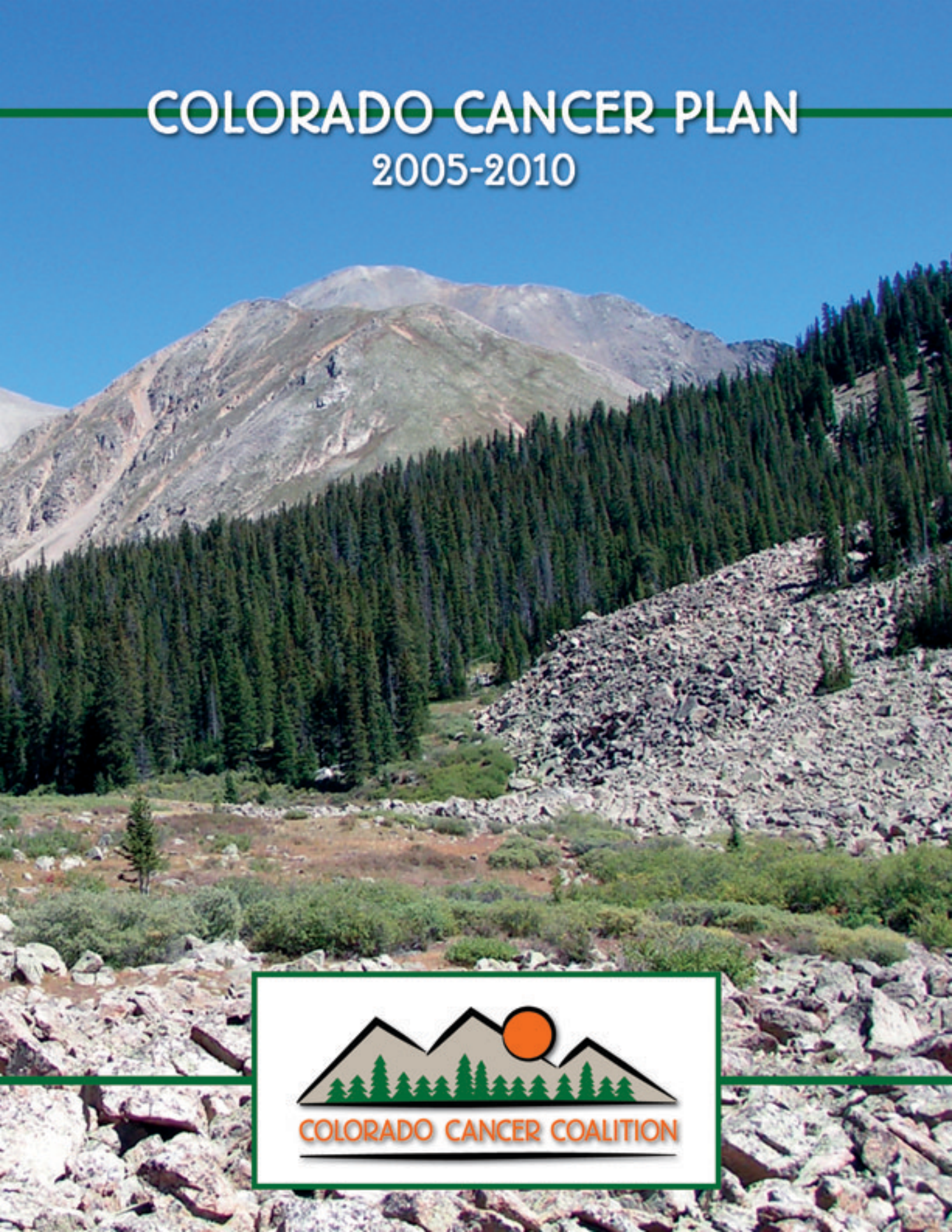
COLORADO CANCER PLAN
2005-2010



COLORADO CANCER COALITION

COLORADO CANCER PLAN 2005-2010

Bringing together and coordinating cancer prevention, early detection, treatment, support, and research efforts to improve the quality of life for everyone in Colorado.

COLORADO CANCER COALITION

www.coloradocancercoalition.org

Colorado Cancer Coalition
Colorado Comprehensive Cancer Program
4300 Cherry Creek Drive South A5
Denver, CO 80246-1530

Office: 303-692-2520
Fax: 303-691-7721

August 11, 2005

A Letter to Colorado:

In Colorado, cancer is the second leading cause of death. Colorado's rate of cancer is too high. Cancer prevention and control activities must remain a priority. The Colorado Cancer Coalition is pleased to present to you the Colorado Cancer Plan 2005-2010.

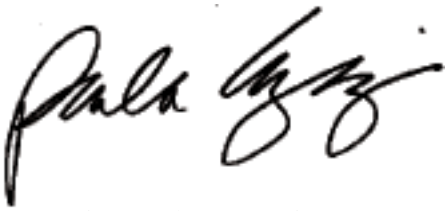
Colorado's plan to alleviate the burden of cancer must involve many sectors of our society, including state government, local public health, nursing, medicine, researchers, religious groups, schools and local communities. No agency, profession, service group or foundation can solve this problem alone. Key partnerships are essential.

This plan is intended to be a living breathing document, used by organizations both big and small. This plan should be a well-used and essential tool for communities to create, implement, and continue activities that will result in a reduction of cancer incidence and mortality throughout Colorado.

The Comprehensive Cancer Program assembled a group of experts, who make up the Colorado Cancer Coalition, to look at the current burden of cancer, evaluate programming, and establish priorities. The work of developing a cancer prevention and control plan is not complete. Cancer prevention and control is an ever-changing discipline. As science and practical experience grow, new strategies will emerge.

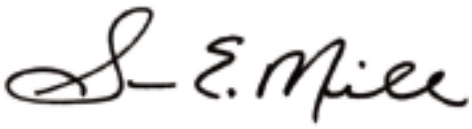
New additions to this iteration of the Colorado Cancer Plan include: a chapter dedicated to Health Disparities; an enhanced section dedicated to Quality of Life: Treatment, Palliative Care, Rehabilitation, and Hospice; and a focus on additional cancer sites.

Thank you for reading the Colorado Cancer Plan. Thank you for your interest, support, and commitment to preventing and reducing the impact of cancer in Colorado. To become a member of this effort, please go to www.coloradocancercoalition.org for more information.



Paula Espinoza, PhD

Chair, Colorado Cancer Coalition



Sara Miller, MPA

Director, Comprehensive Cancer Program

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Dennis Ahnen, MD
Denver VA Medical Center/UCDHSC

Patricia Alvarez Valverde
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Hilarea Amthauer
Colorado Foundation for Medical Care

Theresa Anselmo, RDH, BS
CDPHE Oral Health Program

Chris Armijo, MSPH
Latino/a Research & Poolicy Center

Carsten Baumann, MA
CDPHE-State Tobacco Program

Ann T. Bentz, PhD
UNC-Rocky Mountain Cancer Rehabilitation Inst.

Herman Berry
ACS-Mile High Unit

Alacey Berumen, MNM, ABD
Department of Human Services

Janeen Bonacci
ACS-Mile High Unit

BJ Boucher
ACS-Mile High Unit

Terri Bowland
UCDHSC - Dept. of Dermatology

Alice Bradley, MA
NCI's Cancer Information Service, Rocky Mountain Region

Mary Buller, MA
Klein Buendel, Inc.

Linda Burhansstipanov, MSPH, DrPh
Native American Cancer Research

Tim Byers, MD, MPH
UCCCC

Myrna Candreia
NCI's Cancer Information Service, Rocky Mountain Region

Teresa Castellano
Porter Adventist Hospital/Centura Health

Valerie Chilewski
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Saijai T. Choy
Thai Community

Lynn Cogley
ACS-Mile High Unit

Anne Cosby
9Health Fair

Lori Crane, PhD, MPH
UCDHSC-School of Medicine

Jamie Damico, RN
Nurse Consultant

Krystal Damori, MS, CHES
UCDHSC

Christine Dauchot
Colorado Foundation for Medical Care

Greg De Cuir
ACS-Rocky Mountain Division

Karen DeLeeuw, MSW
CDPHE, State Tobacco Education Partnership Program

Robert Dellavalle, MD, PhD, MSPH
Denver VA Medical Center/ UCDHSC-Department of Dermatology

Carolyn Ann "CAD" Dennehy, PhD
Navitas Cancer Rehabilitation Centers of America

Mark Deutchman, MD
Department of Family Medicine

Wendi Dick, MD, MSPH
UCDHSC-School of Medicine

Jodi Drisko, MSPH
CDPHE-Health Statistics

Andrea Dwyer
UCCCC

David C. Erickson
Rocky Mountain Sunscreen

Paula Espinoza, PhD
Latino Cancer Prevention/Control Network

Jack Finch, MS
CDPHE-Cancer Registry

Jeanna Finch, MS
Day of Caring

Sarah Fischler
Susan G. Komen Breast Cancer Foundation

Linda Fiske, RN, MSN
Exempla Lutheran Medical Center

Catharine Fogg
Asian Pacific Women's Network

Barbara Francis
Navitas Cancer Rehabilitation Centers of America

Scott Freeman, MD
UCDHSC

Jeffery Frank, MD
Colorado Gastroenterology

Mary E. Freivogel, MS
Myriad Genetic Laboratories, Inc.

Cristy Geno, MPH
Kaiser Permanente

Becky Haddad
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Marjie Grazi Harbrecht, MD
Colorado Clinical Guidelines Collaborative

Lisa Harjo
Native American Cancer Research

Lauren F Helig
UCDHSC-Department of Dermatology

Deborah D. Hood, MBA
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Kathy Kennedy, Dr PH
Regional Institute for Health & Environmental Leadership

Laurie Konsella, MPA
Department of Health and Human Services

Linda Krebs, PhD, MS
UCDHSC-School of Nursing

Rose Lee
Native American Cancer Research

Jill T. Levine, MPH
American Cancer Society

Lee Lin
Asian Pacific Development Center

Al Marcus, PhD
AMC Cancer Research Center

Judy McCree Carrington
CDPHE-Office of Health Disparities

Robbie McDowall
QuestDex

Sara Miller, MPA
CDPHE-Comprehensive Cancer Program

Judy Mouchawar, MD, MSPH
Kaiser Permanente of Colorado, Dept. Preventive Medicine

Elizabeth Musson
ACS-Mile High Unit

Mary Kay Myers, MA
CDPHE-CWCCI

Paula Nelson-Marten, RN, PhD, AOCN
UCDHSC-School of Nursing

Cathy O'Grady
Nurse Consultant

Lisa K Perry, MEd, NBCT
Colorado Department of Education

Rich Quinn, MD
COPIC

Peter Raich, MD
Denver Health and Hospitals

Terri Rattler
Native American Cancer Research

Bev Reddick-Jenkins, MA
CWCCI-African American Outreach

Susan Rein
UCCCC

Mark Rice
Pfizer Oncology

Angela Ricker
Sense of Security

Mario Rivera, MS
CDPHE-Comprehensive Cancer Program

Chaer Robert
Colorado Consumer Health Initiative

Linda Roberto
Colorado Breast/Cervical Cancer Program

Randi Rycroft, MSPH
CDPHE-Cancer Registry

John Sabel, MD
South Denver Gastroenterology, PC

Carole Schneider, PhD
UNC-Rocky Mountain Cancer Rehabilitation Inst.

Graham Sellers, MD
Colorectal Surgery Associates

Mary Anne Shube
Win Win Health

Alyson Shupe, PhD, MSW
CDPHE-Health Statistics Section

Elise Spain
Day of Caring for Breast Cancer Awareness

Angela Swanson
Colorado Foundation for Medical Care

Yvonne Sylvan
Jewish Family Service

Tomiko Takeda, MEd
Colorado Cancer Research Program

Heather Tolby
CDPHE-Comprehensive Cancer Program

Vicki Tosher
Survivor/Advocate-Sense of Security

Jeff Varnell, MD
COPIC Insurance

Kieu Vu
CDPHE-Colorado Central Cancer Registry

Deborah Walkington, MA
CDPHE-CWCCI

MellaDee Warren, RN
Metro Denver Black Church Initiative/Sister-to-Sister/Delta Sigma Theta

Tyler Watlington, MD
UCDHSC-School of Preventive Medicine

Susanne Wheeler
ACS-Southern Colorado Unit

Keven Winder
Myriad Genetic Labs

Holly Wolf, PhD, MSPH
UCDHSC-School of Preventive Medicine

Walter "Snip" Young, PhD
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The mission of the Colorado Cancer Coalition is to bring together and coordinate cancer prevention, early detection, treatment, support, and research efforts to improve the quality of life for everyone in Colorado.

GOALS:

- Promote the collection and use of information to increase professional and public understanding and education about cancer, and its impact on Colorado citizens.
- Improve the healthy behaviors of Colorado citizens in order to prevent cancer.
- Increase the proportion of Colorado citizens who access and utilize screening services to diagnose cancer at early stages.
- Increase the proportion of Colorado citizens who have access to state-of-the-art cancer diagnosis, treatment, follow-up, rehabilitation, and palliative care, and hospice services.
- Enhance the quality of life of cancer survivors living in Colorado.
- Support the development of policies that enable cancer prevention and control, and that improve the health and environment in Colorado.
- Develop, sustain, and monitor activities, programs, and policies to eliminate cancer-related health disparities associated with race/ethnicity, level of education or income, insurance status, geographic place of residence, disability status, age, sex, sexual orientation, or any other factor for all populations in Colorado.

COLORADO CANCER COALITION

Table of Contents

The Colorado Cancer Coalition (CCC) is a consortium of organizations and individuals with interests in the prevention and control of cancer in Colorado.

Important activities of the CCC include:

- Promoting the collection and use of information about cancer
- Improving healthy behaviors
- Increasing screening rates
- Improving access to the full spectrum of cancer diagnosis and care
- Reducing disparities
- Setting targets to improve cancer prevention and control
- Supporting policies to facilitate these efforts

The goals of the Colorado Cancer Plan are to target risk factors and further reduce mortality. In addition, these goals aim to lessen, and eventually eliminate, the disparities in cancer in Colorado.

History

In 1996, the CCC published the original "Colorado Cancer Prevention and Control Plan 2000." Statewide goals for reductions in cancer death rates for the Year 2000 were defined in the mid-1990s by the CCC based on cancer death rates and trends from the late 1980s to the early 1990s.

This publication assisted cancer prevention and control partners with focusing agreed-upon goals to reduce cancer mortality for all Colorado citizens. The plan included Year 2000 objectives and suggested strategies to reduce cancer mortality, increase surveillance activities, increase primary and secondary prevention efforts, and address the availability of appropriate cancer treatments.

Most of those goals were met or exceeded by the successes in cancer prevention, early detection, and improved treatment across Colorado. Reductions in death rates between 1991 and 1998 for the major cancer sites were striking. In that seven-year period, breast cancer death rates declined by 29.3%, prostate cancer death rates declined by 27.5%, colorectal cancer death rates declined by 15.7%, and lung cancer death rates declined by 8.8%.

Introduction

Language Use

Labels of racial/ethnic groups are used throughout this plan. The term "white" refers to the standard data collection category of white/non-Hispanic. The term "Hispanic" refers to the standard data collection category of white/Hispanic. The term "black" refers to Blacks, Black/Hispanics, and others who identify themselves in this manner. The Colorado Cancer Coalition recognizes the difficult issue of using labels with regard to racial/ethnic groups.

It is difficult to gain a consensus on the preference of categories such as "people of color/minority community," "American Indian/ Native American," "Black/African-American," "Hispanic/Latino (a)," and "Caucasian/white."

We acknowledge that not everyone identifies himself or herself with these categories, and we very much respect the importance of cultural differences in how communities prefer to be defined.

In this plan, many health indicators will be categorized by race and ethnicity. In accordance with the Centers for Disease Control and Prevention, the Colorado Cancer Coalition also recognizes that race and ethnicity are social constructs representing distinct histories and cultures of groups within the United States, and that they are not necessarily distinct biological or genetic categories.

In 2000, the Colorado Cancer Coalition established goals for the Year 2010, which led the effort to update the Colorado Cancer Plan for 2005. This 2005 report included data on cancer incidence and mortality, and described risk factors, screening guidelines, prevention strategies, and treatment recommendations.

The Colorado Cancer Plan 2005-2010 objectives for reducing the cancer burden in Colorado are based on Colorado surveillance data and the national objectives from Healthy People 2010, as well as issues unique to Colorado. Objectives and their recommended strategies cover cancer mortality, health disparities, primary prevention, secondary prevention, treatment, rehabilitation, quality of life, and surveillance.

Although the reasons for declining cancer rates are multifaceted, the efforts of the Colorado Cancer Coalition play an integral part. The Colorado Cancer Plan goals are to both reduce cancer mortality and to influence selected behaviors that relate to cancer mortality. This new set of goals, objectives, and strategies is intended as a framework for continued improvements by Year 2010. Goal-setting has been created by consensus among the Colorado Cancer Coalition members. These goals and objectives take into account the history and experiences of cancer control in Colorado. The Colorado Cancer Coalition believes that defining these cancer goals, objectives and strategies will help to empower all of us in Colorado's fight against cancer.

Risk Reduction

Cancer is the second leading cause of death in Colorado. Lifestyle, genetic and non-genetic factors, independently or in combination, can increase an individual's risk of developing cancer. Changes in lifestyle, including reduction in tobacco use and modification of the diet to reduce fat

and increase fiber consumption, and early detection and intervention, can significantly reduce mortality from some cancers. Reductions in cancer incidence achieved through risk factor interventions may also reduce cancer morbidity and mortality.

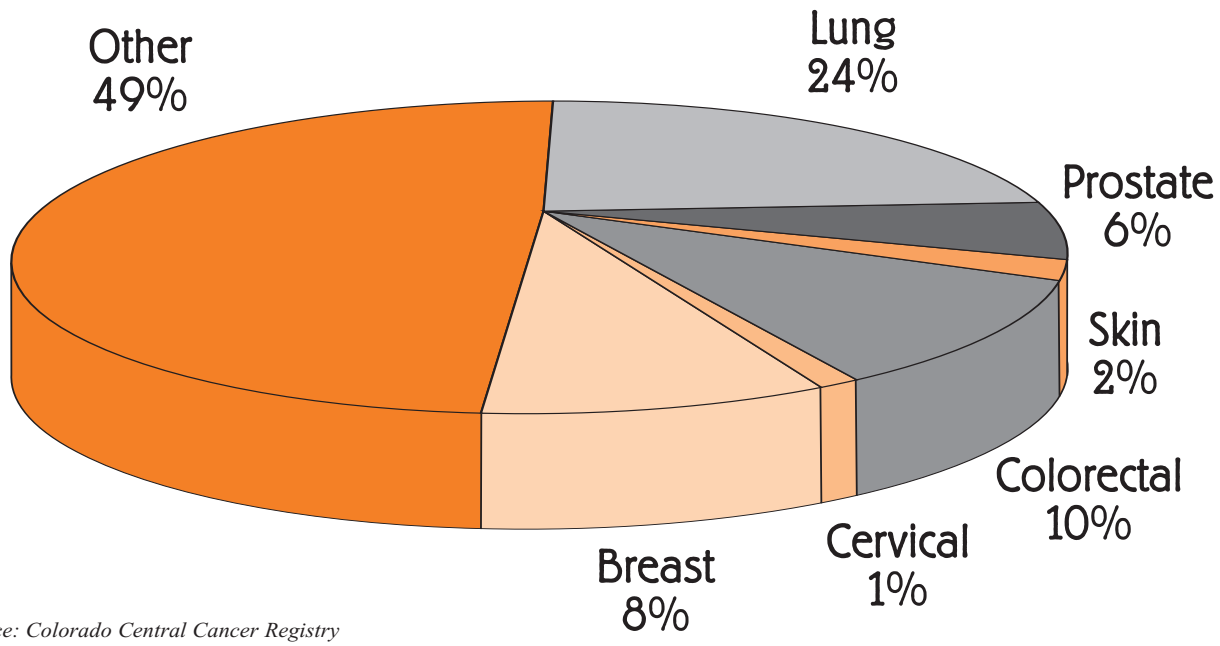
Screening interventions that result in early detection will have a proportionally greater impact upon cancer mortality, since cancer, when detected at an early stage, is more likely to respond to treatment. Screening interventions continue to need support. Mammography screening has led to increased early detection and treatment of breast cancer. Endoscopic and fecal occult blood testing, if more widely used, could further decrease mortality from colorectal cancer. The Papanicolaou (Pap) smear has been, and continues to be, a powerful tool for detection of early cervical cancer or even pre-malignant lesions in women.

The Colorado Cancer Coalition would like to ensure that the Colorado public is aware of the beneficial impact that lifestyle changes have in reducing cancer.

- Eliminating tobacco use can decrease the risk for pancreatic, kidney and urinary bladder cancer, as well as for the more familiar lung, colorectal, head and neck, and cervical cancers. Higher-than-moderate alcohol intake can increase the risk for breast, esophageal, and head and neck cancers.
- High dietary fat can increase the risk for colon and breast cancer. Increased fiber, fruit and vegetable consumption may decrease the risk for colon cancer. Regular exercise may decrease the risk of breast and colon cancer.
- Exposure to ultraviolet radiation is a risk factor for skin cancer and public awareness campaigns are ongoing. The CCC supports existing efforts, as well as those examining other potential environmental carcinogens.

