Alabama

Comprehensive Cancer Control

2006 - 2010 Plan

MISSION STATEMENT

The mission of the Alabama Comprehensive Cancer Control Coalition (ACCCC) is to develop and sustain an integrated and coordinated approach to reducing cancer incidence, morbidity, and mortality and to improving quality of life and care for cancer patients, their families, and their caregivers. ACCCC fulfills its mission by improving access, reducing cancer disparities, advocating for public policy, and implementing the Alabama Comprehensive Cancer Control Plan, which addresses prevention, early detection, treatment, follow-up care, palliation, and behavioral and clinical trials research.

- ACCCC will coordinate, enhance, and strengthen the efforts of public agencies, academic institutions, and community-based private and public organizations that are concerned with cancer prevention, control, and care in Alabama.
- ACCCC will assist with dissemination and utilization of state registry data as well as the sharing of other information procured by various entities concerned with cancer-related issues throughout the state.
- ACCCC will continue to work in partnership with the Alabama Department of Public Health (ADPH) and other institutions and organizations to improve cancer prevention, control, and care in Alabama; to evaluate areas of greatest need; and to find the resources to meet the identified needs.
- ACCCC will educate and advise policy and decision makers about cancer issues facing Alabama.
- ACCCC will act as a clearinghouse for information on cancer control activities across the state and will develop partnerships to minimize duplication of effort among involved entities statewide.
- ACCCC will develop and evaluate methods to track the progress of comprehensive cancer control in Alabama.

This publication was supported in part by Grant Number U55/CCU 421939 from the National Comprehensive Cancer Control Program at the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the contributing authors and do not necessarily reflect the official views of the National Comprehensive Cancer Program at the Centers for Disease Control and Prevention.

DEDICATION

The 2006 – 2010 Alabama Comprehensive Cancer Control Plan is dedicated to Samuel O. Moseley, M.D., for his countless hours of service in trying to protect Alabamians from cancer. He is a true servant leader who has always kept the needs of the citizens of Alabama in the forefront and advocated tirelessly for them.

Dr. Moseley's pioneering efforts in establishing community-based cancer programs have led to the current cancer control efforts in Alabama. He served as the first Chair of the Alabama Comprehensive Cancer Control Coalition and a member of the workgroup who drafted the original Alabama Comprehensive Cancer Control Plan.

Dr. Moseley's gentle nature and positive attitude have endeared him to his patients and colleagues and have been a guiding light to those of us continuing his quest for cancer control. The citizens of Alabama will ever be in his debt and he will always hold a special place in our hearts.

FROM THE GOVERNOR

February 3. 2005

Greetings:

There are few of us who have not in some way been touched by a tragedy of cancer. Having lost my eldest daughter Jenice to cancer, I am well aware of the pain and sacrifice of this disease on its victims and their families.

Across the United States and beyond, tremendous strides have been taken to prevent cancer and treat those individuals diagnosed with the disease. 1 am confident that with the shared commitment to preserve our health and battle this disease we are on the brink of a breakthrough. Our continued dedication to include medical research, clinical care, support services, and early detection programs will make a positive and valuable difference in the lives of many in the state of Alabama.

I commend the Alabama Comprehensive Cancer Control Coalition for developing this very thorough and much needed action plan for the state of Alabama. This distinguished group of individuals and organizations brought together their collective knowledge and expertise for the good of all Alabamians. Living a life with cancer can be filled with pain and discomfort, with little to no opportunity to experience the joys of life. I wholeheartedly support and admire the efforts of the Alabama Comprehensive Cancer Control Coalition for acknowledging this issue and taking a stance to help individuals have a more fulfilled and joyful existence.

It is incumbent upon the citizens of Alabama to work together as people and as a state to increase research into understanding the causes, into finding effective screening and prevention strategies, and into developing improved therapies for cancer patients. The Coalition has shown that working together, we can ensure a healthier future for the people of Alabama.

Bob R. Riley

BR/sl/cbj

FROM THE STATE HEALTH OFFICER

June 2, 2005

Dear Colleague:

I am pleased to introduce the 2006 – 2010 Alabama Comprehensive Cancer Control Plan produced by the Alabama Comprehensive Cancer Control Coalition. This plan addresses the burden of cancer and the reduction of cancer incidence and mortality in Alabama.

Each year, 24,000 Alabamians are diagnosed with cancer and an additional 10,000 deaths are attributed to this disease. Reduction in the rates of cancer in Alabama will be accomplished through lifestyle changes that eliminate tobacco use, improve dietary habits, increase physical activity, maintain a healthy weight, avoid harmful ultraviolet light, increase the adherence to early detection cancer screening tests, and increase the receipt of appropriate and timely cancer treatment.

The Alabama Comprehensive Cancer Control Coalition is comprised of a diverse group of statewide organizations and partners who are committed to the reduction of the cancer burden. Through the hard work and dedication of each member, the 2006 – 2010 Alabama Comprehensive Cancer Control Plan was developed. It is our hope this plan will become the driving force behind cancer control activities in the state.

Finally, I encourage you to become involved in reducing the cancer burden on Alabama residents. You are invited to join the Alabama Comprehensive Cancer Control Coalition to help with this important task. For more information about cancer control activities in Alabama, please visit our website at www.adph.org.

Sincerely,

Donald E. Williamson, M.D.
State Health Officer

DEW/hj

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ACKNOWLEDGEMENTS

The development of the 2006 – 2010 Alabama Comprehensive Cancer Control Plan is the result of ongoing collaboration among statewide organizations and individuals who are committed to improve the state's cancer incidence and mortality rates. Since 1988, many have dedicated their time and expertise to establishing and promoting the Alabama Comprehensive Cancer Control Coalition (ACCCC). Special thanks are extended to the individuals who participated in the first statewide strategic planning process, without whose vision and insight, ACCCC would not have been successful. The names of each of these 1988 Cancer Committee members can be found in the appendix.

In addition, the Executive Committee and the project staff have played an invaluable role in developing the Plan's content and laying the groundwork for the eventual achievement of the Plan's objectives.

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- **Linda Goodson, RN**
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Finally, great appreciation is due to ACCCC members for their energy, interest, and dedication to improving the cancer prevention and control efforts in Alabama.

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EXECUTIVE SUMMARY

Alabama continues to build on its very successful history of cancer control. This second statewide cancer plan covers years 2006 - 2010 and addresses issues across the cancer continuum. A statewide approach to cancer control is the most effective way to tackle such a monumental public health concern. No single agency or organization can meet the challenge alone.

Comprehensive cancer control has been defined as an integrated and coordinated approach to reducing cancer incidence, morbidity, and mortality through prevention, early detection, treatment, and palliation. This comprehensive approach involves systematic assessment of state cancer concerns to ensure that important priorities are identified, resources are used efficiently, gaps in education and services are identified, and duplication of efforts is avoided.

Development and implementation of the new Alabama Comprehensive Cancer Control Plan (ACCCP) involves a statewide partnership among the Alabama Department of Public Health (ADPH), other public health agencies, academic and research institutions, and community-based private and not-for-profit volunteer organizations. Alabama's strength lies in the ability of key stakeholders to collaborate to further reduce the burden of cancer.

While Alabama, along with the rest of nation, has made progress reducing cancer incidence and mortality, significant challenges are still ahead. By tailoring educational messages to groups where the greatest cancer disparities exist and increasing screening and early detection services for the underserved, the state will continue to see exciting progress. An example is, for the first time ever, African American women in Alabama are receiving mammograms at a higher rate than their Caucasian counterparts.

As cancers are detected at earlier stages and treatments become more effective, people are living longer, an achievement that is reflected in the expanded section on Survivorship in the 2006 - 2010 Plan. Also, a much greater emphasis will be placed on cancer prevention over the next five years, including proper nutrition and weight management, regular physical activity, tobacco prevention or cessation, and over exposure to ultraviolet light.

Lifestyle choices will be the health focus for the 21st century. Peer education, community-based interventions, and better access to preventive health care will support Alabamians in making better lifestyle choices and help the state continue to make progress in the battle against cancer.

Alabama's commitment to cancer control began in 1988 when the ADPH conducted an organization-wide strategic planning process that produced the first statewide comprehensive plan for cancer control. The original Cancer Control Strategic Planning Committee consisted of eight members appointed by the State Health Officer and included representation from ADPH, academic medical institutions, and clinical professionals. Additional individuals, organizations, and agencies were consulted during the development of the plan to assure the appropriateness and inclusiveness of the goals, objectives, and strategies addressed. Appendix C contains a list of the 1988 Cancer Control Strategic Planning Committee.

In 1998, the Cancer Prevention Branch of ADPH initiated a revision of the 1988 plan to carry Alabama into the next century. Original members were invited to participate in the review and to assist with the development of the process by which the update would be conducted. Additional key members were recruited to represent the explosion of cancer prevention and control research, programs, organizations, and activities across the state.

The newly formed Comprehensive Cancer Control Core Work Group (CWG) provided the vision and leadership to expand the scope of the original plan. The work continued until the full Alabama Comprehensive Cancer Control Coalition met in September 2001 to adopt the 2001 - 2005 Plan. A cooperative agreement awarded the same year between the Centers for Disease Control and Prevention (CDC) and the ADPH provided the necessary funding to begin statewide implementation.

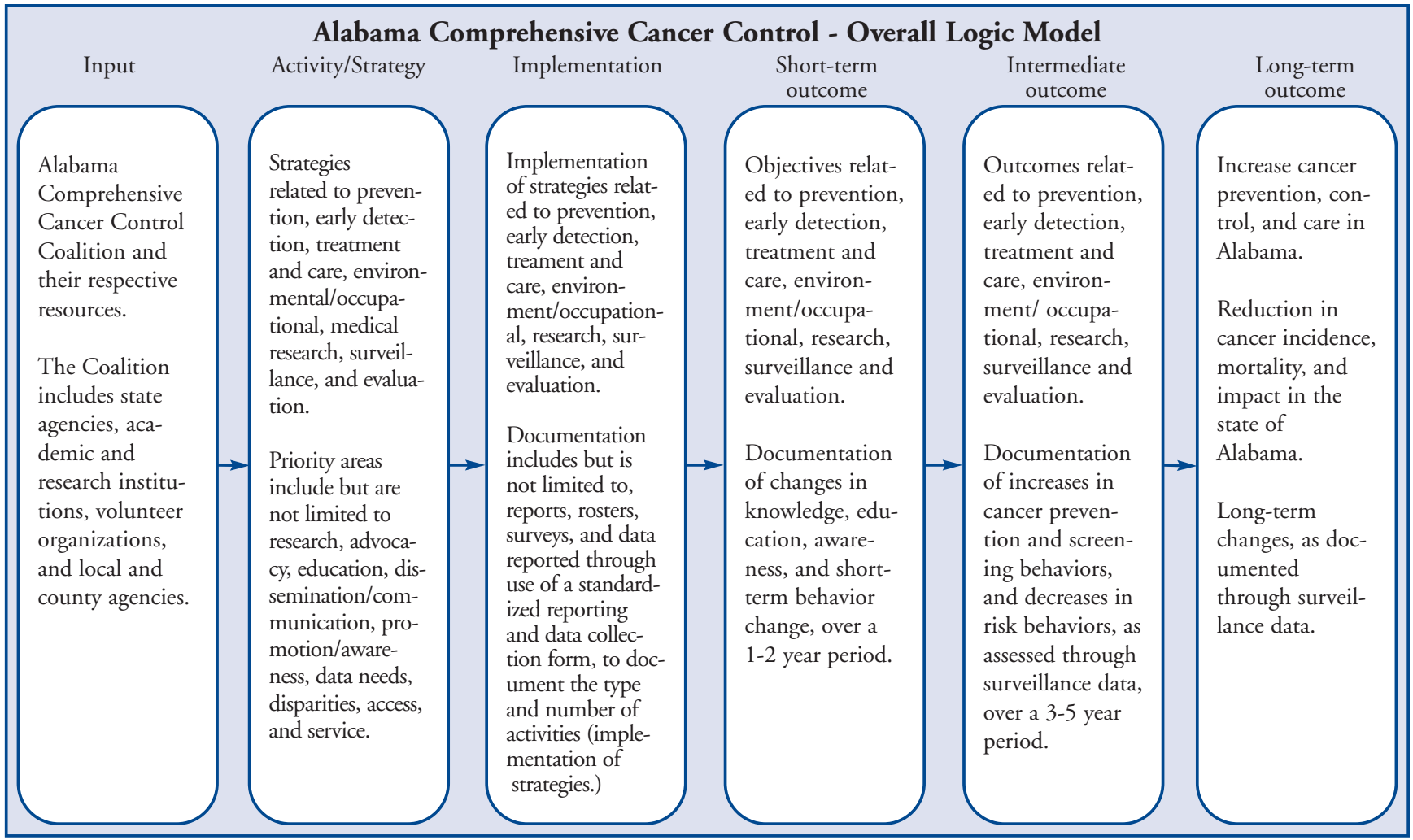
The 2001 - 2005 Plan for Alabama has provided the framework to expand ACCCC membership, target implementation of evidence-based cancer control programs, and refine evaluation and reporting processes of the Plan. Based on the collective experience of the coalition, it is clear that to impact cancer in Alabama the following major needs must be addressed:

- **Maintaining existing partnerships and assuring communication across existing programs, partnerships, and cancer control organizations.**
- **Broadening partnerships and the community role in cancer control.**
- **Investigating and implementing new cancer control strategies.**
- **Providing linkages for cancer control research.**
- **Expanding resources and increasing use of early detection and treatment services by underserved populations.**
- **Enhancing surveillance activities to monitor and evaluating cancer prevention and control activities.**

EVALUATION

ACCCC partners with the University of Alabama at Birmingham (UAB) Division of Preventive Medicine to evaluate implementation of the Plan as well as the ongoing activities and operations of the Coalition.

The evaluation component of the Alabama Comprehensive Cancer Control Plan assesses program implementation and program outcomes at the short-term, intermediate-term, and long-term levels. The evaluation is guided by use of logic models (see Appendix D), which reflect the content of the Plan. Objectives within each section of the Plan are examined to determine the degree to which they are realistic and measurable. In addition, it is recognized that it may not be possible at this time to evaluate every objective in this comprehensive plan. A degree of flexibility is to be expected, and the evaluation plan is based on priority areas and available data. There is, however, increased importance placed on process/implementation of the Plan activities (strategies). Data are collected through use of a Monitoring Form (see Appendix E) and are compiled for the evaluation report. Implementation data, coupled with surveillance data, provide a more comprehensive picture of Plan activities. Evaluation reports are prepared on an annual basis with input by members of the Evaluation Team as well as other primary stakeholders. These reports are used in a feedback loop to improve and strengthen the Plan.


Alabama Comprehensive Cancer Control - Overall Logic Model
Input
Alabama Comprehensive Cancer Control Coalition and their respective resources.
The Coalition includes state agencies, academic and research institutions, volunteer organizations, and local and county agencies.
Activity/Strategy
Strategies related to prevention, early detection, treatment and care, environmental/occupational, medical research, surveillance, and evaluation.
Priority areas include but are not limited to research, advocacy, education, dissemination/communication, promotion/awareness, data needs, disparities, access, and service.
Implementation
Implementation of strategies related to prevention, early detection, treament and care, environment/occupational, research, surveillance, and evaluation.
Documentation includes but is not limited to, reports, rosters, surveys, and data reported through use of a standardized reporting and data collection form, to document the type and number of activities (implementation of strategies.)
Short-term outcome
Objectives related to prevention, early detection, treatment and care, environment/occupational, research, surveillance and evaluation.
Documentation of changes in knowledge, education, awareness, and short-term behavior change, over a 1-2 year period.
Intermediate outcome
Outcomes related to prevention, early detection, treatment and care, environment/ occupational, research, surveillance and evaluation.
Documentation of increases in cancer prevention and screening behaviors, and decreases in risk behaviors, as assessed through surveillance data, over a 3-5 year period.
Long-term outcome
Increase cancer prevention, control, and care in Alabama.
Reduction in cancer incidence, mortality, and impact in the state of Alabama.
Long-term changes, as documented through surveillance data.

ALABAMA CANCER FACTS AND FIGURES AND HEALTHY PEOPLE 2010

ACCCC partners with the American Cancer Society (ACS) and the Alabama Statewide Cancer Registry (ASCR) to produce the ***2005 Alabama Cancer Facts and Figures***, which will report 2003 data. This is the third edition of *Alabama Facts and Figures*; it has become an important document for anyone with an interest in cancer. The publication illustrates a variety of factors that affect cancer prevention, detection, and quality of life by providing not only data but also interpretation of how these factors affect one another.

Alabama Cancer Facts and Figures provides accurate and timely cancer data and cancer risk factor information to key Alabama stakeholders at all levels. The document also serves as an essential planning and evaluation tool for the Alabama Comprehensive Cancer Control Plan.

An additional benefit is that it serves as another mechanism for distributing the Plan, which can be found in an abbreviated format at the end of the document.

The U.S. Department of Health and Human Services released ***Healthy People 2010*** as an effort for states, communities, professional organizations, and others to help improve the health of the nation. This initiative includes a set of health objectives for the nation to achieve over the first decade of the new century. The effort is designed to achieve two overarching goals: to increase the quality and years of healthy life and to eliminate health disparities.

In response to this effort, the Alabama Department of Public Health established a *Healthy Alabama 2010* steering committee. The committee developed *Healthy Alabama 2010* to identify the specific needs of the state in achieving the goals and objectives listed by *Healthy People 2010*. In addition to objectives and strategies used in the Healthy People 2010 report, Alabama developed a set of objectives to reduce racial disparities in health outcomes and to improve the overall health status of Alabamians.

ACCCC plays an important role in addressing the objectives in these publications since many are relevant to cancer prevention, early detection, and survivorship. The Alabama Comprehensive Cancer Control Plan used these objectives as a guide for developing strategies and measuring progress in the outcomes.

ALABAMA DEMOGRAPHICS

According to the 2000 U.S. Census, Alabama is the 23rd most populous state, with 4,447,100 residents.[1] Between 2000 and 2003, Alabama's population grew 1.2 percent, adding 53,652 new residents, but Alabama's growth was lower than the national rate of 3.3 percent. The racial make-up of the state is 71 percent Caucasian, 26 percent African American, and 3 percent other.[1]

AFRICAN AMERICAN POPULATION

In 2000, 26.3 percent of Alabamians were African American, over twice the national rate of 12.2 percent.[1] Federal poverty rates are higher among African Americans, along with lower levels of private insurance and access to health care services.[2] In 2003, 30 percent of Alabama high school graduates were African American, significantly lower than their Caucasian counterparts.[3] Postsecondary education among the African American population is significantly lower than among Caucasian counterparts.[4]

GROWING HISPANIC POPULATION

According to a 2004 report by the U.S. Census, the nation's Hispanic population continues to grow at much faster rates than the population as a whole. The national Hispanic population reached 39.9 million on July 1, 2003, accounting for about one-half of the 9.4 million residents added since the 2000 U.S. Census. This 13.0 percent growth rate for Hispanics over the 39-month period was almost four times that of the total population. The number of people in the United States who reported being Asian grew from 11.9 million to 13.5 million.[5]

Within Alabama, Hispanics account for the fastest growing segment of the population. In 1990, 0.6 percent of Alabama's residents reported being of Hispanic origin. In 2000, 1.7 percent of the population was Hispanic.[1] The northeast and southeast counties have higher proportions of Hispanic residents than other counties in the state. Residents in almost 4 percent of households in Alabama report speaking a language other than English in the home.

