

Children's Health Reform Agenda Opportunities for Impact: Preventing Tobacco Use & Childhood Obesity

A Prevention Policy Paper Commissioned by
Partnership for Prevention

Joseph W. Thompson, MD, MPH
Director, Arkansas Center for Health Improvement
Surgeon General for the State of Arkansas

December 2008



Executive Summary

Two public health threats have the potential to radically and negatively impact children's health status: tobacco use and obesity. Left unchecked, these two issues will almost certainly cause immeasurable harm to the physical health of children and adults, while damaging our country's fiscal health.

Mortality data make clear that tobacco use and obesity are the top two causes of disease-related death among adults in the United States today. While tobacco use has been on the national radar screen for decades, the recent emergence of obesity-related disease and death has become an enormous public health problem. The good news is that the majority of these deaths and resulting health costs for treatment are preventable if positive and immediate action is taken.

We have known for quite a while that smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers in general. The adverse health effects from cigarette smoking account for an estimated 438,000 deaths, or nearly one of every five deaths each year in the United States. What's more, people who start smoking in their teens (as more than 70% do) and continue to do so for two decades or more will die 20–25 years earlier than those who have never smoked, thus losing some of the most productive years of their lives.

To prevent these unnecessary health effects, as well as loss of productivity and premature death, it is imperative that the Federal government continue to work to prevent tobacco use among young people. Recommendations to do so include the following:

- Provide funding for tobacco prevention and cessation programs.
- Prohibit marketing to children and teens.
- Give FDA regulatory authority over the manufacture, distribution, marketing, and use of tobacco products.
- Increase the excise tax on tobacco and related products.
- Protect non-smokers by maintaining and enhancing legislative mandates for clean air that restrict the use of smoke-producing tobacco products in both indoor and outdoor spaces used by the public.

The obesity epidemic has resulted from the convergence of many changes in lifestyle in the United States. With an increased number of two-parent working families, less time is spent shopping for groceries and cooking and more time eating at fast food restaurants. At school, the pressure to spend more time in academics has resulted in more time in the classroom and less time engaging in physical activities. The quality of food at school also has become less healthy, with children eating snacks from vending machines and easy-to-prepare foods for lunch.

Preventing Youth Tobacco Use and Childhood Obesity

As a result, not only are more children obese than ever before, they also are getting adult-onset diseases and/or conditions, such as type 2 diabetes, high blood pressure, and high cholesterol levels. While the science is building as to what interventions work, we know some specific actions that can help stem the tide of this epidemic: improve access to healthier foods in schools and in neighborhoods, reduce “screen time” for children, and increase and improve access to safe places to play.

Specific recommendations include the following:

- Improve federal legislation governing use of food subsidies to feed children at school or similar locales.
- Start teaching parents of young children as soon as possible about healthy foods and physical activity for their children.
- Provide schools with resources and guidance for creating a balance between desk time and physical activity to promote maximal learning and retention.
- Improve pathways to school and work to encourage pedestrian and cycling activity.
- Ensure that the two federal programs directed at improving child access to health care include obesity prevention programs.
- Improve federal oversight of marketing to children and advocate for full disclosure of product dangers to the public.
- Increase funding for obesity control and prevention, involve the National Institutes of Health in building the scientific evidence for obesity prevention.

Federal leaders must tackle tobacco use and obesity as public health threats. To protect all Americans and ensure their health, they must take a multi-pronged approach, targeting action in the areas where Americans learn, work, and play.

Note: The views expressed in this paper are those of the author. They do not necessarily represent the views of Partnership for Prevention.

Introduction: Statement of the Problem

Numerous stories of parents running back into burning buildings to rescue their children, as well as tales of unrelated strangers heroically placing themselves at risk to protect a child, pepper the media on a regular basis. Arguably, there may be no stronger instinctual drive than the desire to safeguard the most vulnerable among us when they are in harm's way. Although this innate response to protect children in jeopardy is easily demonstrated on a personal level, the same response at the societal level is not as readily apparent. However, protecting the public health of children and youth as groups within our society is no less important than parents ensuring the safety of their individual children.

Two public health threats have the potential to radically and negatively impact children's health status: tobacco use and obesity. Left unchecked, these two issues will almost certainly cause immeasurable harm to the physical health of children and adults, while damaging the fiscal health of our country's economy.

