many acknowledge that school wellness policies are among the most effective obesity prevention strategies. Without resources and accountability these policies often lie in a state of dormancy. Converting policies into practices is critical to developing a healthy school environment. The staff dedicated to the Office of School Wellness would assure evidence-based practices and programs are being supported and implemented within school settings.

Conclusion

Learning about healthy eating and physical activity in school will provide children with the knowledge and skills needed to make good health decisions now and in the future. By also providing healthy environments, schools make it easier for students to practice and reinforce appropriate behaviors that lead to better health. This in turn, supports achievement of better grades, test scores and attendance. Establishing the Office of Student Wellness will put in place the critical foundation to support all districts across the state to support healthy and successful students and, in turn, Missouri's workforce of the future.

More participation in physical education class has been associated with better grades and classroom behavior.

Recommendation: Reimbursement for Treatment

The Missouri Department of Social Services and MoHealthNet assures that all Medicaid plans, both fee-for-service and managed care, provide reimbursement for family-centered services provided by licensed professionals (e.g., physicians, psychologists, social workers, registered dietitians, etc.) with specialized training in Medicaid-approved evidence-based multi-component (EBMC) weight reduction programs. Children with a body mass index (BMI) at or above the 85th percentile with or without co-morbid conditions shall be eligible for reimbursed services. EBMC services may be provided in health care or community settings.

Support and Rationale

Obesity is one of the most common problems seen by pediatric primary care providers, with one out of three children seen being above the healthy weight range; there is a 70 percent to 80 percent likelihood these children will be obese as adults.[11,12] Obesity can affect nearly every body system in a child, having a direct and deleterious impact on the organs within those systems—the brain, heart, lungs, kidneys, pancreas, liver, gall bladder, muscles and bones. If current trends continue, Missouri will expend $12 billion annually on obesity-related health care costs by 2030.[14] Reversing childhood obesity is critical to prevent the development of related disease, improve quality of life, and decrease the cost burden associated with a lifetime of excess weight.

Evidence-based treatment for obesity exists, but a major barrier to providing and accessing these services is ability to pay and adequate reimbursement for health care providers through insurance. If treatment is to be made available to children who need it, Missouri's policy must change to assure access to comprehensive evidence-based obesity treatment services and reimbursement for these services.

Screening and Treating Children with Obesity

The U.S. Preventive Services Task Force (USPSTF) recommended that: "Clinicians screen children aged 6 years and older for obesity and, when needed, offer them or refer them to intensive counseling and behavioral interventions to promote improvements in weight status."[23] To maximize effectiveness, interventions should include greater than 25 contact hours with the child and/or family to address dietary, physical activity, and behavioral counseling components.[23,74]

The USPSTF recommendation is congruent with the Expert Committee (convened by the AMA, HRSA and CDC, and consisting namely of representatives from The American Academy of Pediatrics, The American Academy of Family Physicians, The Academy of Nutrition and Dietetics, American Psychological Association, etc.) recommendations regarding prevention, assessment and treatment of child and adolescent overweight and obesity, which advocates for a step-wise approach for pediatric obesity including comprehensive multidisciplinary intervention. Despite these important recommendations, most children in Missouri do not receive evidence-based treatment for obesity. Providers have plainly stated that lack of reimbursement is a primary barrier to obesity care.[24,25] Many insurers nationally and in Missouri do not provide coverage for childhood obesity treatment despite substantial evidence that obesity warrants early and comprehensive treatment.[49] When coverage is offered, it is often limited in scope and is inadequate intensity or breadth to effectively impact children with obesity.[49,50] In November 2011, The Centers for Medicare and Medicaid Services (CMS) issued a decision to extend coverage for intensive behavioral therapy for adults with obesity. While the CMS ruling is a very important step in adult obesity treatment, equivalent coverage has not been extended to children.