An individual's genetic background can certainly be a powerful determinant of cancer risk as well. An increased risk for colorectal, breast, prostate, ovarian, and thyroid cancers, as well as malignant melanoma, exists for persons with first-degree relatives with a history of these

CANCER DEATHS: Colorado Residents 2002



Source: Colorado Central Cancer Registry

respective types of cancer. Women who have BRCA1 and BRCA2 gene mutations are at an increased risk for breast and ovarian cancer. The CCC would like to heighten general awareness of these factors.

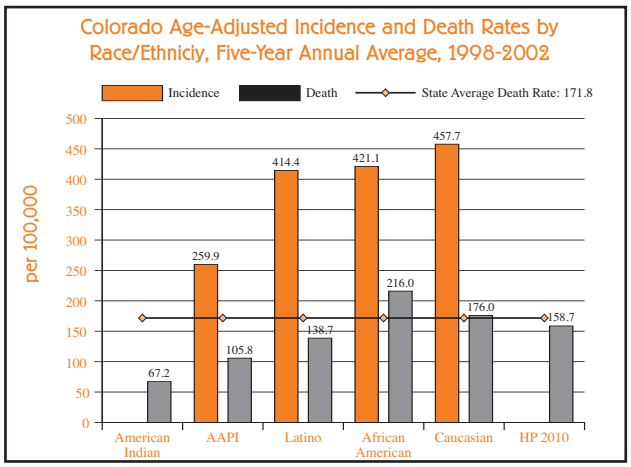
Monitoring and abatement of radon exposure, because of its effect on lung cancer risk, are ongoing processes in the state.

Incidence

In 2002, 17,455 Coloradans were diagnosed with cancer. Colorado continues to have a lower rate of cancer diagnosis than the nation.

The cancer incidence rates for Colorado and the nation have been decreasing since 1992. The population of Colorado has been getting older, with a median age of 26.2 in 1970, 32.5 in 1990, and 34.3 years in 2000. Among men and women, men have a higher incidence of cancer (514.0/100,000) than women (401.6/100,000). The incidence of lung cancer in males is over 50% higher than that of females.

Among racial groups, from 1998-2002, black men had the highest cancer incidence rate followed in order by white non-Hispanic men, white Hispanic men, white non-Hispanic women, white Hispanic women, and black women.



Source: Colorado Central Cancer Registry & Vital Statistics

The incidence of cervical cancer in Hispanic women was more than twice that for white non-Hispanic women and 1.8 times that for black women.

Colorectal cancer was diagnosed in Hispanic men almost 50% more often than in Hispanic women.

In 2002, 17,455 Coloradans were diagnosed with cancer.

Across groups, the lung cancer incidence rate in black males was 1.7 times the rate for black women, and Hispanic men had 1.7 times the lung cancer incidence than Hispanic women.

The incidence of prostate cancer in black men was 38% higher than the rate for white non-Hispanics and 42% higher than the rate for Hispanics.

Prevalence

There are approximately 150,000 Coloradans alive with cancer or a history of cancer. For individuals recently diagnosed with cancer, 6 out of 10 will live five years or longer. Among cancer sites, however, there are major differences in 5-year relative survival rates, as of 1994 to 1997 diagnoses. For men with prostate cancer, 95% are expected to survive five years, while 86% of women with breast cancer will live at least that long. Only 51% of women with ovarian cancer are expected to live five years or longer.

Mortality

Each day, 18 Coloradans die from cancer. There were a total of 6,400 cancer deaths in 2003. The cancer mortality rate for Colorado in 2003 was 167.3 per 100,000 population, considerably lower than for the nation, which was 193.5 deaths per 100,000 population in 2002 (both rates age-adjusted to the 2000 U.S. population).

By gender, males have a considerably higher cancer mortality rate than females, with the Colorado cancer mortality rate of 202.2 deaths versus 144.1 per 100,000 population for males and females, respectively. There are racial differences as well with blacks having higher cancer mortality rates than non-Hispanic whites, and Hispanics having lower cancer mortality rates than non-Hispanic whites. For specific cancer sites, there also are gender and racial differences. For lung cancer in women for 1998 to 2002, rates for blacks were 23% higher, and rates for Hispanics were 46% lower, than rates for white non-Hispanics. For lung cancer in men, rates for blacks were 32% higher, and rates for Hispanics were 36% lower, than rates for white non-Hispanics. The cervical cancer incidence rate for white Hispanic women was more than twice that for white non-Hispanic women and the mortality rate was 56% higher for Hispanic women. Black men had over twice the mortality rate for prostate cancer as than white non-Hispanic men.

Each day, 18 Coloradans die from cancer.

Top Cancers in Colorado

By Mortality: (2000)

1. Lung
2. Colorectal
3. Breast
4. Prostate
5. Pancreas
6. Non Hodgkin's Lymphoma
7. Leukemia
8. Ovarian
9. Brain
10. Multiple Myeloma

By Incidence: (1998-2002)

1. Breast
2. Prostate
3. Lung
4. Colorectal
5. Melanoma
6. Bladder
7. Non Hodgkin's Lymphoma
8. Leukemia
9. Kidney & Renal Pelvis
10. Corpus Uteri, Uterus

Source: Colorado Central Cancer Registry

Differences in health status between groups, experienced over time, are known as health disparities. Inequities in cancer incidence, stage at diagnosis, survival, mortality, and quality of life are shown to exist across the entire range of social groups. The interplay of many factors leads to cancer health disparities such as race/ethnicity; socioeconomic status or SES (income, education, etc.); insurance status; access to quality health care; behavioral choices; immigrant status; language and literacy; geographic place of residence; environmental issues; disability status; age; sex; and sexual orientation. All these variables and others form a complex set of interactions that create and reinforce cancer health disparities in Colorado and the U.S.

The black population of Colorado has the highest death rates for lung, breast, colorectal & prostate cancers.

Approaches to reduce cancer health disparities must consider the complexity of these disparities and should address as many factors as possible at one time. For example, while we know that poverty plays a major role in cancer detection and survival rates for Coloradans, an intervention that only included financial means for accessing health care would not be sufficient to change cancer outcomes for Colorado residents.

Health disparities in Colorado and the U.S. are more readily apparent in some groups than in others. Cancer incidence rates and death rates in Colorado have been measured and reported for blacks and Hispanics. Data for both of these racial/ethnic communities in Colorado shows that each bears an unequal cancer burden when compared to other groups. For example, the black population of Colorado has the highest incidence rate of any population of lung cancer and the highest death rates of lung, breast, colorectal, and prostate cancers. When compared to other racial/ethnic groups in Colorado,

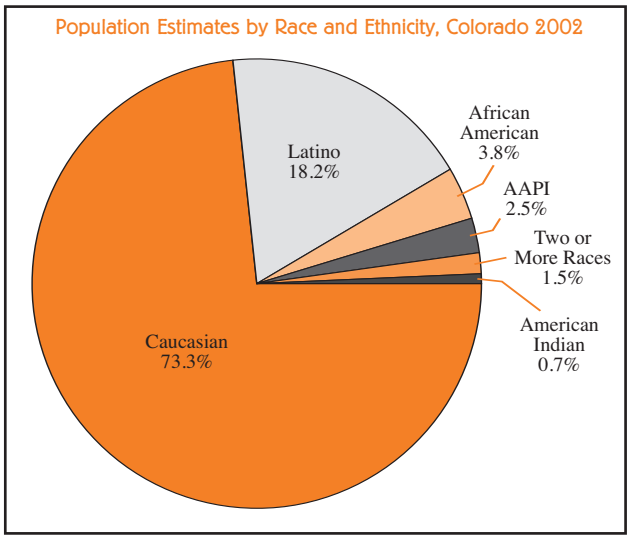
Hispanic females have both the highest incidence and death rates of cervical cancer. Hispanic males have a higher incidence of colorectal cancer than males or females of any other race/ethnicity group in Colorado.

Nationally, American Indians and Alaska Natives (AI/AN) have the lowest five-year cancer survival rates of any population in the U.S. Certain Asian and Pacific Islander (API) communities, (i.e., Korean and Vietnamese women), suffer very high incidence and death rates from cervical cancer. In Colorado, this issue is compounded by the relatively small numbers of individuals among certain groups who have cancer, misclassification of racial/ethnicity, and data collection and reporting challenges. Understanding the impact of cancer on these groups, as well as designing and funding interventions to reach them, can be stymied by institutional challenges to measuring and reporting cancer outcomes in these populations.

CONTRIBUTING FACTORS

RACE/ETHNICITY

Epidemiologic research has found factors associated with race/ethnicity that affect health status and risk, but are independent of biological differences between groups. Historical and current discrimination in the nation's political, economic, and social institutions and systems represent some of the determinants of racial/ethnic health disparities. Inequity can be found in the educational system, labor and housing markets, credit and lending institutions, and health care systems. Even bias that is unintentional on the part of medical researchers or providers is potentially harmful.



Source: Vital Statistics

EDUCATION

In Colorado, school-age children of color score significantly lower than white (Caucasian or white, non-Hispanic) children on standardized tests. Gaps in high school graduation rates between white students and students of color are larger than in many other states. If educational

achievement disparities persist statewide, current shortages of health care and environmental professionals of color will continue challenging efforts to eliminate health disparities in communities of color.

INCOME

Income is a strong predictor of health for all people. As income increases, the percentage of people reporting fair or poor health decreases. In all domains, economic disparities limit people's ability to be healthy, both directly (e.g., lacking money to buy medicine) and indirectly (e.g., emotional stress from coping with chronic financial instability). A report entitled "Cancer & Poverty in Colorado 1995 - 2002," prepared by the Comprehensive Cancer Program of the Colorado Department of Public Health and Environment, reveals a stark difference in cancer stage at diagnosis and survival of Coloradans by neighborhood poverty level. The report highlights the reality that Colorado, like the nation as a whole, shows a link between cancer outcomes and poverty. Yet, the "Cancer and Poverty in Colorado" report is limited in that it delineates only two of the social determinates of cancer-related health disparities, race/ethnicity and poverty, within the state.

The 2010 Colorado Cancer Plan intends to address the variety of contributing factors associated with cancer health disparities. It presents the challenge of addressing a complex, yet critically important issue, ultimately aimed at ending the suffering & premature death from cancer among all people of the state.

Health Disparities

EMPLOYMENT

Unemployment rates in Colorado are higher for all racial/ethnic minority groups than for the majority white population. Unemployment can affect health through a loss of income and health insurance and is itself a stressor – all factors that can delay diagnosis of cancer at an early stage when it is most treatable. Because of educational disparities and opportunity limitations, workers of color are under-represented in professional positions and over-represented in blue collar and service jobs that are lower paying and much less likely to provide health coverage. Additionally, growing occupational health research indicates that workers of color may disproportionately work in unsafe and unhealthful conditions without proper training, protections, or notification of risks.

INSURANCE

Racial/ethnic minority populations in Colorado lack health insurance at higher rates than the majority population. The Hispanic population experiences the highest rate of uninsurance with one in four individuals lacking coverage. The immigrant population, both documented and undocumented, is less likely to receive employer or publicly provided health care.

Underinsurance is insurance that does not adequately cover health care costs or has limited benefits. Underinsurance affects access when policies do not cover preexisting conditions, when co-payments and deductibles cause delays in care, or when certain categories of benefits are not covered such as cancer prevention and early detection services.

CULTURAL BELIEFS

Culture is not the same as race/ethnicity, although cultures and cultural beliefs may exist within racial or ethnic groups.

Cultural beliefs about health and illness can impact the communication style and relationship between patient and provider in the health care setting. Health care professionals sometimes lack cultural awareness or cultural competence. A lack of cultural competency on the part of health care professionals can negatively affect the care of patients, and cause adverse health outcomes that deepen health disparities in communities of color.

Cultural beliefs also affect how communities perceive public health messages about disease prevention and health promotion. Sometimes a community's beliefs are labeled as fatalism, which is often based on real experience. Racial/ethnic communities may be unaware of the strengths and weaknesses of traditional diet choices or other customs. More must be understood about the impact of various cultural beliefs and practices on cancer in order to build upon the strengths of the positive influences and to address areas of concern with sensitivity and respect.

LANGUAGE

Language barriers may contribute greatly to cancer-related health disparities among people whose first language is not English. Language factors can delay and/or inhibit access to cancer services such as prevention, early detection, treatment, and quality of life care. Challenges may include lack of information about available services or fear of jeopardizing immigration status by using such services; communicating in prevention and treatment settings; comprehending the U.S. health care system, including expectations of the patient-provider relationship (e.g., the right to an interpreter); and understanding and identifying with printed health information that may not be culturally or linguistically relevant.

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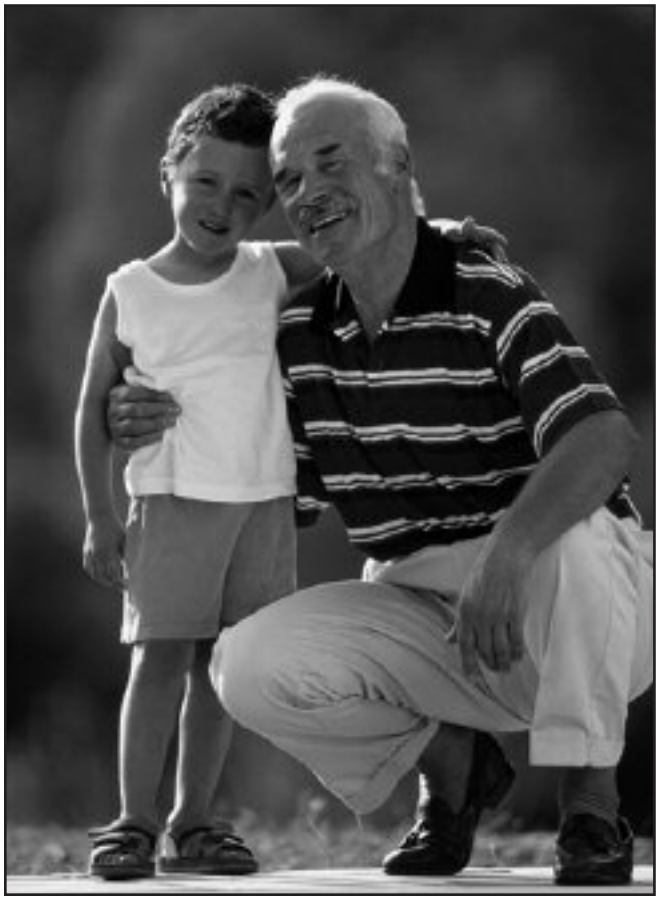


OBJECTIVE 1.1:

Increase public and professional awareness about cancer-related health disparities experienced by Colorado populations.

Strategies:

- Collaborate with government agencies, academic health centers, community and faith-based organizations, and private foundations to educate the public about topics relating to health disparities and cancer.
- Educate policy makers, community, and health professionals about the overall financial burden of being a cancer patient or the family member of a cancer patient.
- Promote and support health care provider and medical school curricula training on cancer disparities, including strategies that providers can incorporate into their practices to address and reduce disparities.
- Identify and disseminate a set of core competencies for health professionals to increase knowledge and understanding of the contributing factors to health disparities, and to increase cultural competancy.
- Convene a meeting of health care providers, cancer survivorship experts, researchers and programmatic staff with the goal of developing strategies to educate policy makers about the unmet needs for cancer treatment of the uninsured and underinsured.

- Produce a status report on cancer disparities in Colorado every two years and disseminate the report to key stakeholders including communities, media, health care and social service organizations, and policy makers.

OBJECTIVE 1.2:

Expand culturally-relevant and audience-specific cancer health education, outreach programs, and cancer-related services.

Strategies:

- Develop, modify, implement and evaluate a clearinghouse of culturally, linguistically and literacy appropriate cancer education and promotion materials and resources in collaboration with relevant community-based organizations.
- Educate community members on how to access and evaluate available cancer information and resources.
- Promote the development, dissemination, and evaluation of culturally-relevant, linguistically-competent cancer care guidelines to the general public via websites, portals, or other mechanisms.
- Provide technical assistance to groups that will enhance the quality and accuracy of materials/products used to educate communities about cancer.
- Increase patient education and access to participation in high quality clinical trials for low-income and uninsured or underinsured populations.
- Provide education on personal health and lifestyle behaviors that influence disease risk, including cancer risk. This education should access existing resources in the community such as families and schools and develop new resources when non-existent.
- Implement and evaluate educational initiatives addressing lifestyle/behavioral and biological factors that increase cancer risk among disparate communities.

OBJECTIVE 1.3:

Develop specific strategies to address patient access barriers related to cancer screening, diagnosis, treatment, and quality of life services (includes both medical issues such as co-pays and wound care and non-medical issues such as transportation, language barriers, child care, and dietary needs).

Strategies:

- Conduct a needs assessment to identify patient access needs related to cancer screening, diagnosis, treatment, and quality of life needs for medically-underserved populations.
- Work in partnership with local Community Health Centers, Area Health Education Centers, and the Metropolitan Community Provider Network to develop, implement, and promote cancer prevention, screening, and treatment services aimed specifically at reducing cancer health disparities in Colorado.
- Identify and publish information on available resources for medically-underserved communities.
- Develop web-based educational and support interventions and systems to

ensure that they are available to communities statewide at no cost to the public.

- Establish standards for Culturally and Linguistically Appropriate Services (CLAS), including availability of interpretation services.
- Support, expand, and promote the availability of transportation services for cancer patients, particularly in rural areas. Recommend that ACS modify the Road to Recovery program description so that it is not limited to treatment options.
- Link U.S. military veterans with cancer prevention, screening, and treatment services within the Veterans Affairs health care system including access to cancer clinical trial participation.

OBJECTIVE 1.4:

Develop systems and infrastructure to support the delivery of the latest, most appropriate cancer prevention, early detection, treatment, and quality of life care for underserved communities.

Strategies:

- Develop, test, maintain, and promote patient navigation systems that can facilitate optimum cancer care throughout the continuum of cancer-related health services.
- Adapt a certified Community Health Worker (CHW) model for use in a variety of settings to address barriers to access, culturally-therapeutic compliance, services utilization, cancer risk management, and health education.
- Identify sources of funding for Patient Navigator and/or Community Health Worker training programs. Provide grant writing training and technical assistance to help disparate communities access funding streams and develop and/or access training programs.
- Identify capacity and access issues for rural Colorado for cancer screening, diagnostic, and treatment services.
- Expand networks or linkages among rural providers and urban centers so that optimal care is more accessible to rural cancer patients.
- Identify availability and implement increased use of mobile units in rural and underserved communities for mammography and colorectal cancer screening.
- Extend state-of-the art cancer care to rural, frontier, and other underserved areas by expanding the use of telemedicine and reinforce a reimbursement system that facilitates expansion of telemedicine to geographically-underserved areas.
- Determine and utilize resources to identify and disseminate "best practices" and “evidence-based medicine” such as Cancer Control PLANET (http://cancercontrolplanet.cancer.gov/).

- Expand and enforce cancer data collection and reporting on racial/ethnic minorities based on the Office of Management and Budget (OMB) categories and use sub-populations groups where possible. This would include developing a Colorado uniform method of recording race/ethnicity for all hospitals and other health care facilities that are required to report to the Colorado Central Cancer Registry.
- Expand cancer data collection systems in the Colorado Central Cancer Registry to include race/ethnicity, socioeconomic status (e.g., level of education), insurance status, disability, and primary language.

OBJECTIVE 1.5:

Foster the development of minority researchers and health care providers.

Strategies:

- Establish mechanisms to enable racial/ethnic minorities and members of other underserved populations to enter health and cancer care professions.
- Initiate training programs that create a diverse and culturally-competent health care workforce that is representative of the Colorado community it serves.
- Support networks for college and graduate students pursuing health careers and financial incentives that will enable Native American health professionals to establish and maintain financially-viable careers in rural areas.

OBJECTIVE 1.6:

Develop, implement, and evaluate public education initiatives to address known carcinogenic environmental factors of high priority in collaboration with environmental organizations working among communities of disparity.

Strategies:

- Collaborate with other organizations, including community-based organizations, attempting to measure environmental impacts on communities of color (e.g. COPEEN (Colorado People's Environmental and Economic Network) and CDPHE).

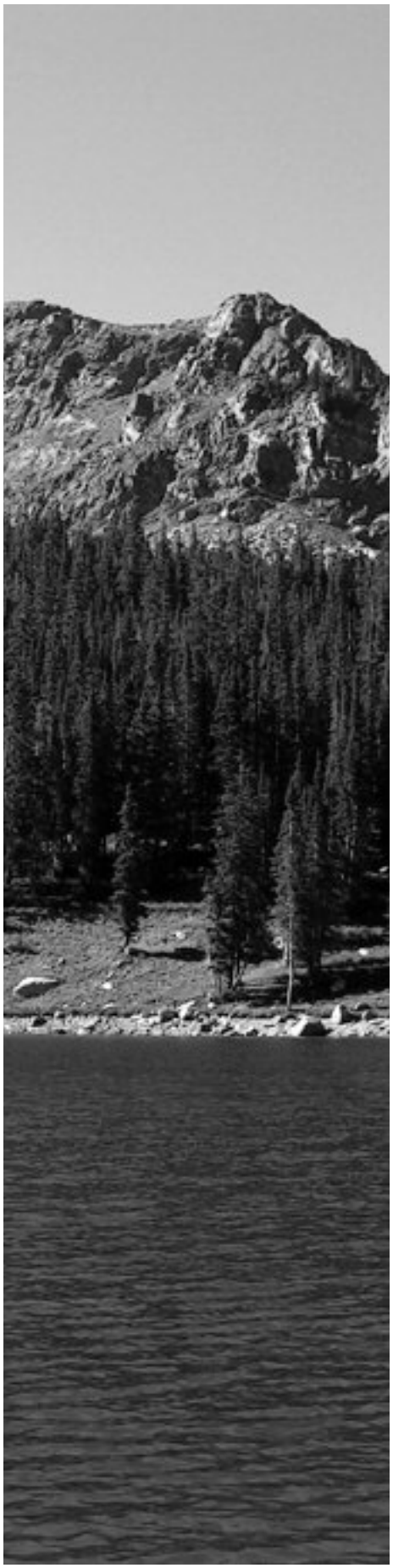
- Support community education efforts related to risk reduction measures.
- Collaborate with the Colorado Tobacco Education and Prevention Program in implementing the cancer plan objectives related to decreasing tobacco-related morbidity and mortality among disparate populations.