The pertinent data are overwhelmingly disturbing in their scope and negativity. Many groups, including The Campaign for Tobacco-Free Kids, the American Cancer Society, the Centers for Disease Control and Prevention (CDC), and the U. S. Department of Health and Human Services have highlighted the problems associated with youth tobacco use and childhood obesity and have called for action. Among these groups, the CDC has reported startling and negative shifts in children's health directly attributable to tobacco consumption and obesity.¹

Mortality data make clear that tobacco use and obesity are the top two causes of disease-related death among adults in the United States today. While tobacco use has been on the national radar screen for decades, the recent emergence of obesity-related deaths will soon overtake tobacco for the number one spot. The good news is that the majority of these deaths and resulting health costs for treatment are preventable if positive and immediate action is taken.

Numerous conditions exist that prevent children from developing into functional and productive adults. Historically, many of these conditions were not readily preventable, either due to lack of knowledge regarding the true nature of the threat (e.g., infectious disease prior to the development of germ theory) or lack of resources to combat the threat (e.g., insufficient financial ability and infrastructure to address sanitation deficiencies). Prior to the development of the sanitary movement and the discipline of public health in the 19th and 20th centuries, these threats often disproportionately impacted our most vulnerable populations: the elderly, the infirm, the poor, and children.

Today, while these same vulnerable populations continue to be at risk, their problems are the result of very different conditions. Mortality and morbidity were once predominantly linked to threats caused by infectious disease and poor sanitation, with resultant high infant mortality and much shorter life spans. However, much harm today is caused by environmentally influenced and preventable behavior. Lifestyle choices such as tobacco use or poor eating habits that lead to obesity can begin in childhood and may not be fully

evident until adulthood. But because of the diseases or conditions that may ensue, these lifestyle habits have the potential to shorten life spans or affect the quality of life.

In this paper, we review tobacco use and obesity rates among children and the harm resulting from each. In addition, we present public policy interventions intended to encourage both positive personal health behaviors and improved societal outcomes. Our recommendations represent a plea to U.S. Congressional leaders and other key policymakers from the public and private sectors to act to counter these health threats, which, if left unchecked, will undermine the well-being of our children today and for generations to come.

The Cost of Tobacco Use and Obesity to Individuals and the Health Care System

Tobacco

Cigarette Smoking

Smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers in general. The adverse health effects from cigarette smoking account for an estimated 438,000 deaths, or nearly one of every five deaths each year in the United States. More deaths are caused each year by tobacco use than by human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined. Globally, one person dies from tobacco use every 6.5 seconds; tobacco kills about 5 million smokers each year, or the equivalent of 13,700 people per day. This is in addition to the suffering caused through tobacco-related diseases and the burden of disease on individuals, families, and society as a whole.^{2,3}

People who start smoking in their teens (as more than 70% do) and continue to do so for two decades or more will die 20–25 years earlier than those who have never smoked, thus losing some of the most productive years of their lives. Unless current rates are reversed, more than 6.3 million children under age 18 who are alive today will eventually die from smoking-related diseases.⁴ Quitting smoking has immediate as well as long-term benefits, reducing risks for diseases caused by smoking and improving health in general.

Lung cancer and heart disease are two of the most common health problems smokers encounter, but the public is largely unaware that there is a wide range of other diseases and ill-effects associated with tobacco use that are not as widely publicized. The list of diseases caused by smoking includes chronic lung diseases; coronary heart and cardiovascular diseases; abdominal aortic aneurysm; sudden infant death syndrome (SIDS); cataracts; pneumonia; periodontitis; reproductive disorders; acute myeloid leukemia; and cancers of the bladder, esophagus, larynx, lung, mouth, throat, cervix, kidney, pancreas, and stomach.

Rates of cancers related to cigarette smoking vary widely among members of racial/ethnic groups, but are generally highest in African–American men. Smoking causes about 90% of lung cancer deaths in men and almost 80% of lung cancer deaths in women. The risk of dying from lung cancer is more than 23 times higher among men

who smoke cigarettes and about 13 times higher among women who smoke cigarettes compared with those who have never smoked.

Smoking causes coronary heart disease, which is the leading cause of death in the United States. Cigarette smokers are 2–4 times more likely to develop coronary heart disease than nonsmokers. Cigarette smoking approximately doubles a person's risk for stroke. Cigarette smoking causes reduced circulation by narrowing the blood vessels (arteries). Smokers are more than 10 times as likely as nonsmokers to develop peripheral vascular disease.

Cigarette smoking is associated with a tenfold increase in the risk of dying from chronic obstructive lung disease. About 90% of all deaths from chronic obstructive lung disease are attributable to cigarette smoking. Cigarette smoking has many adverse reproductive and early childhood effects, including an increased risk for infertility, preterm delivery, stillbirth, low birth weight, and sudden infant death syndrome. Postmenopausal women who smoke have lower bone density than women who have never smoked. Women who smoke have an increased risk for hip fracture than those who have never smoked.