Because obesity tracks so consistently from childhood into adulthood (i.e., 76% of children who are obese at 7-12 years of age remain obese as adults), it is projected that a large portion of obesity-related medical expenditures can be attributable to childhood obesity because such a great proportion of adults with obesity were obese as children.[29] While there is little research on cost-effectiveness of obesity treatment in children, the cost-effectiveness of family based group treatment for obesity was recently examined. Knowing that parental obesity is a risk factor for the child to develop obesity, a family-based treatment model is recommended.[76]5In one study of 51 families with children and parents who were overweight or obese, family-based therapy was associated with a lower cost per unit of weight loss for parents and children than treating the parent and child separately.[51]

To obtain effective weight management services, children and families need access to and insurance coverage for EBMC weight reduction services. To this end, it is crucial that programs be delivered by trained professionals equipped to support children and families through the challenges of weight management. Effective providers can vary in background (e.g., physicians, psychologists, social workers, registered dietitians) but must have specialized training in evidence-based treatment for childhood obesity. It is also crucial that approved treatment programs include a visit frequency that provides at least 25 hours of treatment as recommended by the U.S. Preventive Services Task Force.

76% *of children who are obese at 7-12 years of age remain obese as adults*

what's needed?

family-based treatment for childhood obesity is recommended

Societal and Health Care Costs for Children with Obesity

While the obesity epidemic threatens everyone, not everyone is equally at risk. Children living in lower income households are at higher risk for overweight or obesity. In Missouri, more than one in four of low-income (28.9%) 2-5 year olds are overweight or obese, representing a highly vulnerable population at increased risk for health and social disparities for their lifetime.[28]

Medicaid enrollees have the highest prevalence of obesity compared with those who are uninsured, privately insured, or in Medicare.[52] The average cost of care for children who are obese are roughly three times more expensive for the health system than the average insured child.[53] In Missouri, estimates of the specific costs to Medicaid are not known for children with obesity and warrant further study to more accurately determine the associated costs associated with pediatric overweight and obesity. It is anticipated these costs will be substantial, as nationally $14.1 billion is spent annually in direct health care costs related to children with obesity.[54]

Investing in treatment services now has the potential to save in many ways. First and foremost, being overweight or obese alone is a major preventable risk factor for heart disease. One study found that 60 percent of 5-10 year old children with overweight or obesity already had one risk factor for heart disease; and 25 percent of these children had two or more risk factors.[55] Just as important is the striking increase in type 2 diabetes in children and adolescents. Before 1990, this disease was rarely seen in children and was primarily considered an adult disease. Now, type 2 diabetes diagnosis accounts for as many as half of all new cases of diabetes in children in the U.S.[15,56] The rise in incidence is almost exclusively attributable

to obesity. Higher risk factor levels for these chronic diseases, among others, projects a poor prognosis for children and adolescents who are at increased risk for co-morbidities that include: hypertension, nephropathy, dyslipidemia, chronic inflammation, and nonalcoholic fatty liver disease (NAFLD).[70-73] A diagnosis of diabetes in childhood and adolescence is overwhelming and frightening to many.[74] Children may be put on medications they will take for decades longer than if they had been diagnosed with diabetes as an adult, moreover, the stress and feelings of emotional isolation compound the psychosocial barriers to effective disease management for these young people.

50%

Type 2 diabetes diagnosis accounts for as many as half of all new cases of diabetes in children in the U.S.

The toll on children's mental health is burdensome. Children who are obese are far more likely to be diagnosed with mental health disorders such as depression and eating disorders than are their normal weight counterparts. The stigmatization for children with obesity is great, as they are more likely to be the targets of school bullying, have higher rates of school absenteeism, perform poorer academically, and are less physically fit. [17,19,20]

Conclusion

Obesity is now the number one health concern among parents in the United States – more concerning to them than smoking or drug abuse.[1] The health consequences of obesity are more costly to our nation's health care than smoking or excessive drinking.[57] Without action, the cost of treating obesity and related co-morbidities is projected to reach $12 billion for Missouri by 2030.[14] Implementing statewide Medicaid reimbursement for children at the 85th percentile or higher to receive EBMC weight reduction treatment would support a critical and fundamental change to improve their health and quality of life. Failure to pay now for children with obesity will lead to higher health care costs, poorer quality of life, and a shorter life span.