AGING POPULATION

Alabama has declining birth and death rates, and, like the rest of the United States, its population is aging. The median age of Alabamians in 2000 was 35.8 years,[1] compared to 32.9 years in 1990. In 2000, 13 percent of Alabama's population was 65 years and older; this is higher than the national rate of 12.4 percent.[1] The female population is larger than the male population throughout the age span.[1] Over half of Alabama's population is female, and women also typically have a longer lifespan than men. The

population of Alabamians 65 and older is 60 percent female and 40 percent male.[1]

EDUCATIONAL ATTAINMENT

The recent report *America's Health: State Health Rankings*, issued by the United Health Foundation, the American Public Health Association, and the Partnership for Prevention ranked Alabama 46th in the nation for high school completion. Only 57.2 percent of incoming ninth graders graduate with a high school diploma in four years.[7]

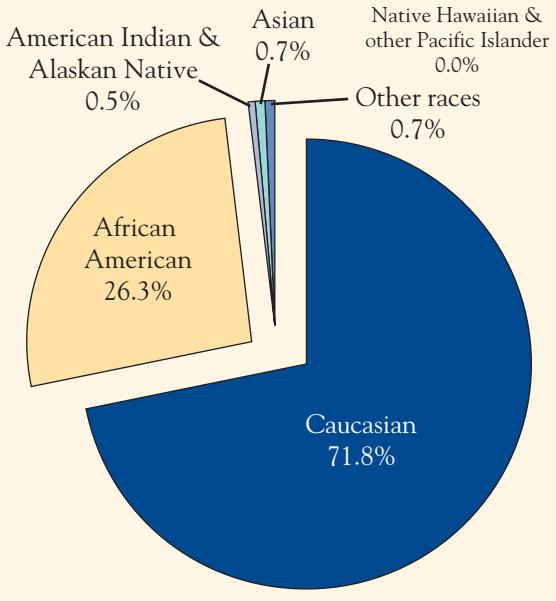
POVERTY

The median Alabama household income reported to the 2000 U.S. Census was $34,135 per year, 19 percent below the national average.[1] Shelby County had the highest median household income ($55,440) followed by Madison County ($44,704). The lowest incomes were in Wilcox ($16,646) and Sumter counties ($18,911).[1]

UNINSURED POPULATION

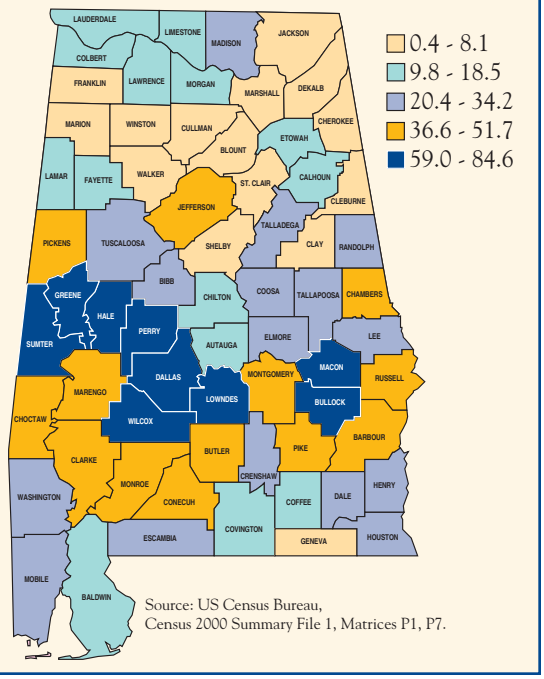
The majority of individuals who live below the poverty threshold have no health insurance. In 2003, the Kaiser Family Foundation reported that 13 percent of Alabamians are uninsured. For those with health insurance, 59 percent were covered by private or individual insurance and 27 percent were covered by either Medicare or Medicaid.[3] Adequacy of the coverage, however, is less clear. Presumably people who live in Alabama, like residents of many other states, may have group health insurance limited to wage earners only, may have high deductibles, or may be only catastrophic coverage. The degree of significance to which lack of health care insurance contributes to poor health outcomes and economic

Figure 1. Distribution of Racial Categories Alabama Census 2000



Produced by the Center for Health Statistics, Alabama Department of Public Health

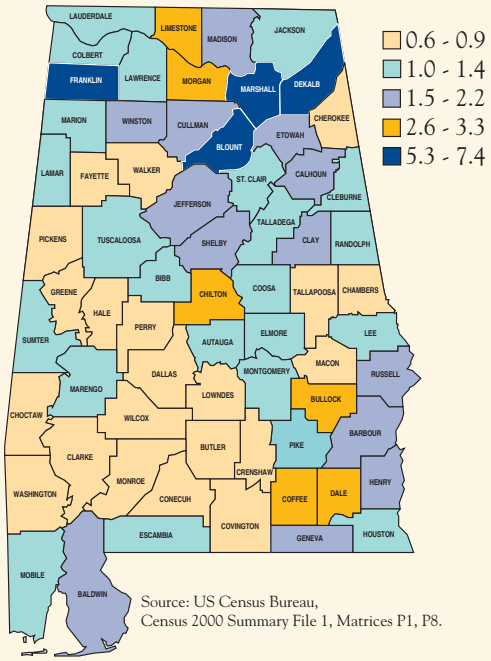
Figure 2. Percent of Persons Who are African American Alone, 2000



Source: US Census Bureau, Census 2000 Summary File 1, Matrices P1, P7.

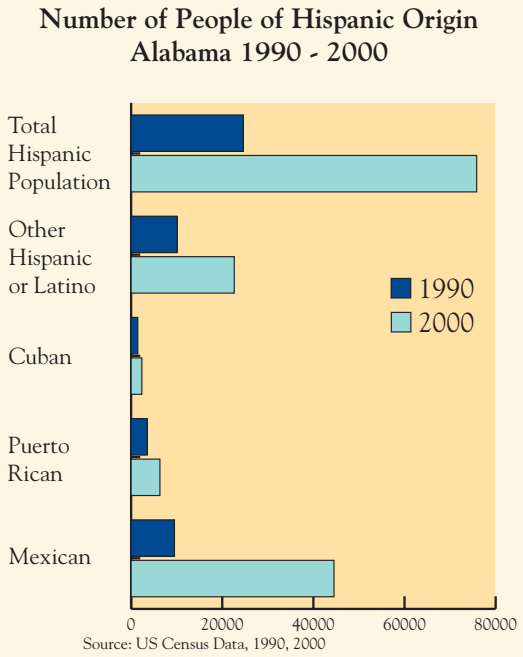
hardship in Alabama cannot be overstated. Screening and early detection services are not readily available to this population, which causes increased suffering from conditions that could be prevented.

Figure 3. Percent of Persons Who are Hispanic or Latino (of any race), 2000



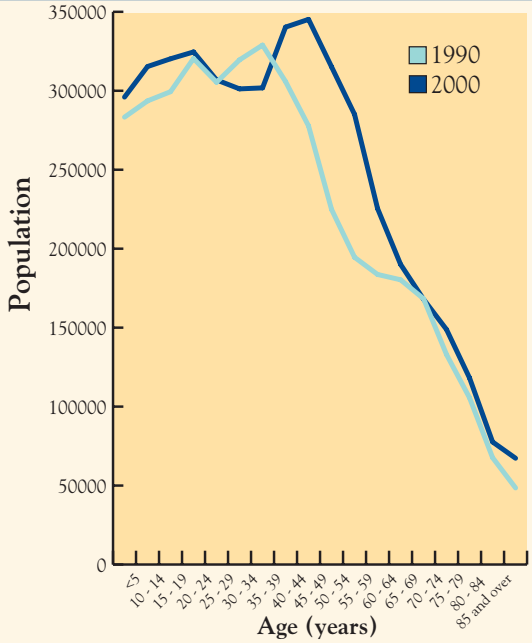
Source: US Census Bureau,
Census 2000 Summary File 1, Matrices P1, P8.

Figure 4. Number of People of Hispanic Origin, Alabama 1990 and 2000



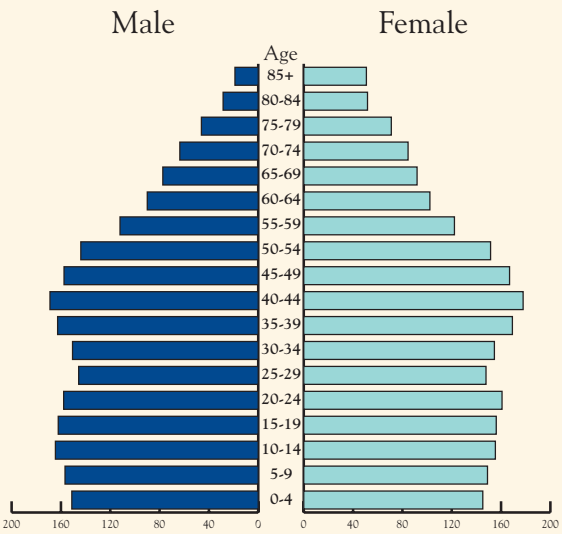
Source: US Census Data, 1990, 2000

Figure 5. Alabama's Aging Population



Source: US Census Data, 1990, 2000

Figure 6. Age Distribution, All Races Alabama, 2001



Source: Population data is based on Census populations as modified by NCI (released December 2003).

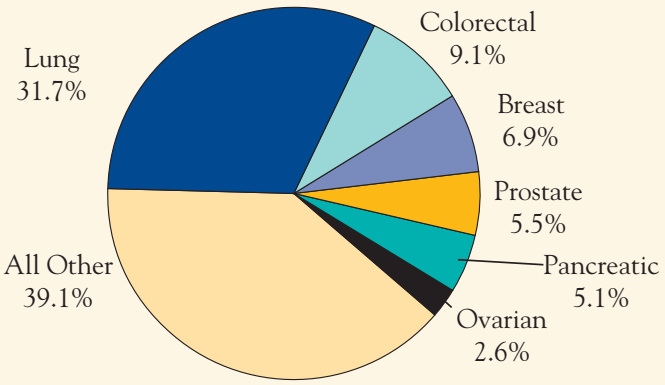
THE BURDEN OF CANCER IN ALABAMA

Routine screening is an important factor which decreases cancer morbidity and mortality rates. Cervical cancer is almost 100 percent preventable if women are properly screened. Breast, colorectal, and prostate cancers have a high survival rate when detected at an early stage. Unfortunately, funding for early detection programs is not adequate to reach populations who are uninsured or underserved. Lung cancer is a substantial problem in Alabama, with an incidence rate of 73.4 per 100,000 from 1996-2002.[8] To decrease the incidence and mortality rates of lung cancer, priority should be placed on establishing or enhancing effective smoking prevention and cessation programs.

Today, more than 150,000 individuals throughout Alabama are living with or surviving a cancer diagnosis. According to the American Cancer Society (ACS), more than 24,000 individuals, or 66 Alabamians per day will be diagnosed with cancer each year.[9] Prostate, breast, and lung cancers are the most frequently diagnosed cancers in Alabama. It is estimated that there will be more than 10,000 cancer-related deaths in Alabama, or 27 per day, making cancer the state's second leading cause of death in 2005, following heart disease.[6]

Scientific evidence suggests that 60 percent of new cancer cases and 33 percent of cancer deaths could be prevented through lifestyle changes such as eliminating tobacco use, improving dietary habits, exercising regularly, maintaining a healthy weight, avoiding exposure to ultraviolet light, obtaining cancer screening for early detection, and seeking timely and appropriate treatment.[10]

Figure 7. Leading Causes of Cancer Deaths, Alabama 2003



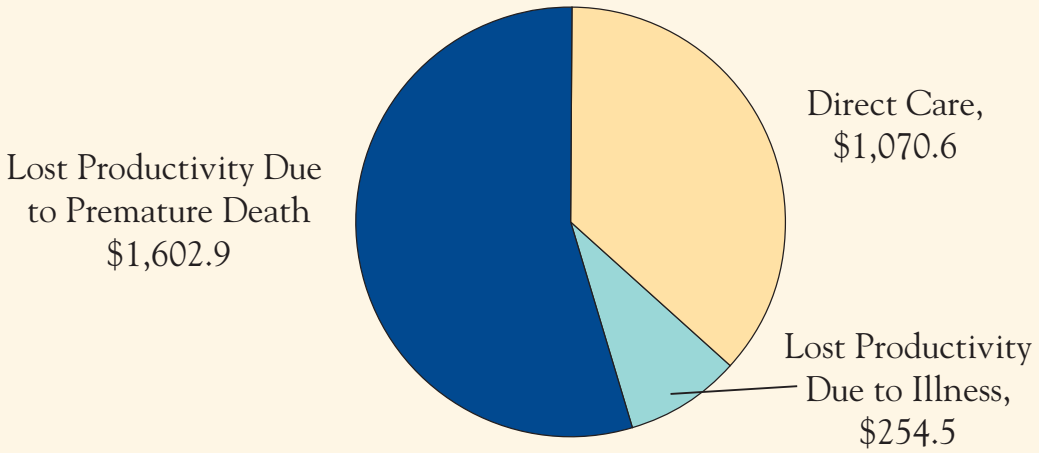
Source: Alabama Department of Public Health, Center for Health Statistics, 2005

ECONOMIC BURDEN OF CANCER IN ALABAMA

In addition to the distressing loss of lives, cancer exacts a great economic toll on Alabamians. ACS estimates the direct and indirect cost of cancer in the United States was $189.8 billion in 2004. This estimate included about $69.4 billion in direct medical costs. Indirect costs for 2004, consisting of productivity or time lost or foregone by patients, families and other informal caregivers, were estimated to be $120.4 billion. These costs include approximately $16.5 billion in indirect morbidity costs (lost productivity due to illness) and $103.9 billion in indirect mortality costs (lost productivity due to premature death)[11]. This means that with a population estimated to be 4.53 million in 2004, the economic cost of cancer in Alabama was over $2.9 billion or approximately $646 for each person.

In part, the costs in cancer care can be attributed to lack of health insurance and barriers that prevent Alabamians from accessing the services needed for cancer prevention and early detection. To prevent increasing costs of cancer-related illnesses, it is important to focus on screening and early detection strategies.

Figure 8. Direct and Indirect Costs of Cancer Alabama, 2004 ($Millions)



Total Cost of Cancer in Alabama, 2004 = $2,928.0 Million

Source: Alabama Department of Public Health, Center for Health Statistics, 2005

DISPARITIES IN ALABAMA

Substantial progress has led to advanced methods of cancer detection, diagnosis, and treatment. Unfortunately, not all populations have reaped benefits from this progress. The incidence and mortality rates of cancer show disparities among rural and minority populations within Alabama. These populations are more likely to experience the following:

- **Be diagnosed with and die from preventable cancers.**
- **Be diagnosed with late-stage disease for cancers detectable through screening at an early stage.**
- **Receive either no treatment or treatment that does not meet currently accepted standards of care.**
- **Die of cancers that are generally curable.**
- **Suffer from cancer without the benefit of pain control and other palliative care.**[12]

Health disparities are more prominent in rural, underserved areas. Of the 67 counties in Alabama, 45 are classified as rural. Within these counties, health insurance enrollment rates are low and health care facilities and providers are sparse. A rural region known as the Black Belt has an age-adjusted prostate cancer death rate of 58.4 compared to 38.0 for the remainder of the state. Location of health care facilities and providers creates a burden for those who seek cancer services. Many of these areas have only one or two primary care physicians within the county.

Cancer incidence rates are lower among minorities; however, their mortality rates are higher. Major contributors to this disparity are the lack of access to early detection and low quality health care. Minorities, especially African American and Hispanic populations, are less likely than Caucasians to have private health insurance. The number of uninsured African Americans in Alabama in 2003 was 22 percent, compared to 13 percent of Caucasians.[5] Studies show that people without health insurance are diagnosed with cancer at later stages and die from cancer at higher rates than those with insurance. To lower the rate of cancer-related deaths, it is important to increase awareness and availability of cancer screening services.

The Alabama Breast and Cervical Cancer Early Detection Program (ABCCEDP) has helped to increase breast cancer screening rates among minority women. In 2002, more African American than Caucasian women in Alabama reported having had a mammogram in the past year.[13] Unfortunately, this screening rate does not hold true for all types of cancer.[14] In 2002, only 10 percent of Alabama's African Americans and Hispanic adults reported ever having

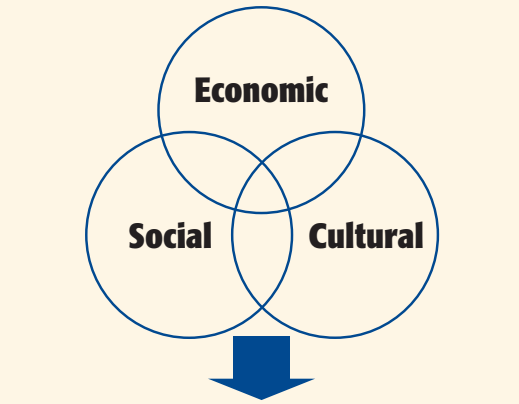
a fecal occult blood test, flexible sigmoidoscopy, or colonoscopy.[13] When diagnosed at a localized stage, colorectal cancer has a five-year survival rate of 90.1 percent. Colorectal cancer mortality rates in Alabama are higher among African Americans.[15]

High quality health care facilities and systems are less available for minority or underserved communities. The Institute of Medicine reported that minorities, particularly African Americans, frequently receive lower quality health care than Caucasians, even when access-related factors were controlled. Individuals living in these underserved communities may be unable to derive benefit from services because of communication barriers such as language, health literacy, and hearing or visual impairment.[16]

A patient's understanding of an illness may be different from a provider's perspective. An individual's beliefs are not always compatible with evidence-based medical practices. To increase compliance rates among minorities and the underserved, cultural competency of health care professionals must become a priority.

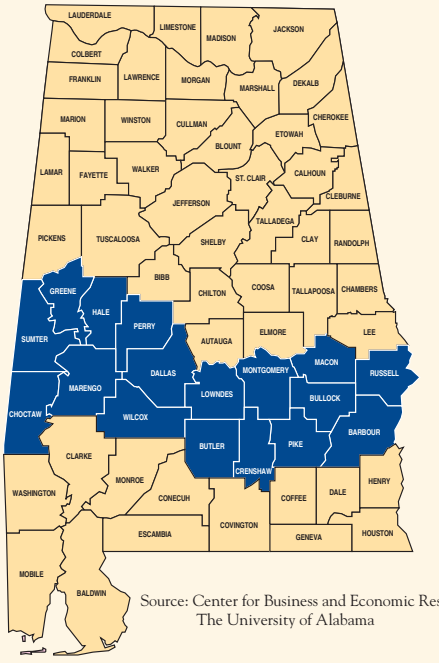
Solutions to eliminate cancer disparities are complex and require intensive and multidisciplinary approaches that unite research and community outreach strategies. The Alabama Comprehensive Cancer Control Coalition is dedicated to working with health care professionals, community-based organizations, government agencies, and academic and research institutions to develop a multi-faceted approach to lower cancer incidence and mortality rates among these populations.

Figure 9. Factors That Influence Cancer Disparities



Source: adapted from: Freeman, HP. Commentary on the meaning of race and science and society. Cancer Epidemiology Biomarkers Prev 12(3): 2325-65, 2003, and Institute of Medicine. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: National Academy Press, 2002

Figure 10. Traditional Counties of the Alabama Black Belt



Source: Center for Business and Economic Research
The University of Alabama

NEW AND EMERGING RESEARCH

Research is responsible for the remarkable progress that has been made in cancer prevention and control since the War on Cancer was declared over 30 years ago. Ongoing groundbreaking scientific discoveries offer an incredible array of opportunities to accelerate progress.

New and emerging scientific research is the driving force behind cancer prevention, improved early detection methods, and successful treatment options. The number of cancer deaths and cases has been declining in the U.S. for over a decade, but our greatest achievements are yet to come.

CHEMOPREVENTION

Chemoprevention involves the use of either natural or synthetic substances to reduce the risk of developing cancer or to reduce the risk of cancer recurring. Studies over the past 25 years have identified agents (drugs, vitamins, hormones, or dietary compounds) which have shown significant success in helping achieve these goals.

Prevention usually denotes steps patients can take on their own to reduce the chance of cancer development (dietary changes, smoking cessation, weight control, decreased sun exposure, etc.). Cancer treatment involves the administration of proven methods to slow or stop cancer. Chemoprevention has been found to bridge the gap between preventive measures and cancer treatment.

Currently there are five basic classes of agents – selective estrogen receptor modulators (SERMs) like tamoxifen and raloxifene, calcium, retinoids (substances related to vitamin A), glucocorticoids, and non-steroidal anti-inflammatory drugs (NSAIDs).

Currently NCI has over 40 trials underway and many more being conducted by pharmceutical companies. These trials require very large numbers of participants to prove a statistically valid result. With success in this area will come a reduction in new cancers as well as a reduction in the number of recurrent cancers.

GENOMICS

Genomics specific to cancer is the study of the functions and interactions of the cancer genes within the genome, including interactions with environmental factors.[17] It is estimated that 5 to 10 percent of cancer is caused by autosomal dominant inherited genetic changes, such as BRCA1 and BRCA2 mutations in breast and ovarian cancers.[18] Research on the cancer genome has already shown an increased risk for individuals with a first-degree relative with cancer, and much more is being learned every day. The influence of the emerging fields of genetics and genomics on cancer control cannot be ignored.