OBJECTIVE 1.7:

Foster the development of community-driven and community-based participatory research on Colorado disparities in quality cancer care.

Strategies:

- Convene a meeting of community members and researchers to identify key research questions related to health disparities in Colorado.
- Explore the feasibility of and interest in establishing a Colorado Health Disparities Research Collaborative in partnership with community members, organizations, and researchers.



GENERAL CANCER RISK & RISK REDUCTION

Cancer is the second leading cause of death in Colorado. Lifestyle, non-genetic and genetic factors, independently or in combination, can increase an individual's risk of developing cancer.

Changes in lifestyle (including reduction in tobacco use, and modification of the diet to reduce fat consumption and increase fiber consumption), as well as early detection and intervention, can significantly reduce cancer mortality for some cancers. Reductions in cancer incidence achieved through risk factor interventions will reduce cancer morbidity as well as mortality. Screening interventions, that result in early detection, will have a proportionally greater impact on cancer mortality since early-stage disease is more likely to be cured by treatment.

OBJECTIVE 2.1:

Increase knowledge of the benefits of screening for the early detection of cancer.

Strategies:

- Disseminate information on the benefits of screening for early detection to both the public and health care providers. Current evidence-based screening tests include:
  - Mammography for breast cancer
  - Endoscopy and/or fecal occult blood testing for colorectal cancer
  - Papanicolaou smears for cervical cancer
  - Skin self-examination and physical examination for skin cancer
  - Other screening tests as developed
- Emphasize screening education in communities with identified disparities.

OBJECTIVE 2.2:

Increase knowledge of cancer risk due to selected preventable factors.

Strategy:

- Disseminate information on increased risk of:
  - All cancers with diets low in fruits and vegetables
  - Breast, esophageal, and head and neck cancer with more-than-moderate alcohol use
  - Colon and breast cancer with high dietary fat
  - Lung cancer with radon exposure
  - Lung, breast, cervical, kidney, head and neck, pancreas, colorectal and bladder cancer with tobacco use, from both primary and second-hand smoke exposure
  - Skin cancer with ultraviolet exposure

OBJECTIVE 2.3:

To increase knowledge of the significance of a family history of cancer and the usefulness of genetic testing.

Strategies:

- Provide education to health care providers to increase use of appropriate assessment tools in the following high-risk groups:
  - Breast cancer in women with first-degree relatives with breast cancer, especially under age 50 and/or ovarian cancer at any age
  - Breast and ovarian cancer in women with BRCA1 and BRCA2 gene mutations
  - Colorectal cancer in persons with first-degree relatives with colorectal cancer, especially at age less than 60
  - Melanoma in persons with first-degree relatives with melanoma
  - Prostate cancer in men with first-degree relatives with prostate cancer
  - Thyroid cancer in persons with first-degree relatives with thyroid cancer or multiple endocrine neoplasia type II
- Support programs increasing the general population's knowledge regarding familial risk, genetic testing and counseling, treatment options, and best practices.

OBJECTIVE 2.4:

To increase knowledge of, and enrollment in, ongoing clinical trials in chemopreventive measures for persons at high risk of cancer.

Strategies:

- Disseminate information on clinical trials via the Colorado Cancer Coalition website at www.coloradocancercoalition.org about ongoing clinical trials in chemoprevention at the following sites; UCCC, CCRP, and RMCC.
- Support establishment of professional training mechanisms, which will increase knowledge about clinical trials.

TOBACCO

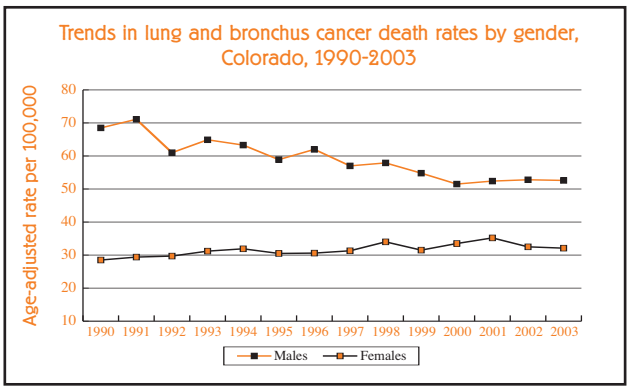
Lung cancer is the most common cause of cancer death for both men and women. About 1,400 cases of lung cancer are diagnosed in Colorado each year.

Avoidance of tobacco use is the key to reducing lung cancer morbidity & mortality.

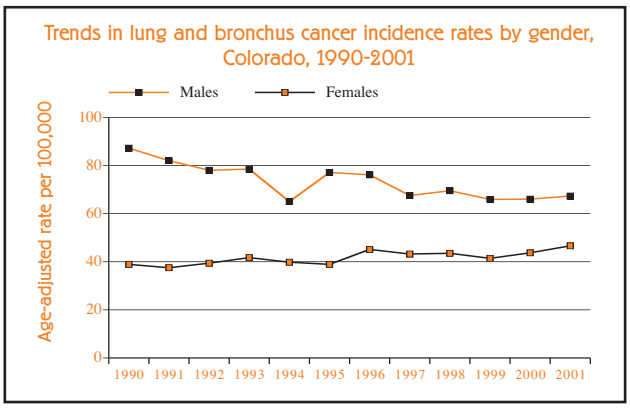
Cigarette smoking far outweighs all other risk factors in the development of lung cancer; the disease rarely occurs in individuals who have never smoked. Approximately 90% of lung cancer cases in men and 80% of cases in women are attributable to cigarette smoking, both active and passive.

The risk of developing lung cancer is proportional to the number of cigarettes smoked daily and the number of years one has smoked. Individuals who smoke more than two packs per day have lung cancer mortality rates 15 to 25 times greater than those who have never smoked. Cessation of cigarette smoking results in a gradual decrease in lung cancer risk. Ten to 20 years after cessation, lung cancer rates for former smokers approach the rates of those who have never smoked.

No effective curative treatment for lung cancer is available. Nearly 90% of lung cancer patients die within five years of diagnosis. Survival improves modestly when lung cancer is detected at an early, localized stage, but few cases are detected early.



Source: Colorado Central Cancer Registry, 2005



Source: Colorado Central Cancer Registry, 2005

Avoidance of tobacco use is the key to reducing lung cancer morbidity and mortality. Morbidity and mortality from heart disease and cancer will be reduced significantly if the prevalence of smoking is decreased. Despite the known adverse effects of tobacco use, approximately 650,000 adult Coloradans still smoke. Environmental tobacco smoke, commonly known as second-hand smoke, also contributes to lung cancer risk.

In addition to its association with deaths due to lung cancer, heart disease and stroke, cigarette smoking also is a risk factor for the development of cancers of the bladder, cervix colon/rectum, esophagus, kidney larynx, and pancreas.

If encouraged by their health care provider, nearly 70% of current adult smokers are more likely to quit. Most adult smokers begin to smoke regularly before age 20. Currently, there are approximately 200,000 youth who are current smokers in Colorado.

Experimentation with smoking is occurring at younger and younger ages, and initiation now occurs almost entirely during adolescence. Preventing young people from starting to smoke should be a major focus of efforts to reduce the prevalence of cigarette smoking.

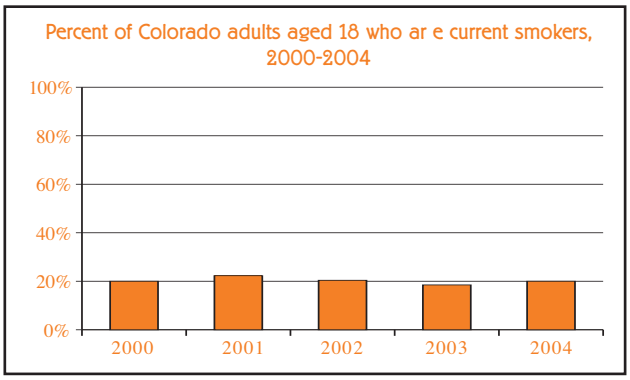
Experimentation with smoking is occurring at younger and younger ages, and initiation now occurs almost entirely during adolescence.

Oral cancer has been shown to occur several times more frequently among smokeless tobacco users than among non-users, and may be 50 times as frequent among long-term spit tobacco users. The consumption of smokeless tobacco in the United States increased 40% between 1970 and 1986. Most new users of smokeless tobacco products are adolescent males. Approximately 140,000 adults are current smokeless tobacco users.

In August 1999, the Centers for Disease Control and Prevention (CDC) released a guidance document which outlines minimum and maximum funding ranges and programmatic recommendations for state tobacco-control initiatives. The funding required for implementing programs varied depending on state characteristics, demographics, tobacco use prevalence, and other factors. CDC's recommended standards for Colorado ranged from $24.5 million to $63.2 million. Colorado, in FY 2005-06, has a budget of approximately $29 million for tobacco control, the first time that funding is within CDC's recommended range.

The overarching, strategic goals for tobacco prevention are:

- Prevent and reduce tobacco use by adolescents
- Reduce tobacco use by adults
- Eliminate exposure to secondhand smoke.
- Reduce tobacco-related disparities.



Source: Colorado BRFSS, 2005

OBJECTIVE 3.1:

By 2010, decrease cigarette use by middle school (MS) and high school (HS) students to 4% and 11.6%, respectively.

(Baseline: 8.8% MS (2000), 24.1% HS (2003), Colorado Youth Tobacco Survey)

By 2010, decrease spit tobacco use by middle school and high school students to 0.3% and 1.1%, respectively.

(Baseline: 2.4% MS (2000), 6.9% HS (2003), Colorado Youth Tobacco Survey)

Strategies:

- Promote and enforce Colorado's Tobacco-Free Schools Law.
- Promote youth advocacy and empowerment as a strategy to expose tobacco industry marketing to children.
- Decrease pro-tobacco influences such as advertising and promotion, and adult role-modeling.
- Promote youth awareness for non-use and decrease social acceptability of tobacco.

OBJECTIVE 3.2:

By 2010, reduce the proportion of middle school and high school students who report that they usually got their cigarettes from a store to 4% and 12.7%, respectively.

(Baseline: 5.2% MS (2000), 21.8% HS (2003), Colorado Youth Tobacco Survey)

Strategy:

- Decrease youth access to tobacco products.

OBJECTIVE 3.3:

By 2010, increase smoking cessation attempts by middle school and high school student smokers to 64.9% and 55.7%, respectively.

(Baseline: 58.7% MS (2000), 52.9% HS (2003), Colorado Youth Tobacco Survey)

COLORADO QUITLINE 800.639.QUIT

COLORADO QUITNET co.quitnet.com

Strategies:

- Promote youth tobacco cessation programs on high school campuses.
- Promote youth use of the Quitline.
- Train and support school personnel to implement cessation programs.

OBJECTIVE 3.4:

By 2010, decrease tobacco use by college-age youth to 13.0%.

(Baseline: 30%, 2003 TABS)

By 2010, increase smoking cessation attempts by college-age youth to 70.0%.

(Baseline: 59.8%, 2003 Colorado Tobacco Attitudes and Behavior Survey)

Strategies:

- Increase awareness of the hazards of tobacco use and second hand smoke.
- Increase involvement in efforts to reduce tobacco use and to eliminate second hand smoke.
- Increase the number of tobacco control policies on individual campuses.
- Empower students to take action on tobacco control issues.
- Increase the collaboration between campus and community to address tobacco control.

OBJECTIVE 3.5:

By 2010, reduce prevalence of cigarette use among:

- **Adults over 18 years old to 12%**
  (Baseline: 18.6%, 2003 BRFSS)
- **Young adults to 20%**
  (Baseline: 22.5%, 2003 BRFSS)
- **Seniors to 4%**
  (Baseline: 8.6%, 2003 BRFSS)
- **Women who are pregnant to 5%**
  (Baseline: 9.3%, 2000-03 BRFSS)

OBJECTIVE 3.6:

By 2010, reduce prevalence of spit tobacco use among adults over 18 years old to 0.6%.
(Baseline: 2.3%, 2003 BRFSS)

Strategies (for Objectives 3.5 & 3.6):

- Use Quitline and QuitNet.
- Enhance community-based services.
- Train and support health care providers and professionals.
- Promote integration of evidence-based treatments in health plans and clinical settings.
- Promote coverage of effective tobacco dependence treatment among public and private health plans.
- Develop a research agenda and increase funding for research on tobacco dependence treatment and population-based tobacco cessation activities.
- Expand population-based tobacco control activities that increase the demand for cessation.

OBJECTIVE 3.7:

By 2010, reduce the proportion of Colorado children ages 0 through 18 who are exposed (daily) to tobacco smoke at home to 7.5%.
(Baseline: 20.3%, 2003 BRFSS)

Strategies:

- Increase public awareness and knowledge of the health risks and harmful effects of secondhand smoke on children through media and educational campaigns.
- Educate childcare providers and other organizations and programs serving children on how to best provide education with parents and caregivers to reduce a child's exposure to secondhand smoke.
- Promote smoke-free homes and autos.

- Educate health care professionals, including day care providers, to identify and counsel on the harms of secondhand smoke and provide cessation resources.
- Promote smoke-free public-assisted housing.

OBJECTIVE 3.8:

By 2010, reduce the proportion of middle school (MS) and high school (HS) students who are nonsmokers and are exposed to secondhand smoke to 27.8% and 34.1%, respectively.
(Baseline: 40.2% MS, 49.0% HS, 1999-2000 Youth Tobacco Survey)

Strategies:

- Educate the public, business owners, and community leaders about the harmful effects of secondhand smoke and the laws prohibiting or restricting smoking.
- Earn pro-health media coverage.
- Run paid media on the health risks of exposure to secondhand smoke.
- Enforce Colorado's Tobacco-Free Schools Law.

OBJECTIVE 3.9:

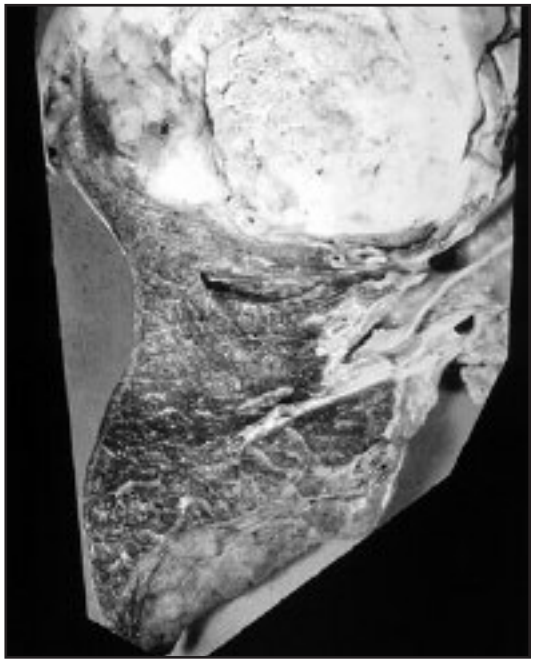
By 2010, increase the proportion of worksites with policies that prohibit smoking in work areas to 100% and common/public areas to 92.3%.
(Baseline: 85% work areas, 78% common/public areas, 2003 BRFSS)

Strategies:

- Promote the productivity, economic and health benefits of a smoke-free worksite, including restaurants and bars.
- Conduct media/educational campaigns educating the public on the benefits of smoke-free workplaces.
- Educate and mobilize hospitality workers and labor unions.
- Focus on employers with high rates of adolescent employees.
- Enforce existing laws.

OBJECTIVE 3.10:

Increase the percentage of the Colorado population covered by municipal clean indoor air ordinances that prohibit smoking in public places.



Strategies:

- Educate local tobacco control coalitions on how to increase support for smoke-free laws/policies in their communities and the processes necessary for establishing smoke-free laws.
- Provide technical assistance to local communities on establishing smoke-free policies/laws.
- Expose tobacco industry tactics and involvement in statewide and local policies.
- Obtain endorsements for smoke-free standards from other groups, key stakeholders, celebrities and others.
- Explore the possibilities of support for a Colorado state law that prohibits smoking in all public places.
- Collect and disseminate data on the number of people in Colorado who are protected by clean indoor air laws.

OBJECTIVE 3.11:

By 2010, reduce current cigarette use among Hispanic adults to 10% through culturally-appropriate strategies.
(Baseline: 21.6%, 2003 BRFSS)

OBJECTIVE 3.12:

By 2010, reduce current cigarette use among African American adults to 9% through culturally-appropriate strategies.
(Baseline: 17.8%, 2001 TABS)

OBJECTIVE 3.13:

By 2010 reduce current cigarette use among Native American adults to 19% through culturally-appropriate strategies.
(Baseline: 35.7%, 2001 TABS)

OBJECTIVE 3.14:

By 2010 reduce current cigarette use among adult Asian Americans and Asian Pacific Islanders to 10% through culturally-appropriate strategies.
(Baseline: 16.3%, 2001 TABS)

OBJECTIVE 3.15:

Reduce tobacco use in the Gay, Lesbian, Bisexual and Trans-gendered population.
(Baseline:To be established)

Strategies (for Objectives 3.11-3.15):

- Establish baseline
- Promote availability of existing cessation services.
- Increase culturally-appropriate cessation services.

- Train and support health care providers and professionals to identify and counsel on the harms of tobacco use and provide cessation resources.
- Promote community-based, grassroots involvement in tobacco control.
- Decrease illegal sales to minors.
- Reduce exposure to secondhand smoke as a social norm change to decrease acceptability of smoking.
- Promote family involvement in non-use of tobacco products.
- Collect and disseminate data on tobacco use prevalence among the various populations.

OBJECTIVE 3.16:

Increase the capacity within priority populations to address tobacco-related health disparities.

(Baseline: To be established)

Strategies:

- Establish baseline
- Increase capacity within community-based organizations and agencies for effective tobacco control programs that reach and involve disparate populations.
- Engage representatives of disparate populations in developing a strategic plan to identify and eliminate tobacco-related disparities.
- Increase funding designated for priority populations.
- Promote diversity and inclusiveness as guiding principles and express this philosophy through goals and objectives.

OBJECTIVE 3.17:

By 2010, reduce the proportion of Colorado children (0-18) who are exposed (daily) to tobacco smoke at home among the various priority populations to 7.5%.

(Baseline: Black 25%, White/Hispanic 15%, 2001 TABS; 20.3% general population, 2003 BRFSS)

By 2010, increase the proportion of worksites, among the various priority populations, with policies that prohibit smoking in work areas to 100%.

(Baseline: White/Black men 83%, Hispanic men 75% 2001 TABS)

Strategies:

- Increase public awareness and knowledge of the health risks and harmful effects of secondhand smoke on children through media and educational campaigns.
- Educate child care providers and other organizations and programs serving children on how to best provide education with parents and caregivers to reduce a child's exposure to secondhand smoke.
- Promote smoke-free homes and autos.
- Educate health care and daycare providers, to identify and counsel on the harms of secondhand smoke and provide cessation resources.
- Promote smoke-free public-assisted housing.
- Reduce exposure to secondhand smoke as a social norm by decreasing the acceptability of smoking.
- Promote the productivity, economic and health benefits of a smoke-free worksite, including restaurants and bars.

- Conduct media/educational campaigns educating the public on the benefits of smoke-free workplaces.
- Educate and mobilize hospitality workers and labor unions.

OBJECTIVE 3.18:

By 2010, reduce current cigarette use among young adults (18-24) to 15% through appropriate strategies.

(Baseline: 22.5%, 2003 BRFSS)

OBJECTIVE 3.19:

By 2010, decrease tobacco use in low SES populations to 18%.

(Baseline: by educational attainment: Less than High School – 43%; by annual household income: Poverty – 36%; Below Median – 27%; 2001 TABS)

OBJECTIVE 3.20:

Decrease tobacco use in consumers of mental health services.

(Baseline: State Public Mental Health System consumers--39% in FY2003-04, 2005 CCAR)

Strategies (for Objectives 3.18-3.20):

- Promote availability of effective cessation services.
- Increase quit attempts.
- Enhance community-based services.
- Train and support health care providers and professionals.
- Promote coverage of effective tobacco dependence treatment among public and private health plans.

OBJECTIVE 3.21:

Reduce tobacco industry influences on priority population groups.

(Baseline: To be established)

Strategies:

- Establish baseline
- Decrease acceptability of tobacco use.
- Expose the advertising strategies used by the tobacco industry.

NUTRITION & PHYSICAL ACTIVITY

Studies suggest that 30 to 35% of cancers are diet-related. Risk varies with the type of diet.

The International Agency for Research on Cancer (UARC) recently published a report that documented the preventive effect of fruit and vegetable consumption on cancer. The evidence is conclusive for cancer of the mouth and pharynx, esophagus, larynx, lung, stomach, kidney, colon rectum, ovary (vegetables only), and bladder (fruit only).

Studies suggest that 30 to 35% of cancers are diet-related. Risk varies with the type of diet.

