History

By the early 1980s, scientific research clearly showed that personal health behaviors played a major role in premature morbidity and mortality. The National Center for Health Statistics (NCHS) periodically used surveys to obtain national estimates of health risk behaviors among U.S. adult populations, but these data were not available on a state-specific basis. This deficiency was critical for state health agencies that have the primary role of targeting resources to reduce behavioral risks and their consequent illnesses.

About the same time as personal health behaviors received wider recognition in relation to chronic disease, morbidity and mortality, telephone surveys emerged as an acceptable method for determining the prevalence of many health risk behaviors among populations. In addition to their cost advantages, telephone surveys were especially desirable at the state and local level, where the necessary abilities and resources for conducting area probability sampling for in-person household interviews were likely unavailable.

As a result, surveys were developed and conducted to monitor state-level prevalence of the major behavioral risks associated with premature morbidity and mortality. The basic philosophy was to collect data on actual behaviors, rather than on attitudes or knowledge, which would be especially useful for planning, initiating, supporting, and evaluating health promotion and disease prevention programs. Data from the questionnaire provided health departments, public health offices, and policymakers with necessary behavioral information. When combined with mortality and morbidity statistics, these data enable public health officials to establish policies and priorities and to initiate and assess health promotion strategies.

In 1984, the creation of the Behavioral Risk Factor Surveillance System (BRFSS) began to collect prevalence data on risk behaviors and preventative health practices that affect health status. The Centers for Disease Control and Prevention (CDC) developed a standard core questionnaire for states to use to provide data that would be comparable with all states. Individual states could add questions to gather additional information on topics of specific interest to them. The South Dakota Department of Health (DOH) started the BRFSS in South Dakota in 1987 with the help of the CDC. By 1994, all states, the District of Columbia, and three territories were participating in the BRFSS.

Purpose

- The main purpose of the BRFSS at the state level is for program support within the DOH. Every year, various health programs collaborate and plan the optional content of the survey to gather useful data. They are then able to use those data to determine priority health issues and identify populations at highest risk. This leads to effective program planning, initiation, support, and evaluation of health promotion and disease prevention programs.

- The DOH also uses BRFSS data to increase awareness and educate the public, the health community, and policymakers about health matters through responses to media inquiries, reports, and publications. Private and public health officials throughout South Dakota receive a copy of this report to aid program efforts in influencing public health issues.

In December 2019, the South Dakota Department of Health released a strategic plan for the next five years. The plan includes goals that will be measured by key performance indicators. Two of these performance indicators use BRFSS data. They include:

- Increase the percentage of those without diabetes who have had a test for blood sugar or diabetes within the past 3 years from 51.4% in 2018 to 59% by 2025.

- Increase the percentage of adults age 50-75 who are up-to-date with recommended colorectal cancer screening from 69% in 2018 to 80% by 2025

In subsequent reports we will be highlighting these areas and tracking the progress toward 2025.

Report Description

This report includes several sections covering major indicators from the survey. The DOH has organized the sections in the following manner:

- A definition of the indicator is given.

- The prevalence of the indicator in South Dakota is given and the prevalence in the United States and D.C. is given if it is available.

- A time trend analysis for each indicator is given as far back as comparable data have been gathered. This includes a dashed trend line as well as the actual data results for each available year. Multiple years of data are very valuable not only for analyzing the trend of the indicator, but also help to show the variability in some indicators.

- A detailed demographic breakdown is included. This table is important because it can identify demographic subgroups at highest risk.

- Text explaining any demographic differences or associations with the given indicator is included. When a prevalence is indicated to be significantly different for different demographics, it simply means the 95% confidence intervals for the given indicators do not overlap.

- Any additional data gathered on the given topic will then follow.

Table 1, on the next page, shows the estimated risk factor rates and the estimated number of persons in South Dakota who are at risk for the selected risk factors. The DOH based the estimated population at risk on 2018 population estimates from the U. S. Census Bureau.

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Table 1
Estimated Percentage and Number of Persons at Risk Due to Selected Factors (Ages 18 and Older Unless Otherwise Specified): South Dakota BRFSS, 2018

Topic	Estimated %	Estimated Population
Body Mass Index - Overweight (BMI 25.0+)	68%	451,000
Body Mass Index - Obese (BMI 30.0+)	30%	200,000
Body Mass Index - Severely Obese (BMI 35.0+)	13%	84,000
Body Mass Index - Morbidly Obese (BMI 40.0+)	5%	32,000
Leisure Time Physical Activity	76%	505,000
Cigarette Smoking	19%	126,000
Smokeless Tobacco Use	7%	46,000
E-Cigarette Use	5%	31,000
Tobacco Use (Cigarette, Smokeless, or E-Cig)	28%	188,000
Diabetes	9%	62,000
No Health Insurance (18-64 Years Old)	10%	51,000
No Health Insurance (0-17 Years Old)	3%	6,000
No Health Insurance (0-64 Years Old)	8%	57,000
Routine Check-Up in Past Two Years	86%	571,000
Mammogram in Past 2 years - 40-74 years old	79%	136,000
Met Cervical Cancer Screening Recommendations (21-65 years old)	77%	185,000
Met Colorectal Cancer Screening Recommendations (50-75 years old)	69%	178,000
PSA Test within the past 2 years - 40+	34%	68,000
Flu Shot in Past 12 months (65+ Years Old)	51%	75,000
Ever Had a Pneumonia Shot (65+ Years Old)	77%	113,000
Been to the Dentist in the Past Year	68%	452,000
Ever Had a Heart Attack	5%	34,000
Have Angina or Coronary Heart Disease	4%	29,000
Ever Had a Stroke	3%	18,000
Ever Been Diagnosed with Cancer (Excluding Skin Cancer)	8%	52,000
Ever Been Diagnosed with Skin Cancer	6%	43,000
Use Sun Block Most of the Time	24%	162,000
Current Asthma	8%	52,000
Arthritis	25%	167,000
Chronic Obstructive Pulmonary Disease (COPD)	5%	31,000
Depressive Disorder	16%	108,000
Kidney Disease	3%	18,000
Severe Vision Impairment	4%	28,000
Hearing Difficulty	8%	50,000
Always or Almost Always Use Seat Belt	85%	565,000
Less Than Six Hours of Sleep per Day	8%	56,000
Drank Alcohol in Past 30 Days	58%	385,000
Binge Drinking	21%	141,000
Heavy Drinking	9%	57,000
Taken Prescription Pain Medication in Past 12 Months	16%	104,000
One or More Adverse Childhood Experiences	49%	325,000
Five or More Adverse Childhood Experiences	9%	62,000
Fair/Poor Health Status	15%	97,000
Physical Health Not Good for 30 of the Past 30 days	5%	35,000
Mental Health Not Good for 20-30 Days of the Past 30 days	6%	43,000
Usual Activities Unattainable for 10-30 Days of the Past 30 Days	7%	46,000
Injured in a Fall - 45+ years old (Last 12 months)	8%	30,000
Ever Been Tested for HIV (18-64 Years Old)	27%	141,000