Family history is known to be a risk factor for many chronic diseases – including coronary heart disease, cancer, and diabetes – but its use in preventive medicine has been de-emphasized compared to modifiable risk factors such as smoking and diet. According to the results from the Healthstyles 2004 Survey, conducted by the CDC, 96 percent of Americans believe that knowing family history is important to their health.[19] The survey also shows, however, that only one-third of Americans have ever tried to gather and organize their families' health histories.

In November 2004, the U.S. Department of Health and Human Services launched a public education campaign urging all Americans to know their family medical history and to discuss it with health care professionals using an online family history collection tool.[20] This free computer program organizes important health information into a printout that can be taken to office visits to help determine whether a patient is at a higher riskate for disease. The printout can also be placed in a patient's medical record. The new computerized tool, called "My Family Health Portrait," can be downloaded at http://www.hhs.gov/familyhistory/. Using family history as a risk assessment tool is an important component within cancer genetics and one of the most amenable public health applications of genomics at this time.[21]

PROTEOMICS

Proteomics, in its modern form, is relatively new and takes over where genomics ends. Proteomics technology is being used in cancer diagnosis and treatment, which involves searching for proteins that may serve as biomarkers of early disease, or responsiveness to therapy, or of the likelihood of relapse after treatment.[22] At this point, none of the proteomics analyses is mature enough to be used in the clinic as a screening tool, but these small studies point to the promise of proteomics as a diagnostic maker.

GENETIC ADMIXTURE

In many disease outcomes, adjustment for socioeconomic factors does not completely eliminate health disparities, therefore suggesting a role in genetics. An emerging technique called genetic admixture looks closely at the differences in ethnic and racial groups to explore the components that cause genetic predisposition to certain types of chronic diseases. Ancestry-informative markers help answer questions by estimating what fraction of an individual's genome was inherited from African ancestors, what part came from European ancestors, and what fraction descended from pre-Columbian aboriginal populations.[23] Past studies have looked into the biology of obesity traits and insulin-resistance syndrome. This technique is currently being considered for application to cancer research.

ADVOCACY

Cancer is not just a medical issue, it is also a psychological, social, and economic issue. The disease becomes political when elected officials make policy decisions that affect the lives of cancer survivors, their families, their career opportunities, and other potential cancer patients. Cancer advocates in Alabama address all these issues at various levels and in their own unique ways. Some groups have paid consultants while others influence decision makers by their personal testimonies.

Through implementation of the Alabama Comprehensive Cancer Control Plan these various approaches will be combined to increase Alabama's capacity to positively influence programs to help prevent cancer, broaden access to quality cancer treatment and follow-up care, and improve the quality of life for those affected by the disease. Each of the Plan sections (Prevention; Early Detection; Survivorship; Environmental, Medical, and Occupational Exposure; Surveillance; and Research) contains advocacy objectives along with strategies to help achieve success.

Strong partners, such as the American Cancer Society (ACS), train individuals and groups to be advocates for their own issues as well as provide a voice for people who are not usually heard. ACS initiatives rely on the combined efforts of a community-based, grassroots network of cancer survivors, caregivers, volunteers, staff, health care professionals, public health organizations, and other collaborative partners who have successfully influenced or supported policies, laws, and regulations.

Recent achievements that have been brought about by advocacy efforts in Alabama include:

- **Adopting the Breast and Cervical Cancer Prevention and Treatment Act.**
- **Increasing the state tobacco tax and increasing penalties for those who sell tobacco to minors.**
- **Passing a statewide clean indoor air act without preemption.**
- **Passing local clean air ordinance in Prattville, Montgomery, Birmingham, Dothan, and Auburn, with initiatives pending in Huntsville and Mobile as well as numerous smaller cities throughout Alabama.**
- **Passing a mandated option requiring that insurance companies offer the full range of colorectal screenings through private insurance.**
- **Advocating for an adequate and sustained funding source for Medicaid to ensure access to cancer care and prescription drugs for Alabama's medically indigent cancer patients served by the state Medicaid program.**

FORMAT OF THE 2006 – 2010 ALABAMA COMPREHENSIVE CANCER CONTROL PLAN

The Alabama Comprehensive Cancer Control Plan is divided into sections that address topics relevant to cancer control in Alabama:

- **Prevention**
- **Early Detection**
- **Survivorship**
- **Environmental, Medical, and Occupational Exposure**
- **Surveillance**
- **Research**

The narrative material that introduces each section and subsection covers information about current prevalence and mortality, and on particular activities and programs that are working to decrease cancer incidence and mortality rates in the state.

The goals and outcomes of each section are based on the most current data available. Significant consideration was given to each goal, objective, and strategy to ensure all populations were addressed. Each section includes the following: an overall goal, individual sub-section goal statements, outcome measures with data sources, objectives, and strategies. The **goal** statements reflect long-term aspirations and are meant to guide the direction of Alabama's cancer control activities. **Outcome** statements provide target measures the ACCCC will work to accomplish by the year 2010. Where applicable, these measures are based on Healthy People 2010 recommendations. Some outcome statements do not include baseline data; in these cases, ACCCC has plans to establish these baselines and set appropriate targets to be met by the end of the five-year period. To accomplish each specific outcome measure, comprehensive **objective** statements are included. **Strategies** are specific activities designed to accomplish the objectives and include information on **agencies**§, **other partners and programs**§, and **linkages**§ whose efforts and resources address the need.

Cancer control research is a major component in the Plan. ACCCC has included specific research goals, outcomes, and objectives in each section to allow for a closer dialogue with researchers. Each committee includes a research liaison who will be responsible for reporting ongoing efforts in cancer research to their respective committees and to the Research Committee.

§ Defined in Glossary, see Appendix B

IMPLEMENTATION AND PRIORITY SETTING

As Alabama enters the second five-year cycle of Plan implementation, valuable lessons have been learned and numerous goals have been achieved: growth in section committee numbers, higher levels of commitment by members, and a better understanding of what a collaboration such as this actually means. Perhaps the most valuable lesson learned is that no one group or organization can hope to undertake all the very complex issues associated with cancer prevention and control.

Plan implementation will be the responsibility of all coalition members, ad hoc committees, and the advisory council as well as grassroots individual and small groups around Alabama. Linkages among the various groups are necessary to ensure coordination and success.

Scientific data and research will be used systematically to identify priorities and to assist with decision making. Objectives will be prioritized based on sound scientific evidence that interventions are effective in reducing cancer incidence and/or mortality, especially in areas where evidence-based interventions are underutilized. The Alabama statewide plan will be reviewed annually and relevant data, expanded scientific knowledge, improved technology, and available resources will guide future priorities. All ACCCC partners are dedicated to the mission of reducing the burden of this relentless disease.

The Plan is comprehensive and will consider all cancers in all populations, but an emphasis will remain on populations that suffer the greatest burden of morbidity and mortality – rural, minority, and medically underserved Alabamians.

PREVENTION

Overall Goal:

Alabama cancer cases will decline because of adoption of healthy lifestyle choices and modification of social and cultural risk factors.

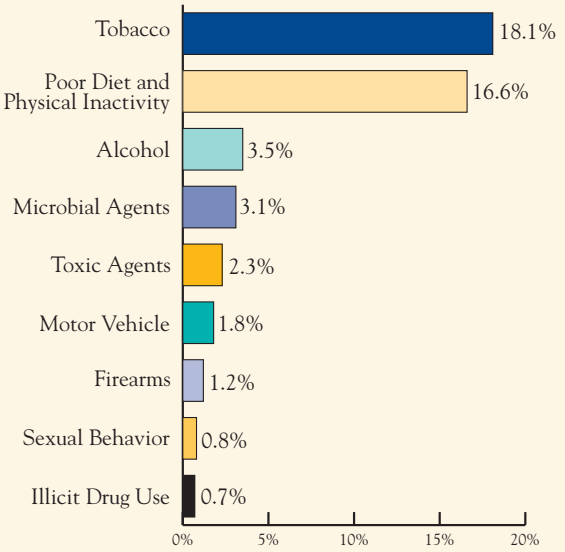
INTRODUCTION TO PREVENTION

In the past, the majority of diseases and illnesses that killed Americans were communicable. Diseases, such as smallpox, have been eradicated worldwide and polio from the United States by implementation of public health programs. During the 21st century, it will take lifestyle changes and healthy behaviors to prevent or cure the most prevalent chronic diseases, including cancer.

The majority of Americans feel that a cancer diagnosis is inevitably fatal; however, current research shows this is untrue. The American Cancer Society estimates that more than 60 percent of cancer deaths could be prevented if Americans maintained a healthy lifestyle and followed recommended cancer screening guidelines.[8]

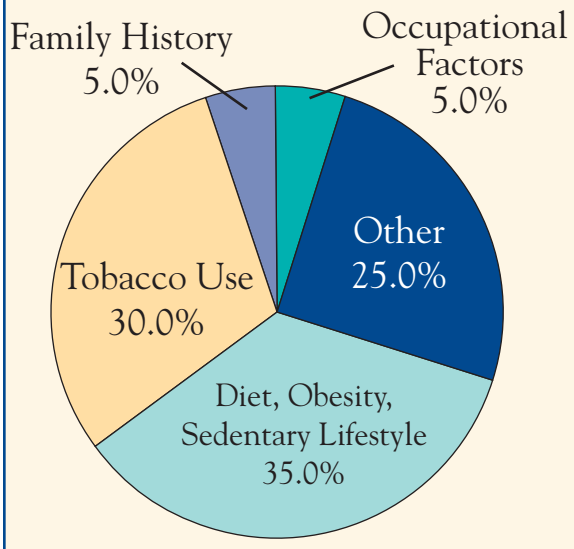
This year more than 24,000 Alabamians, or 66 per day, will receive a diagnosis of cancer, and an estimated 10,000 Alabamians, or 27 per day, will die from cancer.[6] To decrease cancer incidence and mortality rates, Alabamians are encouraged to modify their lifestyle choices – quit using tobacco, eat better, get more physical exercise, and avoid overexposure to ultraviolet light.

Figure 11. Actual Causes of Death in Alabama, 2002



Source: Centers for Disease Control and Prevention (CDC)

Figure 12. Factors Causing Cancer in the United States



Source: Harvard Report on Cancer Prevention, Cancer Causes and Control, 1996

TOBACCO

HEALTH EFFECTS OF SMOKING

Cigarette smoking is responsible each year for more than 440,000 deaths in the United States – more than alcohol, car accidents, suicide, AIDS, homicide, and illegal drugs combined.[24] Half of Americans who smoke will die because of their habit.

At least 30 percent of all cancer deaths are caused by cigarette smoking. It is the major cause of cancers of the lung, larynx (voice box), oral cavity, pharynx (throat), and esophagus and is a contributing cause in the development of some leukemia and cancers of the bladder, pancreas, liver, uterine cervix, kidney, stomach, colon and rectum.[22]

Lung cancer is currently the leading cause of cancer death in both men and women in Alabama. Detection of lung cancer at an early stage, when it is most treatable, is difficult. Compared to nonsmokers, men who smoke are about 23 times more likely to develop lung cancer and women who smoke are about 13 times more likely to do so. Smoking causes about 90 percent of lung cancer deaths in men and almost 80 percent of lung cancer deaths in women.[22] Fortunately, lung cancer is largely a preventable disease.

The harmful effects of smoking do not end with the smoker. Women who smoke during pregnancy have children who are at increased risk for low birth weight, sudden infant death syndrome, and serious respiratory conditions such as asthma.

Secondhand smoke is dangerous to all who are exposed. Primarily because of exposure to secondhand smoke, each year an estimated 3,000 nonsmoking Americans die of lung cancer and an additional 35,000 die of heart disease. An estimated 150,000 to 300,000 children younger than 18 months have recurring respiratory tract infections because of exposure to secondhand smoke.

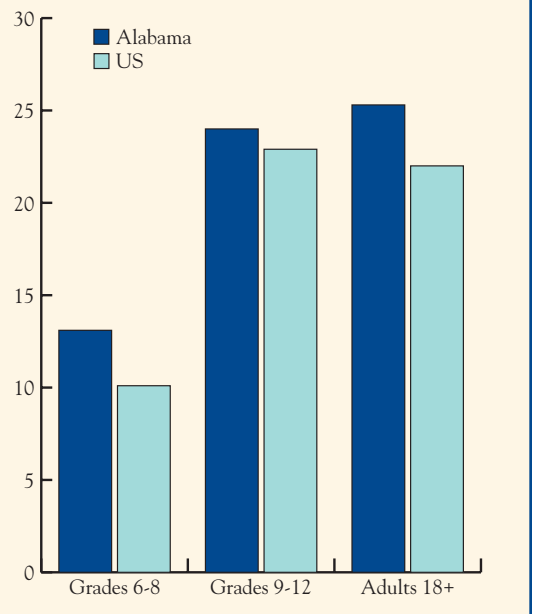
BURDEN OF TOBACCO USE IN ALABAMA

In 2004, the Centers for Disease Control and Prevention (CDC) reported that 46.2 million adults in the United States smoke cigarettes despite broad public awareness of the consequences this behavior has on health.[25] According to the 2003 Alabama Behavioral Risk Factor Surveillance System (BRFSS), 25.3 percent of Alabamians reported being current smokers, higher than the national rate of 22.7 percent. Each year in Alabama, 12,000 young people under the age of 18 become new regular smokers.[26] Although smoking rates have steadily decreased in recent years, the prevalence of Alabama's youth who smoke remains higher than national rates. Currently, 13.1 percent of Alabama middle school students and 24 percent of high school students smoke,[27] while national smoking rates for these populations are 10.1 percent and 22.9 percent, respectively.[28]

Smokers, businesses, nonsmokers, and society bear the burden of costs from cigarette use. Increasing state health care expenditures have resulted in increased taxes to pay for the cost of state Medicaid and Medicare programs. In addition, many health insurance companies have raised premiums for clients who smoke, based on the excessive costs of healthcare compared to nonsmokers.

Alabama spends more than $1.17 billion each year in direct medical expenses to treat smoking-related diseases, while it allocates less than 10 percent of minimum funding recommended by the CDC to address the problem of tobacco use through prevention and cessation. Alabama ranks 36th in the nation in terms of per capita funding to address tobacco use prevention and control, yet one-fourth of Alabamians smoke.

Figure 13. Current Cigarette Smokers, by Age Group, Alabama and US, 2000



Source: CDC YTS, BRFSS

DISPARITIES

Smoking prevalence varies by race and ethnicity, age, gender, and educational attainment. Alabama has higher rates of current smokers than the national average. Alabamians ages 45 to 54 have a higher prevalence of smoking than other age groups 18 and older. Caucasian men in Alabama are more likely to smoke than any other gender or racial group. Prevalence decreases when educational attainment and annual income increase.[29]

EXAMPLES OF CURRENT ACTIVITIES TO REDUCE TOBACCO USE AND EXPOSURE

To address these issues, in 1998 ADPH convened the **Alabama Tobacco Use Prevention and Control Task Force (Tobacco Task Force)** to develop and implement a comprehensive state plan to address Alabama-specific tobacco issues. In 2003, the Tobacco Task Force adopted CDC's Evaluation Plan to monitor progress toward accomplishing Alabama's goals and objectives. In 2004, the Tobacco Task Force prioritized activities to reach objectives, based on available resources. The Alabama Comprehensive Cancer Control Plan complements this plan by adopting projects not targeted by other agencies.

Currently, state government resources to prevent and control tobacco use in Alabama are primarily included in three agencies: ADPH, the Alabama State Department of Education (ALSDE), and the Alcoholic Beverage Control Board (ABC Board). The **ADPH Tobacco Prevention and Control Division** funds a tobacco control program in

each of the state's 11 public health areas, employing 11 Tobacco Use Prevention and Control Coordinators who provide technical assistance to seventeen local tobacco control coalitions. The Division also funds 14 minigrants statewide the purpose of which is to empower youths to strengthen policies in their communities regarding tobacco use, exposure, and treatment. The Course of Study developed by ALSDE requires that students be taught the risks of tobacco use and exposure to secondhand smoke. Through the **Safe and Drug-Free Schools Program**, schools are monitored to enforce the Alabama Administrative Code that requires school campuses to be tobacco free. Safe and Drug-Free Schools Coordinators also participate on local tobacco control coalitions and provide tobacco use prevention programming in their schools. The **ABC Board** is responsible for enforcing youth access to tobacco products by providing merchant education, permitting for tobacco vendors, and enforcing state laws regarding sales of tobacco products to minors.

In April 2005, ADPH launched the first statewide **Tobacco Quitline** available to all Alabamians free of charge. The 1-800-QUIT-NOW toll-free line offers counseling for nicotine dependence as well as discount coupons for nicotine replacement therapy. Callers receive an information packet which is called a "Quit Kit" and can receive additional counseling as they set a quit date and develop a plan to give up cigarettes or spit tobacco. Data shows that, with counseling, users are twice as likely to be able to quit tobacco for good. The line takes live calls from 8 a.m. to 8 p.m., Monday through Friday. Callers can leave a message 24 hours a day to receive more information or a call back.

In 1993, the U.S. Environmental Protection Agency developed a report on the respiratory health effects of secondhand smoke. This same report classified secondhand smoke as a Class A Carcinogen, one which is known to be a cancer causing agent in humans. To address the issue of **Clean Indoor Air** legislation, organizations across the state have formed local coalitions and are working within their municipalities to strengthen clean indoor air laws. At the state level, a bill has been introduced in the current 2005 legislative session to ensure that restaurants across the state are smoke free. The American Cancer Society and other organizations are spearheading efforts to support the passage of this bill.

EVIDENCE-BASED INTERVENTIONS TO REDUCE TOBACCO USE AND EXPOSURE TO SECONDHAND SMOKE

The goal of comprehensive tobacco control programs is to reduce disease, disability, and death by preventing the initiation of tobacco use among youth, promoting quitting among young people and adults, eliminating nonsmokers' exposure to secondhand smoke, and identifying and eliminating the disparities among different population groups related to tobacco use and its effects.[30] The *CDC's Guide to Community Preventive Services* provides a list of evidence-based interventions for community leaders, policy makers, and decision makers to consider. These interventions are recommended because they have been shown to have an impact

in tobacco use prevention and cessation.

CONCLUSIONS AND FUTURE DIRECTIONS

A significant decrease in the prevalence of Alabamians who use tobacco products depends on the implementation of these evidence-based strategies targeting the school-age population. Decreases in the incidence and mortality attributed to lung cancer will then occur as this generation ages and reaches adulthood.

Public policy is the most effective tool for tobacco prevention. Clean indoor air legislation has been passed in some cities and is being considered in many more. Ensuring smoke free environments are available to all Alabamians will decrease not only the rate of environmental tobacco smoke health outcomes, but also the number of tobacco users. Advocacy for legislation that addresses all public places in Alabama is a priority issue for ACCCC and organizations throughout the state.

Current tobacco users in Alabama should have access to effective smoking cessation aids. Insurers and employers need to be educated on the importance of smoking cessation aids as an adjunct to quitting, and the increased savings that occur when these tools are available and utilized. Cessation of tobacco product use will save the insurer and employer in costs attributed to loss of productivity and treatment of tobacco-related diseases.

Table 1: Evidence-based strategies to reduce tobacco-related diseases

Intervention	Recommendation
Strategies to Reduce Environmental Tobacco Smoke	
Smoking bans and restrictions	Recommended (strong evidence)
Strategies to Reduce Tobacco Use Initiation by Children, Youth, and Adults	
Increasing the unit price for tobacco	Recommended (strong evidence)
Media campaigns combined with appropriate interventions	Recommended (strong evidence)
Strategies to Increase Tobacco Cessation	
Increasing the unit price for tobacco products	Recommended (strong evidence)
Media campaigns combined with appropriate interventions	Recommended (strong evidence)
Interventions appropriate for health care systems – provider reminder systems alone	Recommended (sufficient evidence)
Interventions appropriate for health care systems – provider reminder systems plus provider education (with or without patient education)	Recommended (strong evidence)
Interventions appropriate for health care systems – reducing patient out-of-pocket costs for effective treatments for tobacco use and dependence	Recommended (sufficient evidence)
Interventions appropriate for health care systems – patient telephone support (quit lines) when combined with other interventions	Recommended (strong evidence)

Adapted from Guide to Community Preventive Services: Tobacco Use Prevention and Control.
URL: http://www.thecommunityguide.org/tobacco/tobac.pdf

TOBACCO

GOAL: All Alabamians will abstain from using tobacco products.

