South Dakota Cardiovascular Collaborative

STRATEGIC PLAN 2017-2021

Table of Contents

3 | Introduction

4-5 | Background and Data

6-11 | Collaborative Planning Process

12-13 | The Strategic Plan

14 | Appendix A: Acknowledgements

15 | Appendix B: Strategies used in Strategy Prioritization Survey

Introduction

The South Dakota Cardiovascular Collaborative Strategic Plan 2017 - 2021 is a collaborative effort of state and local partners working on heart disease and stroke prevention and management in South Dakota. The Cardiovascular Collaborative is a group of two dozen medical and public health professionals who want to improve the quality of life for all South Dakotans through prevention and control of heart disease and stroke. This group is comprised of representatives from the South Dakota Department of Health (DOH), American Heart Association, South Dakota Regional Extension Center, South Dakota Health Link, South Dakota State Medical Association and the Community Healthcare Association of the Dakotas.

Over the course of several months, the Cardiovascular Collaborative created a five year strategic plan. This report outlines the collaborative process of creating that plan from January 2016 to January 2017.

The strategic plan is based on four goal areas related to heart disease and stroke:

- Improve data collection
- Address needs of priority populations
- Coordinate the continuum of care
- Enhance prevention and management

The objectives and strategies listed in this strategic plan were selected by a group of diverse stakeholders who convened in Chamberlain, SD on July 13, 2016 (See a complete listing of statewide partners involved in development of this plan in Appendix A). The plan serves as a guide to all stakeholders and partners across the state to work together to reduce the burden of heart disease and stroke in South Dakota. It will be used as a "blueprint" – providing direction, focus and accountability over the next five years.

Stakeholders from around the state were involved in the planning process through:

- Key Informant Interviews
- Stakeholder Surveys
- In-Person Planning Meeting
- Monthly Meetings with Cardiovascular Collaborative Leadership Team

Progress as of January 2017:

- Gathered stakeholders for in-person meeting, established vision, mission and started on goals, objectives and strategies
- Refined goals, objectives and strategies through monthly meetings with the Cardiovascular Collaborative Leadership Team
- Identified priority strategies to begin working on in Year 1

Next steps:

Build capacity for implementation by identifying additional stakeholders and creating action plans for the priority strategy identified in each goal area.

Background and Data

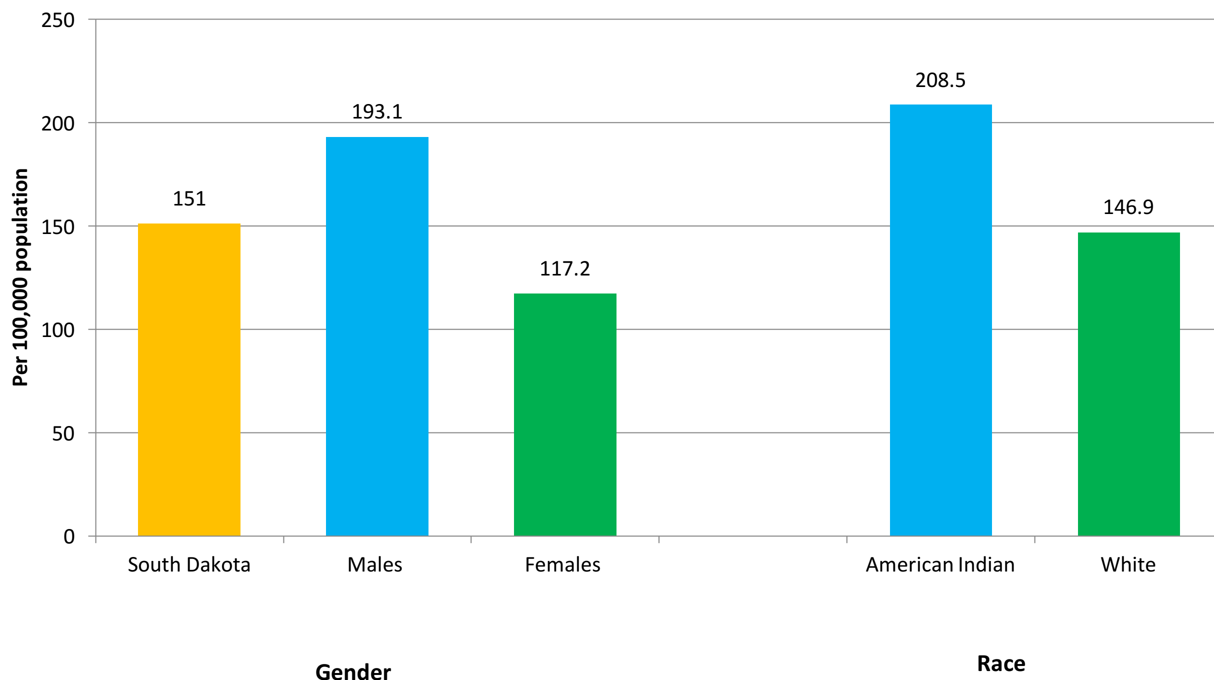
South Dakota (SD) is a primarily rural state which covers over 75,000 square miles. Of SD's 66 counties, 30 (45%) are designated as rural and 34 (52%) are considered frontier (less than six people per sq. mile). SD's rural geography impacts access to health care services. Approximately two-thirds of SD is designated by the federal government as a Health Professional Shortage Area due to geographic and low-income disparities.

