

STATE OF MARYLAND
COMMITTEE ON CHILDHOOD OBESITY

Surina Ann Jordan, Ph.D., Chair

The Honorable Martin O'Malley
Governor
State of Maryland
Annapolis, MD 21401-1991

The Honorable Thomas V. Mike Miller, Jr.
President of the Senate
H-107 State House
Annapolis, MD 21401-1991

The Honorable Michael E. Busch
Speaker of the House
H-101 State House
Annapolis, MD 21401-1991

RE: HB 1176 (Ch. 251) of the Acts of 2008 –
2009 Legislative Report of the Committee on Childhood Obesity

Dear Governor O'Malley, President Miller and Speaker Busch:

Pursuant to House Bill 1176 enacted during the 2008 legislative session, the Department of Health and Mental Hygiene is directed to submit this one-time legislative report on the findings and recommendations of the Committee on Childhood Obesity. The two-year Committee was established to study: (1) insurance reimbursements paid to health care providers to diagnose and treat childhood obesity; (2) a Statewide childhood obesity data system; (3) best practices to address childhood obesity; (4) methods to enhance public awareness of the chronic diseases related to childhood obesity; and (5) methods to increase the rate of obesity screenings for children. The Committee sunsets June 30, 2010.

If you have any questions about this report, please contact Ms. Anne Hubbard, Director of Governmental Affairs, at 410-767-6481.

Sincerely,

Surina Ann Jordan, Ph.D.
Chair

Enclosure

cc: Ms. Sarah Albert, MSAR # 7281
Anne Hubbard, M.B.A.
Frances B. Phillips, R.N., M.H.A.
Russell W. Moy, M.D., M.P.H.
Audrey Regan, Ph.D.

THE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

**Legislative Report of the
Committee on Childhood Obesity**

December 2009



Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*
John M. Colmers, *Secretary, DHMH*

Executive Summary

The **Committee on Childhood Obesity** was established by House Bill 1176 during the 2008 legislative session to provide recommendations to the Governor and General Assembly related to childhood obesity in Maryland.

Committee Recommendations

The Committee on Childhood Obesity proposes the following 12 recommendations for immediate action.

Policy and Environmental Change

- Implement policy and environmental changes that enhance community access to healthy foods.
- Implement policy and environmental changes that enhance community access to physical activity opportunities.
- Require government-funded and regulated agencies responsible for administering nutrition assistance and education programs to collaborate to increase enrollment, participation, and coordination of nutrition education in these programs.
- Improve awareness for all women of child bearing age of the critical role of nutrition and physical activity for preconception wellness and the long-term health of their children.
- Establish policies that promote recommended infant and early childhood feeding practices, such as increased rate and duration of breast-feeding, as well as that educate families and regulated child care providers.
- Develop child care wellness policies.
- Improve nutritional awareness and physical activity opportunities for children by demonstrating a Statewide commitment to implement and monitor local school system wellness policies from pre-kindergarten through high school.

Health Care

- Ensure evidence-based prevention, assessment, and treatment for children who are overweight and obese.
- Align community benefit programs with evidence-based obesity prevention and intervention programs.

Public Awareness

- Implement a social marketing campaign that raises family and community awareness of healthy food choices and the importance of physical activity for obesity prevention and its impact on academic performance and self-esteem.

Infrastructure

- Implement a Statewide surveillance system to monitor nutrition, physical activity, and related health behaviors of children.
- Propose legislation or budget language that would provide a sustainable revenue source to support the implementation of these recommendations through the imposition of a tax levy such as a tax on snack foods.

Statement of Committee's Charge

During the 2008 Maryland General Assembly, House Bill 1176 established the **Committee on Childhood Obesity** (Committee) as part of the State Advisory Council on Heart Disease and Stroke. The Committee is mandated to provide recommendations to the Governor and Maryland General Assembly regarding the following: (1) Insurance reimbursements paid to health care providers to diagnose and treat childhood obesity; (2) A system for collecting, analyzing, and maintaining Statewide data relating to childhood obesity; (3) Best and promising practices to address childhood obesity, including community and school-based approaches; (4) Methods to enhance public awareness of the chronic diseases related to childhood obesity, including the increased number of children developing diabetes; and (5) Methods to increase the rate of obesity screenings for children.