Recommendation: Infrastructure through Centers of Excellence

The Department of Health and Senior Services (DHSS) establishes at least three Centers of Excellence across Missouri that carry out the following functions: 1) assure regional, coordinated access to treatment in health care and community settings through a network of affiliated partners; 2) meet standards to provide evidence-based, multi-component (EBMC) weight reduction programs; 3) provide training for health care providers, school staff, and others in their region about accurate and standardized screening, treatment options, prevention strategies and referral coordination; and 4) conduct research to evolve prevention and treatment best practice approaches.
DHSS will create these centers through a contract with university-based institutions that are able to perform all of the Centers of Excellence functions.

Support and Rationale

Preventing and treating children with obesity requires a comprehensive approach. The typical approach for children with obesity involves brief counseling by a primary care physician with little or no coordination between other health care providers. Rarely, the child receives a successful referral to high-intensity EBMC treatment in a specialty setting.[50,58,59] Rural communities may face additional barriers to accessing obesity treatment services which can be a significant problem as rural children are 25 percent more likely than those in urban areas to be overweight or obese.[60] Establishing Centers of Excellence would provide much needed infrastructure and capacity building for all children and their families to access evidence-based prevention strategies and treatment programs.

Centers of Excellence Purpose

In response to statewide needs for access to treatment services and prevention programs, each Center of Excellence serves as a regional hub that:

- Provides state of the art treatment,
- Improves access to needed care,
- Expands community capacity to deliver treatment,
- Provides for more complex treatment needs,
- Provides training and professional development opportunities for both treatment and prevention professionals,
- Coordinates care,
- Conducts and translates research to advance treatment and prevention approaches, and
- Forges collaborative relationships with statewide and community partners (see Figure 2).

Figure 2. Functional Depiction of Centers of Excellence

Bridging the Gap

The Centers of Excellence begin and end their work with the needs of children and families in mind. The centers will build a strong network of partner organizations to assure children have consistent access to evidence-based prevention strategies throughout their designated regions. Linking prevention strategies as well as evidence-based multi-component treatment weight reduction programs creates a collaborative approach and the groundwork needed for decreasing the high prevalence of children with obesity.

A recurring theme heard at the public hearings was that those in the community, clinicians and caregivers of children with obesity, do not know where to go for treatment and prevention expertise. The Centers of Excellence can fill that critical gap. With a minimum of three centers strategically located throughout the state, primary care providers can both receive training to improve their treatment capacity and refer their more challenging patients and families to the Center of Excellence for treatment. Community based organizations can receive training and benefit from referrals. Caregivers and families of children with obesity will no longer have to "wait and see"; they will have access to proven, effective treatment with evidence-based multi-component weight reduction programs.

Capacity Building and Commitment to Partnerships for the Centers of Excellence

With the state having 114 counties plus one independent city, each established Center of Excellence will have a large service area. Grounded in evidence-based approaches, the centers will be committed to address the unique needs and priorities of the communities they serve.

Essential functions for the Centers of Excellence would be to provide the most current clinical treatment and provide training for clinicians and providers throughout the state in order to build capacity to deliver evidence-based approaches. This would address the current lack of capacity which is a primary barrier and assure wider access of collaborative and coordinated care.[52,53,58,59]

In the State of Missouri, the Centers of Excellence model has worked well for those serving individuals with Autism Spectrum Disorder (ASD). The four Centers of Excellence for Autism seek to help families by: obtaining accurate and timely diagnosis; gain access to a full continuum of care in their home communities; and coordinate care with other health and educational services. This strong and consistent presence throughout the state has allowed the Centers of Excellence for Autism to further serve the state by building community capacity through education and training as well as to establish models of quality health service delivery for children with the Autism Spectrum Disorder. The centers have been successful in building trust and expanding services to families using evidence-based approaches.

