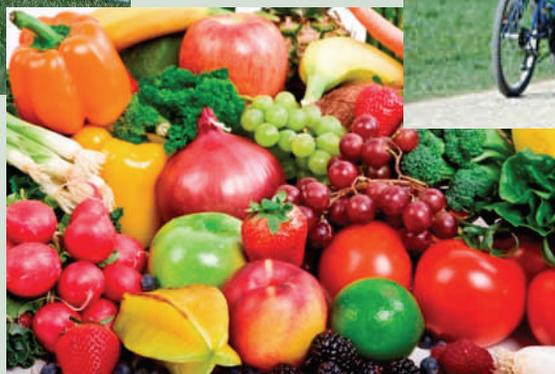


Report of the New Hampshire Commission on Prevention of Childhood Obesity



November 2009

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Introduction

Obesity is robbing children of a healthy future. It is the first time ever when the gains in the life expectancy in the US may be reversed because of growing numbers of overweight and obese children who are at increasing risks of chronic diseases such as diabetes, high blood pressure, heart disease, stroke, etc. at earlier ages.



Many factors contribute to the unhealthy weight gains in children. Individual behavior is often a key focus for change but this assumes that healthy choices are easily available. The commission's focus was not on recommending changes in individual behaviors but on policies that will help create an environment where healthy choices are available and desirable to children.

Policies are important because they provide guidance and a framework for creating a healthy environment where children live, learn and play. Policy can be established at different levels too. State level policy can provide broad guidance that supports places where physical activity and food choices contribute to children maintaining a healthy weight as they grow. Policies in local communities can determine whether there are sidewalks, bike lanes or recreation spaces for children to safely have opportunities for physical activity. Organizational policies in schools or child care settings can determine whether children can have healthy drinks and snacks or more fat, sugar-sweetened or salty choices.

Developing policy is not a simple process and it can happen in different ways. A board of directors or trustees may set policy for an organization. Elected officials legislate public policy. Individual advocates may encourage leaders to enact policies or organize coalitions to promote change. PolicyLink, a national research and action institute (www.policylink.org), suggests "the voices of local advocates allow policymakers to understand protective and risk factors from a community perspective. Successful approaches can become the basis for regional and statewide agendas for change."¹

But policies are only meaningful if they are implemented with specific standards and accountability. There is a great need for parents, teachers, health providers and other concerned citizens to advocate for the implementation and monitoring of policies. Advocacy is needed to ensure that the policy is achieving its desired intent and/or make policy changes to improve it.

This report is focused on the prevention of childhood obesity but the Commission recognizes that some children and adolescents have eating disorders that make them underweight. The US National Center for Health Statistics estimates that 3.3% of children ages 2-19 years were underweight in 2006, down from 5.1% in 1974.

The **5-2-1-0** message reminds us to eat **5 vegetables and fruits a day**, to **limit screen time in front of a TV or computer to 2 hours** or less, to participate in **1 hour of moderate to vigorous exercise** and to **restrict soda or sugar-sweetened drinks**.

This is a simple message readily available to use in most settings where children learn and play. The strength of this message is in its simplicity and clarity.



Background

The NH Expert Panel on Prevention of Childhood Obesity, a diverse group of professionals representing many different disciplines in health and education, issued a set of recommendations for individuals and organizations related to nutrition and physical activity in 2007 (http://www.healthynh.com/fhc/initiatives/ch_obesity/index.php). These recommendations were practical strategies for New Hampshire, based on national research studies. Following the release of these recommendations, a group of private funders pooled resources to help implement the Expert Panel recommendations between 2007 and 2009 in two areas of the state – the Mount Washington Valley region in the north and the Derry/Londonderry area in the southern part of the state.

Implementation was focused on several fronts – primary/pediatric care providers, schools, municipal recreation agencies, after school programs and a variety of youth serving organizations. It became apparent during the implementation work that the practical strategies focus of the Expert Panel did not address state level policy issues that influence the ability of individuals and local organizations to implement desired prevention strategies. For example, pediatric clinicians were engaged in identifying the Body Mass Index of children and assessing and advising them on eating and activity levels, but when a child in the Medicaid program was identified as obese, the Medicaid program would not pay for follow-up counseling with a registered dietician. Additionally, New Hampshire has no state level guidelines related to the food served in schools that is not part of the federal USDA lunch and breakfast programs. These two examples illustrate, in part, why legislation was introduced (HB1422) to establish a legislative commission on the prevention of childhood obesity that would examine relevant state policies and make recommendations on policy changes to the governor and legislature. The Foundation for Healthy Communities, a non-profit organization with a mission to promote health and health care, provided staff support for the commission’s work with funding from the Harvard Pilgrim Health Care Foundation.

Body Mass Index (BMI) is a number calculated from a child’s weight and height. BMI is used as a screening tool to identify possible weight problems in children.

It is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems. For children and teens, BMI is age- and gender-specific and is often referred to as “BMI-for-age.” After BMI is calculated for children and teens, the BMI number is plotted on the CDC BMI-for-age growth charts (for either girls or boys) to obtain a percentile ranking.



In May 2008, the Foundation for Healthy Communities was selected by a consortium of funders to be the lead organization in New Hampshire for coordinating implementation of the NH Healthy Eating Active Living (HEAL) Action Plan (www.healnh.org). The HEAL Action Plan calls for interventions related to policy, practice and communications. It was decided to make the commission’s work the focus for policy activities rather than establish a new HEAL policy work group.

House Bill 1422 was introduced with bi-partisan sponsorship in the fall of 2007. Its sponsors were: Rep. Schulze, Hills 26; Rep. Stiles, Rock 15; Rep. Gile, Merr 10; Rep. Gargas, Hills 5; Rep. Daler, Hills 4; Sen. Foster, Dist 13; and Sen. Roberge, Dist 9. Public hearings were held and the bill received strong support from many individuals, organizations, and the NH Children’s Advocacy Network. Elementary school children from Nashua and Concord advocated at the public hearing for the legislation. The commission was established by House Bill 1422 in the 2008 Session (Chapter 219). The legislature amended HB 1422 in its review process to explicitly request that the commission develop “recommendations to assist schools in adopting and implementing school nutrition standards.” The bill was signed by Governor John Lynch on June 16, 2008.

Commission Duties

House Bill 1422 established a commission on the prevention of childhood obesity with 14 members. The duties (219:3) of the commission are:

The commission shall identify and consider legislative and policy strategies that may be effective in the prevention of childhood obesity in New Hampshire. The commission shall seek input from individuals or entities that the commission deems relevant to its study. The commission's study shall include, but not be limited to:

- a. The efficacy of current laws, regulations, education and certification standards, and clinical protocols in promoting physical activity and healthy eating;
- b. An examination of evidenced-based or promising practices from other states and jurisdictions relative to statewide policy, local ordinance, and educational programming strategies;
- c. The health consequences and economic impact of childhood obesity in the state and the economic impact of any prevention policies or strategies;
- d. Strategies to address the needs of particular regions of the state or certain populations within the state most impacted by childhood obesity; and
- e. Developing recommendations to assist schools in adopting and implementing school nutrition standards.

The commission shall report its findings and any recommendations for proposed legislation to the speaker of the House of Representatives, the president of the senate, the house clerk, the senate clerk, the governor, and the state library on or before November 15, 2009.

219:6 Effective Date. This act shall take effect upon its passage. Approved: June 16, 2008, Effective Date: June 16, 2008.

The first meeting of the commission was held July 31, 2008. The process of engaging key stakeholders in the commission's work has been instrumental in educating and building awareness among groups such as school administrators, children's advocates, teacher unions, local food advocates, etc. A record of the commission's meetings is available at www.healnh.org in the "About HEAL" policy web page.