OUTCOME: By 2010, decrease from 20% to 15% the percentage of tobacco product sales in Alabama that are noncompliant of laws prohibiting sales to minors.
Data Source: 2003-2004 SYNAR Report

OUTCOME: By 2010, decrease from 13% to 10% the proportion of Alabama youths in grades 6-8 who smoke cigarettes.
Data Source: 2004 Middle School Alabama Youth Tobacco Survey (ALYTS)*

OUTCOME: By 2010, decrease from 24% to 16% the proportion of Alabama youths in grades 9-12 who smoke cigarettes.
Data Source: 2004 High School ALYTS

OUTCOME: By 2010, decrease from 25% to 21% the proportion of Alabama adults age 18 and older who smoke cigarettes.
Data Source: 2004 Behavioral Risk Factor Surveillance System (BRFSS)*

OUTCOME: By 2010, decrease from 7% to 1% the proportion of Alabama youths in grades 6-8 who use spit tobacco.
Data Source: 2004 Middle School ALYTS

OUTCOME: By 2010, decrease from 12% to 1% the proportion of Alabama youths in grades 9-12 who use spit tobacco.
Data Source: 2004 High School ALYTS

OUTCOME: By 2010, decrease from 21% to 12% the proportion of Alabama adults age 18 and older who use spit tobacco.
Data Source: 1997 BRFSS

OBJECTIVE 1: Decrease the number of tobacco product sales to minors.
Data Source: SYNAR Report

STRATEGY 1-1: Educate merchants, particularly those who are not members of merchant associations, about tobacco sales laws and the consequences of noncompliance.

Principal Agency/ies: ABC/Responsible Vendor

Other Partners and Programs: ADMHMR/Substance Abuse; ADPH/Health Promotion & Chronic Disease; ADPH/Tobacco Prevention

Linkages: Alabama Association of Convenience Stores; Alabama Oilman's Association; Alabama Retail Association

* All BRFSS and ALYTS data are self-reported.

STRATEGY 1-2: Educate clerks who sell tobacco products about tobacco sales laws and the consequences of noncompliance.

Principal Agency/ies: ABC/Responsible Vendor

Other Partners and Programs: ADMHMR/Substance Abuse; ADPH/Health Promotion & Chronic Disease; ADPH/Tobacco Prevention

Linkages: Alabama Association of Convenience Stores; Alabama Oilman's Association; Alabama Retail Association

OBJECTIVE 2: Increase awareness about the risks of tobacco use and exposure among youths in grades 6-12.
Data Source: ALYTS; YRBS

STRATEGY 2-1: Develop and implement a Public Service Announcement campaign to inform youths about the risks of tobacco use, including spit tobacco.

Principal Agency/ies: ADPH/Tobacco Prevention

Other Partners and Programs: ALSDE; Youth-serving organizations

Linkages: ACES; CDC/DASH; CDC/Smoking and Health/Media Campaign

OBJECTIVE 3: Increase the proportion of adult smokers who report trying to quit for one day or longer during the past 12 months.
Data Source: BRFSS

STRATEGY 3-1: Increase awareness of toll-free Quit Lines among health care professionals and adult smokers.

Principal Agency/ies: Alabama Tobacco Cessation Quit Line Workgroup; Coalition for a Tobacco-Free Alabama; NCI/CIS; Alabama Sheriff's Association

Other Partners and Programs: ACS; ADPH/Tobacco Prevention

Linkages: AAFP; ACES; ADPH/Communications; ASNA; ADSS; CDC/Smoking and Health/Media Campaign; MASA; PEEHIP; SEIB

STRATEGY 3-2: Provide training for community-based outreach programs, such as Community Health Advisors (CHAs), about evidence-based smoking cessation programs and information on the negative health effects of tobacco use and exposure with an emphasis on underserved populations.

Principal Agency/ies: ACS; ADECA; UAB/Community Health Resource Development; UAB/Deep South Network; UAB/Preventive Medicine

Other Partners and Programs: NCI/CIS

Linkages: Coalition for a Tobacco-Free Alabama

OBJECTIVE 4: **Advocate for policy changes and legislative efforts that will reduce tobacco use and exposure.**

Data Source: ADPH/Tobacco Prevention and Control Division policy tracking system

STRATEGY 4-1: **Provide information and act as a resource for state and local decision makers regarding tobacco pattern use, policy issues, and tobacco-related cancers.**

Principal Agency/ies: ACS; ADPH/ASCR; ADPH/Tobacco Prevention; American Heart Association; American Lung Association of Alabama; Coalition for a Tobacco-Free Alabama

Other Partners and Programs: AAFP

Linkages: Campaign for Tobacco-Free Kids; CDC/DASH

STRATEGY 4-2: **Educate employers/payers and insurers about the benefits of reimbursing for smoking cessation counseling and medication aids.**

Principal Agency/ies: ACS; Alabama Tobacco Cessation Quit Line Workgroup; American Heart Association; American Lung Association of Alabama

Other Partners and Programs: Coalition for Tobacco-Free Alabama

Linkages: BC/BS; CDC/Smoking and Health/Media Campaign; Medicaid; Medicare

NUTRITION & PHYSICAL ACTIVITY

Throughout the past two decades, obesity rates have risen to epidemic proportions. *Healthy People 2010* issued a target decrease in obesity rates among Americans; however, this rate has steadily increased.

Determination of whether an individual is overweight or obese is based on the Body Mass Index (BMI) chart. BMI is a measure of height and weight and is typically an accurate correlation of body fat.[31] Adults of healthy weight have a BMI of 18.5 to 24.9. Overweight adults have a BMI of 25 to 29.9, while obese adults have a BMI of 30 or above.[32] For children and teens 2 to 20 years old, BMI is age and gender specific to adjust for changes in body fat as children grow.

Overweight and obesity result from an energy imbalance over an extended period of time: more calories consumed than expended. Genetic predisposition is also a contributing factor in obesity. However, lifestyle choices of unhealthy eating patterns and physical inactivity are leading contributors to this epidemic.

HEALTH EFFECTS FROM BEING OVERWEIGHT OR OBESE

For the majority of Alabamians who do not smoke, dietary choices and physical activity are the most important modifiable determinants of cancer. Many epidemiological studies have shown that populations that eat diets high in vegetables and fruits and low in animal fat, meat, and/or calories have a reduced risk for some of the most common types of cancer. Further research is needed to determine how single nutrients, combinations of nutrients, over nutrition and energy imbalance, or the amount and distribution of body fat at particular life stages affect one's risk of specific cancers.

The American Institute for Cancer Research (AICR) and the World Cancer Research Fund (WCRF) published a report titled *Food Nutrition and the Prevention of Cancer: A Global Perspective*, emphasizing primary prevention of cancer through food and nutrition. AICR and WCRF consider evidence of the causal links between food and nutrition and cancer and make recommendations for policy makers and the general public. The report recommends these basic dietary guidelines for the prevention of cancer and other chronic diseases: choosing a diet rich in a variety of plant-based foods; eating plenty of vegetables and fruits; drinking alcohol in moderation, if at all; limiting consumption of red meat, if eaten at all; limiting fatty foods, particularly those from animal sources; selecting foods low in fat and salt; and preparing and storing foods safely.[33]

COST BURDEN OF OBESITY

In addition to the health effects associated with obesity and

overweight, there is a tremendous effect on both national and state medical expenditures. According to a study of national costs attributable to both overweight and obesity, medical expenses accounted for 9.1 percent of the total U.S. medical expenditures in 1998 and may have reached as high as $78.5 billion ($96.2 billion in 2002 dollars).[33] Approximately half of these costs were paid by Medicaid and Medicare.

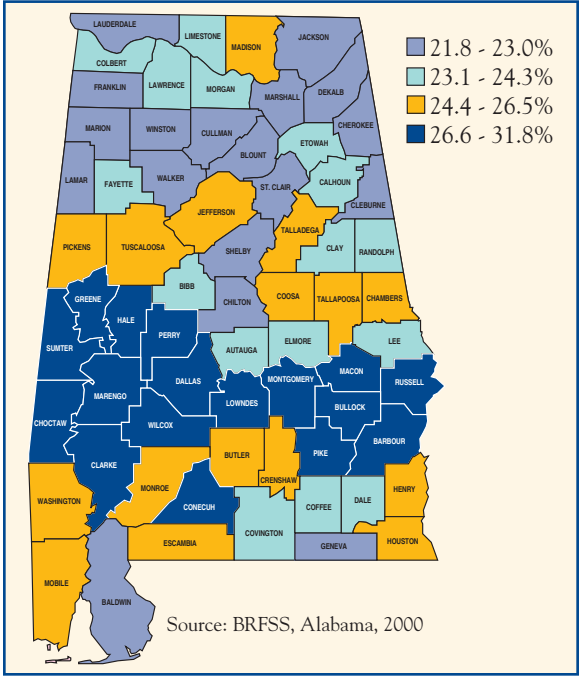
For Alabama, this burgeoning obesity epidemic translates to more than $1.3 billion of direct medical costs (prevention, diagnosis, and treatment) attributable to obesity from 1998 to 2000.[34] This does not include the indirect costs that include absenteeism from work, decreased productivity, and premature death.[32] The statewide cost effects are tremendous when compared to the entire proposed budget for Alabama in 2005, which is $6.64 billion.

OBESITY EPIDEMIC IN ALABAMA

In the *2004 America's Health: State Health Rankings* reported by the American Public Health Association and the U.S. Department of Health and Human Services, Alabama had the highest prevalence of obesity in the nation. Sixty-three percent of Alabama's adult population reported being either overweight or obese, in comparison to the national average of 59.5 percent.[26] Obesity rates for teens have doubled and tripled since 1990. Studies of different regions of the state have found 27 percent of youth to be overweight, with an additional 17 percent who are at risk.[35]

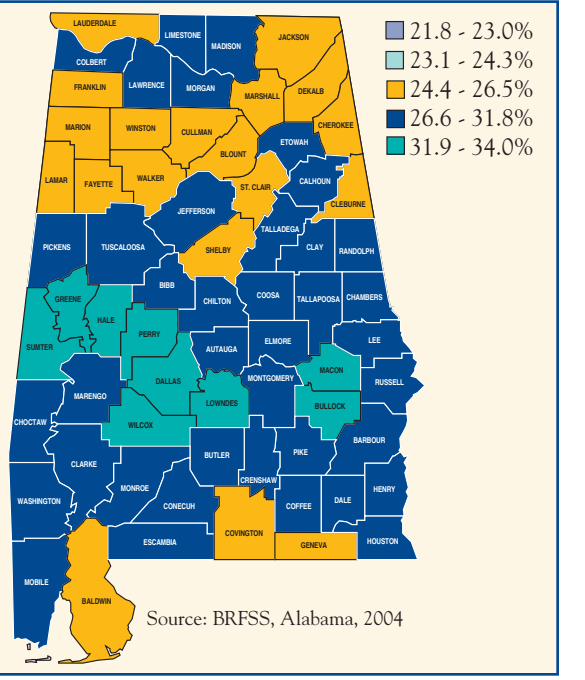
Adherence to the dietary and physical activity guidelines promoted by the U.S. Department of Health and Human Services is extremely low. Almost 60 percent of Alabama adults do not meet the recommended guidelines for moderate physical activity, and almost 80 percent do

Figure 14. Estimated Alabamians Who are Obese - 2000



Source: BRFSS, Alabama, 2000

Figure 15. Estimated Alabamians Who are Obese - 2004



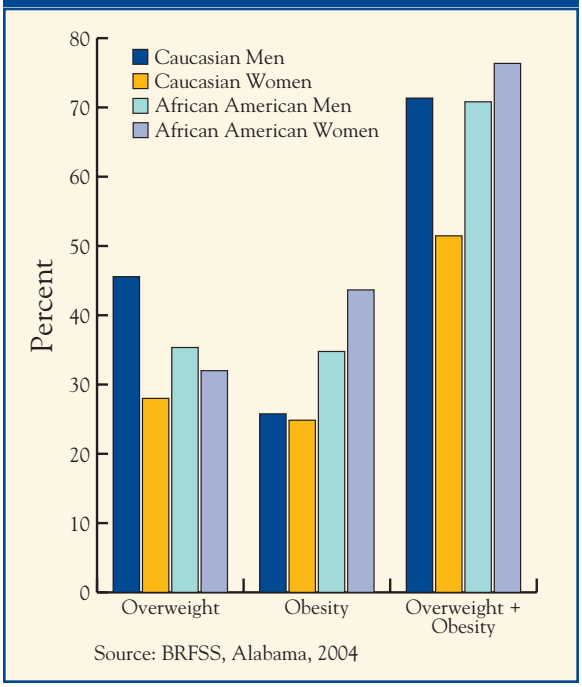
Source: BRFSS, Alabama, 2004

not consume the recommended number of fruits and vegetables per day.[26] Not surprisingly, the trend seems to be similar to the population of Alabama's youth. Data from the 2003 Youth Risk Behavior Survey (YRBS) showed that only 15 percent of youth reported eating at least five servings of fruits and vegetables a day, and only 58 percent reported engaging in physical activity for at least 20 minutes on three or more of the past seven days.

DISPARITIES

According to the 2003 BRFSS, the Hispanic population is more likely to be overweight, while African Americans are more likely to be obese. Contributing to these rates are the fact that African Americans report the lowest rates of physical activity, and Hispanics report the lowest level of fruit and vegetable consumption.

Figure 16. Percent of Overweight and/or Obese Adults Alabama Respondents, BRFSS 2004



Source: BRFSS, Alabama, 2004

Results reported in the 2003 BRFSS show an increased need to promote physical activity and nutrition among the older population. Alabamians 65 and older reported the highest rates of being overweight and Alabamians 55 to 64 had the highest rates of obesity. Rates of physical activity among Alabamians decrease with age, while rates of fruit and vegetable consumption decrease slightly.

EXAMPLES OF CURRENT ACTIVITIES TO PROMOTE A HEALTHY DIET AND PHYSICALLY ACTIVE LIFESTYLE

To address the obesity epidemic in Alabama, both the ADPH and the ALSDE formed Obesity Task Forces. The **ADPH Obesity Task Force** developed a state obesity plan that will address prevention by encouraging Alabamians to have a healthier relationship with food. The ADPH Obesity Task Force is divided into six subcommittees to address general nutrition, physical activity, data, youth and family, community, and health care. The **ALSDE Obesity Task Force** has established similar committees but will focus on the school-age population. ACCCC is collaborating with both Obesity Task Forces and has adopted similar goals and objectives.

The **ADPH Cardiovascular Health Program** has helped three rural communities establish walking paths to meet citizens' demands for safe places to walk. The **ADPH Nutrition and Physical Activity Unit** also participated in school-based initiatives to increase the rates of physical activity and decrease the rates of overweight and obesity in Alabama. In collaboration with **Alabama Action for Healthy Kids**,

equipment to enhance physical activity programs has been provided to 20 low-income, rural schools. Minigrants have also been awarded to 13 schools statewide to implement nutrition or physical activity projects.

Steps to a Healthier Alabama is a five-year initiative designed to identify and promote programs that encourage small behavior change to reduce the burden of diabetes, obesity, and asthma and control risk factors including poor nutrition, physical inactivity, and tobacco use and exposure. The program selected the River Region counties of Autauga, Elmore, Lowndes, Macon, and Montgomery. The Southeast Alabama Region counties of Barbour and Pike are also included. Target populations include at risk individuals and families, schools, and other worksites.

The Alabama Arthritis Control Program is working to promote physical activity among Alabamians who suffer from chronic arthritis. **People with Arthritis Can Exercise (PACE)** is an evidence-based self management exercise program specifically designed for people with arthritis. The program consists of gentle activities to help reduce joint pain and stiffness and increase flexibility and endurance. PACE classes are usually held twice a week for eight weeks or more. The program is offered at various locations throughout the state.

The ADPH Office of Women's Health has begun laying the groundwork for developing a new program that will promote lifestyle behavior modification in Alabama women to address overweight and obesity. Three rural Black Belt counties will pilot the program using trained volunteers as community health advisors for outreach into the communities. The program was launched during National Women's Health Week in May 2005 with a proclamation ceremony at the State Capitol. Using the campaign slogan "**Together One Step at a Time,**" the Office of Women's Health will promote proper nutrition and exercise. The goal is to eventually develop a model that will be adaptable for use in all 67 Alabama counties.

The National Cancer Institute's Cancer Information Service has launched a faith-based initiative for African American churches called **"Body and Soul: A Celebration of Healthy Eating and Living."** This initiative encourages African Americans to eat a healthy diet as part of a more active lifestyle. "Body and Soul" works by combining pastoral leadership, churchwide activities, a church environment that supports healthy eating, and peer counseling. Montgomery County is currently implementing this program in churches. There are future plans to move to additional counties in the state.

EVIDENCE-BASED INTERVENTIONS TO PROMOTE PHYSICAL ACTIVITY

The Agency for Health Care Research and Quality found that multicomponent interventions in school-based settings have increased consumption of vegetables and fruit. These evidence-based interventions include changing the food environment by increasing availability, attractiveness, and variety of vegetables and fruit in school food service; promoting social support by encouraging classroom team activities and

parental involvement; setting goals; offering interactive activities, such as taste-testing and cooking activities; and increasing knowledge and attitudes about the benefits of increased vegetable and fruit consumption.

The *CDC's Guide to Community Preventive Services* provides recommendations for evidence-based interventions that community leaders, policy makers, and decision makers can apply to promote physical activity.

CONCLUSIONS AND FUTURE DIRECTIONS

Behavior and environment play a large role in the epidemic of overweight and obesity. As a Southern state, Alabama is submersed in a culture that believes a social gathering is incomplete without food. Food traditions that are high in fried foods, salt intake, and animal fats are obstacles for public health professionals to overcome. More research is needed on activities and programs that effectively address this behavior while respecting cultural values.

School nutrition programs need to become a mechanism through which healthy behaviors are taught and implemented. Limitations on the availability of unhealthy foods in vending machines and cafeterias should be established. Secondly, coordination of school programs for both parents and children is needed to ensure that healthy eating behaviors are reinforced at home.

Daily participation in physical activity is not the norm in all communities. Attitudes and beliefs about the environments in which people live affect their willingness to exercise. If a community is not safe, members are less likely to engage in outdoor activities that increase their heart rates and oxygen consumption. Community members need to become advocates and raise awareness among community representatives about barriers that prevent participation in physical activity. Elimination of physical education waivers in schools is important to increase the number of children who regularly participate in physical activity.

A focus should be placed on Alabama's older population whose overweight and obesity rates are increasing. Organizations for aging Alabamians should ensure that programs to promote a healthy lifestyle are available to all populations. Physical activity should accommodate different levels of mobility.

Data are needed to gain a better understanding of the growing obesity epidemic among the school-age population. Currently, the only source of available data is the Youth Risk Behavior Survey, which includes the high school population. Further insight and consideration should be placed on finding methods to obtain this data.

Through the work of statewide organizations and partners the barriers exist that prevent Alabamians from making healthier lifestyle choices will be addressed. These barriers include high costs and perishability of healthier foods, safety of neighborhoods, and time constraints. Over the next five years, ACCCC will support and collaborate with these groups to address these barriers.

Table 2: Evidence-based interventions to increase the rates of physical activity	
Intervention	**Recommendation**
Informational Approaches to Increasing Physical Activity	
Community-wide campaigns	Recommended (strong evidence)
"Point-of-decision" prompts to encourage stair use	Recommended (sufficient evidence)
Behavioral and Social Approaches to Increasing Physical Activity	
School-based physical education (PE)	Recommended (strong evidence)
Social support interventions in community settings	Recommended (strong evidence)
Individually tailored health behavior change programs	Recommended (strong evidence)
Environmental and Policy Approaches to Increasing Physical Activity	
Creation of or enhanced access to places for physical activity combined with informational outreach activities	Recommended (strong evidence)

Adapted from Guide to Community Preventive Services: Promoting Physical Activity.
URL: http://www.thecommunityguide.org/pa/pa.pdf

NUTRITION & PHYSICAL ACTIVITY

GOAL: All Alabamians will decrease their cancer risk by improving their diet and physical fitness.

