Minnesota Heart Disease and Stroke Prevention Plan

Implementation Report 2013
Minnesota Heart Disease and Stroke Prevention Plan

Implementation Report 2013

Development of the plan was facilitated by the Minnesota Heart Disease and Stroke Prevention Steering Committee and the Minnesota Heart Disease and Stroke Prevention Unit at the Minnesota Department of Health.

Financial support was provided through a Cooperative Agreement (5U50DP000721-06) with the Division for Heart Disease and Stroke Prevention of the Centers for Disease Control and Prevention (CDC). The content does not represent the official view of any organization.

For more information, contact:
Minnesota Heart Disease and Stroke Prevention Unit
Minnesota Department of Health
P.O. Box 64882
85 East 7th Place, Suite 400
St Paul, MN 55164-0882
Telephone 651-201-5412
www.health.state.mn.us/cvh

Upon request, this publication can be made available in alternative formats, such as large print, Braille or cassette tape. Printed on recycled paper.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation Progress</td>
<td>6</td>
</tr>
<tr>
<td>Global Indicators</td>
<td>7</td>
</tr>
<tr>
<td>Primary Prevention</td>
<td>8</td>
</tr>
<tr>
<td>Acute Treatment</td>
<td>12</td>
</tr>
<tr>
<td>Disease Management</td>
<td>14</td>
</tr>
<tr>
<td>Moving Forward</td>
<td>16</td>
</tr>
<tr>
<td>Heart Disease and Stroke Prevention Steering Committee</td>
<td>18</td>
</tr>
<tr>
<td>Minnesota Stroke Partnership Steering Committee</td>
<td>20</td>
</tr>
</tbody>
</table>
Dear Friends and Colleagues:

Since 2005, Minnesota Heart Disease and Stroke Prevention Steering Committee members have worked hard to create strategic plans for our State to reduce the burden of cardiovascular diseases on our population. In 2011, the Committee updated its original 2004 plan to guide us through the next decade. Both Plans encouraged collaboration and partnerships among the many Minnesota organizations and individuals working to prevent heart disease and stroke.

The 2011-2020 Plan contains detailed application strategies to promote achievable goals for population-based public health interventions and for improved systems of acute and chronic care for those of us for whom primary prevention is already too late. The Plan reflects the knowledge and experience of distinguished experts volunteering to serve on the Steering Committee, including academia, the health care systems, advocacy groups, businesses, and the public health system. As the Chair of the Committee, I have been amazed at the loyalty and dedication of the members who have attended quarterly meetings faithfully for years, some from the beginning. Committee members have also volunteered extra time for working on special projects and advising the dedicated Minnesota Department of Health staff.

This hard work has yielded concrete results. Disease indicators have shown steady improvement over time. Considerable public and private financial resources have been secured for Minnesota through the Committee’s unified approach that allows the members and their organizations to support each other in efforts to obtain research and program funds. As individuals, Committee members have supported efforts to create laws and public policies that promote heart disease and stroke prevention.

This report evaluates progress in implementing the Plan at the two-years out. It reflects the three themes of the 2011-2020 plan, namely, the promotion of primary prevention (public health), the improvement of acute treatment of heart disease and stroke, and the refinement of disease management once people have suffered an adverse event. I hope that you will agree that implementation of the 2011-2020 Plan is progressing as expected and is achieving its goals.

I and the other members of the Steering Committee invite you to join our effort to prevent heart disease and stroke. With your collaboration and support, we will continue to make progress on our goals to prevent heart disease and stroke and to improve the lives of those who have already experienced trouble. As you read this report, please consider ways you and your organization can contribute to the effort.

Sincerely yours,

Neal R. Holtan, M.D., M.P.H., Ph.D.
Chair
Implementation Progress

The Minnesota Heart Disease and Stroke Prevention Steering Committee with assistance of Minnesota Department of Health’s staff summarize the progress we have made in implementing the Minnesota Heart Disease and Stroke Prevention Plan 2011-2020. This report evaluates progress of the strategies outlined in the plan, showing current activity levels and current indicator levels to evaluate progress.

Indicator Changes

Indicators help to evaluate progress made. We look at indicators that focus on our overall objectives to reduce the burden of cardiovascular disease and stroke as well as specific indicators linked to Prevention, Acute Treatment, and Disease Management.

The baseline and current values for each indicator are presented, and change is assessed as better, worse, or stable by statistical significance at the 95% confidence level.

