“While we have made great strides in reducing the burden of cancer, much work is yet to be done. By forming strong collaborations and partnerships to implement the proven strategies outlined in the SD Cancer Plan, we can decrease the burden of cancer on the people of South Dakota now and for future generations.”

-Kim Malsam-Rysdon, Secretary of Health
South Dakota Department of Health
BACKGROUND

INTRODUCTION
In 2017, 4,740 South Dakotans were diagnosed with reportable cancer, which is about 13 cases of cancer diagnosed every day. Cancer was the leading cause of death in South Dakota in 2017, accounting for one in every four deaths (South Dakota Cancer Registry, 2020). Moreover, the American Cancer Society estimates 42,810 cancer survivors reside in South Dakota (American Cancer Society, 2019). Current cancer risk factor and burden data is available at: https://getscreened.sd.gov/registry/data/.

The South Dakota Cancer Plan 2021-2025 is the result of a collaborative planning process undertaken by the South Dakota Department of Health: South Dakota Comprehensive Cancer Control Program (SD CCCP), South Dakota Cancer Coalition, and other cancer prevention and control stakeholders in South Dakota. Stakeholders were involved in the planning process through stakeholder surveys, a best practice review, key informant interviews, a plan advisory committee, and virtual feedback sessions. Reports outlining these efforts and the key findings can be obtained from the SD CCCP. This is the fourth state cancer plan developed by this diverse statewide group.

HOW TO USE THE PLAN
The SD Cancer Plan provides a framework for action and a collaborative road map for organizations and individuals in all sectors and regions of South Dakota to reduce the burden of cancer. Dedication and collaboration are essential to achieve the goals and objectives identified within the plan. The plan consists of 12 priority areas, which correspond to the six overarching plan goals. To ensure progress, the plan also outlines measurable objectives for each priority area. The plan is intended to reach adolescents and adults across all races and socioeconomic levels, as well as target priority populations who face a disparate proportion of the cancer burden.

The plan focuses on evidence-based strategies but does not include activity level information to ensure the plan remains relevant and adaptable. The plan is designed so that anyone can implement efforts to reduce the burden of cancer in SD. Additionally, the SD Cancer Coalition aims to select approximately three priorities from the SD Cancer Plan to implement on an annual basis and convene task forces to develop detailed action plans to achieve these priorities using the strategies and objectives identified. All stakeholders are invited to join the SD Cancer Coalition in these efforts. More information on the SD Cancer Coalition is available at: cancersd.com.

The SD Cancer Coalition Steering Committee will utilize the approved SD CCCP Implementation Funding Plan, which outlines the protocol for allocating funding for coalition task forces and external funding opportunities, to allocate resources to aid in implementation of the SD Cancer Plan. The Steering Committee will review and update this funding plan on an annual basis. The SD Cancer Plan is a living document and modifications or mid-course revisions to the plan will occur as identified by stakeholders during its implementation. All revisions will first be reviewed and approved by the Steering Committee, as indicated in the bylaws.

EVIDENCE-BASED PRACTICE
Evidence-based guidelines, interventions, and best practices are integrated into the SD Cancer Plan wherever possible to support achievement of long-term health outcomes for cancer prevention and control. Evidence-based strategies are those that have been evaluated and proven to be effective in addressing the problem being targeted. These strategies identify the target populations that have benefited from the
strategy, the conditions under which the strategy works, and sometimes the change mechanisms that account for their effects (Fertman, 2010). A defining characteristic of evidence-based strategies is their use of health theory both in developing the content of the approach and evaluation.

Policy, systems, and environmental change approaches are incorporated into the SD Cancer Plan to ensure cancer prevention and control efforts are long-lasting. The goals, priorities, strategies, and objectives included in the plan are evidence-based approaches designed to encourage change in policies, systems, and/or environments in South Dakota to make the healthy choice, the easy choice. Policy, systems, and environmental changes are key factors in making healthier choices a reality for communities and organizations by addressing the laws, rules, environments, and choices that impact healthy behaviors.