South Dakota's communities are served by 123 ground Emergency Medical Services; approximately 73% are volunteer staffed. Seventy-three agencies respond to fewer than 200 calls per year; 84 serve populations of 3,000 or fewer. Furthermore, the vast footprint of South Dakota adds to prolonged response and transport times; 77 agencies serve a community without a hospital and 38% report distances of 31 miles or greater between their main headquarters and the agencies' main receiving facility (SD EMS Report 2016).

Overview of Heart Disease and Stroke in South Dakota

Heart disease was the leading cause of death from 1994-2015, with the exception of 2010-2011 when cancer was the leading cause. In 2015, heart disease accounted for 1,712 deaths or 22.1% of deaths. Heart disease was the leading cause of death for whites, American Indians, males and females. As depicted in Figure 1, the age-adjusted mortality rate was higher for males than females (193.1 vs. 117.2) and for American Indians than white (208.5 vs. 146.9).

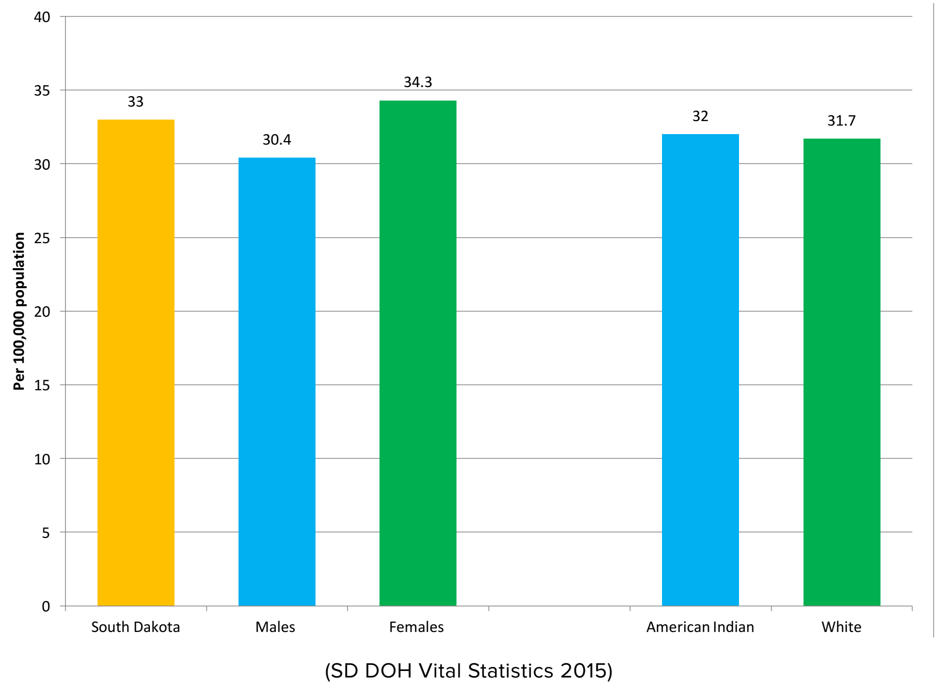
Figure 1. Age Adjusted Heart Disease Mortality, South Dakota, 2015