Activity Level Categories

Each state plan strategy is given an Activity Level Category (note symbols below) that considers the following factors:

- The amount of activity (projects, initiatives, policy work, etc.)
- The reach of the activities (local, regional, or statewide reach)
- The impact on decreasing cardiovascular disease risk, morbidity and mortality
- Scope of the activity
- Quality of the activity (based on best-practice, promising practice)

Healthy Minnesota 2020: Chronic Disease & Injury

The Minnesota Heart Disease and Stroke Prevention Plan 2011-2020 shares common indicators with the Healthy Minnesota 2020: Chronic Disease & Injury framework. They include:

- Youth who eat the recommended number of fruits and vegetables per daily
- Youth/adults who meet physical activity guideline
- Young adults who smoke
- Adult vascular disease patients who achieve optimal vascular care treatment goals
- Adults who are a healthy weight
# Global Indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Baseline</th>
<th>Data</th>
<th>Current Data</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary Heart Disease Death Rate (per 100,000)</td>
<td>121.8</td>
<td>MVS 2009</td>
<td>118.7</td>
<td>MVS 2010</td>
</tr>
<tr>
<td>Coronary Heart Disease Hospitalizations</td>
<td>18,827</td>
<td>MNHDD 2009</td>
<td>17,509</td>
<td>MNHDD 2010</td>
</tr>
<tr>
<td>Cerebrovascular Disease (Stroke) Death Rate (per 100,000)</td>
<td>34.1</td>
<td>MVS 2009</td>
<td>35.8</td>
<td>MVS 2010</td>
</tr>
<tr>
<td>Cerebrovascular Disease (Stroke) Hospitalizations</td>
<td>11,634</td>
<td>MNHDD 2009</td>
<td>11,362</td>
<td>MNHDD 2010</td>
</tr>
<tr>
<td>Inpatient Hospitalization Charges for Coronary Heart Disease (Millions)</td>
<td>$815.8</td>
<td>MNHDD 2009</td>
<td>$810.5</td>
<td>MNHDD 2010</td>
</tr>
<tr>
<td>Inpatient Hospitalization Charges for Cerebrovascular Disease (Stroke) (Millions)</td>
<td>$367.1</td>
<td>MNHDD 2009</td>
<td>$386.7</td>
<td>MNHDD 2010</td>
</tr>
<tr>
<td>Inpatient Hospitalization Charges for Lower Limb Ischemic Amputations (Millions)</td>
<td>$52.1</td>
<td>MNHDD 2009</td>
<td>MNHDD 2010</td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of adults who report being diagnosed with coronary heart disease or angina</td>
<td>3.5%</td>
<td>BRFSS 2009</td>
<td>3.2%</td>
<td>BRFSS 2011</td>
</tr>
<tr>
<td>Percentage of adults who report having had a heart attack (myocardial infarction)</td>
<td>3.0%</td>
<td>BRFSS 2009</td>
<td>3.4%</td>
<td>BRFSS 2011</td>
</tr>
<tr>
<td>Percentage of adults who report having had a stroke</td>
<td>2.3%</td>
<td>BRFSS 2009</td>
<td>2.1%</td>
<td>BRFSS 2011</td>
</tr>
<tr>
<td>Percentage of people without health insurance coverage</td>
<td>8.1%</td>
<td>US Census 2008-09</td>
<td>9.5%</td>
<td>US Census 2010-11</td>
</tr>
</tbody>
</table>

Data Sources: Minnesota Vital Statistics (MVS), Minnesota Hospital Discharge Data (MNHDD), Behavioral Risk Factor Surveillance System (BRFSS)

To view more indicators, please go to our state plan indicators webpage at [http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvhplanindicators.html](http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvhplanindicators.html).
Primary Prevention

The Prevention objectives address primary causes of heart disease and stroke for populations who are considered healthy, or for those with unhealthy lifestyle behaviors, such as physical inactivity, tobacco use, unhealthy eating, or for those who are overweight or obese but have no clinical diagnoses of cardiovascular disease or a risk factor.

Objective 1.1: Decrease cardiovascular disease and stroke risk by decreasing tobacco use.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Baseline</th>
<th>Data</th>
<th>Current</th>
<th>Data</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of adults who smoke cigarettes</td>
<td>16.7%</td>
<td>BRFSS 2009</td>
<td>19.0%</td>
<td>BRFSS 2011</td>
<td>N.A.*</td>
</tr>
<tr>
<td>Percentage of adolescents who smoke cigarettes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th grade</td>
<td>1.6%</td>
<td>MSS</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>9th grade</td>
<td>8.8%</td>
<td>2010</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>12th grade</td>
<td>19.2%</td>
<td></td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of nonsmokers exposed to environmental tobacco smoke in the past 7 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never smokers</td>
<td>36.8%</td>
<td>2010</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Former smokers</td>
<td>39.6%</td>
<td></td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of adults who have banned smoking inside their home</td>
<td>87.2%</td>
<td>MATS 2010</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of adults currently using non-cigarette tobacco products</td>
<td>7.5%</td>
<td>MATS 2010</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of smokers receiving counseling or advice from health care providers in last 12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asked</td>
<td>94.4%</td>
<td>2010</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Advised</td>
<td>71.8%</td>
<td></td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Referred</td>
<td>43.9%</td>
<td></td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of past-year smokers who successfully quit</td>
<td>12.8%</td>
<td>2010</td>
<td></td>
<td></td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Data Sources: Minnesota Adult Tobacco Survey (MATS), BRFSS, Minnesota Student Survey (MSS), HEDIS
N.A.* = Change not calculated due to methodological changes in BRFSS Survey beginning in 2011