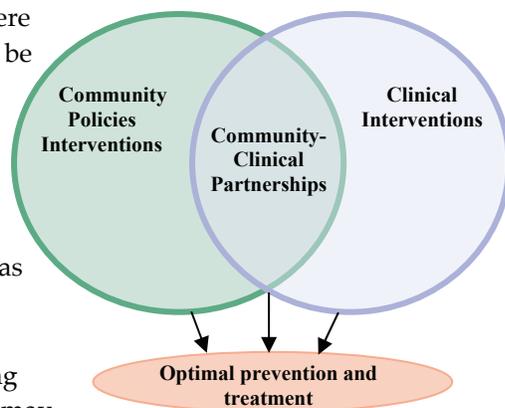
The commission held 15 meetings and public hearings. Members identified four major criteria in helping to determine their recommendations:

- Is this recommendation based on the best evidence or knowledge available?
- Will the recommendation help to raise awareness of the childhood obesity issue and advance the well-being of children?
- How does this recommendation relate to legislative or policy strategies of the state?
- What is the likelihood of some practical action to result from this recommendation?

The Problem of Childhood Obesity

There are many factors that contribute to childhood health outcomes. There are genetic factors, which can increase or decrease potential for a child to be overweight or obese. While this is important to note, there is no indication that genetic factors have significantly changed over the past few decades or are drastically influencing the current rise in childhood obesity. Environmental factors, including access to parks and recreation, TV time, food access and availability, can also drastically impact child health. Another significant set of factors include behavioral choices such as energy intake and levels of physical activity.

A social-ecological approach to addressing unhealthy weight gains among children takes into account an understanding of the multiple factors that may



influence behavior. Spheres of influence include the individual, interpersonal/lifestyle, institutional/organizational, community, and public policy. Childhood obesity is a health issue that may be addressed through a social-ecological approach because there are many community policies and clinical factors related to its prevention and treatment. Community coalitions are critical to advocating for changes that will help to prevent childhood obesity.



At its core, the obesity epidemic is fueled by an imbalance of energy. The Robert Wood Johnson Foundation's Center to Prevent Childhood Obesity (www.reversechildhoodobesity.org) explains, "A child's energy balance is affected by the energy (calories) consumed and the energy expended to support normal growth, physical activity, and daily living. What children eat and drink, and how much physical activity they get, are influenced by key features of their social, built, natural and food environments." Too many children are not engaging in adequate physical activity, nor are they eating appropriate foods. These behavioral factors contribute to increased weight gain and health risks.

Significant changes must occur in the short term if we are to stem this epidemic. These changes will impact all areas that involve children--home, schools, child care, after-school programs, and communities. One approach being implemented by the U.S. Centers for Disease Control and Prevention to address a community perspective is called 'MAPPS.' It aligns interventions on nutrition and physical activity into five strategies: Media, Access, Point of Purchase/Promotion, Price and Social Support & Services. The obesity epidemic is the result of many factors. Policy changes that support systemic strategies will help to alter the factors creating this problem.

Current Data

New Hampshire does not have a statewide system to track the prevalence of unhealthy weight in children and youth but there are some national reports and special studies that have been done within the state that help to document the problem. The N.H. DHHS conducted a BMI and oral health survey of third graders in 81 public schools in the state during the 2008-09 school year. The results of the survey will be released soon.

Among pre-school age children, the Pediatric Nutrition Surveillance System (PNSS) is a source of prevalence data. This surveillance system monitors the nutritional status of low-income children in selected federally-funded maternal and child health programs. The 2007 PNSS found that 15.8% of children between ages 2 to 5 years of age in the N.H. WIC Program were obese (95th percentile BMI-for-age) compared with a national rate of 14.9%. The best rate in this state-by-state comparison was 9.2% in Hawaii (www.cdc.gov/pednss).

Among older children, the National Survey of Children's Health (NSCH), is a phone survey of parents with children ages 10-17 years, conducted by the US Department of Health and Human Services to monitor this health problem. The 2007 NSCH identified the New Hampshire prevalence rate at 29.4% of children overweight or obese. Minnesota and Utah tied for the best rate, with 23.1% of children overweight or obese.

The Youth Risk Behavior Surveillance (YRBS) is a national data system that focuses on youth in grades 9-12. Among 30 states participating in the 2003 YRBS, New Hampshire youth self-reported that 13.4% were at risk of becoming overweight (range: 11-16.7) and 9.9% reported being overweight (range: 7-15.7). The 2007 YRBS in New Hampshire found self-reports of being at risk of becoming overweight increased to 14.4% and being overweight increased to 11.7% (www.cdc.gov/mmwr and www.ed.state.nh.us/). The national YRBS data in 2003 was analyzed by the Centers for Disease Control and Prevention for the association between physical inactivity and academic achievement. The CDC analyses found that students with higher grades were more likely to engage in sufficient vigorous physical activity, play on at least one school or community sports team, and watch less than 3 hours of TV on a school day (<http://www.cdc.gov/HealthyLiving/>).

The Foundation for Healthy Communities conducted a statewide study in New Hampshire in 2006 to help document the problem (www.healthynh.com). Primary care practices serving communities throughout New Hampshire were invited to participate in a voluntary statewide medical chart review project to document

Regional and Population Variations

An examination of a geographic subset of the Foundation for Healthy Communities data, which included three communities in Coos County (185 children ages 6-12 years old) that participated in the study, found a prevalence rate of 40% of children overweight or obese compared to the statewide average of 32.8%.

The Foundation for Healthy Communities study found that among children with private insurance 30.6% were overweight or obese compared to 37.7% of children in the Healthy Kids Program (Gold and Silver). Focusing only on obesity, it was highest among the children enrolled in Healthy Kids at 22.6% compared to 13.5% of children with private insurance.

The Manchester Department of Health report found 1 out of 3 (33.8%) of first graders who were overweight did not have health insurance or were enrolled in the Healthy Kids Gold (Medicaid) or Silver Program. More than half (51.3%) of the Manchester first graders who were overweight had private health insurance.

The Hood Center for Children and Families at Dartmouth Medical School studied adolescents in rural areas of New Hampshire and Vermont over a five year period. It found 28.9% of students surveyed among these rural towns were overweight (BMI at 85th percentile or greater). This was higher than either the statewide prevalence rates for NH or VT in 2007.

childhood obesity prevalence and better understand how it is addressed in the primary setting. The data were abstracted by a nurse from well-child visit records in a convenience sample of 25 primary care practices from 17 different communities. These descriptive statistics are from 1,453 children randomly identified in 2005 and stratified by gender and age (6-9 and 10-12 year olds). Key findings:

- Overall, 32.8% of children ages 6-12 years were overweight or obese. For females, 16.5% were overweight and 13.3% were obese. In males, 15.9% were overweight and 19.9% were obese.
- The survey found that among females, ages 6-9 years old, that 25.4% were overweight or obese (overweight: 13.9%; obese: 11.5%) compared to 34.6% for males in the same age range (overweight: 15.2%; obese: 19.4%).
- In the older age range, 10-12 years old, the overall percentage of overweight or obese children for both females and males was 37%. Among females 20.9% were overweight and 16.4% were obese. Among males, 17.1% were overweight and 20.3% were obese.

The Manchester Department of Health has published the most comprehensive local report on child obesity in New Hampshire. In 2001-02, it found that 39% of first graders were overweight and 19% were obese as determined by BMI at or above the 85th percentile and 95th percentile respectively.ⁱⁱ

Economic Consequences

The cost of ignoring the childhood obesity problem or doing nothing is enormous. Children are increasingly in need of treatment for obesity related conditions. Overweight and obese children face increasing health risks as they age. Furthermore, overweight and obese children are at far greater risk of developing long-term chronic health conditions such as Type II diabetes, high blood pressure, elevated cholesterol and many forms of cancer. Overweight and obesity with their associated health problems have a significant economic impact on the U.S. health care system.