Current primary care practice for the prevention and treatment of childhood obesity often varies from evidence-based recommendations.[61] The Centers of Excellence for Children with Obesity will be created based on the proven autism model to improve access, quality of services, and outcomes for children and their families. Similar to the treatment of children with autism, behaviorally based interventions are considered the first line of treatment for children and adolescents who are overweight or obese.[62] Another parallel to the treatment for autism, the early recognition and diagnosis of overweight leading to obesity is key to successful intervention and management for the child and family.[63] The Centers of Excellence for Children with Obesity would provide much needed community and primary care support for quality improvement of obesity prevention and treatment.

Conclusion

Providing the infrastructure to comprehensively prevent and treat children with obesity throughout the State of Missouri would address a tremendous public health need. The Centers of Excellence would increase the capacity within many communities to deliver evidence-based prevention strategies as well as treatment programs. With obesity being one of the most common problems seen by primary care providers who care for children, the centers' supports would increase the number of trained primary care physicians to accurately assess, detect and intervene early for children with obesity. Early intervention has been found to be most efficacious in preventing obesity and treating children with obesity; this leads to decreased co-morbidities and decreased health care costs. The Centers of Excellence is a successful model which will build capacity and provide much needed interface to improve the quality of life for families and children with obesity throughout Missouri.

The centers would provide much needed infrastructure and capacity building for all children and their families to access evidence-based prevention strategies and treatment programs.

Recommendation: Commission on Child Health and Wellness

Establish a Commission on Child Health and Wellness, supported by the Missouri Department of Health and Senior Services (DHSS), to oversee implementation of the subcommittee's recommended actions, study effectiveness of obesity prevention strategies, and provide an ongoing forum for education and future actions. The commission will include delegates from state agencies and others representing health care professionals, scientists, community-based prevention specialists and families.

Support and Rationale

Obesity is a complex medical, social and environmental problem. Because obesity impacts all ethnicities, communities and age groups, a call to action from relevant sectors is needed to understand, advise, and implement a comprehensive and coordinated system of care for children with obesity.

One step taken by many states has been to establish a state-wide body to address childhood obesity. From 2001-2012, 24 states have enacted legislation that established childhood obesity commissions or similarly named groups.[64] The purpose and activities of state commissions on childhood obesity include:

- Bring forward state policy options that support healthy environments and obesity prevention;
- Study issues such as costs related to obesity and co-morbidities and best approaches to address;
- Recommend resource allocations and assure accountable use of funds; and
- Assure evaluation of efforts and periodic reports on childhood obesity and prevention benchmarks.

The State of Missouri would benefit from creation of the Commission on Child Health and Wellness, or a similar organization, to oversee implementation of these recommendations and assure ongoing efforts to address the changing needs of children and families in Missouri.

Working Together for Children's Health—The Role of Commissions

States and local jurisdictions have considerable influence on health promotion and disease prevention through various actions, including passing laws and regulations that promote public health. National organizations, like the Institute of Medicine, encourage state and local governments to take active roles in considering policy as part of the solution to addressing children with obesity.[65,66] Two notable examples include the commission work in Ohio and Maryland. First, in Ohio, after enacting the Healthy Choices for Healthy Children Council, the state pursued a three-pronged approach for addressing childhood obesity. Their primary goals were to:

- Ensure children have access to nutritious foods in the school setting;
- Build physical activity into the daily school routine with a focus on the quality of physical education; and
- Measure and report progress to the Ohio Department of Health through BMI (Body Mass Index) screening upon school entry and at designated grade levels.[67]

Second, the State of Maryland's Task Force on Childhood Obesity worked to introduce insurance coverage that was ultimately enacted, providing for "obesity evaluation and management and visits for and costs of developmental screening; . . ."[68] These are powerful and impactful examples from commissions across the nation at work.

