Commonwealth of Massachusetts
Office of the State Auditor
Suzanne M. Bump
Making government work better

Official Audit Report – Issued September 26, 2014

An Examination of the Programs and Initiatives for Addressing Childhood Obesity and Promoting Nutrition Standards

For the period July 1, 2009 through June 30, 2013

Commonwealth of Massachusetts
Office of the State Auditor
Suzanne M. Bump
Making government work better

September 26, 2014

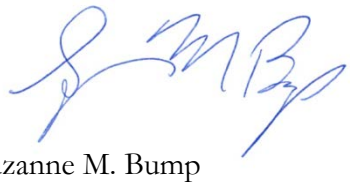
Cheryl Bartlett, Commissioner
Department of Public Health
250 Washington Street
Boston, MA 02108

Dear Commissioner Bartlett:

I am pleased to provide this performance audit of the Commonwealth's programs and initiatives for addressing childhood obesity and promoting nutrition standards. This report details the audit objectives, scope, methodology, findings, and recommendations for the audit period, July 1, 2009 through June 30, 2013. My audit staff discussed the contents of this report with management of the Departments of Public Health, Agricultural Resources, and Elementary and Secondary Education, and their comments are reflected in this report.

I would also like to express my appreciation to all three departments for the cooperation and assistance provided to my staff during the audit.

Sincerely,



Suzanne M. Bump
Auditor of the Commonwealth

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EXECUTIVE SUMMARY

This audit concerns the programs and initiatives for addressing childhood obesity and promoting nutrition standards in the Commonwealth. Obesity rates in Massachusetts and the nation have risen significantly in recent decades. Nearly a quarter of adults in the Commonwealth were reported to be obese in 2012.[1] This level is projected to rise to encompass almost half of adults in Massachusetts by 2030 if current trends continue. Childhood obesity, in particular, has become an increasing problem. Within Massachusetts, 155,000 children under the age of 18 (10.6%) are obese, and an additional 203,000 (14%) are overweight. Childhood obesity has placed thousands of children at higher risk of serious physical health problems such as type 2 diabetes, cardiovascular disease, and asthma, as well as psychological issues including depression.[2] Based on these facts, the Commonwealth and its citizenry need to continue to work collaboratively to combat childhood obesity to reduce the incidence of serious health issues for children as well as the related healthcare costs.

The Commonwealth has begun addressing the problem of childhood obesity through various laws, regulations, programs, and initiatives. First, the state's Department of Public Health (DPH) has taken action to combat childhood obesity by (1) promulgating 105 Code of Massachusetts Regulations (CMR) 225 to implement school nutrition standards and student growth and development screenings commonly referred to as body mass index (BMI) testing and (2) providing funding and oversight for community wellness programs intended to improve the health and welfare of children and adults. The majority of DPH's efforts to reduce childhood obesity are concentrated in the Commonwealth's Mass in Motion (MIM) initiative. Second, Chapter 71, Section 3, of the Massachusetts General Laws requires that public schools include physical education (PE) as a mandatory subject for all students in all grades. The Massachusetts Department of Elementary and Secondary Education is responsible for ensuring compliance with this law. Third, the Massachusetts Department of Agricultural Resources (MDAR) has provided funding to local farmers' markets to create opportunities for Supplemental Nutrition Assistance Program (SNAP) recipients to purchase healthy food for their families.

In accordance with Chapter 11, Section 12, of the General Laws, the Office of the State Auditor (OSA) conducted a performance audit that examined the Commonwealth's efforts to address childhood obesity and promote improved nutrition and wellness for children and adults. Our audit objectives included determining whether public schools (1) tested students' BMI as required by 105

CMR 200.500; (2) offered students competitive foods* and beverages in accordance with 105 CMR 225.000; and (3) met state PE requirements detailed in Chapter 71, Section 3, of the General Laws. In addition, we sought to determine whether funding provided by DPH to 52 MIM cities and towns to combat childhood obesity and improve health and wellness was properly spent and whether DPH provided program guidance and monitored the activities of these 52 MIM cities and towns to help ensure positive outcomes. Lastly, our objectives included determining whether local farmers' markets sought out and used available state funds to purchase point-of-sale (POS) terminals needed in order to accept Electronic Benefit Transfer (EBT) from SNAP recipients and to make healthy food choices more accessible to lower-income families.

During our audit period, public schools performed the required student BMI testing; however, some public schools had not given guardians an opportunity to opt out of the testing or provided them with a "Physician Post-Screening Notification Letter" for children with BMIs below the 5th or above the 85th percentile. Further, some school districts had not reported aggregate BMI results to DPH as required. However, we did find that the public schools we surveyed offered students competitive foods and beverages in accordance with 105 CMR 225.000 and provided PE for students in accordance with state requirements. In addition, funding provided to cities and towns for combating childhood obesity and improving health and wellness was properly spent, and DPH provided guidance and monitored the activities of these cities and towns to help ensure positive outcomes. Finally, we found that certain local farmers' markets did not pursue available state funds to purchase POS terminals needed in order to accept EBT from SNAP recipients.

Although the Commonwealth, through its state agencies and public schools, has taken significant measures to address the problem of childhood obesity, OSA believes that more can be done, including expanding community-based recreational opportunities for children and standardizing PE time within public schools to meet national standards.

Our specific audit findings are detailed below.

Summary of Findings

- In large part, during our audit period, public schools complied with state requirements regarding the implementation of school nutrition regulations, BMI screening, and PE requirements.

* "Competitive foods" is a term used to describe foods and beverages that generally compete with school meal programs. Competitive foods are sold through vending machines, à la carte cafeteria lines, school stores, and other venues.

However, certain public school districts did not report BMI results to DPH, adopt policies for administration of BMI testing, or ensure that guardians were given an opportunity to opt out on behalf of their children. In addition, although all schools that we surveyed complied with the current state law on PE, there are no state requirements regarding the frequency and duration of PE. As a result, the PE practices of the schools we reviewed varied, and none met national PE guidelines.

- DPH is properly administering federal funds to combat childhood obesity and promote overall health and wellness within local communities. Specifically, during the audit period, DPH received over $22 million from the Centers for Disease Control and Prevention (CDC) and, through the MIM initiative, used these funds to support local community efforts to improve the health and wellness of children and adults.

- Some farmers' markets have embraced the use of SNAP benefits that give citizens the opportunity to purchase healthy locally grown produce and other fresh food products that aid in combating childhood obesity. Others have resisted because of financial and administrative concerns. MDAR properly administered $50,000 in initial funding from the Massachusetts Department of Transitional Assistance (DTA) to accept SNAP funds at farmers' markets. MDAR used these funds to help farmers' markets pay for purchases or rentals of POS terminals, POS transaction fees, food-stamp incentives, and outreach. Based on the initial success of the SNAP farmers' markets' initiative, the U.S. Department of Agriculture (USDA) gave MDAR an additional $80,000[†] grant through DTA in early 2012. However, at the time of our audit, few new Massachusetts farmers' markets chose to participate in the SNAP initiative and only $10,625 had been spent. Local farmers cited program barriers such as staffing and accounting needs and high transaction fees as reasons for not participating in the program.

Recommendations

- DPH should collaborate with certain local school districts to ensure that they comply with 105 CMR 200.500 by reporting BMI aggregate data to DPH, adopting BMI administration policies, and giving children's guardians the opportunity to opt out of the BMI program on behalf of their children.

- DPH should reconsider its policy requiring school nurses to notify physicians of student BMI measurements through students' guardians. This requirement is costly to schools, and it is redundant because physicians already measure, and take note of, the weight and height of their student patients.

- DPH should continue to collaborate with local, state, and federal entities to develop, implement, monitor, and support programs designed to combat obesity and improve the health and wellness of the Commonwealth's citizenry.

- MDAR should continue working with USDA to resolve any barriers to SNAP participation at farmers' markets. For example, the USDA funding could be used for EBT training for farmers, additional staffing during market hours, reimbursement of farmers' markets for transaction fees,

[†] The USDA initially allocated $120,000 to Massachusetts. However, USDA then asked states what amount they thought they could realistically use. MDAR informed DTA and USDA that the agency could use up to $80,000 based on the funding restrictions on the grant.

and outreach to SNAP participants. Failure to mitigate the current barriers could impede further expansion of SNAP sales at farmers' markets.

- The Legislature should consider amending Chapter 71, Section 3, of the General Laws to ensure consistent durations of PE throughout the Commonwealth's public schools. The Commonwealth could consider adopting the Surgeon General's recommended 30 minutes of physical activity per school day for all students and the National Association for Sport and Physical Education's recommended 30 minutes of physical activity per school day for elementary-school students and 45 minutes for middle- and high-school students. Public schools could achieve these daily recommended levels of physical activity for children by instituting school-based programs that include mandatory PE class durations and classroom activity breaks.

- In order for communities to provide additional recreational opportunities for children, funding for staffing, maintenance, security, and liability insurance must become available. Funding could be addressed at the state and local levels, directed toward communities with children that have the greatest health risks. The Legislature could set aside a portion of the state funds recovered through Medicaid investigations conducted by the State Auditor, Attorney General, and Inspector General. For example, for the period March 15, 2013 through March 14, 2014, OSA identified over $6 million in potential recoupments from MassHealth service providers. These funds were originally intended for the health and welfare of the Commonwealth citizenry and should be repurposed in this vein. Similarly, the Legislature could amend state law to allow individuals to donate toward fighting childhood obesity through a voluntary check-off program on state income tax returns; establish a special license plate under Chapter 90, Section 2F, of the General Laws, and direct funding from the sale of these plates toward this effort; and designate a portion of the Prevention and Wellness Trust Fund grants for local recreational activities. Additionally, local communities could help fund these efforts by seeking in-kind donations, public and private grants, and volunteers to staff local recreational facilities.

- Currently, candy and soda are considered food and are exempt from the Commonwealth's 6.25% sales tax. According to the Department of Revenue, removing this current sales tax exemption would raise about $53 million a year for the Commonwealth Health and Prevention Fund. Should legislation be passed to remove the current sales tax exemption, a portion of the revenue generated could be used to support physical activity programs in and out of schools. Massachusetts is one of only 16 states (see Appendix B) that do not impose a sales tax on soda.

Post-Audit Period

In response to parents' and guardians' complaints that take-home letters used by schools to report BMI results to families caused bullying and stigmatization of children, DPH proposed amendments to 105 CMR 200.000. DPH reported to the Massachusetts Public Health Council that BMI testing information is critical to understanding childhood obesity in Massachusetts and allows DPH to develop strategies to prevent and reduce childhood obesity. However, DPH explained that experience in Massachusetts and other states, as well as recent research, has found no significant correlation between guardian notification and reducing childhood obesity. Additionally, DPH noted that schools have found processing these letters to be a financial burden; that the letters did not

seem to lead to improved obesity rates; and that the requirement has produced other adverse consequences, including stigmatization and bullying. A public hearing was held as scheduled on October 16, 2013. The council voted nine to one to amend the regulation to remove the guardian notification requirement. DPH will continue to gather childhood-obesity data to inform policy decisions.