The Maryland General Assembly has demonstrated its continued commitment to addressing the childhood obesity epidemic through the creation of the Committee. In 2006, the Institute of Medicine (IOM) recommended that “Federal, state, and local governments should each establish a high-level task force on childhood obesity prevention to identify priorities for action, coordinate public-sector efforts, and establish effective interdepartmental collaboration.”¹ The recommendations presented in this report reflect a timely, evidence-based approach to childhood overweight and obesity prevention and intervention.

The Committee's Framework

The Committee held six meetings between November 13, 2008 and October 15, 2009, during which the Committee first established its overarching vision, mission, and ultimate goal for facilitating the Committee's work. (See the Appendix for Committee Membership and Chairs).

Vision Maryland's children will achieve healthy weights and grow into healthy, capable adults through increased opportunities to enjoy healthful eating, participate in physical activities of their capability, and develop a strong, positive sense-of-self.

Mission To address the health crisis by reducing the prevalence of childhood obesity and its repercussions in Maryland through the integration of health promotion, program implementation, education, clinical treatment, and surveillance to help children achieve healthy lifestyles.

Goal To reduce the prevalence of obesity among children through improved nutrition and physical activity.

To explore its mandate, the Committee convened the following four Subcommittees:

1. Health Care—To identify methods to improve the treatment of obesity and its complications with special attention to the need for increased access to care and adequate public and private reimbursement for health care.
2. Surveillance—To identify a system for collecting, analyzing, and maintaining Statewide data related to childhood health and wellness and disseminating the information to educate stakeholders.

3. Interventions—To identify and address the windows of opportunity, as well as best and promising practices, for obesity prevention in childhood.
4. Awareness—To identify methods to increase public awareness of the need for wellness and the burden of obesity and its risks.

Defining Childhood Obesity and its Impact

Defining Childhood Obesity

Overweight and obesity are identified from Body Mass Index (BMI), which is calculated using height and weight. For children and adolescents, BMI scores are considered in terms of percentiles by age and gender. The Centers for Disease Control and Prevention (CDC) uses the term childhood overweight to indicate a BMI relative to a child’s age that is at or above the 85th percentile but lower than 95th percentile and childhood obesity to indicate a BMI relative to a child’s age that is at or above the 95th percentile.² Both the CDC and American Academy of Pediatrics (AAP) recommend using BMI as a screening tool for overweight and obesity in children beginning at age two years.³

Cost of Obesity

Childhood overweight and obesity contribute significantly to increased health expenditures. From 1979-1981 to 1997-1999, the percentage of hospital discharges from obesity-associated diseases increased among youth 6-17 years old.⁴ The hospital discharges for diabetes nearly doubled (from 1.43% to 2.36%), obesity and gallbladder diseases tripled (0.36% to 1.07% and 0.18% to 0.59%, respectively), and sleep apnea increased fivefold (0.14% to 0.75%).⁵ Nationwide, these childhood obesity-associated hospital costs equaled \$127 million during 1997-1999, an increase from \$35 million during 1979-1981.⁶

When examining both childhood and adult obesity, an estimated quarter of the nation’s health care costs is attributed to obesity. In 2000, the total United States cost was estimated at \$117 billion of which \$61 billion resulted from direct medical costs and \$56 billion resulted from indirect medical costs.⁷ A person who is overweight and maintains a 10% weight loss will reduce his or her lifetime medical costs by approximately \$2,200-\$5,300 per year due to lowering costs associated with hypertension, type 2 diabetes, heart disease, stroke, and high cholesterol.⁸

Current Trends in Childhood Obesity

Nationally, data from the National Health and Nutrition Examination Survey (NHANES) tracks prevalence of overweight and obesity among America’s youth. The most recent survey was conducted in 2003-2006 and indicates rising obesity rates for all age groups.⁹