HEALTH EQUITY
The SD Cancer plan was developed and will be implemented through a health equity lens to support achievement of long-term health equity outcomes. The cancer plan advisory committee and coalition members elected to incorporate objectives and strategies focusing on the identified priority populations throughout the plan to more effectively encompass existing disparities in cancer prevention and control to provide an opportunity for everyone to be healthy. This decision was intentionally designed to ensure health equity is addressed within all priorities of the plan. As appropriate, objectives and strategies specific to vulnerable populations within the state are identified. The identified priority populations (American Indians, rural and frontier populations, low socioeconomic status populations, and uninsured/underinsured populations) and associated objectives and strategies were determined based on a thorough review of the available risk factor and disease burden data.

EVALUATION
Evaluation of the SD Cancer Plan is essential to ensure the goals and objectives are met and measurable impact occurs. The SD CCCP is committed to providing stakeholders with an annual evaluation report demonstrating the effectiveness and impact of program activities. Evaluation of the objectives and strategies in the SD Cancer Plan is essential to ensure efforts are directed appropriately, progress is achieved, and no strategies are overlooked. Annual evaluation of the SD CCCP includes tracking of all measurable objectives outlined in the SD Cancer Plan. Indicator data is gathered from a number of sources, including cancer morbidity and mortality data from the South Dakota Cancer Registry, risk behavior data from the South Dakota Behavioral Risk Factor Surveillance System, and survey data collected by the SD DOH Office of Health Statistics, including associated youth surveys. Finally, programs and organizations throughout the state gather information through surveys and studies of sub-populations, graciously sharing this data to promote cancer control efforts in South Dakota. A contracted evaluator conducts ongoing evaluation of the SD Cancer Plan, the SD CCCP, and the SD Cancer Coalition. The SD CCCP evaluation uses program monitoring and key indicator data to measure progress and identify areas for future priority focus. Each year, the SD CCCP publishes a public report outlining progress towards meeting the SD Cancer Plan objectives, which can be found at cancersd.com.
KEY TERMS

**GOALS** are general, “big picture” statements of outcomes a program intends to accomplish to fulfill its mission. In this plan, goals reflect overarching desirable outcomes related to cancer prevention, early detection, treatment, quality of life, health equity, and collaboration.

**HEALTH EQUITY** is achieved when every person has the opportunity to “attain his or her full health potential” and no one is “disadvantaged from achieving this potential because of social position or other socially determined circumstances.” Health inequities are reflected in differences in length of life, quality of life, rates of disease, disability, death, severity of disease, and access to treatment. (CDC, 2020)

**PRIORITIES** reflect the necessary changes that must be made in order for a program to meet its goals. In this plan, priorities reflect the changes that must be made to reduce the burden of cancer in South Dakota.

**OBJECTIVES** are the “big steps” that a program will take to attain its goals and achieve its priorities. Objectives indicate what will be done, not how to make it happen. Objectives are Specific, Measurable, Achievable, Relevant, and Time-bound (SMART).

**STRATEGIES** are the processes that will be undertaken to achieve the identified objectives. To the extent possible, strategies are evidence-based.
**VISION**

Every South Dakotan free from the burden of cancer.

**MISSION**

Working together to reduce cancer incidence and mortality while improving quality of life for cancer survivors.

**GOALS**

1. Prevent cancer among South Dakotans
2. Detect cancer in the earliest stages for all South Dakotans
3. Ensure timely and appropriate access and treatment for all cancer patients in South Dakota
4. Optimize quality of life for South Dakota cancer patients, survivors, and caregivers
5. Promote health equity as it relates to cancer control in South Dakota
6. Support collaboration among stakeholders in South Dakota to reduce duplication and maximize impact

**PRIORITY POPULATIONS**

- American Indians
- Low Socioeconomic Status Populations
- Rural and Frontier Populations
- Uninsured/Underinsured Populations
PRIORITY 1: REDUCE TOBACCO USE AND EXPOSURE

OBJECTIVES:

1.1 Decrease the percentage of tobacco use (cigarettes, cigars, smokeless, and electronic) by 2025.
   1.1.A: High School Students: 30%<sup>1</sup> to 20%
   1.1.B: Adults: 26%<sup>2</sup> to 23%
   1.1.C: American Indian Adults: 47.8%<sup>2</sup> to 43%
   1.1.D: Adult Cancer Survivors: 12.5%<sup>2</sup> to 11.3%
   1.1.E: Adults with an income less than $25,000: 39.5%<sup>2</sup> to 35.5%
   1.1.F: Adults with no insurance: 57.8%<sup>2</sup> to 52%

1.2 Increase the percentage of adults who have been advised by a doctor, nurse, or other health professional to quit smoking in the past 12 months from 59.9%<sup>2</sup> to 76% by 2025.