OUTCOME: By 2010, decrease from 14% to 12% the proportion of Alabama youths in grades 9-12 who report being overweight.
Data Source: 2003 YRBS*

OUTCOME: By 2010, decrease from 27% to 24% the proportion of Alabama youths in grades 9-12 who report being slightly or very overweight.
Data Source: 2003 YRBS

OUTCOME: By 2010, decrease from 36% to 32% the proportion of Alabama adults age 18 and older who report being overweight, based on BMI.
Data Source: 2004 BRFSS*

OUTCOME: By 2010, decrease from 29% to 25% the proportion of Alabama adults age 18 and older who report being obese, based on BMI.
Data Source: 2004 BRFSS

OUTCOME: By 2010, increase from 15% to 18% the proportion of Alabama youths in grades 9-12 who report eating 5 or more servings of fruits and vegetables every day during the past seven days.
Data Source: 2003 YRBS

* All BRFSS and YRBS data are self-reported.

OUTCOME: By 2010, increase from 23% to 26% the proportion of Alabama adults age 18 and older who report eating 5 or more servings of fruits and vegetables every day.
Data Source: 2003 BRFSS

OUTCOME: By 2010, increase from 58% to 68% the proportion of Alabama youths in grades 9-12 who report being physically active (to the point of sweating/breathing hard) for at least 20 minutes a day on 3 or more of the past 7 days.
Data Source: 2003 YRBS

OUTCOME: By 2010, increase from 40% to 50% the proportion of Alabama adults age 18 and older who report meeting the recommendations for moderate or vigorous physical activity.
Data Source: 2003 BRFSS

OBJECTIVE 1: Increase the availability of evidence-based nutrition education to the public to promote healthy diet choices and weight management.
Data Source: ADPH/Obesity Task Force; ALSDE/Obesity Task Force

STRATEGY 1-1: Provide 5-to-9-A-Day nutrition and weight management education to the public through existing networks and systems.

Principal Agency/ies: ACES; ADPH/Nutrition & Physical Activity; ADPH/WIC; ADSS/Nutrition; Alabama Dietetic Association; Alabama Sheriff's Association; ALSDE/Child Nutrition

O***ther Partners and Programs:*** ADPH/Obesity Task Force; ADPH/Office of Women's Health; ADPH/Steps to a Healthier Alabama; UAB/Comprehensive Cancer; UAB/Preventive Medicine

Linkages: UAB/Deep South Network; UAB/REACH 2010

STRATEGY 1-2: Provide 5-to-9-A-Day nutrition and weight management education through the K-12 school systems.

Principal Agency/ies: ADPH/Nutrition & Physical Activity; ALSDE/Child Nutrition; ALSDE/Coordinated School Health

Other Partners and Programs: ACES; ADPH/Obesity Task Force; ADPH/Steps to a Healthier Alabama; ADPH/WIC; ALSDE/Obesity Task Force

Linkages: Local community-based outreach programs; Local schools; CDC/DASH

STRATEGY 1-3: Provide 5-to-9-A-Day nutrition and weight management education to health care professionals through continuing education programs.

Principal Agency/ies: ACES; ADPH/Nutrition & Physical Activity; ADSS; Alabama Dietetic Association

Other Partners and Programs: AAFP; ADPH/Steps to a Healthier Alabama; Alabama Academy of Pediatrics; Alabama's Action for Healthy Kids; ALSDE/Child Nutrition; ASNA; Healthy Alabama Nutrition and Fitness Coalition; MASA

Linkages: Local dietetic associations

OBJECTIVE 2: Advocate for policy changes that promote healthy school nutrition and physical activity environments.

Data Source: ALSDE; CDC/School Health Index; CDC/Fit, Healthy, and Ready to Learn Programs

STRATEGY 2-1: Encourage school health councils to promote healthy food and beverage choices, including vending machines in school and sports venues.

Principal Agency/ies: ADPH/Nutrition & Physical Activity; Alabama Dietetic Association; Alabama's Action for Healthy Kids; ALSDE/Child Nutrition; ALSDE/Obesity Task Force

Other Partners and Programs: ACS; ADPH/Steps to a Healthier Alabama

Linkages: Children's Policy Council; Governor's Commission on Physical Fitness; Local dietetic associations

STRATEGY 2-2: Advocate for the adoption of evidence-based physical education programs for K-12 students.

Principal Agency/ies: ACCCC; ADPH/Nutrition & Physical Activity; ALSDE/Obesity Task Force; American Heart Association; ASAHPERD; Governor's Commission on Physical Fitness

Other Partners and Programs: Alabama's Action for Healthy Kids; ADPH/Steps to a Healthier Alabama

Linkages: CDC/Community Guide; CDC/DASH; AAHPERD

STRATEGY 2-3: Advocate for reduction of physical activity (PE) waivers in Alabama's school systems.

Principal Agency/ies: American Heart Association; Alabama's Action for Healthy Kids; ASAHPERD; Governor's Commission on Physical Fitness

Other Partners and Programs: ACCCC; ADPH/Nutrition & Physical Activity; ADPH/Steps to a Healthier Alabama

Linkages: AAFP; Alabama Academy of Pediatrics

STRATEGY 2-4: Promote the activities of organizations working to improve school nutrition and physical activity programs statewide.

Principal Agency/ies: ACCCC; ADPH/Obesity Task Force; ALSDE/Obesity Task Force

Other Partners and Programs: ADPH/Steps to a Healthier Alabama

Linkages: Children's Policy Council

OBJECTIVE 3: Increase the number of worksites that promote healthy nutrition and physical activity environments.

Data Source: ACS; ADPH/Obesity Task Force

STRATEGY 3-1: Encourage worksites to offer healthy vending machine choices and weight management programs to their employees.

Principal Agency/ies: ACS/Working Well; ADPH/Worksite Wellness

Other Partners and Programs: ADPH/Obesity Task Force; ADPH/Steps to a Healthier Alabama

Linkages: Health insurance providers

STRATEGY 3-2: Promote the incorporation of fitness activities into employee worksite wellness programs.

Principal Agency/ies: ACS/Working Well; ADPH/Worksite Wellness

Other Partners and Programs: ACES; ADPH/Steps to a Healthier Alabama; BC/BS; Governor's Commission on Physical Fitness

Linkages: American Heart Association; Alabama Sports Festival/Lighten Up Alabama; ALFA; Business Council of Alabama; Local Chambers of Commerce

STRATEGY 3-3: Promote the activities of organizations working to increase the number of employers who offer worksite wellness programs.

Principal Agency/ies: ACCCC; ACS/Working Well; ADPH/Worksite Wellness

Other Partners and Programs: ADPH/Steps to a Healthier Alabama

Linkages: Business Council of Alabama; Local Chambers of Commerce

OBJECTIVE 4: **Advocate for policies that support physical activity in local communities, such as construction of walking trails, sports fields, bicycle paths, and other elements of the built environment.**

Data Source: ADPH/Obesity Task Force; ALSDE/Obesity Task Force

STRATEGY 4-1: **Coordinate education programs for elected officials and other community leaders regarding the link between cancer and physical activity.**

Principal Agency/ies: ACCCC/Advocacy; ADPH/Obesity Task Force; ALSDE/Obesity Task Force

Other Partners and Programs: ADECA; Alabama Association of Regional Councils; Alabama Bicycling Association; Alabama League of Municipalities; US Dept of Justice/Weed and Seed

Linkages: Alabama Recreation and Parks Association; ALDOT/Rails to Trails; Association of County Commissions of Alabama; HUD/Community Development Block Grants; Alabama League of Municipalities

STRATEGY 4-2: **Promote sports and other evidence-based physical activity programs for adults and youths.**

Principal Agency/ies: ADPH/Arthritis; ADPH/Nutrition & Physical Activity; ADPH/Obesity Task Force; ADSS; ALSDE/Obesity Task Force; ASAHPERD

Other Partners and Programs: Alabama 4-H; Alabama Boy and Girl Scouts; Alabama Recreation and Parks Association; Alabama Sports Festival/Lighten Up Alabama; ALDOT/Rails to Trails; Boys and Girls Clubs of Alabama; Governor's Commission on Physical Fitness; Special Olympics; YMCA; YWCA

Linkages: CDC/Community Guide

ULTRAVIOLET LIGHT EXPOSURE

Skin cancer is the most commonly diagnosed cancer in the United States. Each year more than 1,000,000 Americans are diagnosed with skin cancer.[9] Of these about 55,000 people will be diagnosed with melanoma, a leading cause of cancer death in the United States.[37] Skin cancer may be prevented when ultraviolet (UV) light protection measures are used consistently.

HEALTH EFFECTS OF INCREASED EXPOSURE TO ULTRAVIOLET LIGHT

The most common types of skin cancer are basal cell or squamous cell carcinomas, which are caused by frequent exposure to the sun. While these non-melanoma skin cancers are rarely life threatening, they can be very painful, cause disfigurement, and require extensive reconstructive surgery, if left untreated. Basal cell and squamous cell carcinomas are more than ten times as common as melanoma but account for less morbidity and mortality. Melanoma is the most serious type of skin cancer, and is linked to severe sunburns in childhood and intense, intermittent sun exposure. Since 1973, the U.S. incidence of melanoma has increased 150%, and melanoma mortality rates have increased by 44%.[38]

For most Alabamians, sunlight is the main source of UV radiation; however, for a growing number of people, frequent exposure to artificial sunlight through tanning booths and sun lamps also provides a source of UV radiation. Six of nineteen case-control studies found a positive association between use of sun lamps and melanoma risk, but most did not adjust for recreational UV exposure or for the dosage and timing of sun lamp exposure.[39]

BURDEN OF SKIN CANCER IN ALABAMA

Between 1973 and 1995, the national age-adjusted incidence of melanoma increased more than 100 percent, from 5.7 per 100,000 people to 13.3 per 100,000 people.[40] Several factors contributed to the increase in annual incidence rates, including increased UV exposure and possibly earlier detection of melanoma. The rate of new melanoma cases in Alabama increased 23 percent between 1996 and 2002.[7] Melanoma remains one of the most frequently diagnosed cancers in Alabama.

DISPARITIES

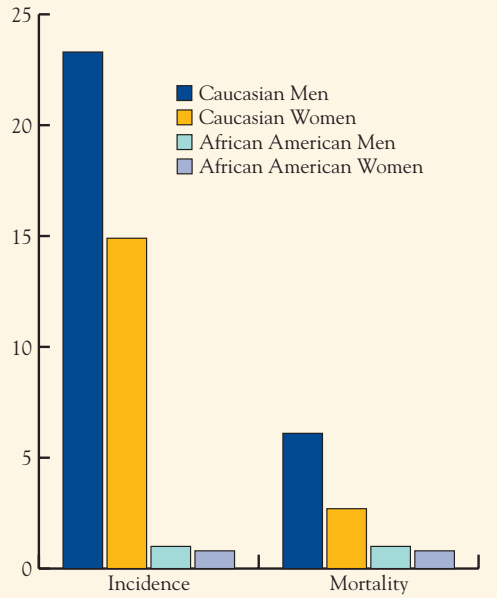
Melanoma is primarily a disease of Caucasian men and women, with rates more than ten times higher than in their counterparts.[9] In Alabama, Caucasian men have a rate of 23.0 versus 1.0 for African American men, and the rate among Caucasian women is 14.9 compared to 0.8 in African American women.[6] An increased focus should be placed on the growing number of elderly, and

especially men, who bear a disproportionate morbidity and mortality from melanoma or non-melanoma skin cancer. Men older than 65 account for 22 percent of the newly diagnosed cases of malignant melanoma each year, and women in the same age group account for 14 percent.[36]

EXAMPLES OF CURRENT ACTIVITIES TO REDUCE ULTRAVIOLET LIGHT EXPOSURE

Because a substantial percentage of lifetime sun exposure occurs before age 20 years, and because ultraviolet (UV) radiation exposure during childhood and adolescence plays an important role in the development of skin cancer, preventive behaviors can yield the most positive effects, if they are initiated early and established as healthy and consistent patterns throughout life.[41] Alabama is one of the few states in the nation to have a policy in place that requires sun safety or skin cancer prevention in elementary, middle, and high schools.

Figure 17. Melanoma Incidence Rates, by Race and Sex, Alabama 1996-2002



Source: Alabama Statewide Cancer Registry (ASCR), 2004
Data years: 1996-2002

ACCCC recently developed and pilot tested a **Sun Safe Kids** curriculum for preschool-age children. This curriculum was also adopted by the ADPH Healthy Child Care Alabama (HCCA) program which provides health and safety programs and training for child care providers, young children, and their parents. In the spring of 2004, the seven nurse consultants from HCCA were trained along with county extension personnel on the Sun Safe Kids program for preschool-age children. Since the training, HCCA nurses have provided Sun Safety programs to child care providers, the children in their child care settings, and the parents of these children in the 40 counties served by the HCCA program throughout the state. The Sun Safe Kids program has also been presented by HCCA nurses at health fairs in their service areas and is often requested by child care providers.

Inspections for tanning booths are not mandated statewide; however, Jefferson County requires that tanning facilities be evaluated twice a year. The **Jefferson County Department of Health** visited 122 tanning facilities and evaluated 1,126 tanning devices in 2000 and 2001. Each facility is graded for cleanliness and operational procedures. Some of the Health Department requirements for tanning facilities include: compliance with the Food and Drug Administration (FDA) regulations, presence of an operator when tanning equipment is being used, visibility of inspection results for consumers and warning signs about the risks of tanning, and cleanliness of devices.

The **Alabama Cooperative Extension System (ACES)** has developed a statewide sun safety campaign directed at farmers and other outdoor workers, as well as youth and adults who participate in outdoor activities. Exhibits were developed for adults, youth and young children and exhibit boards to display these exhibits were provided to all counties in Alabama through ACES. In addition, posters and publications were prepared and distributed statewide. These educational materials were distributed by ACES educators after they attended an in-service training on skin cancer prevention. Each trained agent was expected to conduct at least one county-wide skin cancer education program. In addition, the display boards and publications have been displayed in county Extension offices, feed and farm supply stores, recreation centers, libraries, health fairs and other venues.

ACES was a partner in developing and pilot testing the sun protection curriculum for preschool-age children which has been adopted by Healthy Child Care Alabama. A brochure titled *How to be Sun Safe* was developed and is available through ACES publications. Youth in Alabama who participate in 4-H, the Extension youth education program, have also been taught skin cancer prevention. One activity that has been very popular with youth and adults is bead bracelets made with ultraviolet-sensitive beads (available through Educational Innovations, Inc.). A curriculum was developed at ACES to teach sun safety using these ultraviolet light-sensitive beads. In addition, materials from EPA's SunWise program have been used with youth.

EVIDENCE-BASED INTERVENTIONS TO REDUCE SUN EXPOSURE

Recommendations for effective interventions are available to communities, policy makers, and public health providers through ***CDC's Guide to Community Preventive Services.*** The following table shows recommended interventions that are proven to decrease skin cancer by promoting use of UV protection methods. Guidelines for School Programs to Prevent Skin Cancer have been developed by the CDC and are available at www.cdc.gov

CONCLUSIONS AND FUTURE DIRECTIONS

Sun avoidance, and in particular avoidance of sunburn, is the single most important health education

Table 3: Evidence-based interventions to decrease ultraviolet light exposure

Intervention	Recommendation
Setting-Specific Interventions	
Educational/policy interventions in primary schools	Recommended (sufficient evidence – in improving children's sun protective "covering up" behavior)
Educational/policy interventions in recreational/tourism settings	Recommended (sufficient evidence – in improving adult sun protective "covering up" behavior)

Adapted from Guide to Community Preventive Services: Promoting Physical Activity.
URL: http://www.thecommunityguide.org/cancer/cancer-int-reduce-uv.pdf.

issue for skin cancer. Since many skin cancers are the result of severe sun burning experiences in childhood, it is important that childhood education programs be aimed at making young children aware of the dangers of too much sun and sunburns. This vital message needs to be continually reinforced by teachers, parents and other influential adults.

Tanning is an accepted norm among Alabama youths. ACCCC will work to promote campaigns that change this perception. Coaches, athletic programs, and summer camps are ideal channels to promote UV light protection methods among preschool and school-age children. The collaboration of these organizations to increase use of sun protection among Alabamians should be explored. Plans are being made to incorporate sun safety awareness activities with all youth who attend 4-H camp in Alabama. Through this camp program, approximately 5,000 youth will be educated on UV light protection methods. Current tanning bed inspections will be evaluated for potential statewide adoption. An emphasis will be placed on including radiation exposure as criteria of inspection.

ULTRAVIOLET LIGHT EXPOSURE

GOAL: **All Alabamians will reduce their skin cancer risk by adhering to recommended UV light protection guidelines.**

OUTCOME: By 2010, decrease from 29% to 25% the proportion of Alabama adults who report having had a sunburn within the past 12 months.
Data Source: 2004 BRFSS

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabama adults who report following UV light protection guidelines to reduce the risk of skin cancer.
Data Source: 2006 BRFSS

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabama youths in grades 9-12 who report following UV light protection guidelines to reduce the risk of skin cancer.
Data Source: 2007 YRBS; PRIDE surveys

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabama parents and guardians who report following UV light protection guidelines for their dependent children.
Data Source: 2006 BRFSS

OBJECTIVE 1: Increase knowledge among the public about the skin cancer risk from UV light and the importance of early detection of skin cancer, especially melanoma.
Data Source: ACES

STRATEGY 1-1: Coordinate educational programs about the risk of overexposure to UV light, including light from tanning beds, and the importance of early detection of skin cancer.

Principal Agency/ies: ACES; ADPH/Family Health

Other Partners and Programs: AARP; ACS

Linkages: CDC; NCI/CIS

OBJECTIVE 2: Educate children and youths about the skin cancer risk from natural and artificial sources of light.
Data Source: ALSDE Course of Study

STRATEGY 2-1: Identify and promote the adoption of evidence-based skin cancer prevention curricula in Alabama schools.

Principal Agency/ies: ALSDE; Master Teacher training centers

Other Partners and Programs: ACES; ADPH/Family Health; CDC/Choose Your Cover

Linkages: Alabama Dermatologic Society; CDC/DASH; EPA; The Skin Cancer Foundation

STRATEGY 2-2: Promote skin cancer prevention guidelines for children, particularly those in daycare facilities and preschools, as well as those participating in organized recreational activities and youth groups.

Principal Agency/ies: ACES; ADPH/Family Health; Alabama 4-H

Other Partners and Programs: ACS; Youth-serving organizations

Linkages: CDC/Community Guide

OBJECTIVE 3: Advocate for tanning bed inspections to include focus on radiation exposure.
Data Source: ACCCC

STRATEGY 3-1: Evaluate existing tanning bed inspection programs for potential statewide adoption.

Principal Agency/ies: ADPH/Radiation Control; Jefferson County Department of Public Health

Other Partners and Programs: County Health Departments

Linkages: Alabama State Committee of Public Health; EPA

RESEARCH

The prevention of cancer focuses on studying and modifying behaviors that increase risk, mitigating the influence of genetic and environmental risk factors. To decrease the risk of developing cancer through behavioral modification, it is important for researchers to understand the basis of energy balance and nicotine addiction. Research specific behaviors that may pre-disposition an individual for obesity and/or overweight is important to determine behaviors that may prevent adverse health conditions. Additional behavioral research should examine evidence-based tobacco cessation and prevention programs that are currently available for use by public health professionals. To increase the rate of success in behavioral modification among disparity populations research must be ongoing.

Despite the National Institutes of Health Revitalization Act in 1993, which mandated the inclusion of minorities in research studies, African Americans, Hispanics, and Native Americans continue to be less likely to participate in research studies than Caucasians. It has also been shown that older adults and underserved populations are underrepresented in clinical and behavioral research. Low-income and less educated individuals are more likely to engage in high-risk behaviors such as tobacco use, sedentary lifestyle, and high-fat dietary intake than higher income/more educated individuals. Such disparities have important implications in terms of development of prevention programs tailored to these at-risk populations which, in turn, would increase engagement in healthy behaviors.

RESEARCH

GOAL: Clinical and behavioral research will improve cancer prevention in Alabama, particularly for those populations affected by disparities.

OUTCOME: By 2010, increase by 10% the number of Alabamians who are participating in cancer prevention research studies.

Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of Alabamians from populations affected by disparities who are participating in cancer prevention research studies.

Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

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OUTCOME: By 2010, increase by 10% the number of cancer prevention research studies in Alabama that specifically target populations affected by disparities.

Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

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OUTCOME: By 2010, increase by 10% the number of community-based cancer prevention research projects in Alabama that are funded through a peer review process.

Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OBJECTIVE 1: Increase public awareness about the importance of recruitment and retention in cancer prevention research studies, particularly for populations affected by disparities.

Data Source: Research institutions

STRATEGY 1-1: Develop a database to determine the characteristics of individuals who participate in cancer prevention research studies in the state.

Principal Agency/ies: Research institutions

Other Partners and Programs: Local community-based outreach programs; Pharmaceutical companies

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-2: Disseminate general information to the public about cancer prevention research studies through community-based outreach programs.

Principal Agency/ies: ACS/Mid-South Division; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Other Partners and Programs: Mobile Infirmary/Cancer Disparities Research

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-3: Disseminate educational and culturally appropriate materials about cancer prevention research studies to populations affected by cancer disparities through community-based outreach programs.

Principal Agency/ies: ACS/Mid-South Division; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Other Partners and Programs: Mobile Infirmary/Cancer Disparities Research

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 2: Increase the number of health care professionals who conduct cancer prevention research studies with populations affected by disparities.

Data Source: ACS; Medicaid and Medicare data; NCI/CIS

STRATEGY 2-1: Provide information to institutions and physicians about conducting cancer prevention research studies through referrals, education, and marketing.

Principal Agency/ies: Alabama health care provider associations; ACS; NCI/CIS; Pharmaceutical companies; Research institutions

Others Partners and Programs: ACCCC; Local cancer support groups; Media

Linkages: CDC; DHHS; NIH/Minority Health

OBJECTIVE 3: Disseminate cancer prevention research findings to populations affected by disparities through appropriate communication methods and channels.

Data Source: Local community-based outreach programs; Local faith-based organizations

STRATEGY 3-1: Promote research to determine effective messages and appropriate methods of communicating information to populations affected by cancer disparities.

Principal Agency/ies: Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ACES; ADPH/Minority Health; Alabama Partnership; Local community-based outreach programs; Local faith-based organizations

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 3-2: Disseminate research findings to the public, especially populations affected by cancer disparities.

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ACES; ADPH/Minority Health; Media

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 4: Involve the community as an equal partner with researchers in designing, implementing, evaluating, and disseminating results of cancer prevention research studies.

Data Source: Research institutions

STRATEGY 4-1: Promote relationships among researchers, community-based organizations, and the community at large, particularly involving populations affected by disparities.

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ADPH/Minority Health

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 4-2: Expand the development and implementation of Community Health Advisor (CHA) networks working in cancer prevention across the state.

Principal Agency/ies: UAB

Others Partners and Programs: ADPH/Cancer Prevention

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

EARLY DETECTION

Overall Goal:

All cancer cases in Alabama will be detected and diagnosed at an early stage in order to optimize treatment choices and the probability of cure.

INTRODUCTION TO EARLY DETECTION

Although people are unable to change their genetic makeup, they are able to reduce their risk of certain cancers by following the recommended screening guidelines. Screening tests offer a powerful opportunity for the detection and successful treatment of many cancers, sometimes before it is even considered cancer. Detection of disease in an early or asymptomatic stage greatly improves available treatment options for many cancers and increases the likelihood for cure.

For cancer screening to be effective, screening must demonstrate an ability to reduce cancer-related morbidity and mortality. Also, the effectiveness of screening depends on specificity and sensitivity; that is, people who have the disease must have a high likelihood of testing positive and people who do not have the disease must have a high probability of testing negative.[43] And, screening tests must be affordable, not only so that they are accessible to individuals, but also so that the costs of screening entire populations do not outweigh the benefits.[44] Making cancer screening services readily available and accessible to all Alabamians is essential for reducing higher rates of cancer incidence and mortality in Alabama. Finally, cancer screening cannot be effective unless tests are acceptable to and used by the population at risk and are repeated at intervals appropriate to detect early cancer.[45]

Public education is extremely important in the role of early detection. Appropriate decision-making aids must be disseminated to Alabamians to educate about the benefits of proven cancer screening methods. Health care professionals also play an important role by providing information about cancer screening services, encouraging their patients to participate in routine screening procedures, and systematically integrating the established guidelines in a routine standard of care.

The Early Detection section focuses on four types of cancer: breast, cervical, prostate, and colorectal.

BREAST AND CERVICAL CANCER

Breast cancer is the most common cancer diagnosis among women. Following lung cancer, it is the second leading cause of cancer-related deaths in women annually. According to the Alabama Statewide Cancer Registry, breast cancer mortality rates declined by 2.3 percent per year from 1990 to 2001.[9] These decreases are due to increased awareness, earlier detection through screening, and improved treatment. The American Cancer Society estimates that 211,240 women in the United States and 3,820 women in Alabama will be diagnosed with breast cancer in 2005.[9]

Cervical cancer was once the leading cause of cancer-related deaths for women. Since 1955, the number of deaths from cervical cancer has declined significantly. Cervical cancer incidence rates declined 4.9 percent from 1996 to 2002; however, the rate is slightly higher than the national rate.[7] It is estimated that 10,370 new cases of cervical cancer in the United States and 200 new cases in Alabama will occur in 2005.[7]

EFFECTIVENESS OF RECOMMENDED BREAST AND CERVICAL CANCER SCREENING METHODS

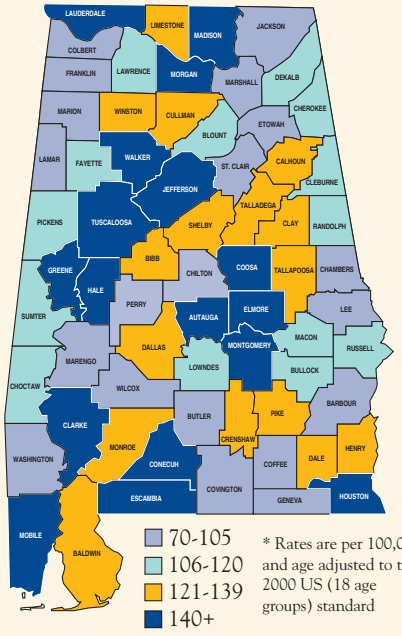
Mammography is especially important and valuable as an early detection tool because it can identify breast cancer at an early stage. When breast cancer is detected at a localized stage, the relative five-year survival rate is 97 percent, compared to a rate of only 23.3 percent for cancers detected at later stages.[6] Mammography, clinical breast examination, and breast self-examination are the three most common methods of screening for breast cancer.

Unlike breast cancer, cervical cancer is preventable if women follow the recommended screening guidelines. A Pap test can prevent cervical cancer from occurring by detecting pre-cancerous changes in the cervix. The decrease in the incidence and mortality rates for cervical cancer can be attributed to the increase in the number of women who receive routine screening.

BURDEN OF BREAST AND CERVICAL CANCER IN ALABAMA

The breast cancer incidence rate among Alabama females increased 4.2 percent between 1996 and 2002, while the cervical cancer incidence rate declined by 4.9 percent during the same period. This can be attributed to increased screening among Alabama women. At a rate of 138.8, the incidence of breast cancer among Caucasian women in Alabama is higher than the 115.7 rate among African American women.[7] In Alabama, cervical cancer rates are highest among African American women.[7]

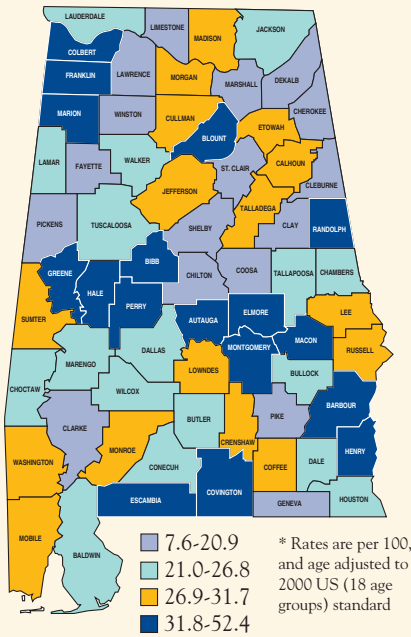
Figure 18. Age-Adjusted Breast Cancer Incidence Rate*, by County, 1996-2002



* Rates are per 100,000 and age adjusted to the 2000 US (18 age groups) standard

Source: Alabama Statewide Cancer Registry (ASCR), 2004

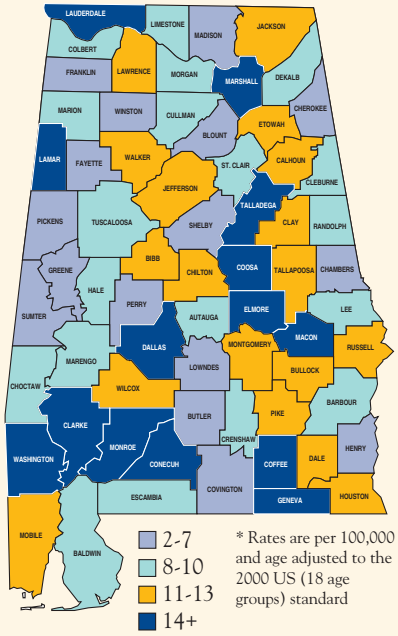
Figure 19. Age-Adjusted Breast Cancer Mortality Rate*, by County, 1999-2002



* Rates are per 100,000 and age adjusted to the 2000 US (18 age groups) standard

Source: Alabama Statewide Cancer Registry (ASCR), 2004

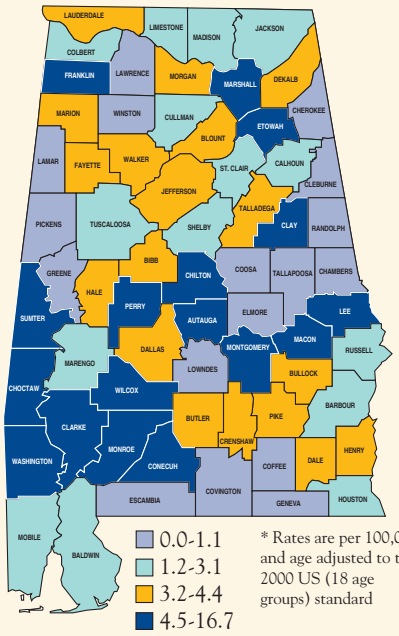
Figure 20. Age-Adjusted Cervical Cancer Incidence Rate*, by County, 1996-2002



* Rates are per 100,000 and age adjusted to the 2000 US (18 age groups) standard

Source: Alabama Statewide Cancer Registry (ASCR), 2004

Figure 21. Age-Adjusted Cervical Cancer Mortality Rate*, by County, 1999-2002



* Rates are per 100,000 and age adjusted to the 2000 US (18 age groups) standard

Source: Alabama Statewide Cancer Registry (ASCR), 2004

Although in Alabama incidence rates for breast cancer are lower among African American women, breast cancer deaths are higher. Mortality rates attributable to cervical cancer are also higher among minority women in Alabama.[12]

CURRENT SCREENING RATES AND STAGES OF DIAGNOSIS AMONG ALABAMA WOMEN

Early detection through screening is the means to reduce morbidity and mortality of breast and cervical cancers in Alabama. At a rate of 70.6 percent, African American women age 40 and over have the highest rate of breast and cervical cancer screenings among Alabama women and a higher screening rate than the national average of 62.8 percent. Alabama women, in all age groups, have higher breast and cervical cancer screening rates than the national averages.[11]

A deeper look into screening rates for breast and cervical cancers among Alabama women shows that screening rates for cervical cancer increase with income and education levels; however, breast cancer screening rates do not follow the same pattern. In 2002, the reported breast cancer screening rates were highest among women who have completed only a high school education or G.E.D. and report an annual income of $25,000 to $34,999.[11]

Although Alabama's African American women have higher rates of reported breast and cervical cancer screening, they tend to have cancers that are diagnosed at later stages; therefore, they have higher mortality rates attributed to breast and cervical cancers. Only 73 percent of breast cancers and 43 percent of cervical cancers of African American women in Alabama were diagnosed at an early stage.[46]

EXAMPLES OF CURRENT PROGRAMS THAT PROMOTE BREAST AND CERVICAL CANCER SCREENING IN ALABAMA

The **Alabama Breast and Cervical Cancer Early Detection Program (ABCCEDP)** is funded through a cooperative agreement with the CDC and targets women who meet an age requirement, are underinsured or uninsured, and are at or below 200 percent of the federal poverty level. Women who meet these guidelines are eligible for a Pap test, pelvic exam, clinical breast exam, and mammography referral. Women diagnosed with cancer through this program are also eligible for Medicaid coverage for treatment.

Alabama began screening with the Breast and Cervical Cancer Program in August of 1996. More than 42,500 women have been screened for breast and cervical cancer in Alabama through this program, and 544 invasive breast cancers and 45 invasive cervical cancers have been detected. The ABCCEDP collaborates with the American Cancer Society, UAB Division of Preventive Medicine, UAB Comprehensive Cancer Center, UAB School of Public Health, Alabama Cooperative Extension System, Avon Breast Cancer Foundation, Susan G. Komen Breast Cancer Foundation, Joy to Life Foundation, and the Alabama Quality Assurance Foundation to educate Alabamians on the importance of breast and overall cancer

screenings. Strategies that have proven to be successful and plan to be continued include educating community volunteers and health professionals on cancer screening recommendations so they can educate their peers and patients about how to reduce their chances of dying from cancer.

The purpose of the **Deep South Network for Cancer Control** is to eliminate disparity in cancer death rates between Caucasians and African Americans in the Deep South. The program targets two poor rural areas (the Black Belt of Alabama and the Delta of Mississippi) and two urban areas (Jefferson County, Alabama, and Hattiesburg/Laurel Metro, Mississippi). The University of Alabama at Birmingham and the University of Southern Mississippi work together on this program.

The Deep South Network builds on community infrastructures, state partnerships, and coalitions to provide cancer awareness activities, support minority enrollment in clinical trials, and promote the development of minority and junior biomedical researchers. Using the Community Health Advisor (CHA) model, women and men who are natural helpers are trained to provide cancer awareness messages and develop resources for their communities. The CHAs receive additional training as research partners (CHA-RPs) to enhance African American participation in clinical trials.

Another program that works to reduce the disparity among minority populations is the **Racial and Ethnic Approaches to Community Health by 2010 (REACH 2010)** project, a four-year demonstration project focusing on breast and cervical cancers that is funded by the CDC. With the help of an established coalition and a trained core working group that consists of CHAs, church representatives and health care professionals, the project aims to train community volunteers, build community capacity, and promote breast and cervical cancer screening particularly by increasing breast and cervical cancer awareness and control among community leaders and policy makers.

The University of Alabama at Birmingham Minority Health and Research Center in collaboration with the Division of Preventive Medicine and St. Vincent's Hospital Hispanic Outreach Program has developed and pilot-tested a lay health program tailored to Alabama Latinos. The program called **Sowing the Seeds of Health**, empowers natural leaders in the Latino communities with the resources and knowledge of where to go and what to do for health services. They help others access needed health services and they educate the community on important health-related topics, such as cancer and diabetes. In doing so, the lay health promoters facilitate the health and wellness of the entire community.

The **Alabama Breast and Cervical Cancer Early Detection Program Butterfly Project** is an outreach program aimed at educating female inmates across the state about the importance of early detection for breast and cervical cancers. The project name, Butterfly, was chosen because inmates could identify with freedom and beauty. Currently 350

women (female inmates and their family and friends) have been reached through presentations by dedicated volunteers who distribute educational materials, discuss the importance of monthly breast self-exams, mammograms, and Pap tests, and inform women who qualify how they can obtain these screening tests through county health departments.

The **Alabama Quality Assurance Foundation** is striving to reduce the disparity in mammography utilization between African American and Caucasian Medicare beneficiaries between ages 50 and 67. This project combines community interventions such as a Community Health Advisor program, continuing practice-based medical education, media campaigns, mammography events, and tailored, targeted mailings. Approximately 4,246 beneficiaries have been targeted, or 27 percent of the total eligible population.

The **Community Health Advisors in Action Program (CHAAP)** is a community-based program to help women who have been screened for breast cancer and are found to have an abnormal test or have a confirmed diagnosis of breast cancer. A network of community volunteers is trained to work one-on-one with women who need assistance with accessing appropriate services and getting recommended follow-up care. Four rural and urban counties are included in this project: Dallas, Sumter, Montgomery, and Jefferson. CHAs help women participating in this program to follow recommendations made by their doctor for breast cancer screening follow-up and treatment by assisting them in navigating the health care system, finding community resources to meet their needs, and solving problems that may make it difficult to keep their clinic appointments.

The North Central Alabama Affiliate of the **Susan G. Komen Breast Cancer Foundation** is one of more than 100 affiliates nationwide dedicated to putting an end to breast cancer. Recently, the Komen Foundation provided community grants totaling more than $243,620 to support the North Central Alabama area breast health education and breast cancer screening and treatment programs. In addition to community grants, the Komen Foundation provides free mammograms for medically underserved women under age 50 in 35 counties in North Central Alabama.

The **Joy to Life Foundation** is a newly formed nonprofit organization providing free mammograms for medically underserved women less than 50 years of age in three counties (Montgomery, Autauga, and Elmore) surrounding Montgomery, Alabama. Approximately 1,000 mammograms have been funded by this foundation.

Funded by the Avon Foundation Breast Cancer Fund, the Coffee County Family Services Center provides the breast health program **"How to Save Your Life with the Touch of Your Fingers"** to educate women about breast self-examination and to refer them to low-cost or free mammograms and clinical breast exams in their own communities. The vital program also partners with other organizations to meet the needs of women to ensure they receive screening throughout southwest Alabama. The program location

is housed within the Coffee County Health Department, which allows Family Services to meet its target audience firsthand.

Since October 2000, Coffee County's "How to Save Your Life with the Touch of Your Fingers" has reached more than 31,963 women with information about the importance of early detection of breast cancer and has referred 3,752 women for mammograms and clinical breast exams. The program has partnered with the medical community to provide free Breast Cancer Forums to the community to educate women in all phases of breast cancer.

EVIDENCE-BASED INTERVENTIONS THAT PROMOTE BREAST AND CERVICAL CANCER SCREENINGS

The *CDC Guide to Community Preventive Services* provides evidence-based interventions that community leaders, policy makers, and decision makers can apply to increase the utilization of breast and cervical cancer screening methods. The tables below list the interventions recommended.

CONCLUSION AND FUTURE DIRECTIONS

Limited funding for the ABCCEDP allows only 12 to 14 percent of the qualified women in Alabama to be served through the program. Advocating for increased funding for the ABCCEDP is essential to

INTERVENTIONS TO IMPROVE BREAST CANCER SCREENING UTILIZATION

Table 4: Evidence-based interventions to promote breast cancer screening

Intervention	Recommendation
Multi-component interventions using media, education, and enhanced access	Recommended (strong evidence)
Client reminders	Recommended (strong evidence)
Small media Recommended (strong evidence)	
Removal of structural barriers	Recommended (strong evidence)
Reducing out-of-pocket expenses	Recommended (sufficient evidence)
Incentives with client reminders	Recommended (strong evidence)

Adapted from Guide to Community Preventive Services: Improving the Use of Breast, Cervical, and Colorectal Cancer Screening. URL: http://www.thecommunityguide.org/cancer/cancer-int-screening.pdf

INTERVENTION TO IMPROVE CERVICAL CANCER SCREENING UTILIZATION

Table 5: An evidence-based intervention to promote cervical cancer screening

Intervention	Recommendation
Client reminders	Recommended (strong evidence)

Adapted from Guide to Community Preventive Services: Improving the Use of Breast, Cervical, and Colorectal Cancer Screening. URL: http://www.thecommunityguide.org/cancer/cancer-int-screening.pdf

increase the number of women who utilize breast and cervical cancer screening in Alabama. An additional focus will be placed on utilization for screening among the Medicare population. Since a decrease of mammogram utilization among the Medicare population is being seen nationwide. Education and outreach services tend to focus on women who are ABCCEDP eligible. An additional focus will include the general population, especially those women who are from populations affected by disparities.

A continued search to expand mammography services for underinsured and uninsured Alabama women age 40 to 50 in the southern half of the state is ongoing. Funding for screening mammograms is currently unavailable in all except three counties in this area. It is important that additional funding be pursued since this age group does not qualify for screening mammograms through the ABCCEDP.

