



A Coalition to Make Massachusetts the National Leader in Health and Wellness

# FIRST ANNUAL REPORT CARD

### **ABOUT THE BOSTON FOUNDATION**

The Boston Foundation, Greater Boston's community foundation, is one of the oldest and largest community foundations in the nation, with assets of \$796 million. In Fiscal Year 2010, the Foundation and its donors made more than \$82 million in grants to nonprofit organizations and received gifts of close to \$83 million. The Foundation is made up of some 900 separate charitable funds established by donors either for the general benefit of the community or for special purposes. The Boston Foundation also serves as a major civic leader, provider of information, convener, and sponsor of special initiatives designed to address the community's and region's most pressing challenges. For more information about the Boston Foundation, visit www.tbf.org or call 617-338-1700.

#### **ABOUT NEHI**

NEHI is a national health policy institute focused on enabling innovation to improve health care quality and lower health care costs. In partnership with members from all across the health care system, NEHI conducts evidence-based research and stimulates policy change to improve the quality and the value of health care. Together with this unparalleled network of committed health care leaders, NEHI brings an objective, collaborative and fresh voice to health policy. For more information, visit www.nehi.net.

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# Introduction

#### FROM THE CO-CHAIRS OF THE HEALTHY PEOPLE/HEALTHY ECONOMY COALITION

In 2007, the Boston Foundation partnered with NEHI to publish the first comprehensive report on the health of Boston's residents. Called *The Boston Paradox: Lots of Health Care, Not Enough Health,* its findings alerted our community to the fact that although Boston is world-renowned as a center for excellence in health care, its own residents are victim to a growing crisis of preventable chronic disease which threatens both the physical and fiscal health of Greater Boston.

Two years later, a second report, *Healthy People in a Healthy Economy*, found that while Massachusetts is home to many innovative programs and practices in a number of areas, the crisis in preventable chronic disease calls for strong and coordinated action across many sectors.

In response, the Boston Foundation and NEHI assembled a powerful group of business leaders, health care providers, public health advocates, and political and civic leaders from across the state to launch the Healthy People/Healthy Economy Coalition. The Coalition's goal is to shift the focus from 'health care' to 'health' and to work closely with state policymakers to make Massachusetts the pre-eminent state in the country for health and wellness.

The challenges to achieving the Coalition's goals are enormous. Public and private spending on health care exceeds \$63 billion in Massachusetts, while spending on public health, which focuses on prevention, is less than \$600 million. Rising health care costs continue to crowd out other public spending, and are creating an unsustainable burden for individuals, families and businesses throughout our state and nation.

This spending mismatch between delivering health care and promoting healthy behaviors must be reversed—and quickly. Recouping even a fraction of the resources spent on avoidable hospitalization and other avoidable medical spending would free up crucial resources not only for direct health promotion, but for other determinants of health, such as education, housing and recreation, that have a profound impact on the quality of our lives.

To meet our goals—to reverse these alarming trends—Healthy People/Healthy Economy is tapping into the collective strength of our region's world-class institutions, pioneering community health professionals and proud heritage of activism, innovation and achievement in public health.

We are dedicated to tracking and reporting on our progress through a series of annual Report Cards. This first Report Card presents the indicators we will be monitoring and contains benchmarks that will help us to measure our success going forward.

We hope that future Report Cards will show marked improvements across all of the indicators we are tracking and reflect a dramatic paradigm shift—making Massachusetts a national leader not only in health care, but in all determinants of health.

#### PAUL S. GROGAN VALERIE FLEISHMAN RANCH KIMBALL

#### HEALTHY PEOPLE/HEALTHY ECONOMY LEADERSHIP GROUP

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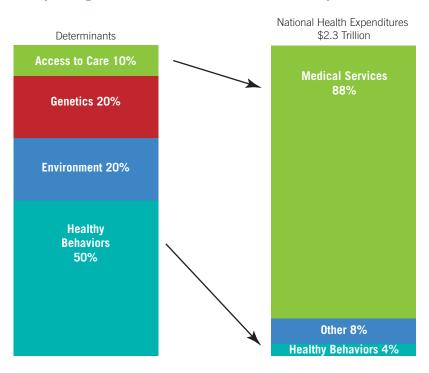
# The Crisis

Good health depends on access to fresh nutritious food, regular exercise and recreation, supportive relationships, and personal and community safety. It is also influenced by our environment, including toxins in the air, water, soil and food. Together, lifestyle and environmental factors account for almost 70 percent of an average person's health, with another 20 percent or so determined by genetic predisposition.

Access to health care is critical to screen for and respond to illness or injury, but no amount of care can substitute for the well-being derived from a healthy lifestyle and a clean, safe and supportive environment.

A case in point: Of the 30 years of increased life expectancy achieved by Americans during the 20th century, 25 of those years were due to public health initiatives—improved literacy, tougher housing standards, sanitation, increased safety for workplaces, products and food, immunizations and smoking cessation—while just five of those years reflect advances in medical care. That fact notwithstanding, Americans spend 88 cents of every health dollar on medical services, or "illness care," leaving little to support healthy behaviors and communities.

From 1980 to 2010, the rising cost of medical services has consumed a rapidly increasing percentage of household, business, municipal and state budgets. Spending on health care as a percentage of the nation's gross domestic product (GDP) almost doubled

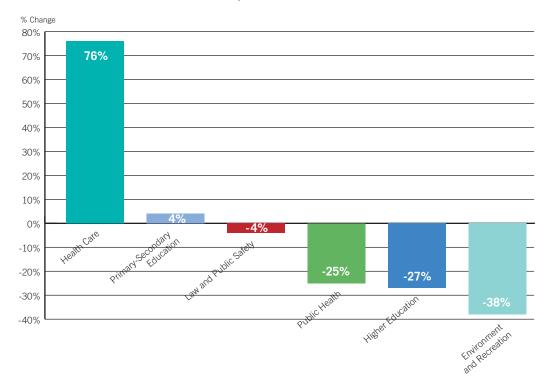


#### **Spending for Health Determinants and Health Expenditures**

Source: NEHI

#### Massachusetts State Spending Imbalance, Net Change, Fiscal Years 2001-2011

Adjusted for Inflation



Source: NEHI analysis from the Massachusetts Budget and Policy Center's Budget Browser, April 2011

from 9.2 percent in 1980 to 18 percent in 2010. Today, on a per capita basis, Americans spend more than twice the average of other wealthy developed nations on health care, and yet our health outcomes rank near the bottom among our peers.

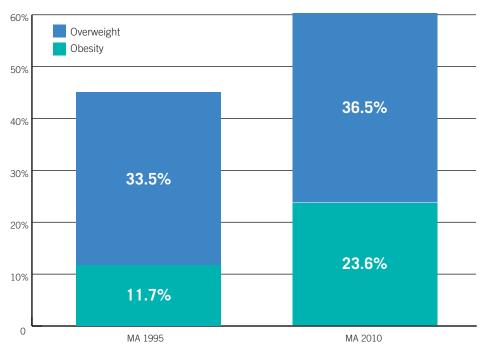
With its academic teaching hospitals, concentration of sub-specialties and clusters of science and innovation, Massachusetts is a world class center of medical services and also one of the most expensive. Despite recent efforts to contain costs, Massachusetts residents spend more than \$10,000 per capita and more than \$65 billion annually in public and private health care combined. The RAND Corporation and the Massachusetts Department of Public Health project that—without significant change—those figures will nearly

# double by 2020 to a budget-busting \$17,000 per capita and \$123 billion annually.

Historically, Massachusetts has been a model for excellent public health programs and strategies—from its network of community health centers to its exemplary smoking cessation campaign and targeted efforts to increase community health such as Mass in Motion and Shape Up Somerville. However, in recent years, as the scale has tipped toward health care spending, resources for public health programs as well as other key determinants of health, such as public education, public safety and parks and recreation have been crowded out.

# As the spending mismatch has widened in Massachusetts and other states over the last 15 years, obesity rates have doubled. Today,

#### Percentage Overweight & Obese Residents, Massachusetts, 1995 and 2010



Source: CDC Behavior Risk Factor Surveillance System (BRFSS)

# one in three children and three in five adults in the Commonwealth are overweight or obese, greatly increasing the risk and prevalence of almost completely preventable chronic diseases, such as Type 2 diabetes.

Type 2 diabetes was once unheard of in children. Now it represents a significant portion of all diabetes reported in the Commonwealth. Overall, diabetes has jumped nearly 40 percent in just a decade. Three out of every five people with Type 2 diabetes will develop complications, such as heart disease, stroke or eyesight problems. And the rate of avoidable hospitalization for hypertension, or high blood pressure, another major risk factor for heart disease, has risen by more than 90 percent over the last decade.

Massachusetts' trends are mirrored by those of the nation. As first lady Michelle Obama has said: "It wasn't that long ago that here in America, our children led reasonably healthy lives. They walked to school, had recess every day and gym class several times a week, and spent afternoons playing for hours outside. Home-cooked meals were the norm, fast food was a special treat, and snacking between meals was against the rules. But today, for many children, all that has changed."

Things have changed for adults and entire families as well. Due to automation and outsourcing, physically-active jobs in factories have dwindled. Most parents are working, so there is less time to provide nutritious meals, necessitating a greater reliance on fast food. Many people are working two or three jobs, making it difficult to exercise or eat well.

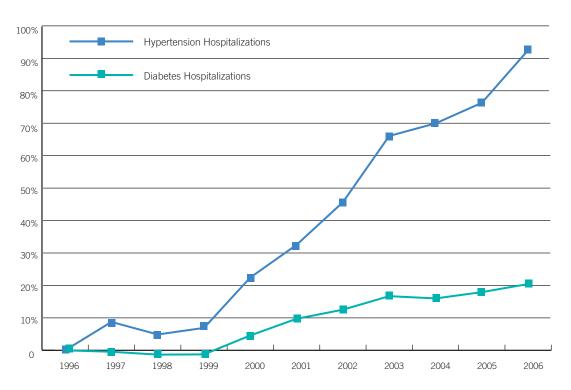
Sprawling residential and commercial development has led to a greater dependence on driving, while amenities such as sidewalks,

that support walking, are missing in many communities. And new technologies beckon young and old alike to spend hours in front of a TV or computer screen.

And with taxpayer-subsidized corn production, the price of sugar-sweetened soda has declined by 20 percent while the price of fresh fruits and vegetables has increased by 40 percent. Today, the U.S. Department of Agriculture lists the main sources of calories for American children as highly processed "grain-based desserts, pizza and soda and energy or sports drinks."