A 2006 report by Thomson Medstat investigated the prevalence and cost of childhood obesity.ⁱⁱⁱ It found substantial disparities associated with different insurance coverage and health status.

- Children treated for obesity are roughly three times more expensive for the health system than the average insured child.
- Annual health care costs are about \$6,700 for children treated for obesity covered by Medicaid and about \$3,700 for obese children with private insurance.
- The national cost of childhood obesity is estimated at approximately \$11 billion for children with private insurance and \$3 billion for those with Medicaid.
- Children diagnosed with obesity are two to three times more likely to be hospitalized.



A 2004 study focused on state-level estimates of adult medical expenditures attributable to obesity (BMI greater than 30) estimated 5% of the adult population in New Hampshire were obese and direct medical costs were \$302

million. It estimated that 8.6% of New Hampshire adult Medicaid enrollees were obese at a cost of \$79 million.^{iv}

State-level estimates can assist policy makers in determining how best to allocate public health resources and provide information concerning the economic impact of obesity in a state.

In addition to the economic costs of childhood obesity, there are social and emotional costs. Obesity can impact a child's self-esteem and exacerbate existing health conditions. Lowered self-esteem may affect academic performance, with potentially even more serious adverse social outcomes in the long term.

Current Policy, Evidence-based Interventions and Recommendations

Food and Healthy Choices

The food and drinks that children consume are strongly influenced by what is made available for them. Parents are a key influence in what is available at home and at restaurants or other out-of-home locations where food is available. A majority of parents are concerned about their child's health and want them to eat and drink healthy food and beverages. Adolescents have more independence and more opportunities to make choices about what they consume, but parents still want to encourage healthy choices. Information about the nutritional aspects of what is provided to children can help parents make informed choices about the food they provide and help them to teach their children about making healthy choices. Foods made available to children by their school can either help to prevent unhealthy eating or contribute to this problem.



The N.H. Department of Education (DOE) has primary responsibility for food in schools. The Bureau of Nutrition in the DOE oversees the U.S. Department of Agriculture (USDA) meal programs. State law RSA 189:11a requires that a minimum of one meal be served at school each day and that meals shall be served without cost or at a reduced cost to any needy child who is unable to pay the full cost of a meal.

The USDA does not have authority to regulate foods sold outside the cafeteria or outside of meal times. USDA's policy does not allow "foods of minimal nutritional value" (FMNV) to be sold in the food service area during meal times. But those foods can be sold at any other time or place. USDA defines FMNV as foods that provide less than 5% of the Reference Daily Intake (RDI) for each of eight specified nutrients per serving. Thus, only foods like jelly beans, popsicles, and soft drinks are prohibited. Ironically, though, seltzer water is forbidden, while candy bars are allowed.

Foods provided outside the USDA meal programs include competitive foods or a la carte items, foods and drinks in vending machines, classroom snacks or events, school stores and school fund raisers. The sale of competitive foods may, at the discretion of the state agency, be allowed in the food service area during lunch period only if all income from the sale of such food accrues to the benefit of the nonprofit food service or the school or student organization approved by the school. DOE data show that for the school year August 2007-June 2008, food service revenues outside the meals (a la carte items) program were \$41.6 million. Federal public school reimbursable revenues were \$2.7 million (\$3.1 million breakfasts) and \$16 million (\$18.2 million lunch/after-school snacks). Also, there is \$823,000 of state funds for reimbursable meals. The DOE does not have established competitive food rules. Foods of minimal nutritional value are categories of foods which may not be sold in the food service area anytime during a meal period.

In 2008, the DOE completed a statewide content review of all school wellness policies. While most schools meet the minimum standard of the law for a school wellness policy, more needs to be done to put policy into practice. Nutrition standards were one of six components examined in their review. There were five schools districts which were rated 100% for their nutrition standards in the DOE school wellness policy and seven that were rated 0. The statewide average for this component was 57.2%.

Food is provided in schools in many ways, and the factors that influence food in schools are varied. The USDA Child Nutrition Programs are a key influence on food in schools through their lunch and breakfast programs. Local schools may also prepare and sell other foods and drinks during the lunch periods and at snack times. Local school districts and/or schools may contract for their food services to a vendor rather than employ staff to prepare and serve food in schools. Also, school children may bring food and drinks to school for their own consumption. The commission decided to focus its attention on the all foods and beverages that are not a part of the USDA programs because policies and requirements for USDA are set at the federal level.

There have been some efforts at improvements in other states. A number of states have passed legislation to directly combat childhood obesity.^v The new “F as in Fat” report identified 17 states that now have nutritional standards for school lunches, breakfasts and snacks that are stricter than current USDA requirements. In addition, 22 states have nutritional standards for competitive foods sold a la carte in schools. These laws regulate the range of foods not associated with the USDA school lunch programs.

The Dietary Guidelines for Americans (Dietary Guidelines) provides science-based advice to promote health and to reduce risk for major chronic diseases through diet and physical activity. An important component of each 5-year revision of the Dietary Guidelines is the analysis of new scientific information by the Dietary Guidelines Advisory Committee. The intent of the Dietary Guidelines is to summarize and synthesize knowledge regarding individual nutrients and food components into recommendations for a pattern of eating that can be adopted by the public. The recommendations are based on the preponderance of scientific evidence for lowering risk of chronic disease and promoting health. The recommendations in the Dietary Guidelines are for people over 2 years of age.

RECOMMENDATION #1

The commission recommends that the N.H. Board of Education use its school approval rulemaking authority by October 2010 to support the sale and distribution of single-serving size, nutrient dense foods in all schools during the school day (‘bell-to-bell’). We recommend that nutrition standards address the different school grade levels (elementary, middle and high school) for all food and beverages available for sale to students. Nutrient dense foods are those foods which provide students with calories rich in the nutrient content needed to be healthy. In an effort to support the availability of nutrient dense foods in schools, we recommend that schools follow a nutrition guideline such as the Institute of Medicine or American Heart Association-Alliance for a Healthier Generation or Action for Healthy Kids-NH for foods sold in schools other than those regulated by the U.S. Department of Agriculture school meals program. These guidelines provide a framework to create healthier choices for foods and promote health. Establishment of national standards would override any state efforts.

The commission examined three sets of nutrition guidelines in studying this issue. The Institute of Medicine (www.iom.edu/en/Global/Topics/Food-Nutrition.aspx) has developed a guideline that is being promoted nationally. The American Heart Association and the William J Clinton Foundation have partnered with industry to create the Alliance for a Healthier Generation (www.healthiergeneration.org) and a set of guidelines. The N.H. Action for Healthy Kids (http://a4hk.org/state_profile.php?state=NH) also has developed guidelines.

Certain key elements are common to each of these guidelines. For example, both sets of recommendations emphasize low-fat and fat-free milk, 100% juice and water for beverages in schools and both sets of recommendations limit the amount of added sugar in flavored milks. The AHA/Alliance recommendation makes it possible for children to get their recommended serving of 100% juice in one sitting, while the IOM recommendation spreads that requirement throughout the day. IOM does not acknowledge that some 100% fruit juices are more nutritionally dense than others, whereas AHA/Alliance guidelines require that these juices contain at least 10% of the recommended daily value for three or more vitamins and minerals.

The **Gilford, NH, School District** offers a practical example of how these different guidelines have been adopted and implemented. The district's guidelines for food and beverages in a la carte school lunch sales are:

Food Items

- **Packaged snacks** - Will be a single serving and contain no more than 35% of calories from fat and no more than 35% added sugar by weight.
- **Fruits and vegetables** - Shall be fresh frozen, dried or canned and contain no more than 35% added sugar by weight.
- **Dairy products** - Shall consist of low fat cheese, yogurt and milk and contain less than 32 grams of total sugar per 8-ounce serving.
- **Ice cream novelties** - Will be limited to a 3-ounce serving, plain cups will be limited to 4 oz.
- **Meat and beans** - Shall contain no more than 35% of calories from fat.
- **Trail mixes/nuts/seeds/nut butters** - Portions shall not exceed 1.25 oz.