Taking Action in Communities—The Role of the Commission

The statewide commission provides an opportunity for joint planning, system-wide problem solving and collaborative policy development to ensure that the voices of all sectors are represented to address this complex public health problem. DHSS is responsible for the promotion and protection of the public's health. Supporting a commission to improve children's health and wellness with an initial focus on obesity is well-aligned with the department's aims and duties for one of the most complex public health problems of the 21st century. DHSS will create the commission to continue the work of assessing the needs of communities throughout the state, informing the implementation plan and tracking progress over time. DHSS will make appointments that assure diverse representation from relevant state agencies, health care providers, community agencies, local governments, the food and beverage industry; and the public. Members must reflect varying geographic and cultural perspectives.

The Commission on Child Health and Wellness would undertake responsibilities including but not limited to:

- Monitor progress in select indicators for tracking childhood obesity prevention, risks, prevalence and resulting health outcomes;

- Recommend policy actions and monitor progress in strategies in the state, communities, early childhood and school settings;
    - To promote the availability of affordable healthy food and beverages and making healthy choices,
    - To increase breastfeeding, and
    - To increase physical activity among children and youth
- Advance and support community collaboration to tailor approaches unique to each community and build on existing supports;
- Monitor availability of treatment services, costs and barriers and recommend strategies to assure availability and access to needed treatment services through a comprehensive and coordinated system; and
- Identify and facilitate coordination of public-private resources to implement actions and track results.

Conclusion

The commission will provide leadership, expertise and guidance to advance and monitor actions to implement sustainable evidence-based prevention and treatment strategies to decrease childhood obesity in Missouri. In addition, the commission will monitor progress over time and make recommendations to advance approaches as experience and results indicate. It is envisioned that the issues addressed by this commission would evolve over time to address other pressing issues that impact the health of children in Missouri.

The commission will study the effectiveness of obesity prevention strategies and provide an ongoing forum for education and future actions.

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Appendix A

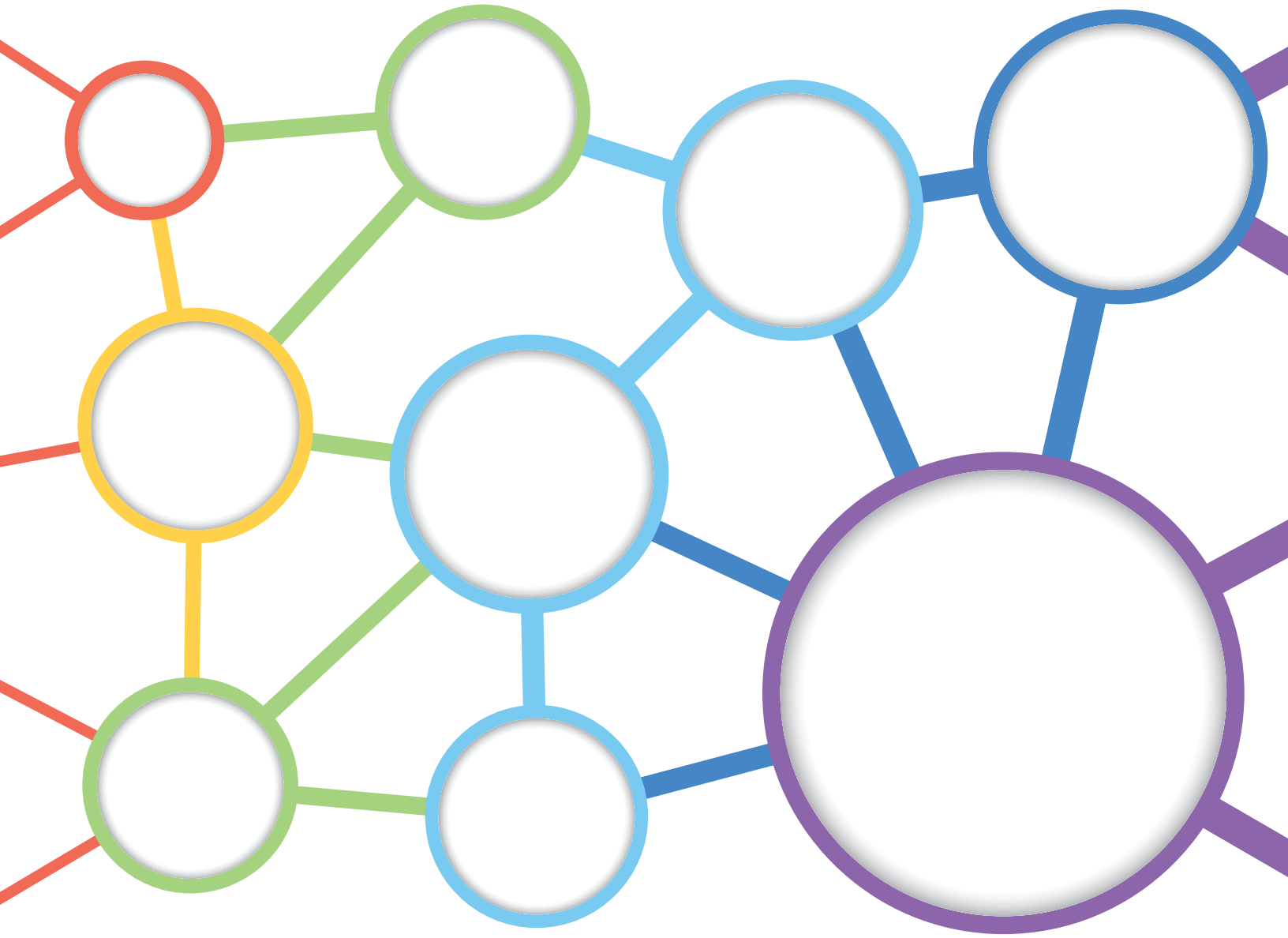
State Licensing Regulations Addressing Caring for Our Children: Natonal Health & Safety Performance Standards for Early Care & Education Programs,* December 2012