Vegetables (including legumes such as dry beans and peas), fruits and grains generally are low in fat, and are good sources of antioxidants, vitamins, minerals, complex carbohydrates and dietary fiber. Phyto-chemicals in plant foods, such as carotenoids, indoles, and flavonoids, also may contribute to the observed protective effect.

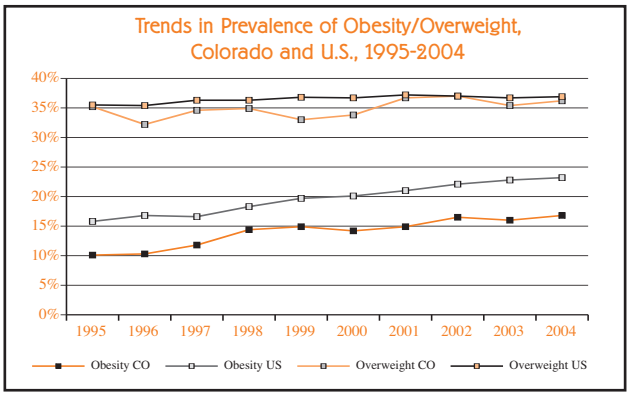
Regular physical activity has been shown to reduce the risk of colon, breast, and possibly endometrial and prostate cancers. Physical activity also helps maintain a healthy weight. In 2003, 41% of Colorado adults age 18 and over exercised for at least 30 minutes, five or more times per week. White, non-Hispanic adults were more likely to exercise than were Hispanic adults (42% and 35%, respectively).

Physical activity can also help mitigate obesity, a nationwide concern linked to many cancers. According to the American Cancer Society's Cancer Prevention and Early Detection Facts and Figures 2004, the current obesity and overweight patterns in the U.S. could account for approximately 1 in 7 cancer deaths in men and 1 in 5 in women.

OBJECTIVE 4.1:

By 2010, reduce the prevalence of obesity to 15%.

(Baseline: 16.8%, 2004 Colorado BRFSS.)



Source: Colorado BRFSS, 2005; CDC BRFSS, 2005.

Strategies:

- Ensure that physical activity and nutrition messages are incorporated into existing and future cancer prevention and control educational campaigns.
- Ensure that physical activity and nutrition professional education opportunities are provided to those working in cancer prevention and control in Colorado (such as at the annual cancer conference)
- Continue to collaborate with the Colorado Physical Activity and Nutrition Program (COPAN), Colorado Cardiovascular

(CVD) coalitions and Colorado 5 A Day Program to work toward the delivery of consistent messages for the public.

OBJECTIVE 4.2:

By 2010, increase to at least 35% the proportion of young people grades 9-12, and to at least 30% the proportion of people age 18 and over, who have engaged in moderate physical activity for at least 30 minutes on five or more of the previous seven days.

(Baseline: 31% of students in grades 9-12, 2003 Colorado YRBS; Baseline: 41% of adults 18 and over, 2003 Colorado BRFSS)

Strategies:

- Continue to promote a 10,000 steps program in schools, worksites and communities.
- Develop and distribute community-specific physical activity resource guides to increase residents' knowledge of existing facilities and opportunities to be more active.
- Encourage employers, schools, churches, and civic groups to provide cancer prevention education through physical activity and nutrition programs.
- Promote the development of sponsored teams, walking clubs, and the development of fitness facilities in schools, worksites, and other community associations.
- Promote sustainable, community-wide campaigns to encourage increased physical activity.
- Promote personalized programs to help participants incorporate physical activity into their daily routines by teaching them new behavior skills, goal setting and self-monitoring.
- Work with transportation planners and elected officials to improve the compatibility for walking and bicycling on existing and proposed thoroughfares.

OBJECTIVE 4.3:

By 2010, increase to 50% the proportion of the population over 18 who eat at least five servings of fruits and vegetables per day.

(Baseline: 24.2%, 2003 Colorado BRFSS)

Strategies:

- Incorporate the 5-A-Day Program into cancer prevention and control initiatives at worksites, schools, churches, and with other community groups
- Educate the public on the link between diet and some cancers
- Collaborate with multiple partners to establish nutritional programs
- Utilize materials and messaging created by the 5-A-Day Program in cancer programming and media events
- Provide professional education linking nutrition and cancer at the annual cancer conference.

BREAST CANCER

Breast cancer is the single most common life-threatening cancer diagnosed in Colorado women and the second leading cause of cancer deaths among women in the state. Breast cancer incidence rates have risen in Colorado over the last two decades partly due to an increase in mammography screening.

However, breast cancer mortality can be reduced by about one-third by annual mammography combined with clinical breast examination and appropriate and timely follow-up treatment for women age 50 and older. Mammography has become widely used in Colorado during the past 25 years. Mammography leads to early diagnosis and treatment, which results in decreased mortality.

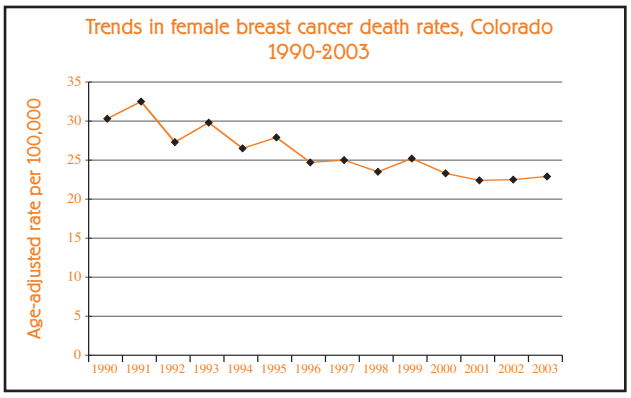
Breast cancer as a public health issue will be controlled only by improving access to quality care for Coloradans. This must include screening, diagnostics, treatment, support services and follow up care.

The U.S. Preventive Services Task Force recommends screening mammography, with or without clinical breast examination, every 1 to 2 years for women age 40 and older. Although scientific controversy remains regarding the benefit versus the risk of screening women age 40 to 49, studies suggest there may be a benefit for women in this age group. Women are urged to discuss the issue with their physicians and make personal decisions about frequency of screening during their forties.

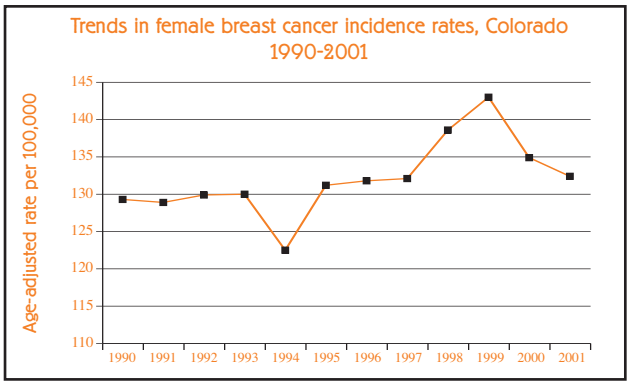
Selected Cancers

From several studies, women eligible for screening mammography report they did not get a mammogram either because they did not know they needed it, or their health care provider did not recommend it. Other barriers to routine compliance with mammography screening include:

- Belief that the examinations are not necessary in the absence of breast changes
- Belief that the individual patient is not personally at risk for breast cancer
- Cost of the mammogram
- Cost of treatment if diagnosed
- Concerns about radiation exposure and treatment outcomes
- Discomfort from the test
- Embarrassment
- Patient uncertainty about the effectiveness of the examination in the detection of breast cancer.

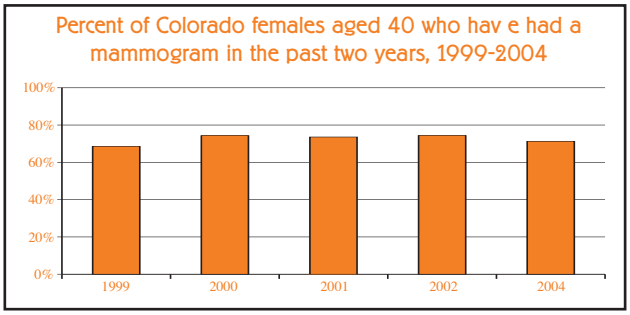


Source: Colorado Central Cancer Registry, 2005



Source: Colorado Central Cancer Registry, 2005

In addition, low educational attainment, low income, specific cultural barriers, lack of resources, advanced age, and lack of a regular source of health care have been associated with lower rates of mammography utilization. Despite the improved rates of mammography, there are disparities, which are of concern and need to be addressed with regard to mammography. Women of Hispanic or black race/ethnicity, for example, are less likely to have up-to-date mammograms than non-Hispanic whites.



Source: Colorado BRFSS, 2005

Since the late 1980s, the number of women receiving regular breast screening examinations, including mammography and clinical breast examinations, has risen dramatically. This increase is the result of aggressive public education and outreach efforts conducted by many Colorado Cancer Coalition agencies, private mammography centers, individual physicians, Colorado Women's Cancer Control Initiative (CWCCI) Community Coordinators, and others. However, these efforts need continued support in order to attain the year 2010 goals.

It is critical that all women in Colorado have access to state-of-the-art mammography. The quality of mammography is affected by four primary factors:

- The mammography unit and film processor equipment
- The skill of the technologist performing the examination

- The skill of the radiologist interpreting the examination
- The physician conducting follow-up for any screen-detected abnormalities.

A comprehensive effort to increase compliance with routine breast cancer screening examinations must ensure that every mammogram meets the highest possible standards for these four parameters.

OBJECTIVE 5.1:

By 2010, increase to 85% the proportion of women age 50 and older reporting having had a mammogram in the past two years.

(Baseline: 77.4%, 2004 Colorado BRFSS)

Strategies for the Public:

- Establish baseline data for the number of women who have knowledge of breast cancer screening guidelines.
- Continue outreach efforts to all women in Colorado about the importance of regular mammography screening and that early detection can save lives.
- Increase willingness, knowledge, and beliefs in order to increase screening among women that do have access.
- Increase awareness of screening options including breast self-examinations, clinical breast examinationss, and mammography.
- Continue public education and outreach to women who are never or rarely screened, women who partner with women, and women with disabilities.
- Increase public knowledge of the availability of Medicare coverage for payment of mammography screening for eligible parties.

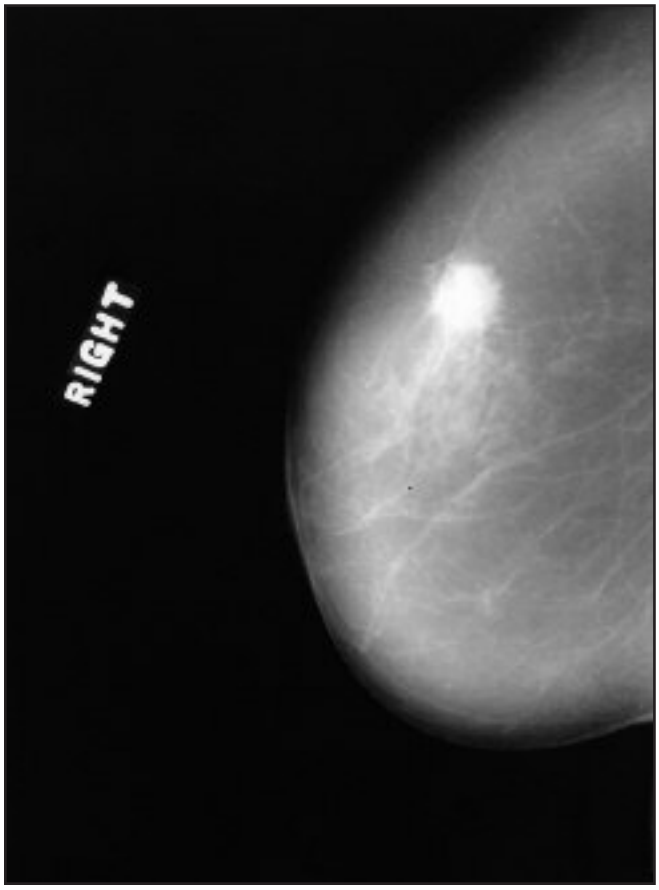
Strategies for Providers:

- Educate primary care providers about strategies for informing women of the need for breast cancer screening and the importance of their role in recommending mammography screening for women.
- Promote dissemination of clinical guidelines for screening and follow-up to all clinicians who conduct mammograms, using COPIC/CCGC guidelines.

Strategies for Health Care Systems:

- Continue low-cost/free mammography screening programs throughout the state.
- Promote access to community-based transportation services.

- Work with clinics to offer extended and non-traditional hours of operation, and encourage clinics to extend clinical hours beyond traditional business hours. Compile, distribute, and maintain a directory of those clinics with extended hours.



OBJECTIVE 5.2:

By 2010, increase to 85% the proportion of minority/ethnic/rural and other certain subgroups of women age 50 and over who have received a mammogram in the past two years.

(Baseline: Hispanic women 70.8%; Black women 77.6%, 2004 Colorado BRFSS)

Strategies for the Public:

- Encourage, support, and assist with programs to educate diverse populations of women on breast health and the importance of mammography screening.
- Provide culturally and linguistically appropriate educational and marketing materials.
- Identify marketing streams specific to the intended populations.
- Support community-based organizations to promote screening.

Strategies for Providers:

- Conduct a study on patient and system barriers to follow-up care by developing a protocol to address identified barriers that can be implemented in varying health care settings and systems.
- Promote mechanisms that ensure prompt notification about mammogram results in a manner comprehensible at the fifth-grade literacy level.
- Increase the use of aggressive notification follow-up for abnormal mammogram results.
- Promote the use of reminder and tracking systems to inform women of their need for follow-up and/or re-screening.

Strategies for Health Care Systems:

- Develop partnerships with correctional, domestic abuse, homelessness and mental health systems, and advocates to promote screening.
- Increase mammography access for low-income women.
- Study the feasibility of providing breast cancer screening services in mobile vans to women in rural areas and at the workplace.

OBJECTIVE 5.3:

Gather and disseminate educational resources for younger women (under the age of 50) to help them identify if they are high risk.

(Baseline: To be established)

Strategies for Health Care Systems:

- Establish baseline.
- Educate younger women about non-modifiable risk factors (genetics and family history).
- Educate younger women regarding modifiable risk factors.

OBJECTIVE 5.4:

Determine current state of mammography access in the state of Colorado. Access is described in terms of capacity, miles from service, hours of operation, financial barriers, geographical location, time off work, etc.

(Baseline: To be established.)

Strategies for Health Care Systems:

- Establish baseline.
- Conduct a study on patient and system barriers to access. After determination of current state of access.
- Maintain referral resources at diverse geographic locations to provide comprehensive information on diagnostic and treatment services to women with breast abnormalities.
- Endorse the establishment of networks or linkages among rural providers and urban centers so that optimal care is more accessible to rural cancer patients.
- Support American Cancer Society efforts to make transportation services, such as Road to Recovery, more readily available to cancer patients, particularly in non-metropolitan areas.
- Explore potential funding sources for access to mammography for women age 40 to 49.
- Increase access to mammography screening for low-income, high-risk women under 40 years old.
- Increase knowledge of access to screening among women ages 40 to 49 who are at high risk or are symptomatic.

CERVICAL CANCER

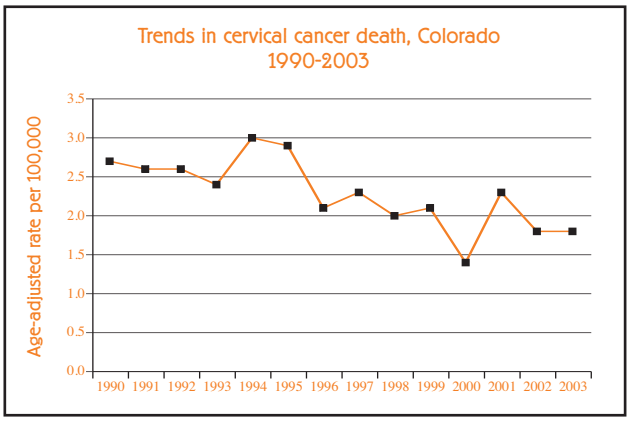
Cancer of the cervix is the 13th most commonly diagnosed cancer among females in Colorado. Cervical cancer mortality declined by more than 70% in the U.S. since adoption of the Pap test (Pap smear) in the 1940s. Despite it being one of the most preventable cancers, each year Colorado has about 160 new cases and 50 deaths.

Women who do not get regular Pap tests are at higher risk for death from invasive cervical cancer.

The main cause of cervical cancer is infection of the cervix with certain types of the human papilloma virus or HPV, which is transmitted primarily through sexual contact. Smoking also increases the risk of cervical cancer.

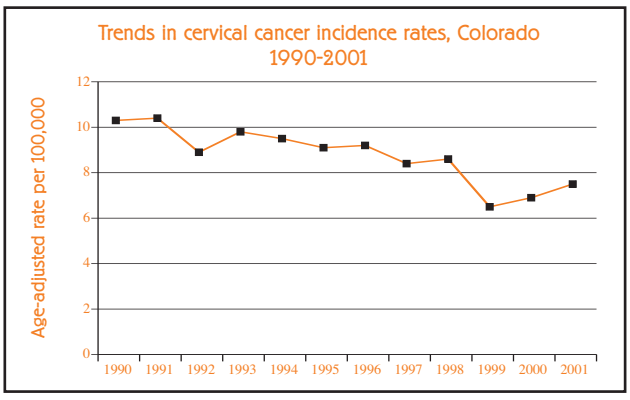
Fortunately, only a small proportion of cervical HPV infections progress to cervical pre-cancer or dysplasia. Cervical dysplasia may progress to invasive cervical cancer (over the course of years and possibly decades) if not detected and treated.

Age influences both cervical cancer incidence and death rates. In Colorado, the majority (more than two-thirds) of invasive cervical cancers are diagnosed in women age 20 to 54. While a smaller number of cases are diagnosed in women age 55 and above, older women are more likely than younger women to be diagnosed at later stages of the disease and to die from it. Additionally, the burden of cervical cancer varies for certain ethnic groups. In 2001, incidence and mortality rates for Hispanics in Colorado were more than twice those of non-Hispanic whites.



Source: Colorado Central Cancer Registry, 2005

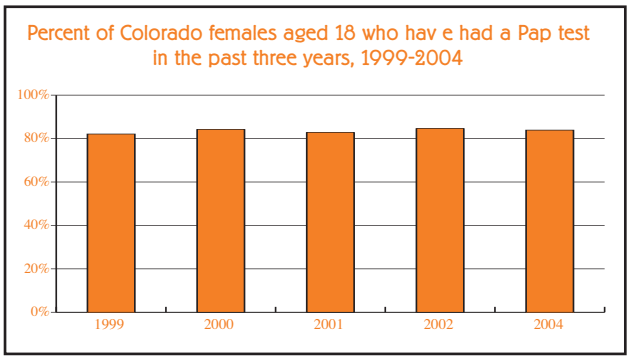
Women who do not get regular Pap tests are at higher risk for death from invasive cervical cancer. The U.S. Preventive Services Task Force recommends beginning screening for cervical cancer with a Pap test at age 21, or within three years of becoming sexually active, whichever comes first. Screening is advised at least every three years, and there is evidence that low-risk older women can probably stop screening after age 65.



Source: Colorado Central Cancer Registry, 2005

National surveys from the Year 2000 showed that certain groups are less likely to

have up-to-date Pap tests: older women; certain race/ethnicity groups (Hispanics/Latinas, American Indians, and Asian-Americans); recent immigrants; women of lower education; and women without health insurance. Results from the Colorado Behavioral Risk Factor Surveillance System (BRFSS) for 1995-2000 showed that poorer women were less likely to have had a Pap test within the past three years than women reporting incomes above the poverty level. BRFSS data from 2002 indicated that 78.6% of Colorado women age 50 and older had a Pap test within the past three years, while only 70% of women ages 65 and older had a Pap test in the past three years.



Source: Colorado BRFSS, 2005

The needs of target populations must be addressed to increase the numbers of women who are screened regularly and to reduce the number of cervical cancer deaths.

OBJECTIVE 6.1:

By 2010, increase to 92% the number of women, age 18 and older, reporting having had a Pap smear in the prior three years.

(Baseline: 83.9%, 2004 Colorado BRFSS)

Strategies:

- Educate primary care providers on strategies for informing women of the need for screening and the importance of their role in recommending screening to women.
- Encourage clinics to extend clinical hours beyond traditional business hours. Compile a directory of those clinics with extended hours.
- Continue support for the Colorado Women's Cancer Control Initiative (CWCCI) to provide services for low-income, uninsured women between 40 and 64 years of age.
- Study the feasibility of providing cervical cancer screening services in mobile vans to women in rural areas and at the workplace.
- Develop partnerships with correctional, domestic abuse, homelessness and mental health systems, and advocates to promote screening.

OBJECTIVE 6.2:

By 2010, decrease the rate of invasive cervical cancer in minority/ethnic women.

(Baseline: Hispanic 14.1%; Black 7.5%, Colorado Central Cancer Registry 1996-2000)

Strategies:

- Identify marketing streams specific to the intended populations.
- Provide culturally- and linguistically-appropriate educational/marketing materials.

- Support community-based organizations in promoting cervical cancer screening.
- Promote mechanisms that ensure prompt notification about Pap smear results in a form comprehensible at the fifth grade literacy level.
- Conduct a study on patient and system barriers to follow-up care. Develop protocol to address identified barriers that can be implemented in varying health care settings and systems.
- Increase the use of aggressive notification follow-up for abnormal Pap test results.
- Promote dissemination of clinical guidelines for follow-up to all clinicians who collect Pap smears.
- Promote the use of reminder and tracking systems to inform women of their need for follow-up and/or re-screening.