Cervical cancer incidence and mortality rates are on the verge of a possible breakthrough. Scientists are currently testing a vaccination for the human papillomavirus (HPV), the number one cause of cervical cancer among Alabama women. This vaccine could substantially decrease the number of women who are diagnosed and die from cervical cancer.

BREAST AND CERVICAL CANCER

GOAL: All breast and cervical cancer cases in Alabama will be diagnosed early through quality screening and follow-up services.

OUTCOME: By 2010, increase from 68% to 73% the percentage of Alabama women 40 and older who report having had a mammogram in the past year.
Data Source: 2002 BRFSS*

OUTCOME: By 2010, increase from 56% to 65% the utilization of mammography services by medically underserved women enrolled in the Alabama Breast and Cervical Cancer Early Detection Program (ABCCEDP).
Data Source: 2004 ABCCEDP

OUTCOME: By 2010, increase from 51% to 56% Alabama women's utilization of mammography services covered by Medicare.
Data Source: 2004 Alabama Quality Assurance Foundation (AQAF)

OUTCOME: By 2010, increase from 69% to 74% the proportion of Alabama's breast cancer cases that are diagnosed at Stage I or Stage II (early stage).
Data Source: 2002 ADPH/ASCR

* The ACCCC recognizes that 2004 BRFSS data are available, but has chosen to use the 2002 data to be consistent with the screening recommendations for mammography

OUTCOME: By 2010, increase from 87% to 93% the percentage of Alabama women age 18 and older who report having had a Pap test within the past 3 years.
Data Source: 2004 BRFSS

OUTCOME: By 2010, increase from 52% to 60% the utilization of cervical cancer screening services by medically underserved women enrolled in ABCCEDP.
Data Source: 2004 ABCCEDP

OUTCOME: By 2010, increase from 50% to 55% the portion of Alabama's cervical cancer cases that are diagnosed at Stage 0 or Stage I (early stage).
Data Source: 2002 ADPH/ASCR

OBJECTIVE 1: Conduct community-based outreach activities to increase awareness among Alabama women regarding the importance of regular breast and cervical cancer screening.
Data Source: ABCCEDP

STRATEGY 1-1: Collaborate with existing community leaders and organizations to provide comprehensive educational campaigns regarding the importance of breast and cervical cancer screening and early detection.

Principal Agency/ies: ADPH/Family Health; ADPH/Health Promotion & Chronic Disease; AQAF; Avon/Breast Care; Komen Foundation; UAB/Community Health Resource Development; UAB/Comprehensive Cancer; UAB/Minority Health & Research; UAB/Preventive Medicine; USA/Cancer Research Institute; USA/Women's Health

Other Partners and Programs: ACS; ACES; Mobile County Health Partnership; NCI/CIS

Linkages: Alabama Partnership; Alabama Sheriffs Association

STRATEGY 1-2: Promote community awareness about the availability of low- or no-cost breast and cervical cancer screening services for underserved women.

Principal Agency/ies: ADPH/Family Health; Alabama Sheriff's Association; Komen Foundation; Joy to Life Foundation; UAB/Community Health Resource Development; UAB/Comprehensive Cancer; UAB/Minority Health & Research; UAB/Preventive Medicine; USA/Cancer Research Institute; USA/Women's Health

Other Partners and Programs: ACS; ACES; ADPH/Health Promotion & Chronic Disease; AQAF; Avon/Breast Care; Community Care Network; Mobile County Health Partnership

Linkages: AAFP; Delta Sigma Theta sorority; Mineral District Medical Society

STRATEGY 1-3: Increase the number of community-based outreach programs using trained volunteers, such as Community Health Advisors (CHAs), to educate the public about breast and cervical cancer.

Principal Agency/ies: UAB/Community Health Resource Development; UAB/Comprehensive Cancer; UAB/Minority Health & Research; UAB/Preventive Medicine

Other Partners and Programs: ACS; ACES; ADPH/Family Health

Linkages: Avon/Breast Care; Komen Foundation; Local health care professionals

OBJECTIVE 2: Encourage Alabama's primary care providers to recommend and conduct breast and cervical cancer screening tests for their patients based on clinical guidelines.

Data Source: AAFP

STRATEGY 2-1: Provide continuing professional education programs for primary care providers regarding adherence to established breast and cervical cancer screening guidelines.

Principal Agency/ies: Alabama health care professional associations; Alabama Schools of Medicine; ACS/PPIP; ACS/PPS+; AQAF

Other Partners and Programs: ADPH/Family Health; Avon/Breast Care; UAB/Comprehensive Cancer; UAB/Minority Health & Research; USA/Cancer Research Institute; other continuing education granting organizations

Linkages: ACS/CME DVD; ACS/CME On-line; ACS/C-Tools; BC/BS physician Web site; Local hospitals

STRATEGY 2-2: Evaluate physician surveys and chart reviews to determine whether practice patterns for screening referrals follow established guidelines.

Principal Agency/ies: ADPH/Family Health; UAB/CME; USA/CME

Other Partners and Programs: ACS; AQAF

Linkages: Alabama health care provider associations

OBJECTIVE 3: Decrease access barriers that prevent women from obtaining recommended breast and cervical cancer screenings.

Data Source: ABCCEDP; Local community-based outreach programs

STRATEGY 3-1: Increase the availability of low- or no-cost breast and cervical cancer screening programs for underserved women.

Principal Agency/ies: ADPH/Family Health; Joy to Life Foundation; Komen Foundation; Poarch Creek Indian Breast and Cervical Cancer Screening Program

Other Partners and Programs: ALPHCA; Community Care Network; Rural health clinics

Linkages: ACS; Alabama Sheriff's Association; Avon/Breast Care

STRATEGY 3-2: Disseminate information about transportation resources for women in need of breast and cervical cancer screening services.

Principal Agency/ies: ACS; ADPH/Family Health; ALPHCA

Other Partners and Programs: Community Care Network; KidOne Transport; Local transportation networks; UAB/REACH 2010 Jefferson County participants

Linkages: Alabama Partnership; ALDOT/Rural Transit #5311 and 5307

OBJECTIVE 4: Increase the number of women who utilize follow-up services after an abnormal breast or cervical cancer screening result.
Data Source: ABCCEDP; AQAF; UAB/CHAAP

STRATEGY 4-1: Educate case management networks to help women navigate the healthcare system after an abnormal cancer screening result.

Principal Agency/ies: ADPH/Family Health; AQAF; Medicaid; Medicare; UAB/Preventive Medicine

Other Partners and Programs: Cancer screening and treatment centers; NASW-AL

Linkages: Local hospitals

STRATEGY 4-2: Train community-based outreach programs, such as Community Health Advisors (CHAs), to help women navigate the healthcare system after an abnormal cancer screening test result.

Principal Agency/ies: UAB/CHAAP

Other Partners and Programs: ACS

Linkages: Alabama health care provider associations; NASW-AL

OBJECTIVE 5: Advocate for an increase in the capacity of MQSA certified mammography facilities and radiologists in Alabama.

Data Source: ADPH/Radiation Control

STRATEGY 5-1: Develop a position paper to educate policy makers and the public about the impact of the lack of certified mammography screening services.

Principal Agency/ies: ACCCC/Advocacy

Other Partners and Programs: ACS; ADPH/Family Health; ADPH/Health Promotion & Chronic Disease; UAB/Comprehensive Cancer; USA/Cancer Research Institute

Linkages: ADPH/Radiation Control

STRATEGY 5-2: Advocate for inclusion of certified mammography services on the agenda of the Alabama Senate Emergency Response Commission to Reduce Healthcare Costs.

Principal Agency/ies: ACCCC/Advisory; ACS

Other Partners and Programs: UAB/Comprehensive Cancer; UAB/Preventive Medicine; USA/Cancer Research Institute

Linkages: ADPH/Radiation Control; Alabama state legislators

COLORECTAL CANCER

Cancer of the colon or rectum, otherwise known as colorectal cancer, is preventable and treatable if detected early. A lack of awareness and education about the benefits of colorectal cancer early detection makes it the second leading cause of cancer-related deaths among men and women today.

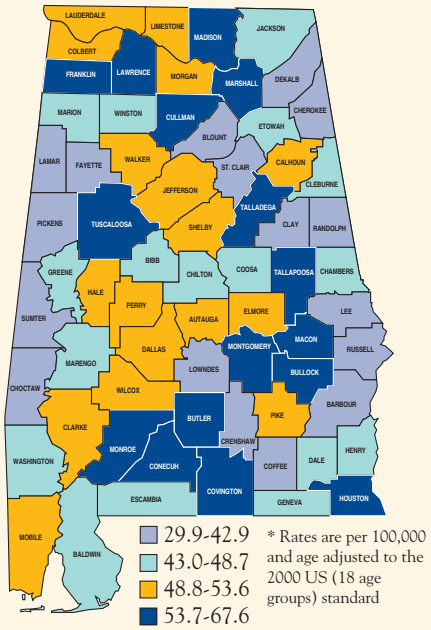
Almost all cases of colorectal cancer begin with the development of benign colorectal polyps. Polyps form when cells lining the colon divide and reproduce in a disorderly way, producing a growth. If the cells of a polyp acquire the ability to invade the intestinal wall and spread to other parts of the body, a malignant or cancerous tumor develops.

Reducing the number of deaths from colorectal cancer depends on detecting and removing the precancerous polyps, which can be present in the colon for years before invasive cancer develops, as well as by detecting and treating cancer in its early stages.

BURDEN OF COLORECTAL CANCER IN ALABAMA

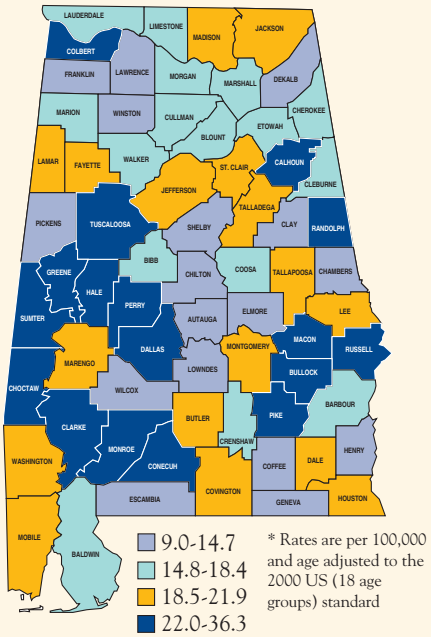
Alabama colorectal cancer incidence rates for both sexes combined have declined by 6.2 percent

Figure 22. Age-Adjusted Colorectal Cancer Incidence Rate*, by County, 1996-2002



Source: Alabama Statewide Cancer Registry (ASCR), 2004

Figure 23. Age-Adjusted Colorectal Cancer Mortality Rate*, by County, 1999-2002



Source: Alabama Statewide Cancer Registry (ASCR), 2004

between 1996 and 2002.[7] The rate of colorectal cancer cases among Alabamians is 52.2 per 100,000 for both genders combined for the years 1996 to 2002.[7] Between the years 1999 and 2002, 3,380 Alabamians died from colorectal cancer, making it the second leading cause of cancer-related deaths in the state.[12] Incidence rates among Alabama residents are slightly higher among Caucasian men and African American women; however, African American men and women have substantially higher mortality rates. Predominantly rural counties in Alabama have higher incidence rates than anywhere else in the state.

CURRENT SCREENING RATES AND STAGE OF DIAGNOSIS AMONG ALABAMIANS

Common colorectal screening includes fecal occult blood testing (FOBT), examination of the lower part of the colon by flexible sigmoidoscopy, and examination of the entire colon by colonoscopy. Caucasian males and females in Alabama have higher screening rates for each component than minority men and women. Alabama men age 50 and older report higher levels than women for flexible sigmoidoscopies and colonoscopies within the past five years. Colorectal cancer screening rates do not increase with age and educational attainment in Alabama as typically thought.[11]

There is a 90 percent survival rate when colorectal cancer is diagnosed early. Unfortunately, 59 percent of all cases in Alabama are diagnosed at later stages; 58 percent of colorectal cases among Caucasians in Alabama were late or unstaged in comparison to 63 percent in the African American population.[40]

SCIENTIFIC EVIDENCE OF COLORECTAL CANCER SCREENING EFFECTIVENESS

The comparative benefit of various types of colorectal cancer screening methods has not yet been determined. The evidence for a mortality benefit is strongest for FOBT, but FOBT has been available longer than the flexible sigmoidoscopy and colonoscopy methods and has more research to support it. Colonoscopy is the definitive method test for diagnosing colorectal cancer but is less available, more expensive, and carries a higher risk than other modalities.

The CDC recently published a report of the National Capacity for Colorectal Cancer Screening and Follow-Up. According to the report, the current unscreened population could be immediately served through increased use of FOBTs. The study estimated it would be ten years before capacity for screening by flexible sigmoidoscopy and colonoscopy would be sufficient for the current unscreened population.

Two new methods of testing for colorectal cancer are not yet widely available or covered by health insurers. The DNA-based stool test, examines DNA from the stool to detect the presence of colorectal cancer or pre-cancerous polyps. This test can be done at home, requires no advance preparation, and is non-invasive, painless, and highly accurate. The second method, virtual colonoscopy, uses MRI or CAT scan technology to examine the colon from outside the body. If a problem is

detected, a traditional colonoscopy is required for further examination and removal of polyps. In the future, these methods may remove the barriers to early detection by making screening less invasive.

EXAMPLES OF CURRENT PROGRAMS THAT PROMOTE COLORECTAL CANCER SCREENING IN ALABAMA

Clinical and behavioral research is ongoing throughout the state to increase the number of Alabamians who receive routine colorectal cancer screening. The majority of these programs work to decrease the disparity of cancer incidence and mortality rates.

Community-Based Strategies for Colorectal Cancer Control is funded by ACCCC through CDC funds. The objective of this project is to develop a curriculum for community education to raise colorectal cancer awareness and increase colorectal cancer prevention and control in the underserved communities in the state of Alabama. The specific aims of this project are to disseminate culturally sensitive material about colorectal cancer risk factors, prevention, and the need for early detection; to establish links with churches to expose male and female members of their congregations age 50 to 80 to information about colorectal cancer, its prevention, and the recommended tests for its early detection; and to, collaborate with primary care providers in the selected communities to improve adherence to early detection guidelines for colorectal cancer.

The purpose of **Training Strategy for Office-Based Sigmoidoscopy** is to develop and evaluate a strategy for providing community-based practitioners in Alabama with opportunities to obtain a comprehensive, supervised hands-on experience in flexible sigmoidoscopy, at low cost and with a minimum amount of disruption to their practice. Practicing primary care providers are recruited and invited to take part in a flexible sigmoidoscopy training program. The program takes place during weekends. It consists of a didactic component and a hands-on training component with direct supervision by expert endoscopists. Volunteer asymptomatic subjects age 50 to 75 are recruited to receive a flexible sigmoidoscopy exam at no cost. Each trainee performs at least 20 supervised flexible sigmoidoscopies to establish competency. After training, periodic supervision is also conducted. This project provides a mechanism to train practicing physicians and enable them to perform flexible sigmoidoscopies in their practices. This strategy will be evaluated for sustainability. Office-based performance of flexible sigmoidscopy by primary care physicians is likely to raise the rate of colorectal cancer screening and reduce related morbidity and mortality.

The National Center on Minority Health and Health Disparities; **Perceived Discrimination in Colorectal Cancer Care** project provides ground work upon which to build community-based education and policy efforts to effectively improve the consistency and equity of care for cancer patients. The objectives of this study are to determine the prevalence of perceived discrimination in African American

and Caucasian colorectal cancer survivors; determine whether this perception influences their experience within the health care system, their health outcomes, and their satisfaction with the quality of care received; compare the process of care for the diagnosis, treatment, and follow-up for African American and Caucasian colorectal cancer patients; and investigate the extent to which perceptions of racial discrimination correlate with real differences in care provided and outcomes.

Cancer Care Outcomes Research and Surveillance Consortium (CanCORS) for patients with colorectal and lung cancer is a five-year NCI-funded project that examines long-term outcomes and racial/ethnic disparities among patients with colorectal and lung cancer. The specific aims of the CanCORS study are to determine how the characteristics and beliefs of cancer patients and providers and the characteristics of systems of organizations delivering cancer care influence treatment and outcomes across the continuum of care from diagnosis to recovery or death. The study evaluates the extent to which patients experience these positive elements of cancer care, with particular emphasis on the reasons for differences by patients' age, race, ethnicity, cultural and family support and socioeconomic status; types of providers delivering care; and organizational aspects of care. The project also evaluates the effects of a select group of common and specific processes of care on clinical outcomes, for example, evaluating the effectiveness of proven cancer therapies in types of patients who were underrepresented in those trials (elderly patients and those with significant co-morbidity); evaluating the effectiveness of proven cancer therapies in routine community settings of care; and using exploratory assessments of the effectiveness of a limited number of new or established therapies that have not been definitively studied in randomized trials.

ACS Worksite Programs promotes colorectal cancer screenings in worksites throughout Alabama who have 500 or more employees. ACS representatives educate employees of the availability of colorectal screening services through even the basic insurance plan.

EVIDENCE-BASED INTERVENTIONS THAT PROMOTE COLORECTAL CANCER SCREENINGS

The *CDC Guide to Community Preventive Services* provides evidence-based interventions that community leaders, policy makers, and decision makers can apply to increase the utilization of colorectal cancer screening methods. The tables below list the interventions recommended.

Table 6: Evidence-based interventions to increase colorectal cancer screening

Intervention	Recommendation
Removal of structural barriers	Recommended (strong evidence)
Client reminders	Recommended (sufficient evidence)

Adapted from Guide to Community Preventive Services: Improving the Use of Breast, Cervical, and Colorectal Cancer Screening. URL: http://www.thecommunityguide.org/cancer/cancer-int-screening.pdf

CONCLUSION AND FUTURE DIRECTIONS

Efforts to increase colorectal cancer screening are imperative, because colorectal cancer is a disease that can be prevented, and if the disease does occur and is detected early, is very treatable. Some of the challenges to increasing screening rates have included the lack of public awareness of prevention and early detection, difficulty in getting providers to consistently recommend screening for those age 50 and older, insurance coverage barriers, fear, perceptions of invulnerability, and the tendency to procrastinate in having these invasive but life-saving procedures. In the years to come, it is hoped that awareness of colorectal cancer can be raised to that of breast and cervical cancer and that screening can become an expected routine. Other challenges include elimination of disparities among colorectal cancer incidence and mortality.

COLORECTAL CANCER

GOAL: All colorectal cancer cases in Alabama will be diagnosed early through use of quality screening and follow-up services.

OUTCOME: By 2010, increase from 24% to 29% the proportion of Alabama men and women age 50 and older who report having a fecal occult blood stool test in the past two years.
Data Source: 2004 BRFSS

OUTCOME: By 2010, increase from 51% to 56% the proportion of Alabama men and women age 50 and older who report ever having a sigmoidoscopy or colonoscopy.
Data Source: 2004 BRFSS

OUTCOME: By 2010, increase from 42% to 47% the proportion of Alabama's colorectal cancer cases diagnosed as Stage I (early stage).
Data Source: 2002 ADPH/ASCR

OUTCOME: By 2010, increase from 17% to 22% the number of primary care physicians who report performing flexible sigmoidoscopies in their offices.
Data Source: UAB/DOPM[46]

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of primary care providers who know that colorectal cancer is preventable.
Data Source: Alabama health care provider associations

OBJECTIVE 1: Increase public awareness regarding colorectal cancer risk factors, early warning signs, and the importance of early detection for prevention and treatment of colorectal cancer.

Data Source: ACS; ADPH/Health Promotion & Chronic Disease; UAB/Comprehensive Cancer

STRATEGY 1-1: Increase media exposure for public service campaigns regarding colorectal cancer risk and screening.

Principal Agency/ies: ACCCC; ACS; ADPH/Health Promotion & Chronic Disease; UAB/Comprehensive Cancer; USA/Cancer Research Institute

Other Partners and Programs: NCI/CIS; UAB/Minority Health & Research

Linkages: CDC/Screen for Life

STRATEGY 1-2: Train community-based outreach programs, such as Community Health Advisors (CHAs), to deliver colorectal cancer education and information to the public, with an emphasis on underserved populations.