Table 1. National Changes in Childhood Obesity

Ages	NHANES II 1976-1980	NHANES III 1988-1994	NHANES 1999-2002	NHANES 2003-2006	Percent Change NHANES II to NHANES
2-5	5%	7.2%	10.3%	12.4%	+7.4%
6-11	6.5%	11.3%	15.8%	17.0%	+10.5%
12-19	5%	10.5%	16.1%	17.6%	+12.6%

Maryland Data

Within Maryland, the lack of data on childhood overweight and obesity prevalence is a major challenge to addressing this epidemic. The Maryland Pediatric Nutrition Surveillance Survey documents overweight and obesity prevalence for children between the ages of 2-5 years enrolled in the Maryland WIC program. Data from the 2006 survey indicates that 16% of children are overweight and 15.4% of children are obese. For children in the 2-5 year age range, Montgomery and Cecil counties have the highest obesity rates. However, childhood overweight and obesity prevalence in Maryland is unknown among children ages 5-12 years old.

Public school children between the ages of 11-18 years participate in the Maryland Youth Tobacco Survey, and 2006 results indicate that 15% of children between ages 13-18 years are overweight and 11% are obese. (Self-reported data for children less than 13 years are not considered reliable.) There are limitations to this data source in general due to the self-report nature of the survey as children may inaccurately report personal information.

The Maryland Youth Risk Behavior Survey (YRBS)¹⁰ is an additional data source that provides information related to the nutrition and physical activity patterns of Maryland high school students. Results from the 2007 YRBS indicate that Maryland high school students are less likely to attend physical education classes than students nationwide (37.0% compared to 53.6%). Additionally, among Maryland students, the frequency and intensity of physical activity decreases by grade with 67.0% of ninth graders reporting engaging in physical activity for at least 20 minutes on three or more of the past seven days compared to 49.1% of 12th graders. Maryland high school students are more likely to watch three or more hours per day of television compared to students nationwide (41.9% compared to 35.4%).

An ongoing study conducted by the Department of Health and Mental Hygiene's (DHMH) Medicaid Healthy Kids Program and the Center for Maternal and Child Health identified BMI among 5,099 children enrolled in Maryland's Medicaid Program during 2004-2006. This study presented BMI by age, gender, and race/ethnicity. By age group, as children aged they had a higher prevalence of overweight and obesity. Statistically significant results indicated that older children ages 12-19 years had the highest prevalence of overweight (18.2%) and obesity (24.6%) followed by children ages 6-11 years (16.9% overweight and 22.4% obese), and children ages 2-5 years (16.1% overweight and 15.6% obese). Furthermore, when examining race/ethnicity, Hispanics had the highest prevalence of overweight and obesity followed by Blacks, Whites, and Asians, respectively. The differences in prevalence of overweight and obesity between Hispanics and White non-Hispanics were also statistically significant, with Hispanics being 41% more likely to be overweight and obese as compared to Whites. This study identified BMI among a cross-sectional sample of children enrolled in Medicaid, and it is an important contribution to Statewide data collection regarding overweight and obesity prevalence among Maryland children.

An additional indicator of health status for school-age children includes physical fitness measurement. Currently, approximately half of Maryland's 24 school systems utilize a health-related fitness assessment that uses criterion-referenced standards to assess students' individual physical fitness levels. The *2008 Report of the Task Force on Student Physical Fitness in Maryland Public Schools* recommended that schools perform fitness measurement on students with differentiated instruction provided for students not meeting standards for fitness. Fitness

measurement is directly referenced in Maryland’s State educational curriculum. (See Content Standard 5, Physical Activity, of the Physical Education Voluntary State Curriculum). The indicator designates a fitness measurement of students for the health-related components of fitness each year in Grade 4 through high school. These fitness measurements should be used to develop personal fitness goals and select activities for the improvement or maintenance of healthy levels of fitness.¹¹