Finally, growing income inequality is exacerbating heath disparities between rich and poor—with the latter having little access to fresh foods and opportunities to exercise. In order to increase health and well-being, we must address the spending imbalance between health care and wellness, and policies that have led to a system of health care that focuses on medical treatment while short changing effective, community-wide public health strategies and investment in healthy behaviors.

Given the current unsustainable trends and the high stakes economics involved, Healthy People/Healthy Economy offers an opportunity to focus on policies and practices that can achieve both better health and greater fiscal health going forward, and make Massachusetts the leader not only in health and wellness but in cost-effective health care.



#### Increase in Avoidable Hospitalizations since 1996, Massachusetts

Source: NEHI from Massachusetts Division of Healthcare Finance and Policy

# The Response: Healthy People/Healthy Economy

The 2009 report *Healthy People in a Healthy Economy* presented a blueprint for action that was based on the premise that in order to have a significant impact on behavior and foster sustainable habits to improve health across Massachusetts, we must mount an effort that is comprehensive and coordinated across the numerous institutions that touch the lives of the state's residents. It was considered to be imperative that leaders in all relevant sectors not just the health sector—collaborate on policies that will promote healthy behavior.

At a forum held at the Boston Foundation in June of 2010, participants discussed the need for a major coalition that would tackle the health crisis—and move toward making Massachusetts the national leader in health and wellness. As a result, the Boston Foundation and NEHI, with the support of the Massachusetts Department of Public Health and numerous other committed stakeholders, created the Healthy People/Healthy Economy Coalition.

## MAKING MASSACHUSETTS THE PREEMINENT STATE IN THE NATION FOR HEALTH AND WELLNESS

The Coalition is targeted at stemming a rising tide of preventable chronic illness and the threat it poses, not only to individuals and families, but to the state's fiscal stability and economic competitiveness. Left unchecked, higher rates of preventable chronic illness will create more medical needs and medical spending, draining limited resources from vital investments in education, the environment and other priorities that have a profound impact on the quality of our health.

Massachusetts' groundbreaking health

care law provides near universal coverage but its focus primarily was on access to care, not on rising health care costs or on positive health outcomes. The goal of the Healthy People/Healthy Economy Coalition is to make Massachusetts a national leader not only in access to health care and health care coverage, but in the health and wellness of all of the state's residents.

# What is a Report Card and Why Do We Need It?

This annual Report Card will track the progress that the Healthy People/Healthy Economy Coalition and our partners throughout Massachusetts make as we work together to improve the health of our state's residents. It is designed to paint a 'big picture,' while at the same time providing details about specific indicators that affect health and wellness, giving us a sense of how they fit together and helping us to evaluate which approaches really work.

This is not meant to be a report on how healthy or unhealthy Massachusetts residents are, although there are fascinating glimpses into that topic throughout this document. Rather, it is an assessment of how well we are doing in addressing health through our policies, programs and practices—and the effect they have on our state's unsustainable health care costs.

It is designed to spark public interest and rally support for aggressive action, and to focus attention on key priorities for action that span policies in both the public and private sectors—from pending legislation to the decisions being made by school systems to the practices of small businesses and corporations.

This first Report Card provides a jumping off point and a series of initial benchmarks through which we can measure future progress. To the extent possible, we assess progress made to date; where promising efforts don't exist, we make suggestions about how we can create them.

Healthy People/Healthy Economy is a challenge to the people of Massachusetts to build a broad coalition of community, business, medical, public health and other leaders who will join together around a comprehensive vision of health improvement in Massachusetts, and hold each other accountable for positive change.

One important lesson we can take from the Commonwealth's largely successful effort to curb smoking is this: no one policy, no one program, and no one practice will turn the tide. We believe that to make a real difference in reducing obesity action must be taken in multiple areas of daily life and through a variety of platforms, consistently and over time.

We must support the organizations, businesses and public entities that are implementing important innovations and help them reach their goals. But we must also have a kind of peripheral vision that will let us know when efforts in one sector are succeeding and when others are lagging behind. This Report Card is designed to help us with this peripheral vision and to spur fresh and continued action.

#### **KEY TO REPORT CARD GRADES**

#### A Positive Change Throughout the Commonwealth

Appropriate policies, programs and practices are not only in place, they are driving positive change in health in Massachusetts

- **B** A Good Start Innovative or best practice policies and programs are now in place and could drive positive change in health in Massachusetts
- **C** A Start Innovative or best practice policies and programs are under active and serious consideration or are part of promising demonstration projects, and could drive positive change in health in the future
- **D Barely a Start** Appropriate policies or programs to address major health problems are only starting to receive active and serious consideration
- **F No Progress** Appropriate policies and programs are not receiving active and serious consideration, despite advocacy
- I Incomplete Policy or programmatic activity is at a very early or experimental stage

# HEALTHY PEOPLE/HEALTHY ECONOMY: FIRST ANNUAL REPORT CARD

# **PHYSICAL ACTIVITY**

Youth Physical Activity	Grade: D	According to a July 2011 report, Massachusetts has the worst score in the country for physical activity among high school students—and state policy needs to create minimum standards for all youth physical activity.
Biking and Walking	Grade: B	Thanks to grassroots organizing and leadership at the state level and in communities, more people in Massachusetts are walking and biking. State government performance would be even better if available federal funds were fully used to support biking and walking infrastructure.
Healthy Transportation Design and Planning	Grade: B	Massachusetts has become a national leader by requiring transportation planning to support biking and walking, and is tackling the often-difficult task of incorporating walking and biking lanes into bridge reconstruction. However, funding for vital infrastructure projects is lacking.

# **ACCESS TO HEALTHY FOODS**

Farmers' Markets	Grade: <mark>B</mark>	Despite the comparatively small size of its farming community, Massachusetts has become a national leader in policy and initiatives to expand farmers' markets and access to locally grown food.			
Food Deserts	Grade: D	A February 2011 report found that Massachusetts is the fourth worst state in the nation for food deserts. The good news is that the state, nonprofits and industry groups are working together to address significant gaps in healthy food access found throughout the state. Now, the state and other stakeholders need to devise and execute plans to fill gaps in access.			
Sugar-Sweetened Beverages	Grade: F	Massachusetts remains one of relatively few states in the country that grants favorable tax status to the purchase of soft drinks. While the Legislature has held hearings on eliminating the sales tax exemption for soft drinks, action on the proposal appears very unlikely at present.			
Healthy School Meals Grade: C		Reforming school lunches remains a huge challenge, given funding constraints, poor school facilities and federal limitations. However, advocacy from the public health community has resulted in stricter standards for competitive foods—foods that are not part of the subsidized school lunch program.			
Trans Fats Policy	Grade: D	While the visibility of this issue has diminished as major fast food chains drop the use of trans fats, Massachusetts has yet to take binding action on the use of these substances.			

# **At-a-Glance**

# **INVESTMENTS IN HEALTH AND WELLNESS**

Employee Health Promotion	Grade: B	In 2010 Massachusetts enacted a promising set of policies to promote employee health and wellness, but now faces the challenge of turning policy into practice on a wide scale.		
Public Health Funding	Grade: F	The Commonwealth's public health programs have been national models for many years. But continued severe budget cuts threaten to weaken them at a time when public and community health programs should be seen as vital elements in overall health care reform, particularly the prevention of chronic disease and the accompanying reduction of long-term health care costs.		
Primary Care	Grade: C	Massachusetts has enormous assets for primary care, including leading-edge primary care practices. But the state's health care reform and health care payment reform strategies have not as yet put the expansion of highly- coordinated, team based care at the center of plans for improvement.		

# **CITIZEN EDUCATION AND ENGAGEMENT**

Health Literacy	Grade: I	Little is being done as yet to address health literacy systematically, either in Massachusetts or elsewhere. However, numerous initiatives, now in early stages, aim to increase the engagement of Massachusetts residents in their health and health care—a task that will require health care and public health professionals to overcome limited health literacy among Massachusetts residents.			
School-Based BMI Reporting	Grade: B	In 2009 the Massachusetts Public Health Council took a major step forward by requiring school-based BMI reporting. Massachusetts could underscore the importance of fighting childhood obesity by writing the regulation into law. Despite the ongoing state fiscal crisis, support for school health should be a local aid priority.			
Health Impact Assessments	Grade: D	Debate over more extensive use of HIAs, which would raise public awareness about the critical role of healthy environments in determining health, has been limited. However, Massachusetts is making an important effort to include HIAs in statewide transportation planning.			

# **Physical Activity**

# **YOUTH PHYSICAL ACTIVITY**

**BIKING AND WALKING** 

# HEALTHY TRANSPORTATION DESIGN AND PLANNING



# **YOUTH PHYSICAL ACTIVITY**

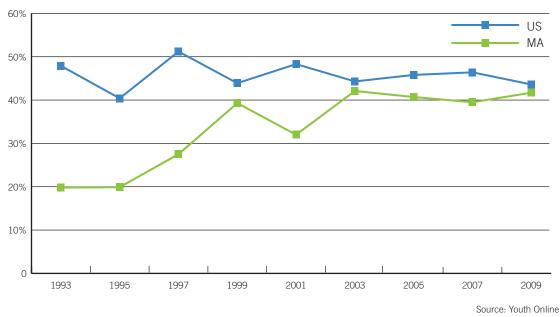


## BACKGROUND

Current evidence-based guidelines recommend 150 minutes per week of physical education for children in elementary school and 225 minutes per week of physical education for middle and high school students.<sup>1,2,3</sup> Weight status, including overweight and obesity among youth, is closely linked to physical activity.<sup>4</sup> In addition, increases in body mass index (BMI) are associated with a rise in daily television viewing and declines in moderate-to-vigorous physical activity in young people.<sup>5</sup> Studies have shown that students who perform aerobic physical activity three or more days per week have significantly higher grades than students who perform no vigorous physical activity.6

#### WHERE WE ARE TODAY

- In 2009, one in every four students in Massachusetts did not participate in at least 60 minutes of physical activity per week<sup>7</sup> and almost half—42 percent—of Massachusetts public school students did not attend any physical education (PE) classes.<sup>8</sup>
- According to the U.S. Centers for Disease Control and Prevention (CDC), just 18 percent of Massachusetts schools offer daily gym classes, compared with a 30 percent national average.
- According to a July 2011 report, Massachusetts is at the bottom of all states when it comes to physical activity for high school students.



