

Tipping the Scales *in favor of our children*

a study sponsored by

**GrowingUp
Healthy**

From The Harvard
Pilgrim Health
Care Foundation



One

That's the number of kids in America who are overweight or obese.

Many of these children will suffer from health problems and poor self-image throughout childhood.

As adults, many will be less successful than their healthier peers and will die younger.

The chronic conditions they develop will further strain our health care system.

The cost in financial and human terms will be huge.

Reversing this trend will require broad social change.

So let's get moving.

in

3



Introduction: Getting Our Arms Around the Problem

Experts who have followed the rising rate of childhood obesity in our nation know that it is a public health crisis. It's time for the rest of us to pay attention as well. In America, almost one in three children and adolescents is either overweight or obese.¹ In some minority groups, the proportion is nearly one in two.²

The ramifications of this crisis are significant. Aside from the emotional problems and discrimination faced by overweight and obese children, conditions rarely—if ever—before seen in children are increasing, including fatty liver, sleep apnea and even type 2 diabetes.³ Obese children are more likely to have hypertension, abnormal blood lipid profiles and digestive disorders. As adults, they are less likely to achieve socioeconomic parity and are more likely to die sooner than their thinner peers.⁴

The crisis threatens to wipe out the enormous strides that have been made in the control of many chronic diseases over the past several decades and the decrease in death and disability associated with them.

The rise in childhood obesity also poses a direct economic burden that threatens our national budget. Estimates of obesity-associated hospital costs for children ages 6 to 17 more than tripled between 1979 and 1999 from \$35 million to \$127 million.⁵ This is an early harbinger of the excessive medical costs that will be incurred later on as these children develop the chronic diseases associated with obesity in adults.⁶

The problem is nationwide—worse in some places and among some population groups than in others. The “solution(s),” however, will not be found at the national level alone. They will depend on a thorough understanding of individual, community and societal behavior at the state and local levels.

The Harvard Pilgrim Health Care Foundation, in partnership with Harvard Pilgrim Health Care, launched **Growing Up Healthy** in 2007, a five-year leadership and funding initiative to help prevent childhood obesity in Maine, Massachusetts and New Hampshire. This requires an understanding of the current strengths and challenges in each state regarding healthy nutrition and physical activity for children.

The Foundation chose the **Friedman School of Nutrition Science and Policy at Tufts University** to present this analysis. Christina D. Economos, PhD, New Balance Chair in Childhood Nutrition at the Friedman School co-authored the report with Jeanne Goldberg, PhD, RD, Professor of Nutrition and Director of the Graduate Program in Nutrition Communication, along with Jennifer Sacheck, PhD, Assistant Professor of Nutrition, and Sara Folta, PhD, Research Associate and Adjunct Assistant Professor. Kathleen Cappellano, MS, RD, and Valerie Clark, MS, RD, played a major role in data gathering and analysis for the project.

For more details and information on the childhood obesity crisis, visit www.harvardpilgrim.org/foundation.

Through its *Growing Up Healthy* initiative, the Harvard Pilgrim Health Care Foundation has committed to a leadership role in advancing that understanding and promoting the changes that will be necessary to turn the tide on childhood obesity in Harvard Pilgrim's three-state service area: Maine, Massachusetts and New Hampshire. A critical first step toward achieving that goal is understanding similarities and differences among and within the three states.

The Foundation commissioned the Friedman School of Nutrition Science and Policy at Tufts University to survey existing data on overweight and obese children, as well as programs that address weight and lifestyle; collect and evaluate school wellness policies and summaries of legislative action over the past five years; and speak with leaders from the business, government, media, advocacy and education sectors.

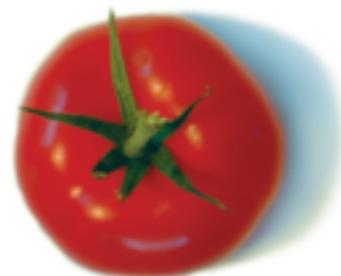
So how do these three states measure up when it comes to childhood obesity? While surveys show that New Englanders in general have slightly healthier eating and exercise habits than average Americans, the difference is not enough to have a significant impact on childhood obesity rates.⁷ In fact, experts view childhood overweight and obesity as a crisis in all three of our target states.

A steady "youth drain"—three-quarters of the hundreds of thousands of New Englanders who moved away in the 1990s were between the ages of 18 and 34—coupled with a low birth rate means that New England is the nation's oldest region.⁸ The young people who do stay are the region's future workforce, and their health should be viewed as a regional asset.

Maine, Massachusetts and New Hampshire are home to many of the nation's most renowned research and educational institutions, hospitals and health systems, resulting in an unusually large concentration of research expertise in child health and obesity. Many of these experts are actively engaged with communities on this issue, serving on steering committees, coalitions and advisory boards within and across the three states.

In addition, all three states boast many impressive, creative and promising efforts led by non-profit community organizations or coalitions working to increase physical activity opportunities for children and reinforce healthy eating habits. New England's long winters call for creativity, but fortunately the traditions of outdoor winter sports and activities are strong and many communities celebrate this heritage by making opportunities to enjoy them more available and attractive. And the spirit of Yankee ingenuity and hardiness is a regional source of pride, one that can serve as an important cultural catalyst to promote year-round outdoor activity.

But so far, the many laudable efforts are too few and too isolated. An effective response to this crisis will require a broad, integrated, coordinated approach. It will require social change that involves children and families, schools, health care practitioners, health insurers and leaders from business and media working together through collaboration, cooperation and partnerships. It will require effective legislation and innovative community and state programs to continue fostering education and change. It will require philanthropic organizations to act as integrators and catalysts to ensure a coordinated and effective effort. It will require all of us to act.



More Than Just Stocky

Who determines whether a child is just "heavysset" or overweight? The most widely used measure is the body mass index (BMI), which is the relationship between height and weight. While BMI is not a perfect measure, it is widely regarded as the most practical measurement available because it is a single number whose importance can be interpreted to a wide range of audiences. Prior to 2007, children with a BMI for age (expressed as a z-score or percentile) between the 85th and 95th percentile were considered at risk for overweight; under today's revised standards, they are considered overweight. Children with BMIs for age above the 95th percentile, once considered overweight, are now classified as obese.⁹

Who is “To Blame?”

Is it the rise of fast food? Is it that families are eating out more often and consuming bigger portions of calorie-dense foods? Is it our agricultural policies that favor production of “bad for you” foods? Is it the decreased time allotted for physical education and recess in schools? Is it consumption of more prepared foods because more mothers are working? Is it the lure of sedentary attractions like the computer, video games and television? Or is it the advertising that children watch?

In all likelihood, multiple simultaneous changes in food availability, market dynamics, community design, educational priorities and family life have contributed to the caloric imbalance that has brought us to this point.¹⁰ Individual behavior affects individual health, but the behavior of whole populations is influenced by several subsystems, including the economy, the political system, social institutions and culture.

To examine the contributing factors and possible solutions to the obesity crisis, the Partnership to Promote Healthy Eating and Active Living convened a two-day national *Summit on Healthy Eating and Active Living* in April 2000 in Washington DC.¹¹ The Summit brought together a uniquely broad range of expertise to understand the roots of the problem as a first step toward solving it. That group included experts not only in nutrition and physical activity, but also from disciplines as diverse as sociology, anthropology, architecture, community planning, economics, policy and health care. Attendees came from government, academia, the health sector, private industries, health voluntary organizations, media and consumer advocacy groups.