1.3 Increase the percentage of adults who report smoking is not allowed anywhere in their home from 85.8%<sup>2</sup> to 94% by 2025.

STRATEGIES:

A. Increase referrals to equitable and culturally appropriate evidenced-based tobacco cessation services, such as the South Dakota QuitLine.
B. Advocate for tobacco-free environments.
C. Promote equitable and culturally appropriate evidence-based policy, system, and environmental changes that reduce tobacco use.
D. Support efforts by the SD Tobacco Prevention and Control Program to implement the SD Tobacco Control State Plan to reduce the impact of tobacco use and exposure on cancer risk.

PRIORITY 2: INCREASE HEALTHY, ACTIVE LIFESTYLES

OBJECTIVES:

2.1 Decrease the percentage of adults and school-age children and adolescents who are obese by 2025.
   2.1.A: Adults: 30.2%<sup>2</sup> to 28.6%
   2.1.B: Adults with an income less than $25,000: 35.3%<sup>2</sup> to 33.5%
   2.1.C: School-age children and adolescents: 16.4%<sup>3</sup> to 15.5%

2.2 Increase the percentage of adults who meet the current guideline of 150 minutes of aerobic physical activity per week from 50.8%<sup>2</sup> to 54% by 2025.

STRATEGIES:

A. Implement evidence-based policy, system, and environmental approaches that increase equitable access to healthy and affordable foods and beverages.
B. Promote adoption of healthy community design principles and equitable access to safe places and spaces to be physically active.
C. Engage and support healthcare professionals in counseling and referral of patients on healthy eating and physical activity.
D. Implement school, worksite, and community policies that support healthy, active lifestyles.
E. Encourage cross-collaboration and consistent promotion of the 2018 Physical Activity Guidelines for Americans through equitable platforms.
F. Promote enrollment into evidence-based physical activity programs for priority populations.

G. Support healthy eating and physical activity opportunities among early childhood education and school-aged youth.

H. Implement worksite and community policies that support breastfeeding.

### PRIORITY 3: REDUCE UV RADIATION EXPOSURE

**OBJECTIVES:**

3.1 Increase the percentage of adults and youth in grades 9-12 who always or nearly always wear sunscreen with a SPF of 15 or higher when outside for more than one hour on a sunny day by 2025.

   3.1.A: Adults: 23.5%² to 26%
   3.1.B: Youth in Grades 9-12: 13.9%¹ to 15.3%

3.2 Decrease the percentage of youth in grades 9-12 who used an indoor tanning device during the past 12 months from 9.2%¹ to 8% by 2025.

**STRATEGIES:**

A. Implement educational interventions and equitable and culturally appropriate evidence-based policy, systems, and environmental changes in early childhood education, school, outdoor occupational, and outdoor recreational and tourism settings to promote sun-protective behaviors.

B. Promote educational interventions and equitable evidence-based policy, system, and environmental changes that reduce ultraviolet radiation exposure from tanning beds.

### PRIORITY 4: REDUCE EXPOSURE TO ENVIRONMENTAL CARCINOGENS

**OBJECTIVES:**

4.1 Decrease the age-adjusted lung cancer incidence rate in South Dakota from 58.3⁴ to 56.0 per 100,000 by 2025.

**STRATEGIES:**

A. Educate about radon and other environmental carcinogens, including equitable strategies to reduce exposure.

B. Promote radon testing and mitigation within homes, schools, and worksites.

### PRIORITY 5: INCREASE HPV VACCINATION RATES

**OBJECTIVES:**

5.1 Increase the percentage of adolescent males and females ages 13-17 in South Dakota who are up-to-date on the HPV vaccine series from 49.5%³ to 60% by 2025.

**STRATEGIES:**

A. Implement equitable and culturally appropriate evidence-based policy and system changes, such as client reminder and recall systems, provider assessment and feedback, provider reminders, immunization information systems, reducing barriers to vaccination, and standing orders.