Secondhand Smoke

Secondhand smoke contains more than 50 cancer-causing chemicals. Nonsmokers who are exposed to secondhand smoke are inhaling many of the same cancer-causing substances and poisons as smokers. Secondhand smoke causes lung cancer in adults who have never smoked themselves. It also causes approximately 3,000 lung cancer deaths among U.S. nonsmokers each year. Exposure has immediate adverse effects on the cardiovascular system, causes coronary heart disease, and is estimated to cause from 22,700 to 69,600 premature deaths from heart disease among U.S. nonsmokers each year.

Nonsmokers who are exposed to secondhand smoke at home or at work increase their risk of developing heart disease by 25–30% and their risk for lung cancer by 20–30%. Breathing secondhand smoke can have immediate adverse effects on blood and blood vessels, potentially increasing the risk of a heart attack.

Chemicals in secondhand smoke appear to affect the brain in ways that interfere with its regulation of infants' breathing. Smoking by women during pregnancy causes sudden infant death syndrome, and infants who are exposed to secondhand smoke after birth are at greater risk of SIDS. Infants who are exposed to both these risk factors are at especially high risk. *The bottom line is that there is no risk-free level of exposure to secondhand smoke.*

Youth and Tobacco

Children make up a large and significant segment of the population who are involuntarily exposed to environmental tobacco smoke and the harm it can cause. Societal measures should be taken to acknowledge this harm, and precautions should be taken to protect children from exposure. In addition, personal use of tobacco is common among children. The health effects of environmental and personal tobacco exposure in childhood tend to

track into adult life and to result in earlier and more severe disease and disability as well as earlier death.

Cigarette Use

Each day in the United States, approximately 4,000 young people between the ages of 12 and 17 initiate cigarette smoking, and an estimated 1,140 young people become daily cigarette smokers. Approximately 23% of male and female high school students in the United States are cigarette smokers. Of that 23% of high school students, approximately 26% are white; 22% Hispanic; and 13% African American. About 8% of middle school students in this country are cigarette smokers.

Other Tobacco Products

Data show that young male students often use smokeless tobacco products. Approximately 13% of high school students and an estimated 5% of all middle school students are current cigar smokers. About 10% of high school males and 4% of middle school males currently use smokeless tobacco products. An estimated 3% of high school students and 2% of middle school students are current users of bidis (flavored Indian cigarettes).

Obesity

Obesity can have an adverse impact on a child's physical, social, and emotional well-being. Some conditions related to obesity produce clinical symptoms in obese children, while others do not. However, the metabolic and physiologic changes associated with childhood obesity, along with the obesity itself, tend to track into adult life and eventually enhance the risks of disease, disability, and death.⁵

Physical Health

Childhood obesity is associated with a wide array of disorders that affect multiple organ systems. These disorders include hypertension, high cholesterol and other lipid abnormalities, glucose intolerance, type 2 diabetes, fatty liver disease, gallstones, sleep apnea, menstrual abnormalities, and orthopedic problems.

Of the multiple health correlates of the childhood obesity epidemic, perhaps the one that has received greatest attention is the increased prevalence of type 2 diabetes. By one estimate, there was a tenfold increase in the prevalence of type 2 diabetes in children between 1982 and 1994. For individuals born in the United States in 2000, the lifetime risk of being diagnosed with diabetes at some point in their lives is estimated at 30% for boys and 40% for girls if current obesity rates level off. Nearly all children with type 2 diabetes are obese, and a disproportionate number are Native American, African American, Hispanic, or Asian/Pacific Islander.

The development of all of the major complications of diabetes, including retinopathy, nephropathy, and neuropathy, are related to duration of disease. Those who develop diabetes earlier in life generally will develop costly complications earlier as well, with the

potential for premature mortality. It is possible that conditions related to type 2 diabetes—such as blindness, amputation, coronary artery disease, stroke, and kidney failure—will become ordinary in middle-aged adults if the childhood obesity epidemic continues at its current rate.

The potential for an even more important complication of childhood obesity may be the onset of metabolic syndrome. Metabolic syndrome is now present in nearly 30% of U.S. children and youth who are obese. This condition is diagnosed when a person has at least three of five metabolic abnormalities: glucose intolerance, abdominal obesity, hypertriglyceridemia, low high-density lipoprotein (HDL) cholesterol, and high blood pressure. Among adults, metabolic syndrome is associated not only with type 2 diabetes but also with cardiovascular disease and a higher mortality rate.

Even among obese youth who do not yet have clinical diabetes, components of metabolic syndrome appear to contribute to the development of atherosclerosis. Ultimately, it may be the association of childhood obesity with metabolic syndrome, rather than exclusively with diabetes, that poses the greatest physical health threat of childhood obesity. In addition, risk factors for cancer in obese adults, such as hormone alterations, may be present in obese children and contribute to a higher incidence of certain types of cancer later in life.