OBJECTIVE 6.3:

Support and collaborate with existing sexually transmitted disease prevention groups, such as the Colorado Coalition for STD Prevention (CCSP).

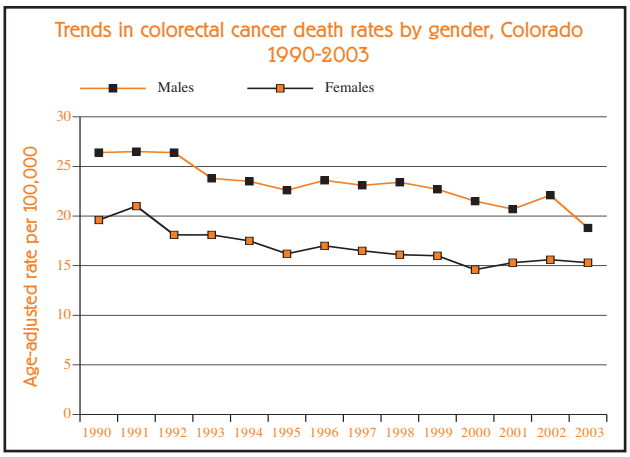
Strategies:

- Support the CCSP Plan recommendations.
- Coordinate efforts to educate the health care community about HPV and cervical cancer.
- Coordinate efforts to educate high-risk populations regarding HPV and cervical cancer.
- Monitor emerging science that investigates new cervical cancer screening and prevention technologies, such as the ThinPrep test and HPV vaccines.

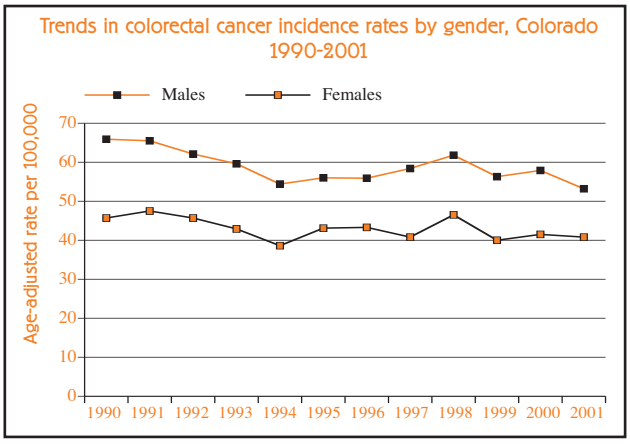
CANCERS OF THE COLON & RECTUM

Cancer in the colon or rectum (colorectal cancer) is a condition in which cells that line the colon or rectum mutate in ways that allow them to multiply in an uncontrolled way and invade other tissues. These rapidly-growing cells then form into masses of tissue that can interfere with the normal function of the colon or rectum, causing bleeding or obstruction. Colorectal cancer takes many years to develop. Most colorectal cancers arise from polyps, which are small mushroom-type growths on the interior lining of the colon or rectum. Polyps are usually present for many years before the cells within them further mutate to allow the cancerous behavior of invasion and spreading to other tissues to become apparent.

Several lifestyle factors have been shown to affect one's risk of forming colorectal cancer, including obesity, inadequate physical activity, and diets high in red meat and low in vegetables.

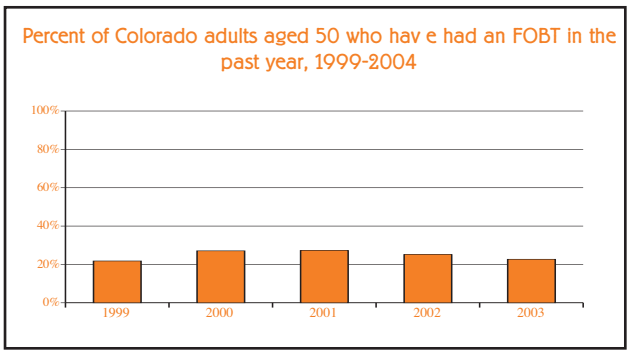


Source: Colorado Central Cancer Registry, 2005

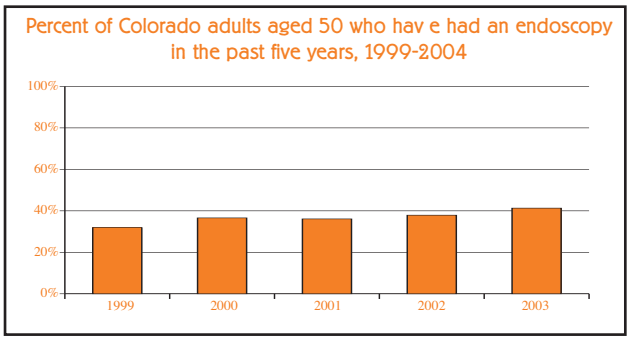


Source: Colorado Central Cancer Registry, 2005

As with most other cancers, advancing age is the biggest risk factor for cancers of the colon or rectum. Men are at higher risk than women, but this difference by gender is modest compared to other cancers. Blacks are at higher risk and Hispanics at lower risk. Those with a history of colorectal cancer or colorectal polyps in their family (first degree relatives) are at twice the risk of those with no family history, and are at risk at a younger age. Several lifestyle factors have been shown to affect one's risk of forming colorectal cancer, including obesity, inadequate physical activity, and diets high in red meat and low in vegetables. Taking estrogen replacement therapy, aspirin, or other non-steroidal anti-inflammatory (NSAID) drugs reduces risk.



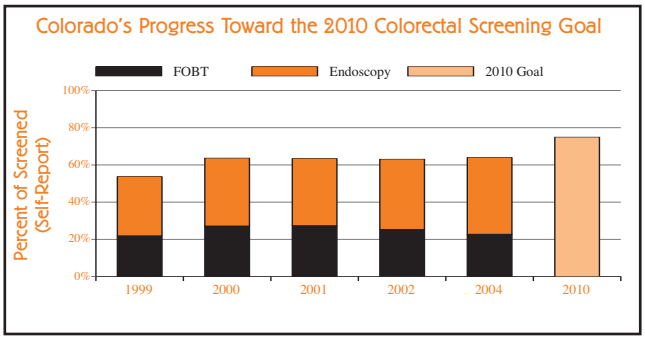
Source: Colorado BRFSS, 2005



Source: Colorado BRFSS, 2005

Randomized, controlled trials have proven that screening for blood in the stool (Fecal Occult Blood Testing with colonoscopic follow-up of all positive tests) reduces the risk of dying of colorectal cancer, and the best evidence from many studies is that endoscopic screening (sigmoidoscopy or colonoscopy) can substantially reduce the risk of dying from colorectal cancer. Because endoscopic examinationscan also allow for polyp removal, endoscopic colorectal screening is both an early detection method and also a cancer prevention method. Research studies on other screening methods, including virtual colonoscopy and testing stool samples for abnormal genes, have not yet shown these newer screening methods to be ready for recommendation to the general public. The identification and removal of colorectal polyps is the single most effective strategy to prevent colorectal cancer.

Colorectal cancer death rates have been on the decline in Colorado (as for the U.S. as a whole) for many years. Over the past decade, death rates from colorectal cancer have declined by over 20% in Colorado. All the reasons for this decline are not known, but they may be due in part to changes in diet in the 20th Century, with fruits and vegetables more readily available year-around, and to increases in the use of aspirin and NSAIDs as well as estrogen replacement therapy. Progress in cancer treatment has also been made, especially chemotherapies for regional stage disease. Screening rates have been improving in Colorado over the past decade as well. In 1999 only one third of Coloradans reported ever having had an endoscopic colon examination, but in 2002 that increased to one half. Death rates from colorectal cancer are lower in Colorado than in the U.S. as a whole (17.3 vs 20.1 deaths per 100,000 per year in 2001). This lower risk may be due to our lower rates of obesity (16.5% in Colorado vs 22.2% nationally).



Source: Colorado BRFSS, 2005

The identification and removal of colorectal polyps is the single most effective strategy to prevent colorectal cancer.

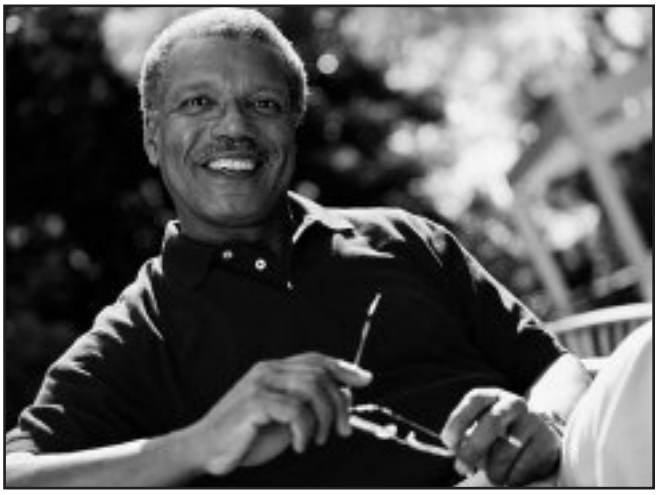
Colorectal cancer death rates will likely continue to fall in Colorado in the years to come. If we can reverse the adverse obesity trends in Colorado and increase colorectal screening rates we could see substantial reductions in colorectal cancer death rates in the years to come.

OBJECTIVE 7.1:

By 2010, 75% or more of Coloradans ages 50 and older will be in compliance with ACS colorectal cancer screening guidelines.
(Baseline: endoscopy 41.3%, FOBT 22.7%, BRFSS, 2004)

Strategies for the Public:

- By 2006, create a multimedia public awareness campaign to increase awareness of the benefits of colorectal screening:
  - Hold a summit of key stakeholders to develop a strategy that will reach the general population as well as high risk groups and the under-served
  - Engage professional social marketers and public relations resources of Colorado Cancer Coalition members to develop the campaign around a common message that can reach different audiences
  - Include messages both for average risk persons and for persons at higher risk due to their family history of colorectal cancer or adenomas
  - Make this message fit with messaging from other organizations in Colorado and nationally
  - Implement this campaign statewide by 2007
- By 2007, implement a small grants program to increase awareness activities in several communities across Colorado.
- By 2007, develop and implement a worksite educational program to increase colorectal screening awareness.



Strategies for Providers:

- By 2006, develop and begin to implement a comprehensive statewide educational campaign to increase knowledge of Colorado health care providers about colorectal screening options:
  - Use expertise of the Colorado Cancer Coalition to design the campaign
  - Address the issue of multiple guidelines in partnership with CCGC
  - Address the issue of medical liability in partnership with COPIC
- By 2006, implement a "screen-the-screener" program to increase screening rates among providers in Colorado, including physicians, nurses, physician assistants, and key office personnel who provide endoscopic screening or affect patient decisions about screening.

Strategies for Health Care Systems:

- Collaborate with health insurers to increase screening rates among their insured.
- By 2007, secure funding for a program to provide colorectal screening for uninsured Coloradans, including the provision of support for any diagnostic or treatment services required for conditions identified by this screening.
- By 2007, enact a program to assure adequate capacity in Colorado for colorectal screening services:
  - Carry out ongoing capacity monitoring
  - Work to improve reimbursement rates for screening services
  - Explore opportunities to support clinical systems in ways that will increase colorectal screening

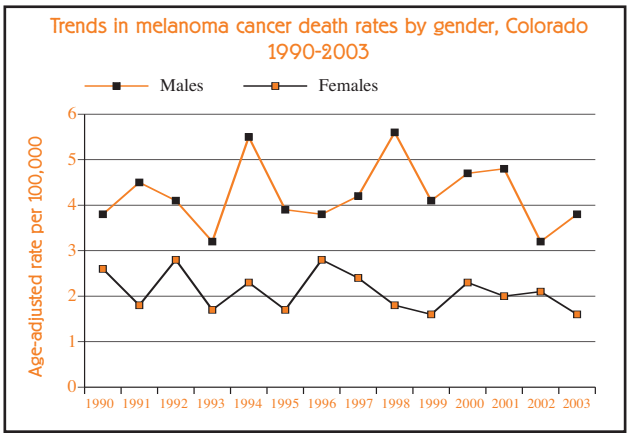
MELANOMA

Most skin cancers are basal cell and squamous cell carcinomas that rarely metastasize and are highly treatable. The most serious form of skin cancer, malignant melanoma, has a high potential to metastasize and can be treated effectively when diagnosed early.

Mortality rates for melanoma in Colorado also have been significantly higher than U.S. rates.

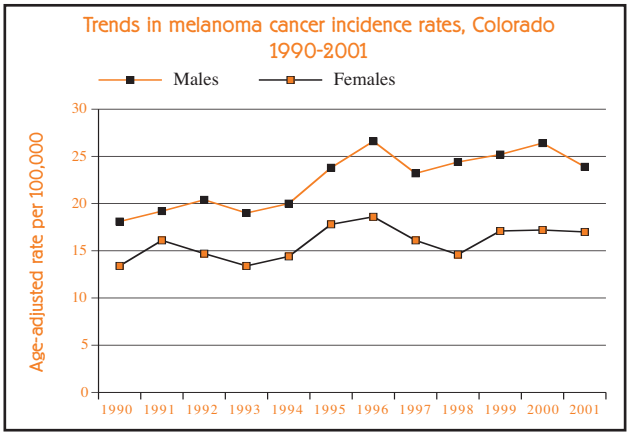
Melanoma has been increasing in Colorado. The 1996-2000 Colorado melanoma incidence rate was 33% higher than the U.S. rate for males, and 40% higher for females. Melanoma survival varies substantially by stage, with a five-year survival of 90% for localized disease and 19% for distant metastatic disease (CCCR, 2004).

Exposure to solar radiation appears to be the chief preventable risk factor for non-melanoma skin cancer and may be responsible for more than 90% of cases. Data indicate that non-melanoma skin cancer is related to cumulative exposure throughout life, whereas intense exposure (sunburns) in childhood may be more important for melanoma. Studies indicate that a single, severe, sunburn before the age of 18, may increase the risk of malignant melanoma two-fold. For this reason, it is important to reduce the proportion of children who have had severe sunburns (i.e., blistering or painful burn lasting more than three days) during childhood or adolescence.

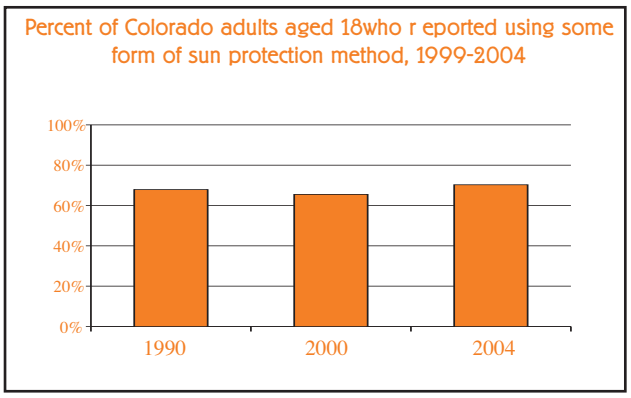


Source: Colorado Central Cancer Registry, 2005

The AAD, AAP, ACS, CDC, NCI, ASHA, NASBE and other authorities strongly recommend reducing UV exposure to prevent skin damage, eye damage and skin cancer. Parents and caregivers should limit sun exposure for infants and children. In addition, facilities providing services to children (e.g., day care centers, schools and recreation programs) should create sun-safe environments. Workplaces should implement sun protection strategies for their employees including educating them on the risks of UV exposure and providing shade, protective apparel and sunscreen.



Source: Colorado Central Cancer Registry, 2005



Source: Colorado BRFSS, 2005

Special care should be taken when the sun's rays are most intense such as during midday hours, during the summer months, at lower latitudes, and at higher elevations. UV intensity increases about 4% for every 1000 feet gained in elevation. Coloradans should be aware of the dangers of sun exposure year- round and take appropriate precautions.

These precautions include:

- Limiting unprotected sun exposure during midday hours on sunny and cloudy days.
- Using shade
- Wearing cover-up clothing and hats
- Wearing sunglasses
- Using sunscreen with SPF 15 or more (excluding infants less than 6 months of age)

In addition, individuals should avoid unnecessary UV exposure from artificial sources such as sunlamps and tanning beds. The WHO now recommends against the use of UV tanning devices for cosmetic purposes. They also recommend that no person under 18 should use a sunbed.

Research shows people who use tanning devices have 2.5 times the risk of squamous cell skin cancer and 1.5 times the risk of basal cell cancer. Alarmingly, people ages 35 or younger who use tanning beds regularly have a melanoma risk 8-fold higher than people who have never used a tanning bed.

Parents & caregivers should limit sun exposure for infants & children.

Screening for skin cancer with skin examinations has been recommended by several national organizations and agencies. Regular skin examinations by a health care professional may be particularly beneficial in the early detection of malignant melanoma. Recent data suggest that skin self-examination may be associated with reduced risk of melanoma incidence. The ACS recommends that everyone perform skin self-examinations at least monthly and have a health care professional examine their skin as part of their routine annual cancer-related checkup.

OBJECTIVE 8.1:

By 2010, increase to 100 the number of schools that have established sun safety guidelines, procedures or policies.

(Baseline: To be established)

Strategies:

- Establish baseline
- Conduct statewide trainings and provide resources for school district personnel.
- Collect all new implemented guidelines, procedures, or policies.

OBJECTIVE 8.2:

By 2010, revise state legislation to restrict indoor UV tanning usage by minors.

Strategies:

- Encourage development of, secure sponsorship for and promote passage of legislation.
- Increase indoor UV tanning facility compliance with regulations.
- Educate indoor UV tanning facility operators about state legislation.

OBJECTIVE 8.3:

By 2010, increase by 5% (from established baseline) the percentage of workplaces that enforce comprehensive sun protection policies for their outdoor workers.

(Baseline: To be established)

Strategies:

- Establish baseline
- Implement educational programs and distribute information which educates workers about sunburns and skin cancer.
- Distribute sun protection products at workplaces.

OBJECTIVE 8.4:

By 2010, reduce to 35 the percent of adults who report having had sunburn in the past year.

(Baseline: 42%, 2004 Colorado BRFSS)

Strategies:

- Implement educational programs and distribute information which educates adults about sunburns and skin cancer.
- Distribute sun protection products at sporting events, parks and other outdoor venues.

OBJECTIVE 8.5:

By 2010, reduce to 26 the percent of parents reporting their children having had a sunburn in the past year.

(Baseline: 49%, 2004 Child Health Survey)

Strategies:

- Implement educational programs and distribute information which educates children and adolescents about sunburns and skin cancer.
- Distribute sun protection products at sporting events, parks and other outdoor venues.

OBJECTIVE 8.6:

By 2010, increase to 75 the percent of adults reporting use of at least one method of sun protection when outside during a sunny summer day for more than one hour.

(Baseline: 70%, 2004 Colorado BRFSS)

Strategies:

- Implement educational programs and distribute information which educates adults about sunburns and skin cancer.
- Distribute sun protection products at sporting events, parks and other outdoor venues.

Sun Safe colorado

www.sunsafecolorado.com

OBJECTIVE 8.7:

By 2010, increase to 75 the percent of children using at least one method of sun protection when outside for more than 15 minutes between 11 am and 3 pm on a sunny summer day.

(Baseline: 60%, 2004 Child Health Survey)

Strategies:

- Implement educational programs and distribute information which educates adults about sunburns and skin cancer.
- Distribute sun protection products at sporting events, parks and other outdoor venues.

OBJECTIVE 8.8:

By 2010, increase the proportion of melanomas detected "early" by physicians to 85%; "early" is defined as less than or equal to 1.00 mm Breslow depth or in-situ stage.

(Baseline 81% for the year 2000)

Strategies:

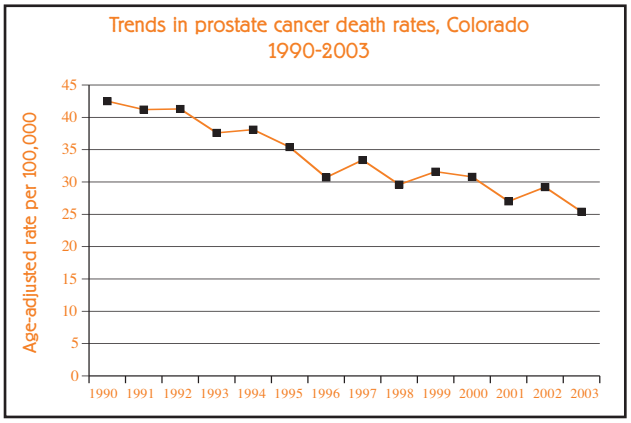
- Promote skin self-examination by persons at high risk of developing skin cancer.
- Promote skin cancer screening events for the public.
- Increase physician education.

PROSTATE CANCER

Nationally, prostate cancer accounts for 30% of all male cancers and 11% of male cancer-related deaths.

Among Colorado men, prostate cancer is by far the most commonly diagnosed cancer & the second most common cause of cancer death.

Among Colorado men, prostate cancer is by far the most commonly diagnosed cancer and the second most common cause of cancer death. A steep rise in prostatic cancer incidence rates in Colorado from the late 1980s to 1992 was followed by almost as steep a drop in rates through 1998. This pattern occurred in many states throughout the U.S. and coincided with wide adoption of the prostate specific antigen (PSA) screening test.