B. Collaborate with schools and universities to provide education and offer equitable and affordable access to the HPV vaccine.

C. Increase public awareness and education.
D. Promote professional education for healthcare providers and dental professionals.

**PRIORITY 6: INCREASE RISK APPROPRIATE SCREENING FOR BREAST CANCER**

**OBJECTIVES:**

6.1 Increase the percentage of women ages 50-74 in South Dakota up-to-date with USPSTF recommended breast cancer screening by 2025.
   - 6.1.A: Women: 82%² to 86%
   - 6.1.B: American Indian Women: 79.7%² to 86%
   - 6.1.C: Women with an income less than $25,000: 67.3%² to 74%

6.2 Decrease the age-adjusted late-stage female breast cancer incidence rate in South Dakota from 38.8⁴ to 35.0 per 100,000 by 2025.
   - 6.2.A: American Indian Women: 54.2⁴ to 48.8 per 100,000

6.3 Decrease the age-adjusted female breast cancer mortality rate in South Dakota from 18.6⁴ to 16.5 per 100,000 by 2025.
   - 6.3.A: American Indian Women: 16.8⁴ to 15 per 100,000

**STRATEGIES:**

A. Implement equitable and culturally appropriate evidence-based policy and system changes, such as client reminders, provider assessment and feedback, and provider reminder and recall systems.

B. Monitor and promote professional education and the use of current screening guideline implementation.

C. Promote the use of culturally appropriate public education, patient navigation, messaging, and health equity strategies.

D. Promote low or no cost screening programs to improve affordability of screening for vulnerable populations.

E. Reduce structural barriers to improve equitable and affordable access to screening for vulnerable populations.

F. Encourage discussion and documentation of family history to inform risk assessment, screening recommendations, and risk-appropriate referral for genetic services.

**PRIORITY 7: REDUCE EXPOSURE TO ENVIRONMENTAL CARCINOGENS**

**OBJECTIVES:**

7.1 Increase the percentage of women ages 21-65 in South Dakota up-to-date with USPSTF recommended cervical cancer screening by 2025.
   - 7.1.A: Women: 80.7%² to 85%
   - 7.1.B: American Indian Women: 91.8%² to 95%
   - 7.1.C: Women with an income less than $25,000: 71%² to 78%

7.2 Decrease the age-adjusted invasive uterine cervical cancer incidence rate in South Dakota from 7.3⁴ to 6.0 per 100,000 by 2025.
   - 7.2.A: American Indian Women: 16.6⁴ to 16.0 per 100,000

7.3 Decrease the age-adjusted mortality rate from cancer of the uterine cervix in South Dakota from 1.6⁴ to 1.4 per 100,000 by 2025.
   - 7.3.A: American Indian Women: 3.7⁴ to 3.5 per 100,000
STRATEGIES:

A. Implement equitable and culturally appropriate evidence-based policy and system changes, such as client reminders, provider assessment and feedback and provider reminder and recall systems.

B. Monitor and promote professional education and the use of current screening guideline implementation.

C. Promote the use of culturally appropriate public education, patient navigation, messaging, and health equity strategies.

D. Promote low or no cost screening programs to improve affordability of screening for vulnerable populations.

E. Reduce structural barriers to improve equitable and affordable access to screening for vulnerable populations.

F. Encourage discussion and documentation of family history to inform risk assessment, screening recommendations, and risk-appropriate referral for genetic services.

PRIORITY 8: INCREASE RISK APPROPRIATE SCREENING FOR COLORECTAL CANCER

OBJECTIVES:

8.1 Increase the percentage of adults ages 50-75 in South Dakota up-to-date with USPSTF recommended colorectal cancer screening by 2025.
   8.1.A: Adults: 69.1%² to 80%
   8.1.B: American Indians: 55.8%² to 65%
   8.1.C: Adults with an income less than $25,000: 61.4%² to 70%
   8.1.D: Adults with no insurance: 25.6%² to 30%

8.2 Increase the percentage of adults ages 50-75 in South Dakota who had a doctor, nurse, or other health professional recommend they be tested for colorectal or colon cancer from 26.9%² to 40% by 2025.