Percentage of Students with no Physical Education in an Average Week

US Centers For Disease Control And Prevention - Youth Risk Behavior Surveillance Survey (Survey)



# **BEST PRACTICES**

- Playworks is a national nonprofit organization focused on making recess and physical activity throughout the school day a priority and an all-inclusive activity. The organization sends in full-time "coaches" to facilitate physical activity in schools. The Metro Boston branch of Playworks has reached out to 27 schools in the city since 2006, with plans to expand to 40 sites by 2013.<sup>9</sup>
- The ABC for Fitness (Activity Bursts in the Classroom) program, developed at the Yale School of Public Health, shows schools how to restructure physical activity into multiple, brief episodes of activity in classrooms

throughout the day without taking away valuable time for classroom instruction.<sup>10</sup>

# **CURRENT POLICY LANDSCAPE**

- Prior to the enactment of the state's Education Reform Act of 1993, state law required physical education for all public school students throughout all grades, with a minimum requirement of 90 minutes per week.<sup>11</sup> Subsequent regulatory changes in 1996 eliminated that minimum requirement.
- State law now requires all schools to provide instruction in physical education, but grade levels or the number of hours of instruction required are not specified. Additionally, high school students are not required to complete specified units of physical education to graduate.

# GRADE: D

**RATIONALE:** According to a July 2011 report from the Trust for American's Health and the Robert Wood Johnson Foundation, Massachusetts has the worst score in the country in a measure of physical activity among high school students—and state policy needs to create minimum standards for all youth physical activity.

## **RAISING THE GRADE**

The Healthy People/Healthy Economy Coalition supports the reform of current state standards to require at least 30 minutes of physical activity during the school day, every day, for all students, a standard that will meet minimum CDC standards for elementary school students. Legislation to this effect has been filed in the 2011 legislative session on behalf of the Coalition.

# **BIKING AND WALKING**



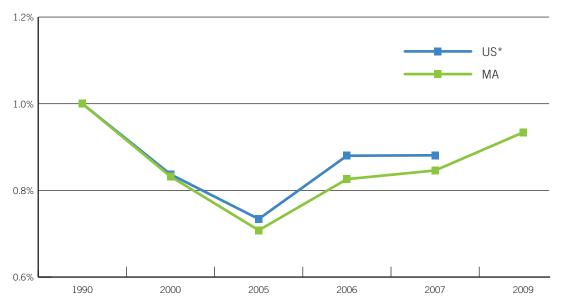
# BACKGROUND

A 2004 study found that every additional hour spent in a car is associated with a six percent increase in the likelihood of obesity, and every additional kilometer walked is associated with a 4.8 percent reduction in the likelihood of obesity.<sup>12</sup> The Alliance for Walking and Biking analyzed data from the American Community Survey and the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS) from 2007 to determine that states with the highest levels of bicycling and walking to work have lower levels of obesity on average.<sup>13</sup>

#### WHERE WE ARE TODAY

- The estimated percentage of all trips by bike (1.0 percent) or foot (9.9 percent) in Massachusetts puts the state firmly above the national average.
- Massachusetts ranks in the top 10 states for the percentage of commuters walking or bicycling to work (4.3 percent and .6 percent of all trips, respectively).
- Massachusetts ranks in the top 10 states in the country for overall safety as well. However, the proportion of all traffic fatalities involving pedestrians (15.4 percent) and bicyclists (1.6 percent) is comparatively high.





Note 1: 2009 data inserted by NEHI from the American Community Survey 2009; calculations from 2009 data performed by NEHI Note 2: Data on U.S. walking levels 1990-2007 are based on an Alliance for Biking & Walking calculation of the average of all 50 states

## **BEST PRACTICES**

Building or reconstructing streets as "complete streets" is a critical step toward encouraging walking and biking. "Complete streets" include ample sidewalks for walking and bicycle lanes to allow for safe and freeflowing bicycle traffic.

### **CURRENT POLICY LANDSCAPE**

- Since 2007, Massachusetts has shown one of the strongest commitments in the nation to the "complete streets" policy with roadways that are designed and operated to enable safe access for all users—completing more than 20 "shareduse" projects, which emphasize pedestrian friendly features.<sup>14</sup>
- In 2009, Massachusetts passed the Bicyclist Safety Bill, which calls for police training on bicycle law and dangerous behavior by bicyclists and motorists; explanations of how a motorist should safely pass a bicycle; and legal protections for bicyclists who choose to ride to the right of traffic.
- MassDOT (Masssachusetts Department of Transportation) is mapping a 740-mile network of seven on- and off-road bicycle corridors statewide, called the Bay State Greenway, as part of a 2008 Bicycle Transportation Plan.
- Massachusetts spends about \$0.90 per capita (compared to \$1.29 per capita nationally) of federal Transportation Enhancement (TE) funds on biking and pedestrian projects. The TE program serves as the major source of funding for bicycle and pedestrian projects nationally.
- Over the past 15 years, Massachusetts has come close to spending up to its entire ceiling for TE funding on highways—and

has one of the nation's lowest percentages of programmed (creating a plan for a TE project) to obligated (signing contracts to implement the plan) funding ratios for biking/pedestrian projects.

#### **GRADE: B**

**RATIONALE:** Thanks to grassroots organizing and leadership at the state level and in communities, more people in Massachusetts are walking and biking. State government performance would be even better if available federal funds were fully used to support biking and walking infrastructure.

#### **RAISING THE GRADE**

- Massachusetts should make an effort to use more TE funds already programmed for the state for biking and walking projects. Currently only 36 percent of funds are obligated for use. By offering design assistance to local TE project sponsors and making federal matching funding for TE projects more accessible, additional TE funds could be allocated for improving biking and walking.
- State-level data on pedestrian (and bicycle) crashes and injuries is scant. Pedestrian trip data—current or projected—should be collected systematically, as it is for all vehicles.

# HEALTHY TRANSPORTATION DESIGN AND PLANNING



## BACKGROUND

Local transportation systems strongly influence public health by encouraging physical activity and reducing over-reliance on automobile travel that generates pollution.<sup>15</sup> Public transit makes it possible to vastly extend the distances people can travel to work while incorporating some walking or biking in their commute.

A CDC study found that users of local transportation systems walked an average of 25 minutes to and from public transit.<sup>16</sup> Lowwage households living far from employment centers spend 37 percent of their income on transportation.<sup>17</sup>

#### WHERE WE ARE TODAY

Massachusetts ranks 6th worst among the 50 states for length of average commuting time to work (27.3 minutes); it ranks 4th best for the percentage of workers using mass transportation (9.4 percent).<sup>18</sup>

#### **BEST PRACTICES**

Best practices in transportation include "complete streets," transit-oriented development (TOD) that supports the construction of mixed-use buildings within walking distance of mass transit stations, and city or metro bike-sharing programs.

#### **CURRENT POLICY LANDSCAPE**

- Massachusetts is one of many states that have embraced transit-oriented development. In 2004 the Romney Administration won approval for use of state bond funds to support major TOD projects.<sup>19</sup>
- Massachusetts is one of the few states in the country to authorize the creation

of a comprehensive, statewide healthy transportation plan (the "Healthy Transportation Compact," which was part of the 2009 Transportation Reform Act).<sup>20</sup>

- Healthy transportation-related initiatives include the Bay State Greenway (BSG), a proposed network of 200 miles of off-road, shared-use paths and 540 miles of on-road connections in seven corridors across all parts of the state,<sup>21</sup> and the Accelerated Bridge Program, designed to rehabilitate 600 deficient bridges while improving pedestrian and bicycle access.<sup>22</sup>
- The state's Safe Routes to School Program (SRTS) has developed partnerships with nearly 350 elementary and middle schools and 116 communities. While SRTS programs reach only seven percent of eligible students nationally, the Massachusetts program reaches 25 percent of students.<sup>23</sup>

# GRADE: B

**RATIONALE:** Massachusetts has become a national leader by requiring transportation planning to support biking and walking, and is tackling the often-difficult task of incorporating walking and biking lanes into bridge reconstruction. However, funding for vital infrastructure projects is lacking.

### **RAISING THE GRADE**

Massachusetts has made a promising start, but the ultimate measure of success will be the full incorporation of walking and biking opportunities into the state's backlog of repair and reconstruction projects. Access to Healthy Foods FARMERS' MARKETS FOOD DESERTS SUGAR SWEETENED BEVERAGES HEALTHY SCHOOL MEALS TRANS FATS POLICY



# FARMERS' MARKETS



# BACKGROUND

One-fifth of all low-income Americans do not purchase any fruits or vegetables,<sup>24</sup> and low-income neighborhoods have been shown to have access to fewer fruit and vegetable markets and more liquor stores than wealthier neighborhoods.<sup>25</sup> But farmers' markets have grown rapidly throughout the U.S. in recent years, doubling between 2000 and 2010, providing greater access to locally grown foods.<sup>26</sup>

#### WHERE WE ARE TODAY

In August of 2010, the U.S. Department of Agriculture ranked Massachusetts 6th best in the nation for the number of farmers' markets,<sup>27</sup> with more than 228 farmers' markets in the Commonwealth, including winter markets.<sup>28</sup>



More than 50 of the farmers' markets in Massachusetts participate in the Supplemental Nutrition Assistance Program (SNAP) and accept Electronic Benefit Transfers (EBT) cards,<sup>29</sup> and some also participate in the "double value program" that doubles every dollar spent by SNAP participants. The goal of the double value program is to encourage the purchase of fresh produce at farmers' markets.<sup>30</sup>

# **BEST PRACTICES**

- The Boston Public Market Association, with support from the Patrick Administration's Department of Agricultural Resources, is developing a year-round, indoor public market in downtown Boston,<sup>31</sup> modeled on successful public markets in other cities, such as Seattle's Pike Street Market.
- Somerville's Healthy Eating by Design partnership created a farmers' market in Union Square designed to be more welcoming to that city's low-income, immigrant residents by being culturally-, linguistically- and economically-appropriate for all residents.<sup>32</sup>
- The Food Project is a nonprofit that distributes food from farms to low-income neighborhoods through Community Supported Agriculture (CSA) programs and farmers' markets.<sup>33</sup> In addition, there are a number of CSAs throughout Massachusetts.
- The Massachusetts Department of Transportation hosts an annual Farmers' Market Program, providing local farmers with free vending space along the Commonwealth's highway service plazas. The program has increased from 11 farmers' markets along the Massachusetts Turnpike to 18 at service plazas statewide.<sup>34</sup>

### **CURRENT POLICY LANDSCAPE**

In 2010, the Massachusetts Legislature passed legislation to create the Massachusetts Food Policy Council. Its goals include the promotion and sale of locallygrown foods, especially in communities with high rates of chronic disease and obesity.<sup>35</sup>

## **GRADE: B**

**RATIONALE:** Despite the comparatively small size of its farming community, Massachusetts has become a national leader in policy and initiatives to expand farmers' markets and access to locally grown food.