		Code & Descriptions of CFOC Standards Components	Missouri	Fully Present # of States	Partial # of States	Missing # of States	Contradicts # of States
INFANT FEEDING	IA1	Encourage/support BF by onsite arrangements for moms to BF	Missing	7	14	30	0
	IA2	Serve milk or formula to at least 12 months	Missing	21	7	21	2
	IB1	Feed infants on cue	Missing	29	4	17	1
	IB2	Do not feed infants beyond satiety/allow infant to stop the feeding	Missing	2	22	27	0
	IB3	Hold infants while bottle feeding	Partial	8	30	12	1
	IC1	Develop plan for introducing age appropriate solid foods in consultation with parent	Partial	0	35	16	0
	IC2	Introduce age-appropriate solid foods no sooner than 4 months, preferably at 6 months	Missing	2	24	24	1
	IC3	Introduce BF infants gradually to iron-fortified foods no sooner than 4 months, preferable at 6 months	Missing	0	27	24	0
	ID1	Do not feed an infant formula mixed with cereal, juice or other foods	Missing	2	1	48	0
	ID2	Serve whole fruits, mashed or pureed, for infants 7 mo up to 1 year	Missing	0	1	17	33
	ID3	Serve no fruit juice to children younger than 12 months	Missing	0	2	17	32
Nutrition	NA1	Limit oils by choosing mono and polyunsaturated fats and avoiding trans fats, sat fats and fried foods	Missing	2	1	48	0
	NA2	Serve meats and/or beans, avoiding fried meats	Partial	3	34	14	0
	NA3	Serve other milk equivalent products (yogurt, cottage cheese) using low-fat variants for 2 years and older	Partial	2	31	17	1
	NA4	Serve whole milk to 12 - 24 mo olds who are not on human milk, or serve reduced fat milk to those at risk for hypercholesterolemia or obesity	Missing	0	5	46	0
	NA5	Serve skim or 1% milk to 2 years and older	Missing	23	1	25	2
	NB1	Serve whole grain breads, cereals, and pastas	Missing	4	26	21	0
	NB2	Serve vegetables (dark green, orange, deep yellow and root, such as potatoes and viandas)	Missing	4	33	14	0
	NB3	Serve fruits of several varieties, especially whole	Fully	10	29	12	0
	NC1	Only 100% juice, no added sweeteners	Fully	31	1	18	1
	NC2	Offer juice (100%) only during meal times	Missing	1	2	48	0
	NC3	No more than 4 - 6 oz. juice/day for 1 - 6 yo	Partial	1	31	19	0
	NC4	No more than 8 - 12 oz. juice/day for 7 - 12 yo	Partial	1	31	19	0
	ND1	Water available inside and outside	Partial	29	13	9	0
	NE1	Teach children appropriate portion sizes by using plates, bowls & cups that are developmentally appropriate to nutritional needs	Missing	0	4	47	0
	NE2	Adults eating meals with children eat items that meet standards	Missing	0	1	50	0
	NF1	Serve small-sized, age-appropriate portions	Fully	33	5	13	0