OVERVIEW OF OBESITY WITH EMPHASIS ON CHILDREN

Background

The Centers for Disease Control and Prevention (CDC) defines an overweight adult as a person with a body mass index (BMI) between 25 and 29.9. Adults with a BMI greater than 30 are considered obese.[3] The CDC estimated that within the United States, 35.9% of adults were obese during 2009–2010. In addition, the CDC estimated that medical costs associated with adult obesity alone were $147 billion in 2008.[4] By the year 2018, 120 million Americans are expected to suffer from obesity.[5]

For the most part, BMI calculations are based upon an individual's height and weight. However, for children under the age of 20, height and weight calculations are not as accurate as they are for adults, as children's body fat percentages change as they grow. Therefore, unlike adult BMI, which is based solely on height and weight, a child's or adolescent's BMI has additional variables, including the child's age and gender. BMI for children and adolescents is reflected in percentiles and grouped into weight categories as detailed below:

- Underweight: below the 5th percentile
- Healthy Weight: 5th percentile up to the 85th percentile
- Overweight: 85th percentile up to the 95th percentile
- Obese: 95th percentile or higher

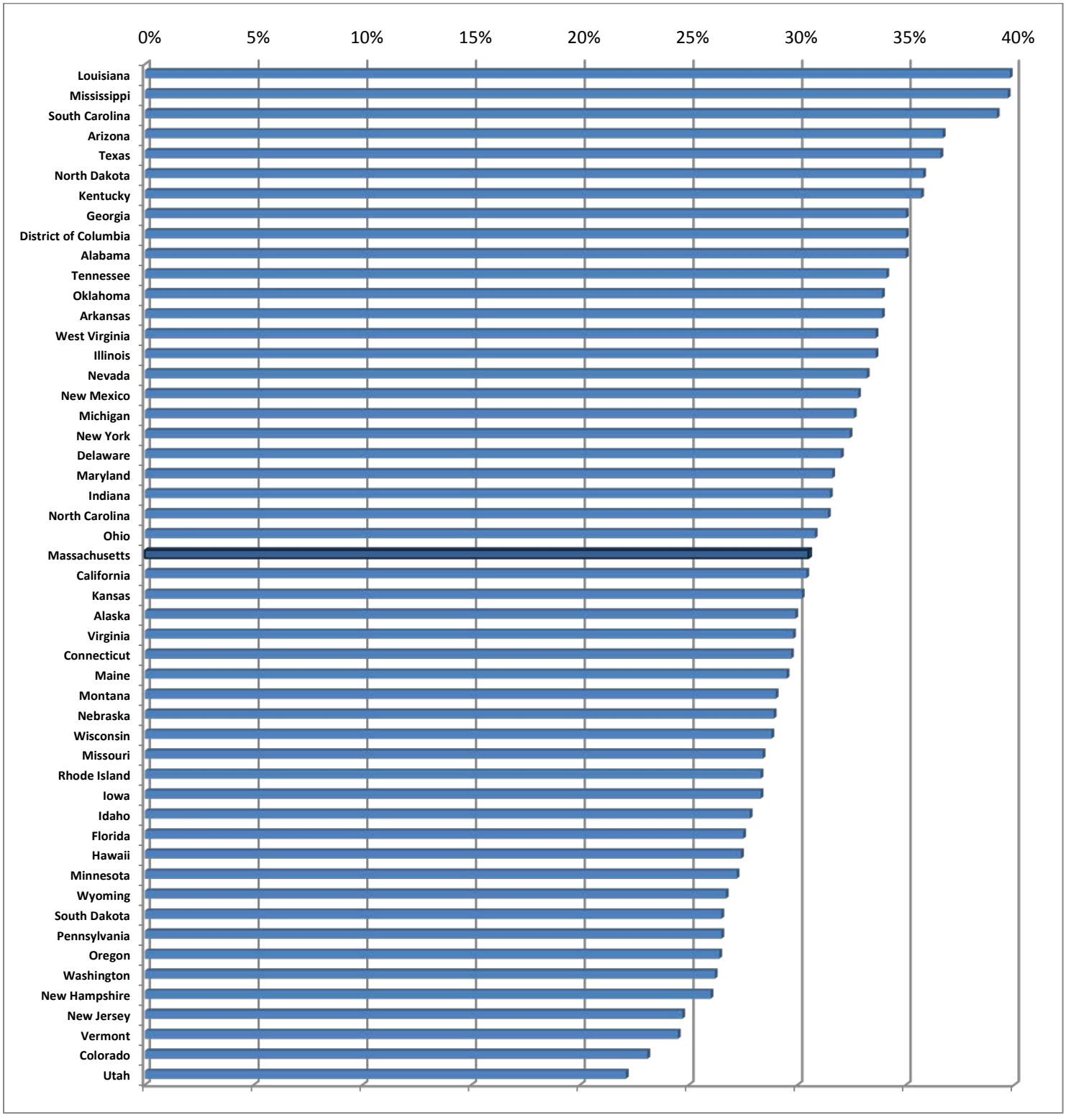
For example, a 7-year-old girl with a 75th-percentile BMI has a higher BMI than 75 out of 100 7-year-old girls from a reference population established in 1977. Although one might think that meant she was overweight, she is actually considered to be at a healthy weight. Based on national CDC 2009–2010 estimates, 18.4% of adolescents aged 12 through 19 years, 18% of children aged 6 through 11 years, and 12.1% of children aged 2 through 5 years[6] have been identified as obese. Childhood obesity has become much more common and has nearly tripled nationwide since 1980.[7] In June 2013, the American Medical Association resolved that obesity should be considered a disease.

Obesity rates in Massachusetts have risen significantly in recent decades, doubling between 1990 and 2007. By 2012,[8] approximately 22.9% of adults in the Commonwealth were reported as obese. This level is projected to rise to almost half of adults in Massachusetts by 2030 if the current trend

continues.[9] As to Massachusetts children, 9.9% of high school students and 14.5% of children aged 10 through 17 years were determined to be obese in 2011. Of particular note, 16.4% of children aged 2 through 4 years from low-income families were already identified as obese during 2012.[10] These high rates of obesity place thousands of Massachusetts children at an elevated risk of serious physical health problems such as type 2 diabetes, cardiovascular disease, and asthma, as well as psychological issues including depression.[11]

According to CDC data, 47 states have adult obesity rates higher than that of Massachusetts, yet for childhood obesity, Massachusetts's position is less impressive. Specifically, 31% of the Commonwealth's children aged 10 through 17 years are overweight or obese. This makes Massachusetts's childhood-obesity rate the 25th highest among the 50 states for this age group, as illustrated in the following chart.

PERCENT OF CHILDREN (10–17) WHO WERE OVERWEIGHT AND OBESE AS OF 2011

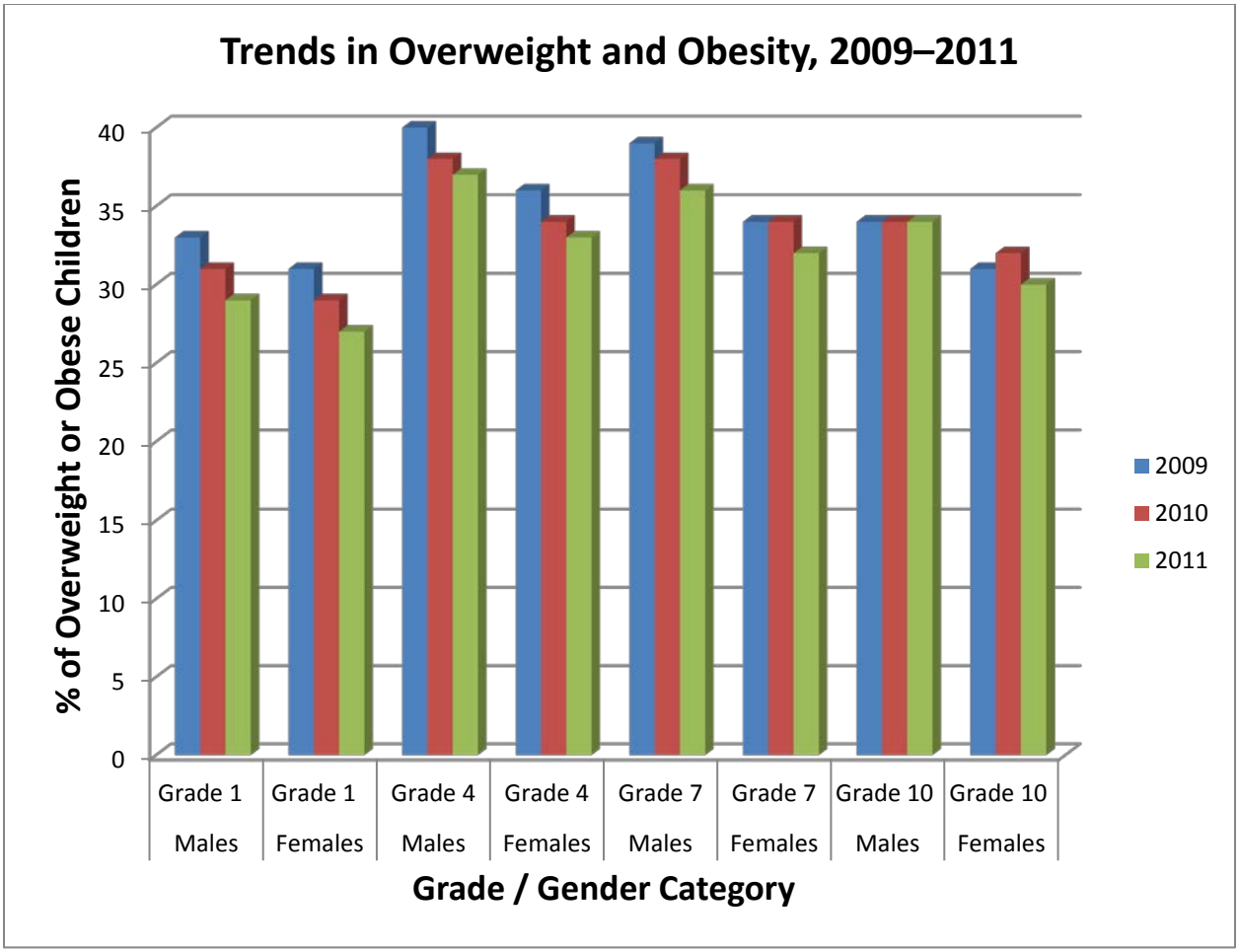


Source: Trust for America's Health, 2011 National Survey of Children's Health

Factors Influencing Childhood Obesity

Many factors have contributed to the rising levels of childhood obesity over the past decades. Most studies have shown that people today generally eat more less-nutritious food than healthy food. For example, a 2010 White House task force on childhood obesity noted that Americans consume more fast food and sugar-sweetened beverages and eat outside the home more frequently than in previous years, contributing to the national problem of childhood obesity.[12] Another study found that increased caloric intake is primarily responsible for adult weight gain in developed countries.[13] Among adolescents, it has been noted that, in recent years, 13% of daily caloric intake for 12-to-19-year-olds comes from sugar-sweetened beverages.[14] In Massachusetts, only 15% of middle- and high-school students report consuming the recommended five or more servings of fruits and vegetables daily.[15]

Although childhood obesity has reached a concerning level, the CDC reported in January 2011 that the rate of increase slowed nationally from 2000 to 2010 and may be leveling off. Similarly, in October 2013, the Massachusetts Department of Public Health (DPH) reported a significant drop in the percentage of the Commonwealth's public-school students who were overweight or obese over the five years since 2007, suggesting that the childhood-obesity epidemic may be receding. DPH's data showed that the percentage of overweight or obese students dropped 3.7 percentage points during the five years from 2009 to 2013 and that this decline affected approximately 75% of school districts and was greatest among elementary-school students.[16] The graph below illustrates the trend in overweight and obese students as outlined by DPH's data for students in 1st, 4th, 7th, and 10th grades, by gender, in the 2009–2011 school years.



DPH believes that these recent results demonstrate a positive trend and underscore the potential effectiveness of investing in initiatives such as Mass in Motion (MIM) as a way of addressing the obesity problem.

Socioeconomic Barriers

Based on national studies, African-American and Hispanic students are more likely to be overweight than their white peers. Also, low-income children and adolescents are more likely to be overweight or obese than their higher-income counterparts. For example, in testimony before the subcommittees on Health and on Oversight and Investigations and the committee on Energy and Commerce in the U.S. House of Representatives on December 19, 2009, Dr. William H. Dietz, MD, PhD, Director, Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, CDC, noted,

> *There are disparities by race, ethnicity, and socioeconomic status in the prevalence of childhood obesity. In 2008, 14.6 percent of low-income, preschool-aged children were obese compared to approximately 10 percent of those from moderate- to high-income families. Among males aged 12 to 19, 22.1 percent of Mexican Americans were obese, 18.5 percent of non-Hispanic blacks were obese, and 17.3 percent of non-Hispanic whites were obese. Among females aged 12 to 19 years, obesity prevalence was higher among non-Hispanic Blacks (27.7 percent) and Mexican Americans (19.9 percent) compared to non-Hispanic whites (14.5 percent).*[17]

Within the Commonwealth, one of the likely causes of low-income individuals composing a high percentage of the obese population may be food insecurity. Household food security exists when all members, at all times, have access to enough food for an active, healthy life.[18] Individuals who are food secure do not live in hunger or fear of starvation.[19] Food insecurity, on the other hand, is a situation of "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."[20]

Recent research indicates that "55 percent of Hispanics, 35 percent of Blacks, and 27 percent of whites indicated that buying more fruits and vegetables would be difficult on their budgets."[21] Not surprisingly, nutritious food has become much more expensive in recent years. Between 2005 and 2011, the consumer price index for food increased 14.5%.[22] In Massachusetts, almost 12% of households struggled with hunger in the years 2010–2012.[23] Adults without food security may compromise quality for quantity and therefore eat foods that are higher in calories and lower in nutritional value and cost, resulting in higher levels of obesity.