Taking lessons from other successful social change campaigns, such as efforts to increase breast feeding rates, seat belt use, smoking cessation and recycling, the group recognized that certain ingredients must be in place to influence the habits of populations.



fit

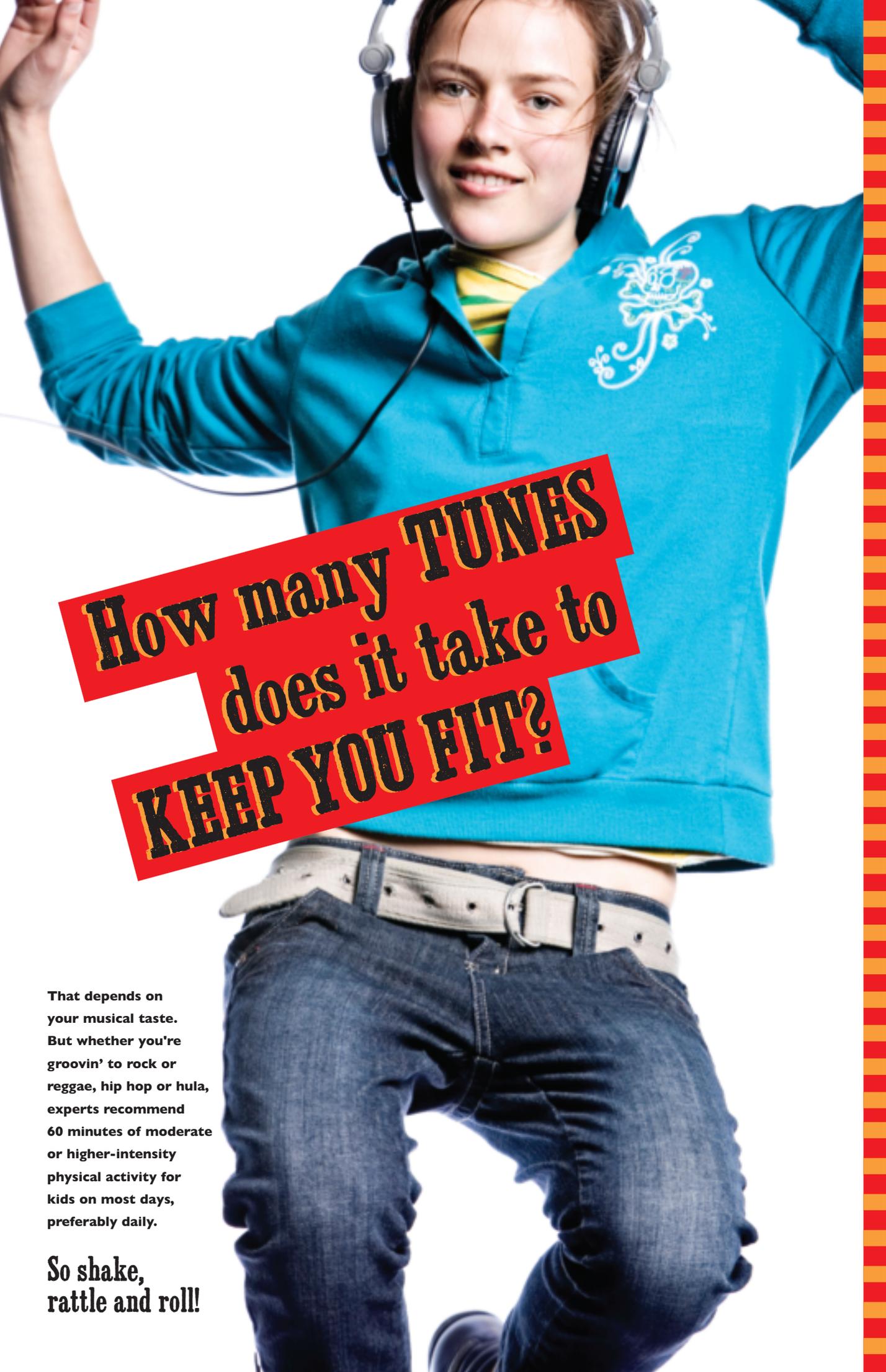
Percent of students
in grades 9 through 12
who participate in daily
school physical activity.

Source: U.S. Department of
Health and Human Services

Key ingredients for social change

- **Recognize and declare a crisis**
- **Understand the major economic implications associated with the crisis**
- **Present the science base: research, data and evidence**
- **Identify and support Sparkplugs, or leaders who can work for their cause through their knowledge, competence, talents, skills and even cunning and charisma**
- **Build coalitions to move the agenda forward with the help of a strategic, integrated media advocacy campaign**
- **Involve the government at the state level to write and implement legislation and at the local level to implement change**
- **Use mass communication that includes consistent, positive messages supported by scientific consensus and repeated in a variety of venues**
- **Change policies and environments to promote healthy lifestyle behaviors**
- **Create a plan with many components that work synergistically**

Source: Summit on Healthy Eating and Active Living



**How many TUNES
does it take to
KEEP YOU FIT?**

That depends on your musical taste. But whether you're groovin' to rock or reggae, hip hop or hula, experts recommend 60 minutes of moderate or higher-intensity physical activity for kids on most days, preferably daily.

**So shake,
rattle and roll!**

A Good Start, But Only A Start

Since the publication of the *Summit* report, the visibility of the obesity problem has increased, as have attempts to address it. The Institute of Medicine (IOM) has convened three expert committees to explore different aspects of the problem.¹² The National Institutes of Health (NIH), Centers for Disease Control and Prevention (CDC) and the United States Department of Agriculture (USDA) have funded numerous meetings and studies to explore everything from the genetics of obesity to community interventions that promote healthier lifestyles.

Philanthropic organizations have funded intervention projects and conferences at which experts and laymen share ideas about how to “solve” the problem. Some of these meetings include representatives of disciplines well beyond health—city planners, architects, economists, business leaders and journalists—who have realized their potential role in addressing the problem. To date, however, the numbers of individuals from this broader sphere of leaders are too few and their impact too small.

The food industry has begun to self-regulate its advertising and develop and promote a range of healthier products, some targeted directly toward children. Some companies have provided program support for obesity-related activities. Some health insurers have provided incentives to subscribers who participate in programs that address healthy lifestyles as well as reimbursements or discounts for fitness-related expenses. States have organized partnerships to share information, materials and expertise. Communities have worked to build healthier environments for families.

It is too early to estimate the effects of these efforts, but the most recent data suggest that the unrelenting rise in prevalence rates appears to have leveled off. That is not enough. We must reverse the slope of the curve. We must create environments that enable children and their families to lead healthy lives, and we must create in those children and families the desire to do so.

Reversing the Trends: The Necessary Ingredients

Declare A Crisis! There is not enough good and consistent data about childhood obesity in Maine, Massachusetts and New Hampshire. Data that are available suggest these states are on par with national trends showing that nearly one in three children is overweight or obese.

“The challenge is that children are healthy now, so they don’t get much attention. People know it affects their futures, but it doesn’t feel like [it is] a crisis.” **Paul Spiess, Health Policy Advisor to the Governor, NH**

Childhood obesity has some of the hallmarks of a crisis in the three states, but it has not created the sense of urgency across all facets of society that has been critical for social change on other issues. In other movements, different factors—including seminal events, key reports and economic projections¹³—helped provide this sense of urgency. In the case of childhood obesity, the latter two have the most potential to be galvanizing factors.

In other states, consistent, reliable data that illustrate the prevalence of the problem have led to key reports that in turn led to programming and policy changes. When and if there are consistent reliable data for Maine, Massachusetts and New Hampshire, those data, along with projected health problems and associated costs, will permit a detailed, convincing analysis of the future health and economic impact should society fail to act on behalf of its children.