Social and Emotional Health

Although childhood obesity may not result in recognized clinical symptoms until later in life, the social and emotional correlates often have immediate effects on children's lives. Obese children and youth are stigmatized and subject to negative stereotyping and discrimination by their peers and adults. This sort of treatment is hypothesized to produce adverse emotional consequences such as low self-esteem, negative body image, and depressive symptoms.

The social and emotional impacts of obesity can also be long-term. In a longitudinal U.S. cohort with a seven-year follow-up, women who were 16 to 24 years of age and overweight at baseline completed fewer years of school, earned less money, and were less likely to be married. The impact of adolescent obesity on subsequent lower earnings of women also was demonstrated in a British cohort study.

Where to Intervene to Protect Children

The rapid increase in obesity rates in the United States can be traced to environmental circumstances and conditions that influence behavior, resulting in poor health outcomes. A few of these can be related to policy changes as well.

For instance, the need to keep our nation competitive in the world economy has directed public attention to improving our public system of education, which led to federal legislation emphasizing academic preparation rather than extracurricular courses. In many instances, limiting or de-emphasizing courses such as physical education has been

the outcome. Certainly, those who labored over the passage of the “No Child Left Behind” Act could not have predicted that competition for time in the school day might result in more obese children. This one legislative action can’t be held uniquely responsible. Rather, a combination of factors created a shift in behavior that has had a negative impact on health.

Another problematic area with an impact on children is the practice of giving them access to food throughout the school day. Schools had to cut costs because the time for academics condensed and the expenditures of ensuring that all students had access to the same curricula increased. One way that schools saved money was by reducing food preparation costs and reducing the time it took to feed children.

Driven by food vendors with products intended for quick and easy preparation and by children’s interest in foods expressly marketed to them, schools bought more prepared frozen foods and fewer fresh foods which, in comparison, take longer to prepare, require more shelf space, and spoil faster than ready-made foods. Unfortunately, many of the ready-made foods, while cheaper and easier to prepare, were not the most nutritious choices, and their preparation was often limited to frying. Time was at a premium at the middle and high school levels, especially in big schools where moving students through a food line could take hours. As a result, many schools grew dependent on vended food or a la cart items by commercial vendors. These foods were usually prepackaged; high in calories, fat, and sugar content; and had minimal nutritious value. Ironically, all of this has occurred with most states still staying in compliance with U. S. Department of Agriculture (USDA) guidelines for meals served in school.

Meanwhile, commercial food production and fast-food restaurants responded to the changing culture of two-parent working families with little time to shop for groceries and much less time to prepare meals. They developed offerings to “help” families out. As a result, for some families, eating three meals outside the house became routine. This trend for eating out has recently expanded with the addition of a “fourth meal,” the one that can be grabbed when you’re out late at night and decide to eat another full meal!

As with tobacco, the child and youth consumer is a major target for commercial food products, particularly those with minimal nutritional value. Television is one way that the food industry markets to young consumers. This becomes evident while watching cartoon networks, after-school programming, and prime time in the evening. In fact, because 50% of 3-year-olds have televisions and/or video players in their bedrooms, their early exposure to screen time not only provides opportunities for advertising but diverts children to sedentary activities rather than physical ones. Parents’ fears for children’s safety, lack of green space in neighborhoods, children at home alone, rundown play areas, and too few adults with free time to coach team sports contribute to a climate in which pick-up games of hide and seek, kickball, baseball, or community programs (such as Little League) are nearing extinction.

These environmental changes, combined with the ways people have learned to use products in response to inherent needs for sustenance and/or pleasure, form a perfect

storm that threatens our nation's public health. The challenge now is to determine how to reverse this negative trend.

Recommendations

Leadership in the executive and legislative branches of the federal government is well positioned to change the poor health outcomes related to tobacco use and obesity. As with other serious epidemics, a united front of critical leadership is often the first sign to the public that the problem is serious and actions must be taken. To that end, federal officials have both immediate and longer range opportunities to foster, encourage, and even demand action at the federal, state, and local levels. Current legislative opportunities, such as re-authorizing critical laws that impact the public at various junctures of work, school, and play, are immediate targets for action. Previous federal actions have had positive impacts, particularly in decreasing the use of tobacco products. However, tobacco use and obesity continue to pose threats to our health and economy. If our nation is to decrease or eliminate tobacco use and obesity, then bolder and more comprehensive steps must be taken.