#### **RAISING THE GRADE**

As suggested in legislation filed on behalf of the Healthy People/Healthy Economy Coalition, Massachusetts should build on its current momentum and enhance the local food movement by extending the state's investment tax credit for local food businesses.

# **FOOD DESERTS**



# BACKGROUND

A "food desert" is a low-income area without access to affordable healthy food, including fresh produce and whole grains. While there is no standard definition for a food desert, making it difficult to identify the number of food deserts in the U.S. and in Massachusetts,<sup>36</sup> the Institute of Medicine and the Centers for Disease Control and Prevention have found that communities without supermarkets are burdened by disproportionately higher rates of obesity and other diet-related health problems.<sup>37,38</sup>

## WHERE WE ARE TODAY

Massachusetts ranks third lowest among all states in the country in the number of supermarkets per capita, according to a March 2011 study by The Food Trust, which was funded by the Robert Wood Johnson Foundation and Kraft Food Foundation. The study found that Massachusetts has fewer supermarkets per capita than most states.<sup>39</sup>

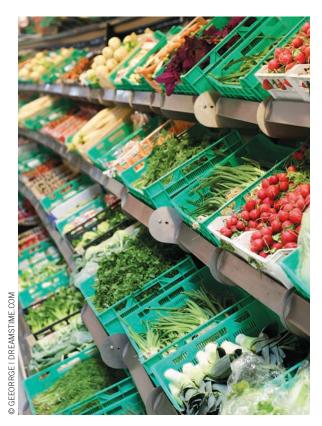


### **BEST PRACTICES**

- In Pennsylvania, a public-private partnership—called the Fresh Food Financing Initiative—has brought dozens of supermarkets to poorer communities in the state, leading to the creation or expansion of 88 supermarkets and 5,000 jobs since 2004.<sup>40</sup>
- Wholesome Wave, a national nonprofit active in Massachusetts, also promotes farm-to-community programs in neighborhoods that lack access to healthy food.<sup>41</sup>

#### **CURRENT POLICY LANDSCAPE**

- In 2009, the Patrick Administration created a statewide Massachusetts Food Policy Council to improve access to local foods and recommend policies to improve coordination among state agencies, such as the Massachusetts Departments of Public Health, Transitional Assistance and Agriculture Resources.<sup>42</sup>
- A Grocery Access Task Force has been convened to respond to the findings of The Food Trust. The task force brings together representatives of the supermarket industry with public health advocates, and is convened by The Food Trust, the Massachusetts Food Association, the Massachusetts Public Health Association and the Boston Foundation.
- In 2010, the Obama administration announced the \$400 million Healthy Food Financing Initiative with the goal of bringing grocery stores to underserved neighborhoods across the nation.<sup>43</sup>



#### **GRADE: D**

**RATIONALE:** A February 2011 report found that Massachusetts is the fourth worst state in the nation for food deserts. The good news is that the state, nonprofits and industry groups are working together to address significant gaps in healthy food access found throughout the state. Now, the state and other stakeholders need to devise and execute plans to fill gaps in access.

#### RAISING THE GRADE

- Legislation filed on behalf of the Healthy People/Healthy Economy Coalition would propose allowing full-service food businesses, such as supermarkets, grocery stores and farmers' markets, to qualify for the state's investment tax credit.
- The Grocery Access Task Force is expected to offer other proposals to make expansion of markets in Massachusetts a priority of the state's economic development strategy.

# SUGAR-SWEETENED BEVERAGES



# BACKGROUND

The consumption of calories from sugarsweetened beverages in the U.S. has increased significantly since the 1970s, and today the average American consumes 50 gallons of soft drinks each year,<sup>44</sup> making sugar-sweetened beverages the single largest contributor of caloric intake in the American diet.<sup>45</sup> Consumption of soft drinks is associated with increased caloric intake, weight gain, diabetes and obesity.<sup>46</sup> A child's chance of becoming obese increases by 60 percent for each additional sugar-sweetened beverage consumed each day.<sup>47</sup>

## WHERE WE ARE TODAY

Massachusetts currently is one of just 17 states in the nation that does not apply a tax of any kind on soft drinks. Indeed, the Commonwealth defines sugar-sweetened beverages as food, exempting them from the state's sales tax.

# **BEST PRACTICES**

- Connecticut, Maine, New Jersey, New York and Rhode Island apply a sales tax to soda.<sup>48</sup> Other states, including Arkansas, Washington, and West Virginia, impose an excise tax. An excise tax on soft drinks has garnered the support of many experts in the public health field. However, no state currently levies an excise tax aggressive enough to affect consumption.
- The Yale Rudd Center for Food Policy & Obesity proposes a penny per ounce excise tax on any beverage with added sugar. They calculate that, over the next 10 years, a national penny per ounce

of sugar-sweetened beverages would decrease consumption by 10-23 percent, reduce health care costs by \$50 billion and generate \$150 billion in revenue.<sup>49</sup>

# **CURRENT POLICY LANDSCAPE**

Under Massachusetts law, sales of essential food items, such as fruits, vegetables and milk, are exempted from the state sales tax.<sup>50</sup> This definition now includes items of minimal nutritional value, such as soft drinks and candy. The sales tax exemption is classified as a "tax expenditure" and is listed in the annual Tax Expenditure Budget that the Governor is required to submit to the Legislature each January.

# GRADE: F

**RATIONALE:** Massachusetts remains one of relatively few states in the country that grants favorable tax status to the purchase of soft drinks. While the Legislature has held hearings on eliminating the sales tax exemption for soft drinks, action on the proposal appears very unlikely at present.

#### **RAISING THE GRADE**

Legislation filed on behalf of the Healthy People/Healthy Economy Coalition would eliminate the current state sales tax exemption on soft drinks. Elimination of the exemption would remove the subsidy for items fueling an increase in obesity and preventable chronic disease and adding to the Commonwealth's high health care costs. The revenue could be directed to nutrition education and public health initiatives many of which have been eliminated or severely reduced.

State	Taxes	on	Sugar	Sweetened	Beverages	(as of	January	2009)
				1				

No Tax on Sugar Sweetened Beverages	Sales Tax on Sugar Sweetened Beverages			
	Alabama*			
	Arkansas*			
	California			
	Connecticut			
	Delaware			
stock	Florida			
	Hawaii			
MARIA PAVLOVA I ISTOCK	Idaho			
MARIN	Illinois			
	Indiana			
Alaska	lowa			
Arizona	Kansas			
Colorado	Kentucky			
Georgia	Maine Maryland			
Louisiana				
Massachusetts	Minnesota			
Michigan	Mississippi Missouri New Jersey New York North Carolina North Dakota			
Montana				
Nevada				
Nebraska				
New Hampshire				
New Mexico				
South Carolina	Ohio			
Oregon	Oklahoma			
Utah	Pennsylvania			
Vermont	Rhode Island*			
Wyoming	South Dakota			
	Tennessee*			
	Texas			
	Virginia*			
	Washington*			
	West Virginia*			
	Wisconsin			

States with asterisk (\*) also impose an excise tax at the manufacturer, distributor or retail level Source: Yale Rudd Center for Food Policy & Obesity

# **HEALTHY SCHOOL MEALS**



# BACKGROUND

A significant amount of students' daily food intake occurs at school.<sup>51</sup> Successful school nutrition departments must balance cost. nutrition and student participation-the food "trilemma."<sup>52</sup> Most food service programs are financially independent from their school districts.<sup>53</sup> The USDA reimburses school districts based on student participation and federal nutrition standards, such as fat content and nutrient requirements, while decisions about what specific foods to serve and how they are prepared are made by local authorities.<sup>54</sup> All foods and beverages consumed in Massachusetts schools, however, are not prepared by school cafeterias. Some are sold a la carte in school stores, snack bars and through vending machines. These

additional sources of food and drink make up a significant portion of a school child's daily school nutrition and must be considered when evaluating school meals.

## WHERE WE ARE TODAY

- Only 15 percent of Massachusetts high school students eat five or more servings of fruit and vegetables a day and 14 percent of middle school students eat three or more servings of vegetables a day.<sup>55</sup>
- The Massachusetts Farm-to-School Project offers valuable assistance to educational institutions such as public school districts, private schools and colleges, providing assistance to about half of the nearly 250 institutions now serving local foods.



The American Recovery and Reinvestment Act (ARRA) provided some federal support for school food service equipment such as appliances and other tools, and the federal "Healthy, Hunger-Free Kids Act of 2010" provides roughly \$4.5 billion in new funding for child nutrition programs over the next 10 years.<sup>56</sup>

# **BEST PRACTICES**

- Despite funding restrictions and often inadequate cooking facilities, innovative school nutritionists in Massachusetts have led a movement to re-introduce fresh fruits and vegetables into the schools, to bring back on-site cooking, and to utilize locally produced foods.
- School systems in Boston, Lawrence and Salem have brought chefs into public schools to prepare healthy meals on site.
- "Shape Up Somerville," a collaboration of the City of Somerville and Tufts University, has worked to restore full cooking capability to city schools.
- Louisiana adopted a new law requiring schools to sell bottled water, low-calorie beverages, fruit juices, and low-fat or skim milk. In addition, Vermont launched a program designed to encourage the purchasing of local milk and meat for school meals.

## **CURRENT POLICY LANDSCAPE**

In the spring of 2010, the Massachusetts Legislature passed a School Nutrition Act that facilitates the direct purchase of foods from Massachusetts farmers by schools. It also bans the sale of salty and sugary snacks and high-calorie sodas in public schools and establishes standards for snacks and beverages sold in vending machines, school stores and cafeteria a la carte lines.<sup>57</sup>

Additionally, the bill requires the Department of Public Health to set guidelines for the training of school nurses to screen and help children with diabetes, eating disorders, and childhood obesity.

# GRADE: C

**RATIONALE:** Reforming school lunches remains a huge challenge, given funding constraints, poor school facilities and federal limitations. However, advocacy from the public health community has resulted in stricter standards for competitive foods—foods that are not part of the subsidized school lunch program.