Understand The Economic Implications In the United States, the medical costs attributed to obesity were estimated at \$75 billion in 2003 dollars, or 6% of the total adult medical costs. Half of these expenditures are financed by Medicare and Medicaid.¹⁴ The U.S. Surgeon General’s *Call To Action*¹⁵ on obesity states that the annual indirect costs of obesity total \$64 billion. This suggests that the total cost of obesity may be as high as \$139 billion per year in 2003 dollars.¹⁶

Based on existing data, a decrease of just 5% in the prevalence of overweight and obesity along with increases in physical activity would save the Commonwealth of Massachusetts \$9.6 billion over four years.¹⁷

The economic implications of allowing the trend to continue unchecked should serve as an incentive to seek effective solutions such as obesity-related legislation regarding limits on vending machines in schools and increased support for physical education. The potential for a favorable cost-benefit ratio also provides incentives for insurers or employers to offer health club memberships or health education programming to subscribers to increase their physical activity and improve their eating habits.

“The single most important way to reduce the burden of disease and reduce costs to society is to reduce obesity.” *The Economic Burden of Chronic Disease, The Milken Institute*

The cost of modifying programming in schools is cited repeatedly as a barrier to improved food service and increased physical activity opportunities in schools. School lunch programs must not lose money and often rely on their a la carte services, which have traditionally sold largely high-calorie, nutrient-poor foods and beverages, to make a profit. Some schools have succeeded in changing their environments; others have not.¹⁸

Present The Evidence Convincing the public to change unhealthy behaviors requires leadership and evidence. The evidence is useful in helping to shape a targeted response. For example, nearly 19% of U.S. children between the ages of six and eleven are obese.¹⁹ But among non-Hispanic black children, the figure rises to 22% and among Mexican Americans to 22.5%.²⁰ The cause of this disparity is unknown and remains an active area for research. Studies have found no consistent relationship between obesity and race or other variables such as socioeconomic status and maternal education. Areas being studied include the impact of genetics, the built environment, the neighborhood food environment and advertising exposure.

An inverse association between family income and obesity in children also has been documented.²¹ On the surface, these data suggest that efforts to bring the problem under control must be more concentrated in low-income communities.

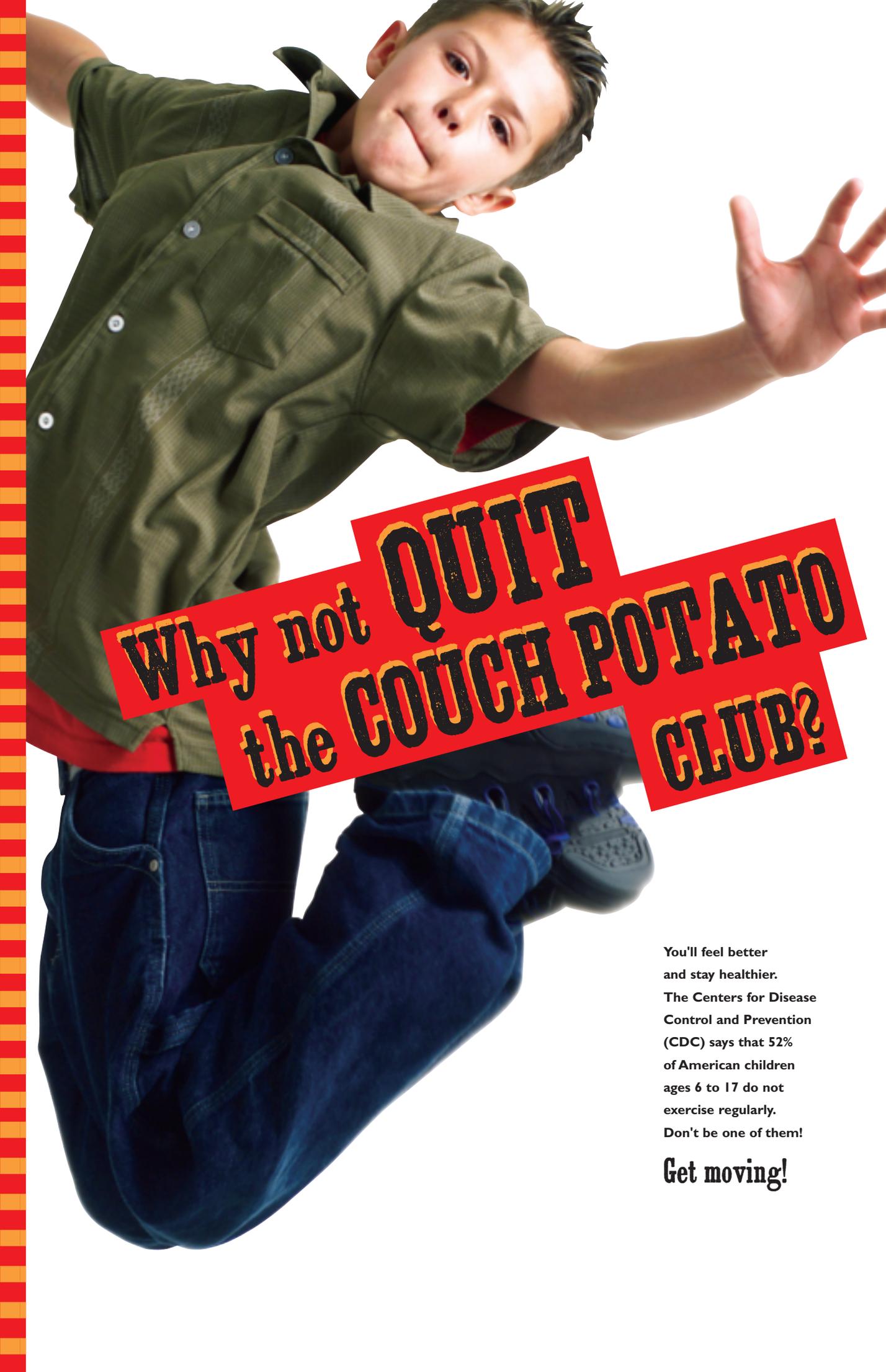


it’s bananas!

Estimated annual per capita medical cost of obesity.

Massachusetts ..	\$283
Maine	\$273
U.S.	\$258
New Hampshire ..	\$235

Source:
Trust for America’s Health



Why not **QUIT**
the **COUCH POTATO**
CLUB?

You'll feel better
and stay healthier.
The Centers for Disease
Control and Prevention
(CDC) says that 52%
of American children
ages 6 to 17 do not
exercise regularly.
Don't be one of them!

Get moving!

“We need the data if we are to deal with the problem. BMI is a rough indicator, but we need a baseline.” *John Corrigan, Safe Routes to*

School Coordinator, New Hampshire Department of Transportation

But it's not that simple. Income alone doesn't explain differences in obesity prevalence.²² For example, obesity rates rise with increasing income among blacks. In addition, the economic profiles of our three target states are not accurate predictors of obesity rates. Massachusetts and Maine have similar rates of childhood obesity, yet they rank third and 37th nationally in terms of median annual income. New Hampshire, which ranks sixth in the nation for median annual income, has a childhood obesity rate that is considerably lower than its two neighboring states.

Clearly, developing effective solutions to the obesity problem will require a more thorough understanding of what differences—economic, ethnic and social—affect it.

In our three target states, comparative data that enable a precise comparison are hard to find, if they exist at all. Because there is no mandatory measuring in these states, nor agreement on how, when and by whom measurement and monitoring should be conducted, it is difficult to find existing data that allow an apples-to-apples comparison. However, data from the National Survey of Children's Health 2003-2004, based on parental reports, found that 20.1% of 10- to 11-year-olds are overweight in Massachusetts, 18.3% in Maine and 12.8% in New Hampshire.²³

While an increasing number of states already mandate BMI measurement in schools in an effort to curb the growing obesity problem, our three target states are not among them. Opinions are divided about who should collect the data—the health care system or the schools—and how they should be disseminated. Some feel that this is the job of the medical community and that it is expensive and inefficient for schools to do it. Others argue that schools should track children's heights and weights as part of a broader health assessment “report card,” and that this information can be communicated to families confidentially. This would capture information about children who do not see a doctor for routine care.