(SD DOH Vital Statistics 2015)

Figure 2. Age Adjusted Stroke Mortality Rate, South Dakota, 2015

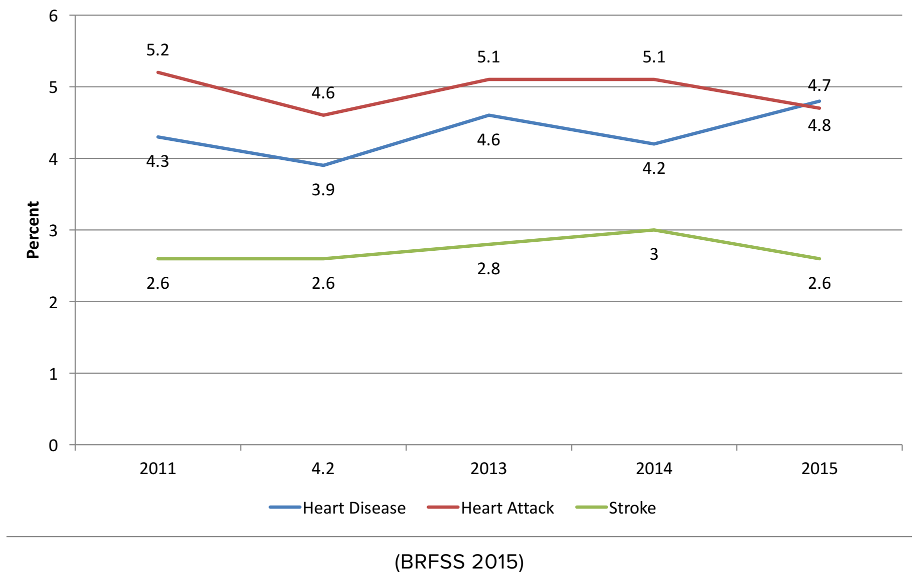
Stroke was the sixth leading cause of death in 2015 and accounted for 381 or 4.9% of deaths. From 1994-2005 stroke was the third leading cause of death. Since 2006 it has fluctuated between the fourth and sixth leading cause of death. The age-adjusted mortality rate for stroke was 33 per 100,000 populations. Females had a slightly higher mortality rate than males; however there was no difference in mortality rates by race in 2015, as shown in Figure 2.



(SD DOH Vital Statistics 2015)

In 2010, the estimated annual cost of cardiovascular diseases (CVD), which included diseases of the heart, stroke and an estimate of hypertension costs as well, was $981 million in South Dakota (CDC Chronic Disease Cost Calculator). This estimate will continue to increase as the population in SD continues to age. According to the CDC cost calculator, from 2010 to 2020 there will be a 65.3% increase in costs due to CVD.

Figure 3. Prevalence of Cardiovascular Disease Among, South Dakota Adults



(BRFSS 2015)

According to Figure 3, the prevalence of heart disease and heart attack were very similar in 2015 with 4.8% and 4.7% of the adult population having experienced either respective disease. That amounts to 30,415 people affected by heart disease and approximately the same number affected by heart attacks. Since 2011, the prevalence of strokes has been virtually unchanged. In 2015, 2.6% or 17,000 adults had ever experienced a stroke. Similar rates were seen among males (2.8%) and females (2.7%) and among American Indians (2.8%) and white (2.8%).

