Maine Cardiovascular Health and Diabetes

STRATEGIC PLAN 2011–2020

PREVENTING AND CONTROLLING CARDIOVASCULAR DISEASE AND DIABETES IN MAINE

Preventing and Controlling Cardiovascular Disease and Diabetes in Maine: Maine Cardiovascular Health and Diabetes Strategic Plan 2011-2020

Maine Department of Health and Human Services
Maine Center for Disease Control and Prevention
Maine Cardiovascular Health Program
Maine Diabetes Prevention and Control Program

In partnership with

Maine Cardiovascular Health Council
Maine Diabetes Advisory Council

June 2011

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Dedication

This integrated statewide cardiovascular health
and diabetes prevention and control *Plan*
is dedicated to all the individuals who are impacted
by diabetes and cardiovascular disease,
including those who live with these diseases and
those who work to prevent and control these diseases.

Remembering Lucinda "Cindy" Hale,
Maine CDC, Diabetes Prevention and Control
Program Coordinator (1982-2010).

She was a dedicated champion
of chronic disease prevention and control
who passed away September 6, 2010
due to diabetes-related complications.

Cindy's energy and compassion
towards helping others
is an inspiration to all.

June 2011

Dear Maine Residents,

We are pleased to present *Preventing and Controlling Cardiovascular Disease and Diabetes in Maine: Maine Cardiovascular Health and Diabetes Strategic Plan 2011-2020*. Developing this plan was an ambitious project and the first of its kind in Maine. Previous planning addressed Cardiovascular Health and Diabetes separately; however, because diabetes and cardiovascular disease are frequently co-occurring conditions and diabetes is a risk factor for cardiovascular disease, public health initiatives to prevent and control these diseases have become increasingly integrated. This plan exists so that working together, we can substantially reduce death, disabilities and healthcare costs due to cardiovascular disease and diabetes in Maine.

Significant progress has been made in the prevention and treatment of cardiovascular disease and diabetes; however, there is still much work to do if we are to significantly impact the burden of these diseases within our state. This plan is a guiding document for public health leaders, healthcare providers, businesses, educators and policy makers to prevent and control cardiovascular disease and diabetes in Maine.

We extend our gratitude to the many stakeholders who invested their time and energy into planning and developing this comprehensive plan. This plan is a true collaborative work, and its successful implementation will only be achieved through the collective efforts of all stakeholders.

We enthusiastically invite you to partner with us as we work to achieve the goals outlined in this plan. Thank you in advance for your commitment to helping Maine residents live longer, healthier lives through prevention and control of cardiovascular disease and diabetes.

Sincerely,

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Table of Contents

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Rebecca Drewette-Card – Public Health Partners, LLC
Ruth Dufresne – contracted staff, University of New England
Troy Fullmer – Maine CDC, Cardiovascular Health and Diabetes Prevention and Control Programs
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Executive Summary

Overview

Cardiovascular disease (CVD) and diabetes have significant social and economic impacts on the state of Maine. In Maine, heart disease, stroke and diabetes are, respectively, the second, fourth and seventh leading causes of death.[1] As many as one out of ten adults may have diabetes. Medical costs for people with diabetes are 2.4 times higher than those without diabetes.[2] The risk of heart disease and stroke are two to four times greater in people with diabetes. In 2007, heart disease, stroke and diabetes together accounted for 31% of all deaths in the state.[1]

Chronic diseases are among the most common, costly and preventable of health problems, and in Maine, they account for 28% of all spending for commercial insurance populations, 30% for Department of Health and Human Services' MaineCare populations and 63% of spending for Medicare.[3] By focusing on the prevention of avoidable hospitalizations due to chronic diseases, Maine can save approximately $52 million annually,[4] but coordinated efforts between all stakeholders are essential to achieving this cost savings.

This *Plan* is intended to serve as a guiding document for public health leaders, healthcare providers, educators and policy makers to prevent and control cardiovascular disease and diabetes in Maine. It includes a comprehensive set of goals, objectives and strategies that address risk factors for these diseases at state and local levels in healthcare, community and worksite settings.

Framework

This is the first combined *Strategic Plan* for diabetes and cardiovascular health (CVH) efforts in the state of Maine. Past strategic planning efforts treated these conditions separately, but public health initiatives for the prevention and control of CVD and diabetes have become increasingly integrated, largely because diabetes and CVD are frequently co-occurring conditions and diabetes is a risk factor for CVD. In fact, CVD is the leading cause of death for individuals with diabetes.[5]

The framework of the *Plan* is based on the principles of the *Socio-Ecological Model,*[6] focusing on policies, systems and environmental changes with the potential for broad reach and impact on the general population and priority populations. Additionally, the *Plan* follows guidance provided by the U.S. Centers for Disease Control and Prevention (USCDC) Division of Heart Disease and Stroke Prevention and the Division of Diabetes Translation, plus the *Health Impact Pyramid* and the *Institute of Medicine's (IOM) Committee on Public Health Priorities to Reduce and Control Hypertension in the U.S. Population.*[8] Although this *Plan* is broader than the individual programs associated with these USCDC programs, the evidence- and practice-base suggest that this guidance is also applicable to a statewide *Plan*. Additionally, this *Plan* is in alignment with the *State Health Plan, Healthy Maine 2010 and Healthy People 2020.*

Although this *Plan* focuses on the continuum of care, special emphasis is placed on addressing the *ABCS* of heart disease and stroke prevention (HDSP) and diabetes control. Lower *A*1C (diabetes), use *A*spirin Therapy (HDSP), lower High *B*lood Pressure, lower High *C*holesterol, and stop *S*moking.

Partner Involvement in the Development of the *Strategic Plan*

The Maine Center for Disease Control and Prevention (Maine CDC)/Department of Health and Human Services (DHHS) Cardiovascular Health Program (CVHP) and Diabetes Prevention and Control Program (DPCP) invited all major CVH and diabetes organizations in Maine to participate in the strategic planning process. Over 100 individuals from diverse organizations participated in the process by providing professional guidance and feedback. Partners in this planning process consisted of worksite, healthcare, public health and community organizations representing the continuum of care in CVH and diabetes and with disparate populations. Active participation of partners from key organizations involved in many areas of diabetes and CVD prevention and control in developing strategies helped ensure that the *Plan* represents the network of state partners working to improve cardiovascular health and diabetes outcomes in Maine. Participants joined one of four workgroups: community, worksite, primary care and clinical office systems, and acute events systems of care. Each workgroup met at least once to discuss CVD and diabetes prevention and control challenges and successes over the past several years and to identify strategies to be implemented in the future.

The *Strategic Plan*

This 10-year *Strategic Plan* has been developed with outcome and process objectives for the 10-year time frame. Strategies have been developed as long-term, intermediate and short-term for 2011-2020 with a midcourse review planned for 2015. This review will include an analysis of *Plan* strategies implemented to date and planning for strategy implementation for the following five years.

Goal 1: Promote Healthy Lifestyles to Prevent Risk Factors for Pre-Diabetes, Diabetes and Heart Disease and Stroke

Goal 2: Improve the Early Detection, Control and Treatment of Risk Factors and Pre-Diabetes for the Prevention of Diabetes and Heart Disease and Stroke

Goal 3: Improve the Detection, Control and Treatment of Diabetes and Cardiovascular Disease to Prevent Complications and Disabilities and Reduce the Severity and Progression of Disease

Key initiatives are highlighted within each goal to illustrate the work that is already happening in Maine. Objectives focused on achieving policies and environmental changes are the foundation of the *Plan*, and educational initiatives support those efforts to make environments more supportive of healthier choices. Strategies are aligned with appropriate objectives. Strategies are time-specific and have been identified as short-term if they will be accomplished within the first two years of the *Plan*, or intermediate if they will be accomplished within the third through fifth years. Long-term strategies are targeted for beyond the fifth year and are labeled "Room to Grow."

Conclusions

The successful implementation of this ambitious *Strategic Plan* will only be accomplished through the collective action of various state, regional and local organizations within Maine. We ask you to join in these efforts to prevent and control CVD and diabetes in Maine.

Introduction

Cardiovascular disease and diabetes have significant social and economic impacts on the state of Maine. In Maine, heart disease, stroke and diabetes are, respectively, the second, fourth and seventh leading causes of death.[1] As many as one out of ten adults may have diabetes. Medical costs for people with diabetes are 2.4 times higher than those without diabetes.[2] The risk of cardiovascular disease and stroke are two to four times greater in people with diabetes. In 2007, heart disease, stroke and diabetes together accounted for 31% of all deaths in the state.[1]

Cardiovascular disease refers to a variety of diseases and conditions affecting the heart and blood vessels, the two largest being heart disease and stroke. Congestive heart failure, hypertension (also known as high blood pressure) and diseases of the arteries, veins and circulatory system are other diseases and conditions that are included in the term cardiovascular disease.

Diabetes is a disease in which an individual's blood glucose (blood sugar) levels are consistently above normal. This is due to the body's inability to produce enough insulin, or effectively use insulin, which breaks down glucose. This causes blood sugar levels to rise and can lead to heart disease, blindness, kidney failure and lower-extremity amputations.

Chronic diseases are among the most common, costly and preventable of health problems, and in Maine they account for 28% of all spending for commercial insurance populations, 30% for Department of Health and Human Services' MaineCare populations and 63% of spending for Medicare.[3] By focusing on the prevention of avoidable hospitalizations due to chronic diseases, Maine can save approximately $52 million annually,[4] but coordinated efforts between all stakeholders are essential to achieving this cost savings. In fact, heart disease (congestive heart failure and hypertension) and diabetes represent two of the five categories of preventable hospitalizations that have been identified as targets for reduction in the most recent *Maine State Health Plan.*[4]

This *Plan* is intended to serve as a guiding document for public health leaders, healthcare providers, educators and policy makers to prevent and control cardiovascular disease and diabetes in Maine. It includes a comprehensive set of goals, objectives and strategies to address the risk factors for these diseases at the state and local levels in healthcare, community and worksite settings.

This is the first combined *Strategic Plan* for diabetes and cardiovascular health efforts in the state of Maine. Past strategic planning efforts treated these conditions separately, but public health initiatives for the prevention and control of cardiovascular disease and diabetes have become increasingly integrated, largely because diabetes and CVD are frequently co-occurring conditions and diabetes is a risk factor for cardiovascular disease. In fact, cardiovascular disease is the leading cause of death for individuals with diabetes.[5]

At the Maine Center for Disease Control and Prevention the Cardiovascular Health Program and Diabetes Prevention and Control Program collaborate closely. One program manager oversees both programs to assure coordinated efforts throughout the state. These programs further partner with other Maine CDC programs that focus on the prevention of risk factors for cardiovascular disease and diabetes: the Partnership For A Tobacco-Free Maine; the Physical Activity, Nutrition and Healthy Weight Program; and the Oral Health Program.

Diabetes Prevention and Control Program, Maine CDC

Program Goals: Prevent diabetes and related complications, disabilities and burden. Maximize organizational capacity to achieve U.S. CDC Diabetes Program goals.

Program Priorities:

- Promote excellence in diabetes care
- Increase access to care
- Promote and support diabetes self-management education
- Support efforts to enhance a more efficient and effective healthcare system for people in Maine
- Eliminate disparities related to diabetes prevention and control

Cardiovascular Health Program, Maine CDC

Vision: Heart-Healthy and Stroke-Free in Maine Program

Goal: Reduce death, disability, and healthcare costs due to heart disease and stroke in Maine.

Program Priorities:

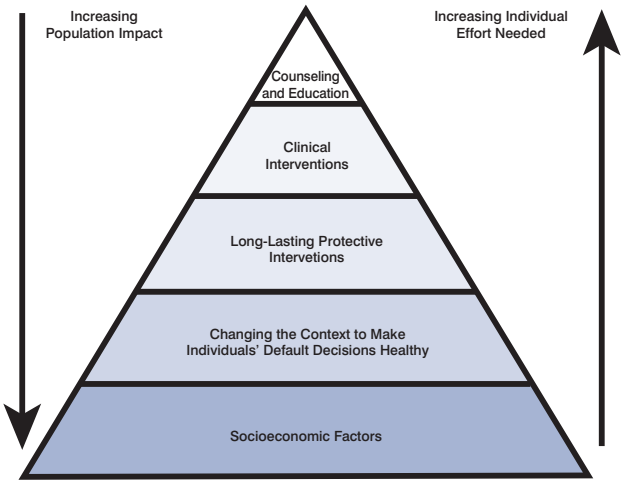
- Control high blood pressure (hypertension)
- Control high blood cholesterol
- Know signs and symptoms of heart attack and stroke and the need to call 911
- Improve emergency response for heart attack and stroke
- Improve quality of care related to cardiovascular disease prevention and control
- Eliminate disparities related to cardiovascular disease prevention and control

Framework for the *Plan*

The framework for the *Plan* is based on several of the guiding principles of public health and cardiovascular and diabetes care (all discussed below): the *Socio-Ecological Model,*[6] the *Health Impact Pyramid,*[7] the continuum of care, the *Care Model* and the U.S. CDC priorities.

The *Health Impact Pyramid* (Figure 1) describes the impact of different types of public health interventions on population health.[7] The pyramid is divided into five tiers: Socioeconomic Factors (tier 1- base); Changing the Context to Make Individuals' Default Decisions Healthy (tier 2); Long-Lasting Protective Interventions (tier 3); Clinical Interventions (tier 4); and Counseling and Education (tier 5-top). Interventions focused at the base of the pyramid have the greatest potential public health impact while requiring the least individual effort to change behavior. In contrast, interventions focused at the tip of the pyramid have the least public health impact while requiring the most individual effort to change behavior.

Figure 1. The health impact pyramid



Source: Frieden TR. A framework for public health action: the health impact pyramid. *Am J Pub Health.*

Socioeconomic Factors (tier 1- base):

- The base tier represents changes in socioeconomic factors such as poverty reduction, improved education and increased access to sanitation. Some examples of tier 1 activities include: poverty reduction and improved education.

Changing the Context to Make Individuals' Default Decisions Healthy (tier 2):

- Interventions in tier 2 change the environment, making healthy options the default choice, regardless of socioeconomic factors. The focus is on ensuring broad level changes which would necessitate individuals spending significant effort not to make the default choice. Some examples include: eliminating trans fats in most food products, fluoridated water in the public water supply, elimination of lead and asbestos exposures and laws prohibiting the sale of alcohol to minors.

Long-Lasting Protective Interventions (tier 3):

- Interventions in this tier require reaching people as individuals rather than collectively. These interventions are infrequent and do not require ongoing clinical care. Some examples include: immunizations, dental sealants and chronic disease self-management programs.

Clinical Interventions (tier 4):

- Tier 4 of the pyramid consists of clinical interventions. Although interventions to prevent cardiovascular disease have the greatest population impact, the impact of clinical interventions is limited by lack of access, erratic and unpredictable adherence and imperfect effectiveness. Examples include: treatment for hypertension and hyperlipidemia, aspirin therapy for people with coronary heart disease, electronic medical records and incentives for meaningful outcomes (e.g., blood pressure and cholesterol control).

Counseling and Education Interventions (tier 5-top):

- Health counseling and education refers to counseling and/or education provided during clinical encounters as well as health education in other settings. The purpose of these interventions is inducing individual behavior change. Even though counseling is generally less effective than the other interventions, these interventions are often the only ones available and when implemented consistently over time may have a significant population impact. Examples include: motivational counseling to increase physical activity and improve diet, counseling by healthcare provider to lose weight and personalized smoking cessation.

The Socio-Ecological Model

The Socio-Ecological Model encourages focusing on policies, systems and environmental changes with the potential for broad reach and impact on the general population and priority populations (discussed in the next section). Effective prevention efforts balance long-term and short-term investments. They focus on producing long-term risk reductions for the entire population, reducing risk in those who are at elevated risk due to conditions such as high blood pressure, high blood cholesterol or pre-diabetes and reducing disease and further risk in those who have CVD or diabetes. It is not enough to provide individuals with information and an opportunity to build skills. Individuals are less likely to make behavior changes that are contrary to the environment in which they live and work. Therefore, it is necessary to make changes to community, school, healthcare and worksite policies, environments and systems, to support individuals adopting healthier behaviors on a population-wide basis.[6]

Continuum of Care

Another fundamental underpinning of this *Plan* is that there is a continuum of care for CVD and diabetes that addresses prevention, detection and treatment, and involves community organizations, primary care providers, hospitals and emergency response. Because an individual with CVD or diabetes may utilize each of these settings' services at varying times in their disease progression, it is important that these settings are connected to one another and offer people a continuum of care.

The *Care Model* or Planned Care Model

The *Care Model* identifies essential elements of a healthcare system that encourages high-quality chronic disease care. These elements are: the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Evidence-based change concepts foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise. The model can be applied to a variety of chronic illnesses. The bottom line is healthier patients, more satisfied providers, and cost savings.[9]

Additionally, the *Plan* follows guidance provided by the U.S. Centers for Disease Control and Prevention (USCDC) Division of Heart Disease and Stroke Prevention and the Division of Diabetes Translation. Although this *Plan* is broader than the individual programs associated with these USCDC programs, the evidence-base and practice-base suggest that this guidance is applicable to a statewide *Plan* as well.

ABCS

Although this *Plan* focuses on the continuum of care, special emphasis is placed on addressing the *ABCS* of heart disease and stroke prevention and diabetes control.

Efforts to address the *ABCS* include:

- **A**1C Test: The A1C goal for most people is below 7. High blood glucose levels can harm your heart and blood vessels, kidneys, feet and eyes (diabetes)
- **A**spirin: Increase low dose aspirin therapy according to recognized guidelines (HDSP)
- **B**lood Pressure: Prevent and control high blood pressure; reduce sodium intake
- **C**holesterol: Prevent and control high cholesterol
- **S**moking Cessation: Increase the number of smokers counseled to quit and referred to quit lines; increase availability of no- or low-cost cessations products[10]

A1C Test

The A1C blood test, also called the hemoglobin A1C test or glycohemoglobin, provides information about an individual's average blood glucose levels for the past two to three months. People with diabetes should have the A1C test at least twice a year. Healthcare providers use results of A1C tests to see if individuals need changes in their diabetes medicine, meal plan or physical activity routine to keep their diabetes under control.[10,11]

Aspirin Therapy

The United States Preventive Services Task Force (USPSTF) recommends taking aspirin for the prevention of cardiovascular disease and as a component of preventive medical services, within specific age and gender parameters. There are risks for people who take aspirin regularly, so no one should start aspirin therapy without first consulting a physician. Aspirin protocols should support consultation between physician and patient about appropriate use.

High Blood Pressure and High Cholesterol

High blood pressure (HBP) and high blood cholesterol (HC) are leading risk factors for heart disease and stroke. Lower blood pressure is associated with lower risk of heart disease and stroke even at levels below current cut-offs for hypertension (140/90 mm/Hg) and pre-hypertension (120/80 to <140/90 mm/Hg). Because policy and systems strategies that impact high blood pressure control can also impact high blood cholesterol, these two areas are combined. Please note: sodium consumption is covered in a separate section of this document.

Smoking

The risk for kidney disease is two to three times higher for people with diabetes who smoke than those with diabetes who don't smoke. Smokers with diabetes have higher risk for heart disease; eye disease that can cause blindness; nerve damage that causes numbness, pain, weakness and poor circulation, amputations and more difficulty recovering from surgery.[12]

Cigarette smoking is the leading cause of preventable death in the United States, accounting for approximately 443,000 deaths or one of every five deaths in the United States each year. Smoking cigarettes increases the risk of coronary heart disease, increases blood pressure and the tendency for blood to clot, decreases high-density lipoprotein (HDL) cholesterol, and increases the risk of recurrent coronary heart disease after bypass surgery. Those who smoke are not the only ones at risk. The Institute of Medicine has concluded that data demonstrates that secondhand smoke exposure increases the risk of coronary heart disease and heart attacks.[12]

Strategic Planning Process

An advisory committee comprised of CVHP and DPCP staff guided the strategic planning process. They worked with program staff and workgroup members to develop timelines; conceptualize the *Plan*; review drafts and develop strategic planning goals, outcome and process objectives, based on guidelines from the U.S. Centers for Disease Control and Prevention.

The CVHP and the DPCP invited partners to participate in the strategic planning process. Over 100 individuals from diverse organizations engaged in the process by providing professional guidance and feedback (see Appendix A for a list of participants). Organizations participating in this strategic planning process consisted of worksite, healthcare, public health and community organizations, representing the continuum of care in CVH and diabetes and with disparate populations. The involvement of partners in the development of the strategies assured that the *Plan* leverages statewide resources. Participants joined one of four workgroups: community, worksite, primary care and clinical office systems and systems of care and acute events. Each workgroup met one to three times to discuss strategies currently implemented and to identify strategies to be implemented in the future.

Once strategies were developed, the advisory committee reviewed the strategies for duplication and clarity and organized them within the goals and objectives framework that had been previously developed. Where the goals and objectives framework had to be adjusted to more accurately reflect the work, they were. Strategies were categorized as short-term (years one and two), intermediate-term (years three to five) and "Room to Grow" (those currently lacking appropriate resources and/or political will) as a way to prioritize resources.

In addition, Maine CDC partner programs that promote protective behaviors for CVD and diabetes-(the Partnership For A Tobacco-Free Maine; the Physical Activity, Nutrition and Healthy Weight Program and the Oral Health Program) were consulted to identify relevant objectives from their current state plans to assure consistency across state plans. At the time of this planning process, some of these programs were in the process of developing their five-year strategic plans.

When a well-developed draft of the *Plan* was ready, it was disseminated to partners for review. Partners were invited to comment on the structure of the *Plan*, on proposed strategies and timelines, to edit descriptions of their programs and to provide feedback on the *Plan*. All proposed changes were considered and the final *Plan* reflects this input from partners.

The Burden of Cardiovascular Diseases and Diabetes in Maine

All figures and data sources referenced to in this portion of the document can be found in Appendix C.

Deaths due to Cardiovascular Diseases and Diabetes

Cardiovascular diseases and diabetes are major causes of death, hospitalizations and healthcare costs in Maine. Heart disease, stroke and diabetes are currently the second, fourth and seventh leading causes of death in the state (Figure 2).

In 2007, heart disease caused 2,852 deaths in Maine (23% of all deaths in the state), stroke caused 664 deaths, (5% of all deaths), and diabetes caused 355 deaths (3% of all deaths). Maine's age-adjusted heart disease, stroke and diabetes death rates are all slightly lower than the U.S. rates. Maine currently ranks as the 32nd highest heart disease death rate, the 30th highest stroke death rate, and the 30th highest diabetes death rate among all 50 states and D.C. Among the six New England states, however, Maine has the highest stroke death rate and the third highest heart disease death rate; Maine ranks somewhat better for diabetes, with the fourth highest diabetes death rate among the New England states.

Maine has made substantial progress in lowering death rates due to some cardiovascular diseases in recent years. Heart disease, coronary heart disease and stroke death rates declined significantly during the past decade. Between 1998 and 2007, Maine's heart disease death rates fell 31% (250.5 to 173.0 per 100,000) and coronary heart disease death rates fell 41% (183.0 to 107.2 per 100,000); both declining slightly more than the national death rates did (Figure 3). After a period of little or no decline during the early to mid-1990s, Maine's stroke death rates also declined significantly, falling 32% between 1998 and 2007 (59.3 to 40.3 per 100,000) (Figure 4). Maine has achieved the *Healthy People 2010* targets for both coronary heart disease and stroke death rates (Figure 5). In addition, while diabetes death rates increased between 1999 and 2002, improvements have been made since then; death rates declined 15% from 2002 to 2006 (83.2 to 70.7 per 100,000) (Figure 6).

Despite this progress, there is still much to improve. Trends in heart failure death rates are not as positive. While heart failure death rates have moved up and down slightly over the past decade, the net decline has been very slight. A

0.9% average annual decline and a 10.3% total decline has been achieved from 1998 to 2007, with death rates declining from 18.9 to 17.0 per 100,000 population (Figure 7). This decline was not statistically significant. Maine males still have much higher coronary heart disease death rates and diabetes death rates than females (Figure 5) and Maine's diabetes death rates are still well above the *Healthy People 2010* target (Figure 5). *Healthy People 2020* targets have been established and Maine will need to achieve additional declines in coronary heart disease, stroke and diabetes death rates of 13%, 16% and 7% to reach these targets (Figure 5). Heart disease and stroke death rates also vary by geography in Maine, with higher rates seen in northern counties compared to southern counties (Figures 8 and 9). In fact, northeastern counties in Maine have higher stroke death rates than the national average.