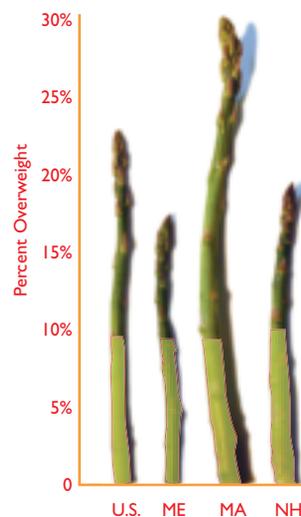
With support from researchers, legislators and school officials, 11 states have taken the initiative to conduct screening and surveillance programs. A 2006 CDC study found that these states required schools or school districts to assess students' height and weight or BMI, and eight of them require parent notification of the results.²⁴

“At the end of the day, money should go toward (health) education... train the kids and they will train future generations.” *John Richardson,*

Commissioner of Economic Development, Department of Economic and Cultural Development, State of Maine

In Maine, the Maine Youth Overweight Collaborative promotes a physician's office-based measurement strategy and provides bridges between the medical community and the schools. Yet many public health officials are in favor of school monitoring. They say that if they were provided with appropriate measurement tools, they would “start tomorrow.” School districts that do assess students' weight report that the information is well accepted by families and is driving program and policy changes. Information is usually sent as a health report card that includes BMI and physical fitness measures. Changes resulting from BMI screening on the family level include increased attention to lifestyle to promote a return to healthy weight. Schools have used the BMI data to improve the quality of their nutrition environment and increase physical activity opportunities for children and families.

In many Massachusetts communities, school nurses systematically collect height and weight data, and legislative leadership is working to mandate BMI screening in all schools.



Prevalence of overweight children ages 10 through 19 by family income as gathered in 2003.

dark green = children living at 0-99% of the Federal Poverty Level

light green = children living at 400% of the Federal Poverty Level

Child and Adolescent Health Measurement Initiative. 2003 National Survey of Children's Health, Data Resource Center for Child and Adolescent Health Web site. Retrieved 03/31/2008 from www.nschdata.org

How A Personal Loss Led To Statewide Gains

After former **Arkansas Governor Mike Huckabee** lost 100 pounds, he led the charge to promote healthier lifestyles in his state. As a result, in 2003 Arkansas became the **first state in the nation to establish an annual statewide BMI surveillance and screening program**²⁵ for all students in grades K-12 as part of a larger initiative to improve the health of all youth. Data generated from the measurements have driven interest in many of the state's obesity-related programs and policies to promote healthy lifestyles, says Arkansas Surgeon General Joe Thompson, MD. Evaluations of the surveillance program reported increased parental awareness and knowledge about their child's weight status and 91% comfort with the confidentiality of the screening process. The evaluation indicated progress in combating childhood obesity.²⁶ Fears about untoward effects of weighing and measuring children have not been confirmed and there have been very few parental complaints.

“Put together a robust, multifaceted program based upon strategies supporting children. In the overall effort, throw 20 to 25 good ideas at the problem” **Joe Thompson, MD,**
Surgeon General, State of Arkansas

A portion of school districts collect surveillance data on specific grades, but only a limited number of communities have sent this data home to parents.

In New Hampshire, the discussion has been controversial. Mandatory height and weight assessment is in conflict with the state's strong “live free” culture, and a legislative mandate is unlikely. There is strong support to train school nurses to conduct the measurement, and if conducted as part of a fitness assessment, it is more likely to be accepted. In this model, currently in place in California, fitness test results include a variety of measurements in addition to BMI, as well as specific goals that contribute to the overall health of the child. Parents and officials are more receptive to reports focused on a child's overall health than simply to BMI measurement results.²⁷

Identify And Support Sparkplugs Strong and passionate leaders are essential elements in successful social change. Through their knowledge, competence, skills, persistence and charisma, these “sparkplugs” can ignite a movement. Whether at the grass-roots level or already in traditional leadership positions, these leaders ideally should come from all stakeholder groups, including:

- **Government**
- **Academics**
- **Schools**
- **Health Care**
- **Advocacy Organizations**
- **Business Leaders**
- **Public Health and State Health Departments**
- **Community Organizations**
- **Media**

Sparkplugs are at the heart of every successful program already addressing the obesity crisis. Many of these programs are described on the Foundation Web site at www.harvardpilgrim.org/foundation. In addition, several examples of effective leaders and programs are profiled later in this report.

Build Coalitions Coalitions — individuals and groups with common objectives — are critical to the success of social transformations, according to the *Summit on Healthy Eating and Active Living* report. Specifically, the report calls for at least two types of coalitions: one at the state level to provide an integrative function, ensure that all areas are covered, minimize overlap and monitor successes and failures; and the other at the community level, where there must be local leadership to ensure that change happens.

Two coalitions are active across the three-state region: The New England Coalition for Health Promotion and Disease Prevention (NECON), and Action for Healthy Kids, a public-private partnership of more than 50 national organizations and government agencies broken down into individual state teams. Coalitions within the three states are building. In Maine, the Department of Health and Human Services, with funding from the CDC, has created 31 Healthy Maine Partnerships, whose role is to coordinate efforts to improve the health of Maine citizens through common goals outlined by the state CDC's Physical Activity and Nutrition Plan. Although the plan is statewide, each Partnership works on a local level, designing programs to achieve goals specific to the resources and characteristics of individual communities.

“This issue needs a social change movement that involves employers, insurers, parents, the school systems, the Department of Health and Human Services and health clubs. The movement should emphasize diversity.” Delia Vetter, Senior Director of Benefits, EMC Corporation

Three additional collaborations are working in Maine to address the prevalence of overweight and obese children: the Maine Nutrition Network, a university-based collaborative; Let's Go Maine, a privately funded community-based initiative; and the publicly funded Maine Governor's Council on Physical Activity.

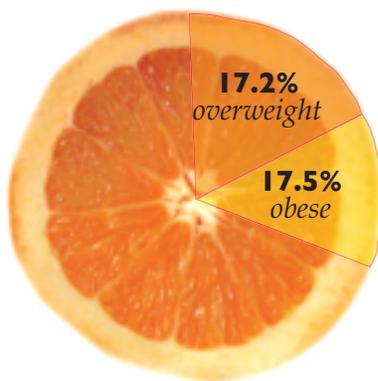
In 2000, the Massachusetts Partnership for Healthy Weight was formed with CDC funding. It includes the Department of Public Health, health care organizations, schools and universities and advocacy organizations. The Partnership has created a plan for a coordinated approach to overweight and obesity, and maintains a Web site for professionals and lay users with information about community resources and local programming to promote healthy lifestyles. West of Boston, the MetroWest Community Health Care Foundation has invested more than \$1.85 million in programs and public awareness initiatives with local YMCAs, public health associations, public school districts and local universities.²⁸

“Partnerships require a great deal of time and energy to develop and maintain. So in recruiting partners, it is not the more the merrier; rather you have to ask yourself if the partnership is strategic. For example, will it provide input from different cultures, mindsets or viewpoints necessary for systemic change? Will partners benefit so that the relationship becomes sustainable?” Jacqueline Ellis,
Maine Coordinated School Health Program

In New Hampshire, where only three cities have public health departments, nutrition and physical activity efforts are managed by the State Department of Health and Human Services. Obesity prevention activities are coordinated through Healthy Eating and Active Living (HEAL), a public-private partnership in which the state is an active participant. HEAL has produced a plan to promote healthy lifestyles that outlines a role for six sectors: the health

MASSACHUSETTS

Massachusetts School Children



Based on measurements of 94,000 children in grades 1, 4, 7 and 11 between 2006 and 2007.



care industry, schools, worksites, communities and municipalities, food and recreation industries and individuals and families.

