



IMPROVING CARDIOVASCULAR HEALTHCARE



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Why is Quality Improvement in Cardiovascular Care Important?

1. The current state of cardiovascular disease is not where it should be.

Data collected by a variety of organizations - including the Centers for Disease Control and Prevention, American Heart Association / American Stroke Association, and the Institute for Healthcare Improvement - regarding the current state of heart disease and stroke suggest there is significant room for improvement.

Some key statistics about cardiovascular disease are:

- About **630,000 people** die of heart disease in the United States every year – that's **1 in every 4 deaths**, making it the leading cause of death by disease in the US.¹
- Heart disease is the leading cause of death for both men and women. **More than half** of the deaths due to heart disease in 2015 were in men.¹
- In the United States, someone has a heart attack **every 40 seconds**. Each minute, more than one person in the United States dies from a heart disease-related event.²
- Heart disease is the leading cause of death for people of most ethnicities in the United States, including African Americans, Hispanics, and Whites. For American Indians or Alaska Natives and Asians or Pacific Islanders, heart disease is second only to cancer.³
- Coronary Heart Disease (CHD) is the most common type of heart disease, killing over **366,000 people** annually.¹
- Every year about **720,000 Americans** have a heart attack for the first time. Another 335,000 happen in people who have already had a heart attack.⁴
- Heart disease costs the United States about **\$200 billion** each year.¹ This total includes the cost of health care services, medications, and lost productivity.¹

Cardiovascular disease is also a large health issue in South Dakota.

- Heart disease was the leading cause of death from 1994-2016, with the exception of 2010-2011 when cancer was the leading cause. In 2017 it was the second leading cause of death. In 2017, heart disease accounted for **1,708 deaths or 21.4% of deaths**.⁵
- Stroke was the sixth leading cause of death in 2017, accounting for **410 or 5.1% of deaths**. Since 2006, stroke fluctuated between the fourth and sixth leading cause of death.⁵
- In 2010, the estimated annual cost of cardiovascular diseases, which included diseases of the heart, stroke and an estimate of hypertension costs as well, was **\$981 million** in South Dakota. This estimate will continue to increase as the population in SD continues to age.⁶

2. By improving outcomes, we can reduce total cost of care.

As a leading cause of death and disease burden, cardiovascular disease is a major contributor to health care spending nationally. However, with improvements in prevention and treatment the total cost of care related to cardiovascular disease has actually decreased.⁷

3. There are established scientific, evidence-based best practice guidelines and pathways as well as scientific based educational offerings.

The American College of Cardiology, American Heart Association and the American Association of Family Practice are well-regarded resources.^{8,9,10}

REFERENCES

¹ Centers for Disease Control and Prevention. Underlying Cause of Death 1999-2013. Retrieved from CDC WONDER Online Database: <https://wonder.cdc.gov/ucd-icd10.html>

Note: Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

² Heron M. Deaths: Leading causes for 2014. National vital statistics reports. 2016;65(5). Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_05.pdf

³ Centers for Disease Control and Prevention. Deaths, percent of total deaths, and death rates for the 15 leading causes of death in 10-year age groups, by race and sex: United States, 2013.

⁴ Benjamin EJ, Virani SSJ, Callaway CW, et al. Heart disease and stroke statistics—2018 update: a report from the American Heart Association. *Circulation*. 2018;137(12):e67-492. DOI: 10.1161/CIR.0000000000000558

⁵ South Dakota Department of Health. Vital Statistics 2015.

⁶ Centers for Disease Control and Prevention. Chronic Disease Cost Calculator Version 2. Retrieved from <https://snaped.fns.usda.gov/library/materials/chronic-disease-cost-calculator-version-2>

⁷ Kamal R and Sawyer B. (2017). What do we know about cardiovascular disease spending and outcomes in the United States? Retrieved from <https://www.healthsystemtracker.org/chart-collection/know-cardiovascular-disease-spending-outcomes-united-states/#item-start>

⁸ American Academy of Family Physicians. (2019). Cardiovascular Clinical Recommendations & Guidelines. Retrieved from <https://www.aafp.org/patient-care/browse/topics.tag-cardiovascular.html>

⁹ American College of Cardiology. (2019). Tools and Practice Support. Retrieved from <https://www.acc.org/tools-and-practice-support/expert-consensus-decision-pathways>

¹⁰ American College of Cardiology. (2019). Clinical Topics. Retrieved from <https://www.acc.org/clinical-topics>

RESOURCES

The current state of heart disease and stroke.