Beverages

- **Juices** - 100 % fruit & vegetable juice only, maximum container size of 12 oz.
- **Water**
- **Milk** - Maximum 2% fat, maximum 4 grams per ounce of total sugars (i.e. lactose and added sweetener), maximum container size of 16 oz.
- **Flavored water and lite beverages** - Not carbonated unless exempted by USDA, no caffeine, no fortified water, no more than 10 calories per 8 oz. from sugar or other caloric sweeteners, only non-caloric sweeteners approved by USDA.
- **Sports beverages** - No sport beverages will be sold on the school campus.

In addition, only foods that meet the nutrition and portion size standards for a la carte school lunch sales will be sold in vending machines and school stores on school campuses. Schools may hold an unlimited number of parties or celebrations if the food they are serving meet the nutrition and portion size standards for a la carte school lunch sales. Schools should limit parties and celebrations that involve food that do not meet the nutrition and portion size standards for a la carte school lunch sales during the school day to no more than one party per class per month. Schools will not use foods or beverages, as rewards or prizes or punishment.

The AHA/Alliance agreement does allow for the consumption of other beverages in high school, including sports drinks, diet soda and low calorie juices. The IOM permits diet soda only after school in high school and does not allow for sports drinks except when provided by coaches to children participating in vigorous sports lasting more than an hour.

Fat limits are the same for both the IOM and AHA/Alliance. For sugar, IOM measures carbohydrates by calories to allow for a greater variety of "dry" products like cereals and granola bars that have high nutrient content. The more commonly used 35% by weight measure adopted by the AHA/Alliance favors foods with higher moisture content. Additionally, IOM focuses on whole grains, while the AHA/Alliance uses fiber as the measure for healthful consumption.

Calorie limits in both standards are essentially the same although the AHA/Alliance guidelines are slightly stricter, taking into account the difference in calorie needs between older and younger children. The AHA/Alliance criteria incorporate positive nutrient contribution (e.g. fiber, calcium, potassium, Vitamin E) for snack foods over 100 calories. The IOM does not allow for reduced fat cheese or an egg as competitive snack foods.



A strong majority of parents believe that schools play a major role in maintaining and promoting healthy lifestyles among children, according to a September 2009 national survey by KRC (www.krcresearch.com) for Alliance for a Healthier Generation. This survey found that younger parents (under 45 years old) are more likely than older parents (age 45+) to believe schools play a major role in promoting healthy lifestyles (66% vs. 57%). Limiting access

to unhealthy foods such as chips, candy and sugary drinks was rated as important (extremely or very important) by 81% of parents surveyed.

Food rating systems are marketed by the food industry in partnership with organizations such as the American Diabetes Association (*Smart Choices*), and the American Heart Association (red check mark on product). Other rating systems are employed by supermarket chains such as Price Chopper with *NuVal* and Hannaford with *Guiding Stars*. In N.H., *Guiding Stars* is offered by Hannaford Brothers supermarket to help consumers evaluate food based on its nutritional content. Foods are given points for the presence of vitamins, minerals, dietary fiber and whole grains, and lose points for the presence of trans fats, saturated fats, cholesterol, added sugars, and added sodium. Once a food's points are added up, its score results in a *Guiding Stars* rating from 0 (does not meet the nutritional criteria to receive a Guiding Star), to a maximum of 3 stars (best nutritional value). In 2009, *Guiding Stars* was introduced into the school food service at the University of New Hampshire (UNH) in Durham. Each prepared meal, salad bar and grab-and-go item served by UNH will receive a star rating.

Foods available in schools are not the only area where improvements are needed. With so many people eating meals away from home, it is essential that everyone have access to accurate information about the nutritional content of the food being served. Menu labeling with information on calories, fat, sodium and other selected nutrients can allow for a more informed choice by the consumer purchasing food in a restaurant. A June 2009 report by Healthy Eating Research, a national program of the Robert Wood Johnson Foundation, (www.rwjf.org/programareas/) found:

- While some restaurants provide nutritional information, most do not make this information available at point of purchase.
- Most consumers underestimate calories and fat in away from home foods.
- Most consumers would like to see nutrition information at places where they go out to eat.

Sixteen states have had legislation introduced to require some form of menu labeling with California being the only



one to pass a statewide requirement. Local legislation has been approved in New York City, Philadelphia, Seattle and Portland, OR. The National Restaurant Association agrees that providing consumers consistent information to a nationally agreed standard serves both consumers and restaurants. They launched an "Ask Us" program in 2005 to assist restaurant owners in providing nutrition information to customers (www.restaurant.org/nutrition/index.cfm).

The New York City menu-labeling law was implemented in July 2008, and a study of 12,000 customers in 2009 found that 56% reported viewing the calories data in fast-food restaurants, and those who viewed the information and used it consumed 106 fewer calories than those who did not. Significant calorie reductions among customers surveyed were noted at McDonalds, Au Bon Pain, KFC and Starbucks (www.rwjf.org/files/research2009).

RECOMMENDATION #2

New Hampshire should implement menu labeling in chain restaurants to ensure that nutritional information is made available at point of purchase. This consumer information is particularly important for children's menus.

SUBWAY is a national restaurant chain with branches in New Hampshire that provides the customer with information at the counter on the calories and fat content of sandwich items. Customers can decide on what they want to order with the nutrition information about the items-bread, meat, cheese, etc. before their sandwich is made.

Physical Activity

Physical activity for young people needs to be an essential element of any strategy looking to curb childhood obesity. Current state guidelines recommend that children engage in developmentally appropriate physical activity each day in school. Too often this recommendation is overlooked or ignored. The reasons for this are many. With increasing pressures to meet academic standards, some schools are eliminating physical education or recess to gain valuable minutes for the academic curriculum. Other schools choose to deny recess to children as punishment. The commission strongly disagrees with these practices. Denying recess or other physical activity ignores the holistic health needs and learning of children. While the added classroom time available when physical education is eliminated may seem to offer short-term gain, compelling evidence exists that physical activity can help to improve academic performance.

There is new research showing an association between better academic achievement and being physically active. A 2009 report by the National Association of State Boards of Education which looked at several research studies states, “students who are healthy and physically active are more likely to be motivated, attentive and successful academically.”^{vi} A study of elementary school children in Illinois demonstrated a positive association with aerobic capacity and achievements in mathematics and reading achievement. Castelli et al. found that among 259 third and fifth graders from four Illinois middle schools, field tests of physical fitness were positively related to academic achievement.^{vii} Specifically, aerobic capacity was positively associated with achievement, whereas BMI was inversely related. Associations were demonstrated in total academic achievement, mathematics achievement, and reading achievement, thus suggesting the aspects of physical fitness may be globally related to academic performance in preadolescents.

Another study of high school students who were underperforming in literacy found that students who took part in physical activity class and a literacy intervention gained improvement on a standardized reading test compared to those students who only participated in the literacy intervention.^{viii} In 2004, Naperville Central High School in Illinois began a “learning readiness” physical education program. Students identified as underperforming in literacy were offered an early morning physical education session immediately followed by a literacy support class. By the end of the semester, the students who took part in both the early morning physical education class and the literacy intervention gained 1.34 years of improvement on a standardized reading test. Their peers who did not participate in the physical education class prior to literacy instruction made only about 0.7 years of improvement. The school then followed this approach for mathematics instruction. The results were even more impressive. Students who exercised prior to the math intervention class increased their standardized algebra test score by 20.4 percent compared with their peers in the control group who only made 3.87 percent improvement.