Strategies

1.1.1 Decrease rates of initiation of tobacco use.

1.1.2 Increase the utilization of smoking cessation services for adolescents and adults.

1.1.3 Advance policies that reduce exposure to environmental tobacco smoke.
Objective 1.2: Decrease all Minnesotans’ risk for cardiovascular disease and stroke by reducing obesity rates, and improving nutrition and physical activity.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Baseline</th>
<th>Data</th>
<th>Current</th>
<th>Data</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of adults who are</td>
<td>37.9%</td>
<td>BRFSS</td>
<td>36.8%</td>
<td>BRFSS</td>
<td>N.A.*</td>
</tr>
<tr>
<td>overweight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or obese</td>
<td>25.4%</td>
<td>2009</td>
<td>25.7%</td>
<td>2011</td>
<td>N.A.*</td>
</tr>
<tr>
<td>Percentage of adolescents who are overweight</td>
<td>13.3%</td>
<td>MSS</td>
<td>11.9%</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td>9th grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of adolescents who are obese</td>
<td>8.8%</td>
<td>MSS</td>
<td>9.4%</td>
<td>2010</td>
<td>N.A.</td>
</tr>
<tr>
<td>9th grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of young children who are</td>
<td>16.8%</td>
<td>PEDNSS</td>
<td>16.4%</td>
<td>PEDNSS</td>
<td>Stable</td>
</tr>
<tr>
<td>overweight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or obese</td>
<td>13.0%</td>
<td>2009</td>
<td>12.7%</td>
<td>2011</td>
<td>Stable</td>
</tr>
<tr>
<td>Percentage of adults who consume at least 5 daily servings of fruits and/or vegetables</td>
<td>21.9%</td>
<td>BRFSS</td>
<td>17.6%</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td>6th grade</td>
<td></td>
<td>MSS</td>
<td>20.7%</td>
<td>2010</td>
<td>N.A.</td>
</tr>
<tr>
<td>9th grade</td>
<td></td>
<td></td>
<td>18.1%</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>12th grade</td>
<td></td>
<td></td>
<td>17.6%</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of adults who participated in 150 minutes or more of aerobic physical activity per week</td>
<td>54.0%</td>
<td>BRFSS</td>
<td>29.6%</td>
<td>BRFSS</td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of adults who participated in muscle strengthening exercises more than twice per week</td>
<td>20.9%</td>
<td>BRFSS</td>
<td>20.9%</td>
<td>BRFSS</td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of adults who participated in enough aerobic and muscle strengthening exercises to meet guidelines per week</td>
<td>20.9%</td>
<td>BRFSS</td>
<td>20.9%</td>
<td>BRFSS</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Data Sources: BRFSS, MSS, Pediatric Nutrition Surveillance Survey (PDNSS)
N.A.* = Change not calculated due to methodological changes in BRFSS Survey beginning in 2011

Strategies

1.2.1 Increase the rate of healthy eating by Minnesota children, youth and adults.

1.2.2 Increase frequency of exposure to effective health messages in multiple media channels.

1.2.3 Increase physical activity for all in Minnesota.
Objective 1.3: Advance methods promoting healthy eating and physical activity that are suited to communities at highest risk.

**Strategy**

1.3.1 Offer culturally sensitive programs that focus on reducing prevalence of obesity by improving dietary behaviors, increasing physical activity levels, and reducing sedentary behaviors.

Objective 1.4: Support aspirin use as primary prevention strategy for cardiovascular disease and stroke for individuals with increased risk.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline (%)</th>
<th>Data</th>
<th>Current</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of adults who are taking aspirin every day or every other day</td>
<td>25.6</td>
<td>BRFSS 2007</td>
<td>N.A.</td>
<td></td>
</tr>
</tbody>
</table>

Data Source: BRFSS

**Strategy**

1.4.1 Increase the use of aspirin according to evidence-based recommendations for individuals without a history of coronary heart disease or stroke who are at increased risk of ischemic events.

**Highlights**

**Healthy Communities Partnerships**

In 2012, Allina Health launched the Healthy Communities Partnership, a 3-year, $6.5 million initiative aims at prevention and wellness in 13 rural communities throughout Minnesota and Western Wisconsin. Hospitals in these areas are required to have a stakeholders group including public health, civic leadership, lay leaders, clinic champions, business leaders, and others to work together on improving the wellbeing of the communities they serve. Based on the areas these hospitals service, there is the possibility to impact 150,000 people. Each community has a unique action plan based on the needs of their own community. All communities include health risk assessments looking at behaviors (including stress, sleep, nutrition, pain, smoking, physical activity, anxiety) as well as biometrics. The Action Plan includes a wellness care guide to help connect the health system to the community and a program ambassador to improve communication between other areas of the community to ensure efforts are not redundant with other initiatives.