Facts, studies, and findings of the current state of heart disease and stroke are listed below:

Heart Disease Facts

From the Centers for Disease Control and Prevention

<https://www.cdc.gov/heartdisease/facts.htm>

This page provides national data about heart disease and its risk factors.

The Burden of Cardiovascular Diseases Among US States, 1990-2016

A report from the Global Burden of Cardiovascular Diseases Collaboration

<https://www.ncbi.nlm.nih.gov/pubmed/29641820>

This publication in the Journal of American Medical Association – Cardiology concludes that large disparities in total burden of cardiovascular disease (CVD) persist between US states despite marked improvements in CVD burden. Differences in CVD burden are largely attributable to modifiable risk exposures.

Advocacy Fact Sheets

From the American Heart Association

<https://www.heart.org/en/about-us/policy-research/advocacy-fact-sheets>

This page contains a repository of fact sheets on a variety of cardiovascular and public health topics.

Heart Disease and Stroke Statistics At-a-Glance

From the American Heart Association

<https://www.heart.org/en/about-us/heart-and-stroke-association-statistics>

This resource provides key statistics about heart disease, stroke, other cardiovascular diseases, and their risk factors.

Heart Disease and Stroke Statistics—2018 Update

A report from the American Heart Association

<https://www.ahajournals.org/doi/full/10.1161/CIR.0000000000000558>

This publication in Circulation documents statistics related to heart disease, stroke, and the cardiovascular risk factors, including core health behaviors and health factors that contribute to cardiovascular health.

Reducing the cost of care and improving outcomes.

Resources, publications, and information about how to prevent cardiovascular disease are listed below:

Reducing the Risk of Heart Disease and Stroke: A Six-Step Guide for Employers

From the Centers for Disease Control and Prevention

https://www.cdc.gov/dhdsp/pubs/docs/six_step_guide.pdf

This guide explains how to reduce costs by investing in worksite health promotion and negotiating with health plans to cover preventive services. It also gives tips for getting started.

Successful Business Strategies to Prevent Heart Disease and Stroke: A Toolkit Guide for Creating Heart Healthy and Stroke Free Worksites

From the Centers for Disease Control and Prevention

<https://www.cdc.gov/dhdsp/pubs/docs/toolkit.pdf>

This toolkit provides information and materials to motivate employers to provide prevention health benefits and services for their employees and establish effective worksite programs to prevent heart disease and stroke.

Long-Term Outcomes of a Cardiovascular and Diabetes Risk-Reduction Program Initiated by a Self-Insured Employer

White, N.D., Skrabal, M.Z., Lipari, L., Lenz, T.L., Skradski, J.J. (2018). Long-Term Outcomes of a Cardiovascular and Diabetes Risk-Reduction Program Initiated by a Self-Insured Employer. *Am Health Drug Benefit*,11(4):177-183.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6207306/>

This study published in the journal American Health & Drug Benefits concludes that sustained participation in an employer-sponsored disease management program can lead to significant changes in employees' health, well-being, and health-related costs.

An Ounce of Prevention...The Value of Prevention for Cardiovascular Disease

From the American Heart Association and American Stroke Association

https://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_474332.pdf

This fact sheet provides information to support the case for specific system and environmental changes that promote cardiovascular health.

Heart Health in the Workplace

Paul, P.E., et al (2016). The Art of Health Promotion – ideas for improving health outcomes. American Journal of Health Promotion, 30(7):563-582.

<http://journals.sagepub.com/doi/pdf/10.1177/0890117116668866>

This issue of The Art of Health Promotion (from the American Journal of Health Promotion) describes “Life’s Simple 7” and the American Heart Association’s plan to work with workplaces to improve heart health.

Best practice guidelines.

These resources are regularly updated as more is learned about best practices for managing cardiovascular disease:

Best Practices Guide for CVD Prevention

From the Centers for Disease Control and Prevention

https://www.cdc.gov/dhdsp/pubs/docs/Best_Practices_Guide_intro_508.pdf

This guide highlights effective strategies for widespread control of hypertension and hyperlipidemia, focusing on health care systems interventions and community programs linked to clinical services.

Guidelines and Clinical Documents

From the American College of Cardiology

<https://www.acc.org/guidelines>

This page contains a repository of guidelines on a variety of cardiovascular topics.

Focus on Quality

From the American Heart Association

<http://www.heart.org/en/professional/quality-improvement>

This page has sets of guidelines for creating programs to improve care related to several cardiovascular conditions.

Heart Risk Calculator

From Ahead Research, Inc.

<http://www.cvriskcalculator.com>

This online calculator calculates 10-year risk of heart disease or stroke using the Atherosclerotic Cardiovascular Disease (ASCVD) algorithm.