#### RAISING THE GRADE

- The Healthy People/Healthy Economy Coalition supports the Massachusetts Department of Public Health in its efforts to strengthen the School Nutrition Act.
- The state should ensure that the Nutrition Act's mandates fit cohesively with federal nutrition standards so that schools facing budget crises are not given conflicting mandates.
- An increase in the purchasing power of small school districts will assist them in collaborating to purchase healthier options and improve the school nutrition "infrastructure" with central kitchens, storage areas and freezers.<sup>58</sup>

# TRANS FATS POLICY



# BACKGROUND

Trans fats are partially-hydrogenated oils that increase bad cholesterol (LDL cholesterol) and decrease good cholesterol (HDL cholesterol). Until the recent movement to eliminate them, margarines, shortenings and baked goods often contained or were processed with trans fats.<sup>59</sup>

Consuming trans fats is associated with heart disease, stroke and type 2 diabetes.<sup>60</sup> According to dietary guidelines published by the U.S. Department of Health and Human Services, people should limit their intake of trans fats and keep their consumption of trans fats to the lowest level possible.<sup>61</sup> The American Heart Association recommends limiting trans fats to less than 2 grams per day.<sup>62</sup>

# WHERE WE ARE TODAY

In 2006, the U.S. Food and Drug Administration (FDA) mandated that the Nutrition Facts label on all packaged foods must indicate the quantity of trans fatty acids in a serving of the food product. The regulatory action has caused food manufacturers to reformulate many of their products to decrease levels of partiallyhydrogenated fats. It has also resulted in an increased awareness about dietary trans fatty acids in the general public, and it has sparked efforts by a number of cities and states to limit the trans fatty acid content of restaurant foods.

### **BEST PRACTICES**

- Some Massachusetts cities and towns, including Boston, Brookline and Cambridge, have taken action against trans fats by regulating them. For instance, the Boston Public Health Commission passed a trans fats regulation in March 2008 which affected restaurants, grocery stores and other food establishments.
- Although several local trans fats bans exist across the country (including New York City, Philadelphia, Albany County in New York, and King County in Washington), California is the only state with a statewide ban on trans fats.<sup>63</sup>

# **CURRENT POLICY LANDSCAPE**

There is no statewide ban on trans fats but legislation was filed in January of 2011 to curb the use of trans fats statewide.<sup>64,65</sup>

# GRADE: D

**RATIONALE:** While the visibility of this issue has diminished as major fast food chains drop the use of trans fats, Massachusetts has yet to take binding action on the use of these unhealthy substances.

# **RAISING THE GRADE**

Massachusetts should enact legislation to eliminate the use of trans fats in restaurants throughout the state. **Investments in Health and Wellness** 

**EMPLOYEE HEALTH PROMOTION** 

**PUBLIC HEALTH FUNDING** 

**PRIMARY CARE** 



# **EMPLOYEE HEALTH PROMOTION**



# BACKGROUND

Employee health promotion and wellness programs have grown steadily among U.S. employers in recent years as a powerful strategy for preventing the onset of major, highly preventable diseases. The most comprehensive wellness programs typically are sponsored by large firms that self-insure and, as such, are in a position to reap direct savings from averted medical costs when employees improve their health and health habits.<sup>66</sup>

### WHERE WE ARE TODAY

An analysis of employee health programs conducted by Mercer for the Massachusetts Division of Insurance in 2010 focusing on employers with 500+ employees found that, unlike peer firms nationally, Massachusetts firms are somewhat more likely to rely solely on health plans for wellness programs and are less likely to obtain more comprehensive services.



### **BEST PRACTICES**

- Several national standards-setting organizations have published standards for best practices based on lessons learned from major employers.<sup>67</sup> Key components of successful programs include: the use of health risk assessment (HRA) tools; financial incentives for participation; access to diet and fitness programs and services; access to health coaches; and customized programs that target specific health risks such as hypertension.<sup>68</sup>
- A number of large companies with major facilities in Massachusetts have earned recognition for employee health management programs,<sup>69</sup> including EMC Corporation, which has conducted innovative clinical trials of Web technologies to improve health risk behaviors.<sup>70</sup>

#### **CURRENT POLICY LANDSCAPE**

- The Massachusetts Department of Public Health is encouraging smaller and mid-sized firms to create worksite wellness programs through its "Mass In Motion" campaign to improve health and fitness. About 20 employers are currently participating in pilot projects under the program.<sup>71</sup>
- Governor Patrick and the Massachusetts Legislature took a major step forward with the passage of Chapter 288 in 2010. Under its provisions, the Massachusetts Group Insurance Commission (GIC) is directed to adopt a comprehensive wellness program for Massachusetts state employees and retirees. In addition, the Commonwealth Connector Authority is directed to provide eligible employers with a five percent subsidy toward the adoption of wellness programs approved by the Authority.

Chapter 288 also authorizes the creation of new small business health benefits "purchasing cooperatives," covering up to 85,000 people in the Commonwealth, and mandates that the cooperatives have access to wellness programs.

### **GRADE: B**

**RATIONALE:** In 2010 Massachusetts enacted a promising set of policies to promote employee health and wellness, but now faces the challenge of turning policy into practice on a wide scale.

#### RAISING THE GRADE

The implementation of Chapter 288 could be a major step forward for Massachusetts in the area of employee health management and wellness. The Governor and the Legislature should continue to fund implementation costs as the GIC adopts and rolls out its program and support the wellness tax credit authorized for Connector-approved programs. Mass In Motion should be sustained to demonstrate the benefits of low-cost wellness activities among smaller companies and worksites. And, since Massachusetts employers rely heavily on health plans for employee health management services, the Governor, Legislature and other stakeholders should ensure that future health care payment reforms encourage health plans to provide intensive health promotion services.

# **PUBLIC HEALTH FUNDING**



# BACKGROUND

Public health agencies and public health professionals are best known for initiatives to prevent or contain outbreaks of infectious disease. Yet the public health field has increasingly organized initiatives to avert disease by promoting healthy behaviors, most notably in successful initiatives against smoking.

## WHERE WE ARE TODAY

Public health agencies throughout the country have had substantial budget cuts since the onset of the "Great Recession" in 2008. Current state spending for the Massachusetts Department of Public Health is one-third less than it was 10 years ago (after adjustment for inflation), and spending for the Department is down 14 percent since 2008.<sup>72</sup>

# **BEST PRACTICES**

- The Boston Public Health Commission's Putting Prevention to Work Initiative is an aggressive and comprehensive effort to reduce unhealthy weight and reduce smoking. Goals include reduced consumption of sugar-sweetened beverages, increased biking and walking, expanded urban gardening and increased physical activity among schoolchildren.<sup>73</sup>
- The State of Vermont's Blueprint for Health pioneers the integration of public health interventions with health care reform. It attacks preventable chronic disease—both the root causes and treatment—by pairing community health workers with primary care physician practices. Early results show increasing improvements in health

outcomes and a reduction in health care spending.<sup>74</sup>

# **CURRENT POLICY LANDSCAPE**

- The Massachusetts Department of Public Health leads a comprehensive campaign to improve unhealthy diet and fitness behaviors through the Mass in Motion initiative.<sup>75</sup>
- Successful implementation of Mass in Motion is threatened by continued budget cuts.

# **GRADE:** F

**RATIONALE:** The Commonwealth's public health programs have been national models for many years. But continued severe budget cuts threaten to weaken them at a time when public and community health programs should be seen as vital elements in overall health care reform, particularly the prevention of chronic disease and the accompanying reduction of long-term health care costs.

## **RAISING THE GRADE**

Since 2008, the Commonwealth has joined a majority of states in severely reducing public health expenditure. Per capita public health spending in Vermont—site of a cutting-edge national experiment in public health and health care reform—is as much as \$20 per capita higher than in Massachusetts.<sup>76</sup> Innovative reforms to reduce chronic disease and cut health care costs will require restoring and expanding public health investment in Massachusetts.





# BACKGROUND

Research shows that access to primary care physicians (PCPs) is strongly associated with good health outcomes and lowered health care spending.<sup>77</sup> Access to PCPs in Massachusetts has increased: from 2006-2008, the number of residents reporting that they had no PCP declined from 12.2 percent to 11 percent.<sup>78</sup>

# WHERE WE ARE TODAY

- Massachusetts has the highest primary care physician-to-population ratio in the country,<sup>79</sup> but PCPs are not evenly distributed: 14 percent of residents live in federally-defined health care shortage areas.<sup>80</sup> In 2009, 22 percent of the state's residents reported difficulty in finding primary care.
- Residents who rely on Medicaid are at special risk: recent data suggest that less than two-thirds of PCPs in the state accept Medicaid patients.<sup>81</sup>

# **BEST PRACTICES**

- The Commonwealth Care Alliance (CCA) utilizes multidisciplinary teams that integrate medical care with community services, significantly improving health outcomes and reducing nursing home admissions and the cost of care for elderly and disabled patients.<sup>82</sup>
- Innovation in primary care practice redesign currently centers on the adoption of the patient-centered medical home model, which emphasizes highly-coordinated, team-based care, preventive medicine, and direct engagement with patients to help them maintain health.

# **CURRENT POLICY LANDSCAPE**

- The Department of Public Health's Primary Care Office coordinates federal, state and local resources to support new PCPs, particularly in communities with health disparities. The state's efforts may be succeeding: since 2008 more than half of all newly-licensed physicians are PCPs.<sup>83</sup>
- Major, publicly-supported initiatives include: the Safety Net Medical Home Initiative, under which 14 Massachusetts community health centers are being converted to the medical home model; and the Massachusetts Medical Home Initiative, which is assisting 46 physician practices throughout the state to convert to the medical home model over three years.

# **GRADE:** C

**RATIONALE:** Massachusetts has enormous assets for primary care, including leading-edge primary care practices. But the state's health care reform and health care payment reform strategies have not as yet put the expansion of highly-coordinated, team based care at the center of plans for improvement.

#### **RAISING THE GRADE**

The Governor, the Legislature, and key stakeholders are working on new proposals to reform health care payment and control costs. Massachusetts should articulate a clear vision in which payment reforms strongly support a primary care system that is fully integrated with other proven resources, such as community health programs and public health interventions.