Physical Education Barriers

Although Massachusetts ranks 25th in the percentage of children aged 10 through 17 years who are overweight or obese, it ranks near the bottom nationally for percentage of middle-school students engaged in the recommended 60 minutes of physical activity daily according to the New England Healthcare Institute's 2013 report card.[24] Physical activity for this report is defined as any kind of physical activity that increases the heart rate and makes the participant breathe hard some of the time. In 2011, among Massachusetts middle-school students,

- 63% were not physically active for 60 minutes per day for at least 5 days per week as recommended by the New England Healthcare Institute;
- 37% reported walking, biking, rollerblading, or skateboarding to or from school on at least one day during the school week, and only 19% reported using these transportation modes each school day;
- 26% reported watching three or more hours of TV on school days;

- 28% reported playing three or more hours of video games on school days.[25]

In addition, 57% of Massachusetts high-school students were not meeting the recommended 60-minute physical activity level as of 2011,[26] and only 18% of Commonwealth schools offered daily gym classes as of 2010, compared to 30% nationwide.[27]

Health Effects

Being overweight or obese leads to a host of debilitating, costly, and sometimes deadly diseases, including musculoskeletal disorders, age-related loss of vision, high blood pressure, type 2 diabetes, heart disease, and some cancers.[28] A number of studies have even linked weight problems to psychological disorders such as depression and poor performance in school.[29] Overall, maladies associated with excess weight are rapidly becoming the leading causes of preventable death in the Commonwealth. Moreover, while the medical conditions associated with obesity once tended to appear later in life, this is changing, with many chronic conditions such as type 2 diabetes being diagnosed in teenagers and coronary heart disease stemming from adolescent obesity appearing in young adults.

Costs

The increased levels of obesity are also an important factor in burgeoning healthcare costs for employers, consumers, and taxpayers. Nationally, medical spending attributable to obesity is estimated to have been $147 billion in 2008.[30] These costs are for direct medical care, including preventive, diagnostic, and treatment services. Healthcare costs for overweight children average $200 more each year than costs for their healthy-weight counterparts.[31] Indirect costs associated with obesity, such as wages lost due to sickness such as cardiovascular disease, were estimated to be $42.8 billion in 2010.[32] In 2011, total obesity-related costs in Massachusetts were estimated at more than $1.8 billion annually, approximately 5% of the total amount of money spent on healthcare.[33]

Commonwealth's Response

Massachusetts has taken steps to address the obesity epidemic. For example, in 2007, the Commissioner of DPH convened a task force of community leaders, the Commissioner's Obesity Task Force, to advise DPH in developing a workable state action plan to deal with obesity. The resultant DPH State Obesity Action Plan (Mass in Motion: A Call to Action) codified many

programs, policies, and practices already in place to combat overweight and obesity. The task force hopes to reduce obesity and promote wellness, particularly healthy eating and physical activity.

In 2009, DPH launched the MIM statewide obesity prevention initiative. This multifaceted initiative includes a public information campaign as well as grants, programs, and regulatory changes addressing obesity in local communities, at workplaces, within the childcare setting, and in schools. For example, legislation promoted by the Governor, enacted by the Legislature in 2009, and promulgated by DPH (105 Code of Massachusetts Regulations [CMR] 200.500) required that public-school students in 1st, 4th, 7th, and 10th grades have their BMI tested to track student wellness. According to DPH, reporting of test results is an important step toward measuring trends among overweight and obese children. The MIM initiative comprises the following:

- A statewide wellness public information campaign.
- A MIM website to promote healthy eating, increase physical activity, and involve people in making their communities healthier.
- Executive Order 509, which requires state agencies that purchase large quantities of food to follow specific nutritional standards.
- The expansion of DPH's worksite wellness program.
- A Municipal Wellness and Leadership Grants Program, which provides grant funding and technical assistance to communities for community-based obesity prevention efforts. As of 2011, this program funded 33 MIM programs covering 52 Massachusetts cities and towns (33% of the state population).
- Administration of a Childhood Obesity Research Demonstration grant from the CDC to develop a series of pilot programs specifically targeting obesity prevention for children aged 2 through 12 years.
- Massachusetts Children at Play, a childcare program that improves nutrition and physical activity policies and practices in preschool settings.
- The regulation 105 CMR 215.100(B)(1), which requires that district school wellness committees annually "recommend and/or review district-wide policies to promote student wellness, such as those addressing health education and services, school nutrition, the nutrition environment, physical education, and opportunities for physical activity around the school environment."
- The regulation 105 CMR 225, which specifies nutrition standards for competitive foods and beverages for students in public schools.

AUDIT OBJECTIVES, SCOPE, AND METHODOLOGY

In accordance with Chapter 11, Section 12, of the Massachusetts General Laws, the Office of the State Auditor (OSA) has conducted a performance audit of certain programs and initiatives that the Commonwealth has established to address childhood obesity and to promote nutritional standards for the period July 1, 2009 through June 30, 2013.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Our audit focused on current state initiatives for reducing childhood obesity and improving nutrition. Our first objective was to determine whether public schools were complying with laws and regulations on nutrition, physical education (PE), and body mass index (BMI) testing of certain schoolchildren. Specifically, we determined whether selected schools were complying with (1) 105 Code of Massachusetts Regulations (CMR) 225; (2) Chapter 71, Section 3, of the General Laws; and (3) 105 CMR 200.500.

Our second objective was to review the effectiveness of certain Mass in Motion (MIM) programs in combating childhood obesity. During our audit period, through the MIM initiative, the Massachusetts Department of Public Health (DPH) awarded federal Community Transformation Grants (CTGs),[‡] totaling almost $15 million, to cities and towns for community wellness initiatives. In addition, a total of $7 million in a Centers for Disease Control and Prevention (CDC) Childhood Obesity Research Demonstration (CORD) grant was awarded to Fitchburg and New Bedford to develop a series of pilot programs targeting obesity prevention for children aged 2 through 12 years. We examined these funds to determine whether they were used in accordance with grant terms and conditions.

Our third objective was to determine whether a $50,000 grant from the Massachusetts Department of Transitional Assistance (DTA), administered through the Massachusetts Department of

[‡] CTGs are funded by the Affordable Care Act's Prevention and Public Health Fund. The CDC supports and enables awardees to design and implement community-level programs that prevent chronic diseases such as cancer, diabetes, and heart disease.

Agricultural Resources (MDAR), increased access to, and use of, farmers' markets by Supplemental Nutrition Assistance Program (SNAP) participants. For all three objectives, OSA engaged a wide range of private- and public-sector stakeholders to identify additional opportunities for policy development with regard to childhood obesity prevention in Massachusetts.

To review public schools' compliance with 105 CMR 200.225; 105 CMR 200.500; and Chapter 71, Section 3, of the General Laws, we used US Census data from 2010 that identified median household income for each of the 351 municipalities in the Commonwealth. We selected the top 40 municipalities, bottom 40 municipalities, and median 40 municipalities according to median household income. We then determined the county and school district for each municipality and selected 20 school districts from each income grouping for a total of 60 schools. Our sample consisted of 20 high schools, 20 middle schools, and 20 elementary schools throughout the Commonwealth. We selected our sample based on demographic, geographic, and BMI statistical criteria. We then developed an electronic survey that was administered to our judgmental sample of 60 schools (listed in Appendix A), of which we also visited 30. The 30 schools visited were selected to ensure maximum geographic coverage of the Commonwealth and equal coverage of elementary, middle, and high schools as well as the availability of OSA resources. At these 30 schools, we compared the actual meals to the approved menus and performed audit testing on a sample of approved competitive food items to determine whether they met DPH regulations. In addition, we observed the schools' nutritional practices and interviewed school officials about them. We also inspected the cafeterias, nurses' stations, and PE/recreational facilities to assess their adequacy. Additionally, we observed nutrition and physical activity educational and promotional materials posted throughout the schools. We combined, tabulated, and analyzed the answers to our site-visit questions and electronic survey.

To accomplish our second objective, we reviewed DPH's administration of selected MIM community programs. We reviewed DPH's oversight of, and local community involvement with, CDC grants totaling approximately $22 million.

First, we reviewed over $8 million of the $15 million in CTG money awarded to cities and towns for wellness initiatives. We selected 8 of the 52 MIM communities for review based on geography, population, and their designation within the MIM initiative. We included within our selection 3 communities representing different regions of the Commonwealth (Brockton, Springfield and

Worcester), 3 communities within Middlesex County (Cambridge, Lowell and Somerville), and 2 MIM pilot program communities (Fitchburg and New Bedford). We reviewed their work plans, which included overall objectives, specific action steps, and milestones with start and end dates. From these work plans we developed a set of questions for each city or town we visited in order to determine whether the community was progressing toward its objectives. We then held meetings with DPH and local personnel involved in implementing the work plans, including the DPH manager of Community Initiatives, the DPH director of the Office of Community Health, DPH community liaisons, local community MIM coordinators, and other municipal officers. We interviewed these personnel regarding the implementation of each community's work plan and requested backup documentation to substantiate progress made. We questioned MIM coordinators about the specific use of grant funds and verified their answers through reviews of source documentation and inquiries in the Commonwealth's Massachusetts Management Accounting and Reporting System. We also toured these communities to personally observe improvements and accomplishments.

Second, we reviewed a CDC CORD grant of almost $7 million awarded to develop a series of pilot programs targeting obesity prevention for children aged 2 through 12 years in Fitchburg and New Bedford. We analyzed the grant work plans (1) to determine goals and action plans and (2) through observation, interviews, and documentation, to determine whether milestones had been achieved. For the two communities, we evaluated MIM oversight practices using the same methods. Additionally, we reviewed improvements and accomplishments achieved through this grant funding that included recreational facilities, children's vegetable gardens, and new programs at daycare centers (such as Massachusetts Children at Play).

To accomplish our third objective, we reviewed the $50,000 in grant money that DTA provided to MDAR for the Farmers Market Promotion Program (FMPP). We met with the MDAR FMPP program coordinator to discuss the use of these funds and also reviewed a breakdown of the $50,000 in funding for each farmers' market financed as well as total SNAP sales for the years 2010–2013. The 10 farmers' markets visited were selected to ensure maximum geographic coverage of the Commonwealth, as well as the availability of OSA resources.

We did not rely on computer-processed data for our audit. Instead, we relied on data such as hardcopy source documents and interviews as supporting documentation on which we based our

conclusions. Whenever sampling was used, we applied a non-statistical approach, and as a result, we were not able to project our results to the population.

Based on our audit, we have concluded that for the period July 1, 2009 through June 30, 2013, public schools performed the required student BMI testing; however, some public schools had not given guardians an opportunity to opt out of the testing or provided them with a "Physician Post-Screening Notification Letter" for children with BMIs below the 5th or above the 85th percentile. Further, some school districts had not reported aggregate BMI results to DPH as required. We found that the public schools we surveyed offered students competitive foods and beverages in accordance with 105 CMR 225.000 and provided PE for students in accordance with state requirements. In addition, funding provided to cities and towns for combating childhood obesity and improving health and wellness was properly spent, and DPH provided guidance and monitored the activities of these cities and towns to help ensure positive outcomes. However, we found that certain local farmers' markets did not pursue available state funds to purchase point-of-sale terminals needed in order to accept Electronic Benefit Transfer payments from SNAP recipients.

DETAILED AUDIT RESULTS AND FINDINGS WITH AUDITEE'S RESPONSE

1. Public schools have complied with nutrition standards and health screening requirements for students; however, schools' physical education activities lack consistency and do not meet established national standards.

In large part, during our audit period, public schools complied with state requirements regarding the implementation of school nutrition regulations, body mass index (BMI) screening, and physical education (PE) requirements. However, certain public schools did not report BMI results to the Massachusetts Department of Public Health (DPH), adopt policies for administration of BMI testing, or ensure that guardians were given an opportunity to opt out on behalf of their children. In addition, although all the schools that we surveyed complied with the current state law on PE, there are no state requirements regarding the frequency and duration of PE. As a result, the PE practices of the schools we reviewed varied, and none met national PE guidelines. Each of these areas is described in detail below.

a. School Nutrition

Background

The federal Child Nutrition and Women, Infants, and Children Reauthorization Act of 2004 requires that districts participating in the National School Lunch Program (NSLP) adopt wellness policies that ensure compliance with NSLP guidelines and provide nutritional guidance for all foods, including competitive foods, offered at schools. The Massachusetts Department of Elementary and Secondary Education (DESE) participates in the NSLP and is responsible for overseeing the Commonwealth's public-school system, which includes more than 1,800 schools with nearly 960,000 students. These schools serve approximately 1.25 million meals a day to their students. Lunch is the main meal that they serve, but they also serve breakfast and snacks.