Hospitalizations due to Cardiovascular Diseases and Diabetes

Every year in Maine there are more than 18,000 hospitalizations for heart disease (including 8,000 for coronary heart disease and nearly 2,000 for congestive heart failure) and more than 3,000 for stroke. More than 24,000 hospitalizations in Maine each year are related to diabetes, and more than 6,000 hospitalizations due to cardiovascular disease are related to diabetes. Hospitalization rates for cardiovascular diseases have declined substantially since 2000, with especially large declines in recent years for congestive heart failure (Figures 10, 11 and 12). Maine started the decade with congestive heart failure hospitalization rates much higher than the Healthy People 2010 target, but by 2008, Maine's rates fell well below both the Healthy People 2010 and 2020 targets and the U.S. rate (Figure 12). Between 2000 and 2008, Maine's heart disease hospitalization rates fell 28% (156.1 to 112.2 per 10,000), coronary heart disease fell 42% (88.9 to 51.3 per 10,000), acute myocardial infarction fell 26% (35.4 to 26.3 per 10,000) and congestive heart failure fell 61% (28.2 to 11.1 per 10,000) (Figures 10 and 11). Stroke hospitalization rates also declined steadily, but more slowly, declining 18% from 22.3 per 10,000 in 2000 to 18.3 in 2008 (Figure 11). Diabetes-related cardiovascular disease hospitalization rates also declined significantly, from 53.0 per 10,000 in 2000 to 38.0 per 10,000 in 2007 (Figure 13). Total diabetes-related hospitalization rates increased very slightly from 2000 to 2004 (161.1 to 163.8 per 10,000, respectively), dropped significantly between 2004 and 2005 (157.7 per 10,000), but more recently have remained level between 2005 and 2007 (157.5 per 10,000) (Figure 13).

Economic Impact

Cardiovascular diseases and diabetes have a large economic impact in Maine and the U.S., including the direct costs associated with hospital care, physician and nursing services and medications, and the indirect costs of lost productivity due to morbidity and mortality. In 2010, the American Heart Association estimated the direct and indirect costs for cardiovascular disease in the U.S.

total $503.2 billion.[13] The direct and indirect costs for diabetes in the U.S. have been estimated to exceed $174 billion in 2007.[14] Cost estimates for Maine are less readily available. Cardiovascular diseases and diabetes are also major contributors to Medicaid costs nationally and in Maine (Figure 14). In Maine, total Medicaid costs due to hypertension, a very prevalent condition, are estimated to exceed $93 million annually, closely followed by Medicaid costs due to diabetes, which exceed $73 million.[15] Medicaid costs due to stroke in Maine, which is less prevalent but highly costly per Medicaid beneficiary, are estimated to exceed $55 million; while Medicaid costs due to heart disease and congestive heart failure are estimated at $29 million and $12 million, respectively.[15]

Heart Attack and Stroke Knowledge

Maine has made great strides in improving public awareness of the signs and symptoms of heart attack and stroke and the need to call 911 (or other emergency numbers) for these acute events. The percentage of Maine adults that could correctly identify all the stroke symptoms increased significantly from 18.1% in 2001 to 23.2% in 2009; the percentage that could correctly identify all the heart attack symptoms also increased significantly from 12.2% to 16.2% during the same time period, as did the percentage who said they would call 911 if they thought someone was having a heart attack or stroke (83.3% in 2001 vs. 88.3% in 2009) (Figure 15). Despite this progress, far too few Maine adults know the signs and symptoms of a heart attack or stroke and much more improvement is needed. Even though nearly 90% of Maine adults say they would call 911 if they thought someone was having a stroke or heart attack, the overwhelming majority do not know the symptoms and may not recognize a cardiovascular event if it is occurring.

Diabetes Prevalence

Data on self-reported diabetes prevalence among adults is available from the Behavioral Risk Factor Surveillance System; these prevalence estimates are most likely an underestimate of the true diabetes prevalence as nearly 24% of adults who have diabetes have not been diagnosed and do not know they have it.[16] In 2009, Maine's diagnosed diabetes prevalence among adults was 8.3%, identical to the U.S. prevalence of 8.3%. While Maine ranks solidly in the middle of the 50 states and the District of Columbia (D.C.) as having the 26th highest diabetes prevalence, Maine has the highest diabetes prevalence among the New England states. The prevalence of diagnosed diabetes has increased in Maine and the U.S., at similar rates; in Maine the prevalence doubled between 1995 and 2002 (3.5% to 7.3%) but has increased only slightly since then to 8.3 in 2009 (Figure 16). Diabetes prevalence among adults increases with age, and 17% of Mainers 65 years and older have been diagnosed with diabetes. While the diagnosed diabetes prevalence is currently not significantly higher for men than women (8.8% vs. 7.9%, respectively) in Maine, in recent years men have consistently had slightly higher (significantly so in some years) diabetes prevalence than women

in the state. There are significant socioeconomic disparities in diabetes prevalence in Maine, with diabetes prevalence increasing with decreasing education and income levels. The prevalence of diabetes is 16% (double the general population prevalence of 8.3%) in both the less than $15,000 annual household income and the less than high school education groups.

High Blood Pressure and High Cholesterol

Hypertension and high cholesterol are two major risk factors for cardiovascular disease in the general population and among those with diabetes. Maine's prevalence of diagnosed hypertension among adults is only slightly higher than the U.S. prevalence (30.0% vs. 28.7%, respectively in 2009) and Maine ranks as the 20th highest prevalence of hypertension among the 50 states and D.C., solidly in the middle. But this does not show the whole picture. The prevalence of diagnosed hypertension among adults has increased substantially in Maine in recent years (Figure 17), and nearly one in three (30%) Maine adults now report that they have been told by a healthcare professional that they have high blood pressure. Among the six New England states (Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island and Vermont), Maine has the second highest prevalence of diagnosed hypertension. Anti-hypertension medication use improved in Maine between 2001 and 2005 (Figure 18), but dropped slightly between 2005 and 2007. Currently 58.9% of Maine adults with diagnosed hypertension report that they are taking anti-hypertensive medications, slightly lower than the U.S. average of 62.3%. While Maine men have a slightly higher hypertension prevalence than women (31.4% vs. 28.7%) and were slightly less likely to be taking anti-hypertensive medications (56.5% vs. 62.5%), neither of these differences were statistically significant. The prevalence of hypertension increases greatly with increasing age, from 6.5% among Mainers 18-24 years of age to 60.1% among those 65 or more years of age. There are also significant disparities in hypertension prevalence by socioeconomic status, with prevalence increasing significantly with decreasing education and income levels. Among those in the less than high school education group, 37% report being diagnosed with hypertension; 40% of those in the less than $15,000 annual household income group have been diagnosed with hypertension.

Maine's prevalence of diagnosed high cholesterol is slightly higher than the U.S. prevalence (38.8% vs. 37.5% in 2009, respectively), and Maine has the 15th highest high cholesterol prevalence among the 50 states and D.C. and the highest prevalence among New England states. The prevalence of high cholesterol has been on the rise in Maine, increasing significantly from 28.1 in 1995 to 37.5 in 2009 and increasing at a similar rate as in the U.S. overall (Figure 19). This increase may be due in part to improvements in blood cholesterol screening rates over the same time period; in 1995 less than 70% (68.6%) of Maine adults had ever had their blood cholesterol checked, but by 2009 nearly 90% (86.8%) had ever had it checked. In 2009, Maine men had a significantly higher prevalence of

high cholesterol than did Maine women (42.0% vs. 36.1%). Similar to diabetes and hypertension, the prevalence of high cholesterol also increases with age, and 55% of Maine adults 65 years of age and older report having high cholesterol. There are also significant socioeconomic disparities in diagnosed high cholesterol prevalence, with the prevalence increasing significantly with decreasing education and income levels. Forty-four percent of those in the less than high school education group and 46% of those in the less than $15,000 annual household income group report having diagnosed high cholesterol.

Other Risk Factors for Cardiovascular Diseases and Diabetes

There are many other important modifiable risk factors for cardiovascular diseases and diabetes, and their related health outcomes, including tobacco use, physical inactivity, unhealthy eating and overweight and obesity. While the prevalence of all these risk factors among Maine adults is similar or slightly lower than among U.S. adults — with the exception of the prevalence of overweight or obesity, which is slightly higher in Maine — the prevalence of these risk factors in Maine is still much too high (Figure 20). The majority of Maine adults are either overweight or obese (64.2%) and do not eat the minimum recommended daily servings of fruits and vegetables (72.0%). A large percentage do not get the recommended amount of physical activity (43.8%) and one in five (21.2%) do not engage in any leisure-time physical activity. Seventeen percent of Maine adults are current smokers, putting them at substantial risk for cardiovascular diseases and diabetes-related complications, in addition to respiratory diseases and cancer. Improvements in the prevalence of these risk factors among Maine residents are urgently needed to improve cardiovascular health and prevent and control diabetes and other chronic diseases.

Behavioral and Biological Protective Behaviors and Risk Factors

The objectives and strategies of this *Strategic Plan* address nine protective behaviors for CVD and diabetes. By engaging in these behaviors, individuals can reduce their risk of, and in many cases prevent, CVD and diabetes. For individuals who already have CVD or diabetes, these behaviors can help in the management of their disease.

Live Tobacco-Free

Tobacco use increases the risk of heart disease and heart attack. Cigarette smoking promotes atherosclerosis and increases the levels of blood clotting factors, such as fibrinogen. Also, nicotine raises blood pressure, and carbon monoxide reduces the amount of oxygen that blood can carry. Exposure to other people's smoke can increase the risk of heart disease even for nonsmokers.[17] Avoiding tobacco use and exposure to secondhand smoke is an important protective behavior for CVD.

Be Physically Active

Regular physical activity can help prevent heart disease and diabetes. It can also impact other risk factors including obesity, high blood pressure, cholesterol and diabetes.[17,18] For individuals with heart disease or diabetes, physical activity is an important part of managing their disease.

Eat a Healthy Diet

Diets high in saturated fats and cholesterol can raise blood cholesterol levels and promote atherosclerosis. High salt or sodium in one's diet causes raised blood pressure levels.[17] Eating a healthy diet and assuring proper nutrition can help prevent high cholesterol and heart disease.

Maintain a Healthy Weight

Obesity is defined as having a Body Mass Index (BMI) of 30 or higher for adults or a BMI at or above the 95th percentile for children of the same age and sex.[19,20] It is linked to higher low-density lipoprotein (LDL) cholesterol and triglyceride levels and to lower HDL cholesterol levels, high blood pressure and diabetes. Maintaining a healthy weight can help prevent CVD and diabetes. For individuals with CVD or diabetes, maintaining a healthy weight is an important behavior for managing their disease.

Keep Blood Pressure Under Control

About one in three Americans has high blood pressure, a key risk factor for heart disease and stroke.[21] High blood pressure can also raise the risk for eye problems and kidney disease.[22] Up to two-thirds of adults with diabetes have high blood pressure.[22] By keeping blood pressure within a normal range, individuals can reduce their risk for cardiovascular disease.

Keep Blood Cholesterol Under Control

Higher levels of LDL cholesterol can lead to heart disease. A higher level of high-density HDL cholesterol can give some protection against heart disease.[23]

Maintain Good Oral Health

A great deal of controversy exists about whether periodontal disease is associated with the severity or incidence of cardiovascular disease. To date, there have been multiple cross-section, cohort and case-control studies with conflicting results.[24] Some studies have shown a connection between oral health and cardiovascular disease and diabetes, among other chronic diseases and health conditions. The Maine CDC, Oral Health Program is working with the CVHP, the DPCP and their partners to help increase people's awareness of the connection and what they can do to best manage their health. And like all infections, dental infections can elevate individuals' blood glucose levels.[25]

Manage Diabetes

Diabetes increases a person's risk for heart disease. About three-quarters of people with diabetes die of some form of heart or blood vessel disease. For people with diabetes, it is important to work with a healthcare provider to help manage it. Managing diabetes will reduce the individual's risk of heart disease, as well as blindness, nerve damage, poor circulation, gum disease, sexual dysfunction, depression and kidney disease.[23,25]

Moderate Alcohol Consumption

Excess alcohol consumption is related to high blood pressure. Lifestyle modification for individuals with high blood pressure includes limiting alcohol consumption to one or fewer drinks per day for women and two or fewer drinks per day for men.[26]

Priority Population Groups

Several priority populations have been identified for cardiovascular health promotion efforts: women and low-income/rural populations. In addition, Native American tribes have been identified as a priority population for both CVD and diabetes prevention and control efforts.

Women

The overall leading cause of death among Maine women is cardiovascular disease, yet many women are still unaware that roughly a third of female deaths in Maine are attributed to CVD.[27] There is a need to better diagnose and treat women who may be at risk for CVD.[28] There is much work ahead to correct this problem, and the foundational work depends on reaching the female patients themselves as well as the healthcare providers who treat them.

The CVHP works collaboratively with the Maine Cardiovascular Health Council's Women and Heart Health Committee to increase public awareness and knowledge of:

- CVD among women
- The major risk factors for CVD
- The importance of knowing the symptoms of heart attack and stroke and the need to call 911

In 2007, the American Heart Association released an update to the *Evidence-Based Guidelines for Cardiovascular Disease Prevention in Women*. This update provides the most current clinical recommendations for the prevention of CVD in women aged 20 and older, and serves as the basis for the work done with women in Maine.

Low-Income/Rural

Data show that the low-income, rural population in Maine experiences cardiovascular events, diabetes and risk factors at higher rates. There are several interwoven factors that contribute to people living in rural areas with low incomes also experiencing more health problems.

Age is one of the most important determinants of health and service utilization. In New England, the proportion of elderly residents increases with rurality, with the proportion of elderly living in isolated rural areas (which are most rural) 23% greater than in non-rural areas.[29]

Not only do data show income affects health but it also is evident there is a significant income disparity between rural and non-rural areas; the difference increases with the degree of rurality. Mean family incomes in rural areas overall are over 23% less than in non-rural communities in the region, and over 36% less in isolated rural areas. Rural areas also have far fewer opportunities for employment that includes health insurance coverage; lack of coverage can make healthcare access more difficult.[29]

Native American Tribes

There is a limited amount of current data specific to the Native American Tribes in Maine due to the small numbers and the lack of funding for oversampling priority populations. The five tribal communities in Maine are currently leading and working together with Maine CDC, University of Nebraska and others to conduct a tribal health assessment for gathering accurate data relating to the health status of tribal members. The results of the survey will be used as a guide for tribal leaders in health program planning, for developing services, for education and research as needed. Despite the limited amount of current local data, national data and other factors show it is critically important for the Maine CDC Chronic Disease Division to continue working with the tribes in Maine.

Health disparities tend to result primarily from health behaviors and environmental factors. There are several barriers to health that have been previously identified by Maine's Tribal Health Directors. They include:

- Transportation
- Prejudice and racism
- Inadequate state and federal funding
- Rurally located
- Low income
- Shortages of qualified health professionals
- Lack of accessible and/or culturally appropriate healthcare

Tribal members in Maine face shorter lives due to the disproportionate burden of illness and poverty. Maine tribal members can expect to live up to 24 years less than other Mainers; chronic diseases are the top causes of death.

Looking at national data gives a picture of some of the health concerns facing the American Indian/Alaskan Native (AIAN) populations. The following two tables show some of the health concerns with diabetes and coronary heart disease.

Table 1: Age-adjusted percentage of persons 18 years of age and over with diabetes, American Indian/Alaska Native and Non-Hispanic White, 2008[30]

American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native to Non-Hispanic White Ratio
15.0%	7.1%	2.1

Source: National Health Interview Survey, 2008

Table 2: Age-adjusted percentage of persons 18 years of age and over with coronary heart disease, American Indian/Alaska Native and Non-Hispanic White, 2009[31]

American Indian/Alaska Native (2 or more races)	Non-Hispanic White	American Indian/ Alaska Native to Non-Hispanic White Ratio
8.8%	6.5%	1.4

Source: National Health Interview Survey, 2009

Other Priority Populations

It is important to address the health needs of all vulnerable populations who are identified to be at risk for health disparities, including certain race and ethnic groups which are at higher risk for cardiovascular disease and diabetes.

2009 U.S. Census data indicates the population of Maine is more than 96% white. Still there are over 18,000 persons of Hispanic or Latino origin and close to 16,000 black persons living in Maine. Although there is a limited amount of current data specific to these populations in Maine, national data gives a picture of some of the health concerns facing these populations and supports the need to address health needs of these populations in Maine. Below are three tables that show some of the concerns with diabetes and stroke in these populations. Incidence of diabetes in non-Hispanic black and Hispanic/Latino populations is significantly higher than the non-Hispanic white population and although incidence of stroke is similar for African American men and white men, African American women have a significantly higher incidence of stroke compared to white women.

Table 3: Age-adjusted percentages of persons 18 years of age and over with diabetes, Non-Hispanic Black and Non-Hispanic White, 2008

Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black to Non-Hispanic White Ratio
11.4	7.1	1.6

Source: CDC 2009. Summary Health Statistics for U.S. Adults: 2008. Table 8. http://www.cdc.gov/nchs/data/series/sr_10/sr10_242.pdf

Table 4: Age-adjusted percentages of persons 18 years of age and over with diabetes, Hispanic/Latino and Non-Hispanic White, 2008

Hispanic/Latino	Non-Hispanic White	Hispanic to Non-Hispanic White Ratio
11.0	7.1	1.5

Source: CDC 2009. Summary Health Statistics for U.S. Adults: 2008. Table 8. http://www.cdc.gov/nchs/data/series/sr_10/sr10_242.pdf

Table 5: Age-adjusted percentages of stroke among persons 18 years of age and over, African American and White by sex, 2009

	African American	White	African American/ White Ratio
Men and Women	3.9	2.6	1.5
Men	2.7	2.8	1.0
Women	4.8	2.5	1.9

Source: CDC 2010. Summary Health Statistics for U.S. Adults: 2009. Table 2. http://www.cdc.gov/nchs/data/series/sr_10/sr10_249.pdf

Assessing Progress Toward Previous Cardiovascular Health and Diabetes Plans

The DPCP and CVHP conducted a review of statewide efforts to complete the strategies, objectives and goals proposed in the *Maine Diabetes Health System Strategic Plan (2005-2009)* and *Heart Healthy and Stroke-Free in Maine (2006-2010*). Process and outcome indicators were assessed to develop a comprehensive picture of the impact of the statewide *Plans*. Due to restrictions of time and other factors, not all objectives and strategies within the *Plans* were evaluated. The DPCP and CVHP used qualitative methods such as key informant interviews with staff and key partners and data extraction from program and partner reports to compile information on progress toward strategy completion. The CVHP also administered a partner survey to gather additional information. Surveillance data were monitored on an ongoing basis and compared to the objectives in the *Plans* to gauge progress on outcomes (many of the objectives use standard data sources such as The Behavioral Risk Factor Surveillance System (BRFSS), hospitalization and mortality data).

Maine Diabetes Strategic Plan (2005-2009)

The majority of the *Maine Diabetes Strategic Plan* activities were completed. Over 36 Plan activities were completed (Appendix D). Partners conducting Plan activities include (in alphabetical order), but are not limited to:

- Amistad, Inc. (a peer support network for individuals with severe and persistent mental illness), Cary Medical Center, Healthy Maine Partnerships, Indian Township Health Department, MaineGeneral Health, MaineHealth, MaineCare (Maine's Medicaid Program), Maine CDC Chronic Disease Programs, Maine Primary Care Association, Medical Care Development, Maine Department of Education, Maine Office of Elder Services, Stephens Memorial Hospital and the University of Maine Cooperative Extension.

Heart Healthy and Stroke-Free in Maine (2006-2010)

The majority of the *Heart Healthy and Stroke-Free Strategic Plan* strategies were completed. Over 32 Plan strategies were completed (Appendix E). Partners conducting Plan activities include (in alphabetical order), but are not limited to:

- American Heart Association/American Stroke Association; Department of Education; Emergency Medical Services; Franklin County CVH Taskforce; Governor's Council on Physical Fitness, Sports, Health and Wellness; Healthcare Systems (hospitals, physician health organizations, primary care practices); Maine Cardiovascular Health Council; Maine Center for Disease Control and Prevention Programs; Healthy Maine Partnerships (HMPs); Maine Center for Public Health; Maine Council for Worksite Wellness; Maine Health Data

Organization; Maine Health Information Center; Maine Health Management Coalition; Maine Nutrition Council; Maine Office of Substance Abuse; Maine Primary Care Association; Maine Quality Forum; Maine Youth Overweight Collaborative; Maine-Harvard Prevention Research Center; Professional Associations (Maine Hospital Association, Maine Public Health Association); Quality Counts; State and Local Community Organizations; Universities; Worksite/Business Chambers and organizations.

Highlights of CVH and Diabetes Strategies Completed in 2005-2010

Optimize Statewide Capacity to Improve Cardiovascular Health and Prevent and Control Cardiovascular Disease and Diabetes

- The Maine CDC has partnered with several statewide organizations and initiatives that collectively have made considerable progress on improving the quality of statewide healthcare systems and chronic illness care, including Quality Counts and the *Aligning Forces for Quality Initiative* (AF4Q); the Maine Health Management Coalition, the Maine Patient-Centered Medical Home (PCMH) Pilot; HealthInfoNet; the Maine Regional Extension Center; the Bangor Beacon Community; and Chronic Disease Partners of Maine. Cardiovascular disease and diabetes prevention and control were and continue to be priorities in these chronic disease prevention and control efforts.

- **Quality Counts (QC)** is a regional healthcare collaborative committed to improving health and healthcare for the people of Maine by leading, collaborating and aligning improvement efforts. QC helps lead several efforts to improve chronic illness care, including the Robert Wood Johnson Foundation-funded *Aligning Forces for Quality* (AF4Q) initiative.

- As one of 17 **AF4Q** communities nationwide, Maine is working to lift the quality of healthcare within the state by promoting and aligning key drivers of healthcare quality, including performance measurement and public reporting of quality data, quality improvement assistance to providers and consumer engagement in the use of quality data.

- The **Maine Health Management Coalition (MHMC)** is an employer/purchaser-led coalition that works to improve the value of healthcare services. The MHMC leads the *Pathways to Excellence* (PTE) program, which works with providers to voluntarily report on the quality of healthcare services. Through the PTE program, more than 50% of primary care practices in the state have publicly reported quality measures for diabetes, with more than 400 primary care practice (PCP) sites in Maine now achieving NCQA Diabetes Recognition for their quality of care, and 172 (n= 424) PCP sites achieving NCQA CVD recognition. The MHMC also works to engage consumers in using this quality data for choosing providers.

- The ***Maine Patient-Centered Medical Home (PCMH) Pilot*** is a collaborative effort both to change payment and provide support for practice change with 26 primary care practices that are transforming to a more patient-centered, high-value model of care. The 26 practices collectively provide care to more than 170,000 patients in Maine, and are actively working to improve delivery of preventive and chronic care services.
- **HealthInfoNet** is Maine's health information exchange that has successfully established a system to link electronic health records for providers that collectively provide care for more than 75% of the state's population. HealthInfoNet also serves as the Maine Regional Extension Center, which is working to support a process of group purchasing, service contracting and support services targeted at implementing and optimizing the use of electronic medical records for Maine primary care providers and critical access hospitals.
- **Eastern Maine Health Systems** successfully secured a federal Beacon grant to create the Bangor Beacon Community, an effort to improve care by linking electronic health information systems across provider settings in the Bangor, Maine community, and by implementing HIT-enabled care management systems for patients with chronic conditions.
- **Chronic Disease Partners** of Maine is a statewide coalition that focuses on the common strategies in prevention, early detection and treatment of chronic disease and support of people with chronic disease through communication, public policy and public education.
- The **Maine Cardiovascular Health Council (MCHC)** expanded its mission to include diabetes. A sub-committee, the Diabetes Advisory Council, was formed and meets quarterly.
- The *Maine 2007 Diabetes Surveillance System Report* was completed and disseminated.

Prevent Risk Factors

- Community blood pressure, cholesterol and glucose screening guidelines developed and disseminated *Prevent Development of Risk Factors*.
- Healthy Maine Partnerships (HMPs), a statewide public health infrastructure made up of 28 local coalitions covering the entire state to promote health and prevent and control chronic disease, implemented 675 policies and environmental change strategies that promote healthy lifestyles to prevent risk factors related to diabetes and cardiovascular disease.
- *Healthy Maine Works* (HMW) began in 2009 to guide Maine employers in developing wellness programs to support the health of employees and family members. HMW is a worksite wellness planning tool that includes state-level promising strategies for health promotion and chronic disease prevention and control. The tool is offered to employers by the HMPs, with more than 110 employers currently using HMW.