Long-term Consequences of Childhood Obesity

Adult Obesity and Chronic Disease

Childhood overweight and obesity have been linked to adult obesity. The risk of adult obesity was at least twice as high for children who were obese compared to children who were not obese.¹² Additionally, risk factors for adult obesity have been found to increase among children who had higher levels of obesity and among children who were obese at older ages.¹³

Currently ranked 25th in adult obesity in the United States, Maryland has followed the national trend of rising rates of obesity.¹⁴ In Maryland, data from the 2007 Behavior Risk Factor Surveillance System (BRFSS) indicates, adult obesity prevalence has increased over 50% (16.3% to 26.3%) between 1995 and 2007. Obesity has continued to increase in all Maryland jurisdictions in the past decade resulting in 22 of 24 jurisdictions with an obesity prevalence of 20% or more. Likewise, disparities in obesity continue to increase in Maryland. Obesity is more prevalent among non-Hispanic Black (34.4%) than non-Hispanic White (25.1%) and Hispanic adults (18.7%). Obesity was most prevalent among non-Hispanic Black women (38.3%), adults between the ages of 50-64 years (30.6%), those with annual household income of less than \$15,000 (36.2%), and those with lower educational levels (31.5%).

Obesity is also associated with serious chronic health conditions. Obese adults were more likely to report having high blood pressure, high cholesterol, diabetes, arthritis, or asthma than normal weight adults.

Table 2: Maryland Adults and Chronic Disease, 2007

Maryland BRFSS 2007 Data	Overall Prevalence	Prevalence in Normal Weight Adults	Prevalence in Obese Adults
High Blood Pressure	29.1%	16.0%	47.7%
High Cholesterol	36.9%	28.6%	46.9%
Diabetes	8.4%	3.3%	17.7%
Arthritis	27.8%	20.3%	38.6%
Asthma	12.9%	10.0%	17.9%

Current Practices to Address Childhood Obesity

In an effort to determine best and promising practices to combat childhood overweight and obesity, including community and school-based approaches, the Committee reviewed initiatives to address childhood overweight and obesity in Maryland.

National Initiatives

In recent years, federal initiatives that have the potential to impact childhood overweight and obesity have been created.

- In 2009, the WIC authorized food list changed to allow foods that have a lower fat content and increase the availability of fruit, vegetables, and whole grains. These changes bring WIC-authorized food items into alignment with the 2005 Dietary Guidelines for Americans and infant feeding practice guidelines of the AAP.¹⁵ The WIC packaging changes have the potential to promote access to healthy foods for non-WIC participants due to increased availability of fruits, vegetables, and whole grain food items in outlets accessed by both WIC and non-WIC participants such as corner stores and small grocery outlets.¹⁶
- In 2004, federal legislation mandated that school systems that participate in the federal school nutrition programs must implement a local wellness policy by the 2006-2007 school year.¹⁷ Components of the wellness policy include goals for nutrition education, physical activity, and other school-based activities designed to promote student wellness; nutrition guidelines for all foods available on the school campus throughout the school day; guidelines for reimbursable school meals; plans for measuring implementation; and involvement of parents, students, and community members in the development of the wellness policy.

Maryland Initiatives

There are a number of State and community initiatives that address childhood overweight and obesity by promoting access to healthier foods and physical activity opportunities.

- The Maryland State Department of Education developed a tool entitled *Making Wellness Work: A Guide to Implementing and Monitoring Wellness Policies in Maryland* which provides a framework for implementing and monitoring school wellness policies. Wellness committees from five school systems piloted the guide in 2008.
- The Maryland Farm to School Program utilizes local farm products in lunchrooms and classrooms throughout the State.¹⁸
- Preventive Health and Health Services (PHHS) block grant funding supports the implementation of evidence-based childhood overweight and obesity programs in Charles and Harford counties.
- The Baltimore Healthy Stores Project is implemented in low-income Baltimore City neighborhoods to increase the supply of nutritious foods, promote point of purchase information, and provide education about the benefits of healthier diets.
- Prince George's County Public Schools partnered with the Alliance for a Healthier Generation to implement the Healthy Schools Program and create school environments that promote nutritious food choices and physical activity opportunities.
- Anne Arundel County Public Schools accessed grant funding from the NFL network's Keep Gym in School Program to repair a middle school's sport and fitness facilities.
- The Howard County Health Department recognizes elementary and middle schools with

awards for innovation in health, nutrition, physical activity, mental health, safety, and environmental health.