As an NSLP participant, DESE is required to develop a wellness policy that addresses and promotes nutritional education in the public-school system. As part of the Mass in Motion (MIM) initiative and pursuant to Chapter 111, Section 223, of the Massachusetts General Laws, DPH published 105 Code of Massachusetts Regulations (CMR) 225, which established nutrition standards for competitive foods and beverages sold or provided in public schools. This regulation, which took effect on August 1, 2012, requires that all competitive foods sold in Massachusetts public schools, whether in vending machines, in school stores, or otherwise, meet stringent nutritional requirements. These include the following:

- Limits on sugar, fat, trans-fat, and sodium content.
- A requirement that all bread- and grain-based products be whole grain.
- A ban on artificial sweeteners and caffeine.

School principals are responsible for ensuring that their schools comply with 105 CMR 225, and each school's food-service officer is responsible for monitoring food and beverages in the cafeteria, vending machines, and school stores to ensure that only acceptable items are available for sale to students. DPH does not monitor compliance but has instead focused its efforts on providing technical assistance and resources to help schools comply with the regulation. However, we found that some schools have adopted the Acceptable List (A-List). The A-List is the result of a joint program initiative at DPH's Office for Nutrition, Health and Safety Programs and the John C. Stalker Institute of Food and Nutrition at Framingham State University. It includes a wide variety of products, such as cheese crackers, pretzels, baked chips, popcorn, yogurts, milk, puddings, nuts, and fruit juices, that meet the comprehensive food requirements in 105 CMR 225. According to DESE, this list has assisted many districts as they have developed and implemented district wellness policies.

Compliance with Nutrition Standards for Competitive Foods and Beverages

We found that all the schools in the non-statistical, judgmental sample of 60 that we visited/surveyed (Appendix A) have complied with state competitive food requirements and, more importantly, have striven to provide wholesome food for students. Specifically, we found that in the middle and high schools, à la carte items from the A-List were sold in cafeterias, in school stores, and from school vending machines. Elementary school sales of à la carte items are very limited, with some schools only offering low-fat milk and bottled water. Below are pictures of à la carte items in a visited school's cafeteria. All items such as milk, water, juices, and fruit comply with state nutrition regulations.

Also, all the vending machines we viewed during our visits were stocked with low-fat milk, water, 100% fruit juices, or other approved snacks, in accordance with regulations.

The vending machine pictured below on the left contains acceptable drinks such as flavored and unflavored water; the vending machine pictured on the right contains snacks such as baked potato chips and pretzels. All are A-List approved.

The 30 cafeterias we visited were clean, appeared adequately staffed, and prepared only non-fried foods. In addition, their schools posted nutritional information and developed wellness programs that were included in the schools' curricula. We also reviewed the à la carte items and found that they met DPH nutritional guidelines for the following categories: calories, sodium,

whole grain, sugar, caffeine, and percentages of total fat and saturated fat. Similarly, all beverage choices available at the schools met DPH regulations and included low-fat milk and low-fat flavored milk; 100% fruit juice; flavored or unflavored water with no added sugar, artificial sweeteners, or caffeine; and beverages with 10 milligrams or less of caffeine per serving. In addition, officials at a number of the schools we visited told us that they have planted vegetable gardens, and others have sought out local produce to improve student nutrition. As a result, a number of the school officials we spoke with noted that students often received the most nutritious meal of the day at school.

b. BMI Testing

Background

BMI testing is a method of determining whether a child has a healthy weight compared to other children of the same age and sex. In February 2009, 105 CMR 200.500 was amended to require BMI testing as part of the Commonwealth's initiative to help children and families achieve wellness. This regulation requires public schools to perform BMI testing for all children during 1st, 4th, 7th, and 10th grades. The school nurse is responsible for oversight of the screening, which includes the following:

- Notifying guardians of planned BMI testing.
- Providing students with privacy during testing.
- Recording test results.
- Confidentially reporting aggregate BMI data to school-district authorities who forward this data to DPH.

In addition, DPH's 2009 BMI Screening Guidelines for Schools states, "The school nurse is responsible for referring students through their guardians for follow-up with the child's healthcare provider." DPH developed a Physician Post-Screening Notification Letter to be mailed to guardians of children with BMIs below the 5th or above the 85th percentile.

According to DPH's BMI Screening Guidelines for Schools,[34] BMI information will enable school health professionals to monitor trends and identify students who are

- at nutritional risk;

- at risk for eating disorders; and
- determined to be underweight, overweight, obese, or at risk of becoming overweight or underweight.

While BMI measurements have limitations,[35] they generally do correlate with direct measures of body fat and are used as an inexpensive and easy way to screen for weight problems.[36] Studies consistently show that obese children are more than seven times likelier to be obese as adults.[37] Therefore, the Institute of Medicine[§] recommends annual school-based BMI testing.[38] However, DPH guidelines require schools to give parents and legal guardians an opportunity to request, in writing, that their children not participate in the program.

Compliance with Most Regulations for BMI Testing of Schoolchildren

We inspected testing facilities at each school we visited and determined that the facilities were adequate and private at each school; that BMI testing was performed by all the schools in the non-statistical, judgmental sample of 60 that we visited/surveyed (Appendix A); and that there were few complaints or opt-outs from students or guardians. The pictures below show BMI testing areas located within school nurses' stations.

However, during the audit, we identified areas of noncompliance with 105 CMR 200.500 through surveys, visits, and a review of the DPH report "The Status of Childhood Weight in Massachusetts, 2011." Specifically, we determined the following for the 60 public schools within 55 school districts either visited or surveyed:

[§] According to its website, the Institute of Medicine "is an independent, nonprofit organization that works outside government to provide unbiased and authoritative advice to decision-makers and the public."

- Five public school districts did not report their aggregate BMI data to DPH.[**] In fact, the aforesaid DPH report stated that for all 287,881 public-school students in 1st, 4th, 7th, and 10th grade, 47,356 students (16%) did not have their BMI data reported to DPH.

- Eight public schools failed to adopt policies for administration of BMI testing.[††]

- Seven public schools could not substantiate that they gave guardians the opportunity to request that their children not participate in the program.[##]

In addition, 46 of the 60 schools visited/surveyed did not provide guardians with a Physician Post-Screening Notification Letter that allows guardians to notify physicians of student BMI measurements below the 5th or above the 85th percentile. However, physicians document the height and weight measurements of students during students' state-required physical examinations. Chapter 71, Section 57, of the General Laws and related amendments and regulations (105 CMR 200.000–200.920) require physical examinations of schoolchildren within six months before entry into school and at intervals of either three or four years thereafter, such as during kindergarten, 4th grade, 7th grade, and 10th grade. These examinations coincide with the current BMI testing intervals for students, which makes this requirement redundant, as physicians would already be measuring and taking note of the weight and height of their patients at these times. A number of school administrators with whom we spoke noted the added expense of informing physicians and that this requirement was redundant, as physicians already measure the weight and height of their patients.

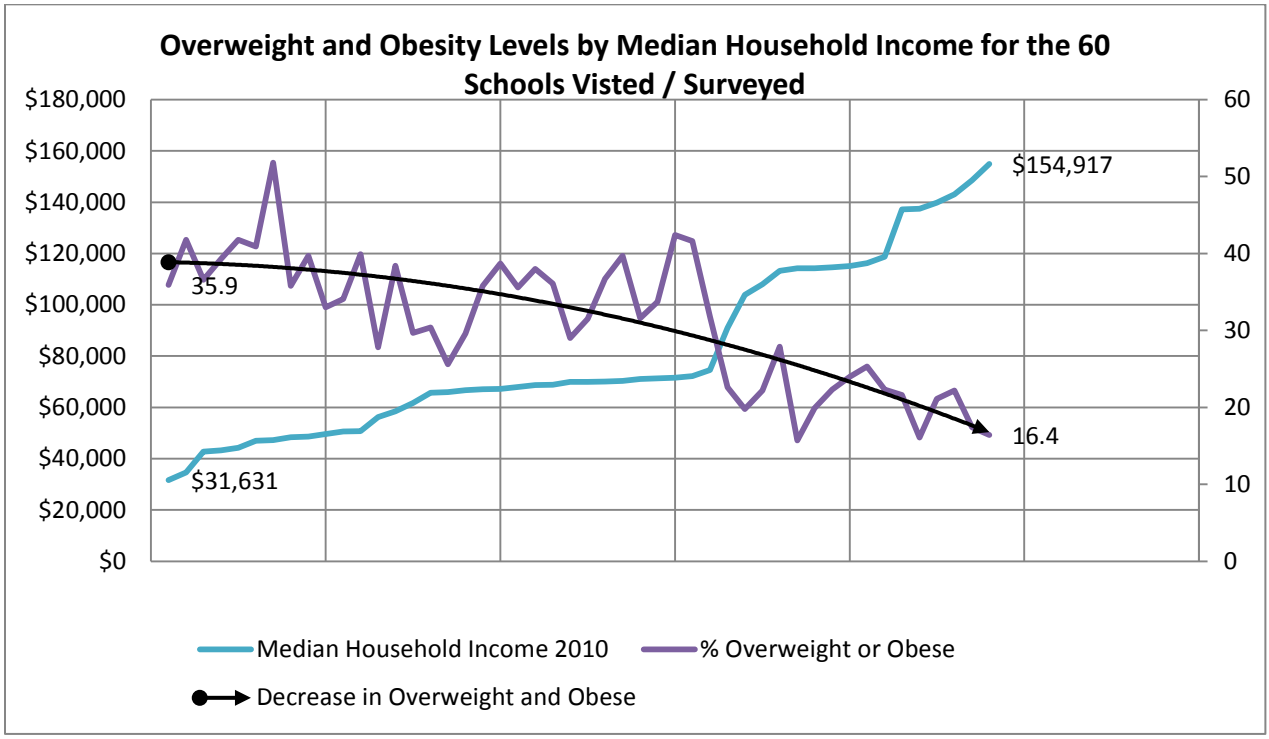
We observed that BMI generally followed income levels, with percentages of overweight and obese children increasing as income levels decrease. Below is a chart illustrating, for the 60 schools either visited or surveyed, the relationship between the percentage of children within a community who were obese and the average annual household income of that same community. Low-income areas such as Lawrence ($31,631) and Springfield ($34,628) had some of the highest overweight/obesity levels (36% and 42%, respectively) in the Commonwealth, while towns with higher median household incomes such as Dover Sherborn ($154,917) and Weston ($148,512)

[**] The five school districts were Boston Collegiate Charter, Chelsea, Mohawk, Norwell, and Revere.

[††] The eight schools were Buckland-Shelburne Elementary School, Carver Middle High School, Dartmouth Middle School, Gardner High School, Leicester Elementary School, Lee Middle-High School, Ralph C. Mahar (Orange) Regional High School, and Provincetown K-8.

[##] The seven schools were Buckland-Shelburne Elementary School, Hull High School, John F. Kennedy (Boston) Elementary School, Lee Middle-High School, Northbridge Middle School, Provincetown K-8, and Robert Frost (Lawrence) Elementary.

had some of the lowest overweight/obesity levels (16% and 17% respectively) in the Commonwealth.



c. Physical Education

Background

Chapter 71, Section 3, of the General Laws requires PE at every public-school grade level. Before 1996, the Board of Education required that each student receive 60 hours per year of PE. However, in 1996, the board repealed this requirement and, in so doing, gave school officials the authority to determine the hours of PE instruction for students. The board's action was directly related to the passage of the Education Reform Act of 1993. This act[39] placed emphasis on increasing the amount of learning time in schools. It also triggered the creation of the Massachusetts Comprehensive Assessment System (MCAS), a statewide test that every student needs to pass in order to receive a high-school diploma. Certain school districts have shortened the duration of PE to add instruction time for academic courses and better prepare students for MCAS testing.[40]

The Centers for Disease Control and Prevention (CDC),[41] Surgeon General,[42] National Association for Sport and Physical Education (NASPE), and World Health Organization[43]

recommend that children have at least 60 minutes of physical exercise every day, but Massachusetts students on average fall well below that recommended guideline. In 2011, 43% of high-school students and 37% of middle-school students nationally reported that they were physically active for a total of at least 60 minutes per day.[44] Research has shown that physical activity helps students not just physically and emotionally, but also academically. Exercise boosts learning and helps battle depression, anxiety, and attention-deficit disorders.[45] Researchers believe that there is a direct link between demonstrated physical activity and success in comprehension and on tests, such as the MCAS test.