Identify and Control Risk Factors

- *Maine Master Blood Pressure Trainer Program* implemented in seven counties (primary care practices in Sagadahoc, Kennebec, Somerset, Oxford, Cumberland, Lincoln and Androscoggin were trained).
- Worksite pilot to improve control of high blood pressure and cholesterol implemented in two worksites. HMPs partnered with Chambers and other business groups, and worked directly with employers to create more than 50 *Healthy Maine Works* accounts for employers across the state. (See p. 44 for a description of this initiative.)
- Ambulatory Diabetes Education and Follow-up (ADEF)/Diabetes Self-Management Training (DSMT) programs and local Healthy Maine Partnerships collaborated in 11 communities to conduct the National Diabetes Education Program (NDEP), *Small Steps/Big Rewards*, raising awareness about prevention of Type 2 diabetes.
- Several ADEF/DSMT Programs offered pre-diabetes classes for the first time to reduce the progression of diabetes.
- In October 2006, Maine's Office of Elder Services (OES) was awarded a three-year competitive grant from the Administration on Aging (AoA) to build upon current efforts to advance evidence-based prevention and wellness programs in Maine. The programs include *Living Well – Chronic Disease Self-Management; Matter of Balance/Volunteer Lay Leader* (MOB/VLL); *EnhanceFitness* and *EnhanceWellness*. In collaboration with MaineHealth's Partnership for Healthy Aging, the area agencies on aging and other community partners, the OES implemented and disseminated these four evidence-based programs statewide at senior centers, nutrition programs, senior housing projects and faith-based organizations. *Living Well* was implemented in Aroostook, Cumberland, Kennebec, Lincoln, Penobscot, Somerset, Waldo and York Counties. Priority to expand program access was given to rural areas and selected underserved areas.
- 28 of 28 (100%) HMPs worked on CVH access and self-management strategies. *Know Your Numbers* and other self-management materials about controlling high blood pressure and high cholesterol widely distributed by HMPs and other partners.
- HMP Care Model/Chronic Disease Self-Management Initiative implemented to increase primary care practice referral of patients with CVD risk factors to community resources.
- Trainings conducted at least annually by MCHC on *Blood Pressure Measurement for the Layperson and on Cardiovascular Disease and Cholesterol Screening*.

- *KeepMEWell* online tool was developed to comply with Public Law 22 M.R.S.A., Part 2§411. It is an online resource toolkit and health risk assessment to help Maine residents assess their risk for chronic diseases, improve their health through education and link to local community support and programs that can help decrease risk of chronic disease and improve health.
- Partners reviewed Maine law regarding community blood glucose screening. Revisions were made to allow for community blood glucose and taken to the Legislature for consideration. The suggested revisions have not been adopted at this time.

Optimize Education and Response Systems to Identify and Treat Acute Events and Optimize Statewide Capacity to Identify and Treat CVD and Diabetes

- Maine Chapter of Diabetes Educators (MeADE) established and conducts the annual Diabetes Education Conference.
- Approximately 2,000 individuals completed the ADEF/DSMT program annually at 35 ADEF/DSMT program sites statewide. Maine Public Law 592 mandates coverage for diabetes supplies and education through an ADEF program.
- *Diabetes Self-Management Education (DSME) Barrier Study* completed and action was taken to decrease barriers. Seventeen of the 35 ADEF/DSME program sites developed a marketing plan and we are tracking the number of referrals and participation to DSME to see how the marketing campaigns are working. In June 2010, the DPCP requested the DSME sites find out more about how participants in their DSME program learned of their program.
- The *Telephonic Diabetes Education and Support* (TDES) program offered through Medical Care Development has been instrumental in increasing access to DSME programs and overall improved health. For example, participation rate in the State of Maine employee health plan has increased with each outreach mailing, with 37 to 50% reporting no prior group or individual diabetes education. At program completion, this same group of participants reported improvement in meeting goals for blood glucose levels, blood pressure, total cholesterol and LDL clinical measures, as well as obtaining annual medical visits, foot exam, eye exams and annual dental care.
- Twenty-seven of 28 (96%) HMPs worked on strategies related to increasing employee awareness of signs and symptoms of heart attack and stroke and the need to call 911 and worked collaboratively with local emergency medical services (EMS) to plan and implement the *Maine HeartSafe Communities* initiative, which includes increased CPR/AED training and placement for the public as a primary objective.

- State policy was passed that mandates insurance reimbursement for telemedicine consults which facilitates the diagnosis and treatment of stroke patients in rural community hospitals by neurologists in medical centers.
- An analysis of emergency medical services data was completed for the first time. Thirty-three percent of combined cardiac and cerebral vascular incident (CVA) events had a total response time of 30 minutes or less; 89% had a total response time of 60 minutes or less. Median times to scene for cardiac and CVA events, combined, for Maine towns representing the incident location. Most towns in the state had a median time to scene of eight to 15 minutes; eight minutes is a commonly cited EMS standard for arrival times.
- Forty-one local EMS services were recognized as *Maine HeartSafe Communities*; primary criteria is increased cardiopulmonary resuscitation/Automated External Defibillator (CPR/AED) training and AED placement for the public. As compared to baseline, every EMS service that completed their biannual designation renewal significantly increased the number of community CPR/AED trainings, several by more than 100%. Services also increased the number of public access AEDs by an average of 49%.
- Maine EMS (MEMS), healthcare systems, hospitals and the CVHP provided the Regional 12-*lead* trainings for paramedics and intermediates among hospitals.
- Protocols implemented to increase adherence to guidelines: MEMS statewide 12-*lead* protocol; *In a Heartbeat* statewide AMI initiatives, which included quality improvement, protocol development and implementation (including prenotification and cath-lab activation from the field), and data analyses.

Optimize Care Systems to Prevent Cardiovascular Complications, Disability and Disease Progression

- Acute Stroke Diagnosis and Treatment grants supported development and implementation of a telestroke pilot, quality improvement interventions, EMS and Emergency Department protocols and mentorship for Joint Commission primary stroke certification.
- Stroke claims data analyzed and will be used to inform ongoing efforts to improve stroke care.
- CVHP and Central Maine Medical Center participated in the Congestive Heart Failure Institutes of Healthcare Improvement (IHI), *Hospital to Home Program*. Learning manual and resources were developed. Lessons learned were shared with MaineHealth.

Eliminate Disparities in the Prevention, Detection and Treatment of Cardiovascular Disease and Diabetes

- Maine CDC Division of Chronic Disease workgroup integrated various program work plans into one Tribal work plan.
- Maine CDC Office of Minority Health established to promote health and wellness in Maine's racial and ethnic minority communities to inform, advise and assist in prioritizing actions to efficiently and effectively address racial and ethnic health disparities in all chronic diseases.
- A community engagement and education activity to improve the prevention and control of high blood pressure was tailored and implemented to meet the needs of women. *Women & Heart Health* DVD created and disseminated.
- Community mini-grants were provided to two rural HMPs serving a primarily low-income population to tailor their HMP strategies to improve the prevention and control of high blood pressure to meet the needs of their communities.
- *KeepMEWell* is both an online resource toolkit and health risk assessment that helps Maine residents assess their risk for chronic diseases, improve their health through education and links them to local community support and programs that can help them decrease their risk of chronic disease and improve their health. Since this initiative began in January 2010 through September 2010 (nine months), there have been 4,406 unique visits to KeepMEWell.org., and 2,605 health assessments completed. The majority (2,516) were completed with Maine zip codes; 1,049 visits to the "Where and How to Get Affordable Healthcare Services" page; and 2,092 searches on the low-cost healthcare services database were conducted. The majority of searches (1,969) were for Maine services. *KeepMEWell* was developed primarily as a tool for Maine residents who were uninsured or underinsured. Sixty-one percent of persons completing the assessment reported being employed for wages. Statewide, approximately 29% reported having no insurance or having private insurance with high deductibles.

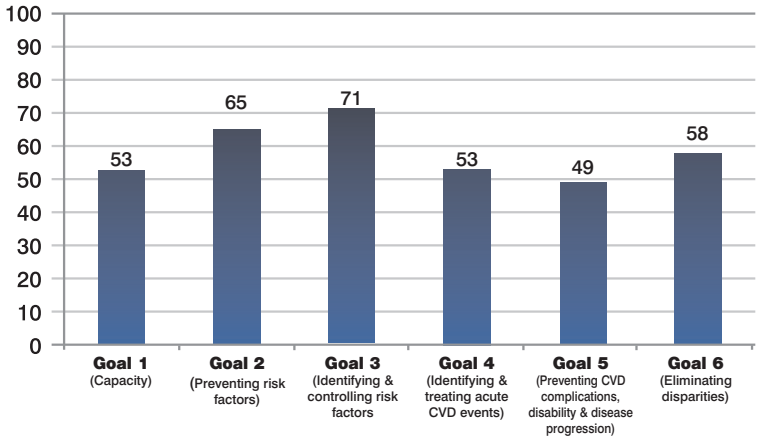
CVHP Partner Survey

In May 2009, the CVHP administered a Web survey to partners who had collaborated on the development and implementation of the Plan to gather information from partners regarding their cardiovascular health-related accomplishments and request suggestions for future strategic planning efforts.

Results

One hundred fifty partners were invited to complete the survey, 63 partners responded to the survey (42% response rate) and 51 completed the entire survey (34% completion rate).

Figure 21: Percent of partners responding that they or their organization had implemented strategies in goal areas



Implementation of Cardiovascular Health Strategies: 88% of respondents' organizations had implemented at least one cardiovascular health activity in one of the six goal areas (n=51): (Figure 21)

- 53% of respondents reported conducting activities in Goal 1 (optimizing statewide capacity to improve CVH)
- 65% reported conducting activities in Goal 2 (preventing the development of CVD risk factors)
- 71% reported conducting activities in Goal 3 (identifying and controlling CVD risk factors)
- 53% reported conducting activities in Goal 4 (optimizing statewide capacity or education and response systems to identify and treat acute events)
- 49% reported conducting activities in Goal 5 (preventing CVD complications, disability and disease progression) and
- 58% reported conducting activities in Goal 6 (eliminating disparities in CVD and risk factors)

Strategic Planning Process for 2011-2015:

- 36% of the 28 respondents whose organizations were familiar with the *Plan* reported that their organization had implemented strategies from the *Plan*.
- 64% of respondents said they wanted to participate fully or in a limited way in the upcoming strategic planning process.

Strategic Plan

This *Plan* proposes a variety of strategies for primary, secondary and tertiary CVD and diabetes prevention and management including community partnerships, policy and environmental changes, public education and awareness, technical assistance and training in best practices and tailoring population-based efforts to fit the needs of priority populations.

The major modifiable protective behaviors for CVD and diabetes are living tobacco-free, being physically active, eating a healthy diet, maintaining a healthy weight, keeping blood pressure and cholesterol under control, maintaining good oral health and managing diabetes (see "Protective Factors" section, page 23). These are most effectively addressed through population-based prevention and health promotion and secondary and tertiary prevention efforts delivered at multiple settings, such as communities, schools, worksites and healthcare settings.

Consistency in approaches across efforts maximizes impact. As such, this diabetes and CVH strategic *Plan* is consistent with the *State Health Plan, Healthy Maine 2010* and *Healthy People 2020*.[4,32,33]

The *State Health Plan* reports some of the preventable hospitalizations driving costs in Maine (Table 6)[4] and includes a goal area to address the support of consumers in self-care and management.[4]

Table 6: Preventable hospitalizations in Maine, 2007

Preventable hospitalization Indicator	Admission rate per 100,000	Potential cost savings given a 50% reduction
Bacterial pneumonia	379.6	$16,230,065
Adult asthma	71.7	$2,198,165
Chronic obstructive pulmonary disease	224.0	$8,640,570
Congestive heart failure	352.2	$14,759,440
Hypertension	21.3	$663,860
Diabetes short-term complication	40.8	$1,469,695
Diabetes long-term complication	90.1	$5,335,710
Uncontrolled diabetes	7.2	$199,715
Rate of lower-extremity amputation among patients with diabetes	28	$2,598,615

Source: 2010-2012 Maine *State Health Plan*

Further, the *Plan* is consistent with the numerous diabetes (Table 7) and CVD (Table 8) objectives of *Healthy People 2020*.

Table 7: *Healthy People 2020* Objectives: diabetes

Number	Objective
D HP2020–1:	Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education.
D HP2020–2:	Increase the proportion of adults with diabetes whose condition has been diagnosed.
D HP2020–3:	Reduce the diabetes death rate.
D HP2020–4:	Reduce the rate of lower extremity amputations in persons with diabetes.
D HP2020–5:	Increase the proportion of persons with diabetes who obtain an annual urinary microalbumin measurement.
D HP2020–6:	Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year.
D HP2020–7:	Increase the proportion of adults with diabetes who have an annual dilated eye examination.
D HP2020–8:	Increase the proportion of adults with diabetes who have at least an annual foot examination.
D HP2020–9:	Increase the proportion of persons with diabetes who have at least an annual dental examination.
D HP2020–10:	Increase the proportion of adults with diabetes who perform self-blood-glucose-monitoring at least once daily.
D HP2020–11:	Reduce the annual number of new cases of diagnosed diabetes in the population.
D HP2020–12:	Reduce the death rate among the population with diabetes.
D HP2020–13:	Improve glycemic control among the population with diagnosed diabetes: a. Reduce the proportion of the diabetic population with A1c value > 9 %. b. Increase the proportion of the diabetic population with A1c value < 7 %.
D HP2020–14:	Increase the proportion of the population with diagnosed diabetes whose blood pressure is under control.
D HP2020–15:	Improve lipid control among the population with diagnosed diabetes.
D HP2020–16:	Increase the proportion of people with prediabetes or multiple diabetes risk factors that are engaged in diabetes prevention behaviors.

Source: U.S. Department of Health and Human Services. Developing Healthy People 2020.

Table 8: *Healthy People 2020* Objectives: Cardiovascular disease

Number	Objective
HDS HP2020–1:	Reduce coronary heart disease deaths.
HDS HP2020–2:	Increase the proportion of eligible patients with heart attacks who receive timely artery-opening therapy from symptom onset.
HDS HP2020–3:	Reduce stroke deaths.
HDS HP2020–4:	Increase the proportion of adults with high blood pressure whose blood pressure is under control.
HDS HP2020–5:	Increase the proportion of adults who have had their blood pressure measured within the preceding two years and can state whether their blood pressure was normal or high.
HDS HP2020–6:	Reduce the mean total blood cholesterol levels among adults.
HDS HP2020–7:	Reduce the proportion of adults with high total blood cholesterol levels.
HDS HP2020–8:	Increase the proportion of adults who have had their blood cholesterol checked within the preceding five years.
HDS HP2020–9:	Increase the proportion of adults aged 20 years and older who are aware of and respond to early warning symptoms and signs of a stroke.
HDS HP2020–10:	(Developmental) Increase the proportion of out-of-hospital cardiac arrests in which appropriate bystander and emergency medical services (EMS) were administered.
HDS HP2020–11:	(Developmental) Reduce hospitalizations of older adults with heart failure as the principal diagnosis.
HDS HP2020–12:	Increase the proportion of adults aged 20 years and older who are aware of, and respond to, early warning symptoms and signs of a heart attack.
HDS HP2020–13:	Reduce the proportion of persons in the population with hypertension.
HDS HP2020–14:	Increase the proportion of adults with prehypertension who meet the recommended guidelines for: a. BMI b. Saturated fat consumption c. Sodium intake d. Physical activity e. Moderate alcohol consumption
HDS HP2020–15:	Increase the proportion of adults with hypertension who meet the recommended guidelines for: a. BMI b. Saturated fat consumption c. Sodium intake d. Physical activity e. Moderate alcohol consumption
HDS HP2020–16:	Increase the proportion of persons with coronary heart disease who have their low-density lipoprotein (LDL) cholesterol level at or below recommended levels.

Table 8: *Healthy People 2020* Objectives: cardiovascular Disease (continued)

HDS HP2020–17:	(Developmental) Increase overall cardiovascular health in the U.S. population.
HDS HP2020–18:	(Developmental) Increase the proportion of adults with hypertension who are taking the recommended medications to lower their blood pressure.
HDS HP2020–19:	(Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a healthcare provider to: a. Eat fewer foods high in saturated fat or high in cholesterol. b. Control weight or lose weight. c. Increase physical activity or exercise. d. Take recommended medicine.
HDS HP2020–20:	(Developmental) Increase the proportion of adults with elevated LDL cholesterol who meet the recommended guidelines for: a. Healthy weight b. Cholesterol-lowering diet c. Physical activity
HDS HP2020–21:	(Developmental) Reduce incidence rates for heart disease and stroke.
HDS HP2020–22:	Increase 30-day survival rates following first occurrence of heart disease and stroke.
HDS HP2020–23:	(Developmental) Reduce the recurrence rates among survivors of heart disease and stroke.

Source: U.S. Department of Health and Human Services. *Developing Healthy People 2020.*

Healthy Maine 2010 includes many chronic disease objectives to improve the health of Maine people. The diabetes and cardiovascular health objectives (and their corresponding numbers) are:

5-1. Increase the proportion of persons with diabetes who receive formal diabetes education

5-5. Reduce the diabetes death rate

5-12. Increase the proportion of adults with diabetes who have a hemoglobin A1c test at least once a year

5-13. Increase the proportion of persons with diabetes who have an annual dilated eye examination

12-1. Reduce coronary heart disease deaths

12-6. Reduce hospitalization of older adults with congestive heart failure as the principal diagnosis

12-7. Reduce stroke deaths

12-12. Increase the proportion of adults who have had their blood pressure checked within the preceding two years

12-15. Increase the proportion of adults in Maine who have had their blood cholesterol checked within the preceding five years[32]

Finally, there are six *Healthy Maine 2010* strategies to address chronic disease that are relevant for this *Plan*:

- Improved surveillance of chronic diseases and disabilities
- Environmental changes
- Education initiatives
- Detecting and lowering risks
- Screening and detection of chronic diseases
- Adequate treatment for chronic disease[32]

Healthy Maine 2020 is expected to be released in 2011. While chronic disease objectives will be updated, readers will see the spirit of *Healthy Maine 2010* reflected in this *Strategic Plan*, with an eye to *Healthy Maine 2020*.

This 10-year *Strategic Plan* has been developed with outcome and progress objectives spanning across the 10-year time frame. Strategies have been developed for 2011-2020 with a midcourse review planned for 2015. This review will include an analysis of *Plan* strategies implemented to date and planning for strategy implementation in the following five years.

The complete set of *Plan* goals, objectives and strategies are presented in the following tables. Objectives focused on achieving policies and environmental changes are the foundation of the *Plan*, and educational initiatives support those efforts to make the environment more supportive of healthier choices. Strategies are aligned with appropriate objectives. In cases where strategies impact multiple objectives, they are noted with the first objective they relate to and are referenced later in the tables. Finally, strategies are time-specific and have been identified as short-term if they will be accomplished within the first two years of the *Plan*, or intermediate if they will be accomplished within the third through fifth years. Those strategies which are currently lacking in available resources and/or political will are included in the "Room to Grow" table; these strategies have been identified as worthwhile efforts that await appropriate resources and the right timing.

Of particular note are the quality of care objectives. Quality of care objectives pertain to the health system, self-management support, delivery system design and clinical information systems elements of the *Planned Care Model*. Many strategies found in these sections are intertwined and overlap, but for the sake of this document, these strategies have been separated into the most appropriate goal area(s). Whenever possible, the quality of care objectives will be implemented in unison.

GOAL 1: Promote healthy lifestyles to prevent risk factors for pre-diabetes and cardiovascular disease *Includes physical activity, healthy eating, healthy weight, tobacco-free, good oral hygiene.

Outcome Objectives:

For prevention outcome objectives, please see the state plans related to the Maine CDC, Partnership For A Tobacco-Free Maine (http://www.tobaccofreemaine.org/), the Maine CDC, Physical Activity, Nutrition and Healthy Weight Program (http://healthymainepartnerships.org/panp/index.aspx) and the Maine CDC, Oral Health Program (OHP) (http://www.maine.gov/dhhs/bohdcfh/odh/index.shtml)

Process Objectives (With Strategies and Activities):

1.1 By 2015, increase the number of reported supportive community and worksite (including school as a worksite) policies and environmental changes that promote healthy lifestyles to prevent risk factors for pre-diabetes, diabetes and cardiovascular disease from 675 (includes only community) in 2010 to 740.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
1.1.1	Continue to partner to implement policies and environmental changes.	Coordinate efforts with appropriate Maine CDC partners to assure that mutually beneficial initiatives are successful. Continue to support the implementation of the state tobacco, physical activity and nutrition and oral health plans.	Short-Term: Ongoing	Maine CDC Programs (PTM, PANP, CVHP, DPCP, OHP), UNE	Community, Worksite
1.1.2	Assist Healthy Maine Partnerships to increase the number of chronic disease prevention policy and environmental change strategies that are implemented.	HMPs partner with community organizations on physical activity and nutrition promotion and hypertension, cholesterol and diabetes prevention.	Short-Term: Ongoing	CVHP, HMPs	Community
1.1.3	Work with partners to develop a Worksite Wellness Tax Credit.	Partner with Maine Association of Health Underwriters and other partners.	Short-Term: 2012	MAHU, MLGWW	Worksite
1.1.4	Work with partners on the development and adoption of insurance carrier premium discounts.	Partner with the Maine Association of Health Underwriters (MAHU), the Maine Leadership Group on Worksite Wellness and various health insurance experts (Bureau of Insurance) to explore opportunities to offer insurance carrier premium discounts.	Intermediate-Term: 2014	MAHU, Maine Leadership Group on Worksite Wellness (MLGWW)	Worksite
1.1.5	Increase the number of worksites that use *Healthy Maine Works* (HMW) to support the promotion of healthy lifestyles and prevention/control of risk factors and chronic disease.	Work with wellness councils, business groups, brokers, to encourage use of HMW with members/clients. Get HMW into the public domain. Increase the number of strategies for employers to support the prevention of high blood pressure, high cholesterol and work-caused stress. Examples: Increase opportunities for physical activity, improve healthy eating behaviors, prevent tobacco use, reduce work-caused stress.	Short-Term: Ongoing	MLGWW, University of New England/ Maine Harvard Prevention Research Center (UNE-MHPRC)	Worksite

GOAL 1: Promote healthy lifestyles to prevent risk factors for pre-diabetes and cardiovascular disease *Includes physical activity, healthy eating, healthy weight, tobacco-free, good oral hygiene.					
Objective	**Strategy**	**Description**	**Time Frame**	**Responsible Partner(s)**	**Setting**
1.1.6	Increase the training opportunities for worksites and worksite wellness advisors (public health, private, brokers, etc.) on effective practices for employee health management. Consider a state certificate.	Partner with regional wellness councils to increase training opportunities.	Short-Term: 2012	Regional Wellness Councils	Worksite
1.2 By 2015, increase the number of reported community, worksite (including school as a worksite) and healthcare educational programs that encourage healthy living and risk factor prevention from 1,478 (includes community only) in 2010 to 1,550.					
1.2.1	Provide resources and technical assistance to HMPs, healthcare organizations and other community organizations to implement educational programs and media/communications.	Examples of education programs include mass media/ communication campaigns, adult education, lay health initiatives and lunch and learns.	Short-Term: Ongoing	Maine CDC Programs, Diabetes Educators	Community, Worksite, Healthcare
1.2.2	Educate medical and dental providers on the connection between good oral health and minimizing diabetes complications and maintain good cardiovascular health.	Develop a fact sheet on the relationship between good oral health and minimizing the complications from diabetes and cardiovascular disease for medical and dental care providers.	Short-Term: 2012	ME CDC Oral Health Program, Dentists	Community, Healthcare
1.2.3	Connect Healthy Maine Partnerships with worksite wellness experts for training, mentoring, problem-solving.	Develop strong connections between regional wellness councils, wellness providers and others to ensure that HMPs have connections to experts for training and problem-solving.	Short-Term: Ongoing	MLGWW	Worksite
1.2.4	Disseminate findings from quarterly literature reviews on cardiovascular health, diabetes prevention and control and chronic disease as they relate to worksite health, through appropriate channels, including wellness councils, business groups, Healthy Maine Partnerships and others working in the area of worksite wellness.	Establish a process for conducting literature reviews and disseminating relevant information to employers, HMPs and wellness-related providers.	Short-Term: 2011	UNE-MHPRC	Worksite
1.2.5	Assist in the continued evolution, dissemination and utilization of the *MLGWW Criteria Document*.	*The MLGWW Criteria Document* has not been widely disseminated. With some modification, it could be more influential in guiding HMPs, vendors and employer wellness programs.	Short-Term: Ongoing	MLGWW	Worksite

Goal 1 Partner Initiative Highlights

Healthy Maine Partnerships (HMPs)

The Healthy Maine Partnership (HMP) initiative is an effort of the Maine Center for Disease Control and Prevention, Maine Office of Substance Abuse and the Maine Department of Education. Participating programs collaborate to provide training, technical assistance, evaluation, program development and communications assistance to local-level Healthy Maine Partnerships (a local public health infrastructure consisting of 28 community coalitions that covers the entire state to promote health and prevent and control chronic disease). Local HMPs engage school, healthcare, worksite, governmental, civic and voluntary agencies to work across their service areas to achieve HMP initiative goals:

- Ensure that Maine has the lowest smoking rates in the nation
- Prevent the development and progression of obesity, substance abuse and chronic disease related to or affected by tobacco use
- Optimize the capacity of Maine's cities, towns and schools to provide health promotion, prevention, health education and self-management of health
- Develop and strengthen local capacity to deliver essential public health services across the state of Maine

HMPs incorporate specific cardiovascular health and broader chronic disease objectives into their workplans. There continues to be a focus on cardiovascular health as well as other behaviors that affect cardiovascular health in the new HMP grant cycle, which begins this year.