# **Citizen Education and Engagement**

HEALTH LITERACY SCHOOL-BASED BMI REPORTING

### **HEALTH IMPACT ASSESSMENTS**



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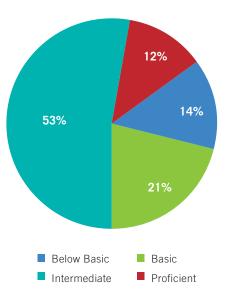
# **HEALTH LITERACY**



#### BACKGROUND

Health literacy is the ability to obtain, understand and use health information. The health literacy of individuals becomes increasingly important as health care, particularly care for chronically ill patients, becomes more complex.<sup>84</sup> Numerous studies link individuals who have limited health literacy with poor health status and, in some cases, with higher rates of mortality.<sup>85</sup> Poor health literacy is a direct contributor to health and health care disparities among the elderly, low-income individuals, and racial and ethnic minorities.<sup>86,87,88,89</sup>

# United States Adults' Health Literacy Level: 2003



Source: U.S. Department of Education, Institute of Education Sciences, 2003 National Assessment of Adult Literacy. Retrieved from http://www.health.gov/communication/literacy/issuebrief/

#### WHERE WE ARE TODAY

- The first—and so far only—national survey of health literacy was released in 2003 as part of the National Assessment of Adult Literacy (NAAL). The survey found that 36 percent of adults—or 90 million Americans—have skills deemed basic or below-basic for dealing with health material.<sup>90</sup>
- No state-level data on health literacy exist as yet, but basic illiteracy (limited reading ability) in Massachusetts was estimated at 10 percent in 2003, compared to a national rate of 14 percent.<sup>91</sup>
- The national economic impact of low health literacy is estimated to be as much as \$238 billion annually.<sup>92</sup>

### **BEST PRACTICES**

- Responses to poor health literacy are taking several forms. One stresses translating often-confusing health care materials and oral communications from health care professionals into "plain language." Another overlapping approach stresses the development of techniques to improve "patient engagement" and participation in health care decision-making.
- An example of the plain language approach is a Minnesota law that requires materials used for determinations of health care benefit eligibility be rendered at the 7th grade level.<sup>93</sup>
- An example of a more expansive, patient engagement-oriented approach is Boston Medical Center's Project RED. Project RED (Re-Engineered Discharge) has replaced

standard instructions given to patients on discharge from the hospital and replaced them with a personalized discharge booklet, along with assistance in making any followup appointments. Between 2006 and 2007, the effort helped reduce re-admission rates for the first month after discharge by 30 percent and costs by 33 percent.<sup>94</sup>

#### **CURRENT POLICY LANDSCAPE**

- Health literacy and patient engagement are stated goals of the federal government. In June 2010, the Department of Health and Human Services launched a National Action Plan to Improve Health Literacy and reduce complex medical language in health-related materials, forms and websites.<sup>95</sup>
- The 2010 national health care reform legislation (the Affordable Care Act) provides support for incorporating patient-physician shared decision-making techniques into daily health care practice and makes patient engagement a goal of new Accountable Care Organizations. The recently announced Partnership for Patients aims to improve the safety of hospital care and reduce unwarranted hospital re-admissions, partly through improved communication and engagement directly with patients and caregivers.
- In Massachusetts, patient engagement is a major goal of collaborative efforts to improve the quality of health care for state residents. Massachusetts Health Quality Partners, representing most major health care providers and health plan organizations in the state, has made patient engagement a centerpiece of its Aligning Forces for Quality Program, and is developing a set of core patient engagement messages and tools for use by all partners.

### GRADE: I

**RATIONALE:** Little is being done as yet to address health literacy systematically, either in Massachusetts or elsewhere. However, numerous initiatives, now in early stages, aim to increase the engagement of Massachusetts residents in their health and health care—a task that will require health care and public health professionals to overcome limited health literacy among Massachusetts residents.

#### **RAISING THE GRADE**

Massachusetts and its health care stakeholders should incorporate strong messages on improvement of health behaviors (particularly diet and fitness behaviors) into any coordinated approach toward improved patient engagement and patient decision-making. Just as health care payment reform should provide support for closer coordination between primary health care practice and community and public health workers, so should patient engagement strategies be closely coordinated with efforts to educate the public on pervasive health risks such as overweight and obesity.

## SCHOOL-BASED BMI REPORTING



#### BACKGROUND

Body Mass Index (BMI) is a calculation based on height and weight and is used as an indicator of a person's body fat.<sup>96</sup> While BMI measurements have real limitations,<sup>97,98</sup> they generally do correlate with direct measures of body fat and are utilized as an inexpensive and easy way to screen for weight problems.<sup>99</sup>

#### WHERE WE ARE TODAY

- In 2009, more than 57 percent of Massachusetts adults had a BMI that would categorize them as overweight or obese<sup>100</sup>
- That same year, analysts determined that 34.3 percent of the state's public school children were either overweight or obese.<sup>101</sup>

#### **BEST PRACTICES**

- In 2004, Arkansas became the first state to institute BMI reporting for all public school students (although it has scaled back its program). Since then, 20 other states have either passed or begun to consider bills that would ask schools to report on student BMI to parents and doctors.<sup>102</sup>
- The Body Adiposity Index (BAI) has been proposed as an alternative measurement to BMI reporting. The BAI is a more complicated equation utilizing the ratio of hip circumference to height.<sup>103,104</sup>

#### **CURRENT POLICY LANDSCAPE**

 Massachusetts students in grades 1, 4, 7 and 10 are required to have their BMI measured and reported as part of a Massachusetts public health regulation adopted in 2009, with the results sent to parents and guardians.

- Students with high BMIs (above the 85th percentile) or low BMIs (below the 5th percentile) are referred to a health care provider. Student BMIs remain in their health records and the data are sent to the Massachusetts Department of Public Health.<sup>105</sup>
- In addition to height and weight measurements, some Massachusetts schools (Cambridge Public Schools as part of its Healthy Children Initiative, for example) have implemented fitness reporting to assess the health and fitness levels of their students.<sup>106</sup>

#### **GRADE:** B

**RATIONALE:** In 2009 the Massachusetts Public Health Council took a major step forward by requiring school-based BMI reporting. Massachusetts could underscore the importance of fighting childhood obesity by writing the regulation into law. Despite the ongoing state fiscal crisis, support for school health should be a local aid priority.

#### **RAISING THE GRADE**

Codification of BMI regulations in state law will further demonstrate the commitment of the state and the public to addressing unhealthy weight as a major public health problem in Massachusetts. On behalf of the Healthy People/Healthy Economy Coalition, legislation to make school BMI reporting law was filed in the Massachusetts House in early 2011.

# **HEALTH IMPACT ASSESSMENTS**



#### BACKGROUND

Health impact assessments (HIAs) are tools for measuring the potential health impact of policies, plans and projects before they are implemented, not unlike environmental impact reports performed before major public projects are permitted and built.<sup>107</sup> HIAs can contribute to recommendations that will increase positive health outcomes while minimizing adverse health outcomes and avoiding unintended consequences and unexpected costs.<sup>108</sup>

#### WHERE WE ARE TODAY

- HIAs are being used in a limited way throughout the country. The national Health Impact Project and the Centers for Disease Control and Prevention have identified nearly 120 HIAs that have been completed or are in progress in 24 states.<sup>109</sup>
- Proposals to require or expand the use of HIAs in connection with public sector or major development projects are enjoying increasing support throughout the public health community—either as a way to achieve environmental equity or as a way to promote the design of projects that will encourage healthy behaviors, such as increased physical activity.

#### **BEST PRACTICES**

HIAs represent a young field, but Boston Medical Center's Medical Legal Partnership used HIAs in 2005 to analyze proposed changes in the Commonwealth's Rental Voucher Program. The assessment projected the health effects of changes in eligibility and tenant obligations, based on the strong influence of secure housing and housing costs on child and family health.<sup>110</sup>

#### **CURRENT POLICY LANDSCAPE**

- The 2009 Massachusetts Transportation Reform Act mandates the creation of a health impact assessment process as an element of the state's new Healthy Transportation Compact.
- Prior legislation in the Massachusetts Legislature called for HIAs on major projects, public and private, with a likely impact on the health of neighborly residents.

### GRADE: D

**RATIONALE:** Debate over more extensive use of HIAs, which would raise public awareness about the critical role of healthy environments in determining health, has been limited. However, Massachusetts is making an important effort to include HIAs in statewide transportation planning.

#### **RAISING THE GRADE**

- Legislation filed on behalf of the Healthy People/Healthy Economy Coalition calls for HIAs on all state capital facility projects.
- The next step toward strengthening the health impact assessment process in Massachusetts will be the effective implementation of HIAs within the planning of transportation projects.
- Other government agencies involved in major infrastructure projects should also look for opportunities to use HIAs as a way to integrate health considerations into current and future initiatives.<sup>111</sup>

# **Conclusion**

Massachusetts leads the nation in access to health care, medical innovation and educational attainment—milestones that are at the core of our state's economic competitiveness. However, as we have seen, the recent doubling of adult obesity and the increasing percentage of children who are overweight or obese in the Commonwealth are resulting in a rising tide of preventable chronic disease. That, in turn, is increasing the likelihood of unsustainable cost burdens on families, businesses and the Commonwealth.

The Healthy People/Healthy Economy Coalition seeks to reverse these trends and the threat they pose to residents' health and the Commonwealth's fiscal health and competitiveness. Its ultimate goal is to address the crisis in preventable chronic disease among Massachusetts residents while improving lives and curtailing health care costs.

The Healthy People/Healthy Economy Coalition's policy agenda is designed to focus attention on transformative best practices and policies, to inspire action at every level, and to foster collaboration across sectors, institutions, cities and towns.

Success will benefit all residents of the Commonwealth, and particularly those now lacking access to physical activities and fresh nutritious foods. Reducing preventable chronic disease rates in all of our communities will reduce future spending on medical services and free up public and private resources to invest in the social determinants of health such as education, recreation and community safety. That, in turn, will help to increase health equity, boost economic dynamism and make Massachusetts the national leader in health and wellness.

This annual Report Card tracks the progress of the Commonwealth's adoption and implementation of proven policies and best practices. In the future, the Report Card will connect our progress on policies with health outcomes and costs.

The Healthy People/Healthy Economy Coalition addresses one of the Commonwealth's greatest challenges—the rebalancing of our investment in health care services with our investment in the basic determinants of health—in order to create the kind of future we all need if we are to achieve the goal of "healthy people in a healthy economy."

Please join us.

### **ENDNOTES**

1. For national physical activity guidelines, see The National Association for Sport and Physical Education's website at http://www. aahperd.org/naspe/standards/nationalGuidelines/.

2. See Massachusetts Comprehensive Health Curriculum Framework, 1999, available at http://www.doe.mass.edu/frameworks/ health/1999/appii.html. See also Bob Hohler, "Boston's schools go lacking in phys-ed," *Boston Globe*, July 2009.

3. See "Clarification of the Massachusetts Physical Education Requirements, April 20, 2000, available at http://www.doe.mass.edu/ news/news.aspx?id=649.

4. Reichert F, Menezes A, Wells J, Dumith S, Hallal P. Physical activity as a predictor of adolescent body fatness: a systematic review. Sports Med. 2009;39(4):279-94.

5. Berkey C, Rockett H, Field A, Gillman M, Frazier A, Camargo C. Activity, dietary intake, and weight changes in a longitudinal study of preadolescent and adolescent boys and girls. Pediatrics. 2000;105(4):e56.