Males were more likely than females to experience a heart attack (6.3% vs. 3.4%) or heart disease (5.3% vs. 3.6%) in South Dakota. Among American Indians, the prevalence of heart attack was 6.2% and among the white population it was 4.9%. Virtually no difference was seen by race among heart disease prevalence, 4.6% among whites and 4.3% among Native Americans (BRFSS 2015).

Collaborative Planning Process

Key Informant Interviews

In collaboration with the South Dakota Department of Health Heart Disease and Stroke Prevention Program, the Emory Centers for Training and Technical Assistance (Emory Centers) initiated a process of discovery to set the stage for a one and a half day strategic planning session in July 2016. The Emory Centers worked with a planning team from the Cardiovascular Collaborative to compile a list of 12 opinion leaders to participate in key informant interviews. Ten opinion leaders participated in the key informant interviews, which were held between March 31 and April 7, 2016.

1. What would you like to see accomplished to reduce death and disability from heart disease and stroke in the next one to five years?
2. What are two or three greatest assets/strengths that can contribute to achieving these priorities?
3. What are some barriers to achieving these priorities (internal challenges, external challenges)?
4. What needs to happen to successfully achieve these priorities?
5. Is there anything else you would like to tell us?

Name	Organization
Holly Arends	Great Plains Quality Innovation Network
Kevin Atkins	Dakota State University/SD Regional Extension Center (HealthPOINT)
Mandi Atkins	South Dakota Health Link
Mark East	South Dakota State Medical Association
Colette Hesla	Community Healthcare Association of the Dakotas (CHAD)
Halley Lee	Department of Health, Office of Rural Health
Marty Link	Department of Health, Office of Rural Health
Megan Myers	American Heart Association
Pamela Schochenmaier	Department of Health, Heart Disease and Stroke Prevention Program
Jason Wickersham, MD	Avera St. Benedict

Common themes were identified within the responses to each interview question. Two primary strategic goals were identified by the majority of the participants in the key informant interviews:

- Improve data collection, analysis and application for quality improvement
- Address the needs for heart disease and stroke services in rural South Dakota

Three other goals were also identified:

- Coordinate and improve continuum of care for heart disease and stroke
- Address physician needs for quality improvement
- Improve individuals' knowledge and commitment to heart healthy lifestyles

To achieve these goals, the Cardiovascular Collaborative has many assets on which to build, namely:

- A history of collaboration and good relationships
- Agencies committed to data collection, analysis and quality care
- Successful heart and stroke-related programs

Some challenges were also identified:

- Limited financial and manpower resources
- Need for additional engaged community-level partners
- Need for a leader or champion who can be relied on to keep the progress moving forward
- Accountability of people and or agencies for their contributions
- Ongoing monitoring of, and response to, needs as the plan is implemented

Based on the interview feedback, there is an eagerness to work collaboratively on an actionable plan for South Dakota cardiovascular care. This willingness was balanced by a notable concern for the capacity of Cardiovascular Collaborative partners to develop and address statewide strategies, specifically related to securing long term infrastructure support.

Stakeholder Surveys

An electronic survey was sent to 90 stakeholders across the state who represented all aspects of the continuum of care. The survey was conducted from June 9 to June 30, 2016. The purpose of the stakeholder survey was to identify heart disease and stroke priorities in South Dakota. The survey was developed by the South Dakota DOH Office of Chronic Disease Prevention and Health Promotion with support from the Emory Centers for Training and Technical Assistance (Emory Centers). Thirty-five stakeholders responded to the survey for a response rate of 39%.

For each goal area, the survey listed several actions and asked respondents to rank which should be given priority over the next five years. The top priorities for each goal area are listed below.

Goal 1 Priorities [Improve Data Collection]

- Determine where more data is needed to improve quality of care along the entire continuum of care
- Coordinate and combine data from multiple sources to determine best practices
- Support physician use of electronic data for detection, tracking, treatment and follow-up care
- Provide aggregated data in user friendly reports; analyze and recommend process for improved patient care

Goal 2 Priorities [Priority Populations]

- EMS ambulance services in rural areas
- Address problems of dwindling volunteer EMS providers
- Improve training and communications with volunteer workforce
- Innovative strategies to sustain EMS services
- Utilize CHWs or similar people in the community to increase community-clinical linkages, as shown to improve services among underserved populations
- Provide outreach services in workplaces in rural communities (hypertension screening, risk factor education, etc.)