**Riverside Plaza Goes Smokefree**

The Statewide Health Improvement Program (SHIP) helps Minnesotans live longer, healthier lives by preventing the leading causes of chronic disease: tobacco and obesity. Minneapolis SHIP, part of the City of Minneapolis Department of Health and Family Support, partnered with Wellshare International and the Association for Nonsmokers (ANSR) to pass a smoke-free building policy, applying to all indoor spaces, including individual apartments at Riverside Plaza, the largest affordable housing development in the state. It took a lot of groundwork to be successful. Wellshare, a non-profit dedicated to improving health, conducted
a door-to-door survey of residents, mostly East African immigrants. At first, 68% supported the policy. Wellshare then created a video for the property’s in-house cable show explaining the dangers of secondhand smoke and the upcoming policy change. Meetings were held with residents and staff to explain the policy and hear concerns. Eventually, 82% supported the policy. As a result, in late fall of 2011 Riverside Plaza decided to go smoke-free. Riverside Plaza is the largest housing complex in Minnesota to provide a smoke-free living environment for its residents. It became smoke-free on January 1, 2013. Building managers Sherman & Associates are now interested in expanding smoke-free air to their four other properties in Northeast Minneapolis. Wellshare, the health department, ANSR and Sherman & Associates all working together show how SHIP partnerships can create benefits for all.

**The Presidents Network Worksite Wellness Initiative**

The TPN Workplace Initiative assists businesses and community leaders to create, enhance and sustain exceptional worksite health programs. Local Presidents Network business leaders serve as role models to help align workplaces with the vision of employers and employees seeing themselves as “self-health” leaders, doing their respective parts in driving down costs of health through better personal choices and smart use of health care resources. Presidents Network leadership and roundtable members advocate for addressing health in creative ways in the worksite environment. They are leaders in bringing about collaboration among business, public health, health plans, providers of care and government that drives down health care costs while improving health overall for everyone. To date, TPN has engaged over 30 communities, over 500 businesses throughout Minnesota and will potentially reach 200,000 employees. Going forward, plans are underway to create a TPN Academy where CEOs/Presidents come together regionally to learn best practices effecting cardiovascular disease from champions and from one another.

To learn more about other activities in the primary prevention area, please go to our state plan strategies webpage at [http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvhplanstrategies.html](http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvhplanstrategies.html).
Acute Treatment

The Acute Treatment objectives address acute cardiac and stroke events – for which time is of the essence. The domains addressed are acute myocardial infarction, sudden cardiac arrest and acute cerebrovascular, primarily stroke events. The strategies and tactics point to the need to develop policies and statewide systems of care, increase knowledge of the signs and symptoms of cardiac and stroke events, and the importance of calling 9-1-1 emergency services for the general public and health care professionals.

Objective 2.1: Provide consistent, evidence-based, and timely acute care for Minnesotans experiencing: Acute cardiac events (STEMI, SCA) and Stroke

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Baseline</th>
<th>Data</th>
<th>Current</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of hospital patients with heart attack given aspirin within 24 hours</td>
<td>95%</td>
<td>QIO 2009</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of hospital patients with heart attack prescribed aspirin at discharge</td>
<td>93%</td>
<td>MN SQRMS 2009</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of hospital patients with heart attack given advice or counseling about quitting smoking while in the hospital</td>
<td>90%</td>
<td>MN SQRMS 2009</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of hospital patients with heart attack given advice or counseling about quitting smoking while in the hospital</td>
<td>90%</td>
<td>MN SQRMS 2009</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of hospital patients with heart attack prescribed beta blocker at discharge</td>
<td>90%</td>
<td>MN SQRMS 2009</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of hospital patients with heart attack prescribed beta blocker at discharge</td>
<td>90%</td>
<td>MN SQRMS 2009</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td>Percentage of eligible hospital patients with ischemic stroke receiving thrombolytic therapy within 3 hours of symptom onset</td>
<td>78.5%</td>
<td>MSR 2010</td>
<td>76.9%</td>
<td>MSR 2011 Stable</td>
</tr>
</tbody>
</table>

Data Sources: MN Statewide Quality Reporting and Measurement System (MN SQRMS), MN Stroke Registry (MSR)

Strategies

2.1.1 Develop and implement a statewide system of care for ST-elevation myocardial infarction (STEMI).

2.1.2 Develop and implement a statewide sudden cardiac arrest system.

2.1.3 Develop and implement a statewide acute stroke system.

2.1.4 Collect long-term patient outcomes data to use in analysis for ongoing quality improvement efforts
Objective 2.2: Create an informed Minnesota population that recognizes acute signs and symptoms and understands the need for timely, evidence-based emergency response: Stroke and Acute cardiac events

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Baseline</th>
<th>Data</th>
<th>Current</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of adults who are aware of the signs and symptoms of heart attack</td>
<td>43.7%</td>
<td>BRFSS 2009</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td>Percentage of adults who are aware of the signs and symptoms of stroke</td>
<td>55.4%</td>
<td>BRFSS 2009</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td>Percentage of adults who indicate they would activate 9-1-1 as their first response if they think someone is having a heart attack or stroke</td>
<td>88.0%</td>
<td>BRFSS 2009</td>
<td>N.A.</td>
<td></td>
</tr>
</tbody>
</table>

Data Sources: BRFSS

Strategies

2.2.1 Disseminate consistent, evidence-based education materials to teach all Minnesotans the signs, symptoms and emergency response to vascular disease events including myocardial infarction and stroke.

2.2.2 Identify for health care professionals, evidence-based education materials and programs related to signs and symptoms of acute cardiac and stroke events.