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2018

Table 2 shows the topics covered on South Dakota's BRFSS each year from 2009 through 2018.

Table 2 Topics Covered on the South Dakota BRFSS, 2009-2018										
Topics	**Year**									
	2018	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**
Advanced Directive		X		X						X
Adverse Childhood Experiences (ACE)	X	X								
Alcohol Consumption	X	X	X	X	X	X	X	X	X	X
Arthritis	X	X	X	X	X	X	X	X		X
Asthma	X	X	X	X	X	X	X	X	X	X
Birth Control		X								
Body Mass Index		X	X	X	X	X	X	X	X	X
Breast Cancer Screening	X		X		X		X		X	
Cancer	X	X	X	X	X	X	X	X	X	X
Cancer Survivorship	X	X	X	X						
Cardiovascular Disease	X	X	X	X	X	X	X	X	X	X
Care Giving			X							X
Cervical Cancer Screening	X		X		X		X		X	
Cholesterol Awareness		X		X		X		X		X
Chronic Obstructive Pulmonary Disease (COPD)	X	X	X	X	X	X	X	X		
Cognitive Impairment				X	X	X				
Colorectal Cancer Screening	X		X		X		X		X	
Depressive Disorder	X	X	X	X	X	X	X	X		
Diabetes	X	X	X	X	X	X	X	X	X	X
Diabetes - Pre	X	X	X	X	X	X	X	X	X	X
Disability (Physical, Mental, or Emotional)				X	X	X	X	X	X	X
Emotional Support & Life Satisfaction									X	X
Falls	X		X		X		X		X	
Flu Shots	X	X	X	X	X	X	X	X	X	X
Health Care Coverage and Access	X	X	X	X	X	X	X	X	X	X
Health Care Coverage - Children	X	X	X	X	X	X	X	X	X	X
Health Status / Healthy Days	X	X	X	X	X	X	X	X	X	X
"Healthy South Dakota" - Name Recognition							X		X	
Hearing Difficulty	X	X	X							
Heart Attack - Knowledge of Signs and Symptoms				X		X		X		X
High Blood Pressure - Prevalence		X		X	X	X	X	X		X
High Blood Pressure - Actions to Control		X			X		X			
HIV/AIDS	X	X	X	X	X	X	X	X	X	X
HPV	X		X							
Immunization - Children									X	
Influenza Like Illness								X		
Influenza - Pandemic										X
Kidney Disease	X	X	X	X	X	X	X	X		
Lung Cancer Screening	X									
Mental Health		X	X							
Nutrition/Fruits & Vegetables		X		X		X		X		X
Oral Health	X		X		X		X		X	
Oral Health - Children		X		X		X		X		X
Physical Activity - Exercise Trips			X	X						
Physical Activity - Hours Sitting per Day			X	X						
Physical Activity - Leisure Time	X	X	X	X	X	X	X	X	X	X
Physical Activity - Type and Amount of Time		X		X		X		X		X
Physical, Mental, or Emotional Limitations				X	X	X				
Pneumonia Shots	X	X	X	X	X	X	X	X	X	X
Prescription Pain Medication	X	X								
Prostate Cancer Screening	X		X		X		X		X	
Salt Related Behavior					X					
Seat Belts	X	X	X	X	X	X	X	X	X	
Sexual Violence					X				X	X
Shingles Shots		X			X					

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Table 2
Topics Covered on the South Dakota BRFSS, 2009-2018

Topics	Year									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Sleep	X		X		X	X			X	X
Special Health Conditions - Children									X	X
Stroke - Signs and Symptoms							X		X	
Substance Abuse		X	X							
Sun Exposure / Skin Cancer	X		X		X		X	X	X	
Sweetened Beverages / Menu Labeling							X	X	X	
Tetanus Shot			X			X				
Tobacco - Cigarette Use	X	X	X	X	X	X	X	X	X	X
Tobacco - E-Cigarette Use	X	X	X							
Tobacco - Quitline Name Recognition			X	X	X	X				
Tobacco - Second Hand Smoke			X	X	X	X	X	X	X	X
Tobacco - Smokeless	X	X	X	X	X	X	X	X	X	X
TV Viewing						X		X		X
Vision Impairment	X	X	X	X	X	X	X	X		
Weight Control								X		X

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2009-2018