Goal 3 Priorities [Continuum of Care]

- Improve patient self-management and engagement in their own care
- Improve coordination and information sharing between major health care systems in South Dakota
- Engage other members of healthcare team (nurses, pharmacists, dietitians, health educators, front desk staff, etc.) in patient care; this is known as team-based care

Goal 4 Priorities [Prevention & Management]

- Promote healthy communities that focus on prevention and lifestyle interventions such as Chronic Disease Self-Management, cardiac ready communities, CPR training, AED placement and training, healthy eating and working, physical activity, etc.
- Engage communities in youth-focused healthy lifestyle programs that encourage healthy eating and physical activity and tobacco prevention
- Form or expand community coalitions to address risk factors for cardiac disease such as obesity, tobacco use, sedentary lifestyle, high blood pressure, etc.

Through the survey, important challenges were also identified:

- Lack of data
- Consistency in practice among health care systems
- Access to health care (especially in rural areas)
- Lack of education
- Managing risk factors

These results were presented at the in-person planning meeting in July 2016 to help inform the development of the strategic plan.

In-Person Planning Meeting (July 2016)

In July 2016, the Cardiovascular Collaborative met in-person for a one-day strategic planning session. The purpose of the strategic planning session was for key stakeholders to arrive at a consensus on an achievable, evidence-based statewide plan that is inclusive of many heart disease and stroke-related activities conducted by a broad range of partners at the state and community levels.

Prior to the one-day session, a small group of 12 members, the Cardiovascular Collaborative Leadership Team, met on the evening on July 12 to review and refine the vision and mission statements of the Cardiovascular Collaborative. On July 13, the full Cardiovascular Collaborative of 22 members met to begin developing the 2017-2021 strategic plan for heart disease and stroke in South Dakota. See Table 2 for a list of attendees.

The meeting began with a welcome and introductions from Pamela Schochenmaier (South Dakota Department of Health) and Megan Myers (American Heart Association), the co-chairs of the Cardiovascular Collaborative. Colleen Winter, Family and Community Health Division Director of the South Dakota Department of Health, also provided an overview of the 2015-2020 DOH Strategic Plan. Linelle Blais, Madeleine Solomon and Mallory Stasko from the Emory Centers for Training and Technical Assistance facilitated the meeting.

The stage was set by giving background information on the following topics: 1) results from key informant interviews, 2) results from stakeholder surveys, 3) key indicators and demographic data and 4) policy updates.

Next, consensus was reached on the following Guiding Principles:

- Focus on the good of the people of South Dakota; use a population approach
- Use consensus process (no winners or losers)
- Work toward realistic and achievable goals
- Be proactive and future-focused
- Include all viewpoints
- Everyone participates
- Stay focused on the goals
- Respect different roles and perspectives, don't take things personally, everyone is valued

After that, the group reviewed and came to consensus on the mission statement that was created by the Leadership Team the previous evening.

Next, everyone divided into small groups, one group per goal area, to refine the goal statement, create measurable objectives and create strategies to achieve the objectives. After each group had written their goal, objectives and strategies, the groups rotated around the room and provided additional feedback and suggestions on the strategies of each goal area. The meeting concluded with a discussion of next steps.