- The Mt. Washington Pediatric Hospital’s Weigh Smart Program in Baltimore City is a multidisciplinary effort that assists children who are overweight and obese and their families with acquiring healthy eating and physical activity habits.
- The Washington County Hospital’s KidShape Program, also a family-focused intervention program, is implemented in Hagerstown and is funded in part through the hospital’s community benefit program.

Future Initiatives

In September 2009, grant funding opportunities under “Communities Putting Prevention to Work” were announced through the American Recovery and Reinvestment Act of 2009. This highly competitive CDC cooperative agreement supports evidence-based community approaches to chronic disease prevention and control. This funding opportunity is designed to implement policy, systems, and environmental changes that achieve behavior change in youth supported in school, family, and community settings, which promote healthy behaviors into adulthood. Communities are expected to implement population-based approaches across five evidence-based strategies (MAPPS) – media, access, point of purchase information, price, and social support/services—in both schools and communities.

Recommendations and Needed Actions in Maryland

The Committee found that comprehensive, multidisciplinary treatment programs for children who are overweight and obese exist throughout Maryland. However, there are not a sufficient number of programs to meet the need. For children who are overweight or obese, intervention and treatment programs that provide organized physical activity, involve parents/caregivers, and incorporate behavioral management techniques are often most successful in improving weight outcomes.¹⁹ In conclusion, the Committee proposes the following recommendations:

Policy and Environmental Change

1. Implement policy and environmental changes that enhance community access to healthy foods.
 - Expand the Healthy Stores Program Statewide.
 - Increase full-service grocery stores in underserved communities through establishment of actual or online (virtual) supermarkets.
 - Implement incentive programs that enable small food retailers in underserved communities to carry healthier, affordable food items.
 - Establish school, workplace, and public service venue service and procurement policies that utilize evidence-based practices to increase access to healthy food choices.
 - Enhance farm-to-institution policies, including within schools, hospitals, and prisons.
 - Ban convenience stores and fast food establishments within a reasonable radius of schools.
2. Implement policy and environmental changes that enhance community access to physical activity opportunities.

- Establish safe, attractive, accessible places for physical activity in every neighborhood, such as recreation facilities, school building access, and land use policies.
 - Implement city planning and zoning policies that include and address results from health impact assessments.
 - Require the building of sidewalks and crosswalks for busy roads near schools.
3. Require government-funded and regulated agencies responsible for administering nutrition assistance and education programs to collaborate to increase enrollment, participation, and coordination of nutrition education in these programs.
 - Establish an interagency committee that includes members at the policy level from each agency/program to promote coordination of enrollment procedures for nutrition assistance programs.
 - Coordinate delivery of educational messages on nutrition, physical activity, and health and wellness to participants of nutrition assistance programs.
 4. Improve awareness for all women of child bearing age of the critical role of nutrition and physical activity for preconception wellness and the long-term health of their children.
 - Mandate wellness education in all secondary schools with additional support from DHMH, local health departments, PTAs, and faith-based organizations.
 - Require daily physical activity in elementary, middle and high schools.
 5. Establish policies that promote recommended infant and early childhood feeding practices, such as increased rate and duration of breast-feeding, and that educate families and regulated child care providers.
 - Increase awareness of the value of breast-feeding among women of childbearing age.
 - Expand WIC education and peer counseling to support adoption by mothers and families of recommended infant and early childhood feeding practices including increases in fruit and vegetable vouchers for breast-feeding mothers.
 - Train hospital-based health care practitioners to promote and support breast-feeding through the Baby-Friendly Hospital Initiatives, a program to encourage and recognize hospitals that offer an optimal level of care for lactation.
 - Expand the availability of lactation consultants.
 - Create work-place policies that support nursing mothers.
 6. Develop a child care wellness policy.
 - Conduct a review of State child care regulations and implement new requirements to ensure all children are eating healthy food and meeting recommendations for physical activity and reductions in television and computer screen time.
 - Include nutrition and physical activity criteria in the Quality Ratings Improvement System (QRIS) through a wellness policy to be submitted by child care providers who voluntarily participate in the QRIS.
 - Develop a wellness policy template to assist child care providers with drafting and implementing wellness policies.
 7. Improve nutritional awareness and physical activity opportunities for children by demonstrating a Statewide commitment to implement and monitor local school system wellness policies from pre-kindergarten through high school.
 - Mandate local school system wellness policies designed and staffed with local resources.

