Preventing and Reducing Obesity in Maine: A Call to Action



July 2022



Introduction

In 2017, the Maine Center for Disease Control and Prevention and LLet's Go!, the childhood obesity prevention program of The Barbara Bush Children's Hospital at Maine Medical Center, convened the Maine Obesity Advisory Council (MOAC) to identify and promote evidence-based recommendations to guide local, district, and statewide programs, policies, and partnerships in reducing obesity and the medical conditions associated with obesity, which result in poor health, higher medical costs, and negative impacts on quality of life in Maine.

Since its inception, MOAC has brought together public health and medical professionals, educators, and community leaders – all bringing vast experience and expertise in the work of obesity prevention across sectors and settings.

In the fall of 2021, MOAC enlisted the services of Hart Consulting to document Maine's historical programming and policy responses to obesity, the current health and economic toll of obesity on Maine people and communities, and the urgent need for action in re-establishing best practice obesity prevention policy and programs.

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Executive Summary



Obesity is a complex, chronic disease with multiple causes. Our understanding of its risk factors and effective prevention and intervention strategies is evolving. Other states have shown that through innovative policymaking and public-private partnerships, progress can be made to prevent and treat this costly chronic disease. This paper outlines known causes of obesity, identifies strategies used in Maine and in other states, and presents a potential path forward for reversing this epidemic.

Obesity is a growing concern in Maine

Over the past two decades, the rates of obesity in Maine have increased for children and adults. Today, 31% of adults have obesity, a three-fold increase since 1992,¹ and 15% of teens in grades 9 through 12 have obesity, a 36% increase since 2001.² People at higher risk of obesity tend to be those with lower incomes and education levels, those living in rural communities, and people from traditionally marginalized communities, including racial and ethnic minority groups.

The causes of obesity are complex

Behavioral, economic, environmental, and genetic factors all influence individuals' weight status. Higher rates of obesity for some subpopulations are exacerbated by underlying inequities, including adverse childhood events, poverty and low wages, lack of access to healthcare, chronic stress, inadequate housing, and unsafe neighborhoods.³ Each person is a product of their genes, family norms, and socio-economic conditions. People are surrounded by influences that either positively or negatively shape their health status and behaviors, including schools, neighborhoods, communities, workplaces, and media platforms. To change the trajectory of obesity, all levels and influences will need to shift.

The disease of obesity increases the risk of developing other serious illnesses

Obesity puts an individual at greater risk for developing other chronic health conditions, such as hypertension, type 2 diabetes, heart disease, asthma, and stroke. It increases the risk of sleep apnea, breathing problems, 14 different cancers, pregnancy complications, and mental illness, such as depression and anxiety. Obesity also increases the risk of developing severe COVID-19 illness once infected. The increasing prevalence of this disease raises concerns that we can no longer ignore.

Many states are leading the way to prevent and reduce obesity

Efforts to prevent and treat obesity look different in every state, but there are some commonalities across longerstanding initiatives. The most successful efforts have state funding and support, multi-stakeholder engagement, public-private partnerships, and comprehensive state and local programming. They have long-term plans and commitments and rely on evidence-based strategies. Many of these states reference <u>The Guide to Community</u>. <u>Preventive Services</u>, a collection of evidence-based <u>findings</u> from the <u>Community Preventive Services Task Force</u>.

Maine's efforts to prevent obesity have been limited

Maine has made some investments in obesity prevention programming at the community and state levels over the last two decades, but most programs were funded with time-limited, competitive federal grants that were not renewed and not continually funded by the state legislature. Despite the growing health and economic impacts of obesity, resources for the state's obesity prevention efforts have waned dramatically over the last decade. Obesity prevention has simply not been a priority for Maine lawmakers while changes to federal funding for prevention programming have further diminished Maine's investment in preventing and reducing obesity. Currently the state's obesity program is managed by one half-time position, down from a staff of three several years ago.

Maine has a clear roadmap for reducing obesity in every community

In 2017, the Maine Center for Disease Control and Prevention (Maine CDC) and Let's Go! convened a group of stakeholders to make recommendations and identify evidence-based strategies to address obesity in Maine. This collaborative effort, called the <u>Maine Obesity Advisory Council</u> (MOAC), developed a practical roadmap for obesity prevention programming and policies in six settings – early care and education, out-of-school programs, schools, healthcare, government, and community.

MOAC reviewed and assessed recommendations from national experts and researchers, studied previous efforts in Maine, and collected input from stakeholders. The result is a comprehensive set of evidence-based goals, strategies, standards, and resources for local and state level action, designed for collaborative efforts that can be tailored to Maine communities. Integrating equity and positive messaging to reduce obesity stigma and bias, MOAC developed clear and tangible recommendations.

Investment is needed to create a healthier future

Obesity rates have increased dramatically over three decades, and it is well understood that reversing the trend will take time as well as sustained investment and action at the federal, state, community, and clinical levels. There is a clear path for preventing and reducing obesity in Maine. Now is the time for action.