Highlights

MN Resuscitation Consortium

The MN Resuscitation Consortium (MRC) developed the Minnesota Resuscitation Academy based on the very successful Resuscitation Academies held in Seattle, WA. The Minnesota academies are focused on the main concepts of the Heart Rescue project and the goal is to help communities, First Responder, EMS and hospitals implement the part of the systems based approach that they impact.

The MRC has held two academies in 2012 and planning a 3rd in 2013. The academies have drawn attendance from nurses, training officers, medical directors, EMS educators, survivors and community champions from the twin cities area and up to 100 miles into greater Minnesota. Attendees have returned to their facilities and communities to start programs and develop ways to improve sudden cardiac arrest outcomes. For example, one attendee returned to start a novel program with their local explorer group to do CPR training throughout a parade route. And all attendees providing patient care have begun entering data in the Cardiac Registry to Enhance Survival (CARES), which will guide future academy sessions.

The MN Resuscitation Academies also created a speaker’s bureau and Mini Academies. In February, academy speakers traveled to Fergus Falls to present at their Topics in EMS conference. The morning sessions were dedicated to a resuscitation presentation creating the first Mini Academy. Other Academy speakers are scheduled to be at Allina’s Pulse Check, North Memorial’s Long Hot Summer, the Teaching and Learning Conference for EMS Educators, and HealthEast.

To learn more about other activities in the acute treatment area, please go to our state plan strategies webpage at [http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvhplanstrategies.html](http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvhplanstrategies.html).
Disease Management

The Disease Management objectives address ongoing clinical care delivery and coordination to reduce preventable heart attack or stroke and decrease hospitalizations. This includes ensuring rehabilitation, secondary disease prevention, risk factor management (such as high blood pressure and high cholesterol) and efforts to support optimal functionality and quality of life. Cardiovascular disease is multi-factorial, requiring an active and coordinated response from a multidisciplinary health care team in effective partnership with an activated patient. The strategies and tactics address systems change in the areas of care transitions, care coordination and chronic disease self-management.

Objective 3.1: Provide disease risk management interventions to prevent secondary cardiovascular and stroke events and progression of disease.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Baseline</th>
<th>Data</th>
<th>Current</th>
<th>Data</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of adults who report that they have been diagnosed</td>
<td>21.6%</td>
<td>BRFSS 2009</td>
<td>26.3%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>with high blood pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of adults with high blood pressure who report taking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>action to reduce their blood pressure:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in diet</td>
<td>71.2%</td>
<td></td>
<td>68.3%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>Reduce sodium consumption</td>
<td>71.3%</td>
<td></td>
<td>69.2%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>Reduce alcohol consumption</td>
<td>33.5%</td>
<td></td>
<td>33.1%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>Increase exercise</td>
<td>74.2%</td>
<td></td>
<td>66.0%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>Medication</td>
<td>86.7%</td>
<td></td>
<td>77.5%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>Percentage of adults who have had their cholesterol checked in the last</td>
<td>77.0%</td>
<td>BRFSS 2009</td>
<td>76.7%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>five years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of adults who report that they have been diagnosed</td>
<td>33.9%</td>
<td>BRFSS 2009</td>
<td>35.6%</td>
<td></td>
<td>N.A.*</td>
</tr>
<tr>
<td>with high blood cholesterol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of adults (18-75 years old) who have vascular disease and</td>
<td>33.8%*</td>
<td>MNCM 2009</td>
<td>39.7%</td>
<td></td>
<td>Better</td>
</tr>
<tr>
<td>reached all four clinical treatment goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of adults (18-75 years old) who have high blood pressure,</td>
<td>72.4%</td>
<td>MNCM 2009</td>
<td>75.4%</td>
<td></td>
<td>Better</td>
</tr>
<tr>
<td>whose blood pressure was adequately controlled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data Sources: BRFSS, Minnesota Community Measurement (MNCM)
N.A.* = Change not calculated due to methodological changes in BRFSS Survey beginning in 2011.
† = Change in definition between 2010 and 2011 reporting years; recast measure with new definition in earlier year shows improving trend.

Strategies

3.1.1 Implement patient activation and self-management interventions for artery disease, stroke, peripheral artery disease and venous thromboembolism that are consistent with patients’ preferences and values.

3.1.2 Utilize evidence-based models and advanced care planning to support care coordination in preventing disease complications.
Objective 3.2: Prevent avoidable hospital readmissions within 30 days post-hospitalization for cardiovascular disease and stroke patients.

**Strategies**

3.2.1 Redesign patients’ care transitions by prioritizing timely, consistent and complete communication between care sites (hospital, clinic, long-term care, home health, hospice) and the associated health care professionals.

3.2.2 Improve medication management and reconciliation for patients upon discharge, through patient education.

**Highlights**

HealthPartners Research Foundation

MDH provided funds to the HealthPartners Research Foundation to improve coronary artery disease care through a systems change project that completed in October 2012. This grant contributed to several advances in patient care and core knowledge. For example, both primary care physicians and cardiologists at HealthPartners Medical Group (HPMG) are responsible for vascular care metrics (aspirin use, blood pressure at goal, LDL at goal, and tobacco-free) for their patients. In addition, Epic workbench, a one-click referral order for care management in the electronic health record, has been implemented for HealthPartners providers. Also, a study of lipid patterns of foreign-born patients cared for by HPMG providers indicates that low HDL is the dominant dyslipidemia pattern. The data also demonstrate that the disparity in treatment of native-born and foreign-born patients is small. HPMG now has the capability of real-time surveillance to identify gaps in evidence-based care for patients with heart disease. Furthermore, the project concluded that 5 components must be in place if a health system is to deliver value for its stakeholders: measurable agreed-upon goals, public reporting of the goals, adequate resources to achieve the goals, alignment of stakeholder incentives and sanctions with the goals, and leadership that continuously promotes the goals.