The New Hampshire Governor's Council on Physical Activity and Health, in collaboration with New Hampshire Healthy Schools Coalition (the state's Action for Healthy Kids team), is currently collaborating to create a Healthy Products Tradeshow to publicize and showcase components of a healthy lifestyle. In addition, the HNHfoundation and The Foundation for Healthy Communities serve as common links to most communities in the state through childhood obesity initiatives and grant programs.

Involve The State Government Much of the authority for public health policy in the United States is controlled at the state level, where goals and strategies to improve the health of their populations are established. Laws about seat belt use, smoking restriction and tobacco use by minors have required legislation introduced at the state level. The development of health policy depends on the existence of a sufficient evidence base, formation of effective coalitions and a strong commitment from policy makers.²⁹

Legislation aimed at preventing obesity commonly focuses on school nutrition standards and vending machines, physical education and physical activity and the formation of councils or task forces. Laws passed most frequently relate to community enhancements, among them the establishment of walking and biking paths, farmers markets, safe walking routes to schools, statewide initiatives and model school policies.³⁰

Legislation, by its nature, takes time, and for that reason it cannot be expected to have a large impact on childhood obesity in the short term. Nevertheless, over the long term, funded legislation is critical to affecting behavioral norms.



“We need to keep reminding decision makers and policy makers about obesity; it can’t just come and go.”

Rep. Peter Koutoujian

Government Sparkplug

Representative Peter Koutoujian 10th Middlesex District, Massachusetts

Massachusetts Representative Peter Koutoujian puts the childhood obesity crisis in stark terms. “We are not talking about chubby kids,” he says. “We are talking about a generation that may be the first in the history of the world to have a shorter life expectancy than their parents.”

People often think the answer to healthier schools is “just a matter of getting junk food out of the schools,” he says. But he knows that schools can do more. This is why he has filed legislation that seeks to do more than assure that only nutritious foods and beverages are available in public schools. His bill also would enhance the training of school nurses to recognize childhood obesity and eating disorders, and authorize a statewide data collection and reporting mechanism in order to track trends.

Koutoujian says his proposed legislation also includes a “farm-to-school” program that would get local produce into schools. “Public school children are in the state’s custody for six to eight hours a day, and eat two to three meals a day in our care. We should be giving them healthy choices.” As a public servant, Koutoujian feels this is an appropriate role for government.

He believes that exposing children to healthy choices will help create life-long healthy habits. “Children are smarter than we give them credit for,” says this father of two. “When presented with good information they usually make good choices. People think all they want is junk food, but the rate of purchase of water and healthy juices in schools has skyrocketed, and the consumption of heavily caffeinated beverages has plummeted, and we should encourage and enable good choices like these.”

Better school nutrition should also have a positive impact on children’s oral health, says Koutoujian. “Sodas and sports drinks are destroying our children’s teeth,” he says. “This is affecting the affluent as well as kids of lesser means. It is a universal problem.”

The cost of obesity in financial terms is not lost on Koutoujian. “In 1987 it cost an estimated \$272 a year to treat an obese person. Today it’s almost \$1,300.” But equally important to Koutoujian—if not more—is the human cost. “People suffer because of obesity. This is about preventing life-threatening chronic illnesses that affect people for their entire lives.”

A number of factors slow the process of passing legislation:

- **The issue of child obesity does not yet have a broad base of advocacy support**
- **It is difficult to find champions of the obesity prevention efforts**
- **In challenging economic times, funding for obesity-related programs may not be viewed as a priority**

Legislators in the three target states have proposed many fitness- and nutrition-related bills. In 2005, New Hampshire passed a bill that requires the state to reimburse schools that have wellness policies with three cents per meal for each child for school breakfast.

A complete summary of current key legislative action in each state, a list of successful legislative activities over the past seven years and a glossary of common legislative terms is provided at www.harvardpilgrim.org/foundation.

Use Mass Communication Mass media exert a powerful influence on society's attitudes, beliefs and values, reflecting, reinforcing and even shaping cultural norms. Media play a role in advocacy for policy change, influence community norms and physical environments, and reach disadvantaged and underserved populations who may not use a wide range of information sources. Media initiatives can also counteract messages from other media outlets that encourage fast foods and unhealthy snack foods.

Unlike smoking or seatbelt use, however, eating and physical activity are the product of multiple complex behaviors rather than a single act. Therefore, the task of providing simple, positive, evidence-based messages is extremely difficult. But it can be done. For example, the 5-2-1-0 theme (five fruits or vegetables each day, two hours or less of screen time, one hour of physical activity and zero sodas or sugar-laced sports drinks) has had enthusiastic support in all three states. Consistent use of this message in schools, doctors' offices, grocery stores and other venues throughout the community increases its impact. A campaign of this nature must be accompanied by a rigorous evaluation of the effectiveness of the message in changing behavior.

"{Mass communications} must target multiple sectors and touch everyone." Victoria Kuhn, Anthem Blue Cross and Blue Shield, Maine

In Massachusetts, a television campaign supported *Jump Up and Go*, a multi-year school-based fitness and lifestyle program targeted to middle-schoolers, was created by Blue Cross Blue Shield. Early in 2008, Time Warner broadcast messages from Maine Coordinated School Health Program's *Healthy Kids, Healthy Schools*. New Hampshire Public Broadcasting has launched a *Live Fit NH* campaign, and the Foundation for Healthy Communities plans to produce radio and billboard advertisements as part of its Community Health and Treatment Initiative.

While obesity-related messages are relatively scarce on public television, they are even harder to find in traditional print and mainstream electronic media. There appears to be little interest in media campaigns or special programs that focus on obesity in general, or childhood obesity in particular. Because communication activities are so important in keeping an issue alive, it is essential that local media be persuaded to play an active role in their community's efforts at change. The impact of a media effort coordinated with an existing program can be considerable.

A Community Success Story

Shape Up Somerville, which began as a research study conducted by Tufts University in Somerville, Massachusetts, provides a useful model for integrating media efforts within a broader program at minimal cost. The project is a comprehensive community-based approach to obesity prevention. In addition to providing in-school and physical activity interventions, Shape Up Somerville (SUS) is designed to foster the development of community partnerships that create healthy eating habits for children and their families. Built into the research was an evaluation component that allowed researchers to report changes in weight gain among children who participated in the intervention, compared to children in two socio-demographically similar communities in Massachusetts who did not.

In the project, Somerville Mayor Joseph Curtatone, who was the local “champion,” appeared at numerous community events that were covered by the local newspaper. In particular, he was featured in a monthly column entitled “Where’s Mayor Joe?” He was photographed at restaurants that had agreed to become “Shape Up Approved” and displayed the “Shape Up Approved” logo in their window. The newspaper stories kept the issue and the mayor’s support for it in the public eye. In addition, members of the SUS team appeared regularly on the local cable TV station and a community newsletter promoted specific SUS programs and activities. All of these activities contributed to branding the Shape Up Somerville logo as a lasting symbol of healthy eating and active living in that community. There was even collaboration with the local public TV station, WGBH.

“Shape Up Somerville, using the Arthur character, is an example of how media can be involved. It helped raise awareness and attract attention. The character is recognized and trusted.” **Julie Benyo,**

WGBH, Boston

Lessons from other social change movements indicate that messages should be evidence-based, framed in a positive way and repeated in a variety of venues. Additionally, if a healthy lifestyles campaign is to capture the interest of children, it is important to explore whether and how to use the media they rely on, including MP3 players, cell phones and age-specific Internet communications technology.

Change Policies And Environments Schools that participate in the National School Lunch and/or Breakfast Program are required by law to establish a local wellness policy that addresses the needs of that particular district or school.³¹ School districts are also required to involve a broad group of stakeholders in the development of those policies and in setting goals for nutrition education, physical activity, food provision and other school-based activities designed to promote student wellness.