- Expand afterschool, weekend and summer physical activity opportunities for families and the school community.
- Implement universal free breakfast in schools.
- Incorporate the recommendations from the *2008 Report of the Task Force on Student Physical Fitness in Maryland Public Schools*.
- Monitor and measure local school system wellness policy implementation and monitor plans for both nutrition and physical activity in schools.
- Provide feedback and technical assistance to each local school system on the wellness policy implementation and monitoring plans.
- Require local school systems to establish baseline student data for the health-related components of physical fitness as originally proposed by the Gwendolyn Britt Student Health and Fitness Act (HB 1264/SB 879 (2009)).
- Encourage sharing of nutrition and physical activity resources through State and local school system Web sites.

Health Care

8. Ensure evidence-based prevention, assessment, and treatment for children who are overweight and obese.
 - Reimburse for BMI documentation, obesity diagnosis, and treatment referral by providers.
 - Reimburse for comprehensive, multi-disciplinary treatment for children who are overweight and obese by a specialized center.
 - Reimburse primary care providers for early recognition and management of children who are overweight and obese.
 - Educate providers and monitor their adoption of recommendations of the AAP and Expert Committee on Assessment, Prevention, and Treatment of Child Overweight and Obesity.
 - Ensure provision of culturally-sensitive and appropriate health education materials for providers to use with families.
9. Align community benefit programs with evidence-based obesity prevention and intervention programs.
 - Include an evaluation component for all community benefit programs that assesses impact on weight status or related markers (e.g., physical activity level).

Public Awareness

10. Implement a social marketing campaign that raises family and community awareness of healthy food choices and the importance of physical activity for obesity prevention, and its impact on academic performance and self-esteem.
 - Purchase or solicit in-kind marketing or advertising services for the development and delivery of healthy nutrition and physical activity messages.
 - Provide support to local communities to deliver media messages.
 - Promote healthy food and drink choices.
 - Consider food labeling requirements for restaurants and fast food establishments.
 - Develop and disseminate counter-advertising messages.
 - Promote active transportation (e.g., bicycling and walking for commuting and leisure activities).
 - Develop and disseminate counter-advertising for television and computer screen time.

Infrastructure

11. Implement a Statewide surveillance system to monitor nutrition, physical activity, and related health behaviors of children.
 - Identify indicators and feasible collection methods for monitoring childhood overweight and obesity, such as BMI, amount of daily physical activity, food intake, and other community measures.
 - Require local school systems to establish baseline data for health-related fitness.
12. Propose legislation or budget language that would provide a sustainable revenue source to support the implementation of these recommendations through the imposition of a tax levy such as a tax on snack foods.
 - Identify bill sponsors.
 - Research precedence for national best practices.
 - Ensure that funds are earmarked for the implementation of these recommendations.

Conclusion

The Committee will continue to convene meetings to fulfill its charge through June 30, 2010. Additional stakeholders and collaborators will be identified to promote multi-sector involvement in prevention and intervention efforts throughout the State.

The recommendations set forth in this report consider all levels of influence in prevention and intervention efforts of childhood overweight and obesity. The strengths and resources of a variety of stakeholders are necessary to maximize child wellness and reverse the trend of increasing rates of children who are overweight and obese. The Committee extensively reviewed evidence-based research and national reports to develop recommendations that would have the most impact within the State of Maryland. Priority recommendations were selected based on the most appropriate and sustainable interventions for Maryland. It is the Committee's hope that these recommendations will guide the State's continued response to childhood overweight and obesity.