To learn more about other activities in the disease management area, please go to our state plan strategies webpage at [http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvplanstrategies.html](http://www.health.state.mn.us/divs/hpcd/chp/cvh/cvplanstrategies.html).
Moving Forward

Moving forward, we will continue to address the objectives and strategies throughout the decade with ongoing assistance provided by the Heart Disease and Stroke Prevention Steering Committee. We will continue to collaborate with partners to move the State Plan ahead and promote attention to the continuing cardiovascular risk factors. Some of the many exciting opportunities that lie ahead to improve cardiovascular health and move the 2011-2020 State Plan forward include a statewide food charter, a statewide acute stroke system and Chronic Disease Self-Management Program implementation.

MN Food Charter

Local communities throughout the state have increased opportunities for physical activity and nutrition and implemented tobacco-free policies in various settings due to resources made available from a number of grants such the federal Community Transformation Grant and state Statewide Health Improvement Program, Tobacco and Safe Routes to School grants. One of the emerging work around access to healthy food is the development of the Minnesota Food Charter.

The purpose of the Minnesota Food Charter is to ensure we have healthy, affordable and safe food, building a legacy of health for future generations. The Food Charter aims to inform planning and decision-making across the state, promote stronger networks and increased collaboration, take on health-related economic impacts and involve the community. The Food Charter is currently soliciting input through Food Charter Events. For more information, go to www.mnfoodcharter.com.

Minnesota Acute Stroke System

The Minnesota Department of Health and the American Heart Association convened a group of stroke experts from across the state to form the Minnesota Acute Stroke System Council in March 2011. This group met monthly to develop a framework for a statewide acute stroke system. Over the course of nearly two years of meetings, presentations, and conferences, a strategic plan was developed that addresses EMS triage and transportation protocols, hospital-based emergency care, and performance improvement for stroke care. While we currently have fifteen Joint Commission-certified Primary Stroke Centers (PSC) in the state, over 25% of Minnesotans live over an hour away from a certified PSC. We need to have hospitals designated as acute stroke-ready facilities in order to ensure that all communities in the state have access to high quality care for the important initial phase of an acute stroke.

The first step in launching the acute stroke system is to set standards for acute stroke ready hospitals to meet. Currently, legislation is pending in the 2013 Minnesota Legislature to give the Minnesota Department of Health authority to designate hospitals as either comprehensive stroke centers, primary stroke centers, or acute stroke-ready hospitals. This will allow people to
be assured that the hospitals in their communities have met standards for excellent stroke care. In addition, EMS agencies will be able to adopt stroke triage and transportation protocols which will ensure that they can take their patients suspected of having a stroke to hospitals which are ready to diagnose and treat them immediately. We anticipate the system to launch in early 2014.

**Chronic Disease Self-Management Program (CDSMP)**

This evidence-based program was developed by Stanford University Patient Education Research and is an effective self-management education program for adults with on-going health conditions and works well for those with more than one chronic condition. Trained peer leaders meet with a group of participants for 2 hours each week for six weeks to learn self-management skills including action planning, problem solving, decision making, symptom management and communications skills. The interactive curriculum includes information about exercise, nutrition, medication usage, stress management, working with the health care team, evaluating treatment choices and dealing with emotions, depression and fatigue. The MDH Arthritis and Aging Unit has been working with a variety of community partners including health clinics, hospitals, community organizations, faith-based organizations and others to support leader training and program implementation since 2008. There have been over 2000 participants across the state with more than 75% who start, completing the program. Among those who participated in 2010 to 2012, 21% identified themselves as being affected by heart disease, 7% are affected by stroke, 51% have hypertension and 32% have high blood cholesterol. Among these participants, most said they would recommend the program to a friend or family member, increased their physical activity, and ate healthier. In addition, most were better able to set and achieve goals, continue daily activities, manage stress and fatigue and work with their health professionals.

This program is currently reaching a small percentage of those with on-going health conditions, including conditions related to heart disease and stroke, who could benefit from the program. With additional resources and collaboration among health care, public health and community organizations there is opportunity to use this proven strategy to increase engagement in self-management of health and health behaviors and improve outcomes for those with heart and stroke related conditions.

With opportunity, there are also challenges. Funding beyond the pilot phase of successful projects to fully implement selected strategies and tactics remains a challenge. Also, additional work is needed to promote and disseminate effective health literate messages through multiple media channels. Additionally, there is a need to offer culturally sensitive programs that focus on reducing the prevalence of obesity. Furthermore, more work needs to be done in collecting long-term patient outcomes data to use in analysis for ongoing quality improvement efforts.