Tobacco

Over the past 20 years, public and private leaders have built a body of knowledge that is irrefutable in how to prevent tobacco use and protect the nation's health and viability. Ironically, because some actions have been taken and have been successful, there is a sense that less effort and investment is needed. Competing priorities from other areas also contribute to a diminished sense of urgency. Such has been the case in the federal fight against tobacco use. Quite simply, we cannot afford to turn our attention away from the dangerous threat, nor can we grow lax in our investments of time and resources. Slippage in these areas and ignoring what we have learned can result in expensive increases in tobacco use and poor health outcomes. While we can be proud of our success in turning this tide, the nation may still falter due to the competitive marketplace, where tobacco producers still tempt Americans with lavish marketing campaigns and tease them with new products still laced with addicting nicotine.

Listed below are a few ways that the federal government can help our country remain vigilant about preventing tobacco use.

Provide federal funding for states to support prevention and cessation programs at the funding level ratios suggested in CDC guidelines.

The Campaign for Tobacco-Free Kids reports that state level funding for tobacco cessation programs is on the decline. A recent report reveals that state governments cut funding for prevention programs by 28% between 2002 and 2005. In the last two years, states have attempted to restore these funds but, even with those additions, a total of \$717.2 million of funding is woefully short of the 2002 high of \$749.7 million and continues to fall short of the CDC-recommended minimums. The report notes that all of the scientific authorities who have studied the issue, including the Institute of Medicine,

the President's Cancer Panel, the National Cancer Institute, CDC, and the U.S. Surgeon General, have concluded that when properly funded, implemented, and sustained, these programs reduce smoking among both youth and adults.^{1,6,7}

Prohibit marketing of tobacco products to children and teens.

Tobacco marketing expenditures have skyrocketed since the 1998 state tobacco settlement. From 1998 to 2005, tobacco marketing expenditures nearly doubled, from \$6.9 billion to \$13.4 billion, according to the Federal Trade Commission's (FTC) most recent report on tobacco marketing.⁸ Legislation to give the U.S. Food and Drug Administration (FDA) authority over tobacco products and a mandate that the agency enforces rules that restrict both advertising and sales of tobacco products to children and youth are needed now. The World Health Organization's 2008 "Report on the Global Tobacco Epidemic, 2008 - The MPOWER" package concludes that one of the top six policies for tobacco control worldwide should be to enforce bans on tobacco advertising, promotion, and sponsorship. Financial penalties for violations of new restrictive FDA marketing guidelines could be used to fund public service campaigns directed at young people to dissuade them from using tobacco products.

Give FDA regulatory authority over the manufacture, distribution, marketing, and use of tobacco products.

Several bills have been introduced that broaden the scope of authority of the FDA in regard to tobacco products. Federal governance of the tobacco industry is a preventive health measure that would safeguard the lives of Americans and help prevent them from being duped into purchasing harmful products. To keep tobacco use at a minimum, vital legislation should be passed to crack down on tobacco marketing and sales to young people; require tobacco companies to disclose the contents of tobacco products and reduce or remove harmful ingredients; stop tobacco companies from misleading the public about the health risks of their products; and require larger, more effective health warnings on tobacco products. A critical component of any legislation should be a provision to grant states the authority to regulate cigarette marketing. If such legislation were enacted, states and localities could impose bans or restrictions on the time, place, and manner (but not content) of the advertising or promotion of cigarettes.

Prohibit new tobacco products from being sold to minors.

In recent years, the tobacco industry has produced a number of newer products with lower levels of nicotine. These products can be directed to former tobacco users and promoted as less dangerous to new users.⁹ Since the nicotine content is reduced, marketing of these products entices users by projecting a message that they are healthier products and less dangerous than cigarettes. However, scientific evidence reveals that use of lesser strength nicotine products can be a gateway to heavier use of nicotine products, resulting in the same health threats and poor outcomes for the user. It is imperative that these *nouveau* tobacco products, which include smokeless ones, are restricted and controlled for marketing and sales to minors. We recommend that the same message of potential threat to people's health be placed on the packaging of these products as is currently done with cigarette packages.

Increase excise tax on tobacco and related products.

Although many states take bold steps to increase taxes on tobacco at the state level, many states are limited by tradition and tobacco interests from moving forward with excise taxes on tobacco products. The Federal government must be bolder than individual states can be and act on the evidence and strong recommendations of its experts, such as the Institute of Medicine (IOM) and the National Cancer Institute. We now know without a doubt that corresponding changes in the cost of tobacco products that occur when excise taxes are increased diminish the rate of use by individuals, especially teens. Deterrents such as tax increases are one of the most effective interventions. Therefore, government must exercise its leadership in enacting such measures when individual actions unchecked can damage the viability of the nation as a whole.