Healthy Maine Works

Increased attention is being paid to the value of worksite wellness in supporting community health. Worksites represent a logical venue for health promotion initiatives, which improve employee health, increase productivity and reduce healthcare utilization. *Healthy Maine Works* (HMW) began in 2009 to guide Maine employers in developing wellness programs to support the health of employees and their family members. HMW is a worksite wellness planning tool that includes state-level promising strategies for health promotion and chronic disease prevention and control. The tool is offered to employers by the 28 local Healthy Maine Partnerships across Maine, with more than 110 employers currently using HMW.

HMW is flexible and adaptable for use electronically or with pen and paper. For employers just getting started, the simple, guided and no-cost process for developing a wellness plan is a great first step. For worksites with existing wellness programs, the strategies in the tool, combined with the expertise and resources provided by HMP staff, can expand or enhance a wellness program.

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.
Outcome Objectives:
For obesity prevention and control objectives, please see the Physical Activity, Nutrition and Healthy Weight Program (http://healthymainepartnerships.org/panp/index.aspx). For tobacco prevention and control objectives, please see the Partnership for A Tobacco-Free Maine (http://www.tobaccofreemaine.org/)
2A By 2020, increase the proportion of adults who have had their blood pressure checked within the preceding two years.
2B By 2020, reduce the percent of adults who have ever been told their blood pressure is high from 31% in 2008 to 28% in 2020.
2C By 2020, increase the percent of adults who have high blood pressure and are following their healthcare provider's advice to reduce their risk of heart disease or stroke by taking action to control high blood pressure: • taking prescribed meds from 59% in 2007 to 62% • exercising more from 77% in 2007 to 80% • cutting down on salt from 66% in 2007 to 70% • controlling or losing weight from 61% in 2007 to 65% • cutting down on alcohol from 43% in 2007 to 46%
2D By 2020, increase the percent of adults with high blood pressure who have it under control (<140/90 mm/Hg).
2E By 2020, increase the percent of adults in Maine who have had their blood cholesterol checked within the preceding five years from 80% in 2008 to 85%.
2F By 2020, decrease the percent of adults who have ever been told their blood cholesterol is high from 39% in 2008 to 37%.
2G By 2020, increase the percent of adults with high blood cholesterol who are following their healthcare provider's advice to reduce their risk of heart disease or stroke by taking actions to control high blood cholesterol: • eating fewer high-fat, high-cholesterol foods from 82% in 2008 to 90% • increasing physical activity from 68% in 2008 to 75% • taking prescribed medicine from 64% in 2008 to 70% • controlling or losing weight from 55% in 2008 to 60%
2H By 2020, increase the proportion of adults with high blood cholesterol that have it under control (LDL-C test <100 mg/dL).
2I By 2020, increase awareness of the importance of maintaining good oral health in order to minimize diabetes complications and maintain good cardiovascular health.
2J By 2020, reduce the hypertension admission rate from 21.3 admissions (per 100,000) in 2007 to 19.2.
2K Continue to monitor the prevalence of pre-diabetes through the Maine BRFSS to determine trends (prevalence was 1.3% in 2007 and 1.0 in 2004).

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.

Process Objectives

2.1 By 2015, increase the number of reported supportive community and worksite (including school as a worksite) policies and environmental changes that improve the identification and control of risk factors for cardiovascular disease and diabetes from 67 (includes community only) in 2010 to 75.

Objective	Strategy	Description	Time Frame	Partner(s)	Setting
2.1.1	Develop and implement policies and environmental changes to reduce sodium intake.	Research, develop and implement policies that will reduce intake of sodium. Activities may include: developing a sodium task force, connecting with the restaurant association to develop an action plan (i.e., menu labeling), working with Maine Cardiovascular Health Council Policy and Obesity Policy Committees to draft a plan to strengthen legislation to reduce sodium consumption.	Intermediate-Term: 2013	MCHC's Policy Committee; Obesity Policy Committee	Community
2.1.2	Assist community and healthcare partners to screen for risk factors (e.g., tobacco use, physical inactivity, poor nutrition, obesity) and increase referrals to decrease risk factors.	People are not screened to guidelines. These are missed opportuhities to detect and treat risk factors and ultimately prevent diabetes and CVD.	Short-Term: 2012	CVHP, DPCP, PTM, Physical Activity and Nutrition Program (PANP)	Community and Healthcare
2.1.3	Increase the number of policy and environmental change strategies in *Healthy Maine Works* for employers to support the detection and reduction/control of tobacco use, inactivity, unhealthy eating, obesity, high blood pressure and high cholesterol.	Examples: Electronic blood pressure monitors with multiple-sized cuffs on site; training staff members to take accurate blood pressure readings, having a stated policy or goal that every staff member will know their blood pressure (and cholesterol), and activate those with high blood pressure to utilize appropriate control strategies, health risk assessment screenings, peer support groups; increase opportunities for physical activity and healthy eating; provide benefits and opportunities for tobacco cessation, peer support groups.	Short-Term: Ongoing	CVHP, PTM, PANP, HMPs, UNE-MHPRC; MLGWW	Worksite

Also see strategies in Objective 1.1

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.

2.2 By 2015, increase the number of reported supportive healthcare policies and environmental changes that improve the identification and control of risk factors for cardiovascular disease and diabetes.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
2.2.1	Implement a state policy mandating the reimbursement of pre-diabetes education.	Work with partners to advocate for reimbursement of pre-diabetes education and working towards having several different formats reimbursable, e.g., face-to-face, online or by telephone.	Short-Term: 2014	DSME Program sites, ME Dietetic Association, ME Association of Diabetes Educators, Public Policy Partners, TDES/MCD	Community
2.2.2	Work with Maine's primary care providers and pharmacy professionals to implement an integrated approach for management of high blood pressure.	The primary goal is the improved management of high blood pressure through an integrated clinician-pharmacist care team approach, including examine and support establishment of a Hypertension Specialist Network in Maine.	Intermediate-Term: 2013	MCD, MCHC & CVHP, Healthcare Systems and Quality Improvement Initiatives (QC, AF4Q, PCMH), MPCA	Healthcare
2.2.3	Establish a permanent home for all Blood Pressure Master and Blood Pressure Trainings.	Develop business plan with Maine Cardiovascular Health Council (MCHC) or Medical Care Development (MCD).	Short-Term: 2011	MCHC or MCD	Healthcare
2.2.4	Disseminate a risk factor and pre-diabetes screening protocol to improve the detection and control of pre-diabetes to primary care provider offices.	Spread the lessons learned from the Diabetes Prevention and Control Program/ MaineGeneral risk factor and pre-diabetes pilot to other primary care providers. The DPCP and MaineGeneral (Gardiner Family Medicine) implemented a risk factor and pre-diabetes health system intervention to improve biometric measures of patients with pre-diabetes.	Short-Term: Ongoing	DPCP/ MaineGeneral and Health Systems	Healthcare

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.

2.3 By 2015, increase the number of community, worksite (including school as a worksite) and healthcare educational programs on the risks of uncontrolled cardiovascular disease and diabetes risk factors and the importance of therapeutic lifestyle changes in controlling risk factors from 326 (includes community only) in 2010 to 340.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
2.3.1	Assist partners to promote existing evidence-based education programs or resources (ADA, Hannaford, AHA, PTM Helpline, MaineHealth Target, Merck, National Diabetes Prevention Program, CDC/ YMCA and health plan model. Stevens Memorial Hospital WIN Program).	Potential materials include: National Diabetes Program's *ABCS* and *Small Steps, Big Rewards* Campaigns; *In a Heartbeat,* American Heart Association (AHA), American Stroke Association (ASA), National Heart, Lung and Blood Institute (NHLBI), PTM HelpLine, *Surgeon General's Report on Smoking,* JNC7* and NCEP-ATP III*. *See Appendix B for definition of terms.	Short-Term: 2011	Maine CDC Programs (CVHP, DPCP, PTM, PANP, HMPs, Maine-Care, Maine Assoc-iation of Retirees, AHA, TDES, Diabetes Educators)	Community
2.3.2	Continue Blood Pressure (BP) Master Training.	Focuses on accurate BP measurement, blood pressure control and guideline adherence. Develop full line of blood pressure trainings (for healthcare professionals, patients and general public) and continue to spread across state, especially northern and downeast.	Short-Term: 2011	CVHP & MCHC Partners include BP Master Trainers (Maine-General, CMMC & Maine-Health)	Community
2.3.3	Promote *Keep ME Well* to increase the number of people with one or more risk factors for heart disease and stroke who know how to manage their risk factors to prevent development of the disease.	Assist individuals in identifying their risk factors for heart disease and stroke and finding resources to help them control them.	Short-Term: Ongoing	Maine CDC Programs, HMPs	Community
2.3.4	Ensure clinicians have resources and education on medication management for patients with co-morbidities including mental health.	Work with CVH partners to develop resources and training to define and understand medication management for CVD patients with co-morbidities. Integrate this concept into team care, including role of pharmacists, and examine mechanisms for up-to-date information on CVH medications through health IT.	Intermediate-Term: 2013	MCHC & CVHP	Healthcare

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.					
Objective	**Strategy**	**Description**	**Time Frame**	**Responsible Partner(s)**	**Setting**
2.3.5	Educate healthcare providers and the public on the importance of physical activity as a critical part of treatment for pre-diabetes and hypertension.	This may include linking diabetes educators to local physical activity resources, educating providers on the link between physical activity and pre-diabetes and hypertension and implementing the CDC's pre-diabetes prevention program via local YMCAs and health insurance companies.	Short-Term: 2012	DPCP, Physical Activity, Nutrition and Healthy Weight Program (PAN-HW)	Community, Healthcare
2.3.6	Educate medical and dental providers on the connection between good oral health and minimizing diabetes complications and maintaining good CVH.	Develop a fact sheet on the relationship between good oral health and minimizing the complications from diabetes and cardiovascular disease for medical and dental care providers.	Short-Term: 2012	ME CDC Oral Health Program, Dentists	Community, Healthcare
2.3.7	Continue to provide blood cholesterol training for providers who conduct cholesterol screenings.	Provide blood cholesterol training for providers who conduct cholesterol screenings.	Short-Term: Ongoing	MCHC	Healthcare
2.3.8	Expand clinician and community partners' training and utilization of motivational interviewing.	As part of clinical practice improvement, care management and *Patient-Centered Medical Home (PCMH)*, conduct trainings in various areas throughout state and also offer online training.	Intermediate-Term: 2013	MCHC and CVHP, Healthcare Systems and Quality Improve-ment Initiatives (QC, AF4Q, PCMH), MPCA	Healthcare
2.3.9	Increase the training opportunities for worksites and worksite wellness advisors (public health, private, brokers, etc.) on effective practices for employee health management. Consider a state certificate.	Partner with the Southern Maine Wellness Council on offering their Wellness Certificate Course, and the Wellness Council of Maine for their Wellness University, to increase the skills of HMPs, employer groups, brokers and other employer-focused groups.	Short-Term: 2012	Regional Wellness Councils	Worksite
2.3.10	Target education and messaging about stroke risks to populations at risk for stroke, based on Maine BRFSS and clinical data sources.	Those aged 65+, those with established risk factors, including previous events, atrial fib, diabetes, etc., and multi-cultural groups.	Short-Term: 2012	Maine-Health	Healthcare

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.					
Objective	**Strategy**	**Description**	**Time Frame**	**Responsible Partner(s)**	**Setting**
2.3.11	Educate the public on the importance of accurate blood pressure measurement and diagnosis.	Create consumer-driven provider changes.	Short-Term: 2012	MCHC, CVHP & AHA/ASA	Healthcare
2.3.12	Provide education to healthcare providers on the identification and treatment of pediatric hypertension.	Once the new guidelines will be available in 2011, there will be a new scale available to more easily identify hypertensive pediatrics.	Short-Term: 2012	Maine-Health	Healthcare
2.3.13	Sponsor a Cardiovascular Health Summit.	CVH Summit - Pre-diabetes and hypertension might be a good model and a kick-off for the hypertension specialist in Maine.	Short-Term: Annually	MCHC	Healthcare
Also see strategies in Objective 1.2					

Goal 2 Partner Initiative Highlight

Maine Patient-Centered Medical Home Pilot

In the fall of 2007, the Maine Legislature convened the Commission to Study Primary Care Practice to examine issues facing primary care and ways to stabilize and support it. In the 2008-2009 *State Health Plan*, the Governor's Office for Health Policy and Finance identified the need to promote primary care as the foundation for our state's health system. Both recommended a key strategy for making primary care viable in Maine through a *Patient-Centered Medical Home Pilot.*

Several organizations came together to develop the PCMH Pilot. The Dirigo Health Agency's Maine Quality Forum, Quality Counts and the Maine Health Management Coalition convened stakeholders to guide the effort and ensure all voices were represented. They formed the PCMH Working Group, which includes consumers, providers, employers, insurers, public health and state government representatives who work through a process of consensus to guide the pilot.

The vision of Maine's PCMH Pilot is to provide effective, efficient and accessible healthcare supported by appropriate payment, and to deliver sustainable value to patients, providers, purchasers and payers. The mission of the PCMH Pilot is to develop and implement a patient-centered delivery system and payment model that supports this vision. The ultimate goal of the Pilot is to sustain and revitalize primary care both to improve health outcomes for all Maine people and to reduce overall healthcare costs.

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.

2.4 By 2015, increase the number of linkages between primary care practices and community resources to improve the detection and control of risk factors for pre-diabetes, diabetes and cardiovascular disease from 28 in 2010 to 42.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
2.4.1	Partner to promote evidence-based programs, such as 211 and *KeepMEWell*.	Assist partner organizations in promotion of these programs by providing promotional materials for distribution and/or inclusion in electronic communications.	Short-Term: Ongoing	HMPs, 211 Maine, Maine-Care, Healthcare and Community Organ-izations	Community
2.4.2	Promote evidence-based programs such as the *Living Well: Chronic Disease Self-Management Program*.	Work with HMPs and other partners to assist Office of Elder Services and Area Agencies on Aging in promotion of these programs.	Short-Term: 2011	HMPs, Maine Office of Elder Services	Community
2.4.3	Continue to assist and promote the *Maine Patient-Centered Medical Home Pilot*. Work with partners to expand the PCMH model.	Medical home model emphasizes prevention, health information technology, care coordination and shared decision-making among patients and their providers.	Intermediate-Term: 2013	MCD, MPIN, CVHP, Healthcare Systems, Primary Care Practices and Quality Improve-ment Initiatives (QC, AF4Q, MHMC), MPCA	Healthcare
Process Objectives					
2.4.4	Continue to assist and promote the Maine Health Management Coalition to engage consumers to prevent and control risk factors and improve quality of CVH and diabetes healthcare.	Develop a variety of creative, proactive efforts to help consumers understand and actively engage in activities that will maintain and improve their health; choose providers and services based on their cost and quality and support the delivery of higher quality, more coordinated care with a focus on controlling CVD and Diabetes Mellitus (DM) risk factors.	Short-Term: Ongoing	CVHP, Healthcare Systems, Primary Care Practices and Quality Improve-ment Initiatives (QC, AF4Q, PCMH)	Community, Healthcare
2.4.5	Link Care Managers with community and state program resources.	Care managers help connect some of the patients who are most in need to the resources in their community.	Short-Term: Ongoing	Community Care Managers	Community

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease.

2.5 By 2015, increase the number of quality improvement initiatives implemented by healthcare systems to increase adherence to blood pressure and cholesterol measurement and treatment guidelines (JNCT and ATP III), including DASH diet and medication management, from five of six healthcare systems, 92 of 416 primary care practice sites (26%) in year 2010 to six of six healthcare systems, 200 of 416 primary care practice sites (~48 %).

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
2.5.1	Develop, train and embed the use of non-physician protocols to help address management of risk factors.	As part of clinical practice improvement, care management and *Patient-Centered Medical Home* explore ways to fully engage entire healthcare team and extenders of care such as community health workers.	Intermediate-Term: 2013	CVHP, MCHC	Healthcare
2.5.2	Discuss the need for establishment of quality measure around BP guideline care connected to prescription fulfillment and adherence.	Research quality of care measures for medication management.	Short-Term: 2012	MCHC, MHMC, Insurers	Healthcare
2.5.3	Research potential for establishing state or regional repository of stroke care quality measures, to inform and promote further stroke systems improvements.	Claims data, etc.	Intermediate-Term: 2013	CVHP, Stroke Care Work-group, the Northeast Cere-brovascular Consortium (NECC)	Healthcare
2.5.4	Refresh claims data project using same methodology to analyze new data; identify and utilize trends to promote specific stroke systems interventions.	Acquire 2007-2008 stroke claims data and conduct comparative analysis to determine progress since baseline and identify additional areas for improvement.	Short-Term: 2011	Stroke Care Work-group, NECC Partners	Healthcare

Several strategies in Goal One also apply to Goal Two, and several strategies in Goal Two also apply to Goal Three, but strategies are only listed in the document once.

Goal 2 Partner Initiative Highlights

MaineGeneral and DPCP Risk Factor and Pre-Diabetes Pilot

MaineGeneral Health Associates in Augusta is Maine's third-largest healthcare system. It consists of a medical center with three campuses in Augusta and Waterville and physician practices serving the Kennebec Valley region. MaineGeneral also focuses on preventive health and supports many ongoing programs throughout the communities they serve.

MaineGeneral Medical Center is partnering with DPCP to implement a risk factor and pre-diabetes pilot intervention to improve biometric measures of patients with pre-diabetes. The goals of this health system intervention are to increase:

- Detection of pre-diabetes
- Referral of people identified as pre-diabetic to self-management programs
- Participation in self-management programs
- Control of risk factors and pre-diabetes

Worksite Pilot on Identification and Control of High Blood Pressure

The CVHP and the Wellness Council of Maine conducted the worksite blood pressure pilot to establish model worksite programs for the prevention and control of high blood pressure, and to convince more Maine employers to adopt such programs.

Pilot sites were Mathews Brothers, a window and door manufacturer in Belfast, and Northeastern Log Homes, a home manufacturer in Kenduskeag. Employers participated in a yearly planning process to identify the mix of programs, policies, environmental changes and behavior change initiatives to work toward this challenge. Both sites added a level of blood pressure assessment and control not seen in most employee health management programs. In addition to onsite screening and encouragement to visit a healthcare provider, both sites added automated and manual blood pressure assessment during the pilot, at a very low cost.

Evaluation results suggest the pilot intervention is a strong promising process. Working with pilot sites to focus on blood pressure resulted in a number of new initiatives that increase the likelihood that all employees are aware of their blood pressure, have the ability to monitor it if needed and receive support related to blood pressure control.

Chronic Disease Partners of Maine and *Pathways to Health* Initiative

To help address the growing incidence of chronic disease risk factors and the burden of chronic disease on the people of Maine, numerous state-level programs and statewide organizations working with chronic diseases and their risk factors have come together to organize and coordinate the multiple resources addressing chronic disease throughout the state. This group, Chronic Disease Partners of Maine, came together with an agreement to make better use of limited public health resources and to improve effectiveness, reach and alignment of strategies intended to promote health and prevent, detect, treat and manage chronic disease. The organizations and state programs forming this coalition share a common vision: it is increasingly important to address chronic disease in a more integrated, collaborative way in order to maximize the limited public health resources available to public health practitioners. Recognizing prevention is a cornerstone of the Chronic Disease Partners of Maine's strategic directive, the group worked with Quality Counts and the Aligning Forces for Quality alliance to create the *Pathways to Health* initiative, an effort to create and disseminate customer-friendly, easy-to-use information for consumers on preventive health guidelines. This information has been made available to provider and community groups through print and Web-based materials in an effort to engage consumers and promote consistent messaging on preventive health guidelines.

KeepMEWell

The *KeepMEWell* online tool was developed to comply with Public Law 22 M.R.S.A., Part 2§411. It is both an online resource toolkit and health risk assessment that helps Maine residents assess their risk for chronic diseases, improve their health through education and links them to local community support and programs that can help them decrease their risk of chronic disease and improve their health. *KeepMeWell* is focused to reach persons uninsured, underinsured or facing other health disparities. The state public health infrastructure, particularly HMPs, have the responsibility of promoting *KeepMEWell* as a component of their comprehensive public health strategy aimed at improving the public's health and quality of life through supportive policies and environments in Maine.

Blood Pressure Master Trainer

The CVHP and partners developed a *Blood Pressure Master Trainer* (BPMT) training program that provides ongoing technical assistance to BPMTs to spread the training and embed environmental and quality improvement changes into primary care practices or healthcare systems. The elements of the intervention include providing training and technical assistance on:

1) Accurate blood pressure measurement
2) Treatment guideline adherence
3) Participation in hypertension or heart disease- and stroke-prevention public reporting or recognition programs such as the National Committee for Quality Assurance or *Bridges to Excellence*
4) Care Team Integration and Quality Improvement Strategies
5) Patient self-management support

Phase One of the intervention was evaluated to determine whether the BPMT training and the ongoing technical assistance provided by the CVHP was:

1) Effective in improving knowledge and skills
2) Effective in maintaining changes in knowledge and skills over time
3) An effective mechanism to spread training information to other health professionals, primary care practices and healthcare systems
4) Resulted in environmental and quality improvement changes in primary care practices and healthcare systems
5) Effective in increasing the accurate measurement of high blood pressure and control of high blood pressure

Results from quantitative and qualitative evaluation methods suggest that Phase One of the intervention was successful.