8.3 Decrease the invasive colorectal cancer age-adjusted incidence rate in South Dakota from 41.4⁴ to 37.3 per 100,000 by 2025.
   8.3.A: American Indians: 58.4⁴ to 53.0 per 100,000

8.4 Decrease the colorectal cancer age-adjusted mortality rate in South Dakota from 15.8⁴ to 14.0 per 100,000 by 2025.
   8.4.A: American Indians: 25.8⁴ to 23.0 per 100,000

STRATEGIES:

A. Implement equitable and culturally appropriate evidence-based policy and system changes, such as client reminders, provider assessment and feedback, provider reminder and recall systems, and FluFIT/FluFOBT.

B. Monitor and promote professional education and the use of current screening guideline implementation.

C. Promote the use of culturally appropriate public education, patient navigation, messaging, and health equity strategies.

D. Promote low or no cost screening programs to improve affordability of screening for vulnerable populations.

E. Reduce structural barriers to improve equitable and affordable access to screening for vulnerable populations.

F. Encourage discussion and documentation of family history to inform risk assessment, screening recommendations, and risk-appropriate referral for genetic services.
PRIORITY 9: INCREASE RISK APPROPRIATE SCREENING FOR LUNG CANCER

**OBJECTIVES:**

| 9.1 | Increase the percentage of adults ages 55-80, at high risk for lung cancer, in South Dakota up-to-date with USPSTF recommended lung cancer screening from 14.9%² to 16.4% by 2025. |
| 9.2 | Decrease the age-adjusted rate of lung cancer cases diagnosed at the distant stage in South Dakota from 28.84 to 26.0 per 100,000 by 2025. |
  | 9.2.A: American Indians: 53.5⁴ to 48.0 per 100,000 |
| 9.3 | Decrease the age-adjusted lung cancer mortality rate in South Dakota from 39.9⁴ to 36.0 per 100,000 by 2025. |
  | 9.3.A: American Indians: 70.0⁴ to 63.0 per 100,000 |

**STRATEGIES:**

A. Develop and deliver equitable and culturally appropriate lung cancer prevention and screening messages to increase awareness of appropriate screening guidelines and quality care standards.

B. Assess capacity, increase equitable access, and ensure affordable and quality lung cancer screening for high risk individuals and vulnerable populations.

C. Ensure equitable and culturally appropriate tobacco cessation support for smokers undergoing lung cancer screening.

D. Promote the use of culturally appropriate patient navigation, messaging, and health equity strategies.

PRIORITY 10: INCREASE PARTICIPATION IN CANCER CLINICAL TRIALS

**OBJECTIVES:**

| 10.1 | Increase the percentage of South Dakota cancer patients who report participating in a clinical trial as part of their cancer treatment from 4.2%² to 4.6% by 2025. |

**STRATEGIES:**

A. Implement policy and system changes to expand equitable access to and promote participation in cancer clinical trials.

B. Increase public awareness, education, and resource promotion.

C. Promote culturally competent professional education.

D. Support translation of research findings into practice.

E. Conduct data collection and reporting regarding cancer clinical trial participation in SD.

PRIORITY 11: PROMOTE QUALITY CANCER CARE AND SUPPORTIVE SERVICES

**OBJECTIVES:**

| 11.1 | Decrease the percentage of South Dakota’s under the age of 65 without health insurance from 10.4%⁶ to 9.4% by 2025. |
| 11.2 | Maintain the number of cancer centers accredited by the American College of Surgeon’s Commission on Cancer from 6⁷ to 6 by 2025. |
| 11.3 | Of those ever diagnosed with cancer, increase the percentage who have ever been given a written summary, by a doctor, nurse, or other health professional, of the cancer treatments they received from 51%² to 56% by 2025. |
| 11.4 | Of those ever diagnosed with cancer, increase the percentage who have ever received instructions from a doctor, nurse, or other health professional about where they should return or who they should see for routine cancer check-ups after completing treatment for cancer from 76.7%² to 85% by 2025. |
STRATEGIES:

A. Increase equitable and affordable access to financial, transportation, and lodging resources for vulnerable populations.
B. Enhance health insurance coverage and reimbursement for cancer care, treatment, and supportive services.
C. Promote adoption of evidence-based practices and accreditation among cancer treatment centers.
D. Increase access and availability to personalized medicine and cell-based therapies for cancer treatment.
E. Support the use of equitable and culturally appropriate patient navigation, care coordination, and community health workers across the cancer continuum.
F. Support clinical and community-based programs and resources that address the needs of cancer patients and their caregivers.
G. Increase awareness and use of survivorship care plans.
H. Support the unique needs of childhood, adolescent, and young adult cancer populations.
I. Promote technology and innovative practice models, such as telemedicine and telehealth, to increase equitable access to health care.