		Code & Descriptions of CFOC Standards Components	Missouri	Fully Present # of States	Partial # of States	Missing # of States	Contradicts # of States
	NF2	Permit children to have 1 or more additional servings of nutritious foods that are low in fat, sugar, and sodium as needed to meet the caloric needs of the child and teach children who require limited portions about portion size and monitor their portions	Missing	2	27	17	5
	NG1	Limit salt by avoiding salty foods (chips, pretzels)	Missing	3	0	48	0
	NG2	Avoid sugar, including concentrated sweets (candy, sodas, sweetened drinks, fruit nectars, flavored milk)	Missing	0	5	19	27
	NH1	Do not force or bribe children to eat	Partial	0	28	23	0
	NH2	Do not use food as a reward or punishment	Partial	5	37	9	0
PHYSICAL ACTIVITY & SCREENTIME	PA1	Provide adequate space, both inside and outside play	Fully	36	6	9	0
	PA2	Provide orientation and annual training opportunities for caregivers/teachers to learn age-appropriate gross motor activities and games that promote PA	Missing	0	2	49	0
	PA3	Develop written policies on the promotion of PA and the removal of potential barriers to PA participation	Missing	2	2	47	0
	PA4	Require caregivers/teachers to promote children's active play, and participate in children's active games at times when they can safely do so	Missing	0	0	51	0
	PA5	Do not withhold active play from children who misbehave	Fully	7	13	31	0
	PB1	Do not utilize media (TV, video, dvd) viewing and computer with children younger than 2 years	Missing	2	13	36	0
	PB2	Limit total media time for 2 yo and older to no more than 30 min/week	Missing	0	14	37	0
	PB3	Limit media time only for educational purposes or PA	Missing	5	2	44	0
	PB4	Do not utilize TV, video, or dvd viewing during meal or snack time	Missing	0	0	51	0
	PC1	For birth - 6 years, provide 2 - 3 occasions daily of active play outdoors, weather permitting	Partial	4	36	11	0
	PC2	Toddlers 60 - 90 min/8-hr day for moderate to vigorous PA	Partial	0	33	18	0
	PC3	Preschoolers 90 - 120 min/8-hr day for moderate to vigorous PA	Partial	0	33	18	0
	PD1	Children birth - 6 years, 2 or more structured or adult-led activities or games that promote movement daily	Missing	1	7	43	0
	PE1	Daily supervised tummy time for infants	Missing	6	1	44	0
	PE2	Use infant equipment (swings, stationary centers, seats, bouncers) only for short periods of time if at all	Partial	1	13	35	2

Data in table are aggregated results from a prior report containing data specific to licensing regulations for family-homes (small and large) and centers. For complete assessment results go to http://nrckids.org/default/assets/File/ASHW%202012%20Final%20Report%209-18-13%20reduced%20size.pdf

*Caring for Our Children (3rd Ed) was developed by the American Academy of Pediatrics, the American Public Health Association, and the National Resource Center for Health and Safety in Child Care and Early Education



Subcommittee on Childhood Obesity
State of Missouri Children's Services Commission