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.
Outcome Objectives:
Disease management and control
3A By 2020, reduce the percent of adults with diabetes from 8.3% in 2009 to 7.5%.
3B By 2020, increase the proportion of adults with diabetes who are taking steps to reduce their risk of heart disease or stroke through exercise from 78.7% in 2004 to 84%.
3C By 2020, reduce the percent of adults with diabetes reporting high blood pressure from 70% in 2007 to 65%.
3D By 2020, reduce the percent of adults with diabetes reporting elevated cholesterol from 69% in 2007 to 59%.
3E By 2020, increase the percent of adults with diabetes having ≥ A1c test per year from 93% in 2008 to 98%
3F By 2020, increase the percent of adults with diabetes who check feet for sores at least daily from 63% in 2007 to 73%.
3G By 2020, increase the percent of adults with diabetes who have an annual eye exam from 72% in 2007 to 82%.
3H By 2020, increase the percent of adults with cardiovascular disease with high blood pressure that have it under control (<140/90 mm/Hg) from 74% in 2008 to 78%.
3I By 2020, increase the percent of adults with diabetes with high blood pressure that have it under control (<130/80mm/Hg) from 45% in 2008 to 47%.
3J By 2020, increase the percent of adults with diabetes and periodontal disease who have four periodontal exams per year.
Emergency response
3K By 2020, increase the percent of adults aged 18 years and older who understand the need to call 911 in the event of a heart attack or a stroke from 88% in 2009 to 95%.
3L By 2020, increase the percent of adults aged 18 years and older who correctly identify five heart attack signs/ symptoms plus decoy and the need to call 911 from 15% in 2009 to 20%.
3M By 2020, increase the percent of adults aged 18 years and older who are aware of the early warning signs of a stroke from 21% in 2001 to 25%.
3N By 2020, decrease the percent of pre-transport deaths attributable to: • diseases of the heart from 55% of total deaths in 2007 to 51% • stroke from 54% of total deaths in 2007 to 50%
Quality of care
3O By 2020, reduce the diabetes hospital admission rate (age-adjusted) from 11.8 admissions (per 10,000) in 2008 to 10.6.
3P By 2020, reduce the diabetes short-term complication hospital admission rate from 40.8 admissions (per 100,000) in 2007 to 36.7.
3Q By 2020, reduce the diabetes long-term complication hospital admission rate from 90.1 admissions (per 100,000) in 2007 to 36.7.
3R By 2020, reduce the angina without procedure hospitalization admission rate from 44.7 admissions (100,000) in 2007 to 40.2.
3S By 2020, reduce the uncontrolled diabetes hospital admission rate from 7.2 admissions (per 100,000) in 2007 to 6.5.
3T By 2020, reduce the rate of lower-extremity amputation among patients with diabetes from 28.0 admissions (per 100,000) in 2007 to 25.2.
3U By 2020, reduce acute myocardial infarction hospitalization admission rates of Maine adults from: • 29.8/10,000 in 2007 to 26.2/10,000 for those aged 35-64 years • 98.8/10,000 in 2007 to 79.0/10,000 for those aged 65-74 years • 183.2/10,000 in 2007 to 153.9/10,000 for those aged 75 years and older

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.

3V By 2020, reduce congestive heart failure hospitalization admission rates of Maine adults from:
- 6.4/1,000 in 2007 to 6.1/1,000 for those aged 65-74 years
- 15.3/1,000 in 2007 to 14.5/1,000 for those aged 75-84 years
- 26.9/1,000 in 2007 to 25.6/1,000 for those aged 85 years and older

3W By 2020, reduce hospitalization rates for Maine adults with diabetes with CVD listed as the first cause from 30% in 2020 to 20%.

3X By 2020, reduce stroke hospitalization admission rates of Maine adults from:
- 13.7/10,000 in 2007 to 13.0/10,000 for those aged 35-64 years
- 75.7/10,000 in 2007 to 71.9/10,000 for those aged 65-74 years
- 152.5/10,000 in 2007 to 144.9/10,000 for those aged 75 years and older

Process Objectives

Disease management and control

3.1 By 2015, increase the number of reported supportive community and worksite (including school as a worksite) policies and environmental changes that improve the identification, control and quality of care of diabetes and cardiovascular disease from 0 in 2010 to 2.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
3.1.1	Increase the number of policy and environmental change strategies in *Healthy Maine Works* for employers to support the prevention and control of diabetes and cardiovascular disease.	Example: chronic disease peer support groups.	Short-Term: Ongoing	CVHP, HMPs, UNE-MHPRC; MLGWW	Worksite
3.1.2	Further develop and implement stroke identification, prevention and risk factor reduction initiatives among Maine *HeartSafe* Communities.	Work with partners to identify specific tools/ resources to implement feasible interventions to increase screening and treating according to national guidelines and integration of evidence-based protocols (i.e., diabetes: ADA; CVD: AHA, ASA and NHLBI).	Short-Term: Ongoing	Maine EMS, *HeartSafe* Designees, HMPs	Healthcare
3.1.3	Work with policy partners to research potential increase in reimbursement rates and/or linkage of referral to reimbursement for cardiovascular rehabilitation.	Identify similar models and present ROI information to stakeholders.	Short-Term: 2012	MCHC Policy Workgroup, AHA/ASA, Insurers	Healthcare

Also see strategies in Objectives 1.1 and 2.1

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.

3.2 By 2015, increase the number of reported supportive healthcare policies and environmental changes that improve the identification and control of diabetes and cardiovascular disease.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
3.2.1	Develop, implement and evaluate statewide EMS protocol and training for stroke recognition and treatment in the field, engaging all levels of providers and local hospitals to ensure a consistent and effective rollout.	Utilize evidence-based tools to develop protocol and curricula. Implement through existing EMS, hospitals and champion EMS medical directors.	Short-Term: Ongoing	State and Regional EMS Offices, Hospitals	Healthcare
3.2.2	Assist community and healthcare partners to screen for risk factors (e.g., tobacco use, physical inactivity, poor nutrition, obesity) and increase referrals for those with CVD or diabetes to increase secondary prevention of disease.	People with CVD and diabetes are not screened to guidelines for the secondary prevention of disease. These are missed opportunities to detect and treat risk factors and prevent recurrent events.	Short-Term: 2012	CVHP, DPCP, PTM, PANP	Community and Healthcare
3.2.3	Increase access to neurological consultation via telestroke networks for acute stroke diagnosis among Maine hospitals.	Integrate training, policies and protocols and data/ quality improvement (QI) interventions to ensure effective and sustainable hub and spoke networks are developed in each region.	Short-Term: Ongoing	Stroke Work-group, Hospital Leadership, Neuro Groups	Healthcare
3.2.4	Establish champions to increase referral rates among multiple-disciplinary providers involved in cardiovascular treatment and follow-up care—integrate referral into discharge protocol/ planning.	Work with existing partners to identify and communicate with appropriate audiences.	Intermediate-Term: 2013	Primary Care Providers, Cardiac Rehab Programs, Hospitals	Healthcare
Also see strategies in Objective 2.2					

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.

3.3 By 2015, increase the number of community, worksite (including school as a worksite) and healthcare educational programs aware of the risks of uncontrolled cardiovascular disease and diabetes and the importance of disease management from 136 (includes only community) in 2010 to 150.

Process Objectives

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
3.3.1	Provide resources and technical assistance to HMPs and other community organizations to implement community-based educational programs or promote existing evidence-based education resources to address *ABCS*.	Communication and mass media campaigns, adult education, lay health initiatives such as National Diabetes Education Program's *ABCS* and *Small Steps, Big Rewards* Campaigns, *PTM HelpLine, HeartSafe, In a Heartbeat,* CVHP *Stroke* Campaign.	Short-Term: Ongoing	Maine CDC Programs (DPCP, PTM, HMP), Diabetes Educators	Community
3.3.2	Provide resources and technical assistance to healthcare organizations to implement healthcare-based educational programs to address *ABCS*.	Adult education, lay health initiatives, lunch and learns, grand rounds, collaborative learning sessions.	Short-Term: Ongoing	Maine EMS, *HeartSafe* Designees, HMPs	Healthcare
3.3.3	Promote provider adherence to current guidelines regarding the use of aspirin therapy for the secondary prevention of cardiovascular disease.	Use of aspirin (75-150 mg/day) to prevent myocardial infarction and stroke in people who have already experienced such an event or who have a high risk of an event such as symptomatic coronary heart disease (e.g., angina) or have undergone revascularization Coronary Artery Bypass Surgery (CABG) or Percutaneous Transluminal Coronary Angioplasty (PTCA).	Short-Term: Ongoing	CVHP, MCHC, Consumers for Affordable Healthcare (CAHC), Healthcare Systems and Quality Improvement Initiatives (QC, AF4Q, MHMC, PCMH), MPCA	Healthcare

Also see strategies in Objectives 2.1 and 2.3

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.					
3.4 By 2015, increase the percent of adults with diabetes who have taken a Diabetes Management Course from 61% in 2010 to 80%.					
Objective	**Strategy**	**Description**	**Time frame**	**Responsible Partner(s)**	**Setting**
3.4.1	Expand and promote the *Living Well* Chronic Disease Self-Management Program, which in turn promotes participation in Diabetes self-management courses for applicable individuals.	Maine Office of Elder Services received a grant to expand the *Living Well* CDSM Program and make it sustainable in the state. Observe the progress of the pilot for the online version of the *Living Well* Program. If successful, promote through partners and various media/ communication channels.	Short-Term: 2011	Maine CDC, HMPs, MOES, Healthcare Systems	Community

Goal 3 Partner Initiative Highlight

Maine HeartSafe Communities

Early recognition of the symptoms associated with sudden cardiac arrest, heart attack and stroke, immediate access to emergency services and prompt medical treatment are all crucial to prevent future events, save lives and reduce medical costs and disability.

The *Maine HeartSafe Communities* program is a collaborative initiative of the CVHP and state and regional Emergency Medical Services that promotes enhancements to each of the vital links in the cardiovascular "chain of survival":

1) early access to emergency care
2) early CPR
3) early defibrillation
4) early advanced care

HeartSafe designation recognizes a local EMS service's dedication to improving cardiovascular health and disease outcomes through achievement of program criteria. *Maine HeartSafe* designees go above and beyond to ensure that patients suffering cardiovascular events receive the most timely and effective care possible, and over the past five years, have emerged as leaders in statewide efforts to improve emergency response and outcomes associated with cardiovascular events and thereby increasing survival and improving quality of life for Maine people.

The CVHP and Maine EMS provide evidence-based educational resources and technical assistance to *HeartSafe* designees to carry out these important efforts.

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.

Emergency response

3.5 By 2015, increase the number of community, worksite (including school as a worksite) and healthcare educational programs aware of the signs and symptoms of heart attack and stroke, CPR and AEDs and the need to call 911 from 136 (includes only community numbers) in 2010 to 150.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
3.5.1	Continue to lead *In a Heartbeat* (IHB) AMI Community Engagement (ACE) efforts through the Maine Cardiovascular Health Council.	Develop innovative methods to further increase AMI recognition and use of EMS among Maine populations.	Short-Term: Ongoing	ACE Members, MCHC	Community, Healthcare
3.5.2	Continue to increase the reach and efficacy of statewide *In a Heartbeat* initiative.	a. Assist with establishment of sustainable system for Medical Direction review and feedback for 12-leads in the field, b. Assist regional EMS services with development of triage and communications plans that are based on current status of diagnosis and treatment capacity among receiving hospitals.	Short-Term: Ongoing	ACE and Partner Organi-zations	Community, Healthcare
3.5.3	Continue to support the IHB Heart Attack Response and Treatment (HART) workgroup and Maine EMS in achieving improved pre-hospital response and treatment outcomes for AMI.	a. Assist with establishment of sustainable system for Medical Direction review and feedback for 12-leads in the field, b. Assist regional EMS services with development of triage and communications plans that are based on current status of diagnosis and treatment capacity among receiving hospitals.	Short-Term: Ongoing	HART Members	Community, Healthcare
3.5.4	Develop and implement pre-hospital protocols/ pathways that promote evidence-based and expeditious care for SCA patients – this should also include statewide training of providers, and transport-planning, based on hospital resources.	Utilize existing models (AZ, NY and NC) to design clinical tools which promote evidence-based care.	Short-Term: 2011	Maine Cardiac Arrest Survivor Program (MCASP) Partners (EMS, Health Systems, Hospitals)	Healthcare
3.5.5	Promote use of standardized guidelines and established disease care models by emergency response personnel for diagnosis and management of heart disease and stroke.	Work with statewide emergency response leadership to identify and integrate evidence-based protocols, metrics and tools specific to cardiovascular events.	Intermediate-Term: 2013	Maine and Regional Offices of EMS, AHA/ASA, Hospitals	Healthcare

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.

3.6 By 2015, increase the number of supportive community, worksite and healthcare policies and environmental changes that improve emergency response to cardiovascular events.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
3.6.1	Promote and distribute educational materials to communities on the signs and symptoms of heart attack and stroke and the need to call 911.	Work with community partners to promote and distribute educational materials. Ongoing efforts with specific promotions focused around relevant National Health Observances (NHO).	Short-Term: Ongoing	MCD, HMPs, MaineCare, Maine Association of Retirees, Regional AARP, AHA, Tribal Health Programs	Community
3.6.2	Increase the number of educational strategies for employers in *Healthy Maine Works* to support employees in knowing the signs and symptoms of heart attack and stroke and calling 911 in the event of a heart attack or stroke.	Examples: Posting information on the signs and symptoms of heart attack and stroke.	Short-Term: Ongoing	CVHP, HMPs, UNE-MHPRC; MLGWW	Worksite
3.6.3	Develop and deliver education/communication for primary stakeholder audiences, to promote statewide support of SCA systems of care, and increased training and utilization of CPR/AED.	General public, healthcare administration, healthcare providers.	Short-Term: Ongoing	MCASP Partners (EMS, Health Systems, Hospitals)	Healthcare
3.6.4	Utilize national models to identify core sets of sudden cardiac arrest metrics to be collected and analyzed by EMS and hospitals.	Research various models available — prioritize and promote the model which is most useful and feasible to implement among Maine hospitals.	Short-Term: 2011	MCASP Partners (EMS, Hospitals, AHA)	Healthcare
3.6.5	Work with Maine's primary care providers and pharmacy professionals to implement the integrated approach for management of high blood pressure program.	Improved management of high blood pressure through an integrated clinician-pharmacist care team approach. Assist healthcare providers and pharmacists to work as partners with their patients in a collaborative care process.	Intermediate-Term: 2013	MCD, MCHC	Healthcare

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.					
Quality of care					
3.7 By 2015, increase the number of quality improvement initiatives implemented by healthcare systems to increase adherence to diabetes and cardiovascular disease and treatment guidelines (including medication management).					
3.7.1	Design and implement patient-centered stroke treatment and discharge plans.	Work with statewide stroke partners to develop and integrate electronic and/or paper tools which prompt clinicians to identify and address patient-specific treatment and discharge issues and goals.	Intermediate-Term: 2013	Stroke Work-group, Hospitals	Healthcare
3.7.2	Develop a tiered system of sudden cardiac arrest diagnosis and treatment among Maine hospitals to include stabilization, therapeutic hypothermia and Percutaneous Coronary Intervention (PCI), based on national recommendations/ guidelines.	Utilize existing models (AZ, NY and NC) to design clinical tools which promote evidence-based care.	Intermediate-Term: 2014	MCASP Partners (EMS, Health Systems, Hospitals)	Healthcare

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.

3.8 By 2015, increase supports to promote evidence-based sub-acute care and rehabilitation to decrease recurrence of cardiovascular events, morbidity and mortality.

Objective	Strategy	Description	Time Frame	Responsible Partner(s)	Setting
3.8.1	Research, develop and pilot an alternative cardiac rehab program for those who could not otherwise access these services, especially those experiencing health disparities—for example, telehealth cardiac rehab for low-income/rural populations.	Work with hospital stroke teams to identify priority patients (those who fall out of traditional stroke rehab protocol, yet have risk factors for recurrence). Work with statewide telehealth partners to determine need, feasibility, reimbursement, credentialing, etc.	Intermediate-Term: 2014	Maine Telehealth Work-group, Cardiac Rehab Programs, Hospitals	Healthcare
3.8.2	Establish champions to increase referral rates among multiple-disciplinary providers involved in cardiovascular treatment and follow-up care.	Work with existing partners to identify and communicate with appropriate audiences.	Short-Term: 2011	Primary Care Providers, Cardiac Rehab Programs, Hospitals	Healthcare
3.8.3	Develop and implement guidelines-based protocols/ pathways for the sub-acute setting, which promote high quality of care, and decreased morbidity and mortality associated with sudden cardiac arrest.	Utilize existing models (AZ, NY and NC) to design clinical tools which promote evidence-based care.	Intermediate-Term: 2014	MCASP Partners (EMS, Health Systems, Hospitals)	Healthcare
Several strategies in Goals One and Two also apply to Goal Three, but are not listed in Goal Three.					

Goal 3 Partner Initiative Highlights

In a Heartbeat – AMI Community Engagement

The collective goal of the *In a Heartbeat* (IHB) initiative is to strengthen Maine's system of care for acute myocardial infarction (AMI), helping to ensure rapid and effective recognition, response, diagnosis and treatment for all Maine people, regardless of geographic location. Initiated by the Maine Quality Forum in 2006, this collaborative effort is supported by statewide health systems, hospitals, emergency medical services and providers, as well as the CVHP, the American Heart Association and other partners.

AMI Community Engagement (ACE) is the community engagement component of the *In a Heartbeat* initiative, and is focused on dissemination of consistent, evidence-based messaging to increase heart attack symptom recognition, and immediate access of 911 among Maine residents. Eastern Maine Medical Center, Central Maine Medical Center and Maine Medical Center provided funding and leadership, with the CVHP and American Heart Association, to develop and pilot training materials and educational resources. Statewide trainings were added when the pilots proved to increase participant knowledge specific to heart attack recognition and intent to use 911.

There are now 138 trainers delivering heart attack education and resources statewide. Collectively, they have conducted over 158 community presentations and 24 train-the-trainers, disseminated over 45,000 IHB/ACE resources, reaching approximately 2,000 people in 50 different towns and 12 counties. The proportion of Maine adults who correctly identified the signs of heart attack and a decoy question and the need to call 911 increased significantly from 10.2 in 2001 to 12.3 in 2005 to 15.1 in 2009.

Stroke Care in Maine

Stroke Care in Maine is a workgroup of statewide partners enhancing stroke systems of care: stroke prevention, symptom recognition/call 911, pre-hospital response and treatment, acute diagnosis and treatment, sub-acute treatment, rehabilitation and continuous quality improvement.

Coordinated by the CVHP, this group consists of physicians, nurses, administrators/project managers, EMS personnel, statisticians and epidemiologists from around the state representing hospitals, rehabilitation centers, emergency medical services, healthcare organizations, physician organizations and the American Stroke Association.

The Stroke Care in Maine workgroup has led efforts to improve the statewide stroke system of care:

- Conducted a statewide stroke conference in 2007
- Conducted a stroke diagnosis and capacity survey among acute care hospitals to identify existing resources and challenges with stroke diagnosis and treatment

- Assisted the CVHP with an analysis of Maine's All-Payer Claims Database to 1) determine if claims data could serve as a measure of stroke care in Maine, and 2) utilize the data as a baseline measure of the quality of stroke care, identify gaps and plan future efforts accordingly
- Collaborated with the CVHP to conduct a telestroke training on building statewide telestroke networks to ensure access to around-the-clock, evidence-based stroke diagnosis and treatment, regardless of location

Diabetes Self-Management Training/ Ambulatory Diabetes Education and Follow-up (DSMT/ADEF) Programs

In 1977, the Maine CDC Diabetes Control Program (or DCP, as it was then called) was one of six state-funded diabetes programs by the CDC. The program began with a focus on developing a quality diabetes self-management education program. From 1977 through 1982, the DCP and educators throughout the state worked on and improved the ADEF program. In 1982, the ADEF program and its impact was featured in an article published by the CDC in the *Morbidity and Mortality Weekly Report* (MMWR). In 1986, L.D. 592 was passed, which is the law that mandates coverage for diabetes supplies and education through an ADEF program. In 2003, in an effort to turn the focus of the program toward disease prevention, the program name changed from CDC Diabetes Control Program (DCP) to CDC Diabetes Prevention and Control Program (DPCP).

ADEF/DSMT Program Goal:

The overall goal of the ADEF/DSMT Program is to assist persons with diabetes to acquire the knowledge, skills, attitudes and behaviors needed to achieve/maintain diabetes control, prevent/manage complications and live well with diabetes.

ADEF/DSMT State Certified Program:

There are 35 ADEF/DSMT Program Sites in Maine that offer the ADEF/DSMT Program in accordance with the Program components and site responsibilities outlined in the *ADEF/DSMT Program Manual*. ADEF/DSMT Programs must also achieve accreditation from the American Diabetes Association (ADA) Education Recognition Program or American Association of Diabetes Educators (AADE) Diabetes Education Accreditation Program (DEAP) or Indian Health Service (IHS) Integrated Diabetes Education Recognition Program.

The DPCP reviews site adherence to ADEF/DSMT Program requirements and provides technical assistance to ADEF/DSMT Programs to achieve and maintain ADEF/DSMT Program and ADA or AADE or IHS Education Recognition Program status.

The ADEF/DSMT Program and the ADA Education Recognition Program are based on the *National Standards for Diabetes Self-Management Education*. Guidelines for achieving ADEF/DSMT Program and ADA or AADE or IHS Education Recognition Program Status are the same.

The objectives of the ADEF/DSMT Program are to:

- Assess each person referred to the ADEF/DSMT Program thoroughly and design an individualized education and follow-up plan which includes learner outcomes and behavioral goals.
- Provide appropriate instruction and counseling to develop self-management skills.
- Achieve/maintain blood glucose control, prevent/manage complications and live well with diabetes.
- Continually evaluate the effectiveness of the ADEF/DSMT Program to achieve desired participant outcomes.

Quality Counts & Diabetes Pathway

Aligning Forces for Quality (AF4Q) is the Robert Wood Johnson Foundation's (RWJF) signature effort to lift the overall quality of healthcare in targeted communities, reduce racial and ethnic disparities and provide models for national reform.

Although healthcare quality is a national problem, healthcare is delivered locally and fixing it requires local action. As one of 17 *Aligning Forces* communities across the United States, Maine has brought together a team of stakeholders representing the people who get care, give care and pay for care, working to rebuild healthcare systems so they work better for everyone involved.

Quality Counts serves as the lead organization for the Maine AF4Q effort, in partnership with the Maine Health Management Coalition and the Maine Quality Forum. The Maine AF4Q initiative places a special focus on improving the key relationship between primary care providers and patients/families, supported by the communities in which they live and work. The initiative aims to increase awareness of quality; increase the availability, use and understanding of information on healthcare quality and support the roles of both consumers and providers in achieving patient-centered care.

Through the Maine AF4Q effort, diabetes was identified as a priority area for action. In partnership with the Maine CDC Diabetes Prevention and Control Program and the Maine Association of Diabetes Educators, Quality Counts developed the *Maine Diabetes Pathway* as a statewide communication and education tool for people with diabetes. It is part of the larger state effort to improve diabetes care, and was created to provide a common messaging tool that can be used across

healthcare and community settings to promote consistent, action-oriented messaging for patients with diabetes across the state of Maine to achieve the following:

1. Support people with diabetes by helping to build confidence and self-management skills.
2. Support adherence to evidence-based (ADA) treatment guidelines.
3. Encourage patients with diabetes to partner with their care team to achieve best results.

Living Well – Chronic Disease Self-Management

The Chronic Disease Self-Management Program, or *Living Well*, is a workshop given two and a half hours, once a week, for six weeks, in community settings such as senior centers, churches, libraries and hospitals. People with different chronic health problems attend together. Subjects covered include techniques to deal with problems such as frustration, fatigue, pain and isolation; appropriate exercise for maintaining and improving strength, flexibility and endurance; appropriate use of medications; communicating effectively with family, friends and health professionals; nutrition; and, how to evaluate new treatments. Program participants demonstrate significant improvements in exercise, cognitive symptom management, communication with physicians, self-reported general health, health distress, fatigue, disability and social/role activities limitations.

Living Well for Better Health is a six-session workshop that helps people to take control of their health and feel better. This workshop is for people with any ongoing health condition, such as: arthritis, cancer, depression, diabetes, fibromyalgia, heart disease or Parkinson's.

Participants learn how to:

- Deal with pain and feeling tired
- Talk with your doctor
- Set goals and make changes
- Eat healthy and exercise
- Manage your medicine

"Room to Grow" strategies are worthwhile efforts that currently lack available resources and/or political will; however, these strategies are included in the *Plan* and await appropriate resources and timing.					
Relevant Objective	**Strategy**	**Description**	**Time Frame**	**Responsible Partner(s)**	**Setting**
2.1	Advocate for licensing changes to allow for blood glucose screening in community settings.	Investigate progress toward community blood glucose screening licensing. Work toward making this an allowable community screening.	Room to Grow	DHHS-Licensing and Regulatory Services	Community, Healthcare
2.2	Examine literature to determine if point of care test for lipids is a quality concern for accurate diagnosis and management of high cholesterol in clinical practice setting.	Using models and guidelines established by the National Heart, Lung, and Blood Institute of the National Institutes of Health and the National Cholesterol Education Program (NCEP), develop training workshops to help health professionals initiate, update, expand or enhance training for cholesterol screening. These trainings will impact the effects on participants' knowledge and competency on cholesterol testing and diagnosis.	Room to Grow	MCHC and MCVHP	Healthcare
2.3	Spread BP detection and management trainings to OB/GYN offices.	BP Back to Basics for OB/GYN audience is good starting point for CVH quality improvement.	Room to Grow	MCHC and MCVHP	Healthcare
2.3	Examine pediatric hypertension issues and help spread new pediatric hypertension guidelines to clinicians.	New guidelines were available in fall of 2010. There is a new scale available to more easily identify hypertensive pediatrics.	Room to Grow	Maine-Health	Healthcare
3.8	Educate the public on the benefits of cardiovascular rehabilitation and how to access those programs through insurance.	Work with partners to develop and disseminate consistent messaging which promotes use of cardiac rehab among target populations.	Room to Grow	Cardiac Rehab Programs, Hospitals, HMPs	Healthcare

Evaluation Plan

The Maine Cardiovascular Health and Diabetes Strategic Plan 2011-2020 identifies a set of goals and objectives, and promising strategies to achieve these objectives. Progress in meeting many objectives can be measured using established health indicators and existing data collection sources. It will be important for stakeholders taking action in these areas to identify, early on, indicators for monitoring and reporting success.