Protect non-smokers by maintaining and enhancing legislative mandates for clean air that restrict the use of smoke-producing tobacco products in both indoor and outdoor spaces used by the public.

The U.S. Surgeon General's 2006 report finds there is no risk-free level of exposure to secondhand smoke. This means that being around any amount of secondhand smoke is harmful. Nearly half of all nonsmoking Americans are regularly exposed to secondhand smoke. Exposure to smoke for adults increases the risk of heart disease by 25 to 30% and lung cancer by 20 to 30%. Children exposed to secondhand smoke may have sudden infant death (SID), breathing problems, ear infections, and asthma. Congress should ensure that all federal work spaces, monuments, museums, and recreational areas such as parks, and public transit systems are smoke-free.¹⁰

Obesity

The startling rise in the numbers of overweight youth and adults has focused the nation's attention on this predominant threat to length, productivity, and quality of life. For too long, innovations such as advances in food preparation and preservation, electronic media, and tools to ease our workload have promoted an environment in which our food intake has not met our energy output, resulting in lethargy and excessive intake. These conditions have had an adverse effect on our children. Increasingly, they are getting adult-onset diseases and/or conditions such as type 2 diabetes, high blood pressure, and high cholesterol levels. While the science is building as to what interventions work, we know some specific actions that can help stem the tide of this epidemic: improve access to healthier foods in schools and in neighborhoods, reduce "screen time" for children, and increase and improve access to safe places to play. Federal leaders must tackle obesity as a public health threat and target action in the areas where Americans learn, work, and play.

The past 10 years have seen a surge in action to generate public recognition of the childhood obesity epidemic, to research its possible causes, and to develop plans to address the problem. In the late 1990s, the National Conference of State Legislatures provided model legislation calling for the creation of state work groups to assess the impact of obesity and propose interventions. From the Surgeon General's "Call to Action

to Prevent and Decrease Overweight and Obesity 2001,” which served to stimulate the development of specific agendas and actions targeting the obesity epidemic, we see the recognition that, “The data on the morbidity and mortality associated with overweight and obesity demonstrate the importance of the prevention of weight gain, as well as the role of obesity treatment in maintaining and improving health and quality of life.”¹¹

In 2005, the IOM published *Preventing Childhood Obesity: Health in the Balance*, which emphasized the collective responsibility of multiple stakeholders and different sectors, including industry, advertising, media, local communities, schools, and families, as well as federal, state, and local governments, in addressing childhood obesity.^{12,13} The 2003 American Academy of Pediatrics Policy statement “Prevention of Pediatric Overweight and Obesity” helped in this effort by providing strategies for early identification of excessive weight gain by using body mass index (BMI), recommending dietary and physical activity interventions during health supervision encounters, and pushing for advocacy and research.¹⁴

Improve federal legislation governing use of food subsidies to feed children at school or similar locales.

The reauthorization of the Child Nutrition and Women, Infants, and Children Act is an optimal place to start to improve the food that children consume at home and at school. The USDA needs broader authority to require nutrition standards for all foods and beverages and to sell food competitively. An increase in federal reimbursement rates for school meals is needed to help offset the rising cost of food. Schools can be helped to meet stronger national nutritional guidelines by providing grants for upgrades to cafeterias and kitchen facilities so that healthier food can be cooked, stored, and served. The Fresh Fruit and Vegetable Program in the Farm bill is a very under-funded initiative that holds promise for improving access to fresh foods for families. Current laws governing food production subsidies need to be considered in relation to obesity, and the United States should explore new avenues of food production that increase access to affordable, healthier food options in the marketplace.

Start teaching parents of young children as soon as possible about healthy foods and physical activity for their children.

Multiple sources of federal funds directed at preparing and caring for young children are spent each year. Head Start, Title 1, Child Care and Development Fund, and the Social Services Block Grant are just a sampling of federal bills that provide resources to states and families. They represent a strong federal investment in building our nation and offer an effective way to improve what food and how much of it children eat and to help children learn to keep physical activity as a vital part of their waking hours.

We strongly advise that each of the federal legislative acts directed at young children have a health education component for caregivers that includes positive guidance for obesity prevention. In addition, federal authorizing legislation for these programs should include provisions to ensure that children have developmentally appropriate periods of mobility and exercise, while limiting sedentary time spent in front of electronic screens such as computers, video players, or TVs.^{15, 16, 17} Quality standards of care and licensing

guidelines must promote the importance of having children engage in daily activities that are developmentally appropriate to ensure that children's maximal attainment of mental and physical benchmarks are achieved.

Provide schools with resources and guidance for creating a balance between desk time and physical activity to promote maximal learning and retention.