Compliance with State PE Requirements

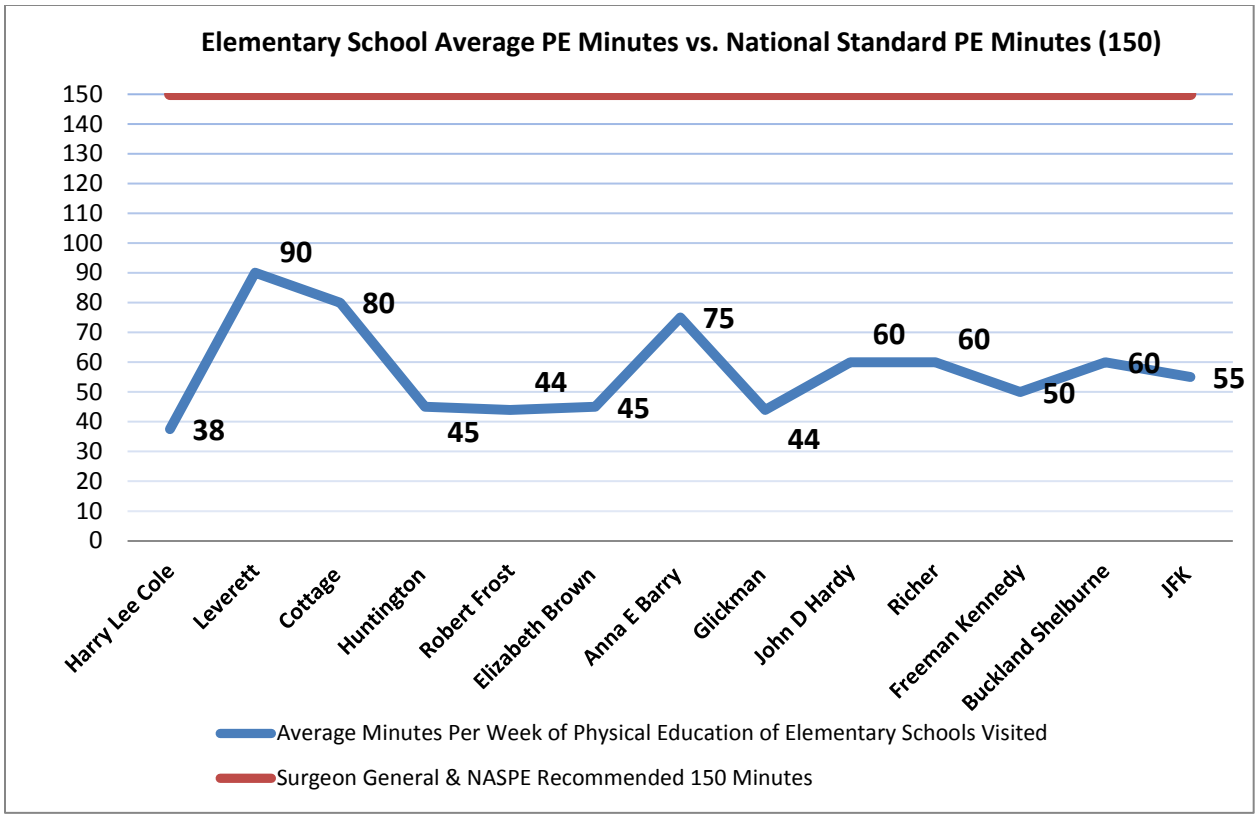
Our audit found that all the schools in the non-statistical, judgmental sample we reviewed were in compliance with Chapter 71, Section 3, of the General Laws in that students received PE as a part of their curriculum. However, practices varied widely from school district to school district and from school to school. Specifically, the frequency and duration of PE at the elementary schools we visited/surveyed ranged from 38 minutes per week to 90 minutes per week. Similarly, PE levels at the middle and high schools that we reviewed ranged from 22 minutes per week to 168.

The Surgeon General recommends at least 300 minutes of physical activity weekly for all children, with 150 of those minutes to occur during the school week. NASPE recommends 150 minutes per week of PE for elementary-school students and 225 minutes of PE per week for middle- and high-school students. The majority of the elementary, middle, and high schools we reviewed provided less time than the amount recommended by the Surgeon General and NASPE. These elementary-,[§§] middle-,[***] and high-school[†††] variances in PE are shown in the following charts.

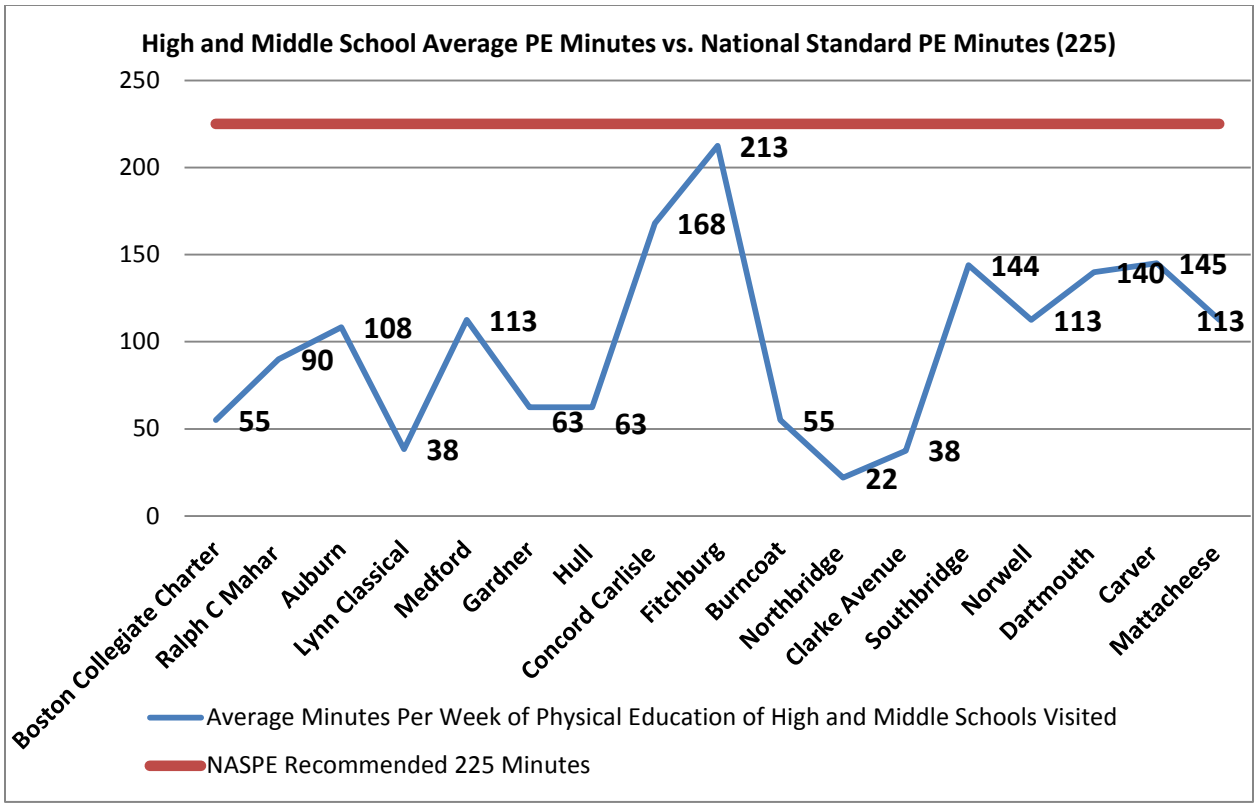
[§§] Harry Lee Cole Elementary School of Boxford, Leverett Elementary of the Union #28 school district, Cottage Street School of Sharon, Huntington Elementary of Brockton, Robert Frost Elementary of Lawrence, Elizabeth Brown Elementary of Swansea, Anna E. Barry Elementary School of Chicopee, Glickman Elementary School of Springfield, John D. Hardy Elementary School of Wellesley, Richer Elementary School of Marlborough, Freeman-Kennedy School of Norfolk, Buckland-Shelburne Elementary of the Mohawk District, and John F. Kennedy School of Boston.

[***] Burncoat Middle School of Worcester, Northbridge Middle of Northbridge, Clark Avenue School of Chelsea, Southbridge Middle School of Southbridge, Norwell Middle School of Norwell, Dartmouth Middle School of Dartmouth, Carver Middle High School of Carver, and Mattacheese Middle School of Dennis-Yarmouth.

[†††] Boston Collegiate Charter School of the Boston Collegiate Charter District, Ralph C. Mahar Regional High School of the Ralph C. Mahar Regional District, Auburn High School of Auburn, Lynn Classical High School of Lynn, Medford



High School of Medford, Gardner High School of Gardner, Hull High School of Hull, Concord-Carlisle High School of Concord-Carlisle, and Fitchburg High School of Fitchburg.



Below are pictures of physical-fitness facilities at schools we visited. Each school had adequate physical-fitness facilities, and some were truly impressive.

The limited amount of time dedicated to PE at many schools is especially problematic because physical activity and diet are two behavioral factors affecting Massachusetts's childhood-obesity epidemic. The severity of this epidemic cannot be underestimated:

- 32.3% of 1st, 4th, 7th, and 10th grade students in Massachusetts are overweight/obese.

- 80% of children diagnosed with type 2 diabetes are overweight.[46]
- 33% of boys and 39% of girls born in 2000 will develop diabetes if current trends continue.[47]
- 75% of overweight adolescents are likely to be obese as adults.
- Children who are overweight are at increased risk of type 2 diabetes mellitus, asthma, and orthopedic problems; they are more likely to have risk factors for cardiovascular disease (such as increased blood pressure and cholesterol); and they are more likely to have behavioral problems and depression.[48]

Moving Forward

Although the Commonwealth, through its agencies and public schools, has taken measures to combat childhood obesity, the Office of the State Auditor believes there is more that can be done to address this issue. There are many successful programs that the Commonwealth could emulate that could help improve the overall health of children. The intended return on investment for these programs would be a reduction in the rate of childhood obesity, which could lead to both short- and long-term reductions in healthcare costs and improvements in academic performance. For example, every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses, and for every $1 spent on wellness programs, employers could save $3.27 in medical costs and $2.73 in absenteeism costs.[49] Some examples of successful local, state, and federal programs and initiatives are detailed below.

- Build Our Kids' Success (BOKS). BOKS is a before-school physical activity program, now used in 165 schools nationwide, that explores how moderate exercise can help enhance memory, improve thinking, lift mood, and help individuals handle stress.[50] The National Institute on Out-of-School Time at Wellesley College conducted a two-year evaluation on the effects of participation in BOKS in Natick and Boston Public Schools.[51] The research indicated numerous benefits to young people who participate in BOKS and also suggested positive effects on program leaders, trainers, teachers, principals, school staff, and families. A survey of parents and teachers involved with the program indicates that participation is associated with positive socio-emotional, interpersonal, and academic outcomes. In a survey of 1,039 BOKS participants from Natick; Boston; Washington, D.C.; and New York City, 84% said they had participated in more exercise since starting the program and 76% said they had begun eating healthier.
- The Presidential Youth Fitness Program (PYFP). The PYFP assesses health-related fitness of school-aged children. The PYFP includes fitness activities, such as mile runs, pushups, sit-ups, etc., that may lower student health risks such as high blood pressure, diabetes, and lower-back pain. The PYFP sets targets for achieving and maintaining a healthy level of fitness in the areas of aerobic cardiovascular endurance, muscular strength/endurance, abdominal strength/endurance, and flexibility. With these assessments, teachers are able to:

- monitor and assist students to improve overall health and fitness;
- identify students' strengths and weaknesses in overall health and physical fitness, including development of individual improvement programs; and
- communicate with students and guardians about students' fitness status.

Many of the Commonwealth's cities and towns provide playgrounds, recreational fields, conservation land, outdoor courts, and school-based gyms and strive to make these areas and facilities safe for children. Communities could monitor the use of their recreational facilities and, if there appears to be a demand for additional recreational space and time, explore the possibility of making more space and time available in public buildings and community-based colleges/universities during periods such as weekends, semester breaks, and school vacations when recreational space in these facilities may be available.

In addition, access to public transportation or safe walking routes to and from these resources can be challenging for some students and needs to be addressed. Two-thirds of Massachusetts communities do not have physical-activity facilities that are close to public transportation. Also, 87% of Massachusetts public schools offer opportunities for students to participate in intramural activities or physical activity clubs, but fewer than half provide students with transportation home after the activities. In addition, "Walk to School" programs, offering safe routes for children to and from public schools, were available in only 15% of the Commonwealth's cities and towns in 2007.[52]

Recommendations

DPH should collaborate with certain local school districts to ensure that they comply with 105 CMR 200.500 by reporting BMI aggregate data to DPH, adopting BMI administration policies, and giving children's guardians the opportunity to opt out of the BMI program on behalf of their children.

In addition, DPH should reconsider its policy requiring school nurses to notify physicians of student BMI measurements through students' guardians. This requirement is costly to schools, and it is redundant because physicians already measure, and take note of, the weight and height of their student patients.