Obesity in Maine



Obesity poses a serious and growing threat to public health and productivity in Maine. Obesity increases the risk for many serious health conditions, including high blood pressure, type 2 diabetes, cancer, and depression. The disease of obesity is a tremendous economic burden on families and businesses that are shouldering increased direct and indirect medical costs, lost productivity, and reduced quality of life. Today's generation may be the first to live shorter, less healthy lives than their parents.

COVID has uncovered Maine's silent epidemic of obesity

As Maine works its way through the COVID-19 public health and economic crises, now more than ever, people understand the link between obesity and risks for severe illnesses and chronic diseases. The public health messages about the high risk for severe illness for people with obesity or other medical conditions appear daily in news briefs, advertisements, and expert interviews. Too many have suffered the ill effects of the virus either personally or through the struggles of a loved one. Maine has a renewed opportunity to respond to the obesity epidemic to improve health, reduce the economic burden, and enhance the quality of life for all Maine people.

Body mass index (BMI) is a measure of weight (kg) divided by height (m²). BMI is a screening tool; it does not assess overall health.

Adult obesity is defined as having a body mass index (BMI) of 30.0 or greater.

Pediatric obesity is defined as having a BMI in the 95th percentile or greater, based on the child's age and sex.

Obesity prevalence has increased over time

Obesity is a complex, chronic, relapsing disease in which excess body fat leads to physiological impairments. The disease of obesity increases the risk of developing other chronic diseases and is associated with early mortality and reduced quality of life.⁴ Obesity is common, with rates increasing across all demographic factors over the past few decades. Prevalence of the disease is expected to continue to rise if not prevented or treated.⁵ In 2020, 31% of Maine adults were classified as having obesity, and 35% were classified as having overweight. This means two-thirds of adults in the state carry extra weight and the rates are climbing each year. The prevalence of obesity among adults increased almost 300% from 12% in 1990 to 31% in 2020 (Figure 1). Obesity among children in Maine is also rising (Figure 2).⁶ Nationally, the prevalence of severe obesity among children and adolescents, as measured by a BMI >99th percentile, makes them the fastest growing subgroup.⁷



Figure 1. Prevalence of Obesity Among Adults in Maine, Maine Behavioral Risk Factor Surveillance System, 1992-2020⁸



The causes of obesity are complex

Behavioral, economic, environmental, and genetic factors all play a role in influencing weight status. Higher rates of obesity for some groups are exacerbated by underlying inequities, including living in neighborhoods that lack affordable and nutritious foods, low quality diets, low wages and poverty, lack of access to healthcare, inadequate housing, sedentary time, and unsafe neighborhoods.¹⁰ Adverse childhood events and chronic stress are also risk factors for obesity. Research suggests that environmental factors, including exposure to toxins like PFAS, can increase the risk for obesity.¹¹

Families, environments, practices, and cultural norms influence obesity

Many of the social advances and innovations over the past few decades contribute to developing unhealthy weight status. More neighborhoods are built away from service centers, creating sprawl, and forcing people to be more reliant on cars for transportation and decreasing engagement in active transportation. The proliferation of computers, smart phones and other technology have tied many people to screens for entertainment, choosing movement less frequently for recreation. Portion sizes have increased as has the availability of calorie dense, low nutrient quality foods in grocery, retail, and convenience stores, as well as fast food eateries and restaurants. Sugary drinks are aggressively marketed and replace water in many situations.

People are surrounded by influences that shape their health and productivity. Each person is a product of their genes, family norms, and socio-economic conditions. From there, influences start in schools, neighborhoods, communities, and media platforms – eventually reaching policies that either support physical activity, nutrition, and access to healthcare or detract. To change the trajectory of obesity, all levels and influences will need to shift. See Figure 3.



The prevalence of obesity varies among different groups

Like many chronic diseases, there are social and demographic predictors of weight status. Data show that adults with lower education levels, lower income, and those who are racial and ethnic minorities are more likely to have higher rates of obesity than those with more education, higher income, and those who are white. There are also differences across sexes and age groups.

Geographic, racial, and social disparities impact Maine's obesity rates

Maine's rural communities often lack walking trails, sidewalks, road shoulders, or recreation areas, increasing residents' risk of physical inactivity.¹³ Isolation and long distances from grocery stores for rural residents may increase their risk of having diets with low quality nutritional value. Rural residents may face different cultural and financial barriers including lack of services, shortage of healthcare professionals, and no public transportation compared to non-rural residents.¹⁴ Other historically marginalized communities in Maine, including Black, Indigenous, and people of color, are more likely than their white neighbors to suffer from chronic stress and illness, and are at increased risk of obesity.¹⁵ Still others in Maine may have experienced adverse events at various life stages, such as neglect, domestic violence, and poverty, putting them at higher risk for having obesity and other chronic diseases.