For the purpose of this planning process, goal, objective and strategy were defined:

Goal: A statement of a long-term expected outcome.

Objective: A shorter-term measurable change that, when accomplished, will help in reaching the goal.

Strategy: A relatively broad approach to achieving an objective.

A logic model was developed for the *Plan* (Appendix F). A logic model is a tool for graphically representing the relationships between strategies or activities and intended effects. A logic model needs to be revised periodically to reflect new evidence, lessons learned and changes in context, resources, activities and expectations. The logic model found in the *Plan* includes inputs and activities that are needed for successful *Plan* implementation and expected short-, intermediate-, and long-term outcomes.

The purpose of the *Plan* evaluation will be to assess progress and provide partners with a means to make decisions regarding *Plan* implementation, assist partners in implementing *Plan* strategies and ultimately achieve *Plan* objectives and goals.

The evaluation includes a process evaluation that focuses on the quality and implementation of the *Plan*. The process evaluation is built on an outcome evaluation that assesses the achievement of expected outcomes. Failure to complete a process evaluation in conjunction with an outcome evaluation makes it difficult to determine whether failure to achieve desired outcomes is due to the fact that *Plan* strategies were ineffective in bringing about the desired effect or due to ineffective or incomplete implementation. Although the *Plan* evaluation includes both process and outcome evaluation, given the broad nature of statewide strategic plans, this evaluation focuses more on process and capturing the quality and estimating the quantity of strategies implemented. The outcome evaluation will be coordinated with epidemiologic and surveillance efforts to assess progress toward short- and long-term objectives.

Mixed methods, qualitative and quantitative, will be used to provide a comprehensive evaluation. Qualitative methods focus on process evaluation; key informant interviews conducted with staff and partners and program reports will be the data sources. Quantitative methods focus on process and outcome evaluation. Partner surveys, statewide chronic disease prevention and control initiative databases (such as *Healthy Maine Works* and Healthy Maine Partnerships), and standard secondary data sources (such as Behavioral Risk Factor Surveillance System (BRFSS), hospitalization and mortality data) will be the data sources. Data collection and analysis will be conducted during the mid-course review in 2015.

Partners involved with implementation will share the task and responsibility of collecting and reporting data to verify the processes and outcomes of strategies and objectives. It is expected that adequate resources will not be available to evaluate every strategy or objective of the *Plan*. Prior to the midcourse review in 2015, partner input will be solicited to help prioritize evaluation efforts. Table 9 lists process and outcome indicators that may be used to evaluate the *Plan*.

Targets for 2020 were set by analyzing trends for the past five years and estimating a reasonable change. In some cases, targets will be determined by chronic disease partners working on the same or similar objectives that are currently undertaking statewide strategic planning processes in other health areas (tobacco, physical activity, etc.). Some objectives are related to making systems or environmental changes. Indicators for measuring success have been identified, but data have not yet been analyzed (e.g., *Healthy Maine Works* and Healthy Maine Partnerships) or baseline data is not yet available for some indicators.

Table 9: Process and outcome indicators by goal

GOAL 1: Promote healthy lifestyles to prevent risk factors for pre-diabetes, diabetes and heart disease and stroke.			
Indicator	**Baseline (Year)**	**Target (Year)**	**Data Sources**
Outcome			
For prevention outcome objectives, please see state plans for Maine CDC programs of Partnership For A Tobacco-Free Maine; Physical Activity, Nutrition and Healthy Weight Program; and Oral Health Program			
Process			
Number of reported supportive community and worksite (including school as a worksite) policies and environmental change strategies that prevent risk factors	675 (2010)	740 (2015)	Healthy Maine Partnerships data base (KIT), *Healthy Maine Works* database (HMW)

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and heart disease and stroke.			
Indicator	**Baseline (Year)**	**Target (Year)**	**Data Sources**
Outcome			
Proportion of adults who have ever been told their blood pressure is high	30.0% (2009)	28.0% (2020)	BRFSS
Proportion of adults who have high blood pressure and are following their provider's advice by taking action to control high blood pressure:			BRFSS
Taking prescribed meds	58.9%	62%	
Exercising more	76.9%	80%	
Cutting down on salt	65.5%	70%	
Controlling or losing weight	61.4%	65%	
Cutting down on alcohol	43.4%	46%	
(CDC HDSP Indictor 1.2.6)	(2007)	(2020)	
Proportion of adults with high blood pressure that have it under control (<140/90 mm/Hg). (CDC HDSP indicator 1.7.1)	Unknown (UK)	TBD	TBD
Proportion of adults in Maine who have had their blood cholesterol checked within the preceding five years (HM 2010; 12-15)	80.2% (2008)	85% (2020)	BRFSS
Proportion of adults who have ever been told their blood cholesterol is high	38.8% (2009)	37% (2020)	BRFSS
Proportion of adults with high blood cholesterol who are following their provider's advice by taking actions to control high blood cholesterol:			BRFSS
Eating fewer high-fat, high-cholesterol foods	81.7%	90%	
Increasing physical activity	68.4%	75%	
Taking prescribed medication	64.2%	70%	
Controlling or losing weight	55.0%	60%	
(CDC indictor 1.2.6)	(2008)	(2020)	

GOAL 2: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and heart disease and stroke.			
Indicator	**Baseline (Year)**	**Target (Year)**	**Data Sources**
Outcome			
Proportion of adults with high blood cholesterol that have it under control (LDL-C test <100 mg/dL).	UK	TBD	TBD
Hypertension admission rate	21.3/100,000 (2007)	19.2/100,000 (2020)	Maine CDC/ DHHS
Process			
Number of reported supportive community, healthcare and worksite (including school as a worksite) policies and environmental change strategies that improve the identification and control of risk factors for cardiovascular disease and diabetes	67 (2010)	75 (2015)	HMW, KIT, partner survey, mid-course review
Number of quality improvement initiatives implemented by healthcare systems to increase adherence to blood pressure and cholesterol measurement and treatment guidelines including DASH diet (Dietary Approaches to Stop Hypertension http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf) and medication management	5 of 6 healthcare systems, 92 of 416 primary care practice sites (26%) (2010)	6 of 6 healthcare systems, 200 of 416 primary care practice sites (~48%) (2015)	BPMT

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.			
Indicator	**Baseline (Year)**	**Target (Year)**	**Data Sources**
Outcome			
Proportion of adults with diabetes	8.3% (2009)	7.5% (2020)	BRFSS
Proportion of adults with diabetes reporting high blood pressure	69.8% (2007)	65% (2020)	BRFSS
Proportion of adults with diabetes reporting high cholesterol	69.4% (2007)	65% (2020)	BRFSS
Proportion of adults with diabetes having ≥ A1c test per year (HM 2010; 5-12)	92.9% (2008)	98% (2020)	BRFSS
Proportion of adults with diabetes who check feet for sores at least daily	63.0% (2005-2007)	73% (2020)	BRFSS
Proportion of adults with diabetes who have an annual eye exam (HM 2010; 5-13)	72.0% (2007)	82% (2020)	BRFSS
Proportion of adults with CVD with high blood pressure that have it under control (<140/90 mm/Hg)	74.2% (2008)	77.9% (2020)	*Pathways to Excellence,* MHMC

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.			
Indicator	**Baseline (Year)**	**Target (Year)**	**Data Sources**
Outcome			
Proportion of adults with diabetes with high blood pressure that have it under control (<130/80mm/Hg)	44.9% (2008)	47.1% (2020)	*Pathways to Excellence*, MHMC
Proportion of adults with diabetes and periodontal disease who have four periodontal exams per year.	UK	TBD	TBD
Emergency response			
Proportion of adults aged 18 years and older who understand the need to call 911 in the event of a heart attack or a stroke	88.3% (2009)	95% (2020)	BRFSS
Proportion of adults aged 18 years and older who correctly identify five heart attack signs/symptoms plus decoy and the need to call 911	15.1% (2009)	20% (2020)	BRFSS
Proportion of adults aged 18 years and older who are aware of the early warning signs of a stroke and the need to call 911	20.8% (2009)	25% (2020)	BRFSS
Proportion of pre-transport deaths attributable to heart disease	55.2% (2007)	51.3% (2020)	Maine CDC
Proportion of pre-transport deaths attributable to stroke	53.5% (2007)	50.0% (2020)	Maine CDC
Quality of care			
Diabetes hospitalizations (age-adjusted)	11.8/10,000 (2008)	10.6/10,000 (2020)	Maine State Profile of Selected Public Health Indicators (MSPSPHI)
Diabetes short-term complication hospital admission rate	40.8/100,000 (2007)	36.7/100,000 (2020)	MSPSPHI
Diabetes long-term complication hospital admission rate	90.1/100,000 (2007)	81.1/100,000 (2020)	MSPSPHI
Angina without procedure hospitalization admission rate	44.7/100,000 (2007)	40.2/100,000 (2020)	MSPSPHI
Uncontrolled diabetes hospital admission rate	7.2/100,000 (2007)	6.5/100,000 (2020)	MSPSPHI
Lower-extremity amputation among patients with diabetes hospital admissions rate	28.0/100,000 (2007)	25.2/100,000 (2020)	MSPSPHI
Acute myocardial infarction hospitalization admission rates of Maine adults Aged 35-64 years Aged 65-74 years Aged 75 years and older	29.8/10,000 98.8/10,000 183.2/10,000 (2007)	26.2/10,000 79.0/10,000 153.9/10,000 (2020)	Maine CDC
Congestive heart failure hospitalization admission rates of Maine adults Aged 65-74 years Aged 75-84 years Aged 85 years and older (HM 2010; 12-6)	6.4/1,000 15.3/1,000 26.9/1,000 (2007)	6.1/1,000 14.5/1,000 25.6/10,000 (2020)	MSPSPHI

GOAL 3: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease.			
Indicator	**Baseline (Year)**	**Target (Year)**	**Data Sources**
Outcome			
Stroke hospitalization admission rates of Maine adults Aged 35-64 years Aged 65-74 years Aged 75 years and older (HM 2010; 12-7)	 13.7/10,000 75.7/10,000 152.5/10,000 (2007)	 13.0/10,000 71.9/10,000 144.9/10,000 (2020)	Maine CDC
Process			
Number of reported supportive community, healthcare and worksite policies and environmental changes that improve the identification, control and quality of care of diabetes and cardiovascular disease	UK	TBD	HMW, KIT, MPIN, Midcourse Review, Partner Survey
Proportion of adults with diabetes who have taken a Diabetes Management Course (HM 2010, 5-1)	60.5% (2010)	80% (2020)	BRFSS, MSPSPHI
Number of supportive community, healthcare and work-site policies and environmental change strategies that improve emergency response to cardiovascular events	UK	TBD	HMW, KIT, MPIN, Midcourse Review, Partner Survey
Number of quality improvement initiatives implemented by healthcare systems to increase adherence to diabetes and cardiovascular disease and treatment guidelines	UK	TBD	Maine Practice Improvement-Network (MPIN), Mid-course Review, Partner Survey
Hospital and primary care practice adherence to national guidelines for diagnosing and treating cardiovascular disease	UK	TBD	*Pathways to Excellence,* MHMC

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Appendices

A: List of Strategic Planning Participants

B: Definition of Terms

C: Burden Data Figures

D: Maine Diabetes Health System Strategic Plan, 2005-2009: Summary of Progress

E: Heart Healthy and Stroke Free in Maine, 2006-2010: Summary of Progress

F: Logic Model for Cardiovascular Health and Diabetes Strategic Plan

G: Partner Profiles

Appendix A: List of Strategic Planning Participants

Community Workgroup

NAME	ORGANIZATION
Valoree Berlan	Office of MaineCare Services
Nicole Breton	Maine CDC, Oral Health Program
Ann Clark	MaineHealth's Partnership for Healthy Aging
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Denise Delorie	Central Public Health District
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Nicole Ditata	Healthy Community Coalition
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Dona Forke	Maine Dietetic Association
Carol Freshley	MidCoast Hospital
Mary Ellen Grade	Merck
Margaret Gradie	Maine CDC, Oral Health Program
Lucinda Hale	Maine CDC, Diabetes Prevention and Control Program
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Holly Richards	Maine CDC, Cardiovascular Health Program
Annabelle Suarez	Merck
Patricia Watson	Stephens Memorial Hospital
Albert Whitaker	American Diabetes Association

Worksite Workgroup

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Dorean Maines	Maine CDC, Partnership For A Tobacco-Free Maine
Michelle Mitchell	Partnership for Health
Karen O'Rourke	University of New England, Center for Community Public Health
Kyra Rodriguez	University of New England, Center for Community Public Health
Ted Rooney	Maine Health Management Coalition

Appendix B: Definition of Terms

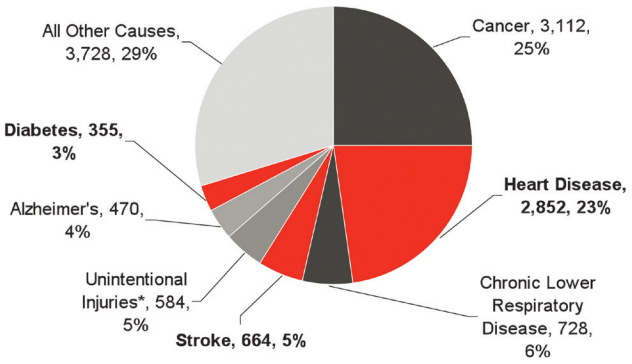
ACE	AMI Community Engagement
ADA	American Diabetes Association
ADEF	Ambulatory Diabetes Education and Follow-Up Program
AED	Automated External Defibrillator
AF4Q	*Aligning Forces for Quality*
AHA	American Heart Association
AMI	Acute Myocardial Infarction
ASA	American Stroke Association
BP	Blood Pressure
BPMT	*Blood Pressure Master Trainer*
BRFSS	Behavioral Risk Factor Surveillance System
CCPH	Center for Community and Public Health (University of New England)
CDSM	Chronic Disease Self-Management Program
CHF	Congestive Heart Failure
CPR	Cardiopulmonary Resuscitation
CVA	Cerebral Vascular Accident (aka stroke)
CVD	Cardiovascular Disease
CVH	Cardiovascular Health
CVHP	Maine CDC Cardiovascular Health Program
DASH	Dietary Approaches to Stop Hypertension
DHHS	Maine Department of Health and Human Services
DPCP	Maine CDC Diabetes Prevention and Control Program
DSME	Diabetes Self-Management Education
DSMT	Diabetes Self-Management Training
ED	Emergency Department
EMR	Electronic Medical Record
EMS	Emergency Medical Services
HART	Heart Attack Response and Treatment
HIT	Health Information Technology
HMP	Healthy Maine Partnership
HMW	*Healthy Maine Works*
IHB	*In a Heartbeat*
IHI	Institute of Healthcare Improvement
JNC-7	*The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure*

KIT	Knowledge-based Information Technology
MAHU	Maine Association of Health Underwriters
MDA	Maine Dietetic Association
MCASP	Maine Cardiac Arrest Survivor Program
MCHC	Maine Cardiovascular Health Council
MCD	Medical Care Development
MeADE	Maine Chapter of the Association of Diabetes Educators
MEMS	Maine Emergency Medical Services
MHMC	Maine Health Management Coalition
MLGWW	Maine Leadership Group on Worksite Wellness
MOES	Maine Office of Elder Services
MPCA	Maine Primary Care Association
MPIN	Maine Practice Improvement Network
NCEP-ATP III	*Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Final Report*
NDEP	National Diabetes Education Program
NECC	The Northeast Cerebrovascular Consortium
NHLBI	National Heart, Lung and Blood Institute
PAN-HW	Physical Activity, Nutrition and Healthy Weight Program
PCMH	*Patient-Centered Medical Home*
PTE	*Pathways to Excellence*
PTM	Partnership For A Tobacco-Free Maine
QC	Quality Counts
RWJF	Robert Wood Johnson Foundation
SCA	Sudden Cardiac Arrest
TDES	Telephonic Diabetes Education Support
TIA	Transient Ischemic Attack
UNE-MHPRC	University of New England/ Maine-Harvard Prevention Research Center

Appendix C: Burden Data Figures

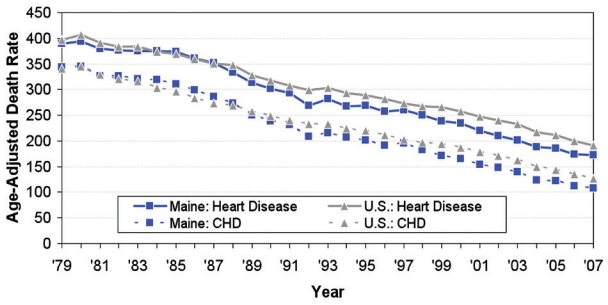
Figure 2. Leading causes of death in Maine, 2007

Heart Disease, Stroke, & Diabetes: 3,871 deaths, 31% of all deaths



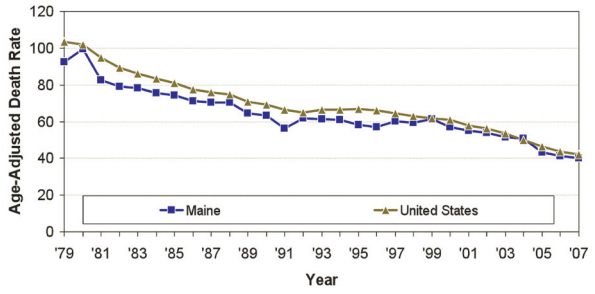
* Unintentional injuries other than motor-vehicle injuries.
Source: National Center for Health Statistics, "Deaths: Final Data for 2007"

Figure 3. Heart disease and coronary heart disease death rates, 1979-2007, Maine and U.S.



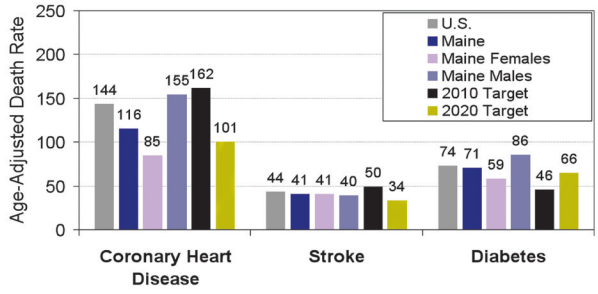
Heart Disease: 1999-2007: ICD-10 codes I00-I09, I11, I13, I20-I51; 1979-1998: ICD-9 codes 390-398, 402, 404, 410-429 multiplied by comparability ratio of 0.9858.
Coronary Heart Disease (CHD): 1999-2007: ICD-10 codes I20-I25; 1979-1998: ICD-9 codes 410-414, 429.2 multiplied by comparability ratio of 0.9990.
Rates per 100,000 population, age-adjusted to the 2000 U.S. standard population.
Data Source: Compressed Mortality File, CDC Wonder.

Figure 4. Stroke death rates, 1979-2007, Maine and the U.S.



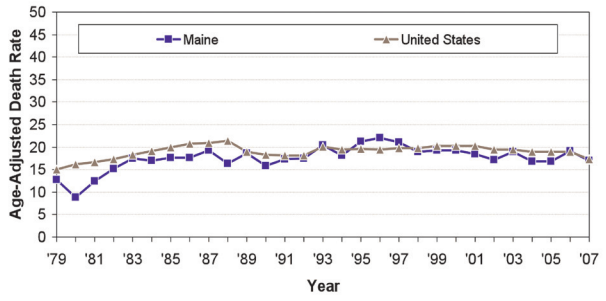
1999-2007: ICD-10 codes I60-I69; 1979-1998: ICD-9 codes 430-434,436-438 multiplied by comparability ratio of 1.0588. Rates per 100,000 population, age-adjusted to the 2000 U.S. standard population. Data Source: Compressed Mortality File, CDC Wonder.

Figure 5. Death rates by healthy people 2010 and 2020 targets, 2006



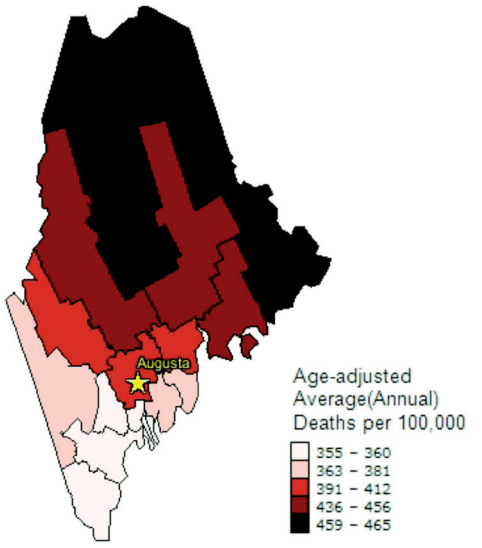
Healthy People 2010 Objective 12-1: Coronary Heart Disease, ICD-10 codes I11, I20-I25. Healthy People 2010 Objective 12-07: Stroke, ICD-10 codes I60-I69. Healthy People 2010 Objective 5-5: Diabetes, ICD-10 codes E10-E14, any listed cause. Rates per 100,000 population, age-adjusted to the 2000 U.S. standard population Data Source: DATA2010, CDC, NCHS.

Figure 6. Diabetes death rates, 1999-2006, Maine and U.S.



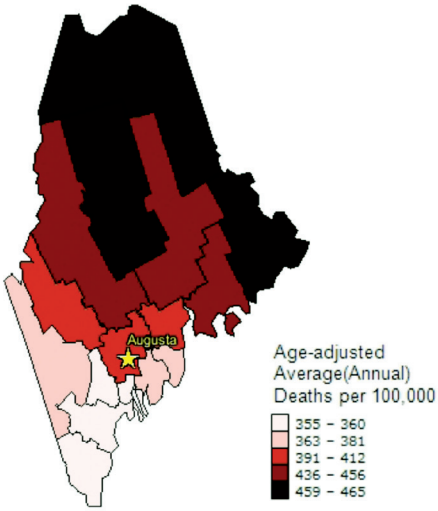
1999-2006: ICD-10 codes E10-E14, any listed cause.
Rates per 100,000 population, age-adjusted to the 2000 U.S. standard population.
Multiple cause Mortality File, CDC Wonder.

Figure 7. Heart failure death rates, 1979-2007, Maine and U.S.