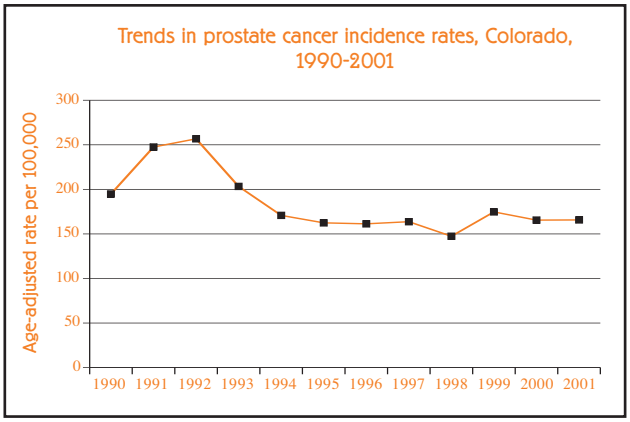


Source: Colorado Central Cancer Registry, 2005

The incidence rate for prostate cancer was stable between 1996 and 2001. Mortality rates decreased 26% from 1990 to 1999 in Colorado, possibly due to improvements in early detection. Age, race/ethnicity and family history are factors that affect the risk for prostate cancer.

About 80% of all men with clinically diagnosed prostate cancer are age 65 years or older. Because prostate cancer usually occurs at an age when conditions such as heart disease and stroke cause death, many more men die with prostate cancer rather than because of it. Fewer than 10% of men with prostate cancer die of the disease within five years of diagnosis.

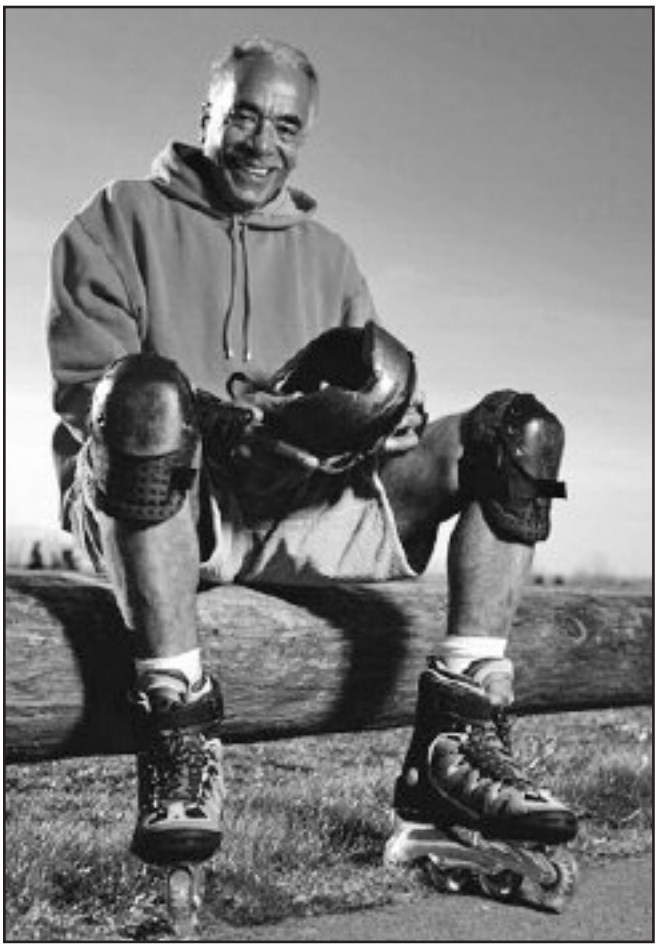
Effective measures to prevent prostate cancer have not been determined. Many physicians recommend screening to their patients, and in recent years, a substantial proportion of men in the U.S. have been screened. Although the screening detects some prostate cancers early in their growth, it is not yet known whether it saves lives or whether treatment reduces disability and death from this disease.



Source: Colorado Central Cancer Registry, 2005

Further, there are concerns that for some men, screening and treatment may do more harm than good. Current medical tests cannot predict the growth of prostate cancers. Slower-growing cancers might not require treatment (surgery or radiation), which commonly causes impotence and incontinence. Thus, the harms of treatment

may outweigh the benefits. Moreover, it is unclear how well treatment works for faster-growing prostate cancers. Studies now underway will tell us more about the effectiveness of screening and treatment.



Strategies for the Public:

- Provide public education to increase awareness about the possible benefits of annual prostate screening for men 50 and older (with a life expectancy of at least ten years).
- Continue targeted awareness campaigns aimed at dispelling myths and correcting misinformation regarding prostate cancer treatment.
- Create pamphlets in both English and Spanish to educate men about prostate cancer.

Strategy for Providers:

- Educate and encourage health care providers to perform annual DRE and offer PSA screening during physical examinationsof men age 50 and older who have a life expectancy of at least ten years.

Strategy for Health Care Systems:

- Support programs offering screenings for uninsured and underinsured men.

OBJECTIVE 9.1:

By 2010, increase to 65% the proportion of men over age 50 who report being fully informed about and offered screening by Prostate-Specific Antigen (PSA)/Digital Rectal Exam (DRE) in the preceding 2 years.

(Baseline: 41% discussed with doctor, 51% recommended, 2000 Colorado BRFSS)

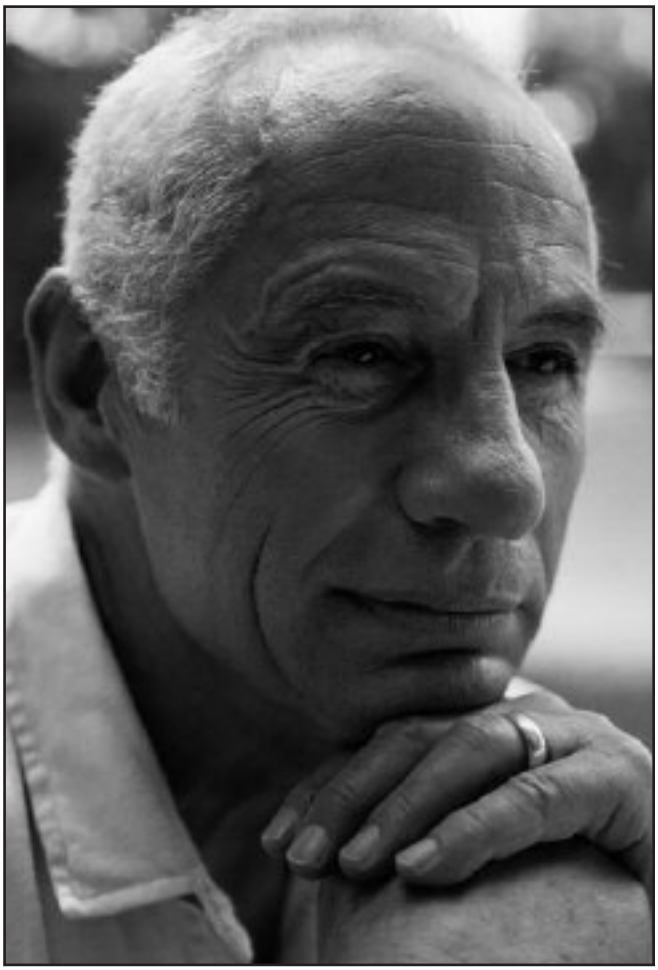
OBJECTIVE 9.2:

By 2010, increase to 75% the proportion of African-Americans and other high-risk men over the age of 45 who report being fully-informed about and offered screening by PSA/DRE in the preceding 2 years.

(Baseline: To be established)

Strategies for the Public:

- Establish baseline
- Continue targeted awareness campaigns specifically for black males and for men with a strong family history of 1 or more first-degree relatives diagnosed with prostate cancer at an early age, due to evidence showing earlier onset in these high-risk groups.
- Continue educational programs for black males (and other high-risk groups) starting at 45 years that involve use of community leaders and health workers to educate their community members about the importance of screening.



Strategy for Providers:

- Facilitate an annual prostate cancer symposium/educational workshop for health care professionals, community health workers, and survivors in Colorado to discuss all aspects of prostate cancer, including barriers to screening, outreach efforts to high-risk groups, and the diagnosis and treatment of prostate cancer.

Strategy for Health Care Systems:

- Support specific screening programs for underserved and high-risk populations.

Other Selected Cancers

The top five cancers in Colorado by incidence rate are breast, prostate, lung, colorectal and melanoma, while those that are in the top 10 list as causes of cancer mortality include pancreas, non-Hodgkin lymphoma, leukemia, ovarian, brain and multiple myeloma. This chapter attempts to present information about several of these "other" cancers.

LUNG CANCER

Lung cancer is the most common cause of cancer death among both females and males in both the U.S. and Colorado. In Colorado, the cumulative lifetime risk of lung cancer is 1 in 11 for males and 1 in 16 for females, and it is the third most commonly diagnosed cancer overall. Cigarette smoking is the most important risk factor for lung cancer, accounting for approximately 80% of lung cancer deaths in females and 90% in males. After ten years of abstinence, smoking cessation decreases the risk of lung cancer to 30-50% of that of continuing smokers. Five-year survival rates for lung cancer are only about 10%. Other risk factors include occupational exposure (e.g., radon, asbestos) and indoor and outdoor pollution (e.g., radon, environmental tobacco smoke). About 1 to 2% of lung cancer deaths are attributable to air pollution.

As smoking cessation and prevention are the most important areas to focus on to reduce both the incidence of and mortality from lung cancer, this is where efforts need to be made (for objectives relevant to these efforts, see chapter on Tobacco). Additionally, continued dissemination of information about the risks of radon exposure is necessary.

OBJECTIVE 10.1:

Support ongoing research into development of screening tools for earlier detection.

OBJECTIVE 10.2:

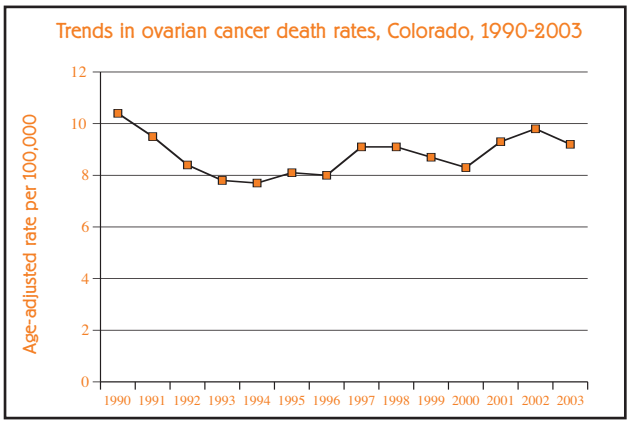
Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.3:

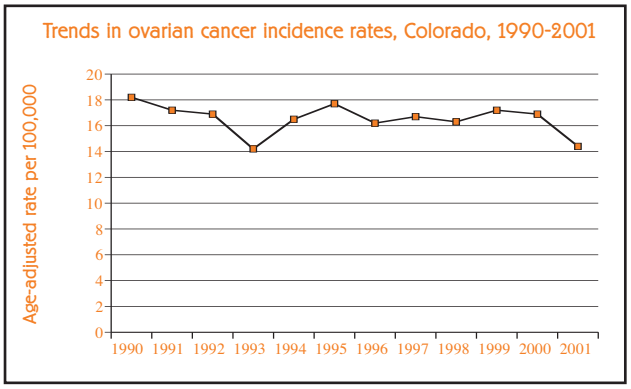
Create a clearinghouse for current clinical trials and increase patient participation in them.

OVARIAN CANCER

In the U.S., incidence of ovarian cancer ranks second among all gynecologic cancers. It causes more deaths than any other gynecologic cancer. In Colorado, ovarian cancer is the 6th most commonly diagnosed cancer in women and the 8th most common cause of cancer mortality. The cumulative lifetime risk is 1 in 52. In women with a personal or family history of breast or ovarian cancer, that risk increases significantly. Other risk factors include advancing age. There has been a decline in rates of early detection from the time period 1996-2000 and 2001 from 27% to 20%. The 5-year survival rate for ovarian cancer is approximately 50%.



Source: Colorado Central Cancer Registry, 2005



Source: Colorado Central Cancer Registry, 2005

OBJECTIVE 10.4:

Continue to support the activities of the Ovarian Cancer Advisory Panel in their efforts to increase awareness about ovarian cancer, and to educate the public and health care providers about advancements in this area.

OBJECTIVE 10.5:

Increase the number of women receiving genetic counseling who have a high risk of carrying a genetic mutation (those with a family history of breast or ovarian cancer, those diagnosed with ovarian cancer under the age of 50 years/bilateral breast cancer/or both ovarian and breast cancer).

OBJECTIVE 10.6:

Increase the number of women with ovarian cancer who are referred and treated by a gynecologic oncologist.

OBJECTIVE 10.7:

Support ongoing research into development of screening tools for earlier detection.

OBJECTIVE 10.8:

Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.9:

Create a clearinghouse for current clinical trials and increase patient participation in them.

PANCREATIC CANCER

Pancreatic cancer is the 5th leading cause of cancer mortality in Colorado. Risk factors include cigarette and cigar smoking, obesity, physical inactivity, chronic pancreatitis, diabetes and cirrhosis. The cumulative lifetime risk is 1 in 58 for males and 1 in 75 for females. Incidence rates in blacks are higher than in whites. Five-year survival is only about 5%. Currently, there are no effective screening tests for this deadly disease.

OBJECTIVE 10.10:

Promote education of the public regarding signs and symptoms of pancreatic cancer, especially for those at higher risk, which include blacks and individuals with diabetes.

OBJECTIVE 10.11:

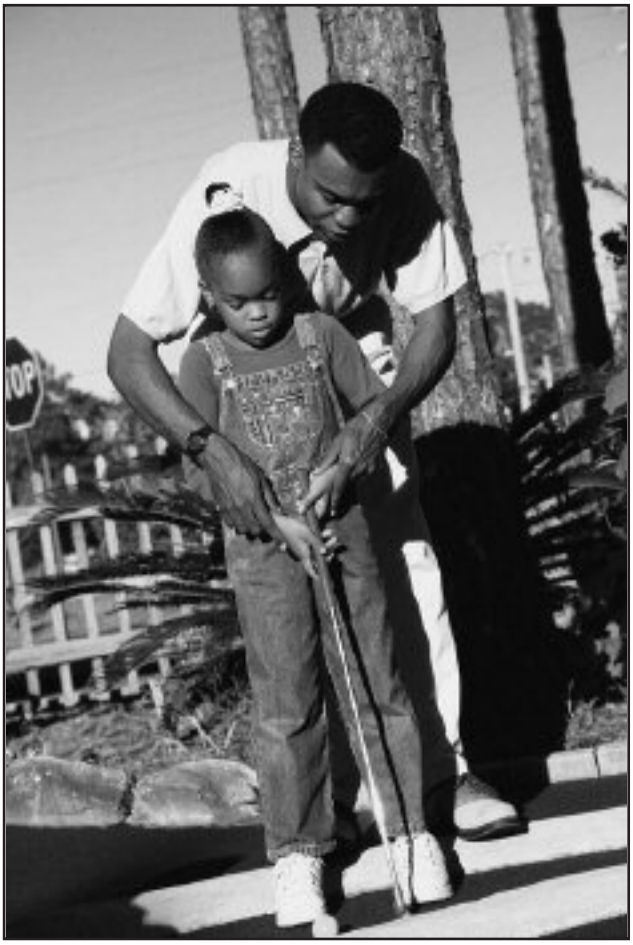
Support ongoing research into development of screening tools for earlier detection.

OBJECTIVE 10.12:

Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.13:

Create a clearinghouse for current clinical trials and increase patient participation in them.



BRAIN & OTHER NERVOUS SYSTEM CANCERS

Brain and other nervous system cancers encompass cancerous tumors of the brain and spinal cord. Primary cancers that start in the brain are less common and different from tumors that start in other organs and spread to the brain (metastatic or secondary brain tumors). The most common type of malignant brain tumor in Colorado, as well as the U.S., is glioblastoma. In Colorado, the cumulative lifetime risk of brain and other nervous system cancer is 1 in 108 for males and 1 in 158 for females. Five-year survival with primary, malignant brain cancer was 31% for the 1990-1997 time period.

OBJECTIVE 10.14:

Support ongoing research into development of screening tools for earlier detection.

OBJECTIVE 10.15:

Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.16:

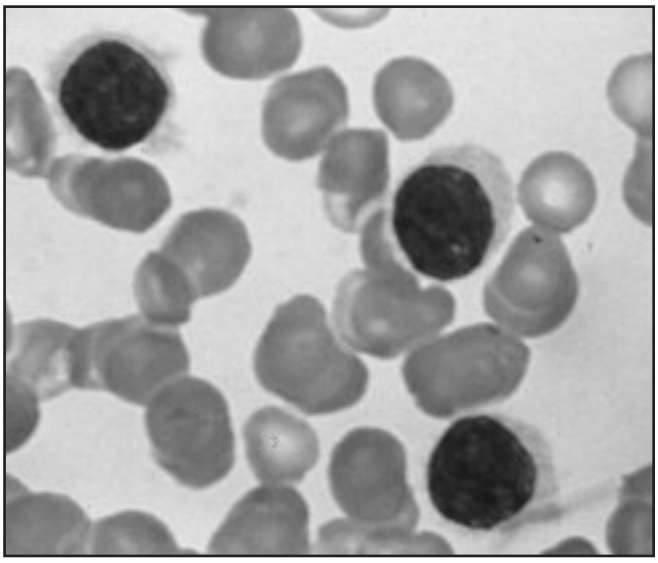
Create a clearinghouse for current clinical trials and increase patient participation in them.

LEUKEMIAS

Leukemias are cancers that begin in cells of the bone marrow and then invade the blood. They encompass both acute (acute lymphocytic leukemia or ALL; acute myeloid leukemia or AML) and chronic forms (chronic lymphocytic leukemia or CLL; chronic myeloid leukemia or CML). Leukemia is often associated with childhood cancer, but according to the ACS it occurs ten times more frequently in adults than in children. In Colorado, the cumulative lifetime risk of leukemia is 1 in 47 for males and 1 in 82 for females. Although Colorado incidence rates for leukemia were about 11-15% higher than U.S. rates in 1996-2000, the incidence declined in 2001 to rates that were similar to national rates. Five-year survival rates for adult leukemias were stable at 41-42% between 1990 and 1997, while five-year survival rates for childhood leukemias increased from 74% to 84% from 1990-1993 to 1994-1997.

OBJECTIVE 10.17:

Support ongoing research into development of screening tools for earlier detection.



OBJECTIVE 10.18:

Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.19:

Create a clearinghouse for current clinical trials and increase patient participation in them.

NON-HODGKIN LYMPHOMA

Non-Hodgkin lymphoma (non-Hodgkin's lymphoma, or NHL) is a cancer that arises from the lymphatic system, a part of the immune system which consists of lymph nodes and lymph vessels. Although risk

factors for NHL generally relate to impaired immune function, the causes of most lymphomas are not clear. In Colorado, the cumulative lifetime risk of non-Hodgkin lymphoma (NHL) is 1 in 36 for males and 1 in 46 for females. In contrast to a type of lymphoma known as Hodgkin's Lymphoma, NHL is more difficult to treat and has lower survival rates. From 1990-1997, five-year survival for NHL was about 54%, with lower survival for Hispanics and blacks observed in the 1994-1997 time period.

OBJECTIVE 10.20:

Support ongoing research into development of screening tools for earlier detection.

OBJECTIVE 10.21:

Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.22:

Create a clearing house for current clinical trials and increase patient participation in them.

MULTIPLE MYELOMA

Multiple myeloma is a progressive blood disease. It is a cancer of the plasma cell, an important cell in the immune system that produces antibodies for fighting infection. It is currently considered incurable, but it is treatable. There are several promising new therapies that are helping patients live longer, healthier lives. In Colorado, the cumulative lifetime risk of blood cancer is 1 in 102 for males and 1 in 161 for females. Five-year survival is about 30%. Incidence and mortality rates are higher for blacks.

OBJECTIVE 10.23:

Support ongoing research into development of screening tools for earlier detection.

OBJECTIVE 10.24:

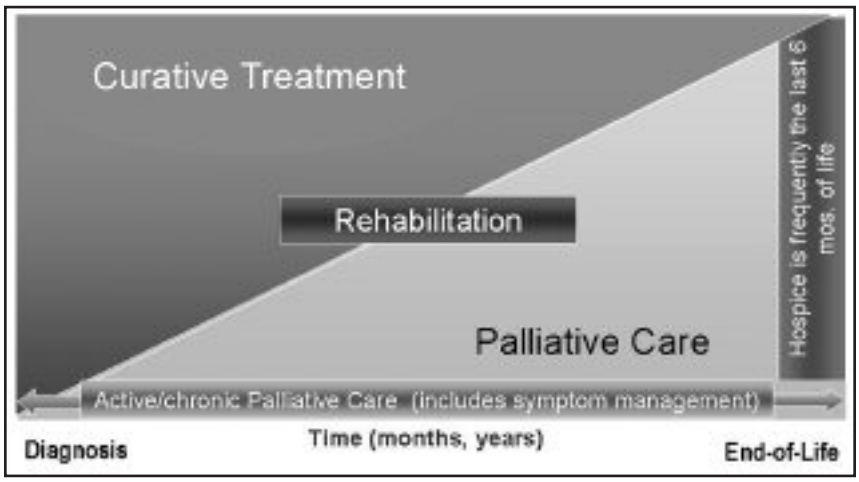
Support ongoing research into development of better treatment regimens.

OBJECTIVE 10.25:

Create a clearing house for current clinical trials and increase patient participation in them.

Survivorship, Rehabilitation, Palliative Care, & Hospice

Quality of life will be discussed in four sections: survivorship, rehabilitation, palliative care, and hospice. Each section details objectives for education, access, services, and research. The goal of this chapter is to enhance the quality of life of cancer survivors living in Colorado. This goal may also impact the lives of caregivers, family, and support members of individual cancer survivors.