In Maine:

- The prevalence of obesity is higher among people with a high school diploma compared to those with a college degree (34.5% vs. 24.5%, respectively).¹⁷
- Adults with lower annual incomes are more likely to have obesity: 37.1% of people with an annual income of \$25,000 to \$49,999 have obesity, compared to 31.8% of those earning \$75,000 or more.¹⁸
- Multi-racial adults have higher rates compared to white adults (33.5% vs. 31.5%, respectively)¹⁹
- Males have slightly higher rates of obesity compared to females (32.3% vs. 29.7%, respectively)²⁰
- Adults ages 45 64 years have higher rates of obesity (35.5%) than adults ages 18 44 (29.5%), or 65+ years (27.3%)²¹

Obesity puts people at higher risk for severe illnesses

Chronic Conditions. Obesity increases the risk for developing additional chronic health conditions such as hypertension, type 2 diabetes, heart disease, asthma, and stroke. It increases risks for developing sleep apnea, breathing problems, 14 different cancers, pregnancy complications, and mental illness such as depression and anxiety. It puts strain on the musculoskeletal system, leading to chronic back pain, and stresses ankles, knees, and hips. Alzheimer's and vascular dementia are also more likely among adults with obesity.²²

CHRONIC CONDITIONS ASSOCIATED WITH OBESITY

- Hypertension
- Type 2 diabetes
- Heart disease
- Stroke
- Asthma

- Liver abnormalities
- Sleep apnea
- 14 different cancers
- Pregnancy complications
- Depression

- Anxiety
- Chronic back pain
- Alzheimer's and vascular dementia

Metabolic Diseases. Obesity causes low-grade, chronic inflammation, that can contribute to the onset of metabolic diseases, weakening the immune system. People with obesity commonly have respiratory diseases and circulatory issues due to lower lung, heart, and metabolic functions.²³

Obesity and Mortality Associated with COVID-19. Recent studies suggest individuals with obesity who contract COVID-19 have increased risk of hospitalization and admission to critical care facilities. A study published by the US Centers for Disease Control and Prevention (CDC), found that among of the 148,494 adults who received a COVID-19 diagnosis during an emergency department or inpatient visit at 238 US hospitals during March–December 2020, 28.3% had overweight and 50.8% had obesity. Furthermore, of those who were hospitalized and died, 27% had overweight and 46% had obesity.²⁴

Obesity takes an economic toll on Maine families and businesses

The economic and societal costs of obesity are great. The costs include direct and indirect medical costs of managing and treating obesity-related chronic diseases, reduced productivity and quality of life, premature mortality, and losses due to mental and emotional strain. Sick days, medical claims, and health care costs increase with increases in BMI.²⁵ In 2018, the Milken Institute estimated the total annual cost of obesity in the US to be \$1.38 trillion, with \$370 billion in medical costs, and \$1.02 trillion for lost workdays and productivity.²⁶ An older study estimated the costs in Maine to be \$452 million in 2011.²⁷

Best Practices in Reducing the Prevalence of Obesity



Obesity rates have increased steadily over the past few decades, and it is well understood that reversing the trends will take time as well as broad investment and action at the federal, state, community, and clinical levels. Nevertheless, the return on investment will be substantial. Research conducted by the Trust for America's Health found that every \$1 spent on evidence-based chronic disease prevention programs saves \$5.60 in health spending and yields \$7.50 in economic output.²⁸

State and Federal Policies. Advocates at the state and national levels continue to seek the enactment of policies that promote healthy choices and reduce conditions in the community that contribute to obesity. These policies include healthy meals and increased time for physical activity for children in schools and early care and education programs; higher prices for sugary drinks; transportation planning requirements; zoning improvements; tax breaks for creating walkable districts; and expanded insurance coverage, to name a few.²⁹ State and federal policy changes have the greatest reach across populations and stand the greatest chance of being sustained.

Community, School, and Healthcare Setting Prevention Best Practices. Community-level change is important in reducing obesity; making changes where people live, work and play. The <u>Community Preventive Services Task Force</u> calls for a multi-faceted public health approach to prevent and reduce overweight and obesity in communities. Its core recommendations focus on promoting the importance of physical activity and healthy eating as important choices for maintaining good health. The recommendations provide evidence-based strategies to improve conditions in the community that contribute to obesity. The strategies focus on working in communities with schools, worksites, and other non-profits to advocate for healthier food options; access to nutritious foods; increases in breastfeeding; increased opportunities for safe physical activities; and reduced screen time to prevent excess weight gain and prevent chronic disease.³⁰

THE COMMUNITY GUIDE

The Guide to Community Preventive Services (The Community Guide) is a collection of evidence-based findings of the <u>Community Preventive Services Task Force (CPSTF</u>). MOAC relied on this resource to select interventions to improve health and prevent disease in the state, community, community organizations, businesses, healthcare organizations, or schools. The U.S. Department of Health and Human Services (DHHS) established the CPSTF in 1996 to develop guidance on which community-based health promotion and disease prevention intervention approaches work and which do not work, based on available scientific evidence. The U.S. CDC provides the CPSTF with technical and administrative support.