“There are competing issues, even within health, that make it hard for obesity to stick out as a main issue.” **George Bald, Commissioner**

of Resources and Economic Development, New Hampshire

“Community gardens are a powerful starting place for bigger goals,” says Daniel Ross, Executive Director of Nuestras Raices, a Holyoke, Massachusetts-based grassroots organization that promotes economic, human and community development through projects relating to food and agriculture. Serving a predominately Puerto Rican community, Nuestras Raices uses cultural touchstones to promote health and wellbeing. “Many of our older members first came here as migrant farmers working in the tobacco farms of western Massachusetts, or on truck farms. They have lifetimes of experience in agriculture,” says Ross. “Most of today’s generation, growing up in cities, has little connection with agriculture.” Working in the community gardens and other agricultural endeavors provides that connection, and preserves and celebrates the agricultural heritage of their culture.

In the gardens, vegetables aren’t the only things that grow. “Here in the inner city there are breakdowns between generations,” explains Ross. “Kids don’t respect their elders because they think they have no relevant knowledge. Adults think kids are lazy. Working together in the gardens changes their relationships.”

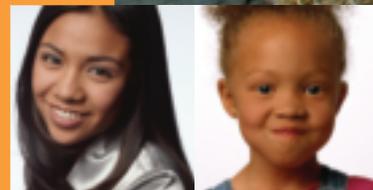
It also changes the relationship that kids have with the food they eat. “It is very well documented that kids are more likely to eat food they grow,” says Ross. “They bring home some of the crops they grow to their families. We work with more than 100 kids during the spring and summer, and that has an impact on nutrition levels of kids and families throughout the city.”

As a parent of eight children, and as Chair of Community Leadership for Nuestras Raices, Hazel Rosario, says she has seen many kids’ appreciation for good foods grow as fast as their gardens. “They never would eat a tomato until they grew one,” she says. “It’s wonderful to see them discover new foods.”

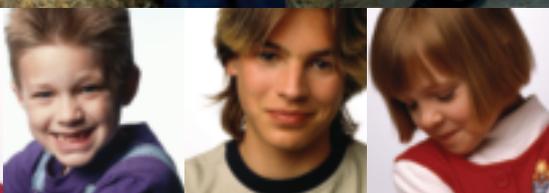
Daniel Ross says the economics of gardening also promotes healthier diets. “Community gardens have been proven to raise nutrition levels not just in families that participate, but also in the community, as neighbors share and sell produce at farmers’ markets. According to a study done at Mt. Holyoke College, on average each family of community gardeners raises more than \$1,000 worth of produce. In a neighborhood where the per capita income is less than \$10,000 a year, families are saving 10% of their yearly income.”

Ross says the program also offers youth leadership opportunities and jobs. Youth leaders have their own farm, where they raise crops and livestock, manage a petting zoo, do environmental restoration projects, work at farmers’ market stands, all while teaching and mentoring the younger children. “Watching kids harvest their crops is the most fun,” he says. “They usually can’t believe what they have grown. There is a great sense of pride, and they make connections. You know those vegetables will get eaten.”

Community gardens are only one aspect of Nuestras Raices’ work. Recognized as one of the most innovative organizations of its kind in the nation, Nuestras Raices has also helped community members start more than 25 food and agriculture-related businesses, including restaurants, greenhouse operations, catering, commercial sustainable farms, farm stands, aquaculture and horse stables. The organization is also actively involved with the Holyoke Food and Fitness Policy Council, a coalition of more than 70 agencies and community members working together to improve residents’ access to healthy foods and fitness opportunities.



“Community gardens have been proven to raise nutrition levels not just in families that participate, but also in the community, as neighbors share and sell produce at farmers’ markets.” **Daniel Ross**, pictured second from the right



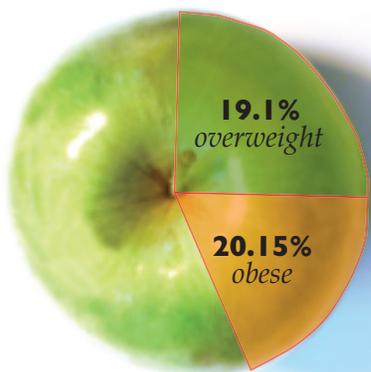
“The cafeteria should be a classroom.” **Pat Laska**, Nutrition Director,
Portsmouth, New Hampshire, School Department

At the minimum, wellness policies must include five components:

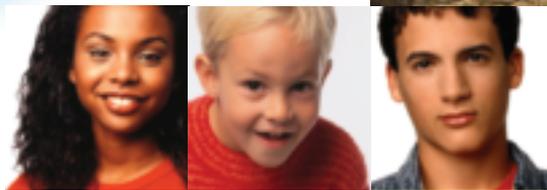
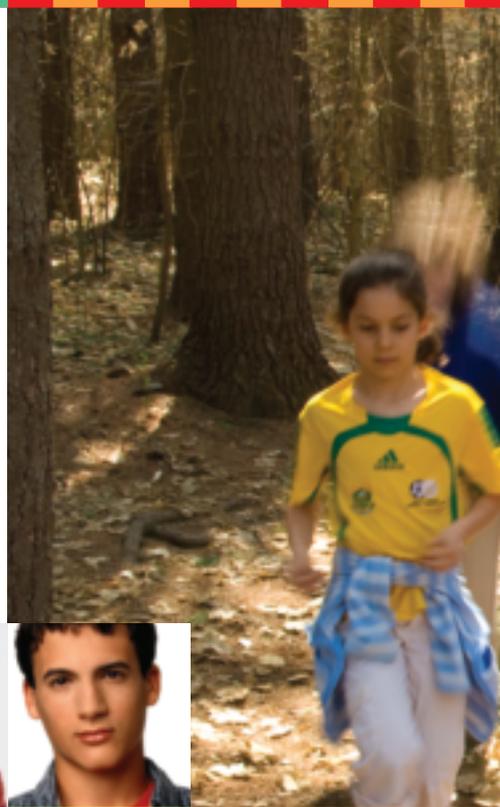
- **Goals for nutrition education, physical activity and other school-based health education efforts**
- **Nutrition guidelines for all foods available on each school campus**
- **Guidelines ensuring that reimbursable school meals meet program requirements and nutrition standards**
- **Plan for measuring policy implementation**
- **Community involvement in policy development with representation of parents, students, the school food authority, the school board, school administrators and the public to ensure that the diverse needs of the community are met**

NEW HAMPSHIRE

New Hampshire School Children



Based on measurements of children ages 6 through 13 in five representative schools, from 2004 through 2007.



Organization **Sparkplug** John Taylor and Caroline Cannon

Caroline Cannon feels lucky to live in Northern New England with its natural beauty and plentiful opportunities for outdoor activity. She wants others to share her enthusiasm for an active lifestyle. “Starbucks is popular because everyone wants a little treat now and then. Hiking to a beautiful spot, seeing a pristine lake, that’s a treat. Why would you not go for a hike if you could?”

Cannon serves on the Board of Upper Valley Trails Alliance (UVTA), a consortium of about 200 organizations dedicated to the creation, preservation and use of trails in the Upper Valley of Vermont and New Hampshire. Funded primarily by the Robert Wood Johnson Foundation, with help from other charitable organizations such as the Harvard Pilgrim Health Care Foundation, and local businesses such as L.L. Bean, UVTA actively promotes year-round use of a broad network of walking trails.

“We have done lots of fun events to get people outdoors and away from their TVs and shopping malls and out on the trails,” says John Taylor, UVTA’s Acting Executive Director.

Though New Englanders are hardy when it comes to winter weather, not everyone embraces the wintertime as a season for outdoor activity. The UVTA is working to help kids and their families develop a love of winter activity through its “Passport To Winter Fun” program.

Targeted at third- to fifth-graders, the program includes a list of activities for kids to try, and a “passport” for tracking their activities, with incentives at various milestones. “The goal is to get kids outdoors and on the trails,” says Taylor. “The activities range from snowshoeing, to walking to school, cross-country skiing, building snow forts, overnight camping, skating, dog-walking, sledding, orienteering or following animal tracks. When they are active one hour a day, they can fill in a spot in their passport. The goal is to complete 30 activities, over a period of six to eight weeks.”