We have made great strides in addressing prevention, acute treatment and disease management of cardiovascular disease throughout the state in the past two years. We hope to tackle some of the strategies that have not been addressed in the coming years. The Minnesota Heart Disease and Stroke Prevention Steering Committee will continue to advance the state plan.
Heart Disease and Stroke Prevention Steering Committee

Members serving from 2011 – current

Teresa Ambroz, MPH, RD, LD
Minneapolis Heart Institute Foundation

Tom Arneson, MD, MPH
Minneapolis Medical Research Foundation

Courtney Jordan Baechler, MD, MSCE
United Heart & Vascular Clinic

Patricia Barney, MPH
Minnesota Department of Health

Justin Bell, JD
American Heart Association

Kenneth Bence, MHA, MBA
Medica

Ann Bentdahl, BA
Minneapolis Heart Institute Foundation

Jill Birnbaum, JD
American Heart Association

Donald Bishop, PhD
Minnesota Department of Health

Mary Braddock, MD, MPH
Gillette Children’s Hospital

Janny Brust, MPH (Vice Chair)
MN Council of Health Plans

Rachel Callanan, JD
American Heart Association

Jay Cohn, MD
University of Minnesota

Jeannine Conway, PharmD, BCPS
University of Minnesota

Tom Crowley, MBA
St. Elizabeth’s Medical Center

Khatidja Dawood, MS
Hennepin County Human Services & Public Health Department

Daniel Duprez, MD, PhD
University of Minnesota

Kevan Edwards, PhD, MA
Minnesota Department of Health

Mustapha Ezzeddine, MD
University of Minnesota

Gary Hanovich, MD
Minnesota Medical Association

LuAnn Heinen, MPP
National Business Group on Health

Ben Heinz, RD, LD
StayWell Health Management

Jerri Hiniker, RN, BSN
Stratis Health

Alan T. Hirsch, MD
University of Minnesota

Neal Holton, MD, MPH (Chair)
Ramsey County Public Health

Victoria Kasdan, RN, MPH
Blue Cross/Blue Shield of MN

Stephen L. Kopecky, MD
Mayo Clinic

Jane E. Korn, MD, MPH
Minnesota Department of Health

Thomas Kottke, MD, MSPH
HealthPartners

Anne Kukowski
Minnesota Department of Health

Kamakshi Lakshminarayan, MD, PhD
University of Minnesota

Shirlynn LaChapelle, RN
Minnesota Black Nurses Association

Catherine Lexau, PhD, MPH, RN
Minnesota Department of Health

William J. Litchy, MD
Mayo Clinic

Deb Loy, BSN, BSE
Minnesota Department of Education

Russell Luepker, MD, MS
University of Minnesota

Keith Lurie, MD
Advanced Circulatory Systems Inc.

Mary Manning, RD, MBA
Minnesota Department of Health

Joan Mellor
Medtronic Foundation

Kathleen Miller, BSN, CCRC
University of Minnesota

Vicki Olson, RN, MS
Stratis Health

Jim Przybilla
PrimeWest Health

Karen Rau, BSN, MBA
PrimeWest Health

Nelson L. Rhodus, DMD, MPH, FACD, FICD,
University of Minnesota

Gay Lynn Richards, DBP, RN, MPH, CNS
Minnesota Department of Health

Martha Roberts, MPH
Minnesota Department of Health

Mark Schoenbaum, MSW
Minnesota Department of Health

James Sebesta, PE, BME
AKF Group LLC

George Spears
Division of Indian Work

Gretchen Taylor, MPH, RD
Minnesota Department of Health
Bill Tendle, MS
Southside Community Health Services

Paula Thompson, RD, LD, CDE
Saint Elizabeth’s Medical Center

James Toscano
Minneapolis Heart Institute Foundation

Pam Van Zyl York, PhD, MPH, RD, LN
Minnesota Department of Health

Janelle Waldock, MS, MPA
Blue Cross/ Blue Shield of MN

Cindy Winters
Heart Beats Back: The Heart of New Ulm Project

Noya Woodrich, MSW, LISW
Greater Minneapolis Council of Churches

Demetris Yannopoulos, MD
MN Resuscitation Consortium

**CLINICAL ADVISORS**

Beth Baker, MD
Minnesota Spine Rehab Inc.

Jay Cohn, MD
University of Minnesota

R. Craig Christianson, MD
UCare Minnesota

Daniel Duprez, MD, PhD
University of Minnesota

Mustapha Ezzeddine, MD
University of Minnesota

Gary Hanovich, MD

Thomas Kottke, MD, MSPH
HealthPartners

Kamakshi Lakshminarayan, MD, PhD
University of Minnesota

William J. Litchy, M.D.
Mayo

Russell Luepker, MD, MS
University of Minnesota

Keith Lurie, MD
Advanced Circulatory Systems Inc.

Alejandro Rabinstein, MD
Mayo Clinic

**COMMUNITY ADVISORS**

David Abelson, MD
Park Nicollet Health Services

Glenn Andis
Medica

Tom Arneson, MD, MPH
Medical Research Foundation

Jeanne Bailey, MA
United Family Medicine

Jill Bimbaum
American Heart Association

Ellen Benavides, MHA
Minnesota Department of Health

Carol Berg, RN, MPH
UCare Minnesota

Claudia Fercello
Minnesota Department of Health

LuAnn Heinen, MPP
National Business Group on Health

Jerry Jaker, EdS
MN Institute of Public Health

Don Klassen
Klassen Performance Group Inc.