The Legislature should consider amending Chapter 71, Section 3, of the General Laws to ensure consistent durations of PE throughout the Commonwealth's public schools. The Commonwealth could consider adopting the Surgeon General's recommended 30 minutes of physical activity per

school day for all students and NASPE's recommended 30 minutes of physical activity per school day for elementary-school students and 45 minutes for middle- and high-school students. Public schools could achieve these daily recommended levels of physical activity for children by instituting school-based programs that include mandatory PE class durations and classroom activity breaks.

In order for communities to provide additional recreational opportunities for children, funding for staffing, maintenance, security, and liability insurance must become available. Funding could be addressed at the state and local levels, directed toward communities with children that have the greatest health risks. The Legislature could set aside a portion of the state funds recovered through Medicaid investigations conducted by the State Auditor, Attorney General, and Inspector General. For example, for the period March 15, 2013 through March 14, 2014, OSA identified over $6 million in potential recoupments from MassHealth service providers. These funds were originally intended for the health and welfare of the Commonwealth citizenry and should be repurposed in this vein. Similarly, the Legislature could amend state law to

- allow individuals to donate toward fighting childhood obesity through a voluntary check-off program on state income tax returns;
- establish a special license plate under Chapter 90, Section 2F, of the General Laws, and direct funding from the sale of these plates toward this effort; and
- designate a portion of the Prevention and Wellness Trust Fund[###] grants for local recreational activities.

Additionally, local communities could help fund these efforts by seeking in-kind donations,[§§§] public and private grants, and volunteers to staff local recreational facilities.

Currently, candy and soda are considered food and are exempt from the Commonwealth's 6.25% sales tax. According to the Department of Revenue, removing this current sales tax exemption would raise about $53 million a year for the Commonwealth Health and Prevention Fund. Should legislation be passed to remove the current sales tax exemption, a portion of the revenue generated

[###] Chapter 224 of the Acts of 2012 "established and set upon the books of the commonwealth a separate fund known as the Prevention and Wellness Trust Fund." The Commissioner of Public Health, as trustee, administers the fund. The act requires that the commissioner annually award no less than 75% of the fund "through a competitive grant process to municipalities, community-based organizations, health care providers, regional-planning agencies, and health plans that apply for the implementation, evaluation and dissemination of evidence-based community preventive health activities."

[§§§] In-kind donations are donations of goods and services rather than money.

could be used to support physical activity programs in and out of schools. Massachusetts is one of only 16 states (see Appendix B) that do not impose a sales tax on soda.

DPH's Response

DPH appreciates this recommendation and agrees with the importance of collaborating with local school districts. When DPH proposed regulations relating to BMI reporting, the Department engaged school districts and municipalities in seeking public comment and responses. DPH has continued that engagement through a number of avenues. The Department reaches out to those schools which fail to report BMI data and will continue to do so. We have taken a further step of factoring in compliance with the regulations in ongoing funding determinations. It is also important to note that all school nurses seeking licensure by the Department of Elementary and Secondary Education are required to be trained in BMI measurement and this training includes reporting requirements, BMI administration policies and the requirement for parental opt out. DPH will continue to work with these school nurses to provide assistance and support in coming into compliance. . . .

The 2009 [BMI Screening Guidelines for Schools] Guidelines are currently being revised to align more closely with the Department's current regulations (as revised in 2013) and will remove the recommendation that parents notify their child's primary care provider if their BMI is below the 5th percentile or above the 85th percentile.

DESE's Response

There is no Department of Elementary and Secondary Education related finding. The report comments that physical education is implemented in various ways at the local district level. Districts have met the state requirement however the report notes that the national physical education guidelines as issued by the National Association for Sport and Physical Education (NASPE) are not met in some schools. The report recommendation for a legislative proposal to address the NASPE guidelines will be reviewed as it is presented. Many school districts as mentioned in the report approach physical education and physical activity within the community as a joint effort. The partnerships engaged in communities through these efforts, including extended day enrichment activities should be valued for the model these programs contribute to working together.

Auditor's Reply

Based on their responses, DPH is taking measures to address our concerns in this area, and DESE will review potential legislation concerning standardized PE time in public schools.

2. DPH is properly administering federal funds to combat childhood obesity and promote health and wellness within local communities.

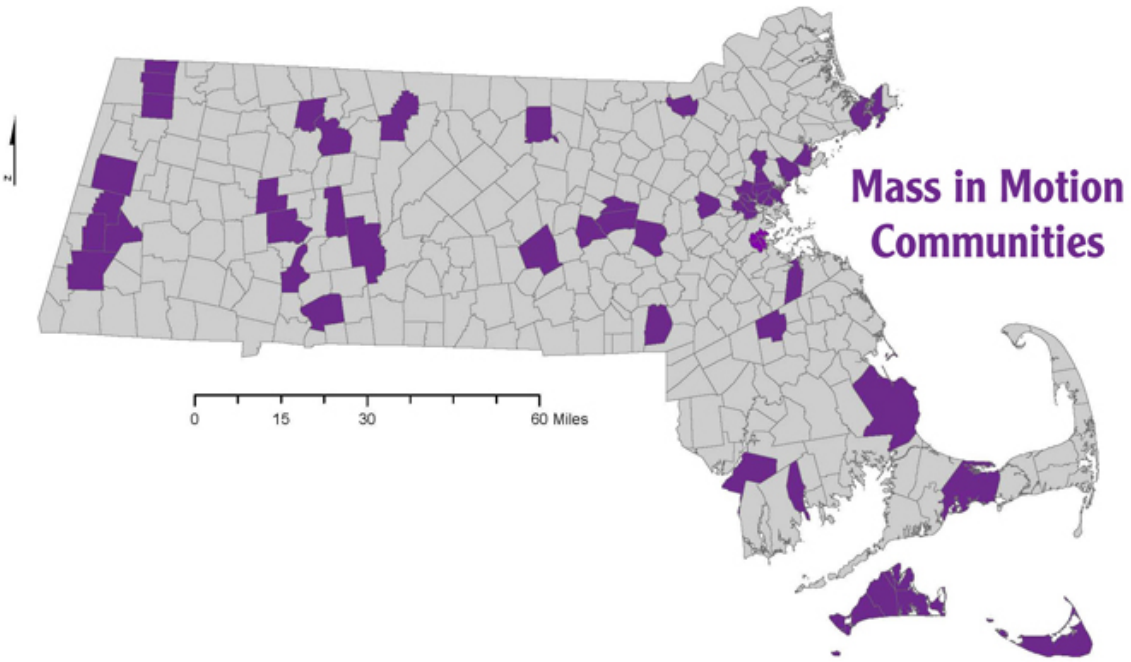
DPH is properly administering federal funds to combat childhood obesity and promote overall health and wellness within local communities. Specifically, during the audit period, DPH received over $22 million from the CDC and, through the MIM initiative, used these funds to support local community efforts to improve the health and wellness of children and adults. DPH collaborated with community leaders to establish program goals and objectives, and it continuously monitored

local progress to ensure that funding was properly spent and desired outcomes were being achieved. Below is a detailed description of the two types of CDC grant (Community Transformation Grants [CTGs] and a Childhood Obesity Research Demonstration [CORD] grant) awarded to DPH during the audit period and the results of our audit work, as well as the status of the Massachusetts Children at Play (MCAP) program currently funded by the CORD grant.

a. Community Transformation Grant Program

The CDC's Community Transformation Grant Program provides funding for states to design and implement community-level programs that help prevent chronic diseases such as cancer, diabetes, and heart disease. DPH received two five-year CTGs, totaling over $15 million, for the period October 1, 2010 through September 30, 2015. Through the CTGs, DPH funded local community efforts to improve wellness and fitness, including establishing evening hours for access to school gyms, constructing sidewalks near schools in order to create safe walking routes, improving food selection in restaurants and grocery markets, and expanding school-based nutrition and exercise programs.

The first grant, totaling $7,525,030, was designated to serve eight Massachusetts counties (Franklin, Berkshire, Hampshire, Hampden, Plymouth, Barnstable, Dukes, and Nantucket) with an estimated combined population of more than 1,570,000. The second grant, totaling $7,874,910, was designated for Middlesex County, which has an estimated population of over 1,530,000. DPH directed CTGs and/or other federal, state, and private funds to 52 MIM communities (Appendix C) within these nine counties. Through this selection of counties, DPH was able to affect approximately 33% of the Commonwealth's population. The following map provided to the audit team by DPH shows the 52 MIM communities affected by these funds.[53]



We visited a non-statistical, judgmental sample of 8 of the 52 MIM communities (Brockton, Cambridge, Fitchburg, Lowell, New Bedford, Somerville, Springfield, and Worcester) during the audit period. The funding provided was intended to promote tobacco-free living, active lifestyles, healthy eating, preventive healthcare, social and emotional wellness, and safe and healthy physical environments. We found that the 8 communities were making satisfactory progress toward these funding goals by building comprehensive community-level strategies to improve health and wellness. Specifically, each community collaborated with DPH to create a MIM work plan that included short-term milestones and long-term goals targeted at establishing safer streets and walking routes, increasing availability of healthy food in local stores and restaurants, and creating safer recreation facilities for adults and children. As these communities moved forward with their MIM work plans, DPH officials provided guidance and oversight to help ensure progress toward the established milestones and goals. MIM coordinators met quarterly and discussed each community's successes and disappointments as well as potential strategy adjustments to community work plans. MIM coordinators then shared this critical information with community leaders to help them succeed in their efforts to improve health and wellness.

During our interviews of MIM coordinators, we learned that CTG funds were spent on salaries, office supplies, advertisement, and travel expenses. We confirmed the appropriateness of these

expenditures through documentation review in the Massachusetts Management Accounting and Reporting System.

b. Childhood Obesity Research Demonstration Grant Program

Federal CORD grants provide funding for states to "implement and evaluate evidence-based policies, systems, and environmental interventions to . . . reduce childhood obesity."[54] The CDC awarded DPH a $6,973,768 CORD grant for the four-year period ending September 30, 2015. DPH is using the grant to implement a series of pilot programs targeting obesity prevention for low-income children between the ages of 2 and 12 years who reside in Fitchburg and New Bedford. As described below, the pilot programs being implemented address childhood obesity at different stages of child development.

- **High Five for Kids**: A program that examines family pediatricians' efforts to address obesity in children aged 2 through 6 years.
- **Massachusetts Children at Play**: A program that targets improving physical activity and nutrition at childcare centers.
- **Food and Fun After School**: An afterschool program designed to develop healthy eating and exercise habits in children.
- **Eat Well and Keep Moving**: A school-based program that encourages fourth- and fifth-grade students to choose nutritious diets and become physically active.
- **Planet Health**: A program that seeks to improve the health of sixth-, seventh-, and eighth-graders while building and reinforcing skills in language arts, math, science, social studies, and PE.
- **Safe Routes, Healthy Markets, and Healthy Dining**: New Bedford and Fitchburg also received CORD funds to build upon three MIM programs that focus on improving health and wellness within communities.

Our audit found that DPH is effectively administering the CORD grant through a series of fiscal and programmatic oversight activities. First, two to four times per month, DPH conducts grant and fiscal management meetings to help ensure that expenses charged to the CORD grant represent reasonable, allowable, and allocable costs. Second, DPH conducts (1) weekly grant oversight meetings, (2) weekly CORD grant team meetings, and (3) bimonthly CORD steering committee meetings. During these meetings, DPH's program staff and managers discuss and, if necessary, act upon matters affecting progress within the various CORD grant initiatives. Third,

DPH regularly informs the CDC of progress within the CORD initiatives via monthly conference calls, in interim and annual progress reports, and during the CDC's annual site visit.

In addition, based upon our review of (1) the terms and conditions of the CORD grant, (2) DPH's interim and annual progress reports to the CDC, (3) the CORD components of the MIM work plan, and (4) discussions with DPH and municipal personnel actively involved in the CORD grant, DPH is making satisfactory progress toward meeting the goals and objectives of the CORD grant. However, the overall effect of the CORD grant cannot be fully assessed until after September 30, 2015, when the current grant funding ends. At that time, the CDC will conduct a comprehensive review of the CORD-funded programs. The CDC and DPH plan to expand use of the successful elements of this initiative throughout the country and the Commonwealth, respectively.

c. Massachusetts Children at Play

MCAP is a joint program among DPH, DESE, and the Massachusetts Department of Early Education and Care (EEC), focused on reducing childhood obesity. This program was originally designed to provide a method for childcare facilities to evaluate and improve their physical activity and nutrition practices and help them comply with the EEC requirement of 60 minutes[55] of physical activity each day for preschool children.