Prizes for kids at the 10-, 20- and 30-step marks include free passes from local businesses for activities such as skating, swimming, skiing or rockwall climbing. At 20 steps kids also are eligible to win larger prizes such as a season’s pass to the Dartmouth Cross-Country Ski Center. Those who fill in all 30 spaces receive a t-shirt and a raffle ticket to win one of 350 Vermont Teddy Bears. But Taylor has observed something interesting about the incentive prizes. “As kids get further into the program, fewer of them actually collect the prizes. They find that they just like the activities.”

Written comments from kids about the passport program bear this out. When asked, “What did you like best about your passport?” children responded, “having fun with my mom,” and “that I get in lots of exercise,” and “playing outside more.” The UVTA is working on developing a similar program for middle schoolers.



“Why would you not go for a hike
if you could?” **Caroline Cannon,**

Upper Valley Trails Alliance

For this project, school wellness policies from 90 randomly chosen elementary or middle schools—30 from each state—were evaluated to determine whether they were consistently following the minimum requirements of the law and the USDA recommendations and to identify innovative components and strategies beyond the basic requirements.³² Review of the school wellness policies for the 90 schools revealed opportunities for improvement. For example, on average fewer than 40% of schools had policies meeting the minimum federal requirements. Only 40% specified that nutrition education and related activities be offered in both the classroom and the cafeteria with coordination between teachers and food service personnel. Fewer than half required staff training in nutrition education and only about 29% specified professional training and development for physical education teachers.

Among schools that were doing the most about childhood obesity, there was a common denominator: A champion, a sparkplug, someone who makes things happen. Typically this is the school principal, the food service director, the superintendent of schools and/or the school nurse or physician.



Hey...

TAKE A HIKE!

Or ride a bike.

Shoot some hoops,
hit the slopes, climb the
wall, nail an ollie, stick
the landing, hit the surf. . .

well, you get the idea.

Exercise doesn't have to
be boring.

**Just get moving,
and have fun!**

Build Synergy Effective social change programs have many components that are integrated and build on each other. The success of programs can be defined by several measures, but perhaps the most important are numbers of children and families served and changes in relevant behaviors.

By these two measures, programs conducted in collaboration with academic institutions or government agencies appear most successful. *Shape Up Somerville*, the collaboration between Tufts University and Somerville, MA, described earlier, is an example.

In the three target states, more than 230 programs were identified that promote physical activity, sound nutrition and healthy lifestyles to 6- to 12-year-old children. Approximately half of the programs identified are less than five years old. Program evaluation is essential to measure progress.

Components of an integrated nutrition and fitness program might include these elements:

School Nutrition Creative approaches to improving school meals and the wellness environment include farm-to-school programs that encourage partnerships between schools and local farmers and school gardening programs. Access to school gardens increases children's exposure to produce and provides an opportunity for active classroom experiences with integration of nutrition into other content areas.

Physical Activity In School In addition to legislative and policy efforts to mandate or increase children's access to physical activity during the school day, one program that is well-represented in Maine, Massachusetts and New Hampshire encourages physical activity on the way to and from school. *Safe Routes to School* (SRTS), a US Department of Transportation program, evaluates programs based on a student survey, a parent survey and walkability and bikeability checklists. Grants are awarded for infrastructure changes to promote active transport to schools.

Physical Activity Outside of School Training of after-school and daycare providers and implementation of programs is a challenge. In New Hampshire, Plus Time NH, HNH*foundation*, Foundation for Healthy Communities and Advocates for Healthy Youth provide funding and or training to after-school programs. In Massachusetts, the MetroWest Community Health Care Foundation has provided funding for programs to target childhood obesity, including several after-school programs.

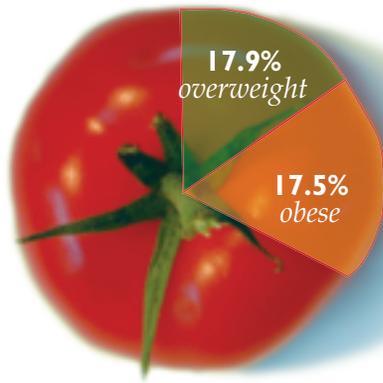
Additionally, Boys and Girls Clubs and YMCAs are found in all three states. The level of focus and programming on physical activity and nutrition varies. *KidPower* at the Alford Youth Center in Waterville, Maine, a partnership between Boys and Girls Club and the YMCA, is part of the Healthy Weight Initiative. The Center received funding from the New Balance Foundation to purchase youth-sized exercise equipment. Springfield 21st Century Community Center has integrated physical activity into programming to keep children engaged in learning.

Trail Use, Outdoor Activity and Active Transport Encouraging families to pursue outdoor activity is an important goal of many park programs. Parks, an important physical activity resource, appear to have been underutilized. Government support depends on attendance, so park programs that attract visitors and offer educational programs provide an attractive synergism.



MAINE

Some School Children in Maine



Based on a small sample of kindergarteners and third graders in 2005.

“Leadership stood up and said, ‘This is an important issue for When that happens, people pay attention.’”

Bill Caron, CEO of MaineHealth



Corporate Sparkplug

Bill Caron and Meg Baxter

Meg Baxter, President of United Way of Greater Portland in Maine, says that along with many other United Way leaders across the country, she was pondering how her organization could do more than provide essential services for individuals and families. She was thinking about ways to have a broader impact at the community level.

At about the same time, Bill Caron, CEO of MaineHealth, an integrated health care delivery system serving Southern, Central and Western Maine, was thinking about how his organization could address rising rates of obesity in the community-at-large.

“Timing is everything,” says Baxter, looking back at how Let’s Go! — a comprehensive approach to promoting healthy kids and healthy communities through physical activity and nutrition — got started. Not only were she and Caron, a United Way board member, on the same wavelength about addressing community health issues, but so were five other corporate citizens they approached. “The seven founding organizations pledged a significant amount of money over a long-term period to drive this community-wide initiative,” says Caron.

Let’s Go! is a comprehensive program to promote healthy choices for children, youth and families in 12 Greater Portland communities, with an emphasis on increased physical activity and healthy eating habits. Education and activities are targeted to schools, workplaces and health care organizations.

In April 2007, for example, a workplace initiative called StairWELL was launched among the seven founding businesses. “We knew that if we are going to impact young people, we need to impact the adults in their lives, too,” says Caron. StairWELL promotes the use of stairs instead of elevators. “I’m on the 6th floor, so it was a good challenge,” says Caron, and it raised awareness among all workers about building exercise into daily activities.

In schools Let’s Go! is promoting 5-2-1-0, a program to help children make good choices by eating at least five servings of fruits and vegetables each day; limiting screen time to two hours or less; participating in at least one hour of physical activity; and avoiding soda and sugar-sweetened drinks. Schools receive a comprehensive toolkit containing lesson plans, handouts, strategies and resources to incorporate these lessons into the school day.

Meg Baxter says schools can apply for mini-grants for related activities, ranging from workshops on healthy eating to walking programs with pedometers for every student. “Maine has already banned junk food in schools, so we are looking at ways to extend kids’ healthy eating habits outside of school, and to increase their levels of physical activity.”

Bill Caron says the program’s success so far is due in part to the support of the founding group of stakeholders. “Leadership stood up and said, ‘This is an important issue for our community.’ When that happens, people pay attention.” In addition to United Way of Greater Portland and MaineHealth, Let’s Go!’s other founding partners include Anthem Blue Cross and Blue Shield of Maine, Hannaford Bros. Co., Maine Medical Center, TD Banknorth and Unum.

our community.
attention.”