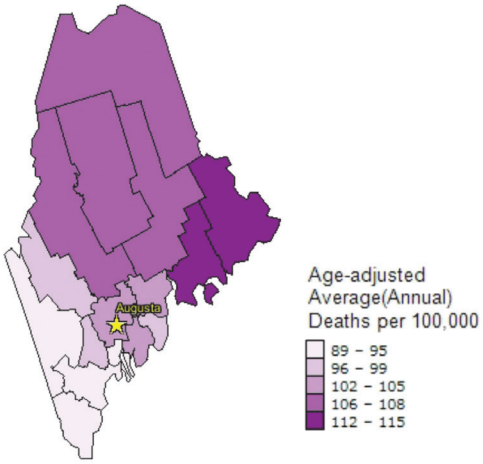
Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Figure 8. Heart disease death rates, Maine, 2000-2006, adults age 35+ years



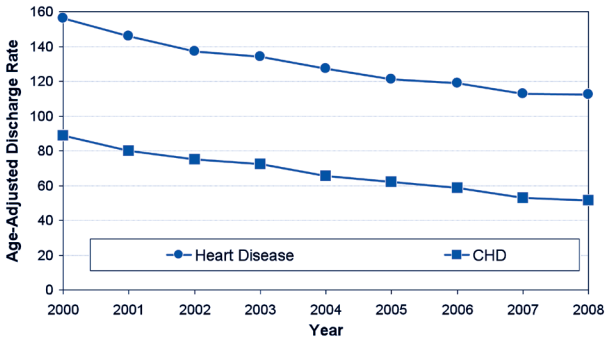
Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Figure 9. Stroke death rates, Maine, 2000-2006, adults age 35+ years



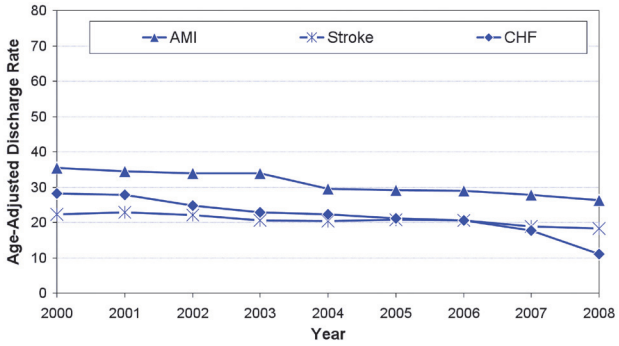
Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Figure 10. Hospital discharge rates for heart disease and coronary heart disease, Maine, 2000-2008



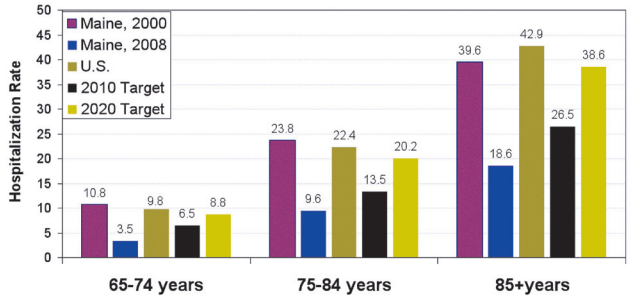
Discharge rates per 10,000 population age-adjusted to the U.S. 2000 standard population; principal diagnosis only. ICD-9-CM codes: Heart Disease 390-398, 402, 404, 410-416, 420-429; Coronary Heart Disease (CHD) 402, 410-414, 429.2. Data Source: Inpatient Data, Maine Health Data Organization.

Figure 11. Hospital discharge rates for acute MI, stroke, and congestive heart failure, Maine, 2000-2008



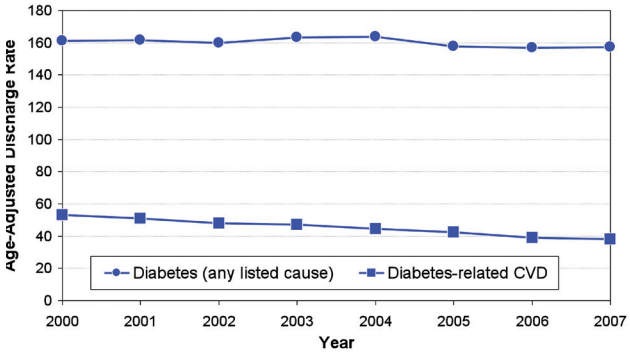
Discharge rates per 10,000 population age-adjusted to the U.S. 2000 standard population; principal diagnosis only. ICD-9-CM codes: Acute Myocardial Infarction (AMI): 410; Congestive Heart Failure (CHF) 428.0; Stroke 430-434, 436-438. Data Source: Inpatient Data, Maine Health Data Organization.

Figure 12. Congestive heart failure hospitalization rates and healthy people 2010 and 2020 targets



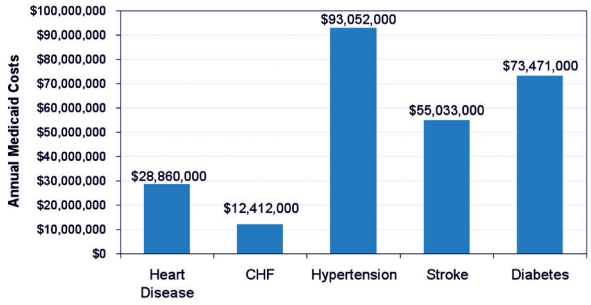
Congestive Heart Failure: ICD-9-CM codes 428.0; principal diagnosis. Age-specific rates per 1,000 population. Maine data source: Inpatient Data, Maine Health Data Organization. U.S. data source: 2007 data, Healthy People 2020 Baseline, CDC, NCHS.

Figure 13. Diabetes-related hospital discharge rates, Maine, 2000-2007



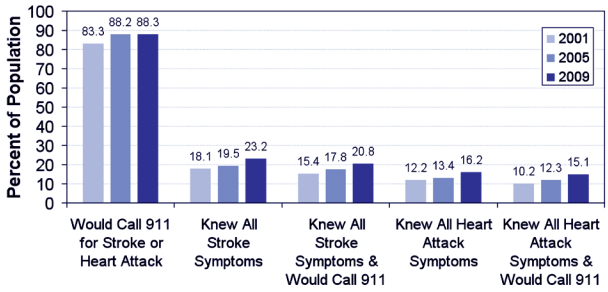
Discharge rates per 10,000 population age-adjusted to the U.S. 2000 standard population. CVD = Cardiovascular Disease. ICD-9-CM codes: Diabetes: 250 in any listed cause 1-10; Diabetes-related CVD: 390-448 as primary cause with 250 in any listed cause 2-10. Data Source: Inpatient Data, Maine Health Data Organization.

Figure 14. Annual medicaid costs due to cardiovascular diseases and diabetes, Maine, 2007



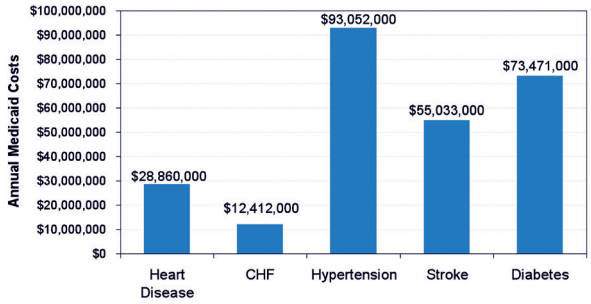
Source: Centers for Disease Control and Prevention. Chronic Disease Cost Calculator: Version 1.0.3225. Available at: http://www.cdc.gov/nccdphp/resources/calculator.htm. Costs are in 2007 dollars. CHF: Congestive Heart Failure.

Figure 15. Stroke and heart attack awareness, Maine adults, 2001-2009



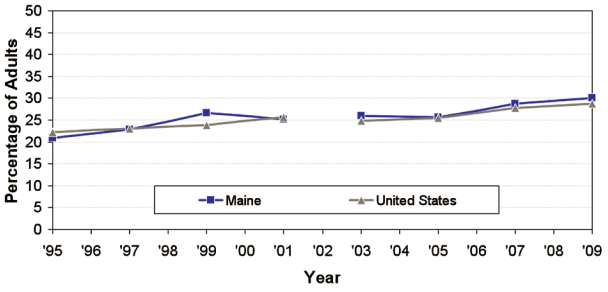
Data Source: Maine Behavioral Risk Factor Surveillance System. Adults = ages 18+ years.

Figure 16. Diabetes prevalence, 1995-2009



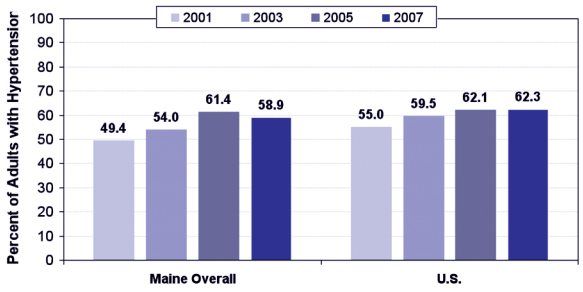
Data Source: Behavioral Risk Factor Surveillance System Data, Center for Disease Control & Prevention. Adults = ages 18+ years. The diabetes question was changed slightly in 2004. Use caution in comparing pre-2004 data to 2004 and later data.

Figure 17. Hypertension prevalence, 1995-2009



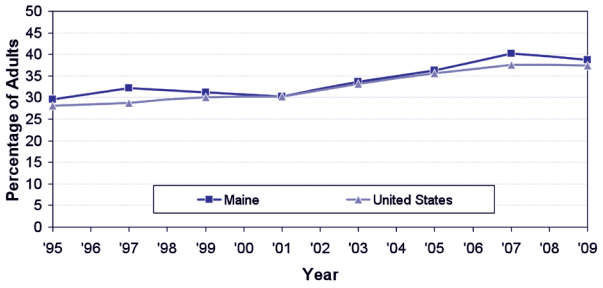
Data Source: Behavioral Risk Factor Surveillance System Data, Center for Disease Control & Prevention. 1990-2001 included women diagnosed with high blood pressure only while pregnant as hypertensive, while 2003 and later years data do not consider them to be hypertensive. Data not available for 1996, 1998, 2000, 2002, 2004, 2006, 2008.

Figure 18. Percentage of adults with diagnosed hypertension who are taking anti-hypertensive medication, 2001-2007



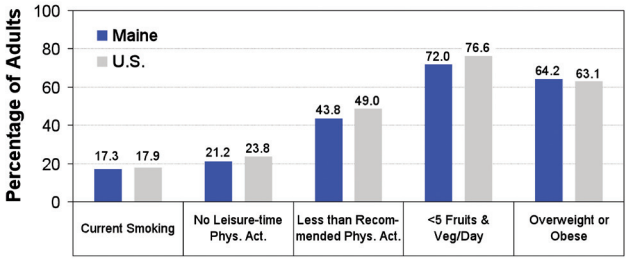
Data Source: N.C. Behavioral Risk Factor Surveillance System. Adults = ages 18+ years.
Data not available in 2002, 2004, 2006.

Figure 19. High cholesterol prevalence, 1995-2009



Data Source: Behavioral Risk Factor Surveillance System Data, Center for Disease Control & Prevention. Adults = ages 18+ years.
Data not available for 1996, 1998, 2000, 2002, 2004, 2006, 2008.

Figure 20. Prevalence of selected risk factors, Maine & U.S. adults, 2009



Phys. Act. = Physical Activity. Recommended Phys. Act.: 30+ minutes of moderate activity per day on 5+ days of the week, or 20+ minutes of vigorous activity per day on 3+ days of the week. Veg = Vegetables.
Data Source: Maine and National Behavioral Risk Factor Surveillance System Data. Adults = ages 18+ years

Appendix D: Maine Diabetes Health System Strategic Plan, 2005–2009: Summary of Progress

Policy and Finance

- 2005: The Mission of the MCHC was expanded to include diabetes
- 2005: Maine Chapter of Diabetes Educators (MeADE) was established
- 2006: Diabetes Advisory Council, a sub-committee of the MCHC, was established and meets quarterly
- 2008: Chronic Disease Partners of Maine was established
- 2008: Maine CDC Division of Chronic Disease began efforts to integrate work of the following programs: DPCP, CVHP, Asthma Program and Oral Health Program

Health Promotion and Prevention

- 2005: ADEF/DSMT programs and local Healthy Maine Partnerships collaborated in 11 communities to conduct the National Diabetes Education Program (NDEP) *Small Steps/Big Rewards* raising awareness about prevention of Type 2 diabetes
- 2007 – present: Several ADEF/DSMT Programs offered pre-diabetes classes
- 2009 – present: Stephens Memorial Hospital—Diabetes Education Department diabetes prevention pilot program used NDEP's *Small Steps, Big Rewards* and the *Power to Prevent* curriculum for Stephens Memorial Hospital employees and provider office staff
- 2005 – present: Promotion of MaineGeneral Community Health Program's *Move More* program
- 2005 – 2007: University of Maine Cooperative Extension developed and conducted the *Eating Matters* program, (basic skills in nutrition, cooking, shopping for individuals and families with diabetes and pre-diabetes) with the assistance of HMPs and ADEF/DSMT programs in Waldo and Oxford counties
- Annually: Indian Township Health Center & United Southern & Eastern Tribes have a Comprehensive Fitness Center available free of charge for tribal members daily
- 2007: Amistad, Inc., a peer support network for individuals with severe and persistent mental illness in Portland, received technical assistance from the DPCP, Partnership For A Tobacco Free Maine and the Office of Adult Mental Health in establishing its *Healthy Amistad Program* to support prevention and management of diabetes and other chronic conditions

Education

- Annually: Approximately 2,000 individuals referred to the ADEF/DSMT program at 35 ADEF/DSMT program sites statewide
- Annually: Three diabetes clinics held at Indian Township Health Center in Princeton
- Biannually: Updated Ambulatory Diabetes Education & Follow-Up (ADEF)/Diabetes Self-Management Training (DSMT) Program curriculum to be consistent with the current National Standards for Diabetes Self-Management Education
- 2004: A workgroup was formed with Maine Dept. of Education school nurse consultant and local school nurses and diabetes educators. Workgroup designed and administered survey to Maine school nurses about diabetes management in schools. Workgroup also produced and distributed, the *Maine Guideline for Schools – Tools for Schools who have Students with Diabetes*
- 2004 – 2006: MaineCare Program & DPCP designed and distributed "easy-to-read" brochures on nutrition, reducing your risk of CVD, foot care, blood glucose monitoring, smoking cessation and the importance of receiving a flu shot to 3,000 individuals and MaineCare Program members with diabetes
- 2005 – present: Cary Medical Center and community partners sponsor *Camp Adventure*, a diabetes camp for adolescents founded by Ann Gahagan, RN, FNP, CDE in 1997 and operates one week in June each year
- 2006: Telephonic Diabetes Education Support (TDES) Program developed and coordinated by Medical Care Development
- 2006 – present: DPCP Website provides education and resources for professionals and for people with diabetes
- 2006 – present: Offices of Elder Services and Partnership for Healthy Aging – *Healthy Choices* Program coordinated the Chronic Disease Self-Management Education Program (CDSMP) – *Living Well* (developed by Stanford University)
- 2006 – present: Office of Elder Services coordinates the following programs through the Healthy Choices Grant: *A Matter of Balance, Enhance Fitness, Enhance Wellness and Healthy IDEAS*
- 2007: MaineHealth TARGET Diabetes Resource Clinical Tools Ordering Website
- 2008 – present: HMPs and Maine CDC chronic disease programs plan and conduct Chronic Disease Care Model Inventory initiative to identify chronic disease supports or resources in the community and have them listed in 211 system. Individuals with chronic disease are encouraged to call 211 for help in finding resources

- 2008 - present: HMPs and Maine CDC chronic disease programs plan and conduct the *Healthy Maine Works* initiative to assist worksites to assess health and wellness needs and interests of employees and implement wellness strategies
- 2008: Maine Primary Care Association provided continuing education and technical assistance to federally qualified health centers on best practices in diabetes care

Data and Surveillance

- 2006: DSME Barrier Study designed and conducted by DPCP and partners
- 2007: *The Maine 2007 Diabetes Surveillance System Report* produced and distributed
- 2008: Maine Public Health Reports Website created

Care Delivery

- 2006 & 2007: A workgroup of interested parties met to review the Maine law regarding community blood glucose screening. Revisions to Maine law to allow for community blood glucose screenings if specific protocols and procedures are followed were generated to be taken to the Legislature for consideration
- 2007: The CVHP and DPCP produced guidelines for entities conducting community blood pressure, cholesterol and glucose screenings

Appendix E: Heart Healthy and Stroke-Free in Maine, 2006–2010: Summary of Progress

Table 10: Status Total for Priority Strategies: Heart Healthy and Stroke-Free in Maine, 2006–2010 (Includes strategies related to physical activity, nutrition, tobacco and diabetes)

Progress toward priority strategies				
Total Number of Priority Strategies	Number Planned/ No Action taken (percent)	Number In Process (percent)	Number Completed (percent)	Number Cancelled or Deferred (percent)
35	3 (9%)	13 (37%)	19 (54%)	0 (0%)

*Percents rounded so do not equal 100%

Table 11: Status total for all strategies: Heart Healthy and Stroke-Free in Maine, 2006–2010

Progress toward all strategies				
Total Number of Strategies	Number Planned/ No Action Taken (percent*)	Number In Process (percent)	Number Completed (percent)	Number Cancelled or Deferred (percent)
69	13 (19%)	22 (32%)	33 (47%)	1 (1%)

* Percents rounded so do not equal 100%.

Table 12: Complete monitoring results: Heart Healthy and Stroke-Free in Maine, 2006–2010

Strategy Number	Timeline*	Priority	Status**	Notes	Planned	In process	Complete	Cancelled/ Deferred
1.01.1	Intermediate	Yes	Complete				1	
1.01.2	Short-term	Yes	Complete				1	
1.01.3	Short-term	Yes	Complete				1	
1.01.4	Long-term	Yes	Complete				1	
1.02.1	Short-term		Complete				1	
1.02.2	Intermediate	Yes	Complete				1	
1.02.3	Long-term		In process			1		
1.03.1	Intermediate	Yes	Complete				1	
1.03.2	Long-term		Planned		1			
1.03.3	Intermediate		Complete				1	
1.03.4	Short-term	Yes	Complete				1	
1.03.5	Long-term		In process	***		1		
1.03.6	Long-term		Complete				1	
1.04.1	Intermediate	Yes	Complete				1	
1.04.2	Intermediate		Complete				1	
2.01-10.1	Short-term	Yes	Complete				1	
2.01-10.2	Intermediate		In process			1		
2.01-10.3	Short-term	Yes	Complete				1	
2.01-10.4	Short-term		Complete				1	
3.01.1	Intermediate		In process			1		
3.01.2	Long-term		Planned		1			
3.01.3	Intermediate	Yes	Complete				1	
3.02-15.1	Long-term	Yes	Complete				1	
3.02-15.10	Intermediate	Yes	In process			1		

Table 12: Complete monitoring results: Heart Healthy and Stroke-Free in Maine, 2006–2010 (continued)

Strategy Number	Timeline*	Priority	Status**	Notes	Planned	In process	Complete	Cancelled/ Deferred
3.02-15.11	Intermediate	Yes	Planned		1			
3.02-15.2	Long-term	Yes	Complete				1	
3.02-15.3	Intermediate	Yes	In process			1		
3.02-15.4	Intermediate	Yes	Complete				1	
3.02-15.5	Short-term	Yes	In process			1		
3.02-15.6	Long-term		Complete				1	
3.02-15.7	Intermediate		Planned		1			
3.02-15.8	Intermediate	Yes	Complete				1	
3.02-15.9	Long-term	Yes	In process			1		
3.14.1	Short-term		Complete				1	
3.14.2	Intermediate		Complete				1	
3.15-16.1	Short-term		Complete				1	
3.15-16.2	Short-term		Complete				1	
3.15-16.3	Short-term		Complete				1	
3.17.1	Intermediate		In process			1		
3.17.2	Intermediate	Yes	Complete				1	
3.17.3	Intermediate	Yes	In process			1		
3.17.4	Intermediate		Planned		1			
4.01-03.1	Intermediate	Yes	Complete				1	
4.01-03.2	Short-term		In process			1		
4.01-03.3	Intermediate	Yes	In process			1		
4.04-05.1	Intermediate	Yes	Complete				1	
4.04-05.2	Short-term		In process			1		
4.04-05.3	Short-term		Complete				1	

Table 12: Complete monitoring results: Heart Healthy and Stroke-Free in Maine, 2006–2010 (continued)

Strategy Number	Timeline*	Priority	Status**	Notes	Planned	In process	Complete	Cancelled/ Deferred
4.04-05.4	Long-term	Yes	Complete				1	
5.01.1	Intermediate	Yes	Complete				1	
5.01.2	Long-term	Yes	In process			1		
5.02-10.1	Intermediate		Complete				1	
5.02-10.2	Intermediate		Cancelled					1
5.02-10.3	Intermediate	Yes	In process			1		
5.02-10.4	Intermediate	Yes	In process			1		
5.02-10.5	Intermediate		In process			1		
5.02-10.6	Short-term	Yes	In process			1		
5.02-10.7	Intermediate		Planned		1			
5.02-10.8	Long-term		Planned		1			
6.1.1	Short-term	Yes	In process			1		
6.1.10	Intermediate		Planned		1			
6.1.2	Intermediate	Yes	In process			1		
6.1.3	Short-term		In process			1		
6.1.4	Intermediate		Planned		1			
6.1.5	Intermediate	Yes	In process			1		
6.1.6	Intermediate		Planned		1			
6.1.7	Long-term		Planned		1			
6.1.8	Long-term		Planned		1			
6.1.9	Intermediate	Yes	Planned		1			
Total	**69**	**35 (51%)**			**13 (19%)**	**22 (32%)**	**33 (47%)**	**1 (1%)**

* When a strategy spanned across two timelines (e.g., short-term to intermediate), the latter timeline was used (e.g., intermediate)
** Progress options are: Planned, In Process, Completed and Cancelled/Deferred
*** Was not coded so coded as Long-term

Highlights

Goal 1: Optimize Statewide Capacity to Improve Cardiovascular Health and Prevent and Control Cardiovascular Disease through:

1. **Collaborative efforts:** *State Health Plan*, Maine Quality Forum, Quality Counts, MCHC Annual CVH Summit, CVHP Annual Stakeholder Meeting.

2. **Technical assistance and professional development:** CVHP Partner Training Needs Assessment, training on Healthcare Insurance and Health Reimbursement Structure, MCHC Summit, quality control, MCHC Workshops on BP and cholesterol, Maine Practice Improvement Network (MPIN), *Master BP Trainer,* Systems education, MaineHealth, HMP trainings.

3. **Surveillance, research and evaluation:** MQF *In A HeartBeat*, MHMC/PTE, MQF Data Metrics Workgroups, CVHP and EMS—Stroke and EMS data.

4. **State and local policies and environmental changes:** MCHC Policy committee reconvened, policy brief given to all legislators (186), all CVH-related bills identified and tracked, completed and distributed legislative updates and completed and distributed summary of all new CVH related laws to CVH-interested parties list.

Goal 2: Prevent Development of Risk Factors

1. **Support of the PAN and PTM programs and strategic plans and other state partner efforts to prevent CVD risk factors.**

Goal 3: Identify and Control Risk Factors

High Blood Pressure

1. Develop and Disseminate Educational Resources:
   - Several Maine CDC, Division of Chronic Disease Programs (CVHP, DPCP, Cancer, etc.) and Office of Substance Abuse have databases of promising practices to address CD that is available to partners and HMPs.
   - A list of services continues to evolve and CVHP has an online ordering system for disseminating resources.
   - A community screening resource binder, which includes patient education materials that community screening sites can use, was developed.

2. Educate the public on CVH risk factor identification, control and self-management:

- Thirteen of 28 (46%) HMPs worked on CVH access and self-management strategies (KIT 07-08). *Know Your Numbers* and other self-management materials to control high blood pressure and high cholesterol widely distributed to HMPs and other partners. Worksite pilot to improve control of high blood pressure and high cholesterol implemented in two worksites. *Healthy Maine Works* piloted in five worksites.
- *Living Well* implemented in Aroostook, Cumberland, Kennebec, Lincoln, Penobscot, Somerset, Waldo and York Counties. *Master BP Trainer* implemented in seven counties (Sagadahoc, Kennebec, Somerset, Oxford, Cumberland, Lincoln and Androscoggin practices).
- Trainings conducted at least annually by MCHC on Blood Pressure Measurement for the Layperson and on Cardiovascular Disease and Cholesterol Screening.
- Worksite pilot to improve control of high blood pressure and high cholesterol implemented in two worksites. Healthy Maine Partnerships have partnered with Chambers, other business groups and worked directly with employers to create more than 50 *Healthy Maine Works* accounts for employers across the state.

Quality of Care

1. *A Quick Guide* for screeners was piloted by MaineHealth for MaineCare providers during Stroke Awareness Month (May 2009).
2. Method to increase primary care practice referral of patients with CVD risk factors to community resources: Phase II of the HMP Care Model/Chronic Disease Self-Management Initiative and the Governor's Wellness Initiative are being developed to address this.
3. Partnerships formed or improved with Maine Practice Improvement Network, Maine Health Management Coalition and Quality Counts.

Diabetes

1. DPCP and CVHP funded 11 HMPs to conduct *Small Steps - Big Rewards* Campaign to prevent type 2 diabetes and decrease risk for CVH in 2005.
2. Pre-diabetes questions added to BRFSS in 2007.
3. DPCP and CVHP fund 17 HMPs to conduct A1c, blood pressure and cholesterol campaign in 2006. DPCP and CVHP collaborated to produce *Wisdom from the Heart* DVD.