Best Practice Medical Interventions for Obesity. Guidelines from the National Institutes for Health and the National Heart, Lung, and Blood Institute call for early identification and assessment for overweight and obesity by clinicians. The guidelines encourage providers to use motivational interviewing and shared decision-making with patients to develop weight loss goals. They advise clinicians to assess patients for conditions related to obesity and follow the best treatment protocols. The primary care provider monitors the patient and adjusts treatments over time. The goal of the guidelines is to achieve a 10% reduction in weight, a reduction that is associated with improvements in co-morbidities, such as high blood pressure and diabetes. The clinical guidelines outline criteria based upon disease severity for the use of medications and surgery to achieve weight loss.³¹

Many states are leading the way to prevent and reduce obesity

Efforts to reduce the prevalence of obesity are different in every state, but there are common themes across the well-established initiatives. They have state funding and support, engage many stakeholders at all levels, and implement comprehensive state-local programming.

State Led and Funded Efforts. Recognizing the impacts of obesity on the public's health, the economy, and the workforce, many states have implemented statewide strategies to reduce the prevalence. For example, Illinois, North Carolina, and Wisconsin have state obesity councils with long term strategic plans to address obesity through increasing physical activity, and improving nutrition. Some states, like Vermont, Michigan, and Illinois have state- and federally-funded obesity reduction and prevention programs in their state health departments. In some places, such as North Carolina, Michigan, and New Hampshire, public and private universities have created obesity research programs to understand the underlying causes and develop effective solutions. The Strategies to Overcome and Prevent Obesity Alliance at The George Washington University conducts research and convenes global partners. Many of these university research programs collaborate with state and local health departments, schools, and community organizations to expand the reach and depth of their work.

Foundation and Public-Private Partnerships. Across the US, there are private health foundations like the <u>Michigan</u> <u>Health Endowment Fund</u> that have adopted obesity reduction as a central health issue for funding and programming. For many years, <u>Robert Wood Johnson Foundation</u>, a national health and equity focused foundation, has invested in obesity research, program design, and evaluation. There are state-level coalitions focused on the issue, such as the <u>Illinois Alliance to Prevent Obesity</u>, which convenes multidisciplinary stakeholder groups, including large employers, educators, health care systems, agriculture, public health, and insurance.

Maine's Investment in Obesity Prevention



Over the last twenty years, the Maine Center for Disease Control and Prevention (Maine CDC) has implemented various efforts to prevent and reduce obesity. Maine's investment in obesity prevention began in 2000 with the creation of the Healthy Maine Partnerships (HMPs), which were funded through the Fund for a Healthy Maine from Maine's share of the 1998 tobacco settlement. The HMPs were a network of 31 community coalitions funded to address three of the leading contributors to chronic disease and preventable deaths – physical inactivity, poor nutrition, and tobacco use.

Federal and state funding for physical activity and nutrition programming has been limited

In 2003, the state established a Physical Activity and Nutrition (PAN) program with a 5-year federal grant to guide obesity prevention work across the state and support the HMPs with technical assistance. The state started to scale back the PAN program in 2012, when the federal funds were not renewed and took further steps toward dissolving the obesity prevention program by reallocating its funding to other programs. Since 2019, Maine CDC has supported one half-time contractor to oversee healthy eating and active living grants and contracts (Figure 4).

Figure 4. Maine CDC Obesity Prevention Programs Timeline 2001 to 2021



In the past, Maine CDC has received limited term federal grants for targeted obesity prevention activities for specific communities, such as the US CDC Prevention and Control (1305) grant and US CDC Communities Putting Prevention to Work grant. Other funding has been for specific interventions through the US CDC Community Transformation Grant, for example, for the use of the Go NAPSACC toolkit in early care and education sites to promote healthy eating and physical activity. These grants, while helpful in exposing state and community partners to evidence-based practices, were time limited not renewed by the federal government nor consistently funded by the state legislature.

For decades, the state has received federal funding for Supplemental Nutrition Assistance Program Education (SNAP-Ed) for low-income families on nutrition and healthy eating. These funds have traditionally supported direct education for eligible families and have more recently used the public health approaches of implementing policy, systems, and environmental changes. Other federally funded programs include Women Infants and Children (WIC) that has a strong education component for low-income mothers, as well as school nutrition program funding for low-income students through the National School Breakfast and Lunch Programs.