SURVIVORSHIP

Cancer survivorship is a continuum that begins with diagnosis and continues for the remainder of a survivor's life. Educating cancer survivors about survivorship issues at all stages of their illness and recovery is crucial to enhancing their quality of life. This includes

- Preventing secondary cancers and recurrence of cancer whenever possible
- Promoting appropriate management following diagnosis and/or treatment to ensure the maximum number of years of healthy life for cancer survivors
- Minimizing preventable pain, disability, and psychosocial distress for those living with, through, and beyond cancer
- Supporting cancer survivors in accessing the resources and the family, peer, and community support they need to cope with their disease.

OBJECTIVE 11.1:

Develop, implement, evaluate and maintain cancer survivorship education programs that increase access to state-of-the-art cancer treatment, supportive care and quality of life information and resources.

Strategies:

- Provide ongoing education on survivorship at the annual Colorado Cancer Conference.
- Provide easy-to-use, interactive, web-based cancer resource programs (e.g., how to obtain Medicaid/ Medicare) for survivors living in Colorado.
- Teach survivors how to access and evaluate available information.
- Increase knowledge and perceived behaviors to prevent cancer recurrence among Colorado cancer survivors.
- Develop and evaluate obesity and tobacco education programs for cancer survivors.
- Tailor communication (literacy, language, content and delivery for specific cancer survivor populations such as hearing or visually impaired) with a focus on underserved communities, to increase awareness of available interventions and resources.
- Educate decision-makers about economic and insurance barriers related to health care for cancer survivors.

OBJECTIVE 11.2:

Ensure that all cancer survivors have adequate access to high-quality treatment and other post-treatment follow-up services.

Strategies:

- Identify, evaluate, and implement current "Patient Navigation" programs and systems to increase access to state-of-the-art treatment, supportive care and quality of life services for geographically-isolated, poor and medically-underserved populations. This will help cancer survivors enter the health care system, establish eligibility for assistance programs for which they qualify, and access the medical, supportive services and complementary therapies needed for effective care.
- Determine and increase the proportion of survivors receiving state-of-the-art treatment services.
- Develop culturally-sensitive, literacy-appropriate and age-specific programs that increase access to survivorship services.

OBJECTIVE 11.3:

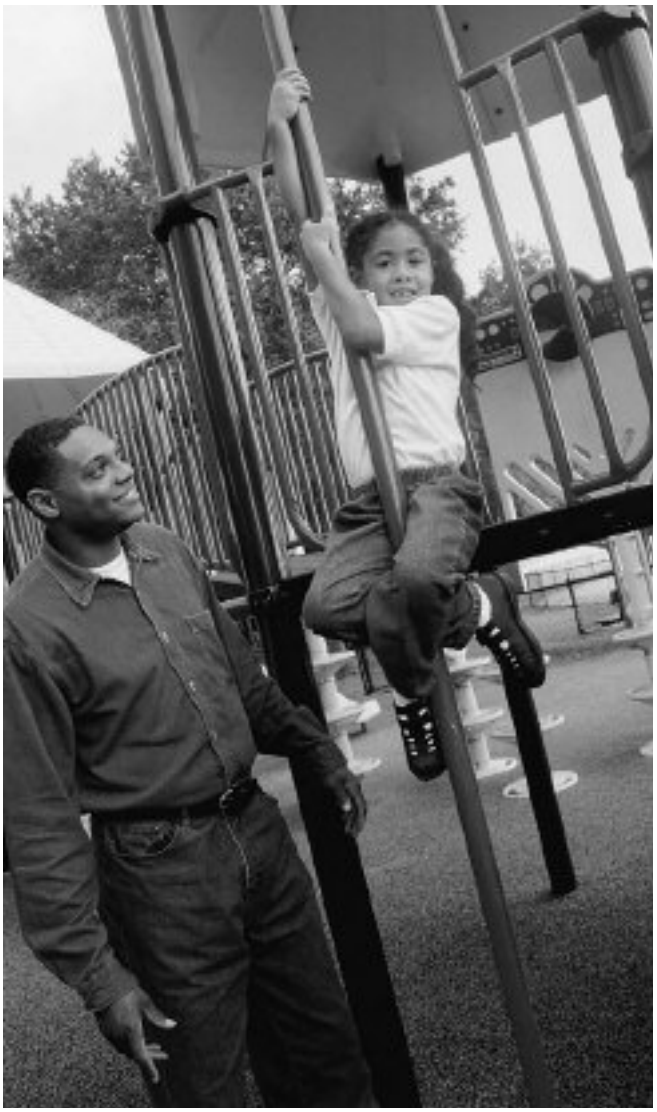
Develop research interventions to address survivorship issues.

Strategies:

- Increase the number of cancer survivors living in Colorado who make informed decisions about their participation in treatment, rehabilitative, supportive care and/or quality of life clinical trials.
- Implement and evaluate community-based clinical trials education and research programs that are appropriate for literacy, culture and geography for cancer survivors regardless of where they live in Colorado.
- Identify existing types of survivor navigation systems delivered in a variety of locations or through different mechanisms (e.g. rural, urban, on-line, print, telephone, clinical trials), and determine those that are considered best practices.
- Survey and analyze the insured populations in Colorado to determine the impact the cancer survivor's level of coverage has on timely access to care and receipt of follow-up care.
- Identify, disseminate and deliver "best practices" model approaches and outreach strategies for culturally-, linguistically- and literacy-specific cancer communications and health promotions, in partnership with cancer survivors, caregivers and community advocacy organizations.
- Develop interventions to alleviate financial burden of participation in treatment, supportive care and quality of life clinical trials for underserved and underinsured cancer patients.
- Conduct research on preventive interventions to evaluate their impact on cancer recurrence.

REHABILITATION

The National Cancer Institute estimates that 8 million individuals have survived cancer and 72 to 95% of these individuals have negative side effects that dramatically limit their quality of life (e.g., immobility, muscle wasting, contractures, edema, fatigue, and depression). The Centers for Disease Control and Prevention acknowledges that cancer survivorship/rehabilitation needs to be treated as a pressing public health issue. Rehabilitation is the process of restoring individuals to a useful life following cancer through education and therapeutic interventions. Rehabilitation support for cancer survivors should be included throughout all phases of cancer.



From diagnosis to treatment, planning, the impact of the cancer treatment should be assessed to determine its influence on the survivor's functional capacity. Comprehensive pretreatment analysis (e.g., range of motion, muscular strength and endurance, gait evaluation, balance, nutritional support, and psychological/emotional parameters) should occur to help cancer survivors preserve their functional abilities during treatment.

Cancer survivors (whether athletic or sedentary) should receive rehabilitation during treatment to preserve and restore their functional capacity through exercise, symptom management, and pain control. Post treatment cancer survivors should receive a program to help restore daily routines, achieve goals (e.g., lifting one's grandchildren), and promote a healthy lifestyle once again through exercise, symptom management, and mobility. The recurrence phase should include educating cancer survivors about the impact of recurrence, offering supervised programs to restore function and preventing decline while assisting individuals in maintaining activity and quality of life. During the end of life phase, rehabilitation efforts center around helping individuals and family members deal with issues of mobility training, good body mechanics, assistive devices, managing pain through nonpharmacologic treatment, controlling symptoms, maintaining independence, and quality of life.

Currently, Colorado has a limited number of rehabilitation programs and complementary therapies for cancer survivors. The programs that do exist include individualized and group exercise therapy, massage therapy, lymphedema therapy, counseling/psychotherapy, nutrition, physical therapy, and social support programs for adults and children.

OBJECTIVE 11.4:

Develop, expand, and evaluate rehabilitation information and resources for Colorado cancer survivors and their families.

Strategies:

- Enhance the current Colorado Cancer Resource Guide Online website (CCRGonline.org) to include a hot button for rehabilitation.
- Develop and implement a multimedia public service campaign.
- Develop an informational pamphlet that includes a reference to the CCRGonline.org rehabilitation services.
- Encourage health care providers to distribute copies of the pamphlet to all cancer survivors.
- Display the informational pamphlet at community events within Colorado.
- Contact cancer support groups to increase their awareness of rehabilitative services available in Colorado.

OBJECTIVE 11.5:

Educate health care professionals of the need for and use of rehabilitation throughout the cancer experience.

Strategies:

- Provide ongoing education on cancer rehabilitation at the annual Colorado Cancer Conference.
- Expand continuing education offerings to provide rehabilitation training for health care professionals.
- Implement and/or integrate curricula in cancer rehabilitation in all Colorado universities and professional health care education programs.
- Provide certification in cancer rehabilitation on the state level to practitioners including nurses, psychologists, psychiatrists, social workers, occupational and physical therapists, exercise physiologists, physicians, and other health care workers who complete a course and designated hours of practice in cancer rehabilitation.
- Develop and expand the certification of rehabilitation programs to include, but not be limited to exercise, occupational therapy, functional capacity, psychosocial stability, speech and hearing, etc.
- Provide internships and fellowships in cancer rehabilitation.

OBJECTIVE 11.6:

Ensure that all cancer survivors (including pediatric, geriatric, and disparate populations) have access to rehabilitative services and complementary therapies throughout all phases of their cancer experience.

Strategies:

- Educate decision-makers (e.g., legislators) about economic and insurance barriers related to health care for cancer survivors such as insurance reimbursement for cancer rehabilitation.
- Identify geographic regions within Colorado and expand the number of professionals who are trained to address selected cancer rehabilitation issues.
- Acquire funding for the underprivileged through public and private foundations.
- Increase the number of cancer rehabilitation facilities/support programs throughout Colorado.
- Develop specialized rehabilitative programs to address the unique needs of each subpopulation, such as organized play for pediatric survivors.
- Develop culturally sensitive and age-specific programs that increase access to rehabilitation services and complementary therapies.

OBJECTIVE 11.7:

Disseminate, expand and enhance research in cancer rehabilitation.

Strategies:

- Develop a cancer rehabilitation research website that highlights professional literature, findings and successful interventions/outcomes.
- Link the cancer rehabilitation research website to www.coloradocancercoalition.org.
- Encourage and obtain funding for cancer rehabilitation research.
- Provide internships and fellowships in cancer rehabilitation research.
- Implement cancer research that delineates the impact of rehabilitation on:
  - The survivors' recovery
  - Side effects such as the relationship between physical activities and medications
  - Psychosocial resilience.

PALLIATIVE CARE

Palliative care is interdisciplinary care that aims to relieve suffering and improve quality of life for cancer survivors and their supportive network. It is offered regardless of the stage of disease and simultaneously with all other appropriate medical treatment. It is not just for individuals who are dying.

Palliative care has a holistic focus and should ensure that cancer survivors:

- Keep the best quality of life they can have, for as long as they can.
- Receive pain and symptom management through every stage of cancer and every type of treatment.
- Receive psychological and spiritual support from the time of diagnosis through the cancer journey.

Physical symptoms of cancer can occur at time of diagnosis, during and after treatment and may include pain, fatigue, nausea, dyspnea, persistent edema and more, depending upon the cancer site and type of treatment the survivor receives.

Palliative care sometimes overlaps with hospice care. In fact, many would say that hospice is the purest form of palliative care. (All hospice care is palliative care, but not all palliative care is hospice care.)

There are differences, however,. Both emphasize good pain and symptom management and concentrate on improving quality of life. Hospice care is usually considered when an individual has 6 or fewer months to live. Ideally, palliative care would begin when an individual is first diagnosed with a chronic or life-threatening illness. Palliative care would be offered throughout the continuum of chronic illness and would culminate in hospice care as one nears end of life.

OBJECTIVE 11.8:

Educate cancer survivors of the importance and availability of ongoing access to palliative care. Identify specific palliative programs, resources, and services available to this population.

Strategies:

- Conduct an assessment throughout the state on specific palliative services. Include type and location of service. Include information in statewide and local cancer resources.
- Develop and disseminate public education that empowers cancer survivors to seek palliative care specific to their needs.
- Disseminate information on appropriate interventions for management of cancer pain and other symptoms common to a cancer diagnosis to the public.
- Distribute story leads on best practices to local media.

OBJECTIVE 11.9:

Educate practicing health professionals, including community-based physicians, nurses, social workers, and chaplains on the need and benefits of palliative care services for cancer survivors.

Strategies:

- Provide ongoing education on palliative care at the annual Colorado Cancer Conference.
- Include palliative care education updates in the Cancer Coalition newsletter and at quarterly meetings.
- Working with the ACoS Cancer Liaison Physicians in the state, encourage cancer centers and hospitals to provide physician education on palliative care at Tumor Boards, Grand Rounds, section meetings, etc.
- Organize a state palliative care education conference, educating health professionals as well as sharing best practices.

OBJECTIVE 11.10:

Ensure that all cancer survivors (including pediatric, geriatric, and minorities) have access to palliative care services from the time of diagnosis through the end of life.

Strategies:

- Determine baseline numbers of Colorado hospitals that provide palliative care consult services. Between 2005 and 2010, increase that number by 25%.
- Provide specific education to physicians and health professionals on the benefits of palliative care services for key populations (e.g., pediatric, geriatric and minorities).
- Determine alternative means (e.g., internet, videoconferences) to serve rural Colorado populations who do not have easy access to palliative care services in their area.
- Develop culturally-sensitive and age-specific programs that increase access to palliative care services.

OBJECTIVE 11.11:

Identify specific areas of palliative care services that require enhancement (e.g., symptom management, psychosocial care, and/or spiritual care) and develop an action plan to make improvements.

Strategies:

- Identify palliative care services at the local level that are lacking and develop programs to fill this gap.
- Partner with other organizations (e.g., Colorado Hospice Organization [CHO], Colorado Palliative Care Partnership [CPCP]) to work together to develop and monitor programs.

OBJECTIVE 11.12:

Encourage collaborative research between and with other palliative care organizations to enhance the development, consistency, and quality of palliative care services offered in Colorado.

Strategies:

- Survey existing palliative care services in Colorado.
- Identify and collaborate with other coalitions of organizations (e.g., CHO, CPCP) to implement research projects to determine outcomes of palliative care services.
- Identify specific outcome measures appropriate for evaluation of currently offered palliative care services.
- Determine and share research findings at annual statewide cancer conferences.
- Disseminate research findings in appropriate publications.

HOSPICE

Hospice is the model for quality, compassionate care for people facing a life-limiting illness or injury.

Hospice involves:

- A team-oriented approach to expert medical care, pain management, and emotional and spiritual support specifically designed for each individual.
- Support to the individual's loved ones before and following his/her death.

At the center of hospice is the belief that each of us has the right to die pain-free and with dignity, and that our families will receive the necessary support to allow us to do so.

Hospice focuses on caring, not curing, and in most cases care is provided in the individual's home. Hospice care also is provided in freestanding hospice centers, hospitals, and nursing homes and other long-term care facilities. Of note, hospice is also available in the prison setting (Canon City), as Colorado established the first prison hospice program in the country. Hospice services are available to individuals of any age, religion, race, culture or illness. Hospice care is covered under Medicare, Medicaid, most private insurance plans, HMOs, and other managed care organizations.

Palliative care extends the principles of hospice care to a broader population who could benefit from receiving this type of care earlier in their illness or disease process. No specific therapy is excluded from consideration. An individual's needs must be continually assessed and treatment options should be explored and evaluated in the context of the individual's values and symptoms. Palliative care, ideally, would transition into hospice care as the illness progresses.

In 2004, Colorado's 41 licensed hospice organizations (operating from 57 locations) served approximately 43% of all dying Coloradans and nearly 80% of Coloradans dying from cancer. Hospice is available in 58 of Colorado's 64 (91%) counties, as illustrated in the map below.

The American Board of Hospice and Palliative Medicine (ABHPM) was established in 1996 to promote excellence in the delivery of medical care to all individuals with advanced, progressive illness through the development of standards for training and practice in palliative medicine. In 2004, there were 1,541 board certified palliative medicine physicians in the United States and 33 in Colorado.

The National Board for Certification of Hospice and Palliative Nurses (NBCHPN) was established in 1993 to promote delivery of comprehensive palliative nursing care through the certification of qualified hospice and palliative nurses. In 2004, there were 169 palliative advanced practice nurses in the United States (two in Colorado), 7,149 certified hospice and palliative nurses (130 in Colorado), and 1,562 certified nursing assistants (46 in Colorado).

OBJECTIVE 11.13:

Educate cancer survivors and their caregivers about hospice resources available to them in a timely fashion.

Strategies:

- Provide comprehensive information regarding treatment options (including all quality of life sections described in this chapter: survivorship, rehabilitation, palliative care, and hospice) near the time of diagnosis.
- Provide ongoing reassessment of survivors' values and goals over time, benefits and burdens of treatment, and the decision-making process regarding changes in the care plan.
- Provide easy-to-use, interactive, web-based resource programs for survivors and caregivers (e.g., links to the Colorado Hospice Organization webpage and other hospice resources, and including hospice information on the Colorado Cancer Resource Guide – www.ccrgonline.com).
- Provide end-of-life care and/or counseling to survivors and their caregivers at appropriate times during the cancer experience.
- Assure individuals and their caregivers will be prepared for the dying process and for death, when it is anticipated, and provide appropriate bereavement support for caregivers.

OBJECTIVE 11.14:

Educate health care professionals about available hospice resources.

Strategies:

- Encourage health care providers to address symptom control (including physical, psychosocial, and spiritual symptoms) throughout the cancer experience (both during and after treatment).
- Train health care providers to talk sensitively about end-of-life issues (including advance care planning, designating medical decision durable power of attorney, etc.) and hospice resources with survivors and their caregivers at appropriate times during the cancer experience.

- Increase proportion of health care providers with additional certification in hospice and palliative care (ABHPM, NBCHPN, etc.).
- Increase the diversity of health care and hospice providers.
- Provide ongoing education on hospice and end-of-life care at the annual Colorado Cancer Conference.
- Provide ongoing education on cancer education at the Colorado Hospice Organization annual conference.

OBJECTIVE 11.15:

Improve access to hospice care for Colorado cancer survivors.

Strategies:

- Eliminate barriers to hospice care (e.g., late referral to hospice, cultural misunderstandings, and financial barriers).
- Develop culturally-sensitive and age-specific programs that increase access to hospice services.
- Ensure hospice services are available throughout Colorado.
- Determine how hospice services can be provided as needed in the six Colorado counties currently without hospice coverage.

OBJECTIVE 11.16:

Encourage collaborative research between and with hospices to enhance the quality and consistency of care provided at the end of life.

Strategies:

Encourage collaborative research projects between the Colorado Cancer Coalition and the Colorado Hospice Organization and individual hospices.

Monitoring and surveillance, evaluation, and research are interrelated functions that are overseen by a subcommittee of the Colorado Cancer Coalition. Monitoring and surveillance is the ongoing, systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of public health practices. Program evaluation is the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming. Evaluations include surveillance and program monitoring. Research increases the extent to which cancer planning and programming decisions are made on the basis of sound evidence. Accurate and complete data and solid research form the underpinnings for comprehensive cancer control. The implementation of monitoring and surveillance, evaluation, and research are essential to all of the chapters of the Colorado cancer plan and are closely integrated with the timely dissemination of data to those responsible for cancer prevention and control.

Current monitoring and surveillance activities in Colorado are grouped into two main categories: morbidity and mortality information and risk behavior information. Surveillance of cancer morbidity and mortality, conducted by the Colorado Central Cancer Registry (CCCR) and the Health Statistics Section at the Colorado Department of Public Health and Environment, provides information on the occurrences and deaths due to cancer in Colorado.

The CCCR, established within the Colorado Department of Public Health and Environment by Colorado Revised Statutes 1989, Section 25-1-107 (1) (z), collects information from local hospital tumor registries, private pathology laboratories, death certificates, Colorado physicians, and surrounding states about cancer cases among Colorado residents. By regulation from the Colorado Board of Health, cancer is a reportable disease in Colorado, and all reports of cancer cases received by the Department, in connection with the Registry, shall be and remain strictly privileged and confidential as "medical records and reports" within the purview and intent of Section 25-1-122 (4), Colorado Revised Statutes 1989.

Data from the CCCR are used to describe the incidence of various cancers, stage at diagnosis, and relative survival rates. Statistics on mortality from cancer are produced routinely by the Health Statistics Section and published in conjunction with the CCCR's data.

Determination of cancer incidence and mortality rates permit trend analysis and comparison with national cancer incidence and mortality rates. Regional differences within Colorado also can be determined. Routine reports and special studies are produced by the CCCR to keep policy makers and planners informed of changes in cancer incidence trends. Additionally, assessment of cancer risk behaviors for the population as a whole and for selected groups provide information used in designing focused interventions.

Health risk behaviors have been monitored in Colorado since January 1990 by the Colorado Behavioral Risk Factor Surveillance System (BRFSS), funded by the Centers for Disease Control and Prevention. The BRFSS is annual random telephone survey of adults in Colorado that collects information on a number of health behaviors, including tobacco use, diet, and cancer screening behaviors.

Since 1988, the Comprehensive Cancer Prevention and Control (CCPC) Program at the Colorado Department of Public Health and Environment has used a variety of surveys to collect information specific to screening behaviors for breast, cervical and prostate cancer. The purpose of these surveys is to monitor changes in the public's knowledge, attitudes, and behaviors relevant to screening and treatment and to monitor penetration of public education and outreach efforts.

Other cancer control programs and organizations throughout the state gather information through surveys and special studies of the populations they serve. Several sources collect information on cancer risk factors and preventive behaviors among Colorado residents.