The original pilot phase of the MCAP program, in effect January 2010 through January 2012, was financed by American Recovery and Reinvestment Act funds. With these initial federal funds, DPH provided training on physical activity and nutrition at 264 childcare centers in 108 Massachusetts communities. The MCAP program has since been scaled back to 12 childcare facilities in two communities (Fitchburg and New Bedford) and is funded through the CORD grant from September 30, 2011 through September 29, 2015.

During the audit, we visited a non-statistical, judgmental sample of two YMCA childcare facilities currently participating in the MCAP program. Through discussions with facility staff, touring each facility, and examining resources (exercise facilities and program literature) being used to implement the MCAP program, we determined that these two locations were achieving the MCAP goals of increasing physical activity and improving nutritional awareness for a

preschool children's program. It should be noted that the staff at both facilities found the MCAP program to be highly beneficial.

d. DPH Assessment of MIM Initiative

In late 2012, as a way of measuring the effect of the MIM initiative, DPH analyzed current BMI rates for five MIM communities (Fitchburg, Gloucester, Northborough, Springfield, and Weymouth). The analysis showed a drop in students' BMI in these MIM communities since the inception of the MIM initiative. Specifically, the five communities showed a decrease of 2.4% in BMI levels. DPH's analysis of non-MIM communities identified a much lower drop of only 0.4% in BMI. Although these results are preliminary and only based on a small sample of communities, it appears that these programs are having a positive effect on the health and welfare of children.

Recommendations

DPH should continue to collaborate with local, state, and federal entities to develop, implement, monitor, and support programs designed to combat obesity and improve the health and wellness of the Commonwealth's citizenry.

DPH's Response

DPH appreciates the recognition of its important and collaborative work focused on healthy eating and active living. The Department is currently reprocuring these services and welcomes this endorsement as it continues to look for additional resources to support this work.

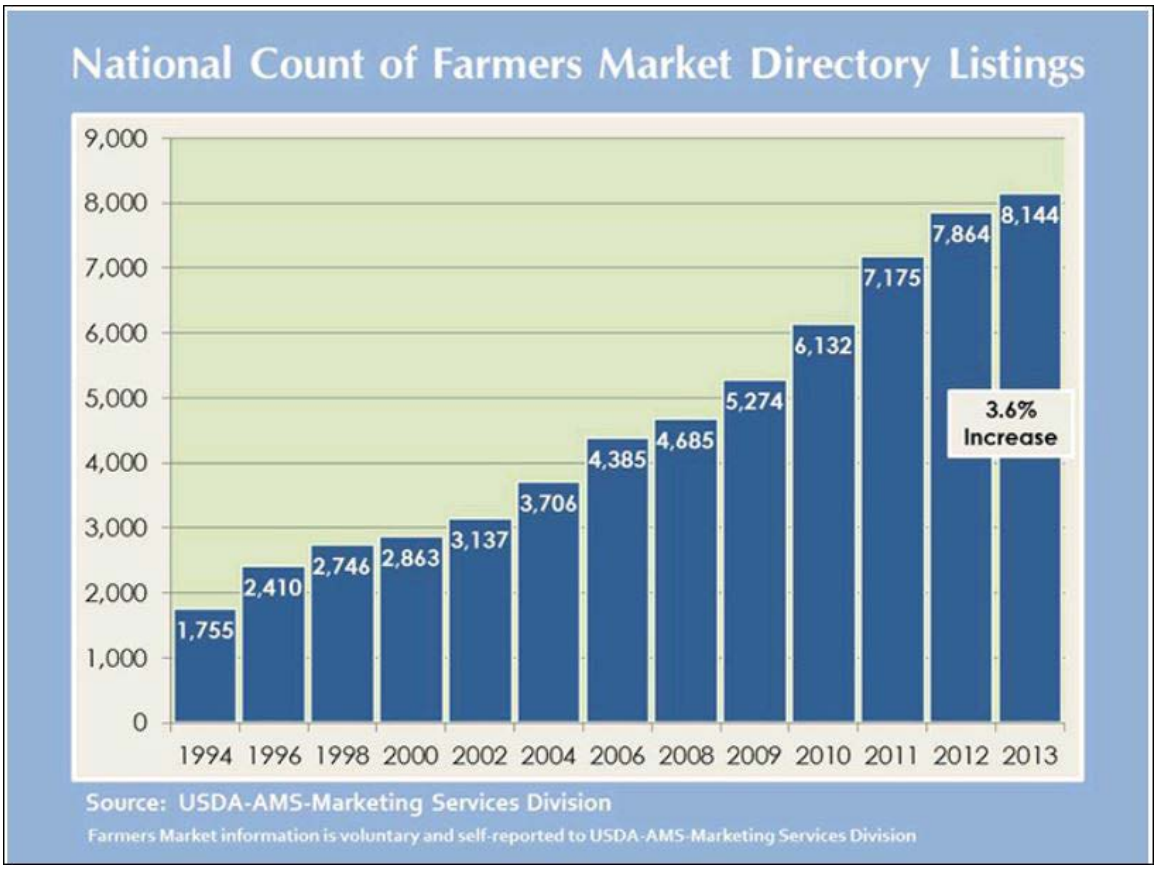
3. Some farmers' markets have embraced the use of Supplemental Nutrition Assistance Program benefits; others have resisted because of financial and administrative concerns.

The Massachusetts Department of Agricultural Resources (MDAR) properly administered $50,000 in initial funding from the Massachusetts Department of Transitional Assistance (DTA) to accept Supplemental Nutrition Assistance Program (SNAP) funds at farmers' markets. MDAR used these funds to help farmers' markets pay for purchases or rentals of point-of-sale (POS) terminals, POS transaction fees, food-stamp incentives, and outreach. Based on the initial success of the SNAP farmers' markets' initiative, the U.S. Department of Agriculture (USDA) gave MDAR an additional $80,000 grant through DTA in early 2012. However, at the time of our audit, few new Massachusetts farmers' markets had chosen to participate in the SNAP initiative, and only $10,625 had been spent. Local farmers cited program barriers such as staffing and accounting needs and high transaction fees as reasons for not participating in the program.

Electronic Benefit Transfer and Farmers' Markets Background

Since 2004,[56] Electronic Benefit Transfer (EBT) has been the technology used for food-stamp purchases. Food-stamp recipients have their benefits saved electronically on plastic cards much like debit or credit cards. To make a purchase, an EBT card is swiped through a POS terminal similar to those used for other forms of electronic payment. In fiscal year 2012, $74.6 billion in food assistance was distributed to 47.7 million Americans, more than 15% of the U.S. population. The transfer of food-stamp benefits from paper vouchers to plastic cards has increased the SNAP program's convenience and efficiency. In addition, since 2004, the value of SNAP redemptions at farmers' markets has increased by 400% nationally.

Use of POS terminals is usually dependent on access to electricity and telephone lines. For grocery stores, such utilities are always available, and the cost of POS terminals and any transaction fees are fully funded by USDA and the states. Farmers' markets, on the other hand, do not always have access to these utilities. Therefore, in order to accept EBT transactions, farmers' markets require POS devices with wireless technology, which the federal and state governments are not required to help fund. In addition, the federal and state governments are not required to fund the transaction fees charged to farmers' markets for accepting SNAP benefits as they are required to do for grocery stores. Despite these challenges, the number of farmers' markets authorized to accept EBT payments dramatically increased nationally from fiscal year 1994 to fiscal year 2014, as illustrated by the table below.[57]



Mixed Results Regarding the Increased Use of SNAP Benefits at Farmers' Markets

As previously noted, MDAR received a $50,000 grant from DTA to accept SNAP benefits at farmers' markets. MDAR expended the grant in 2010 for wireless POS-terminal purchases and rentals, transaction fees, incentives, and outreach for 21 farmers' markets. For example, MDAR purchased a wireless POS terminal for a Boston-based farmers' market and encouraged SNAP recipients to shop at this market by funding a SNAP benefit incentive program named Boston Bounty Bucks. The incentive program gave SNAP benefit recipients a dollar-for-dollar matching incentive for all SNAP purchases up to $10.

In 2010, MDAR and DTA received funds to increase the number of farmers' markets that accept EBT transactions in order to encourage SNAP participants to shop at farmers' markets and to increase the amount of produce purchased by SNAP recipients. Examples include $20,000 in funding provided by the Wholesome Wave Foundation and $5,000 by the Harvard Pilgrim Health Care Foundation in 2010 and 2011.

Subsequently, MDAR issued a report on February 22, 2011, titled "Supplemental Nutrition Assistance Program Benefits at Farmers' Markets: Program Evaluation." The report focused on identifying the significant challenges of operating POS terminals at farmers' markets, successful outreach methods, and whether financial incentive programs led to increased SNAP spending. MDAR's study included a 2010 survey of all 58 Massachusetts farmers' markets, of which 44 (76%) responded. MDAR's survey revealed that Massachusetts farmers' markets are not opposed to conducting transactions with SNAP participants. However, respondents cited lack of infrastructure or equipment as a reason for not accepting SNAP benefits. Specifically, they identified the cost of POS terminals, staff needed to operate the EBT-compatible POS terminals, accounting issues, and transaction fees as primary barriers to participation. Most farmers cited the hiring of employees to perform the necessary accounting as the greatest burden to overcome. For example, most farmers' markets that accept EBT use scrip. Scrip is a type of currency, in the form of paper or tokens designed to be unique to each market, in denominations of $0.50 and $1.00. EBT SNAP benefit recipients use this scrip to purchase eligible items from farmers at the market, and at the end of the day, farmers receive a credit from the market for the amount of scrip they have received. Farmers' markets must employ people to provide scrip accounting services and can wait up to a month to receive their money from scrip purchases.

Noting initial successes with the farmers' markets' pilot program, in early 2012 USDA announced a nationwide $4 million grant that would increase the availability of wireless EBT-compatible POS terminals at farmers' markets. The program was set to conclude in late February 2013, but it was extended through late 2013 (and extended again last winter, to September 30, 2014) because few new farmers' markets had accepted the offer and only $263,900 (6.6%) of the available $4 million had been spent. For example, of Massachusetts's allocation of $80,000 in the program, only approximately $3,000 of the funds had been spent by February 28, 2013. By June 30, 2013, that amount had increased to $10,625. In response to MDAR's survey, Massachusetts farmers stated that the current grant funds were solely for purchases of wireless EBT-compatible POS terminals and any monthly connection fees and, unlike the initial grant funds, could not be used to resolve staffing and accounting issues and high transaction fees associated with SNAP purchases. Consequently, they did not want to participate in the grant program. Below is a table outlining each state or territory's use of the additional $4 million in funding.

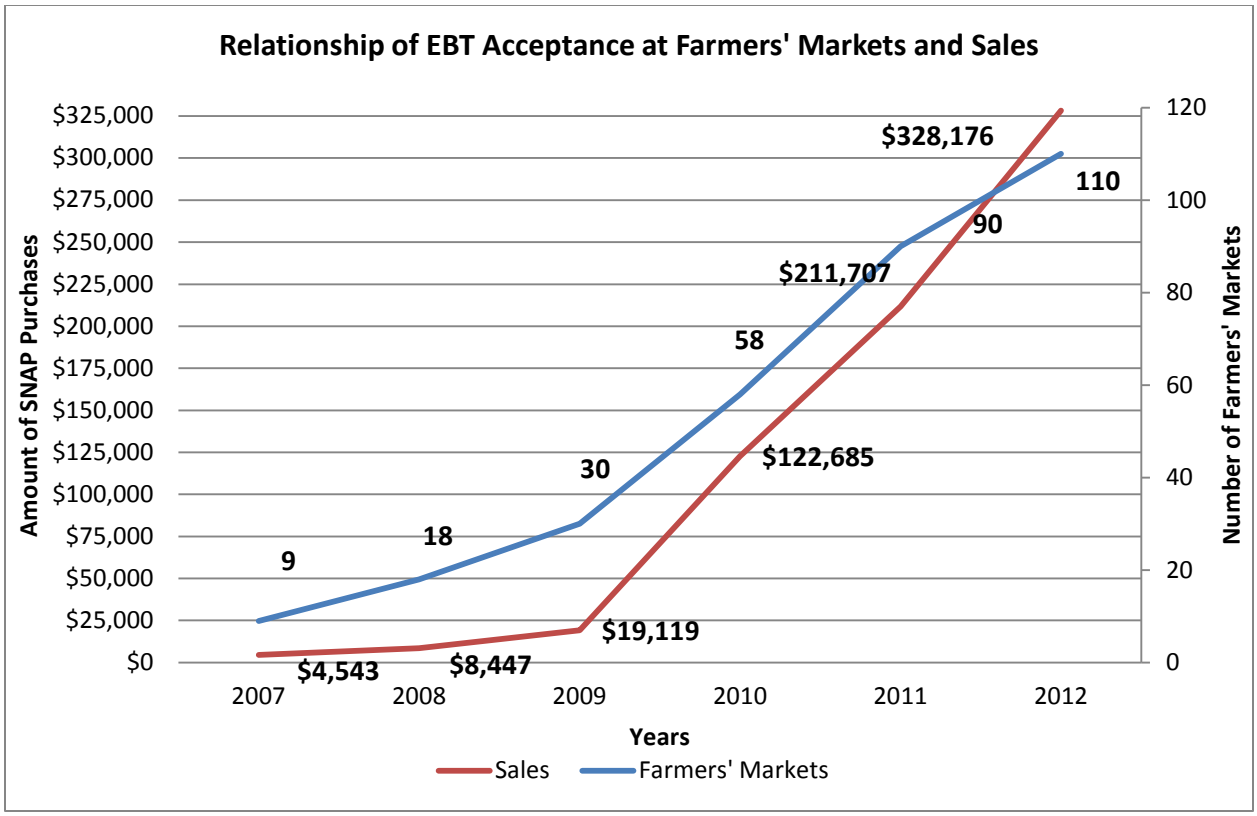
State/Territory Use of $4 Million Fiscal Year 2012 SNAP Farmers' Market Equipment Funds as of February 28, 2013