PRIORITY 12: IMPROVE AVAILABILITY AND USE OF ADVANCE CARE PLANNING, PALLIATIVE CARE, AND END-OF-LIFE CARE SERVICES FOR CANCER PATIENTS

OBJECTIVES:

12.1 Maintain the number of South Dakota hospitals with 50 or more beds reporting a palliative care team from 8\% to 8 by 2025.
12.2 Increase the percentage of adults who reported having an advanced directive in place by 2025.
   12.2.A: Adults: 32\% to 35\%
   12.2.B: Adults with an income less than $25,000: 26.3\% to 30\%
   12.2.C: Adults with no insurance: 13.2\% to 20\%

STRATEGIES:

A. Promote culturally competent professional education.
B. Increase public awareness, education, and resource promotion.
C. Promote completion of advance directives.
D. Promote community-based services, appropriate referrals, technology, and other innovative practice models, to increase equitable access for rural and other vulnerable populations.
E. Support healthcare professional certification.
F. Promote adoption of best practices and national standards into routine cancer care.
DEDICATION AND ACKNOWLEDGEMENTS

The South Dakota Cancer Plan 2021-2025 is dedicated to those in South Dakota who have been impacted by cancer.

The South Dakota Cancer Plan 2021-2025 was created in collaboration with the SD Cancer Coalition, SD Cancer Coalition Steering Committee, and the SD Cancer Plan Advisory Committee. The SD Cancer Plan Advisory Committee consisted of the members indicated below and represents diverse stakeholders from all sectors across the cancer care continuum. Numerous other coalition members and stakeholders also contributed to the development of this plan. Moreover, implementation of this plan would not be possible without the efforts of the dedicated cancer prevention and control stakeholders in South Dakota.

SD CANCER PLAN ADVISORY COMMITTEE:

1. Ashley Miller, South Dakota Department of Health
2. Brooke Lusk, Black Hills Special Services Cooperative
3. Charlene Berke, Avera Cancer Institute
4. Connie Schmidt, Sanford Health Plan
5. David Benson, American Cancer Society Cancer Action Network
6. Doris Cardwell, Cancer Survivor
7. Rep. Jean Hunhoff, South Dakota Legislature (District 18)
8. Jacob Parsons, South Dakota Department of Health
9. Jennifer Kerkvliet, South Dakota State University
10. Jill Ireland, American Cancer Society
11. Kay Dosch, South Dakota Department of Health
12. Kelley Le Beaux, Great Plains Tribal Chairmen’s Health Board
13. Kiley Hump, South Dakota Department of Health
14. Kristi Gylten, Monument Health Cancer Care Institute
15. Kristin Cina, Walking Forward Program
16. Lexi Pugsley, South Dakota Department of Health
17. Lindsey Karlson, Horizon Health Care, Inc.
18. Lora Black, Sanford Research
19. Lori Koenecke, South Dakota Department of Health
20. Mark East, South Dakota State Medical Association
21. Dr. Mary Milroy, Retired Breast Cancer Surgeon
22. Melissa Baron, Susan G. Komen Great Plains
23. Neva Zephier, Indian Health Service
24. Patricia Da Rosa, South Dakota State University
25. Sam Gaster, Avera Cancer Institute
26. Sandra Melstad, SLM Consulting, LLC
27. Sara Anderson, Sanford Health Plan
28. Sarah Mollman, South Dakota State University
29. Sarah Quail, South Dakota Department of Health
30. Dr. Thavam Thambi-Pillai, Sanford Surgical Associates
31. Tracey McMahon, South Dakota State University
REFERENCES


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