Frequently, the attention given to the reauthorization of the No Child Left Behind Act focuses only on the criteria that suggest academic offerings, which are often sedentary. However, new and powerful evidence indicates that children learn and perform better and achieve more when they have a balance of physical activity and sedentary time during the academic day.¹⁸ Not utilizing this information to guide the country's policymaking in preparing the future workforce is both short-sighted and wrong-minded. Healthy bodies build healthy minds; thus, what children eat, what preventive health services they receive, and how they exercise will almost guarantee academic achievement in the classroom. One way to achieve this balance is to incorporate a physical fitness index or physical education quality score in school performance ratings. In addition, physical education requirements for all school years should include intramurals as well as competitive sports. Intramurals provide all students with exposure to choices of physical activity that can last a lifetime.

Improve pathways to school and work to encourage pedestrian and cycling activity.

Consideration of federal legislative opportunities that are not traditionally health oriented is one of the bolder steps that federal leaders can take to help create a more health-oriented environment. The reauthorization of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFE-TEA LU) is one such vehicle to help address the obesity problem. Within the context of this legislation, Congress should increase funding for Safe Routes to School programs; implement Complete Streets to support pedestrians and cyclists; and provide incentives to use transportation funds linked with land use decisions that create livable communities.

Ensure that the two federal programs directed at improving child access to health care include obesity prevention programs.

Medicaid and the SCHIP programs should designate obesity as a treatable condition in their rules and regulations and provide guidance about counseling and/or treatment options as informed by emerging research. Many low-income children are disproportionately impacted by excessive weight and are exhibiting early onset disease such as type 2 diabetes, high cholesterol levels, and even high blood pressure; these are health problems that were rarely seen in children only ten years ago.¹⁹ While emerging evidence is informing the best interventions for both clinical treatment and prevention of obesity, the nation's largest insurer for children (Medicaid) must respond accordingly and create pathways toward compensating for the care required by obese children.

Improve federal oversight of marketing to children and advocate for full disclosure of product dangers to the public.

The FTC, the Federal Communications Commission (FCC), and Congress should work together with the food and beverage industries to develop a new set of rules governing all marketing and advertising of food and beverages—across all media—to all children. If voluntary efforts and/or collaborative agreements are not forged between regulators and industry, then Congress should enact legislation mandating that consumers receive the following: appropriate information regarding the food they eat by product labeling; acknowledgment of product content prior to purchase; and other deliberate actions that prepare consumers and protect children.²⁰ Importantly, federal oversight should be exercised to control advertising and marketing of products to children, especially in efforts that may include interactive Internet marketing practices.

Increase funds for obesity control and prevention.

The CDC needs more dollars for grants to states for obesity control and prevention. In addition, a better method for ascertaining whether the obesity rates among children are improving, worsening, or reaching a plateau are needed so that parents, states, and the nation can accurately determine progress on the epidemic. Assessing a child's body mass index, now more likely to be assessed as a school health screen, is currently the best measure of child obesity levels and should be uniformly gathered by states.^{21, 22}

Involve the National Institutes of Health in building the scientific evidence for obesity prevention.

Framing obesity as a complex systems problem, one in which all scientific disciplines and societal sectors play an important role, the federal government should charge the NIH with prioritizing research to have greater and more direct population-level impact. This should include enhanced research on environmental and policy factors that enable or constrain healthy eating and physical activity and the mechanisms by which these socio-environmental factors influence health behaviors and obesity outcomes. Greater emphasis on the testing and/or evaluation of upstream interventions and programs that aim to modify the macro-environment also will be more likely to generate both effective and sustainable population-level solutions. Furthermore, the NIH should be mandated to increase the substantive and methodological capacity in the field, via research development and institutional training programs for true cross-disciplinary research and the translation of science into policy.

Conclusion

Why address tobacco use and obesity in children? There is clearly a health imperative. Rates of disease related to these threats are increasing in adults, resulting in decreased well-being, productivity, and enjoyment of life. There is also an economic imperative. Treatment of these diseases and illnesses are placing increased burdens on already-stretched family finances and on our health care system.

Preventing Youth Tobacco Use and Childhood Obesity

Finally, there is a moral imperative to act. As individuals, families, and a society, we are entrusted with an invaluable resource--our children--and with ensuring their health, welfare, and safety. Moreover, we are entrusted with securing their transition to healthy and happy adults. Sometimes, we don't know what actions to take to protect children from some potential harm. In the case of tobacco and obesity, however, we do know what works and there is no question that we need to act now.

Today's generation of children may be the first in recorded history to have a shorter overall expectation of lifespan than their parents. Substantive and immediate action to reduce tobacco use and childhood obesity has the potential to prevent that negative future from occurring.