Appendix

Committee on Childhood Obesity Membership

Committee Chair

Dr. Surina Ann Jordan

Subcommittee Chairs

Jeanne Charleston, R.N.

Dr. Anjali Jain

Dr. Alan Lake

Dr. Audrey Regan

Members of the State Advisory Council on Heart Disease and Stroke

The American Heart Association- Rhonda Chatmon

The Department- Dr. Maria Prince

The Johns Hopkins Medical Institutions- Dr. Marlene Williams

The Maryland Association of County Health Officers- Roger Harrell

The Maryland Hospital Association, Inc.- Dr. David Meyerson

The Maryland Nurses Association- Sandra Bryan

The Medical and Chirurgical Faculty of the State of Maryland- Dr. Howard Garber

The Monumental City Medical Society- Dr. Royce Fagan

The University of Maryland and School of Medicine- Dr. Marcella Wozniak

The Maryland Academy of Family Physicians- Dr. Chan-Hing Ho

The American College of Emergency Physicians Maryland Chapter- Dr. William Jaquis

The American Stroke Association- Dr. Barney Joel Stern

The American Society of Internal Medicine- Vacant

The Maryland Institute for Emergency Medical Services- Lisa Myers

The Maryland State Council on Physical Fitness- Dr. Surina Ann Jordan

The Maryland Chapter of the American College of Cardiology- Dr. Chen Tung

The Maryland Pharmacy Association- Catherine Cooke

Members of the general public:

Eileen Bucanan

Dr. Albert Heck

Alexander Martin

Jose Maldonado

Heide Morgan

Appointed Members for the Childhood Obesity Report

Maryland Chapter of the American Academy of Pediatrics- Dr. Alan Lake

Children's National Medical Center- Dr. Anjali Jain

Johns Hopkins Children's Center- Dr. Richard Katz

Maryland Association of Boards of Education- Sandra Barry

Additional Participants:

Dr. Maureen Black

Jeanne Charleston

Toni Chittams
Dr. Maiya Clark
Dr. Donald Fedder
Michaelene Fedder
Dr. Richard Fornadel
Carol Grove
Tim Jones
Bramaramba Kowtha
Michael Mason
Donna Mazyck
Dr. SJ Rao
Payam Sheikhattari
Shelonda Stokes
Lauren Thomas
Dawn Witherspoon
Peggy Yen

Department of Health and Mental Hygiene

Debra Celnik, Office of Chronic Disease Prevention
Dr. Cheryl DePinto, Center for Maternal and Child Health
Marti Grant, Medicaid Healthy Kids Program
Andrea Hewitt, Center for Maternal and Child Health
Zachary Nickey, Office of Chronic Disease Prevention
Erin Penniston, Office of Chronic Disease Prevention
Dr. Audrey Regan, Office of Chronic Disease Prevention
Steve Trageser, Office of Chronic Disease Prevention
Ann Walsh, Office of Chronic Disease Prevention

References

¹ Institute of Medicine. (2006). *Report Brief: Progress in Preventing Childhood Obesity: How Do We Measure Up?* Retrieved June 25, 2009, from http://www.iom.edu/~media/Files/Report%20Files/2006/Progress-in-Preventing-Childhood-Obesity--How-Do-We-Measure-Up/11722_reportbrief.ashx

² Centers for Disease Control and Prevention. (2009). *Defining Childhood Overweight and Obesity*. Retrieved June 29, 2009, from <http://www.cdc.gov/obesity/childhood/defining.html>

³ Centers for Disease Control and Prevention. (2009). *Defining Childhood Overweight and Obesity*. Retrieved June 29, 2009, from <http://www.cdc.gov/obesity/childhood/defining.html>