RECOMMENDATION #3

All schools must adhere to the requirement to adopt and implement written policies that recommend developmentally appropriate daily physical activity and exercise (NH Ed 306.04 Policy Development (a) (15)).

The Department of Education already recommends daily physical activity for all children. It is essential that individual school districts ensure that all children engage in physical activity. This is particularly true for students in middle and high school, who are often overlooked when it comes to enforcing the requirement for daily physical activity. To this end, the commission recommends that all schools adhere to this requirement.



The NH Department of Transportation's **Safe Routes to School (SRTS)** Program helps communities by reimbursing them for the costs of developing walking and bike paths that allow children to get themselves to school. SRTS is designed for children from kindergarten through grade 8, including those with disabilities, who live within approximately two miles of school. More than 60 communities have been awarded over \$2 million for planning, infrastructure and education that support safe routes to school. Visit www.nh.gov/dot/ to learn more.

Opportunities for daily physical activity for children may take many forms. Interscholastic sports provide a significant opportunity for youth to compete and develop skills while in school. They also provide a vehicle for school spirit and community-building. Intra-mural sports and physical activity clubs are available in approximately 49% of middle schools and 45% of high schools according to national data. A study of rural areas in New Hampshire and Vermont by the Dartmouth Hood Center for Children and Families found that larger schools (enrollment > 950) offered more sports than smaller schools and that on average about 20% of students participate in at least one intramural sport.^x The most common intramural sports offered were skiing, snowboarding, Frisbee, dancing and basketball. The Hood Center research found that all schools in their study offered inter-scholastic athletics with an average of 10 sports offered for males and females. High schools offered nearly twice the number of sports than middle schools did. Sixteen percent of schools required a fee to participate compared to 32% nationally, although most will waive the fee if a student cannot afford to pay. Examining information on the amount of public funds allocated for inter-scholastics, intramural teams and recreational physical activity (e.g., dance, hiking club, etc.), and the number of individual children who participate in the programs offered can help policy advocates to understand the range of opportunities available and children served.



In addition to physical education classes, recess, interscholastic sports and club or intramural sports in school, there are other approaches to classroom-based physical activity. 'Take 10' (www.take10.net) and Activity Bursts in Classroom ("ABC") (www.davidkatzmd.com) are two strategies that classroom teachers can use to integrate physical activity within the daily academic curriculum.

One related initiative gaining increasing momentum is a movement to schedule recess before lunch as opposed to the traditional scheduling of recess after lunch. A report from Montana schools indicated having recess before lunch helps improve student behavior on the playground, in the cafeteria and classroom. Also, it increased nutrient intake as students wasted less food and drank more milk. There are toolkits on-line which can help to provide guidance for schools willing to consider this change (www.peacefulplaygrounds.com).

Physical education and health education are a critical part of a child's school day. They allow children to learn about their bodies and understand the implications of decisions they are making. Fitness assessments, such as the President's Challenge and the *FITNESSGRAM*, allow for a comprehensive measure of fitness as opposed to athletic ability. There is evidence that fitness assessments compliment BMI assessments, and offer the potential for students to learn about their overall health. The Commission strongly encourages the completion of a comprehensive fitness assessment annually by qualified personnel. These assessments should be shared with students and parents and can be compared over time to gauge progress over the long-term.

RECOMMENDATION #4

Qualified school personnel should complete a comprehensive fitness assessment for children and provide a health fitness report to children and parents every year.

FITNESSGRAM is an evidence-based comprehensive fitness assessment. It includes measures of aerobic capacity, body composition, muscular strength and endurance and flexibility. It has a set of standards, Health Fitness Zones, based on a child's gender and age. No one fails the fitness test although 'Needs Improvement' is a category. FITNESSGRAM is used at the Symonds School in Keene. Staff there looked at their grade 4 data to understand the fitness levels of students as a group and found that 60% of boys and 63% of girls met the fitness standard in 2006. Keene schools are planning to expand their collection and analyses of health information as part of their community Vision 2020 Envisioning a Healthier Future.

The Amherst school district uses FITNESSGRAM at each grade level. The child fitness level is provided to each student, and fitness plans and goals are generated from them. Additionally, programmatic decisions are driven from the collective data. The data is analyzed and disaggregated for use in comparisons with national data.

A study in California of students in grades 5, 7 and 9 has documented that as overall FITNESSGRAM scores increased, the mean reading and math standardized achievement scores also improved.^x FITNESSGRAM physical fitness test scores were compared to reading and mathematic scores on the standardized achievement tests. Subjects included all 5th, 7th, and 9th grade students in California public schools in 2002 for whom there was a complete set of data. The research found that as overall fitness scores improved, mean achievement scores also improved. The relationship between fitness and academic achievement appeared to be stronger for females than males and stronger for higher socio-economic status (SES) than lower SES students.

Best practices that derive from individual school approaches, as well as evidence-based curricula, should be shared with physical education and health teachers across the state. While professional associations help, there is currently no direct support to health and physical education teachers from the Department of Education. In the face of this burgeoning epidemic, and with the increased attention on schools and their potential to impact the obesity epidemic, there is a need for increased support for individual teachers.

RECOMMENDATION #5

Reinstitute the Physical Education and Health Coordinator position within the NH Department of Education to help support schools to implement their health and wellness programs and to share best practices.

Physical activities should be constructed to encourage participation from all children. The Commission heard testimony about evidence-based curricula, a number of which consist of non-competitive games. The Commission also heard about some out-of-school programs which promote lifelong habits of physical activity. These included fishing, hunting, snowshoeing and hiking clubs.

Children's Programs and Facilities

Offering healthy food choices and increasing physical activity must occur in all aspects of a child's life for sustained change. Schools cannot do it alone. For this reason, any comprehensive childhood obesity strategy must look at other locations which have sustained contact with children, including before and after school programs and child care centers.

There is a wide variety of different after-school programs, some of which are licensed, others are not. Some programs provide snacks and others do not. However, all programs have considerable contact with children and all can influence a child's life. The behavior that children observe in these environments can have a powerful

influence on the choices they make. The YMCA in Manchester testified before the Commission regarding recent changes to their job descriptions, which requires that all staff members participate actively with children, modeling the activity that the YMCA desires to see in all children.

RECOMMENDATION #6

All licensed and licensed-exempt after-school programs should serve and/or promote healthy snacks and provide for some physical activity each day.

Coordinated Approach to Child Health (CATCH) Kids Club is an evidence-based, coordinated school health program designed to promote physical activity and healthy food choices, and prevent tobacco use in children from preschool through grade 8. CATCH aims to equip children with knowledge, skills, self-efficacy and intentions to make healthy dietary and physical activity decisions. In 2004, the Keene Parks and Recreation Department implemented CATCH Kids Club (CKC), an after school program that combines physical activity and nutrition education. CKC has expanded to 57 program sites that include recreation departments, YMCAs, Boys & Girls clubs, etc. The Harvard Pilgrim Health Care Foundation is supporting this statewide expansion effort.

The Derry Boys and Girls Club has a CKC program and serves approximately 2,000 children in grades K to 5 in their after school program. In October 2007 the club decided to change to healthier snack options. The vending machines no longer sell sugary soda and candy bars in favor of water, juice, diet soda, granola bars, baked chips and Fig Newton cookies in single serving packages. Sales initially dropped 50%, but climbed back to 90% of sales within six months. In the spring of 2009, CKC members and staff planted a garden on-site to increase availability of fresh fruits and vegetables. It was a seed-to-table approach that taught the kids about growing food, harvesting it, food preparation and healthy eating.

Equally important is the influence of child care centers. These centers are a significant influence on children as they are developing lifelong habits. It is essential that they utilize best practices when caring for children. Therefore, recommendations on TV time limits and physical activity can provide useful guidance to help them provide the best care for children in line with emerging evidence.