Table 2: July 2016 Meeting Attendees by Goal Area

Goal 1	Goal 2	Goal 3	Goal 4
Ashley Miller*	Kiley Hump*	Megan Myers*	Katie Hill*
Kevin Atkins*	Colette Hesla*	Rebecca Baird	Cole Hunter
Dan Friedrich	Holly Arends*	Marty Link*	Mary Michaels
Mandi Atkins*	Jessica Roskens	Mark East*	Mindi Smith
Stan Kogan		Dr. Steve Schroeder	Colleen Winter
Kristen Bunt		Halley Lee*	Pamela Schochenmaier*

*Indicates member of Leadership Team

Monthly Meetings with the Cardiovascular Collaborative Leadership Team

The Cardiovascular Collaborative Leadership Team met monthly to help plan and prepare for the in-person meeting in July 2016, revise and complete the one pager of the strategic plan and prepare for the next in-person meeting in March 2017. The Leadership Team was instrumental in refining the objectives that were set at the July 2016 meeting and in identifying priority strategies to work on at the March 2017 meeting. The Leadership Team also helped identify additional stakeholders to invite to join the Cardiovascular Collaborative and attend the March 2017 meeting who would help the Collaborative take action on the priority strategies.

Strategy Prioritization Survey

An online survey was conducted October 20 – November 3, 2016 to gather input from the Cardiovascular Collaborative Leadership Team on which strategies to prioritize in Year 1 of implementing the strategic plan. The survey was sent to 12 members of the Leadership Team and seven responded for a response rate of 58%.

For each goal area, respondents were asked to rate each strategy first on a five point scale for impact (no impact to high impact) then on how long it would take to accomplish the strategy (within the first year, by second year, by third year, by fourth year and by fifth year). See Appendix B for the results.

The data were compiled to show the strategies organized by impact (high impact, substantial impact, some impact, a little impact) then coded for year to complete (Year 1, Year 2, Year 3, Year 4+) and were presented to the Cardiovascular Collaborative Leadership Team during their November call. From this analysis, six priorities emerged (see Appendix B). During the call, the group reviewed the data and came to consensus on four priority strategies.

Priority Strategies for Year 1:

Goal 1: Improve Data Collection
Explore a process to collect, analyze and benchmark cardiovascular indicators available from the HIE and other data sources.

Goal 2: Priority Populations
Promote the different models of team-based, patient-centered care in South Dakota (health cooperative clinic, health homes, PCMH).

Goal 3: Continuum of Care
Develop pilot program for cardiac ready communities.

Goal 4: Prevention & Management
Encourage the implementation quality improvement processes in health systems.

These strategies will be the focus of the work of the Cardiovascular Collaborative in Year 1.

Next Steps

The next step in this collaborative action planning process is to bring together additional diverse stake-holders from around the state to help the Collaborative take action on priority strategies. This in-person meeting will take place March 2017 in Chamberlain, SD. At this meeting, members of each goal area group will create an action plan for accomplishing the priority strategy in Year 1. This will guide the work for this year. The group will meet again in 2018 to review and celebrate accomplishments, assess the current reality and create new action plans around priorities for Year 2.

The Strategic Plan

Cardiovascular Collaborative Vision:
Healthy People, Healthy Communities, Healthy South Dakota

Cardiovascular Collaborative Mission:
Improve quality of life of all South Dakotans through prevention and control of heart disease and stroke.

The four goals of the South Dakota Cardiovascular Collaborative Strategic Plan are:

Goal I: **Drive policy and population outcomes through improved data collection and analysis for heart disease and stroke.**

Goal II: **Address prevention and treatment needs of priority populations in South Dakota for heart disease and stroke.**

Goal III: **Coordinate and improve continuum of care for heart disease and stroke.**

Goal IV: **Enhance prevention and management of heart disease and stroke.**

For each of these goals, the collaborative planning process described above has resulted in:

- Measurable objectives to be achieved by 2021 that represent progress toward accomplishing the goal
- Priority strategies to achieve the objectives

The following section shows each goal aligned with its corresponding objectives and strategies. While each strategy aligns with objectives within that goal area, many of the strategies transcend goal areas. In other words, performing some of the activities can address objectives in more than one goal area.