Goal Area 4: Optimize Education and Response Systems to Identify and Treat Acute Events

1. Signs and Symptoms of Heart Attack and Stroke and the Need to Call 911
   - Public Education: *In A HeartBeat*, Health Communications during Stroke and Heart Attack Awareness Month, HMP strategies—14 of 28 (50%) of HMPs worked on strategies

related to increasing employee awareness of signs and symptoms, call 911. All eight Health Districts worked on the signs and symptoms objective.

2. Quality of Care:
   - Data and Surveillance: CVHP supplemented their CVD surveillance system with EMS data, accessing the speed with which EMS arrives at individuals and, subsequently, hospitals, and the degree to which individuals receive timely and appropriate treatment for heart attack and stroke. Thirty-three percent of combined cardiac and cerebral vascular incident (CVA) events had a total response time of 30 minutes or less; 89% had a total response time of 60 minutes or less. Median times to scene for "cardiac" and CVA events, combined, for Maine towns representing the incident location. Most towns in the state had a median time to scene of 8 to 15 minutes.
   - Public Education and Access: 3 (11%) HMPs worked independently on CPR and AED strategies (Knowledge-based Information Technology (KIT) 2007–2008). Currently, 14 HMPs work collaboratively with local EMS to plan and implement Maine *HeartSafe* Communities initiatives, which includes increased CPR/AED training and placement for the public as a primary objective.
   - Currently, 41 local EMS services recognized as Maine *HeartSafe* Communities; primary criteria is increased CPR/AED training and AED placement for the public. As compared to baseline, every EMS service having completed their biannual designation renewal significantly increased the number of community CPR/AED trainings, several by more than 100%. Services also increased the number of public access AEDs by an average of 49%.

3. Professional Education:
   - CVHP has worked with Maine EMS, healthcare systems and statewide hospitals on the following continuing education initiatives:
     - Regional EMS Stroke trainings in Regions 1, 5 and 6.
     - Cary Stroke Grant to expedite pre-hospital/ED assessment, diagnosis, treatment and/or transport.
     - Regional 12-lead trainings for paramedics and intermediates among hospitals, national model exists.

4. Adherence to Guidelines:
   - MEMS statewide 12-lead protocol.
   - *In a Heartbeat* statewide AMI initiatives, which include 12-lead training and QI, protocol development and implementation (including prenotification and cath-lab activation from the field) and data analyses.
   - Region 5 *HeartSafe Communities* initiative, which included a region-wide stroke

symposium for EMS and law enforcement, quality assurance training for 12-lead data collection and analysis and a regional evaluation plan to identify and implement ongoing quality improvement interventions for heart attack and stroke.

- CVHP Acute Stroke Diagnosis and Treatment grants supported development and implementation of a telestroke pilot, QI interventions, EMS/ED protocols, and mentorship for Joint Commission primary stroke certification.

Goal Area 5: Optimize Care Systems to Prevent Cardiovascular Complications, Disability and Disease Progression

1. Adherence to guideline: MQF, ASA/AHA, *In A HeartBeat*, Institute of Healthcare Improvement (IHI) – Congestive Heart Failure (CHF), MPIN, MHMC/PTE, Acute Stroke Diagnosis and Treatment Grants, Stroke Care Workgroup, NECC.

2. In-patient educational media: *Women and Heart Health* DVD created and disseminated.

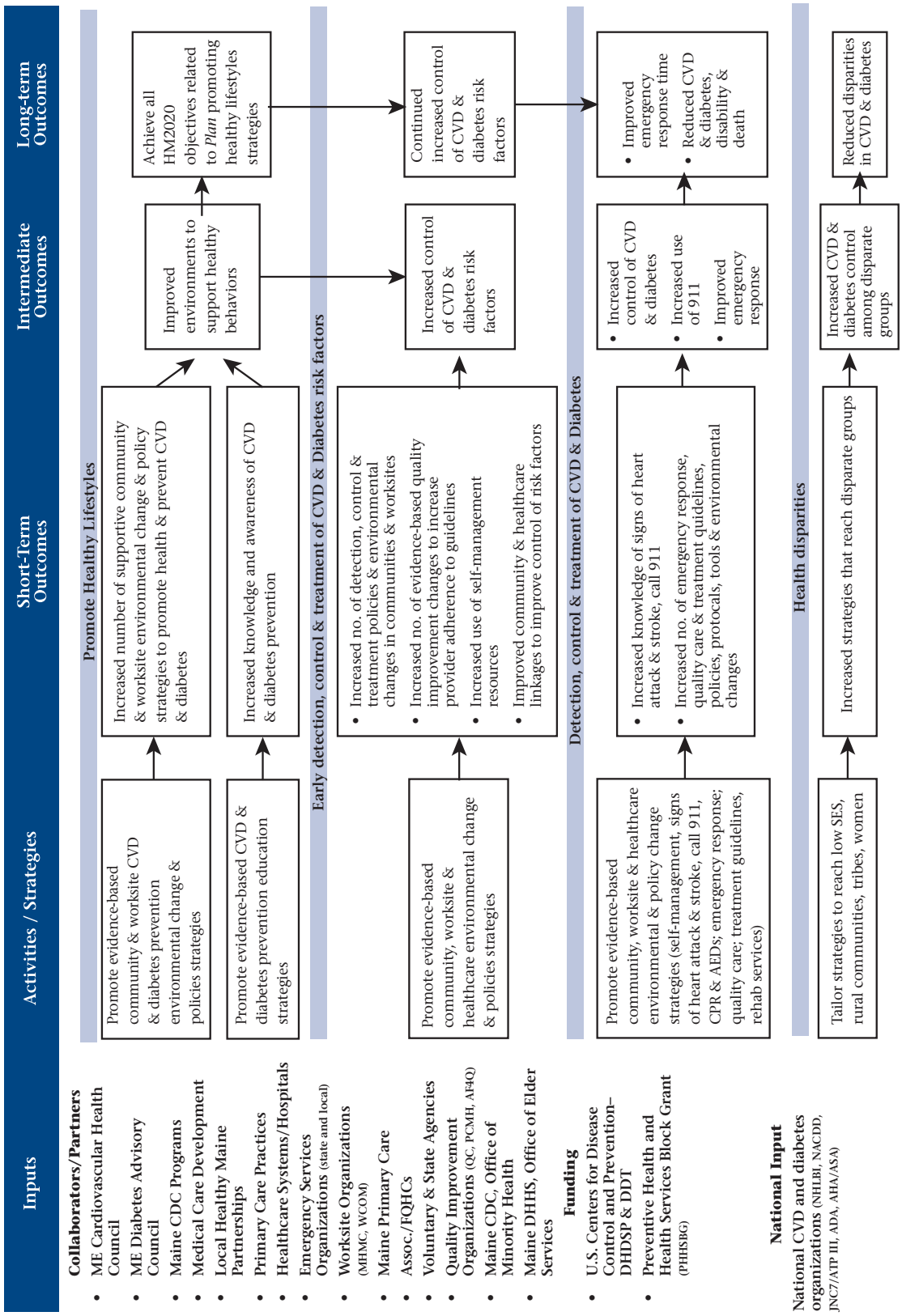
3. Self-management of CVD at the worksite: *Healthy Maine Works* piloted with five HMPs in 2008, expanded to all HMPs in 2009. As of summer 2009, >50 accounts have been created for worksites by HMPs.

4. Increase use of cardiac rehabilitation services among persons that have CVD: CVHP and Central Maine Medical Center participated in the IHI-CHF *Hospital to Home* Program project. Learning manual and resources were developed. Lessons learned shared with MaineHealth and implemented.

Goal Area 6: Eliminate Disparities in the Prevention, Detection and Treatment of Cardiovascular Disease and Its Risk Factors

1. Collaborate with organizations currently serving disparate populations:
   - Maine CDC, Division of Chronic Disease Workgroup to integrate various program into one Tribal workplan.
   - Maine CDC Office of Minority Health.

Appendix F: Logic Model for Cardiovascular Health and Diabetes Strategic Plan



Appendix G: Partner Profiles

The objectives of this state *Plan* will only be achieved through the collaboration of many partner organizations throughout the state. Key partners working on each goal are listed below. Most partners work on more than one goal area, but have been identified with one goal for simplicity.

Goal One: Promote healthy lifestyles to prevent risk factors for pre-diabetes and cardiovascular disease

Physical Activity, Nutrition and Healthy Weight Program (Maine CDC)

The Maine CDC, Physical Activity, Nutrition and Healthy Weight (PAN-HW) Program provides state-level leadership, coordination and collaboration for integrated approaches to physical activity and nutrition (PAN) promotion and overweight and obesity prevention, including promotion and maintenance of the State's *Physical Activity and Nutrition Plan 2005-2010*. The program develops, implements and evaluates evidence-based interventions and promising practices for PAN promotion and obesity prevention in the community, school, worksite and healthcare settings, especially for populations experiencing health disparities. In addition to developing and maintaining surveillance data for the public, local and state organizations, the program also provides technical assistance, resources and guidance to the Healthy Maine Partnerships and other community organizations and initiatives relating to PAN promotion, obesity prevention and state- and local-level policy and legislative change.

Program Goals:

- To increase the proportion of Maine citizens who are at a healthy weight and reduce health risks associated with overweight and obesity
- To identify and eliminate health disparities related to overweight and obesity among priority populations

Partnership For A Tobacco-Free Maine (Maine CDC)

The Maine CDC, Partnership For A Tobacco-Free Maine (PTM) is the statewide comprehensive tobacco prevention, control and treatment program established in 1997 by the Maine Legislature. The program was directed in statute to assist people who use tobacco to quit, provide an ongoing media and communications campaign, increase law enforcement regarding tobacco sales, grant community and school-based programs aimed at tobacco prevention and control as well as community-based enforcement of state tobacco control laws, and conduct surveillance and evaluation of the prevention and control program. PTM works at all levels to establish policies and environments that promote tobacco-free living; the program also provides evidence-based services to help tobacco users quit. In 1999, the Maine Legislature allocated a significant amount of the

state's share of the tobacco settlement to fund and expand the Partnership For A Tobacco-Free Maine as well as a community/school component that became the Healthy Maine Partnerships.

Program Goals:

- Preventing youth and young adults from starting to use tobacco
- Motivating and assisting tobacco users to quit
- Eliminating involuntary exposure to secondhand smoke
- Addressing populations disproportionately affected by tobacco use

Oral Health Program (Maine CDC)

The Maine CDC, Oral Health Program seeks to reduce dental disease and improve the oral health of all Maine citizens by planning, implementing and evaluating primary and secondary prevention efforts in oral health promotion and disease prevention. To carry out its mission, the Oral Health Program engages in:

- Public leadership to enable communities to prevent, control and reduce oral diseases
- Planning, implementing and evaluating programs for oral health promotion and disease prevention
- Statewide coordination of community-based oral health services through increased access and removal of barriers
- Funding for school-based oral health education and sealant programs and for community agencies providing education and clinical services

Some studies have shown a connection between oral health and cardiovascular disease and diabetes, among other chronic diseases and health conditions. The Oral Health Program is working with CVHP, DPCP and their partners to help increase the public's awareness of the connection and what they can do to best manage their health.

Maine Leadership Group for Worksite Wellness

The Maine Leadership Group for Worksite Wellness (MLGWW) works collectively to increase opportunities for more Maine employers to develop evidence-based wellness programs, which include strong cardiovascular health promotion and disease prevention initiatives.

In 2004, CVHP convened Maine's three regional wellness councils to establish communication between the councils and other multi-region worksite health promotion providers, provide networking opportunities for worksite health providers, create a process for referrals between regions and advocate for opportunities to increase the development of worksite health management programs. The group realized the benefits of their collaboration and formed a council, now called the MLGWW.

The MLGWW, the worksite advisory board for the CVHP, wrote a position paper on the best practice model for worksite health promotion, developed the *Criteria for Worksite Health Programs* document for the Governor's Office of Health Policy and Finance and advised the work of the Dirigo Wellness Pilot, a grant-funded project for small businesses funded by the National Governors Association.

Chronic Disease Partners of Maine

Chronic Disease Partners of Maine (Partners) is a statewide coalition that focuses on the common strategies in prevention, early detection and treatment of chronic disease and support of people with chronic disease through communication, public policy and public education. Its purpose is to share information to enhance collaboration, consistency and coordination; to encourage joint planning, reduce duplication and share program implementation; to foster effective and efficient systems of public health and healthcare delivery and to build will and advocate for change.

Goal Two: Improve the early detection, control and treatment of risk factors and pre-diabetes for the prevention of diabetes and cardiovascular disease

American Heart Association/American Stroke Association

The American Heart Association/American Stroke Association (AHA/ASA) is a national voluntary health agency with the mission of "building healthier lives, free of cardiovascular diseases and stroke."

The AHA/ASA program goal is: by 2020, to improve the cardiovascular health of all Americans by 20% while reducing deaths from cardiovascular diseases and stroke by 20%. The Maine Chapter of the AHA/ASA collaborates with statewide partners on advocacy and education efforts to promote cardiovascular health within the state.

Maine Cardiovascular Health Council

- The mission of the Maine Cardiovascular Health Council is to promote cardiovascular health through prevention and risk reduction. It has three goals:
- Improve prevention and control of cardiovascular risk factors and disease
- Provide health professionals evidence-based resources to improve cardiovascular risk factors and disease
- Inform, educate and empower the general population about cardiovascular risk factors and disease

The council co-sponsors a *Blood Pressure Master Trainer* program and cholesterol, motivational interviewing, and diet and exercise have also been part of the trainings it has offered. The Council has three very active committees:

Policy and Systems Change Committee: This committee reviews cardiovascular health policy initiatives and legislation and makes recommendations for further action.

Women and Heart Health Committee: This committee develops educational resources to promote cardiovascular health for women in Maine. Developed materials include spokesperson trainings, *Wisdom Gained from the Heart* DVD, *Bingo in the Heart of Maine* and others.

ACE Committee (AMI Community Education) Committee: This committee disseminates evidence-based messages for at-risk populations and providers to increase knowledge and early recognition of the signs and symptoms of heart attack and the need to activate 911.

Cardiovascular Health Program (Maine CDC)

The Maine CDC, Cardiovascular Health Program partners with local organizations, schools, employers, healthcare providers and state organizations to prevent Cardiovascular Disease (CVD) death and disability in Maine. The program promotes a way of life that supports and includes preventing and controlling risk factors, especially high blood pressure and high blood cholesterol, and increasing timely, effective care for heart attacks and strokes. To accomplish this, staff partner with state-level organizations, provide education to Maine residents and offer technical assistance, resources and training to community organizations, healthcare providers and employers.

Program Goal:

To reduce death, disability and healthcare costs due to CVD

Program Priorities

- Controlling high blood pressure and high blood cholesterol
- Increasing knowledge of signs and symptoms of heart attack and stroke and the need to call 911
- Improving emergency response for heart attack and stroke
- Improving quality of care related to CVD
- Eliminating disparities related to CVD prevention and control

Diabetes Prevention and Control Program (Maine CDC)

From 1977 to today, the Maine CDC, Diabetes Prevention and Control Program has been a statewide program responsible for a wide variety of activities that address the reduction of morbidity, mortality and the associated cost burdens of diabetes in the state.

The DPCP strives to respond to the state's evolving healthcare delivery systems and the scientific community's support for rigorous glycemic control and lifestyle interventions that effectively prevent and/or delay the onset of diabetes and associated complications. It supports community-

based diabetes self-management education programs and their integration with regional interventions that address health promotion and disease prevention activities, as well as tobacco cessation, physical activity and nutrition improvement activities and diabetes surveillance activities. It works with a variety of stakeholders to improve diabetes care through health systems and community partnerships to further the development and spread of the Planned Care Model.

Program Goals:

- Prevent diabetes
- Prevent the complications, disabilities and burden associated with diabetes
- Eliminate diabetes-related health disparities
- Maximize organizational capacity to achieve National Diabetes Program goals

Maine Primary Care Association

The Maine Primary Care Association (MPCA) works to strengthen and sustain Maine's Primary Care Safety Net. Its Federally Qualified Health Centers and Indian Health Centers provide high-quality primary care to underserved areas and populations of the state where healthcare options are limited, and access to barriers would prevent delivery of the right care at the right time in the right place.

To support health centers as they make Maine a healthier state, MPCA has coordinated a variety of services and programs which enhance everything from individual patient care to statewide policy efforts. Efforts include:

- Advocating to support community health centers, residents in medically underserved areas and uninsured or underinsured populations
- Coordinating programs to increase services offered at health centers and access to programs for patients who might otherwise go without
- Managing the installation of Electronic Practice Management and Electronic Medical Record applications in addition to providing technical support
- Supporting health centers with the adoption of quality improvement initiatives which enhance patient care and health center performance
- Actively recruiting medical staff to work in health centers
- Leading health centers in developing emergency preparedness (EP) plans
- Providing medical student and resident rotations at health centers

Medical Care Development, Inc.

Medical Care Development (MCD) is a not-for-profit organization that was established in 1966 as a Regional Medical Program to improve care for heart, cancer and stroke. MCD has worked to improve the health of Maine citizens for more than 40 years by collaborating with hospitals and physicians to improve quality of care and provide access to the latest evidence-based services.

MCD's Mission is to improve the health and well-being of people both nationally (domestically) and internationally. They do this:

- In partnership with communities, organizations and governments
- By developing and operating creative, compassionate and practical programs
- By providing technical advice and assistance to enhance the capacity of others

MCD has three program divisions:

The Division of Health Improvement continually increases the effectiveness of healthcare and public health systems in helping people to become and stay healthy.

International Division: MCD International currently operates public health programs and health systems initiatives in 14 countries.

The Division of Community Living has over 30 locations in Maine where they provide assisted living services for elderly or disabled residents.

With respect to diabetes and cardiovascular disease in Maine, a key program at MCD is The Telephonic Diabetes Education and Support Programs© (TDES©). MCD partners with employers and employee health insurance plans to address the needs of plan members with chronic disease through offering a telephone-based intervention to provide evidence-based diabetes self-management education and support services. Several insurance plans cover TDES services for adults with diabetes and pre-diabetes. Pharmacy copayments are also waived for enrollees for up to one year. Qualified applicants self-select from a diabetes-focused or a diabetes- and cardiovascular disease-focused program.

Maine Practice Improvement Network

In 2006, Medical Care Development was successful in establishing the Maine Practice Improvement Network (MPIN). MCD partnered with five large regional Physician Hospital Organizations, the Maine Medical Association, the Maine Primary Care Association and multiple physician practices throughout the state, to form the Maine Practice Improvement Network. The goal was to create a structure and a process for the members of the MPIN to share effort, cost, resources and learning related to office practice redesign, improvement knowledge and implementation of the Planned Care Model, leading ultimately to improved patient outcomes.

Since its inception, members of the Maine Practice Improvement Network share quality improvement best practices, tools, methods and successful strategies. MPIN quality advisors lead and facilitate change through various quality initiatives. Collaboration among network members and stakeholders position this network as a statewide Quality Improvement resource for Maine's healthcare industry.

MPIN Member Organizations

Central and Western Maine Physician Hospital Organization
Kennebec Region Health Alliance—MaineGeneral Physician Hospital Organization
Maine Network for Health
Maine Primary Care Association
Medical Care Development
Nova Health
Quality Counts

Maine Health Management Coalition

The Maine Health Management Coalition (MHMC) is a purchaser-led partnership with multiple stakeholders working collaboratively to maximize improvement in the value of healthcare services delivered to MHMC members' employees and dependents. The 50+ members include public and private employers, hospitals, health plans and doctors working together to measure and report healthcare value. MHMC helps employers and their employees use this information to make informed decisions. The coalition:

- Engages employees/dependents to understand and seek high-quality healthcare and facilitates the use of cost and quality information by employers and employees to make informed decisions
- Measures and reports on the cost of healthcare services
- Promotes the development and adoption of payment and incentive systems that reward providers for improving quality and efficiency
- Promotes benefit designs that encourage high-value healthcare
- Fosters collaboration among diverse stakeholders through facilitation, negotiation and mediation to accelerate the process of consensus-building
- Promotes an urgency for market-driven healthcare reform to improve quality and contain the direct and indirect costs of healthcare

Quality Counts

Quality Counts is a regional healthcare collaborative committed to improving health and healthcare for the people of Maine. Their goals are to improve health, promote consistent delivery of high-quality care, improve access to care and contain healthcare costs.

Mission: Quality Counts is transforming health and healthcare in Maine by leading, collaborating and aligning improvement efforts.

Vision: Through the active engagement and alignment of people, communities and healthcare partners, every person in Maine will enjoy the best of health and have access to patient-centered care that is uniformly high quality, equitable, and efficient.

Strategic Priorities

- Further increase system alignment to transform health and healthcare (See QC Simple Rules for Alignment)
- Promote a sustainable system of quality improvement assistance to all providers in Maine
- Foster meaningful consumer engagement in transforming health and healthcare in Maine
- Promote integration of behavioral and physical health
- Assure the organizational success and sustainability of QC needed to meet our mission

Major Programs

- Patient-Centered Medical Home (discussed below)
- *Aligning Forces for Quality* (discussed below)
- QC Learning Community
- Behavioral Health Integration
- Pressure Ulcer Prevention
- Electronic Health Records to Improve Care

Aligning Forces for Quality

Aligning Forces for Quality (AF4Q) is a national program of the Robert Wood Johnson Foundation designed to help communities across the country improve the quality of healthcare within their geographic regions. The $25-million program is part of RWJF's continuing effort to close the gap between the quality of healthcare that Americans now receive and what the healthcare system is capable of delivering. The foundational premise of AF4Q is that no single person, group or profession can improve the quality of care without the support of others. Maine is one of fifteen sites selected from across the country to participate in this initiative.

AF4Q in Maine is led by Quality Counts in close partnership with the Maine Health Management Coalition and the Maine Quality Forum. These partners work with numerous stakeholder groups including consumers, healthcare providers, purchasers, insurers and public health organizations to improve healthcare by aligning efforts within and across three areas, or "forces": quality improvement, public reporting and consumer engagement, with a particular focus on reducing disparities in healthcare across the state.

University of New England, Center for Community and Public Health

The Center for Community and Public Health (CCPH) at the University of New England develops programs, conducts research and provides public health education and training with a focus on chronic disease management and prevention, health disparities and environmental health that is local, regional and global in scope. CCPH includes the following programs:

- **Center for Health Policy, Planning and Research** identifies, develops and evaluates innovations related to access, delivery and quality of healthcare and health policy.
- **Health Literacy Institute** provides health literacy and plain language consulting, training and materials development in Maine and across the country.
- **Maine Area Health Education Center Network** has been working since 1985 to address healthcare workforce shortages in Maine's rural and underserved areas.
- **UNE-Maine Geriatric Education Center** partners with health systems and professional networks to develop, implement, disseminate and evaluate geriatric education, training curricula and resources throughout Maine.
- **Graduate Programs in Public Health** provides students with an online Master of Public Health program and a Graduate Certificate in Public Health.
- **Maine-Harvard Prevention Research Center** is a collaboration of the CCPH, the Harvard Prevention Research Center and Maine CDC to increase physical activity, improve nutrition and reduce obesity in Maine through research, research translation, education and policy development.

Goal Three: Improve the detection, control and treatment of diabetes and cardiovascular disease to prevent complications and disabilities and reduce the severity and progression of disease

Maine Association of Diabetes Educators

The Maine Association of Diabetes Educators (MeADE) achieved recognition as a chapter of the American Association of Diabetes Educators in 2006. The MeADE's vision is to provide statewide leadership and education to those living with diabetes, those at risk and those who educate and treat people with diabetes.

The purposes of MeADE are:

- To provide diabetes educators with a forum for learning opportunities/continuing education through meetings, workshops and networking. To ensure quality diabetes self-management education for individuals with diabetes based on the national standards of care- and lifestyle-management for the prevention of diabetes mellitus. To promote leadership within the diabetes community.
- To be proactively involved in legislative issues pertinent to the diabetes educator and individual with diabetes.

Members are active healthcare professionals with an interest in diabetes education or diabetes research.

Maine Cardiovascular Health Program
Maine Diabetes Prevention and Control Program

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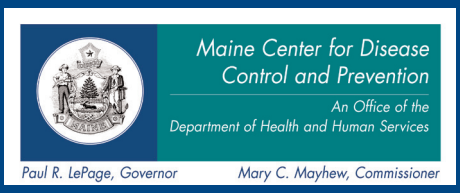

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