The New Hampshire Child Care Program Licensing Rules regulate all licensed child care centers in the state of NH. The NH DHHS Bureau of Child Care Licensing reported 1,141 licensed child care providers facilities with 47,171 slots available in 2008. Current licensing rules focus on health and safety concerns, but do not address risk factors that can lead to unhealthy weight.

RECOMMENDATION #7

The commission recommends that child care licensing rules be modified through the rulemaking process no later than the next revision or no later than 3 years, to include specific language promoting physical activity, stimulation and limiting sedentary time for children in the care of licensed child care providers.

The **Lakes Region Child Care Center** in Laconia and Belmont serves 155 children ages 6 weeks to 6 years in child care and another 150 children in an after-school program. The center participates in the federal food program for child care and have successfully shifted the food program to healthier foods and local foods when available. In addition, the center changed how the food is served by using a family-style approach where children are able to select what they would like to eat and are part of the meal process. Marti Ilg, Executive Director, and her staff are leading this effort.

There is another group of children who require specific oversight to ensure that their needs are being met. These are the children in direct care of the State of New Hampshire. Children removed from their families are in the care of the DHHS Division of Children Youth and Families or the Division of Juvenile Justice Services. These are some of the most vulnerable children in our society and may face several health risks.^{xi} The 2007 NH KIDS COUNT reported that there were 1,646 children in out-of-home placements with about half of those children in foster homes in 2004. The remaining half live in group homes, a secure residential facility or therapeutic foster care.^{xii}

RECOMMENDATION #8

The commission recommends that the NH Department of Health and Human Services develop guidelines and an accountability procedure that ensures that all children in direct care of the State receive a BMI percentile-for-age assessment, at least one hour of daily physical activity and that congregate meals served to them meet the Dietary Guidelines for Americans.

Spaulding Youth Center is one of the oldest child facilities in the nation. It is located on a 470 acre hilltop site in Northfield and provides a safe, caring and supportive environment for youth to heal, learn, grow, and play. A professional staff of more than 180 offers 24/7 intensive residential treatment, educational and community services, including foster and respite care, for children and youth ages 6-20 with autism or other neurological impairments and boys in grades 1-8 with emotional and behavioral problems. Spaulding's Healthy Kids Initiative is designed "To inspire and nurture students and their families to achieve a healthy future through healthy life style choices." This initiative started 2 years ago with a primary focus on obesity prevention among the students by improving the amount of time that the children are physically active and the nutritional content of food consumed throughout the day.

Community Connections

Any effective response to childhood obesity should consider all areas of a child's environment. This includes all adults who through their decision-making or actions directly influence the built and natural environments of children and their families. The Commission heard testimony from many community advocates concerned about transportation, town and city planning, local agriculture and the pervasive influence of media that surrounds children today. The Commission was engaged in all the community issues and concerns that were raised and made specific recommendation related to two items.

The natural environment in New Hampshire is a significant asset to residents and visitors to the state. The commission heard about the educational and economic opportunities to increase the understanding of agriculture among children and their access to locally grown food.

The **New Hampshire Children In Nature Coalition** is dedicated to fostering experiences in nature that:

1. Improve physical and emotional health and well-being
2. Increase understanding of and care for the natural world
3. Promote stronger connections to community and landscape

The Coalition started in 2007 with the goal of bringing together various groups interested in reconnecting children with nature. An active on-line community and conferences create opportunities to learn more about effective strategies for engaging children and communities with nature (www.wildlife.state.nh.us/ChildrenInNature/).

In addition to an increasing number of garden projects linked to schools, child care centers and after-school programs, N.H. Farm to School (NHFTS) helps to bring local agriculture into the classroom. NHFTS works to strengthen relationships between local farms and schools by integrating agricultural production, school food procurement and school curriculum. NHFTS seeks to develop a healthy, community-based, community-supported school food system.

Through innovative programs, NHFTS works with both farms and schools to foster mutually beneficial relationships. The program started with the Apples and Cider project in 2003, which facilitated the purchase of locally grown apples and cider for 11 schools in NH. Currently over half of NH schools are purchasing through this program, the students benefiting not only from the quality fruit, but also from learning about lessons on nutrition, sustainability and food production. Other projects include the Get Smart/Eat/Local program, which takes the experience learned from the Apples and Cider project and applies them to a wider variety of products. The Fresh Fruit and Vegetable Project (FFVP), a USDA initiative, delivers funding to procure fresh fruits and vegetables to schools with lower-income students. NHFTS works alongside the Department of Education, UNH Cooperative Extension and others to support local procurement where appropriate.

RECOMMENDATION #9

Increase the number of schools in the N.H. Farm to School program, which purchase food from N.H. farms and help children learn more about healthy eating.

Laconia’s Woodland Heights Elementary School students are enjoying locally grown foods. The USDA Fresh Fruit and Vegetable Project provides funds to schools with 50% or more students receiving free or reduced lunch, specifically for purchasing fresh fruits and vegetables, offered free to students at non-meal times during the school day. Woodland Heights has been a recipient of the FFVP for the last 2 years. The school is using this support to serve 600-700 pieces of fruit or vegetables a day, free of charge to students. The fruit and vegetables are set up in the cafeteria between breakfast and lunch. Students are welcome to help themselves, or bring items to distribute to their classrooms. This fall, students are enjoying local McIntosh apples from Surowiec Farm in Sanbornton. Surowiec Farm started out as a dairy farm in 1917, and has been a family farm ever since. Laconia’s elementary and middle school cafeterias all offer salad bars with fresh vegetables and fruit.

Another Farm to School effort in Coos County has schools in Stewartstown and Colebrook purchasing local carrots and tomatoes from North Country Farm Fresh Cooperative.



A focus on “pedestrian-friendly environments, safety and actively promoting bicycling and walking by connecting and adding sidewalks wide enough for people to meet and talk” were recommendations of the New Hampshire Long-Range Transportation Plan issued by the Community Advisory Committee to the Commissioner of the NH Department of Transportation in June 2006

(http://www.pps.org/transportation/info/transportation_projects/nh_lrtpt). This plan emphasized that policy-makers need to link municipal land use decisions and transportation planning.

Town and city master plans are very important in creating an environment where children may safely engage in active living/physical activity. These plans should consider recreation and alternate forms of transportation for their communities. The commission believes a policy for local master plans should include a section that addresses the importance of walking and bicycling in their communities.



RECOMMENDATION #10

The commission recommends a section (o) be added to RSA 674:2 to address the importance of making communities places where people of all ages and physical abilities can easily and safely enjoy walking and bicycling as forms of transportation and recreation.

Excerpt from the **New Boston Master Plan** adopted by the New Boston Planning Board on September 12, 2006:

Livable, Walkable Community Goal:

To make New Boston a place where people of all ages and physical abilities can easily and safely enjoy walking and bicycling as forms of transportation and recreation.

Livable, Walkable Community Objectives:

1. To maintain and enhance the placement of and signage for crosswalks.
2. To employ traffic calming measures including education, enforcement and engineering.
3. To increase the availability of well connected, constructed and maintained sidewalks to include winter plowing.
4. To adopt and enforce motor vehicle noise performance standards.
5. To incorporate bicycling and walking facilities into all transportation projects as required by the American Association of State and Highway Transportation Officials (AASHTO) Standards and the Americans with Disabilities Act (ADA) standards.
6. To provide easy, safe and accessible walking and bicycling to all key destinations throughout the town.
7. To investigate and create innovative alternative parking options.
8. To improve nighttime lighting for easy and safe walking and bicycling while limiting or prohibiting light pollution as prescribed by the International Dark-Sky Association.
9. To explore alternative routes across town without accessing the town center.
10. To develop a contiguous walking, bicycling and recreational trail system throughout the town.