The Presidents Network

Mary Kruse, MS
HealthSource Solutions

Marc Manley, MD, MPH
Blue Cross/ Blue Shield of MN

Gretchen Musicant, RN, MPH
Minneapolis Department of Health

Nico Pronk, PhD
Health Partners

Chris Reif, MD, MPH
Community Univ. Health Care Clinic

Cally Vinz, RN
ICSI

**STAFF**

Lisa Calhoun, MPH
Minnesota Department of Health

Elizabeth Gardner, MA
Minnesota Department of Health

Mary Jo Mehelich, RN, MPH
Minnesota Department of Health

Jenny Patrin
Minnesota Department of Health

James Peacock, PhD, MPH
Minnesota Department of Health

Corey Sargent, MA, NREMT-P
Minnesota Department of Health

Sueling Schardin, MPH, RD
Minnesota Department of Health

Stanton Shanedling, PhD, MPH
Minnesota Department of Health

Albert Tsai, PhD, MPH
Minnesota Department of Health

Jacob Zdon, MPH
Minnesota Department of Health
Minnesota Stroke Partnership Steering Committee

Members serving from 2011- current

Justin Bell, Esq.
American Heart Association

Kari Bottemiller, MS, RN, CNS
St. Marys Hospital-Mayo Clinic

Donna Brauer, PhD, RN
Minnesota State University, Mankato

Cynthia Busch, PhD, CCC-SLP
Minnesota State University, Mankato; Minnesota Stroke Association

Rachel Callanan
American Heart Association

Amy Castle, RN
St. Joseph’s Hospital

Paula Chambers RN, MAN
Hennepin County Medical Center

Diane Chappuis, MD
United Hospital

Ed Cristostomo, MD
Northland Neurology

Carol Droegemueller, MS, ACNS-BC, CNRN
Regions Hospital

Rosie Emmons, RN, BSN
HealthEast Care System

Melissa Freese, BSN, CNRN
St. Cloud Hospital

Melissa Fritz, RN, BSN
United Hospital

Thomas S.D. Getchius, BA
American Academy of Neurology

Mary Jordheim Gokey, RN, MSN
Sanford Medical Center Fargo

Karen Gozel, RN, BSN
Abbott Northwestern Hospital

Andrew Grande, MD
University of Minnesota

Angela Heyer, RN, BSN, CNRN
University of Minnesota Medical

Betty Hydukovich, RN
Lake Region HealthCare Corporation

David King (CHAIR)
Minnesota Brain Injury Alliance

Donna Lindsay, RN
Abbott Northwestern Hospital

LaVasha Lobbins, MEd, PMP, CMP Consultant/Community Member

Pam Madrid, RN, CNS, CCRN, CCNS
Mercy Hospital Critical Care

Kathleen Miller, BSN
University of Minnesota

Sheryl Orcutt
Genentech

Michael Ostrander, MD
Park Nicollet Clinic

Alejandro Rabinstein, MD
Mayo Clinic

Jeanne Rash
American Heart Association

Natalie Rund, RN
Lake Region Healthcare

Corey Sargent, MA, NREMT-P
University of Minnesota

Marnee Shepard, PT, NCS
Fairview Southdale Hospital

Brian Siska
Minnesota Stroke Association

Carol Ann Smith, RN, CNRN
Hennepin County Medical Center

Tess Sierzant, MS, RN, CNRN
St Joseph’s Hospital

Lynn Steffen, PhD, MPH
University of Minnesota

Sarah Tonn
American Academy of Neurology

Kevin Weber
Genentech

Alexander Zubkov, MD, PhD, FAHA
Minneapolis Clinic of Neurology

STAFF

Mary Jo Mehelich, RN, MPH
Minnesota Department of Health

James Peacock, PhD, MPH
Minnesota Department of Health

Corey Sargent, MA, NREMT-P
Minnesota Department of Health

Sueling Schardin, MPH, RD
Minnesota Department of Health

Stanton Shanedling, PhD, MPH
Minnesota Department of Health

Albert Tsai, PhD, MPH
Minnesota Department of Health
Development of the plan was facilitated by the Minnesota Heart Disease and Stroke Prevention Steering Committee and the Minnesota Heart Disease and Stroke Prevention Unit at the Minnesota Department of Health.

Financial support was provided through a Cooperative Agreement (5U50DP000721-06) with the Division for Heart Disease and Stroke Prevention of the Centers for Disease Control and Prevention (CDC). The content does not represent the official view of any organization.

For more information, contact:
Minnesota Heart Disease and Stroke Prevention Unit
Minnesota Department of Health
P.O. Box 64882
85 East 7th Place, Suite 400
St Paul, MN 55164-0882
Telephone 651-201-5412

Upon request, this publication can be made available in alternative formats, such as large print, Braille or cassette tape. Printed on recycled paper.

www.health.state.mn.us/cvh