State funded obesity prevention work continues to occur throughout the state

Over the past five years, Maine CDC has invested in a collaborative effort with community partners and Maine Prevention Services (MPS) to support work across the state designed to prevent obesity, and other public health challenges. Maine CDC contracted with Let's Go!, the childhood obesity prevention program of The Barbara Bush Children's Hospital at Maine Medical Center, to implement strategies to reduce childhood obesity in the state. Let's Go! works with sites in early care and education programs, schools, out-of-school programs, and health care practices to improve environments and adopt standards and policies that support healthy eating and active living.

Despite the tremendous health and economic impacts of obesity, resources for the state's obesity prevention efforts have waned dramatically over the last decade. Obesity prevention has simply not been a priority for Maine lawmakers while changes to federal funding for prevention programming have further diminished Maine's investment in preventing and reducing obesity.

A Call to Action



The Maine Obesity Advisory Council has developed a community blueprint

Recognizing the need for a shared blueprint for community action, Maine CDC and Let's Go! convened the Maine Obesity Advisory Council (MOAC), which was charged with developing a practical and realistic roadmap for early childhood education, schools, out-of-school childcare, healthcare, workplaces, communities, and government. MOAC focused on the policy and environmental factors that contribute to obesity and engaged in an extensive process of reviewing data; assessing recommendations from national experts and previous planning efforts in Maine; collecting input from additional stakeholders; and placing emphasis on populations experiencing race, health and social inequities,

The result is a simple but comprehensive set of evidence-based recommendations, strategies, standards, and resources to guide local, district, and statewide programs, policies, and partnerships in reducing obesity and the medical conditions associated with obesity that result in poor health, higher medical costs, and negative impacts on quality of life in Maine.

The MOAC recommendations can be found on the <u>MOAC website</u>, along with a library of standards and resources to help individuals and organizations implement one or more obesity prevention strategies in their communities.

Everyone has a role to play in obesity prevention

MOAC recommendations are grounded in the belief that everyone has a role to play, and partnerships are central to maximizing health outcomes, reducing costs, and improving lives. The recommendations reflect consensus among members. They are grounded in evidence, designed for collaborative effort, and can be tailored to Maine communities. They are not intended to be static; it is presumed and expected that they will be updated as evidence and environments evolve. The recommendations are designed with a focus on prevention and informed by local input, understanding that specific implementation steps may need to differ by region and setting.

MOAC Recommendations. Using the US CDC "Community Strategies" as a starting place, the MOAC recommendations address six settings where people live, learn, work, and play -in early care and education, out-of-school programs, schools, healthcare, government, and in our communities. These comprehensive recommendations include strategies to advance equity and employ positive messaging to reduce obesity stigma and bias.

MOAC'S 5 GOALS AND 11 RECOMMENDATIONS



Goal 1: Increase the consumption of healthier food & beverages

RECOMMENDATIONS:

- Increase access to, and the affordability of, healthier food and beverages that also address barriers in under-resourced communities
- Increase public communications that support the consumption of healthier food and beverages and are culturally relevant

Goal 2: Decrease the consumption of less healthy food & beverages

RECOMMENDATIONS:

- Decrease access to, and the affordability of, less healthy food and beverages that also address challenges in under-resourced communities
- Decrease public communications that support the consumption of less healthy food and beverages including those aimed at under-resourced communities

Goal 3: Increase physical activity **RECOMMENDATIONS**:

- Increase safe and accessible opportunities for physical education and physical activity
- Increase public communications that support physical activity and are culturally relevant
- Improve the built environment to create or support physical activity that is safe and accessible

Goal 4: Increase the initiation and duration of breastfeeding and/or consumption of breast milk **RECOMMENDATIONS**:

- Increase the awareness and understanding of the benefits of breastfeeding and breast milk in ways that are culturally relevant
- Improve environments for breastfeeding and expressing breast milk that address barriers in underresourced communities

Goal 5: Increase cross-sector coordination and collaboration

RECOMMENDATIONS:

- Increase understanding of the health and economic benefits of preventing obesity and promoting healthy weight in ways that are culturally relevant
- Enhance public-private partnerships that are engaging in efforts to prevent obesity and promote healthy weight in ways that address equity

Click <u>here</u> to learn how to implement these recommendations in your community

MaineObesityAdvisoryCouncil.org

The COVID-19 pandemic is an important catalyst for change

Recent studies report an increase in overweight and obesity due to the isolation and anxiety from the COVID-19 pandemic. Behavioral changes, including increased alcohol consumption,^{32,33} and increased caloric intake,^{34,35} and decreased physical activity,³⁶ as well as the

"The epidemic of obesity is an urgent problem in the U.S. and has worsened during the COVID-19 pandemic. What is needed are transformational policies and bold investment in programs that reduce health inequities and address the social and economic conditions that are barriers to access to affordable, healthy food and physical activity"

J. Nadine Gracia, MD, MSCE, President and CEO of Trust for America's Health

chronic stress from the pandemic have increased Americans' weight status.³⁷ Indeed, the "Stress in America Survey" conducted by the American Psychological Association in February 2021 showed that 42% of adults reported unwanted weight gain since the pandemic started, along with a median reported weight gain of 15 pounds.³⁸ Data also show that obesity is associated with poorer health outcomes associated with COVID-19 infection.