No.	State	FY 12 SNAP Farmers' Market Fund Allocation	Total Funds Used through February 28, 2013	Total Funds Remaining
1	AL	$ 91,874	$ 6,842	$ 85,032
2	AK	7,721	7,721	0
3	AR	43,235	0	43,235
4	AZ	27,022	[Declined]	27,022
5	CA	426,945	78,000	348,945
6	CO	60,992	80	60,912
7	CT	61,764	0	61,764
8	DC	17,757	3,645	14,112
9	DE	5,404	1,101	4,303
10	FL	78,749	13,322	65,427
11	GA	38,603	3,225	35,378
12	GU	5,404	0	5,404
13	HI	57,132	565	56,567
14	IA	162,131	[Declined]	162,131
15	ID	44,779	[Declined]	44,779
16	IL	178,086	2,705	175,381
17	IN	113,945	0	113,945
18	KS	50,955	0	50,955
19	KY	96,506	0	96,506
20	LA	23,934	0	23,934
21	MA	120,440*	2,989	117,451
22	MD	67,941	5,924	62,017
23	ME	51,727	5,909	45,818
24	MI	163,748	8,705	155,043
25	MN	83,761	1,335	82,426
26	MO	77,205	6,675	70,530
27	MS	32,353	12,353	20,000
28	MT	30,110	1,049	29,061
29	NC	109,631	4,135	105,496
30	ND	28,566	0	28,566
31	NE	53,272	0	53,272
32	NH	54,044	[Declined]	54,044
33	NJ	91,874	0	91,874
34	NM	34,742	220	34,522
35	NV	27,794	[Declined]	27,794
36	NY	269,446	29,670	239,776
37	OH	157,711	0	157,711

No.	State	FY 12 SNAP Farmers' Market Fund Allocation	Total Funds Used through February 28, 2013	Total Funds Remaining
38	OK	31,654	[Declined]	31,654
39	OR	53,272	7,380	45,892
40	PA	179,116	[Declined]	179,116
41	RI	28,566	2,217	26,349
42	SC	39,375	3,123	36,252
43	SD	16,213	15,600	613
44	TN	47,095	0	47,095
45	TX	97,279	9,828	87,451
46	UT	17,757	0	17,757
47	VA	91,874	4,000	87,874
48	VT	32,426	5,430	26,996
49	WA	84,154	6,946	77,208
50	WI	167,521	13,200	154,321
51	WV*	45,551	0	45,551
52	WY	20,845	0	20,845
National Totals		$ 4,000,001	$ 263,894	$ 3,736,107

* This initial amount was subsequently decreased by $40,440, to $80,000. This was the amount that MDAR informed DTA and USDA that it could realistically use based on the funding restrictions.

Of the nearly 8,000 farmers' markets in the United States, fewer than half are authorized to accept payment through SNAP. However, this represents an increase of nearly 100% since 2010. Similarly, in Massachusetts, fewer than half of farmers' markets accept EBT, but this also represents a major increase: in 2012, EBT cards could be used at 110 farmers' markets, up from only 9 markets in 2007. Massachusetts EBT sales in 2012 exceeded $320,000, up from just over $4,000 in 2007. This relationship between EBT acceptance and sales at farmers' markets is represented in the chart below.



Accepting SNAP benefits at farmers' markets allows participating farmers to increase their sales and allows low-income families to have access to this healthy food source.

Recommendations

MDAR should continue working with USDA to resolve any barriers to SNAP participation at farmers' markets. For example, the USDA funding could be used for EBT training for farmers, additional staffing during market hours, reimbursement of farmers' markets for transaction fees, and outreach to SNAP participants. Failure to mitigate the current barriers could impede further expansion of SNAP sales at farmers' markets.

MDAR's Response

> *USDA has made clear that funds can only be used for the purchase of the equipment and any monthly connection fees associated with that equipment. This had been reinforced on several conference calls of which MDAR has taken part with USDA and other participating states.*

Auditor's Reply

We appreciate MDAR's efforts to help resolve the barriers to SNAP EBT card participation at farmers' markets. We encourage MDAR to continue its ongoing dialogue with USDA regarding any future farmers' market funding in order to help ensure the success of the program.

APPENDIX A

60 SCHOOLS VISITED/SURVEYED BY AUDIT TEAM

No.	School Name	School District
1	Luther Conant School	Acton
2	Crocker Farm School	Amherst
3	Andover High School	Andover
4	Auburn High School	Auburn
5	Blackstone-Millville Regional High School	Blackstone-Millville
6	John F. Kennedy Elementary School	Boston
7	Boston Collegiate Charter School	Boston Collegiate Charter
8	Harry Lee Cole Elementary School	Boxford
9	Huntington Elementary School	Brockton
10	Carver Middle High School	Carver
11	Clark Avenue School	Chelsea
12	Anna E. Barry Elementary School	Chicopee
13	Deer Hill School	Cohasset
14	Concord-Carlisle High School	Concord-Carlisle
15	Dartmouth Middle School	Dartmouth
16	Mattacheese Middle School	Dennis-Yarmouth
17	Dennis-Yarmouth Regional High School	Dennis-Yarmouth
18	Chickering Elementary School	Dover
19	Duxbury Middle School	Duxbury
20	Fitchburg High School	Fitchburg
21	Gardner High School	Gardner
22	Gateway Regional High School and Junior High School	Gateway
23	Turners Falls High School	Gill-Montague
24	Granby Jr./Sr. High School	Granby
25	Groton-Dunstable Regional Middle School	Groton-Dunstable
26	Hopkins Academy	Hadley
27	Hamilton-Wenham Regional High School	Hamilton-Wenham
28	Hull High School	Hull
29	Robert Frost Elementary	Lawrence
30	Lee Middle and High School	Lee
31	Leicester Primary School	Leicester
32	Hanscom Middle School	Lincoln
33	Lincoln-Sudbury Regional High School	Lincoln-Sudbury

No.	School Name	School District
34	Lynn Classical High School	Lynn
35	Manchester-Essex Middle School	Manchester-Essex
36	Richer Elementary School	Marlborough
37	Martha's Vineyard Regional High School	Martha's Vineyard
38	Medford High School	Medford
39	Buckland-Shelburne Elementary School	Mohawk
40	Florence Sawyer School	Nashoba
41	Freeman-Kennedy School	Norfolk
42	Northbridge Middle School	Northbridge
43	Norwell Middle School	Norwell
44	Provincetown Schools	Provincetown
45	Ralph C. Mahar Regional School	Ralph C. Mahar
46	Garfield Middle School	Revere
47	Cottage Street Elementary School	Sharon
48	North Elementary School	Somerset
49	Southbridge Middle School	Southbridge
50	Mount Everett Regional High School	Southern Berkshire
51	Alfred M. Glickman Elementary School	Springfield
52	O'Donnell Middle School	Stoughton
53	Elizabeth S. Brown Elementary School	Swansea
54	Leverett Elementary School	Union #28
55	Webster Middle School	Webster
56	John D. Hardy Elementary School	Wellesley
57	Weston High School	Weston
58	Westport Elementary School	Westport
59	Thurston Middle School	Westwood
60	Burncoat Middle School	Worcester

APPENDIX B

STATE TAXES ON SODA CONTAINING SUGAR

No.	Sales Tax on Sugary Soda in 2012	Percent Tax
1	Alabama	4
2	Arkansas	2
3	California	7.3
4	Colorado	2.9
5	Connecticut	6
6	District of Columbia	6
7	Florida	6
8	Hawaii	4
9	Idaho	6
10	Illinois	6.3
11	Indiana	7
12	Iowa	6
13	Kansas	6.3
14	Kentucky	6
15	Maine	5
16	Maryland	6
17	Minnesota	6.9
18	Mississippi	7
19	Missouri	1.2
20	New Jersey	7
21	New York	4
22	North Carolina	5.8
23	North Dakota	5
24	Ohio	5.5
25	Oklahoma	4.5
26	Pennsylvania	6
27	Rhode Island	7
28	South Dakota	4
29	Tennessee	5.5
30	Texas	6.3
31	Utah	1.8
32	Virginia	1.5
33	Washington	6.5
34	West Virginia	6
35	Wisconsin	5

No.	No Sales Tax on Sugary Soda in 2012
1	Alaska
2	Arizona
3	Delaware
4	Georgia
5	Louisiana
6	Massachusetts
7	Michigan
8	Montana
9	Nebraska
10	Nevada
11	New Hampshire
12	New Mexico
13	Oregon
14	South Carolina
15	Vermont
16	Wyoming

APPENDIX C

52 MASS IN MOTION COMMUNITIES

No.	Municipality	County	No.	Municipality	County
1	Barnstable	Barnstable	27	Belchertown	Hampshire
2	Adams	Berkshire	28	Northampton	Hampshire
3	Clarksburg	Berkshire	29	Williamsburg	Hampshire
4	Great Barrington	Berkshire	30	Holyoke	Hampshire
5	Lee	Berkshire	31	Cambridge	Middlesex
6	Lenox	Berkshire	32	Everett	Middlesex
7	North Adams	Berkshire	33	Framingham	Middlesex
8	Pittsfield	Berkshire	34	Hudson	Middlesex
9	Stockbridge	Berkshire	35	Lowell	Middlesex
10	Fall River	Bristol	36	Malden	Middlesex
11	New Bedford	Bristol	37	Marlborough	Middlesex
12	Aquinnah	Dukes	38	Medford	Middlesex
13	Chilmark	Dukes	39	Melrose	Middlesex
14	Edgartown	Dukes	40	Somerville	Middlesex
15	Nantucket	Dukes	41	Wakefield	Middlesex
16	Oak Bluffs	Dukes	42	Waltham	Middlesex
17	Tisbury	Dukes	43	Franklin	Norfolk
18	West Tisbury	Dukes	44	Weymouth	Norfolk
19	Gloucester	Essex	45	Brockton	Plymouth
20	Lynn	Essex	46	Plymouth	Plymouth
21	Salem	Essex	47	Chelsea	Suffolk
22	Greenfield	Franklin	48	Dorchester	Suffolk
23	Montague	Franklin	49	Revere	Suffolk
24	Orange	Franklin	50	Fitchburg	Worcester
25	Springfield	Hampden	51	Northborough	Worcester
26	Amherst	Hampshire	52	Worcester	Worcester

APPENDIX D

ABBREVIATIONS

Acceptable List	A-List
body mass index	BMI
Build Our Kids' Success	BOKS
Centers for Disease Control and Prevention	CDC
Childhood Obesity Research Demonstration	CORD
Code of Massachusetts Regulations	CMR
Community Transformation Grant	CTG
Electronic Benefit Transfer	EBT
Farmers Market Promotion Program	FMPP
Mass in Motion	MIM
Massachusetts Children at Play	MCAP
Massachusetts Comprehensive Assessment System	MCAS
Massachusetts Department of Agricultural Resources	MDAR
Massachusetts Department of Early Education and Care	EEC
Massachusetts Department of Elementary and Secondary Education	DESE
Massachusetts Department of Public Health	DPH
Massachusetts Department of Transitional Assistance	DTA
National Association for Sport and Physical Education	NASPE
National School Lunch Program	NSLP
Office of the State Auditor	OSA
physical education	PE
point-of-sale	POS
Presidential Youth Fitness Program	PYFP
Supplemental Nutrition Assistance Program	SNAP
U.S. Department of Agriculture	USDA

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