The commission heard testimony about the issue of new school construction and the accessibility of schools for children who want to walk or bicycle. According to the US Environmental Protection Agency (EPA), in 2001, 15% of students ages 5-15 years walked to or from school and 1% biked compared to 48% who walked or biked in 1969.^{xiii} The EPA study found that school proximity to students matter for walking and bicycling and the built environment influences student travel choices. They estimate that neighborhood schools would produce a 13% increase in walking or biking. The NH Department of Education oversees State building aid funds for schools. The Department has school siting standards related to motor vehicle parking and outdoor space requirements but no policy on school siting to encourage pedestrian accessibility of new schools. It does have a waiver process for schools that want to use State funds for renovation or new construction that do not meet the standards for motor vehicle parking and other outdoor space. The NH Preservation Alliance (www.nhpreservation.org) is leading an effort in the state to examine issues related to schools and sustainable energy and economic practices.



Another issue raised in testimony before the commission was media literacy. Media literacy can be a powerful tool for helping children to understand media messages in order to make healthy choices. Media Awareness Network (MNet) did a comprehensive study of the connections between media literacy and childhood overweight and obesity. They found young people today are media savvy, spending a great deal of their time engaged in various forms of media. Screen time for our children continues to grow, with weekday averages of 5-6 hours, rising to 6-7.5 hours per day on the weekends with many kids using various forms of media at the same time. MNet reports that on an average weekday, our kids spend: 54 minutes instant messaging; 50 minutes downloading and listening to music; 44 minutes playing online games; and 30 minutes doing school work.

According to New Hampshire's own Media Power Youth (www.mediapoweryouth.org) children see 10,000 food ads annually - predominantly for sugary, fatty, salty foods which are dense in saturated fat and calories. In 2005, the Institute of Medicine found that advertising affects children's food choices, food purchase requests, and diets, and plays a key role in the current epidemic of childhood obesity, diabetes and other health problems. Billions are spent annually to market food and beverages to children and about 80% of foods advertised on television shows intended for children are for convenience/fast foods and sweets.^{xiv} Media Power Youth in New Hampshire provides training and education to help immunize children against media's influence on health issues including obesity. Using a community-wide collaborative approach, lesson planning and training sessions demonstrate how to incorporate media literacy into multiple curricula and classroom settings.

Health Care

One key intervention to help a child achieve a healthy weight is nutritional counseling. A registered dietician (RD) has the expertise to help a child, and their parent and/or caregiver, understand the nutritional elements in the food and beverages they consume.

RECOMMENDATION #11

The commission recommends that all insurance carriers in New Hampshire (both Medicaid and private insurers) allow a minimum of four registered dietician visits, if clinically recommended, for all children with a BMI-for-age percentile equal to or greater than 85%.

Private health care insurance is the largest source of coverage in N.H. More than 70% of children in NH are insured through the private sector. There are about 60,000 children who receive insurance through the Medicaid program. The three major private health insurance companies are Anthem Blue Cross Blue Shield, Harvard Pilgrim Health Care and CIGNA. The three major insurers offer individual nutrition assessment and counseling for children by a registered dietician to prevent or treat a medical illness and ordered by a primary care provider or other contracted provider. The NH Medicaid Program currently does not offer individual nutrition counseling by an RD for children who are obese or overweight unless they have a diabetes diagnosis. They will pay a physician to do nutrition counseling although most pediatricians do not have the expertise in nutrition to counsel and often believe this may not be the best use of their time.

An example of a patient that can be helped by **working with a Registered Dietician** is TAZ, a 16 year old, obese male with dyslipidemia and a strong family history of coronary artery disease. Weight: 249 pounds, 6 feet tall, BMI 33.2, Cholesterol- 169 mg/dL, Trigs-180 mg/dL, HDL- 35 mg/dL, LDL 130 mg/dL. He was seen for a 45-minute nutrition consultation to discuss dietary strategies to promote weight loss and improve lipids. He was asked to avoid cheese, cream in coffee, and avoid sugar rich beverages. At a follow-up consult, 3 months later - weight: 244 pounds, BMI 32.5, Cholesterol-151 mg/dL, Trigs-146 mg/dL, LDL 87 mg/dL and HDL 35 mg/dL. TAZ is now back in school and would benefit from bringing lunch from home since he is buying school lunch daily. Another follow-up consult is scheduled in 3 months.

Very few medical professionals receive adequate training on childhood obesity issues. As a result, many in the medical community do not have sufficient knowledge or experience on how to assess and advise overweight or obese children and their parents on the risk factors and strategies related to preventing and addressing childhood obesity. Despite numerous clinical guidelines, only 39 percent of pediatricians believe they could effectively manage obesity in their patients and, worse, only 12 percent of them report high self-efficacy in this skill set. To help boost their confidence in managing childhood obesity and, in turn, to assist in the interpretation and adoption of the AMA recommendations, physicians need access to educational programs, clinical tools, and weight-management and community-based physical activity programs.^{xv}

Systemic improvements in integrating the promotion of good nutrition and clinical skills are warranted in the education of the primary care physician. Currently, there are opportunities for the already practicing physician to be taught strategies to prevent and manage childhood obesity, and to learn about reimbursement for these office visits. Although nutrition education has been added to the curricula of some residency programs, more comprehensive efforts are needed to consistently teach residents the clinical skills necessary to promote optimal nutrition and physical activity in their patients.

RECOMMENDATION #12

A continuing medical education unit for physicians, registered nurses, registered dieticians and other health providers who work with children should be made available that specifically relates to childhood obesity and healthy choices.

The **American Academy of Pediatricians** identifies professional education opportunities on line at www.aap.org/profed/html, and the American Academy of Family Physicians lists programs at www.aafp.org.

BMI: Screening for Health

New attention has focused on measures that can help to identify children at risk of obesity. Body Mass Index (BMI) is widely accepted as a relatively easy and effective way to identify children who might be at risk of overweight or obesity. BMI relates to the amount of body fat and can provide a useful glimpse into overall health. The American Academy of Pediatrics (AAP) recommends that BMI should be calculated and plotted annually on all children as part of normal health supervision within the child's medical home. The Commission endorses this approach.

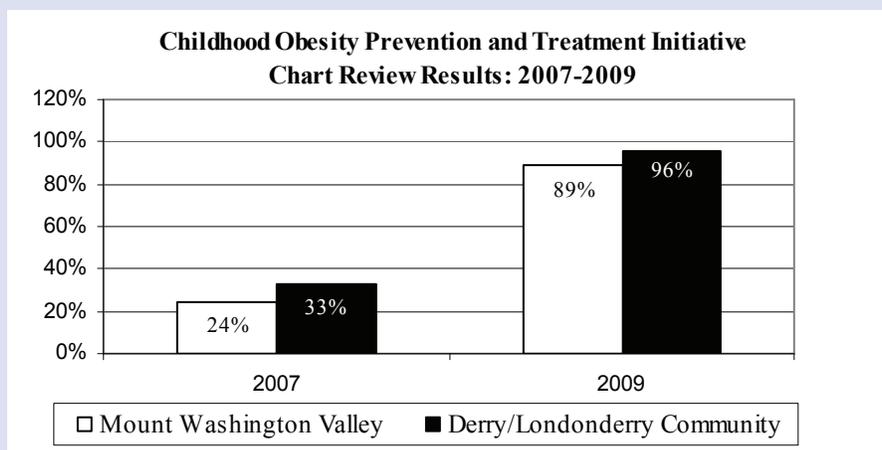
This can normalize the assessment of BMI and help parents to become more aware of the health risks of an unhealthy weight.

RECOMMENDATION #13

The commission recommends that all pediatric primary care providers assess the BMI percentile-for-age for everyone between 2-20 years of age as part of their annual well-child/well adolescent visit.