Goal 1: Improve Data Collection

Goal I: Drive policy and population outcomes through improved data collection and analysis for heart disease and stroke.	
Objective I.A.	Identify and track data to support at least one heart disease and stroke policy change or recommendation by 2021.
Objective I.B.	Increase input into at least 4 data collection tools by organizations and/or individuals by 10% by 2021.
Strategies	1. Explore a process to identify and track cardiovascular indicators available from the HIE (Health Information Exchange) and other nationally recognized data sources. 2. Convene priority stakeholders to identify potential for policy action, i.e. potential legislation, to support the use of HIE. 3. Encourage providers who have access to HIE to contribute data to the system. 4. Educate members of the HIE to help them more fully utilize the services and incorporate health information technology into workflows. 5. Develop a process to disseminate data to stakeholders.

Goal II: Priority Populations

Goal II: Address prevention and treatment needs of priority populations in South Dakota for heart disease and stroke.	
Objective II.A.	Increase the number of EMTs in South Dakota from 3,281 EMTs in 2016 to 3,850 EMTs by 2021.
Objective II.B.	Decrease the age-adjusted death rate due to heart disease in the American Indian population from 212.5 per 100,000 to 202.0 per 100,000 by 2021.
Objective II.C.	Decrease the age-adjusted death rate due to stroke in the American Indian population from 48.5 per 100,000 to 46 per 100,000 by 2021.
Strategies	1. Promote the different models of team-based, patient-centered care (health cooperative clinic, health homes, patient-centered medical home). 2. Support policies that increase access to heart disease and stroke care for priority populations. 3. Improve collaboration with tribal communities. 4. Maximize community-clinical linkages (e.g. CHW, different sectors). 5. Explore innovative strategies to sustain EMS services (ex: funding, training).

Goal III: Continuum of Care

Goal III: Coordinate and improve continuum of care for heart disease and stroke.	
Objective III.A.	Decrease emergency response times by decreasing average ambulance chute times* from 7.5 minutes to 6.5 minutes by 2021.
Objective III.B.	Reduce 30-day readmission rate for heart disease and stroke from 6.09% to 5.9% by 2021.
Strategies	1. Develop pilot program for cardiac ready communities. 2. Ensure utilization of community-based resources and programs such as Mission: Lifeline and LUCAS for EMS services. 3. Engage non-physician providers in team-based approach to care. 4. Utilize results of needs assessment to address infrastructure and sustainability of EMS.

*Chute time is a measurement of time from the notification of the crew until the ambulance begins moving toward the emergency scene. A current analysis of EMS chute times showed an average of 7.5 minutes for a 911 response. EMS directors from 130 ground and air licensed ambulance services in SD were surveyed in the summer of 2016. Out of the 130 services, 76% reported they track and measure chute times while 24% report they did not. To effectively increase awareness of and reduce chute times by 2021, the EMS Program will focus strategies on increasing the awareness of monitoring chute times locally. Of course, many other contributing factors pay a role in increased chute times, volunteerism plays the most significant factor.

Goal IV: Prevention & Management

Goal IV: Enhance prevention and management of heart disease and stroke.	
Objective IV.A.	Decrease prevalence of heart attack from 4.7% (2015) to 4.45% (5% decrease) by 2021.
Objective IV.B.	Decrease prevalence of stroke from 2.6% (2015) to 2.47% (5% decrease) by 2021.
Strategies	1. Encourage the implementation of quality improvement processes in health systems. 2. Expand prevention and lifestyle interventions in communities and for all ages across the lifespan. 3. Promote patient-centered disease management that engages patient and family in their own care and links them to community resources. 4. Promote awareness, detection and management of high blood pressure (clinical innovations, team-based care and self-monitoring of blood pressure).

Appendix A: Acknowledgements

The South Dakota Department of Health, Heart Disease and Stroke Prevention Program and the American Heart Association led and facilitated the development of this plan in collaboration with the following partners:

Holly Arends, Great Plains Quality Innovation Network
Kevin Atkins, Dakota State University/SD Regional Extension Center (HealthPOINT)
Mandi Atkins, South Dakota Health Link
Rebecca Baird, South Dakota Department of Health, Office of Rural Health
Kristen Bunt, South Dakota Association of Healthcare Organizations
Stacie Davis, Dakota State University
Mark East, South Dakota State Medical Association
Dan Friedrich, Dakota State University/SD Regional Extension Center (HealthPOINT)
Colette Hesla, Community Healthcare Association of the Dakotas (CHAD)
Katie Hill, South Dakota Department of Health, Chronic Disease Prevention and Health Promotion
Kiley Hump, South Dakota Department of Health, Chronic Disease Prevention and Health Promotion
Cole Hunter, Great Plains Tribal Chairmen's Health Board
Amanda Keefe, Urban Indian Health
Stan Kogan, Sioux Falls Health Department
Halley Lee, South Dakota Department of Health, Office of Rural Health
Marty Link, South Dakota Department of Health, Office of Rural Health (EMS)
Mary Michaels, Sioux Falls Health Department
Ashley Miller, South Dakota Department of Health, Chronic Disease Prevention and Health Promotion
Gary Myers, American Heart Association
Megan Myers, American Heart Association
Jessica Roskens, Sanford Health
Pamela Schochenmaier, South Dakota Department of Health, Heart Disease and Stroke Prevention
Dr. Steve Schroeder, South Dakota Foundation for Medical Care/Quality Innovation Network
Mindi Smith, Sanford Health
Dr. Jason Wickersham, Avera St. Benedict
Colleen Winter, South Dakota Department of Health, Family & Community Health

Thank you for your contributions to the plan!

Appendix B: Strategies used in Strategy Prioritization Survey

(Oct/Nov 2016)

For each goal area, survey respondents were asked to rate each strategy first on a five point scale for impact (no impact to high impact) then on how long it would take to accomplish the strategy. The data were compiled to show the strategies organized by impact (high impact, substantial impact, some impact, a little impact) then coded for year to complete (Year 1, Year 2, Year 3, Year 4+). From this analysis, the six bolded strategies emerged as a "quick win" from the Strategy Prioritization Survey.

Impact + Year - Priorities for Consideration

	A Little Impact 2.71 – 2.95	**High Impact** 3.45 – 3.71
	1b (2.86) 2a (2.71) 3a (2.86)	4b (3.57)* 4d (3.57)* 1c (3.71)* 2c (3.57)* 2d (3.57) 2e (3.57)
	1a (3.14) 2b (3.14) 4a (3.14) 3b (3.14) 3c (3.14)	1d (3.43)* 3d (3.43)* 1e (3.43) 4c (3.43)
	2.95 – 3.2 **Some Impact**	3.2 – 3.45 **Substantial Impact**

Year 1
Year 2
Year 3
Year 4+

1a. Encourage providers who have access to HIE (Health Information Exchange) to enter data into the system.
1b. Convene priority stakeholders to identify potential for policy action, i.e. potential legislation, to support the use of HIE.
1c. Explore a process to collect, analyze and benchmark cardiovascular indicators available from the HIE and other data sources.
1d. Educate members of the HIE to help them more fully utilize the services and incorporate health information technology into workflows.
1e. Develop a process to disseminate data to stakeholders.

2a. Improve collaboration with tribal communities.
2b. Maximize community-clinical linkages (e.g. CHW, different sectors).
2c. Promote the different models of team-based, patient-centered care in South Dakota (health cooperative clinic, health homes, PCMH).
2d. Support policies that increase access to heart disease and stroke care for priority populations.
2e. Explore innovative strategies to sustain EMS services (ex: funding, training).

3a. Engage non-physician providers in team-based approach to care.
3b. Utilize results of needs assessment to address infrastructure and sustainability of EMS.
3c. Develop pilot program for cardiac ready communities.
3d. Ensure utilization of community-based resources and programs such as Mission: Lifeline and LUCAS for EMS services.

4a. Expand prevention and lifestyle interventions in communities and for all ages across the lifespan.
4b. Encourage the implementation quality improvement processes in health systems.
4c. Promote patient-centered disease management that engages patient and family in their own care and links them to community resources.
4d. Promote awareness, detection and management of high blood pressure (clinical innovations, team-based care and self-monitoring of blood pressure).

For more information visit:

DOH.SD.GOV/DISEASES/CHRONIC/HEARTDISEASE