Additional studies on risk behaviors, physician and patient attitudes on cancer screening and practice, and other special topics have been conducted by such groups as the American Cancer Society (ACS), the University of Colorado Cancer Center, the AMC Cancer Research Center, and other professional societies.

Evaluation is a key component of the state plan so that cancer prevention and control efforts can be directed appropriately, based on regional or population-specific risks. The evaluation uses strategies for assessing both processes and outcomes associated with comprehensive cancer control planning and implementation. Additionally, a contracted evaluator conducts an ongoing evaluation of the efforts of the Colorado Cancer Coalition. The Centers for Disease Control and Prevention provides the framework for the evaluation model utilized by the CCPC.

OBJECTIVE 12.1:

Continue to monitor and carry out surveillance activities using existing systems, which allow for further analyses.

Strategies:

- Continue advocacy, funding, and support for the following existing data collection systems:
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - Colorado Central Cancer Registry (CCCR)
  - Colorado Women's Cancer Control Initiative (CWCCI)
  - Tobacco Attitudes and Behavior Survey (TABS)
  - Youth Risk Behavioral Survey (YRBS)
  - Youth Tobacco Survey (YTS)
  - Child Health Survey (CHS)
  - Pregnancy Risk Assessment Monitoring System (PRAMS)
  - Vital Statistics.
- Use cancer-related data for monitoring and surveillance of cancer risk factors, preventive behavior, incidence, stage at diagnosis, treatment, survival, rehabilitation, race/ethnicity, socioeconomic status, insurance status, and mortality.
- Determine the feasibility of linking cancer screening history to the cancer registry.
- Measure and monitor underserved populations (i.e., low socioeconomic status, uninsured). Consider gaining education and household income data from hospitals and improving the quality of data on insurance status.
- Compare Colorado cancer data related to Healthy People 2010 targets by race/ethnicity.
- Review Colorado's cancer data to identify any gaps that may exist in Colorado's data systems (use Georgia's Institute of Medicine (IOM) report for comparison).

OBJECTIVE 12.2:

Annually evaluate the Colorado Cancer Plan with the Colorado Cancer Coalition and task forces to determine the success of implementation.

Strategies:

- Continue to convene a surveillance and evaluation subcommittee experienced and knowledgeable in monitoring and surveillance, evaluation, and research.
- Develop and implement a comprehensive monitoring and evaluation plan to assess the implementation of objectives and strategies of the Colorado Cancer Plan.
- Assess and evaluate the efficacy of the objectives and strategies of the Colorado Cancer Plan by determining impact on changes in cancer-related outcomes.
- Extend the Patterns of Care Study to Colorado (patterned after Georgia's IOM).
- Report evaluation results at each annual Colorado Cancer Conference.

OBJECTIVE 12.3:

By 2010, develop data sources for those objectives and strategies for which baseline data currently do not exist.

Strategies:

- Identify gaps in the data (use Georgia's IOM report for comparison).
- Determine potential data sources or develop data sources as needed.
- Propose modifications to any of the existing data collection mechanisms if data elements are inconsistent, lack specificity, or are not used.

- Make recommendations on data that need to be added to increase or create capacity for monitoring/surveillance, research, and evaluation.
- Establish baseline data for any other chapters (e.g., palliative care, health disparities) for which baseline data should be determined.

OBJECTIVE 12.4:

On an ongoing basis, evaluate the efforts of the Colorado Cancer Coalition.

Strategies:

- Assess Coalition member satisfaction.
- Assess Coalition member activities on a regular basis to determine if they are implementing the Colorado Cancer Plan.
- Identify under-represented groups/regions for membership involvement (e.g., African-Americans, OB-GYN, rural, contact for the uninsured).

OBJECTIVE 12.5:

On an annual basis, compile and disseminate data identified in the aforementioned Objectives 12.1, 12.2, 12.3, and 12.4 (listed in this chapter) to provide a full disclosure and impartial reporting on the plan's progress, accomplishments, and opportunities for improvement.

Strategies:

- Continue funding or advocate for funding to incorporate these sources of data into statewide reports.
- Collaboratively disseminate reports and information in a meaningful manner to appropriate audiences:
- Increase the Colorado Cancer Coalition's involvement in writing and disseminating reports by developing a communication plan for the public (i.e., through press releases).
- Increase media exposure to educate the public and professionals about cancer in Colorado.
- Produce an Annual Report from the Coalition including prevalence rates, trends, and other pertinent studies related to previously mentioned data sets.
- Make reports available on the Colorado Cancer Coalition's website.
- Establish plans and implement the training of potential users (particularly non-traditional users) to appropriately use available information to increase professional and public understanding and education about cancer and its impact on Colorado citizens.

OBJECTIVE 12.6:

Promote the importance of conducting research on cancer prevention, treatment, and survivorship.

Strategies:

- Establish and maintain a tracking system of research projects.
- Develop a research agenda working in coordination with the task forces to prioritize research conducted on cancer prevention (including screening), treatment, and survivorship.

OBJECTIVE 12.7:

By 2007, collect and report data on the knowledge, attitudes, and practices of health care providers on issues related to cancer prevention and control.

Strategies:

- Identify existing data sources and systems.
- In collaboration with partners; for example, the Colorado Clinical Guidelines Collaborative, set up mechanisms to collect ongoing data and consistently implement these systems.

OBJECTIVE 12.8:

By 2010, increase the scope of data on cancer risk factors and preventative behavior throughout a person's lifetime.

Strategies:

- Explore development of data collection to capture this information.
- Establish a plan to gather information on children and cancer-related behavior.
- Add questions to the Behavioral Risk Factor Surveillance System (BRFSS), which inquire about behavioral issues with children in the household; for example, second hand smoke exposure.
- Produce a report on prevalence rates, trends, and other pertinent studies related to these data.
- Consider examining the relationship between obesity and cancer trends in Colorado using data from hospital records.
- Work with health care organizations to develop mechanisms for gathering and reporting cancer-related behaviors (i.e., risk factors and screening).

OBJECTIVE 12.9:

By 2010, develop enhanced cancer registration capabilities.

Strategies:

- Assist the Cancer Registry in developing partnerships with large private oncology clinics to obtain outpatient treatment information.
- Promote recruitment and retention of certified tumor registrars in Colorado:
- CCCR Director or other CCCR staff will make presentation to Health Information Management classes (at Regis University and/or Arapahoe Community College) about the cancer registry profession.
- CCCR will provide regular training sessions for Colorado registrars to promote continuing education.
- Develop measures of socioeconomic status beyond race/ethnicity that are collected by the CCCR.
- Use cancer registry data for physician education and/or notification projects. (eg., alerting physicians that specific patients are at increased risk for "X" because they have a set of conditions "Y.")
- Facilitate data linkages between CCCR and other databases to obtain follow-up information (e.g., Medicare and Medicaid, for example).

Coordination & Evaluation

In recent years, state and other health organizations have significantly enhanced the number and quality of the cancer-related programs conducted in Colorado. Most of these, however, came about through issue-specific grants that impose restrictions and limitations on program activities, cross–program collaboration, and planning across cancer sites and risk factors. Although Colorado has an existing infrastructure for public-private collaboration in which public health functions are integrated into the larger health system, a formal structure is needed to ensure that comprehensive cancer prevention, control, and care happens in a systematic and synchronized manner. The following are objectives and strategies for implementing this Plan.

Over the years, Colorado has continued to increase and enhance the number and quality of the cancer-related programs. Although Colorado has a strong infrastructure for public-private collaborations, a formal plan to continue these efforts is crucial for the Colorado Cancer Plan success. The following logic model is used to guide the efforts of the Colorado Cancer Coalition to implement this plan:

COLORADO CANCER CONTROL LOGIC MODEL

Goal/Purpose

1. Promote the collection and use of information to increase professional and public understanding and education about cancer, and its impact on Colorado citizens.
2. Improve the healthy behaviors of Colorado citizens in order to prevent cancer.
3. Increase the proportion of Colorado citizens who access and utilize screening services to diagnose cancer at early stages.
4. Increase the proportion of Colorado citizens who have access to state-of-the-art cancer diagnosis treatment, follow-up, rehabilitation, and palliative care, and hospice services.
5. Increase the support of policies that enable cancer prevention and control and that improve the health and environment in Colorado.
6. Ensure programs and activities are developed and sustained to eliminate disparities in cancer incidence and mortality in Colorado according to gender, race, ethnicity, insurance status, socioeconomic status, age, and place of residence.

Intervention (Process)

1. Coalition development
2. Development of statewide cancer control plan.
3. Funds available for new programs (targeting health disparities)
4. Annual conference

Inputs

- CDPHE staff
- Colorado Cancer Coalition
- CDC funding

Short-Term Outcomes

Prioritization of areas to work on within cancer plan.

New programs are developed (to address disparities).

Increase proportion of Coloradans who receive cancer screening tests.

Improved coordination of services.

Increased knowledge about cancer, available services and research among the professional community and the general public.

Intermediate Outcomes

Individual behavior change.
- Tobacco use
- Sunscreen use
- Improve diet
- Increase use of early detection/screening

Reduce duplication of services.

Increased proportion of cancers detected in early phases.

Increased access to services for uninsured.

Sustain programs and enhance best practices.

Improved quality of life for those with cancer.

Long-Term Outcomes

Decreased incidence of cancer.

Decreased cancer mortality rates.

Eliminate disparities in cancer incidence, treatment and mortality.

Policy changes
- Tobacco
- Sunscreen
- Insurance coverage for services

Coordination & Evaluation

The CCC Executive Committee interfaces with several standing committees and disease-specific task forces as shown in the diagram. The CCC is planning to initiate a Clinical Trials Task Force with the goals of improving knowledge about cancer clinical trials and ultimately improving accruals to them.

The Executive Board of the CCC oversees the activities and decisions of the partnership. Each member organization is represented on the board and may bring issues for discussion and action for consideration of the CCC as a whole. Participation of individual member organizations in various projects such as this one can be queried via email listserv.

Colorado Cancer Coalition & Task Forces

PUBLIC EDUCATION & AWARENESS

OBJECTIVES:

- Assist with the design and conduct of media, campaigns, educational materials, and community presentations related to cancer in Colorado.
- Shares in coordination of task forces in colorectal, prostate, and breast (hosted by ACS) and ovarian and skin (hosted by CCPC).

SURVEILLANCE & EVALUATION

OBJECTIVES:

- Assist with identification of data sources, design of any special surveys, recommendations for data analysis, and review and interpretation of data for planning and evaluation.
- Provide technical support for annual cancer reports and other projects.
- Serves as advisory panel to the Colorado Central Cancer Registry.

THE COLORADO CANCER COALITION

OBJECTIVES:

The Colorado Cancer Coalition, a gathering of organizations and individuals with interests in the prevention and control of cancer in Colorado, dedicates itself to achieve increased prevention, research, early detection, and improved treatment of cancer for all Coloradans in the coming decade.

CWCCI ADVISORY

OBJECTIVES:

- Provides expertise, support, knowledge and skills towards achieving the mission of the Colorado Women's Cancer Control Initiative, the statewide breast and cervical screening program.

QUALITY OF LIFE

OBJECTIVES:

- Establishes projects for the CCC related to survivorship, rehabilitation, palliative care and hospice issures.

CANCER PLAN STEERING

OBJECTIVES:

- Evaluates the current state of the Colorado Cancer Plan and makes recommendations for adjustment to objectives and strategies within the plan.

CANCER CONFERENCE STEERING

OBJECTIVES:

- Coordinates the implementation of the statewide Colorado Cancer Conference, which is an annual training, skill building, and informational effort.
- Fund raises for monies to host the conference.

According to the CCC bylaws, membership is open to any organization whose mission is not in conflict with Coalition priorities and who meets all membership requirements. Each member organization is expected to do the following:

- Endorse and support the implementation of CCC priorities
- Assist with recommending and recruitment of new members
- Coordinate and collaborate within its own organization to implement strategies that address one or more CCC priorities
- Coordinate and collaborate with one or more other organizations to implement strategies that address on or more CCC priorities
- Provide information at least annually about organization progress and accomplishments
- Attend regularly scheduled meetings (attendance can be in person or via teleconference). If unable to attend, all effort will be made to appoint someone to attend in place
- Share ideas, recommendations, and agree to disagree

The CCC is dedicated to its mission, with leadership that will ensure success. With the oversight and decision-making capability of its Executive Committee and the creation of the planned Clinical Trials Task Force, a straightforward process for optimizing collaborative efforts and decision-making will be further honed.

OBJECTIVE 13.1:

Continue efforts of the Colorado Cancer Coalition, a public-private collaboration that focuses on comprehensive cancer prevention and control.

(Baseline: The CCC has met formally on a quarterly basis since 1993.)

Strategies:

- Seek funding sources to support the Colorado Cancer Coalition (CCC) and to implement priority strategies of the Colorado Cancer Plan.
- Share programs, resources, and best practices among CCC members.
- Hold an annual Colorado Cancer Conference to share best practices, increase skills, and commence new initiatives throughout the state.

OBJECTIVE 13.2:

Monitor and coordinate cancer control and quality-of-life activities in Colorado.

Strategies:

- Maintain the use of the Colorado Cancer Resource Guide (CCRGonline.org) and the ColoradoCancerCoalition.org websites to continue online information service for cancer control in Colorado.
- Continue to maintain and expand the Colorado Cancer Coalition, enhancing its value, membership and efficacy.
- Continue to monitor screening guidelines, and influence prompt dissemination and incorporation of science-based recommendations.
- Continue to influence content of cancer-related guidelines to match current evidence.
- Keep apprised of, and disseminate information on, the activities of organizations engaged in implementing or supporting cancer control and quality-of-life activities in Colorado.

OBJECTIVE 13.3:

Evaluate the implementation of the Colorado Cancer Plan.

Strategies:

- Conduct evaluation of the Plan annually.
- Disseminate evaluation information on an annual basis at the Colorado Cancer Conference and revise the Plan as needed.

OBJECTIVE 13.4:

Develop and implement an evaluation plan for the Colorado Cancer Plan.

Strategies:

- Recruit and convene a planning and implementation committee experienced and knowledgeable in evaluation techniques.
- Assess and evaluate the efficacy of the Colorado Cancer Plan's strategies by determining its impact on the knowledge and behavior of the citizens of Colorado, and by measuring the resulting changes in cancer-related outcomes.
- Develop an evaluation plan and receive approval for its content by majority vote of the Colorado Cancer Coalition.
- Perform an annual evaluation and avail the community of its outcomes in a written report.

OBJECTIVE 13.5:

By 2006, Establish a clinical trials task force to address issues of enrollment, collaboration, and programming.

Strategies:

- Recuit potential members.
- Vote to have task force established.
- Develop work plan.
- Expand and/or develop objectives and strategies related to cancer clinical trails for cancer plan.
- Implementation of the Colorado Cancer Plan is the role of the Colorado Cancer Coalition.

ACRONYMS

AAD .....American Academy of Dermatology

AAP .....American Academy of Pediatrics

ABHPM .....American Board of Hospice and Palliative Medicine

AcoS .....American College of Surgeons

ACS .....American Cancer Society

AI/AN .....American Indians/Alaska Natives

API .....Asian/Pacific Islander

ASHA .....American School Health Association

BRFSS.....Behavioral Risk Factor Surveillance System

CAM .....Complementary and Alternative Medicine

CCC .....Colorado Cancer Coalition

CCCR .....Colorado Central Cancer Registry

CCGC .....Colorado Clinical Guidelines Collaborative

CCOP .....Community Clinical Oncology Program

CCP.....Comprehensive Cancer Program

CCRP .....Colorado Cancer Research Program

CCSP .....Colorado Coalition for STD Prevention

CDC .....Centers for Disease Control and Prevention

CDPHE .....Colorado Department of Public Health and Environment

CHO .....Colorado Hospice Organization

CHS.....Child Health Survey

COHID .....Colorado Health Information Dataset

CO-PAN .....Colorado Physical Activity and Nutrition Coalition

COPEEN.....Colorado People's Environmental and Economic Network

CPCP.....Colorado Palliative Care Partnership

CVD .....Colorado Cardiovascular Coalition

CWCCI .....Colorado Women's Cancer Control Initiative

DRE .....Digital Rectal Exam

FOBT .....Fecal Occult Blood Test

HMO .....Health Maintanance Organization

HPV.....Human Pailloma Virus

IARC .....International Agency for Research on Cancer

NASBE .....National Association of State Boards of Education

NBCHPN .....National Board for Certificantion of Hospice and Palliative Nurses

NCDB .....National Cancer Data Base

NCI .....National Cancer Institute

NSAIDs.....Non Steroidal Anti-Inflamatory Drugs

OMB .....Office of Management and Budget

PDQ .....Physician Data Query

PRAMS .....Pregnancy Risk Assessment Monitoring System

PSA .....Prostate-Specific Antigen

RMCDS .....Rocky Mountain Cancer Data Systems

SES .....Socioeconomic Status

SPF .....Sun Protection Factor

STD.....Sexually Transmitted Disease

STEPP .....State Tobacco Education Prevention Partnership

TABS .....Tobacco Attitudes and Behavior Survey

UCCCC.....University of Colorado Comprehensive Cancer Center

UV .....Ultraviolet

WHO.....World Health Organization

YRBS .....Youth Risk Behavioral Survey

YTS .....Youth Tobacco Survey

TERMINOLOGY

Age-adjustment: Facilitates comparison of rates between two or more populations that have different age distributions (the percent of individuals in each age group). Age-adjustment may be accomplished by the direct method (by applying rates from the study population to a defined standard population), or the indirect method (by applying standard rates to the study population distribution).

Cancer: A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissue and can spread through the bloodstream and lymphatic system to other parts of the body.

Cancer Screening: Checking for changes in tissue, cells, or fluids that may indicate the possibility of cancer when there are no symptoms.

Carcinoma: Cancer that begins in the epithelial tissue that lines or covers an organ.

Clinical Trials: Research studies that evaluate the effectiveness of new treatment or disease prevention methods on patients.

Colonoscopy: An examination of the rectum and entire colon using a lighted instrument called a colonoscope. A colonoscope allows the physician to remove polyps or other abnormal tissue for examination under a microscope.

Complementary and Alternative medicine (CAM): Also referred to as integrative medicine, CAM includes a broad range of healing philosophies, approaches, and therapies. A therapy is generally called complementary when it is used in addition to conventional treatments; it is often called alternative when it is used instead of conventional treatment (conventional treatments are those that are widely accepted and practiced by the mainstream medical community.)

Depending on how they are used, some therapies can be considered either complementary or alternative.

Digital Rectal Exam (DRE): A test in which the health care provider inserts a lubricated, gloved finger into the rectum to feel for abnormal areas of the prostate.

Fecal Occult Blood Test (FOBT): A test to check for small amounts of hidden blood in stool.

Grade: A system for classifying cancer cells in terms of how abnormal they appear under a microscope. The grading system provides information about the probable growth rate of the tumor and its tendency to spread. The systems used to grade tumors vary with each type of cancer. Grading plays a role in treatment decisions.

Health Disparities: Differences or inequalities in health between different populations. Health disparities have often been reported for different races or ethnicities.

Incidence Rate: The number of new cases of cancer diagnosed in one year per 100,000 persons in the population.

Invasive Cervical Cancer: Cancer that has spread from the surface of the cervix to tissue deeper in the cervix or to other parts of the body.

Malignant: Cancerous.

Mammogram: An x-ray of the breast.

Melanoma: Cancer of the cells that produce pigment in the skin.

Mortality Rate: The number of people who died from a specific cancer in one year, expressed as the number of deaths per 100,000 persons in the population.

Papanicolaou (Pap) Test: Microscopic examination of cells collected from the cervix. The Pap test is used to detect cancer, changes in the cervix that may lead to cancer, and non-cancerous conditions, such as infection or inflammation.

PSA (Prostate-Specific Antigen) Test: A test that measures the level of an enzyme (PSA) in the blood that increases due to diseases of the prostate gland, including prostate cancer.

Relative Survival Rate: The ratio of the calculated observed survival rate for patients with a particular cancer to the expected survival rate for the general population. An assumption in using this statistic is that the presence of cancer is the only factor that is different for the two groups (all other characteristics are identical).

Risk Factor: Something that increases a person's chance of developing a disease.

Sigmoidoscopy: A procedure in which the physician or health care provider looks inside the rectum and the lower part of the colon (sigmoid colon) through a flexible lighted tube. During the procedure, the physician or health care provider may collect samples of tissues or cells for closer examination.

Socioeconomic Status: A term used to classify an individual or population based on one or more indicators, such as income, assets, employment, occupation, and education.

Squamous Cells: Flat cells that look like fish scales. These cells are found in the tissue that forms the surface of the skin, the lining of the hollow organs of the body, and the passages of the respiratory and digestive tracts.

Stage at Diagnosis: Tumors are categorized according to the extent of spread of disease. Tumors also are described as carcinoma in situ, non-invasive, or highgrade dysplasia. These categories include neoplastic changes that precede the spread of fully developed cancers. Traditionally, cancers are staged as:

- Local: the tumor is confined to the organ of origin
- Regional: the tumor has extended beyond the organ of origin or involves local lymph nodes
- Distant: the tumor has spread to other vital organs

Years of Potential Life Lost: The number of potential years of life lost by each cancer death occurring before age 75.

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COLORADO CANCER COALITION

www.coloradocancercoalition.org

To obtain additional copies
or for further information,
please contact:

Colorado Cancer Coalition
c/o Colorado Comprehensive Cancer Program
4300 Cherry Creek Drive South A5
Denver, CO 80246-1530

Office: 303-692-2520
Fax: 303-691-7721