BMI can help a pediatric clinician, child and parent to identify children at risk of being overweight or obese. BMI is measured against a developmentally appropriate level, based on age and gender. While this measure is useful in isolation, recording and comparing BMI at different ages can help to identify children at risk, open the dialog about unhealthy weight gain and its associated health risks. This could potentially allow for behavior changes before the child is clinically obese.

Strategies for Improved Clinical Care in NH: In January 2007, a team of Nashua nurses, physicians, dietitians and administrators from Southern New Hampshire Medical Center, Saint Joseph Hospital, Dartmouth-Hitchcock, and Lamprey Health Care formed Stay'NHealthy. This collaboration was an adaptation and expansion of the successful and nationally recognized Maine Youth Overweight Collaborative (MYOC). The purpose of Stay'NHealthy is to increase the ability and effectiveness of primary care providers to prevent, manage and treat overweight/obese youth and their families by providing clinicians with needed training, tools and support. The program also strengthens links with community partners. This program had a wide reach, involving approximately 78% of the pediatric clinicians and reaching two-thirds of the children from 2-18 years in the greater Nashua area.



Rich Laracy, DO, a pediatrician at **Saco River Medical Center** in Conway knew that fewer children were at a healthy weight but knew it would take a community effort to make change. Dr. Laracy and his clinical colleagues made a commitment to assess BMI on all their patients and to assess and advise children about physical activity, healthy eating and screen time. They used the 5-2-1-0 message to help guide their effort. The doctors at **Londonderry Pediatrics**, a practice with about 1,000 patients, made a similar commitment to help prevent childhood obesity. Their busy practice uses a paper medical record and adapted the 5-2-1-0 assessment tool in their office. In addition, Dr. Kerry Houston and Dr. Shanon Gruchot became engaged in their school wellness committee to help create a healthier learning environment in school. The practice also has added dietitians to help with nutrition consults.

Testimony to the commission revealed that in Manchester, an estimated 2,500 children in the city had no primary care physician. The 2007 New Hampshire KIDS COUNT Databook estimates 6% of children ages 0 to 17 in NH (15,700 to 21,700 children) have no health insurance coverage. Uninsured children are less likely to receive routine well-child care. The commission decided for this reason, as well as for overall state public health surveillance, to recommend school-based BMI screenings for all children.

The Institute of Medicine recommends annual school-based BMI screenings. The CDC expresses some concern about BMI measurement in school because the link or lack thereof, between BMI measurement and referral for treatment. It is therefore important that schools help to link parents with community health providers.

RECOMMENDATION #14

The commission recommends that BMI be assessed every year in school by a qualified/trained individual and that this be enforced through school accreditation process.



BMI is a public health tool that is most effective when measured over time among different age groups. The Commission determined that identifying the BMI of children in grades 1, 4, 7 and 10 would adequately measure growth over time, while accounting for growth spurts apparent in all children. The collection of this BMI data at these four time periods will balance the need for information to understand the problem and monitor changes over time.

There are 20 states that currently require BMI collection in schools, and a number of others are considering enacting such legislation. Collection of BMI in schools, as a part the routine health assessments, can help to raise awareness of a common child health indicator, inform parents, engage school nurses in positive dialog with children and provide the state with useful information about the trends in childhood obesity. A comprehensive public awareness program around the use of BMI as a health screening tool should be delivered alongside any effort.

Pine Tree Elementary School in Center Conway is a K-6 grade school with 216 students that does an annual BMI screening on all students. School nurse Cheryl Clapp, RN confidentially sends the BMI screening results home to parents so they can be aware if further follow-up with the child's pediatric primary care provider is advisable.

The Commission endorses a set of best practices defined by the CDC, which can help to ensure that the BMI measurement ensures privacy and respect for all students. The CDC advises that BMI measurement programs should adhere to the following safeguards:

- introduce the program to school staff and community members and obtain parental consent,
- train staff in administering the program (ideally, implementation will be led by a highly qualified staff member, such as the school nurse),
- establish safeguards to protect student privacy,
- obtain and use accurate equipment,
- accurately calculate and interpret the data,
- develop efficient data collection procedures,
- avoid using BMI results to evaluate student or teacher performance, and
- regularly evaluate the program and its intended outcomes and unintended consequences.

BMI data collection will help health professionals to recognize children who are at risk of childhood obesity and related diseases. Identifying children early, makes it possible to help children, their families and the community to modify the child's environment and unhealthy behaviors and support healthy eating and active living.

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Recommendations from the New Hampshire Commission on Prevention of Childhood Obesity

1. The commission recommends that the N.H. Board of Education use its school approval rulemaking authority by October 2010 to support the sale and distribution of single-serving size, nutrient dense foods in all schools during the school day ('bell-to-bell'). We recommend that nutrition standards address the different school grade levels (elementary, middle and high school) for all food and beverages available for sale to students. Nutrient dense foods are those foods which provide students with calories rich in the nutrient content needed to be healthy. In an effort to support the availability of nutrient dense foods in schools, we recommend that schools follow a nutrition guideline such as the Institute of Medicine or American Heart Association-Alliance for a Healthier Generation or Action for Healthy Kids-NH for foods sold in schools other than those regulated by the U.S. Department of Agriculture school meals program. These guidelines provide a framework to create healthier choices for foods and promote health. Establishment of national standards would override any state efforts.
2. New Hampshire should implement menu labeling in chain restaurants to ensure that nutritional information is made available at point of purchase. This consumer information is particularly important for children's menus.
3. All schools must adhere to the requirement to adopt and implement written policies that recommend developmentally appropriate daily physical activity and exercise (NH Ed 306.04 Policy Development (a) (15)).
4. Qualified school personnel should complete a comprehensive fitness assessment and provide a health fitness report to children and parents every year.
5. Reinstitute the PE and Health Coordinator position within the N.H. Department of Education to help support schools to implement their health and wellness programs and to share best practices.
6. All licensed and licensed-exempt after-school programs should serve and/or promote healthy snacks and provide for some physical activity each day.
7. Child care licensing rules should be modified through the rulemaking process no later than the next revision or no later than 3 years, to include specific language promoting physical activity, stimulation and limiting sedentary time for children in the care of licensed child care providers.
8. The N.H. Department of Health and Human Services should develop guidelines and an accountability procedure that ensures that all children in direct care of the State receive a BMI percentile-for-age assessment, at least one hour of daily physical activity and that congregate meals served to them meet the Dietary Guidelines for Americans.
9. Increase the number of schools in the N.H. Farm to School program, which purchase food from N.H. farms and help children learn more about healthy eating.
10. Add a section (o) to RSA 674:2 to address the importance of making communities places where people of all ages and physical abilities can easily and safely enjoy walking and bicycling as forms of transportation and recreation.
11. All insurance carriers in New Hampshire (both Medicaid and private insurers) should allow a minimum of four registered dietician visits, if clinically recommended, for all children with a BMI-for-age percentile equal to or greater than 85%.
12. A continuing medical education unit for physicians, registered nurses, registered dietitians and other health providers who work with children should be made available that specifically relates to childhood and healthy choices.
13. All pediatric primary care providers should assess the BMI percentile-for-age for everyone between 2-20 years of age as part of their annual well-child/well adolescent visit.
14. BMI should be assessed every year in school by a qualified/trained individual and enforced through school accreditation process.



- 5:** Fruits and vegetables...more matters! Eat at least 5 servings a day. Limit 100% fruit juice.
- 2:** Cut screen time to 2 hours or less a day.
- 1:** Participate in at least one hour of moderate to vigorous physical activity every day.
- 0:** Restrict soda and sugar-sweetened sports and fruit drinks.
Instead, drink water and 3-4 servings/day of fat-free/skim or 1% milk.

*Contact the Foundation for Healthy Communities for more information on how you can promote 5-2-1-0 in your community!
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