⁴ Wang, G. & Dietz, W.H. (2002). Economic Burden of Obesity in Youths aged 6 to 17 years: 1979-1999. *Pediatrics*, 109(5), e81-e86. Retrieved July 6, 2009, from <http://pediatrics.aappublications.org/cgi/reprint/109/5/e81>

⁵ Wang, G. & Dietz, W.H. (2002). Economic Burden of Obesity in Youths aged 6 to 17 years: 1979-1999. *Pediatrics* 109(5), e81-e86. Retrieved July 6, 2009, from <http://pediatrics.aappublications.org/cgi/reprint/109/5/e81>

⁶ Centers for Disease Control and Prevention. (2008). *Preventing Chronic Diseases: Investing Wisely in Health Preventing Obesity and Chronic Disease through Good Nutrition and Physical Activity*. Retrieved July 6, 2009, from <http://www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/obesity.pdf>

⁷ Centers for Disease Control and Prevention. (2008). *Preventing Chronic Diseases: Investing Wisely in Health Preventing Obesity and Chronic Disease through Good Nutrition and Physical Activity*. Retrieved July 6, 2009, from <http://www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/obesity.pdf>

⁸ Centers for Disease Control and Prevention. (2008). *Preventing Chronic Diseases: Investing Wisely in Health Preventing Obesity and Chronic Disease through Good Nutrition and Physical Activity*. Retrieved July 6, 2009, from <http://www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/obesity.pdf>

⁹ Centers for Disease Control and Prevention. (2009). *Overweight and Obesity: NHANES Surveys*. Available <http://www.cdc.gov/obesity/childhood/prevalence.html>

¹⁰ Maryland State Department of Education. (2008). *2007 Maryland Youth Risk Behavior Survey*. Available http://www.marylandpublicschools.org/NR/rdonlyres/707B5FB5-9A0C-4A06-A741-92D16DC7B2E7/18502/2007_MD_YRBS_Report_Oct_1.pdf

¹¹ Task Force on Student Physical Fitness in Maryland Public Schools. (2008). *Final Report of the Task Force to Study Student Fitness in Maryland Public Schools submitted to the Maryland General Assembly and Governor*. Available http://www.healthymaryland.org/TaskForce_PE.pdf

¹²Serdula, M.K., Ivery, D., Coates, R.J., Freedman, D.S., Williamson, D.F., & Byers, T. (1993). Do Obese Children Become Obese Adults? A Review of the Literature. *Preventive Medicine*, 22(2), 167-177.

¹³ Serdula, M.K., Ivery, D., Coates, R.J., Freedman, D.S., Williamson, D.F., & Byers, T. (1993). Do Obese Children Become Obese Adults? A Review of the Literature. *Preventive Medicine*, 22(2), 167-177.

¹⁴ Trust for America's Health. (2009). *F as in Fat: How Obesity Policies are Failing in America 2009*. Available <http://healthyamericans.org/reports/obesity2009/Obesity2009Report.pdf>

¹⁵ Public Health Law & Policy. (2009). *Healthy Corner Stores: The State of the Movement*. Available http://www.calendow.org/uploadedFiles/Publications/By_Topic/Disparities/Obesity_and_Diabetes/HealthyCornerStores_StrategicPlan.pdf

¹⁶ Public Health Law & Policy. (2009). *Healthy Corner Stores: The State of the Movement*. Available http://www.calendow.org/uploadedFiles/Publications/By_Topic/Disparities/Obesity_and_Diabetes/HealthyCornerStores_StrategicPlan.pdf

¹⁷ The Library of Congress THOMAS. (2004). S.2507. Retrieved July 6, 2009 from <http://thomas.loc.gov/cgi-bin/bdquery/z?d108:SN02507:@@@D&summ2=m&>

¹⁸ Maryland Department of Agriculture. (2009). *Farm to School*. Available <http://www.mda.state.md.us/mdfarmtoschool/index.php>

¹⁹ Agency for Healthcare Research and Quality. (2008). *Effectiveness of Weight Management Programs in Children and Adolescents*. Evidence Report/Technology Assessment Number 170.