A number of park programs seek to instill in children and youth a commitment to stewardship of the land and a lifelong habit of physical activity. For the most part they do not have evaluations. Programs like *Take It Outside* (Maine Department of Conservation), *No Child Left Inside / Great Park Pursuit* (Massachusetts Department of Conservation and Recreation) and *Children in Nature Initiative / Great Park Pursuit* (New Hampshire Division of Parks and Recreation) encourage park use by families.

Special programs designed to encourage use of parks include the New Hampshire Division of Parks and Recreation Bus Pass Program that provides discounted passes for youth groups who visit the park. An evaluation of the Upper Valley Trails Association's (UVTA) *Passport to Winter Fun*, an incentive program for 8- to 10-year-olds in New Hampshire, found that children were more engaged with nature and less interested in incentives as they progressed through the program. *Teens to Trails* (Maine) provides resources and mentorship for high school outing clubs, many of which struggle with liability insurance, programming ideas and recruitment. Through its annual conference, *Teens to Trails* has brought together students, park service and trail managers for workshops and networking.

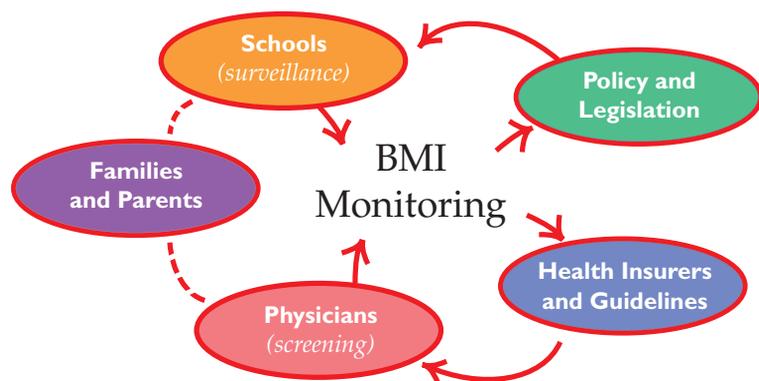
Conclusion: **Tipping The Scales Toward Social Change**

The public health crisis of childhood obesity must be addressed through broad social change. The proposed Tipping the Scales model for social change includes a role for all stakeholders: children and their families; the schools they attend; the health care practitioners or providers who care for their physical and emotional well-being; health insurers, who must find cost-effective solutions to support both preventive care and treatment; legislators and policy experts who can create legislative action and clear guidelines that shape behavior; and community leaders able to create community and state programs that foster education and promote health.

Perhaps the most important finding of this report is that while there are many efforts targeted toward solving the problem, these efforts too often lack synergy and coordination. Creating an effective social movement will require coordination and collaboration among all stakeholders, as well as prominent and committed leaders who will continue to bring people back to the public policy agenda.

The framework depicted below was derived from the social-ecological model and the Shape Up Somerville project. It reflects the interactive relationship among the players and the resources needed to reverse the problem of overweight and obesity in children.

BMI data are at the core of this model, providing evidence that the problem is real. This is the catalyst for passing legislation and getting the necessary resources to promote and support healthier lifestyles for children and families. Health insurers can use the data to understand the extent of the problem and the economics of developing programs that will serve their subscribers. Schools and physicians, using evidence-based interventions, must work together to provide parents and children with consistent messages about healthy lifestyle behaviors.



If BMI monitoring is done by both schools and physicians, the data will drive policies that affect schools, as well as better reimbursement for physicians. Families and parents should receive regular feedback from both schools and physicians.

Taking the Next Steps: A Call To Action

To say that there is much work to be done to address the obesity crisis in our nation and our region does not diminish the fine work already being done in this area by so many, both locally and on a national level. But a multifaceted problem such as this one requires many and varied solutions, at all levels, working in synergy. We are not yet at that point. The recommendations of this report are broad, and the most effective solutions will be specific and local. The following recommendations are steps toward those solutions.

1. Generate consistent state-level data. Monitoring BMI in children and adults is the only way to know whether we are making progress in reversing the obesity trend. Differences in opinion about where that measurement should be taken, how it should be monitored and how the information should be transmitted must be resolved. The authors of this report believe that ideally BMI screenings should take place in the medical setting, with schools responsible for ongoing surveillance monitoring. However, many children lack access to regular health care. For them, school-based screening would fill an important void. Each state must decide how it will collect, analyze, disseminate and use BMI data. The medical community and other health care professionals must ally with the educational system to promote funded legislation to ensure that it will be done.

2. Focus on schools and on how to use available resources more effectively. Financially challenged states are already spending millions of dollars on feeding programs for children. We should focus on how to maximize the value of these dollars. School wellness policies, required by law, should include basic guidelines to promote healthy school environments. At present, monitoring and evaluation of the implementation of these policies are generally not required and are rarely done. Coalitions in each state formed to combat the childhood obesity epidemic can take the lead in promoting the implementation of these policies at the community level and increasing awareness of their value to children and their families. Improvement in school environment depends on this.

3. Create a broad alliance of advocates to bring about legislation and policy changes that offer creative, cost-effective solutions. Progress at the legislative and policy level is slow. Passing legislation often requires the persistent support of a broad coalition. Appropriate legislative agendas must be developed, coalitions must help get legislation passed, and leaders must work together to create strategies and/or operational plans to use current resources in new, more effective ways.

4. Engage the business community. The economic argument for reducing obesity has been made, but the business case has not. Business leaders must be convinced that providing employees with resources for obesity prevention is cost effective because it can reduce health insurance claims and employee sick days, increase productivity and catalyze family change. They must also recognize that the region's young people are the future workforce. The business sector must find ways to promote fitness and health in children and reach out to communities. These efforts can have long-term benefits for them. Employers who have taken a leadership role in health promotion and disease prevention for their employees as well as for the children in their region need to be engaged in making the case for the value of this work to their peers, both in terms of cost-effectiveness and quality of life.

5. Create consistent, coordinated, engaging, accessible and effective messages about the value of healthy eating and exercise. A successful social change movement requires a strong media presence.

To achieve this support, programs must engage local media channels and use experts in marketing and public relations to work with existing partnerships and coalitions in each state, or even in all three states, to develop such a campaign with a consistent message. Key leaders in each state who can become the sparkplugs of the movement must “sell” the idea to the media and marketing communities. As a first step, leadership at the highest levels of public office in each state must convene a small group of key influencers to pool their collective resources to engage the critical partners.

6. Health insurers must support the delivery of obesity prevention and treatment services. Health insurers must recognize the health and financial value of supporting obesity prevention and treatment, and make it feasible for practitioners to offer this care. This will require creative approaches to counteract the argument that “it is not affordable.”

7. Engage philanthropy to serve as a key integrator and coordinator of multifaceted efforts. Many charitable foundations have dedicated time and resources to programs and planning efforts that address obesity, and specifically childhood obesity. Now the challenge is 1) to facilitate a coordinated and integrated attack on the problem; 2) to bring those who are not already there to the table; and 3) to create an environment in which individual interests and agendas are second to achieving the goal of raising children of normal weight, with sound eating habits and healthy active lifestyles.



It is our hope that the *Tipping the Scales* report on childhood obesity in Maine, Massachusetts and New Hampshire will help take this effort to the next level, where fiscal analyses identify sources of revenue and policy-making leads to operational workplans. On the strategic level there is a need to build coalitions, create and pass legislation, and implement new policies and processes. On the practical level, these initiatives must lead to more consistent nutrition education for children, healthier food in schools and communities, better and more accessible exercise options for children and families, and other supports that enable children to develop lifelong healthy habits.

It is time for individuals, educators, activists, health care professionals, community and business leaders, health insurers and legislators to step up and play their part in ensuring the health of our children, giving them and our nation the promise of healthier and more productive futures.

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We are grateful to those interviewed for this report. They are listed at www.harvardpilgrim.org/foundation.

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