6. Coe, D.P., Ivarnik, J.M., Womack, C., J., Reeves, M.J., & Malina, R.M. (2006) Effects of physical education and physical activity levels on academic achievement in children. *Medicine & Science in Sports and Exercise*, 38, 1515-1519.

7. YRBSS, Massachusetts (2009).

8. Ibid.

9. Please see the Playworks website: http://www.playworks.org/make-recess-count/play/playworks-boston

10. For information on ABC for Fitness see http://www.davidkatzmd.com/abcforfitness.aspx

11. Wangsness, Lisa, and April Simpson. "Lack of Physical Education Weighs Heavily on Many." Boston.com. *Boston Globe*, 30 May 2007. Web. <a href="http://www.boston.com/yourlife/health/children/articles/2007/05/30/lack\_of\_physical\_education\_weighs\_heavily\_on\_many/s.">http://www.boston.com/yourlife/health/children/articles/2007/05/30/lack\_of\_physical\_education\_weighs\_heavily\_on\_many/s.</a>

12. Frank, LD, Andersen M, and Schmid TL. "Obesity Relationships and Community Design, Physical Activity, and Time Spent in Cars," *American Journal of Preventive Medicine* 27:(2) 2004, 87-96. Retrieved from http://www.act-trans.ubc.ca/documents/ajpm-aug04.pdf.

13. According to data from the 2010 "Bicycling and Walking in the United States Benchmarking Report" from the Alliance for Biking & Walking. Retrieved from: http://peoplepoweredmovement.org/site/index.php/site/memberservices/alliance\_2010\_benchmarking\_report\_ information\_findings

14. "Complete Streets Atlas." *National Complete Streets Coalition*. 2011. Retrieved from: http://www.completestreets.org/complete-streets-fundamentals/complete-streets-atlas/.

15. Bell J, Cohen L, and Malekafzali S, editor. "The Transportation Prescription: Bold New Ideas for Healthy, Equitable Transportation Reform in America." The Convergence Partnership. 2009. Retrieved from: http://www.convergencepartnership.org/atf/cf/%7B245a9b44-6ded-4abd-a392-ae583809e350%7D/TRANSPORTATIONRX.PDF.

16. L.M. Besser et al., "Walking to Public Transit: Steps to Help Meet Physical Activity Recommendations," *American Journal of Preventive Medicine* 29 (2005): 273-280.

17. Lipman, B. "A Heavy Load: The Combined House and Transportation Burdens of Working Families" (Washington DC: Center for Housing Policy, October 2006). Retrieved from: http://www.nhc.org/pdf/pub\_heavy\_load\_10\_06.pdf.

18. American Community Survey 2009, at http://factfinder.census.gov

19. See Massachusetts TOD bond program, www.eot.state.ma.us/todbond

20. MassDOT, "Healthy Transportation Compact," available at: http://www.massdot.state.ma.us/main/HealthyTransportationCompact. aspx.

21. "Massachusetts Bicycle Transportation Plan." *MassDOT*. 2008. Retrieved from: http://www.mhd.state.ma.us/default.asp?pgid=../ common/bikes/bike\_tran\_plan.

22. "Accelerated Bridge Program." *MassDOT*. 2011. Retrieved from: http://www.eot.state.ma.us/acceleratedbridges/about\_legislation. htm.

23. "Massachusetts SRTS Program." Safe Routes to School National Partnership. 2009. Retrieved from: http://www.saferoutespartnership.org/state/statemap/massachusetts.

24. Blisard, N., Stewart, H., & Jolliffe, D. (2004). *Low-income households' expenditures on fruits and vegetables* No. Agriculture Information Bulletin 792-5) Economic Research Service, USDA.

25. Moore, L. V., & Diez Roux, A. V. (2006). Associations of neighborhood characteristics with the location and type of food stores. *American Journal of Public Health*, 96(2), 325-331.

26. See U.S. Department of Agriculture, "Farmers Markets and Local Food Marketing" at http://www.ams.usda.gov/AMSv1.0/ams. fetchTemplateData.do?template=TemplateS&navID=WholesaleandFarmersMarkets&leftNav=WholesaleandFarmersMarkets&page=WFMF armersMarketGrowth&description=Farmers%20Market%20Growth&acct=frmrdirmkt

27. "Patrick-Murray Administration Celebrates Massachusetts Farmers' Market Week August 22-28" (press release), August 2010, available at: http://www.mass.gov/?pageID=eoeeapressrelease&L=1&L0=Home&sid=Eoeea&b=pressrelease&f=100819\_pr\_farmers\_mrk\_week&csid=Eoeea.

28. Massachusetts Department of Agricultural Resources, "Massgrown Map," available at: http://massnrc.org/farmlocator/map. aspx?Type=Farmers%20Markets.

29. "Using Your SNAP Benefits at the Farmers' Market," available at: http://www.mass.gov/agr/massgrown/docs/snap-consumer-info. pdf.

30. Ibid.

31. Massachusetts Department of Agricultural Resources, "A New Public Market Is Coming to Boston!," available at: http://www.mass.gov/agr/public-market/index.htm.

32. Lessons from the field: promoting health eating in communities. http://www.activelivingbydesign.org/sites/default/files/HEbD\_Lessons\_from\_communities\_FINAL2.pdf

33. The Food Project, "What We Do," available at: http://thefoodproject.org/what-we-do.

34. Commonwealth Conversations: Transportation, Available at: http://transportation.blog.state.ma.us/blog/2010/05/farmers-markets-are-back.html.

35. Massachusetts Public Health Association, "The Case for a Massachusetts Food Policy Council," available at: http://www.mphaweb. org/documents/CaseforFPC2-pager\_000.pdf.

36. Centers for Disease Control and Prevention, "Food Deserts," available at: http://www.cdc.gov/Features/FoodDeserts/.

37. Treuhaft, S. and Karpyn A. (2010) The Grocery Gap: Who has Access to Healthy Food and Why it Matters. Oakland (CA): Policylink and Food Trust.

38. Powell, LM, Auld C, Chaloupka, FJ, O'Malley, PM, and Johnston, LD. (2007) American Journal of Preventive Medicine, 33(4), S301-S307.

39. Ibid.

40. Kay Lazar, "Shortage of Grocers Plagues Mass. Cities," *The Boston Globe*, March 7, 2011, available at: http://articles.boston. com/2011-03-07/lifestyle/29346935\_1\_grocery-stores-supermarkets-corner-stores/3.

41. See Wholesome Wave, available at: http://wholesomewave.org/.

42. "Patrick-Murray Administration Announces Establishment of Massachusetts Food Policy Council," (press release), April 7, 2011, available at: http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=110407\_food\_policy\_council&csid=Agov3.

43. USDA Office of Communications, "Obama Administration Details Healthy Food Financing Initiative," (press release), February 19, 2010, available at: http://www.hhs.gov/news/press/2010pres/02/20100219a.html.

44. Rudd Center, Fall 2009. Relation between consumption of sugarsweetened drinks and childhood obesity: A prospective, observational analysis."

45. Block, G. (2004). Foods contributing to energy intake in the US: Data from NHANES III and NHANES 1999-2000. *Journal of Food Consumption and Analysis*, 17, 439-447.

46. Vartanian, L. R., Schwartz, M. B., & Brownell, K. D. (2007). Effects of soft drink consumption on nutrition and health: A systematic review and meta-analysis. *American Journal of Public Health*, 97(4), 667-675; Malik, V. S., Schulze, M. B., & Hu, F. B. (2006). Intake of sugar-sweetened beverages and weight gain: a systematic review. American Journal of Clinical Nutrition, 84(2), 274-288.

47. Ludwig, D. S., Peterson, K. E., & Gortmaker, S. L. (2001). Relation between consumption of sugarsweetened drinks and childhood obesity: A prospective, observational analysis. *The Lancet*, 357(9255), 505-508.

48. "Sugar-Sweetened Beverage Taxes and Public Health," A Research Brief, July 2009, Robert Wood Johnson Foundation.

49. Webinar on Soft Drink Taxes, March 9, 2010: http://www.yaleruddcenter.org/. See also NEJM article, Brownell et al http://www.yaleruddcenter.org/resources/upload/docs/what/policy/BenefitsSodaTaxNEJM9.09.pdf.

50. Massachusetts General Law Chapter 64H, Section 6

51. Gleason P, Suitor C. *Children's Diets in The Mid-1990s: Dietary Intake and Its Relationship With School Meal Participation.* Alexandria, VA: US Department of Agriculture Food and Nutrition Service, Office of Analysis Nutrition and Evaluation; 2001.

52. Dishing out healthy school meals. Harvard Pilgrim Health Care Foundation. Retrieved from https://www.harvardpilgrim.org/pls/portal/docs/PAGE/MEMBERS/FOUNDATION/HEALTHYMEALS.PDF

53. Dishing out healthy school meals. Harvard Pilgrim Health Care Foundation. Retrieved from https://www.harvardpilgrim.org/pls/portal/docs/PAGE/MEMBERS/FOUNDATION/HEALTHYMEALS.PDF

54. National School Lunch Program. http://www.doe.mass.edu/cnp/nprograms/nslp.html

55. *Health and Risk Behaviors of Massachusetts Youth, 2007*: The Report (Rep.). (2008, May). Retrieved http://www.doe.mass.edu/ cnp/hprograms/yrbs/2007YRBS.pdf

56. Child Nutrition Reauthorization Healthy, Hunger-Free Kids Act of 2010. (2010 December). Let's Move. Retrieved from http://www. whitehouse.gov/sites/default/files/Child\_Nutrition\_Fact\_Sheet\_12\_10\_10.pdf

57. School Nutrition Bill Fact Sheet. (n.d.). *Massachusetts Public Health Association*. Retrieved from www.mphaweb.org/documents/ SchoolNutritionBillFactSheet7.10.pdf

58. *Dishing out healthy school meals*. Harvard Pilgrim Health Care Foundation. Retrieved from https://www.harvardpilgrim.org/pls/portal/docs/PAGE/MEMBERS/FOUNDATION/HEALTHYMEALS.PDF

59. Centers for Disease Control and Prevention, "Trans Fat," available at: http://www.cdc.gov/nutrition/everyone/basics/fat/transfat.html.

60. Boston Public Health Commission, "The Boston Public Health Commission's Trans Fat Regulation," available at: http://www.bphc. org/programs/cib/chronicdisease/heal/transfat/Forms%20%20Documents/transfat\_english.pdf.

61. U.S. Department of Agriculture and U.S. Department of Health and Human Services, "Dietary Guidelines for Americans 2010," available at: http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf.

62. American Heart Association, "Trans Fats," available at: http://www.heart.org/HEARTORG/GettingHealthy/FatsAndOils/Fats101/ Trans-Fats\_UCM\_301120\_Article.jsp.