Maine has tackled big public health challenges in the past

The State of Maine and public health stakeholders are at an important decision-point to reduce and prevent obesity and address this leading cause of comorbidities, including other chronic diseases, disabilities, and premature death, and eliminate the disparities seen across populations. Maine CDC, as the state's public health agency, has a long history of leveraging the strengths of stakeholders to make progress in public health issues, such as preventing youth tobacco use and providing safe drinking water, to name a few examples. The agency can apply those lessons learned by continuing its work with MOAC and engaging partners in the development of a state-level implementation and monitoring plan to prevent and reduce obesity in Maine.

The path to rebuilding Maine's obesity prevention program is clear

To move forward in a meaningful and effective way, Maine needs to build management capacity and work with stakeholders to create a plan for addressing the obesity epidemic. The MOAC goals and recommendations provide a solid base of evidence-informed practices to include in the plan. To be sustainable and impactful, the plan should focus on lasting changes through strengthened policies and improved environments that reduce and prevent obesity among youth and adults in Maine. Ultimately, Maine's efforts must be grounded in community-led and -based strategies that ensure there is equitable access to obesity interventions for populations most impacted by the disease, including populations already at risk of health disparities, such as racial and ethnic minorities, people with low-income, and those living in rural areas.

THE PATH TO PREVENTING OBESITY IN MAINE

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Build Capacity. Enhance Maine's statewide capacity to prevent and reduce obesity by increasing staff, enhancing data collection & analysis, and investing in evidence-based obesity prevention programming. **ACTION:** The Maine CDC should actively pursue funding from the Maine Legislature and the federal government through grants and other opportunities.



Support Communities. Invest in best practice obesity prevention programming at the community level, including education, training, and support for local policy change.

ACTION: Governments, schools, employers, and service agencies should formally adopt, support, and equitably invest in the MOAC recommendations.



Implement Strong Policies. Disrupt the environment in which obesity thrives by advancing obesity prevention policies.

ACTION: Policymakers should strengthen federal and state food programs, improve infrastructure for physical activity, ensure comprehensive and affordable insurance coverage for obesity treatment, and invest in healthy children and families.



Focus on Equity. Build systems and infrastructure to address geographic and demographic disparities. **ACTION:** The Maine CDC and community-based partners should engage experts and stakeholders in ongoing equity-centered planning and advisory functions.

🗩 Build Capacity

After years of episodic programming and diminished funding, the first step will be to build capacity at Maine CDC to focus on obesity prevention through changing environments and policies that promote physical activity and improve nutrition. According to best practice, the public health team tasked with this initiative should have at least three full-time program staff. The group should be enhanced further by adding epidemiological support for surveillance and tracking of obesity-related data. Stakeholders should be engaged in the design and implementation of a 10-year comprehensive plan to address the prevention, treatment, and management of overweight and obesity, with a focus on reducing disparities among groups disproportionately impacted by obesity and its related chronic diseases. The Governor and Maine Legislature should actively support the Maine CDC in securing the funding needed to build and grow statewide obesity program capacity.

Support Communities

MOAC has identified a comprehensive set of recommendations and evidence-based strategies to reducing and preventing obesity. To support implementation, the <u>MOAC website</u> provides an easy-to-use directory of steps that individuals, organizations, and governments can take to prevent and reduce overweight and obesity. There are strategies for multiple settings, including early childhood education, schools, out-of-school childcare, healthcare, workplaces, and communities. Maine CDC and its stakeholders can adopt, promote, and implement these strategies to impact obesity and overweight where people live, learn, work, and play in Maine.

Adopt Strong Policies

Preventing obesity requires strong policies to change the community conditions that contribute to obesity. Best practice policies include incentivizing municipalities and developers to build sidewalks and paths, improving the nutritional quality in school nutrition programs, increasing the price of sugary drinks, and expanding insurance coverage requirements. Maine is already making progress in advancing promising state policies by establishing and funding School Meals for All and revisiting its Active Transportation Plan, but policymakers can do more to strengthen federal and state food programs, improve infrastructure for physical activity, ensure comprehensive and affordable insurance coverage for obesity treatment, and improve the community conditions that support healthy children and families.

$\widehat{ ho}$ Focus on Equity

All voices need to be included in obesity prevention and reduction efforts, especially those disproportionately impacted by this chronic disease. Working with the Office of Population Health Equity and community-based organizations, the Maine CDC can identify and engage populations most impacted by obesity, including those living in rural areas, people with low-incomes, and racial and ethnic minorities to develop community-led strategies for reducing inequities. Building Maine's systems and infrastructure to address geographic and demographic disparities will take sustained investment. The time is now for the Maine CDC and community-based partners to engage stakeholders and experts in equity-centered planning.