References

1. Centers for Disease Control and Prevention. "Best Practices for Comprehensive Tobacco Control Programs – 2007." Available online at http://www.cdc.gov/tobacco/tobacco_control_programs/stateandcommunity/best_practices/. Accessed 11/05/08.
2. World Health Organization. "WHO Report on the Global Tobacco Epidemic, 2008- The MPOWER package. Available online at http://www.who.int/tobacco/mpower/mpower_report_tobacco_crisis_2008.pdf. Accessed 11/05/08.
3. Centers for Disease Control and Prevention. Smoking and Tobacco Use Factsheets. Available online at http://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm. Accessed 11/05/08]
4. CDC, State Highlights 2006. See, also, U.S. General Accounting Office (GAO), "CDC's April 2002 Report on Smoking: Estimates of Selected Health Consequences of Cigarette Smoking Were Reasonable," letter to U.S. Rep. Richard Burr, July 16, 2003 <http://www.gao.gov/new.items/d03942r.pdf>. Accessed 11/05/08.
5. Jeffrey P. Koplan, Catharyn T. Liverman, and Vivica A. Kraak. "Preventing Childhood Obesity: Health in the Balance." Washington, DC: The National Academies Press, 2005.
6. Campaign for Tobacco-Free Kids. State Tobacco Settlement. Special reports available online at <http://www.tobaccofreekids.org/reports/settlements/>. Accessed 11/05/08.
7. Richard J. Bonnie, Kathleen Stratton, and Robert B. Wallace. "Ending the Tobacco Problem: A Blueprint for the Nation." Washington, DC: The National Academies Press, May 2007.
8. Federal Trade Commission Cigarette Report for 2004 and 2005. Available online at <http://www.ftc.gov/reports/tobacco/2007cigarette2004-2005.pdf>. Accessed 11/05/08.
9. American Cancer Society, American Lung Association, and Campaign for Tobacco-Free Kids. "Light, low tar, and mild: why the FCTC must ban misleading descriptions." February 2003. Available online at <http://www.tobaccofreekids.org/campaign/global/framework/docs/LightMildforINB-6.pdf>. Accessed 11/05/08.
10. Centers for Disease Control and Prevention. 2006 Surgeon General's Report—The Health Consequences of Involuntary Exposure to Tobacco Smoke. Available online at http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2006/index.htm#full. Accessed 11/05/08.
11. U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001.
12. Active Education: Physical Education, Physical Activity & Academic Performance. Fall 2007. Available online at: http://www.activelivingresearch.org/files/Active_Ed.pdf. Accessed 10/13/08.
13. Institute of Medicine., IOM. Preventing Childhood Obesity: Health in the Balance. Washington, DC: The National Academies Press, 2005.

Preventing Youth Tobacco Use and Childhood Obesity

14. Wang LY, Chyen D, Lee S, Lowry R. The association between body mass index in adolescence and obesity in adulthood. *J Adolesc Health*. 2008; 42:512-51.
15. Vandewater EA, Huang X. Parental weight status as a moderator of the relationship between television viewing and childhood overweight. *Arch Pediatr Adolesc Med*. 2006; 160: 425-431.
16. Crespo CJ, Smit E, Troiano RP, Bartlett SJ, Macera CA, Andersen RE. Television watching, energy intake, and obesity in US children. *Archives of Pediatric and Adolescent Medicine*, 2001;155:360-365.
17. Tremblay W. "Is the Canadian child obesity epidemic related to physical inactivity?" *International Journal of Obesity*, 2003; 27:1100-1105.
18. Brownson, RC, Haire-Joshu, Luke DA. "Shaping the Context of Health: A Review of Environmental and Policy Approaches in the Prevention of Chronic Diseases". *Annual Review Public Health*, 2006 27:341.
19. Daniels, SR. "The consequences of childhood overweight and obesity. *Childhood Obesity* Vol. 16/No.1." Spring 2006. Available online at http://www.futureofchildren.org/usr_doc/03_5562_daniels.pdf. Accessed 11/05/08.
20. Yale University, RUDD Center for Food Policy and Obesity. Menu Labeling: Opportunities for Public Policy. Available online at www.yaleruddcenter.org. Accessed 11/05/08.
21. CDC Division of Adolescent and School Health. Coordinated School Health Programs. <http://www.cdc.gov/HealthyYouth/partners/funded/cshp.htm>. [Accessed 07/17/08.
22. CDC Division of Nutrition Physical Activity and Obesity. Overweight & Obesity State-Programs. http://www.cdc.gov/nccdphp/dnpa/obesity/state_programs/index.htm. Accessed 07/17/08.