63. McGreevy, P. (2008, July 26). State bans trans fat. Los Angeles Times. Retrieved from http://articles.latimes.com/2008/jul/26/local/ me-transfat26

64. Carey Goldberg, "Bid to Ban Trans Fat Statewide Gets a Boost," *The Boston Globe*, August 21, 2008, available at: http://www.boston.com/news/local/articles/2008/08/21/bid\_to\_ban\_trans\_fat\_statewide\_gets\_a\_boost/.

65. Rush, M. Bill S01164. 187th General Court of the Commonwealth of Massachusetts. Retrieved from http://www.malegislature.gov/ Bills/187/Senate/S01164

66. See Baicker K, Cutler D, Song Z. Workplace wellness programs can generate savings. Health Affairs 29, No 2 (2010); also comments from Mercer Health to Massachusetts Division of Insurance , May 2010 (Mercer's National Survey of Employer-Sponsored Health Plans and the HERO Employee Health Management Best Practice Scorecard).

67. These organizations include the National Committee on Quality Assurance (NCQA), the Utilization Review Accreditation Committee (URAC), and the American College of Occupational and Environmental Medicine. The aforementioned analysis conducted by Mercer Health Care for the Massachusetts Division of Insurance included analysis of standards developed by the Health Enhancement Research Organization (HERO) for HERO's ongoing" HERO Scorecard" of best practices among major U.S. firms.

68. For a recent summary see Henke R, Goetzel R, McHugh J, Isaac F. Recent experience in health promotion at Johnson & Johnson: lower health spending, strong return on investment. Health Affairs 30, No. 3 (2011): 490-499

69. Examples include Fidelity, Raytheon, AstraZeneca, Saint Gobain, General Electric and John Hancock.

70. EMC trials have included partnership with Boston University to test the DASH diet for hypertension treatment, and partnership with the Center for Connected Health of Partners HealthCare to test the Smart Beat home monitoring technology for hypertension control. See Moore TJ, Alsabeeh N, Apovian CM, Murphy MC, Coffman GA, Cullum-Dugan D, Jenkins M, Cabral H. Weight, blood pressure, and dietary benefits after 12 months of a Web-based Nutrition Education Program (DASH for health): longitudinal observational study. J Med Internet Res. 2008 Dec 12;10(4):e52; also Center for Connected Health, "SmartBeat hypertension self-management program named New England's Best Benefits Practice," January 10, 2010; accessed at http://www.connected-health.org/media-center/announcements/ smartbeat-hypertension-self-management-program-named-new-england's-best-benefits-practice.aspx

71. For information see http://www.mass.gov/?pageID=eohhs2terminal&L=5&LO=Home&L1=Consumer&L2=Prevention+and+Welln ess&L3=Wellness+Unit&L4=Programs+and+Initiatives&sid=Eeohhs2&b=terminalcontent&f=dph\_com\_health\_wellness\_unit\_c\_about\_ worksite\_wellness\_program&csid=Eeohhs2

72. In FY 2011 dollars, spending for the MA Department of Public Health totaled \$ 756,337 in FY 2001, \$596,321 in FY2008, and \$502,932 in FY2011. Data calculated by NEHI from the Budget Browser of the Massachusetts Budget and Policy Center.

73. See outline of Boston Public Health Commission Obesity Prevention Program at http://www.bphc.org/programs/cib/cppw/ Forms%20%20Documents/CPPW%20Program%20Fact%20Sheets.pdf

74. See Bielaskza-DuVernay C. Vermont's Blueprint For Medical Homes, Community Health Teams, And Better Health At Lower Cost. Health Affairs. March 2011

75. The Mass in Motion campaign has created an evidence-based worksite wellness program for participating businesses; adopted BMI reporting standards for public schools; funded community-based health and fitness strategies in 10 communities throughout the state; and expanded access to farmers' markets for low income residents. See http://www.mass.gov/massinmotion/

76. See Trust for America's Health, " Investing in America's Health," March 2011

77. Goodman DC, Grumbach K. Does having more physicians lead to better health system performance? *JAMA*. 2008;299(3):335-337. doi: 10.1001/jama.299.3.335

78. Massachusetts Division of Health Care Finance and Policy. February 2010. Health care in Massachusetts: Key indicators. Retrieved from http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/10/key\_indicators\_feb\_10.pdf

79. Massachusetts Division of Health Care Finance and Policy. Primary Care in Massachusetts: An Overview of Trends and Opportunities. July 2010. Retrieved from http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/10/primary\_care\_report\_in\_massachusetts\_fact\_sheet.pdf

80. Massachusetts Division of Health Care finance and Policy, July 2010, op cit.

81. Ibid Also see "Study: Longer wait on Cape for primary care doctor," Cynthia McCormick, Cape Cod Times, May 19, 2011

82. Meyer H. A New Care Paradigm Slashes Hospital Use And Nursing Home Stays For The Elderly And The Physically And Mentally Disabled, Health Aff March 2011 vol. 30 no. 3 412-415.

83. Massachusetts Division of Health Care Finance and Policy, February 2010, op cit

84. Boodman, S. G. (2011, March 1). Helping Patients Understand Their Medical Treatment. *Kaiser Health News*. Retrieved from http://www.kaiserhealthnews.org/Stories/2011/March/01/Health-Literacy-Understanding-Medical-Treatment.aspx

85. Peterson P, et al. Health literacy and outcomes among patients with heart failure. *JAMA*. 2011;305(16):1695-1701.

86. Nielson-Bohlman L, Panzer A, Kindig D. 2004. *Health Literacy: A Prescription to End Confusion*. National Academy Press, Washington D.C.

87. Baker DW, Parker RM, Williams MV, Clark WS. 1998. "Health Literacy and the Risk of Hospital Admission." *Journal of General Internal Medicine*. 13(12): 791-798.

88. Agency for Healthcare Research and Quality. "Low Health Literacy Linked to Higher Risk of Death and More Emergency Room Visits and Hospitalizations." (2011, March 28). Retrieved from http://www.ahrq.gov/news/press/pr2011/lowhlitpr.htm

89. Boodman, S. G. (2011, March 1). Helping Patients Understand Their Medical Treatment. *Kaiser Health News*. Retrieved from http://www.kaiserhealthnews.org/Stories/2011/March/01/Health-Literacy-Understanding-Medical-Treatment.aspx.

90. Boodman, S. G. (2011, March 1). Helping Patients Understand Their Medical Treatment. *Kaiser Health News*. Retrieved from http://www.kaiserhealthnews.org/Stories/2011/March/01/Health-Literacy-Understanding-Medical-Treatment.aspx

91. National Assessment of Adult Literacy. State and County Estimates. 2003. Retrieved from: http://nces.ed.gov/naal/estimates/ StateEstimates.aspx

92. Vernon, J., Trujillo, A., Rosenbaum, S., & DeBuono, B. (2007). *Low Health Literacy: Implications for National Health Policy* (Rep.). University of Connecticut.

93. Council of State Governments (CSG). "State Profiles" Retrieved from: http://www.csg.org/knowledgecenter/docs/ SOG02HealthLiteracy.PDF

94. Boodman, S. G. (2011, March 1). Helping Patients Understand Their Medical Treatment. *Kaiser Health News*. Retrieved from http://www.kaiserhealthnews.org/Stories/2011/March/01/Health-Literacy-Understanding-Medical-Treatment.aspx

95. Background information on the National Action Plan to Improve Health Literacy at www.health.gov/communication/hlactionplan

96. National Heart Lung and Blood Institute, "Calculate Your Body Mass Index," available at: http://www.nhlbisupport.com/bmi/.

97. Melissa Healy, "BMI Might Not Tell the Whole Truth," *Los Angeles Times*, available at: http://articles.latimes.com/2011/apr/17/ health/la-he-BMI-20110417.

98. Linda Carroll, "Bye-bye BMI? Tape May Measure Obesity Better," available at: http://www.msnbc.msn.com/id/14483512/ns/health-fitness/.

99. CDC, "About BMI for Children and Teens," available at: http://www.cdc.gov/healthyweight/assessing/bmi/childrens\_bmi/about\_ childrens\_bmi.html.

100. Behavioral Risk Factor Surveillance Survey Massachusetts, 2009: http://www.mass.gov/Eeohhs2/docs/dph/behavioral\_risk/report\_2009.pdf

101. The Status of Childhood Weight in Massachusetts, 2009, Essential School Health Services Program, Massachusetts Department of Public Health. September 2010.

102. Yale Rudd Center for Food Policy & Obesity, "BMI Reporting," available at: http://www.yaleruddcenter.org/what\_we\_ do.aspx?id=164.

103. Richard Bergman, et al. "A better Index of Body Adisposity," *Obesity*, available at: http://www.nature.com/oby/journal/v19/n5/abs/ oby201138a.html.

104. Ibid.

105. Massachusetts Department of Public Health, "Body Mass Index (BMI) Regulation," available at: http://www.mass.gov/?pageID=eoh hs2terminal&L=5&L0=Home&L1=Consumer&L2=Prevention+and+Wellness&L3=Wellness+Unit&L4=Policies+and+Legislation&sid=Eeoh hs2&b=terminalcontent&f=dph\_com\_health\_wellness\_unit\_c\_bmi\_regulation&csid=Eeohhs2.

106. Cambridge Public Schools, "Cambridge Public Schools Healthy Children Initiatives," available at: http://www.cpsd.us/web/HPEA/ CPS-HealthyChild.pdf.

107. WHO I Health Impact Assessment. (2011). Retrieved from http://www.who.int/hia/en/.

108. CDC - Healthy Places - Health impact assessment (HIA). (2011). *Centers for Disease Control and Prevention*. Retrieved from http://www.cdc.gov/healthyplaces/hia.htm.

109. The Robert Wood Johnson Foundation. (2010). *Health Impact Assessment: Bringing Public Health Data to Decision Making, December 2010* (Issue brief). Pew Charitable Trusts. Retrieved from: http://www.healthimpactproject.org/resources/policy/file/health-impact-assessment-bringing-public-health-data-to-decision-making.pdf.

110. See background at UCLA Health Impact Assessment Clearinghouse, at http://www.hiaguide.org/hia/child-health-impact-assessment-massachusetts-rental-voucher-program

111. The Robert Wood Johnson Foundation. (2010). *Health Impact Assessment: Bringing Public Health Data to Decision Making*, December 2010 (Issue brief). Pew Charitable Trusts. Retrieved from: http://www.healthimpactproject.org/resources/policy/file/health-impact-assessment-bringing-public-health-data-to-decision-making.pdf.



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