A Vision for a Healthy Future



Obesity is a disease that results in many challenges – physical, mental, and economic. Its causes are complex and our understanding of its risk factors and effective response strategies is evolving. Other states have shown that through innovative policymaking and public-private partnerships that adopt evidence-based strategies, progress can be made to prevent and reduce this devastating chronic disease.

It's time to make the healthy choice the easy choice. Working together, we can change environments, policies, and practices across the state and in our communities to make Maine a place where every child and adult has access to nutritious food; where there are plentiful opportunities for physical activity; where the value of breast milk is well understood and breast feeding is commonplace; and where community partners are engaging in collective efforts to prevent obesity and promote healthy weight.

There is a clear-cut path to preventing and reducing obesity in Maine. Now is the time for action.

Current and Past Participants in the Maine Obesity Advisory Council



Adriane Ackroyd, Maine Department of Education Amy Belisle, Maine Department of Health & Human Services Rebecca Boulos, Maine Public Health Association Allen Browne, Retired surgeon Matija Burtis, Maine Medical Center Weight & Wellness Program Jamie Cotnoir, Maine Center for Disease Control & Prevention Danielle Dill, Maine Center for Disease Control & Prevention Miriam Epstein, Let's Go! Andrew Finch, Maine Center for Disease Control & Prevention Karen Gallagher, Maine Center for Disease Control & Prevention Meg Helming, YMCA Alliance of Maine Chace Jackson, American Heart Association Kara Kaikini, Maine State Breastfeeding Coalition Lori Kaley, University of New England/Maine SNAP-Ed Carol Kelly, Pivot Point, Inc. (facilitator) Dee Kerry, American Academy of Pediatrics, Maine Angela King, Bicycle Coalition of Maine Mary-Anne LaMarre, Maine Sheriffs' Association Donna Levi, Let's Go!

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ENDNOTES

- 1 US Centers for Disease Control and Prevention. (2020) Behavioral Risk Factor Surveillance System. <u>https://www.cdc.gov/brfss/</u>
- 2 US Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health. <u>https://www.cdc.gov/ healthyyouth/data/yrbs/index.htm</u>
- 3 Baciu A, Negussie Y, Geller A, et al. (Eds.). Communities in action: Pathways to health equity. (2017). National Academies Press. <u>https://www.ncbi.nlm.nih.gov/books/NBK425845/</u>
- 4 STOP Obesity Alliance and George Washington University. Understanding obesity. Retrieved December 16, 2021, from https://stop.publichealth.gwu.edu/understandingobesity
- 5 US Centers for Disease Control and Prevention. Adult obesity facts. <u>https://www.cdc.gov/obesity/data/adult.html</u>
- 6 US Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2015). *BRFSS prevalence & trends data*. <u>https://www.cdc.gov/brfss/brfssprevalence/</u>
- 7 Skinner. A.C., Ravanbakht S.N., Skelton. J.A., Perrin. E.M., Armstrong. S.C. (2018). Prevalence of obesity and severe obesity in US children, 1999–2016. *Pediatrics*, 141(3):e20173459
- 8 US Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition Physical Activity and Nutrition. <u>https://www.cdc.gov/ nccdphp/dnpao/data-trends-maps/index.html</u>
- 9 US Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health. <u>https://www.cdc.gov/ healthyyouth/data/yrbs/index.htm</u>
- 10 See Baciu A, Negussie Y, Geller A, et al (2017).
- 11 Weipeng, Q., Clark, J.M., Timme-Laragy, A.R., and Park, Y. (2020 May 22) Per- and Polyfluoroalkyl Substances and Obesity, Type 2 Diabetes and Non-alcoholic Fatty Liver Disease: A Review of Epidemiologic Findings. *Toxicol Environmental Chemistry*. 102(1-4): 1–36. Doi: 10.1080/02772248.2020.1763997
- 12 Lipek, T., Igel, U., Gausche, R., Kiess, W., and Grande, G. (2015). Obesogenic environments: environmental approaches to obesity prevention. *Journal of Pediatric Endocrinology and Metabolism* 28(5-6):485-95. <u>https://www.degruyter.com/document/doi/10.1515/jpem-2015-0127/html</u>
- 13 Maine Department of Health and Human Services. (2019). The way health should be: social determinants of health: How where we live, learn, work, and play affects our health. https://www.maine. gov/dhhs/mecdc/phdata/MaineCHNA/documents/SDOH-Report-11-15-2019.pdf
- 14 Douthit, N., Kiv, S., Dwolatzky, T., Biswas, S. (2015) Exposing some important barriers to health care access in the rural USA. Public Health 129(6):611-620. <u>https://doi.org/10.1016/j.puhe.2015.04.001</u>
- 15 See Maine Department of Health and Human Services. (2019).
- 16 Maine Department of Health and Human Services. (2019).
- 17 America's Health Rankings. (2021). Maine State Summary Annual Report. United Health Foundation <u>https://www.americashealthrankings.org/explore/annual/measure/Obesity/state/ME</u>
- 18 See America's Health Rankings. (2021).
- 19 See America's Health Rankings. (2021).
- 20 See America's Health Rankings. (2021).
- 21 See America's Health Rankings. (2021).
- 22 US Centers for Disease Control and Prevention. Adult obesity causes and consequences. <u>https://www.cdc.gov/obesity/adult/</u> <u>causes.html</u>
- 23 Lopez, C., Bendix, J., & Sagynbekov, K. (2020). Weighing down America: 2020 Update a community approach against obesity. The Milken Institute. <u>https://milkeninstitute.org/sites/default/files/</u> reports-pdf/Weighing%20Down%20America%20v12.3.20 0.pdf

- 24 Kompaniyets. L., Goodman. A.B., Belay. B., Freedman. S., Sucoscky M.S., Lange S., Gundlapalli A., Boehmer, T.K., and Blanck, H.M. (2021). Body Mass Index and Risk for COVID-19-Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death – United States, March-December 2020. Morbidity and Mortality Weekly Report. http:// dx.doi.org/10.15585/mmwr.mm7010e4external icon
- Burton, W.N., Chen, C.Y., Schultz, A.B., Edington, D.W. (1999). *The costs of body mass index levels in an employed population*. (3). Statistical Bulletin Metropolitan Life Insurance Company. 80(3):8-1 <u>https://pubmed.ncbi.nlm.nih.gov/10418077/</u>
- 26 Milken Institute. America's obesity crisis: The health and economic costs of excess weight. https://milkeninstitute.org/report/ americas-obesity-crisis-health-and-economic-costs-excessweight
- 27 Gabe, T., Medical costs of childhood obesity in Maine. (2012). University of Maine, School of Economics. SOE Staff Paper 603. <u>https://umaine.edu/soe/wp-content/uploads/sites/199/2012/11/</u> <u>Childhood-Obesity-Final-Report-November-2012.pdf</u>
- 28 Trust for America's Health and the Robert Wood Johnson Foundation. (2016). A blueprint for a healthier America: Policy priorities for the next administration and Congress. <u>https://www.tfah.org/wp-content/uploads/archive/assets/files/Blueprint.pdf</u>
- 29 Warren, M., Beck S., and Lieberman, D. (2021). State of Obesity 2021: Better policies for a healthier America: special feature: covid-19, social determinants of health, and obesity. Trust for America's Health. <u>https://www.tfah.org/report-details/state-ofobesity-2021/</u>
- 30 Community Prevention Services Task Force. (2017). The community guide: What works, obesity prevention and control, evidence-based interventions for your community. <u>https://www. thecommunityguide.org/sites/default/files/assets/What-Works-Factsheet-Obesity.pdf</u>
- 31 Expert Panel on the Identification, Treatment of Overweight, Obesity in Adults. (1998). Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults: The evidence report (No. 98). (US), National Heart, Lung, Blood Institute, National Institute of Diabetes, Digestive and Kidney Diseases. https://www.ncbi.nlm.nih.gov/books/NBK2003/
- 32 Weerakoon, S.M., Jetelina, K.K., Knell, G. (2020). Longer time spent at home during COVID-19 pandemic is associated with binge drinking among US adults. *The American Journal of Drug and Alcohol Abuse*; 47(1):98-106
- 33 Perrar, I., Alexy, U., Jankovic, N. Changes in total energy, nutrients and food group intake among children and adolescents during the covid-19 pandemic-results of the Donald study. (2022). Nutrients. 14(2):297. doi: 10.3390/nu14020297. PMID: 35057478; PMCID: PMC8778042
- Poskute, A.S., Nzesi, A., Geliebter, (2021). A. Changes in food intake during the COVID-19 pandemic in New York City. Appetite. 1;163:105191. doi: 10.1016/j.appet.2021.105191. Epub 2021 Mar 3. PMID: 33667497
- 35 Diniz, T. A., Christofaro, D. G. D., Tebar, W.R., Cucato, G.G., Botero, J.P., Correia, M.A., Ritti-Dias, R.M., Lofrano-Prado, M.C., Prado, W.L., (2020). Reduction of physical activity levels during the covid-19 pandemic might negatively disturb sleep pattern. *Frontiers in Psychology.*
- 36 Stockwell, S., Trott. M., Tully, M., et al. (2021). Changes in physical activity and sedentary behaviours from before to during the COVID-19 pandemic lockdown: a systematic review. *BMJ Open Sport & Exercise Medicine* 2021;7:e000960
- 37 American Psychological Association. (2021, March 11). One year on: Unhealthy weight gains, increased drinking reported by Americans coping with pandemic stress [Press release]. http://www.apa.org/ news/press/releases/2021/03/one-year-pandemic-stress
- 38 See American Psychological Association. (2021, March 11).