Principal Agency/ies: UAB/Community Health Resource Development; UAB/Comprehensive Cancer; UAB/Minority Health & Research

Other Partners and Programs: ACS/PPIP; ACS/PPS+; ACES; NCI/CIS

Linkages: ADPH/Health Promotion & Chronic Disease

STRATEGY 1-3: Encourage Alabamians to be proactive about discussing colorectal cancer screening with their healthcare professional.

Principal Agency/ies: ACS/PPS+

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; Alabama Sheriff's Association; UAB/Minority Health & Research; USA/Cancer Research Institute

Linkages: ACOS; BC/BS; CDC/Screen for Life; NCI/CIS

STRATEGY 1-4: Educate the insured population about new Alabama legislation regarding colorectal cancer screening coverage.

Principal Agency/ies: ACS/PPS+; ACS/Working Well

Other Partners and Programs: BC/BS; Worksite human resource departments

Linkages: AARP; Alabama Business Council

OBJECTIVE 2: Educate Alabama's primary care providers to follow established colorectal screening guidelines.

Data Source: AAFP

STRATEGY 2-1: Provide continuing education programs to primary care providers regarding the importance of adhering to established colorectal screening guidelines.

Principal Agency/ies: Alabama health care professional associations; Alabama Schools of Medicine; ACS/PPIP; ACS/PPS+

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; UAB/Comprehensive Cancer; UAB/Minority Health & Research; USA/Cancer Research Institute; Other continuing education granting organizations

Linkages: ACS/CME DVD; ACS/CME On-line; ACS/C-Tools; BC/BS physician Web site; Local hospitals

OBJECTIVE 3: Increase colorectal cancer screening rates among populations affected by disparities.
Data Source: BRFSS

STRATEGY 3-1: Develop, pilot test, and evaluate a low- or no-cost colorectal cancer screening program for under- and uninsured men and women age 50 and older.

Principal Agency/ies: ADPH/Health Promotion & Chronic Disease

Other Partners and Programs: ACS; UAB/Comprehensive Cancer; UAB/Minority Health & Research; USA/Cancer Research Institute

Linkages: Other research institutions

STRATEGY 3-2: Implement a colorectal cancer screening program statewide for populations affected by disparities.

Principal Agency/ies: ADPH/Health Promotion & Chronic Disease

Other Partners and Programs: ACS; UAB/Comprehensive Cancer; USA/Cancer Research Institute

Linkages: CDC; UAB/Minority Health & Research

OBJECTIVE 4: Advocate for recommended colorectal screening services to be provided for under- and un-insured Alabamians.
Data Source: ACCCC

STRATEGY 4-1: Educate state and local policy makers and the public about the health and economic benefits of prevention (precancerous polyps) and early detection of colorectal cancer.

Principal Agency/ies: ACS; ACCCC/Advocacy; UAB/Comprehensive Cancer; USA/Cancer Research Institute

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; UAB/Preventative Medicine

Linkages: CDC; NCI/CIS

PROSTATE CANCER

Prostate cancer is typically a slowly progressing cancer. Autopsy reports have shown that many older men who died of other diseases also had prostate cancer, of which neither they nor their health care professionals were aware. However, the slow progression does not occur in all cases of prostate cancer. Today's medical technology is unable to detect the details of prostate cancer progression in men.

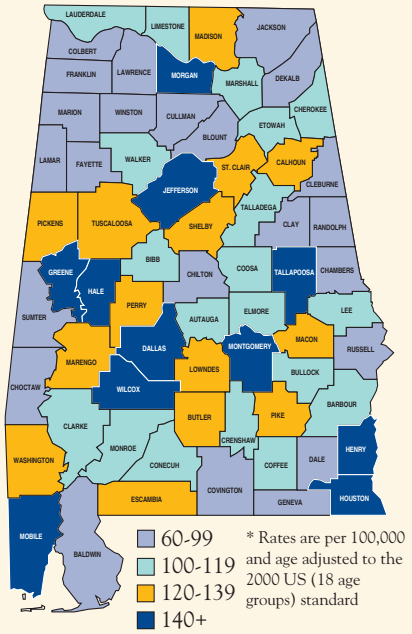
BURDEN OF PROSTATE CANCER IN ALABAMA

Currently, prostate cancer is the most commonly diagnosed cancer among Alabama men. The rate of prostate cancer incidence in Alabama declined 7.0 percent between 1996 and 2002. During the same years, Alabama's prostate cancer incidence rate was 126.9 per 100,000, lower than the national rate of 179.0 per 100,000.[7] African American men in Alabama have the highest incidence and mortality rate from prostate cancer.[7]

SCIENTIFIC EVIDENCE OF PROSTATE CANCER SCREENING EFFECTIVENESS

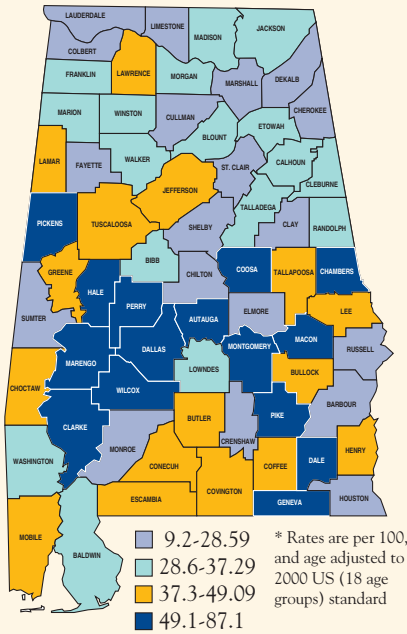
Currently, there is insufficient data to recommend for or against prostate cancer screening. Beginning at age 40, men are encouraged to talk with their health care professionals about screening options that are available.

Figure 24. Age-Adjusted Prostate Cancer Incidence Rate*, by County, 1996-2002



Source: Alabama Statewide Cancer Registry (ASCR), 2004

Figure 25. Age-Adjusted Prostate Cancer Mortality Rate*, by County, 1999-2002



Source: Alabama Statewide Cancer Registry (ASCR), 2004

Two methods most commonly used are the prostate specific antigen (PSA blood test) and the digital rectal examination (DRE).

Although there is supportive evidence that PSA screening can detect early-stage prostate cancer, the evidence is mixed and inconclusive regarding whether early detection improves health outcomes. Additionally, prostate cancer screening can cause anxiety related to follow-up testing from frequent false-positive results. Even when detected early, treatment is controversial. Significant side effects are associated with treatment regimens and untreated prostate cancer might not affect an individual patient's health or longevity. Although there is no solid evidence that early detection of prostate cancer decreases mortality, the ACCCC promotes educational messages about the benefits and risks of early detection.

Despite some significant lowered incidences of prostate cancer in the state of Alabama, death rates for African American men remained more than twice as high as those for Caucasian men.12 To address these disparities of the incidences of prostate cancer, ADPH, UAB, and ACS have implemented strategies and programs to encourage better informed decision making for men who seek information on prostate cancer screening.

EXAMPLES OF CURRENT PROGRAMS THAT PROMOTE INFORMED DECISION MAKING FOR PROSTATE CANCER SCREENING IN ALABAMA

Several physicians, clinicians, and prostate cancer survivors participated in a round-table discussion on prostate cancer screenings, risk factors, and treatment options. This **Prostate Cancer Panel Discussion Videotape** is made available through ADPH. Local library branches and churches may order it for health programs.

The **Health Messages and Educational Materials (HMEMS) Project** is a five-year study to evaluate the use of culturally relevant educational materials to create more awareness of prostate cancer in African American male populations. The goal is to motivate men toward better informed decision making in regard to prostate cancer screening. The project involves focus group sessions in rural and urban counties in the state of Alabama. The project also recruits and trains community leaders to act as prostate cancer champions and research partners. These men undergo education and training seminars to assist them in the dissemination of prostate cancer information to various facets of the community.

ADPH coordinated with UAB investigators to create awareness about prostate cancer through the Alabama Department of Transportation. Through the **Prostate Cancer Bus Campaign**, prostate cancer messages were displayed on the side of metro buses in Montgomery, Mobile, and Birmingham, Alabama. The Birmingham campaign began in August of 2004 and is still ongoing. Information is available on the buses for customers. The Birmingham bus is decorated with messages and contact information, and consumer information is available on the bus.

The Mid South Division of the American Cancer Society and the UAB Division of Urology collaborated

on the creation of an **ACS/UAB Community Cancer Screening Initiatives** task force to investigate methods and strategies to increase the numbers of men who participate in prostate cancer screening programs. The focus is primarily African American men but also includes Hispanics and underserved populations. The task force utilizes contact with women's groups, existing businesses, organizations, and work sites, and the committee works with ADPH to collect existing guidelines regarding early detection and treatment of prostate cancer.

CONCLUSION AND FUTURE DIRECTIONS

The ACCCC Early Detection committee will work to establish a baseline of the number of men who are informed about the risks and benefits associated with prostate cancer screening and treatment. Consideration has been given to adding a question to the 2006 BRFSS. Until a definitive method of prostate cancer screening is established, ACCCC will work to promote informed decision making through existing networks.

PROSTATE CANCER

GOAL: All Alabama men will be able to make informed decisions regarding the risks and benefits associated with prostate cancer screening and treatment.

OUTCOME: By 2010, establish a baseline measure and set an appropriate target to increase the proportion of Alabama men age 40 and older who report being informed of the benefits and risks associated with prostate cancer screening and treatment.

Data Source: 2006 BRFSS

OUTCOME: By 2010, establish a baseline measure and set an appropriate target to increase the proportion of Alabama primary care providers who discuss with their male patients the risks and benefits of prostate cancer screening and treatment.

Data Source: AAFP; AQAF

OBJECTIVE 1: Educate Alabama men aged 40 and older about the benefits and risks associated with prostate cancer screening.

Data Source: ADPH/Health Promotion & Chronic Disease; UAB/Urology

STRATEGY 1-1: Identify or develop for the public comprehensive educational materials about prostate cancer screening that are evidence-based, culturally sensitive, and tailored to appropriate literacy levels.

Principal Agency/ies: NCI/CIS; UAB/Minority Health & Research; UAB/Urology

Other Partners and Programs: ACS/Man to Man; Cancer treatment centers; Us Too

Linkages: ALPHCA; CDC; Rural health clinics

STRATEGY 1-2: Train community-based outreach programs such as Community Health Advisors (CHAs) to deliver prostate cancer education and information to the public, with an emphasis on underserved communities.

Principal Agency/ies: ACS/Man to Man; UAB/Deep South Network; UAB/Minority Health & Research; Us Too

Other Partners and Programs: Local community-based outreach programs; Local faith-based organizations

Linkages: ADPH/Health Promotion & Chronic Disease

OBJECTIVE 2: Promote the discussion between primary care providers and their patients about the benefits and risks associated with prostate cancer.

Data Source: AAFP

STRATEGY 2-1: Provide education programs to primary care providers to improve their ability to initiate the discussion of the risks and benefits associated with prostate cancer screening and treatment.

Principal Agency/ies: Alabama health care professional associations; Alabama Schools of Medicine; ACS/PPIP; ACS/PPS+

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; UAB/Comprehensive Cancer; UAB/Minority Health & Research; USA/Cancer Research Institute; Other continuing education granting organizations

Linkages: ACS/CME DVD; ACS/CME On-line; ACS/C-Tools; BC/BS physician Web site; Local hospitals

STRATEGY 2-2: Identify or develop comprehensive patient education materials and resources that are evidence-based, culturally sensitive, and tailored to appropriate literacy levels for medical practitioners to use in discussing prostate cancer screening.

Principal Agency/ies: ACS; NCI/CIS; UAB/Preventive Medicine; USA/Cancer Research Institute

Other Partners and Programs: Cancer screening and treatment centers

Linkages: ADPH/Health Promotion & Chronic Disease; CDC; Pharmaceutical companies

RESEARCH

Community-based participatory research is important to understand the barriers that prevent populations from utilizing cancer screening methods. Colorectal cancer is 90 percent preventable if detected at an early stage; however, the majority of colorectal cancer cases are detected at a later stage. Researchers need to continue to study and develop targeted methods of cancer awareness that will reach populations in need. Less invasive screening techniques for colorectal cancer will increase screening utilization by Alabamians.

There are many barriers that prevent Alabamians from accessing the services needed. To better understand these barriers, researchers should include the community in all aspects of research development, implementation, and evaluation. It will benefit not only the researchers, but the communities and future populations.

RESEARCH

GOAL: Clinical and behavioral research will improve early detection of cancer in Alabama, particularly for those populations affected by disparities.

OUTCOME: By 2010, increase by 10% the number of Alabamians who are participating in cancer early detection research studies.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of Alabamians from populations affected by disparities who are participating in cancer early detection research studies.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of cancer early detection research studies that specifically target populations affected by disparities.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of community-based cancer early detection research projects in Alabama that are funded through a peer review process.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OBJECTIVE 1: **Increase public awareness about the importance of recruitment and retention in cancer early detection research studies, particularly for populations affected by disparities.**

Data Source: Research institutions

STRATEGY 1-1: **Develop a database to determine the characteristics of individuals who participate in cancer early detection research studies in the state.**

Principal Agency/ies: Research institutions

Other Partners and Programs: Komen Foundation; Local community-based outreach programs; Pharmaceutical companies

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-2: **Disseminate general information to the public about cancer early detection research studies through community-based outreach programs.**

Principal Agency/ies: ACS/Mid-South Division; Komen Foundation; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research Institutions

Other Partners and Programs: Mobile Infirmary CDRP

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-3: **Disseminate educational and culturally appropriate materials about cancer early detection research studies to populations affected by cancer disparities through community-based outreach programs.**

Principal Agency/ies: ACS/Mid-South Division; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Other Partners and Programs: Media; Mobile Infirmary/Cancer Disparities Research

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 2: **Increase the number of health care professionals who conduct cancer early detection research studies with populations affected by cancer disparities.**

Data Source: ACS; Medicaid and Medicare data; NCI/CIS

STRATEGY 2-1: Provide information to institutions and physicians about conducting cancer early detection research studies through referrals, education, and marketing.

Principal Agency/ies: Alabama health care professional associations; ACS; NCI/CIS; Pharmaceutical companies; Research institutions
Others Partners and Programs: Komen Foundation; Mobile Infirmary CDRP

Linkages: CDC; DHHS; NIH/Minority Health

OBJECTIVE 3: Disseminate cancer early detection research findings to populations affected by disparities through appropriate communication methods and channels.

Data Source: Local community-based outreach programs; Local faith-based organizations

STRATEGY 3-1: Promote research to determine effective messages and appropriate methods of communicating information to populations affected by disparities.

Principal Agency/ies: Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ACES; ADPH/Minority Health; Alabama Partnership; Local community-based outreach programs; Local faith-based organizations

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 3-2: Disseminate research findings to the public, especially populations affected by disparities.

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ACES; ADPH/Minority Health; Media

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 4: Involve the community as an equal partner with researchers in designing, implementing, evaluating, and disseminating results of cancer early detection research studies.

Data Source: Research institutions

STRATEGY 4-1: Promote relationships among researchers, community-based organizations and the community at large, particularly involving populations affected by disparities.

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ADPH/Minority Health

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 4-2: Expand the development and implementation of Community Health Advisor (CHA) networks working in cancer early detection across the state.

Principal Agency/ies: UAB

Others Partners and Programs: ADPH/Cancer Prevention

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

SURVIVORSHIP

Overall Goal:

Quality services and programs for cancer treatment, life-long follow-up care, and end-of-life care will be accessible and geographically available to all Alabamians.

INTRODUCTION TO SURVIVORSHIP

A vital component of comprehensive cancer planning identified by the CDC is addressing the growing number of cancer survivors. The National Cancer Institute estimated that, as of January 2001, approximately 9.6 million Americans were living with a history of cancer.[48] Some of these individuals were cancer-free, while others still had evidence of cancer and may have been undergoing treatment. The five-year relative survival rate for all cancers diagnosed between 1995 and 2000 is 64 percent, up from 50 percent in 1974-1976, due in part to progress in early detection and new or improved treatments.[49] These rates vary by the type of cancer and the stage of diagnosis.

The National Cancer Institute defines an individual as a cancer survivor "from the time of diagnosis, through the balance of his or her life."[50] Family members, friends, and caregivers are affected by the cancer experience and are, therefore also included in this definition. To address the growing number of people who survive a cancer diagnosis, the *National Action Plan for Cancer Survivorship: Advancing Public Health Strategies* was developed in collaboration with the CDC and the Lance Armstrong Foundation (LAF). The purpose of this plan is to advance public health efforts regarding cancer survivorship to actively address the needs of this population.

LAF divides cancer survivorship into three stages:

- **Living with cancer – the experience of receiving a cancer diagnosis and any treatment that may follow.**
- **Living through cancer – the extended stage following treatment, includes the time when the person has completed treatment and/or is in remission.**
- **Living beyond cancer – the post-treatment and long-term survivorship stage, including the time when the "activity of the disease or likelihood of its return is sufficiently small that the cancer can now be considered permanently arrested."[51]**

ACCCC has chosen to divide survivorship into three subsections: treatment, follow-up, and end-of-life care.

PALLIATIVE CARE

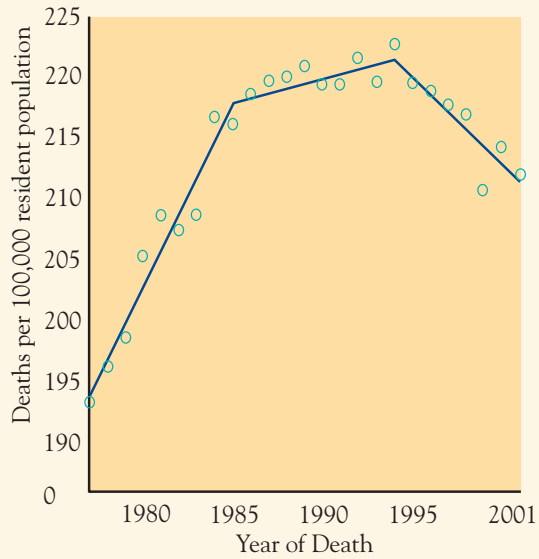
Palliative care is the combination of curative and caring therapies aimed at reducing the symptoms and suffering of individuals and families facing a life-threatening illness. It strives to meet physical, psychological, social, and spiritual needs while remaining sensitive to the individual's and family's cultural and religious values, beliefs, and practices. Palliative care is offered simultaneously with all other appropriate medical treatment

to cure or prolong life. It provides excellent, evidence-based medical treatment that focuses on vigorous care of pain and symptoms throughout illness.

Common symptoms that are treated and controlled or relieved by palliative care include pain, difficulty with breathing, loss of appetite and weight loss, fatigue, muscle weakness, sleep problems, depression and anxiety, and confusion.

Palliative care programs organize a variety of hospital resources – medical and nursing specialists, social workers, and clergy – to effectively deliver the highest quality of care to patients with advanced illness. Aggressive pain and symptom control is integrated into all stages of treatment. Studies have shown that the palliative care approach decreases length of hospital and ICU stays and eases patient transitions between care settings, resulting in increased patient and family satisfaction and better compliance with hospital care quality standards. Successful palliative care programs use an array of delivery systems, from consultative services to inpatient units to achieve a "good death."

Figure 26. Mortality, Alabama - All Cancer Sites, All Races, Both Sexes, All Ages by Year



Source: Death data provided by the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER*Stat. Death rates are age-adjusted to the 2000 US standard population by 5-year age groups. Population counts for denominators are based on Census populations as modified by NCI.

The vision of **Alabamians for Pain Relief (APR)** is that all Alabamians be able to both expect and receive proper care and relief for health-related pain and suffering. Currently, this coalition is in the planning stage and is actively seeking funding for its activities. Three work groups have been formed: an initiative development work group to concentrate on maintaining the focus of the coalition; an education work group to increase public awareness of pain centers and other available methods of pain management; and a professional education work group to enhance communication among health care professionals about methods of pain management. The ACCCC supports all activities of the APR and will work actively to promote the growing need for a pain initiative within the state of Alabama.

Beginning in 2006 ADPH will initiate a **controlled substance database** for the State of Alabama. Prescriptions for controlled substances will be reported to the database by entities that dispense controlled substance prescriptions to the public. The purpose of the database is to monitor controlled substances, reduce the number of inappropriate prescriptions for controlled substances that are dispensed in the state, reduce the number of people who shop for controlled substances inappropriately from multiple physicians and pharmacies, and promote the appropriate dispensing of controlled substance prescriptions.

TREATMENT

A cancer diagnosis is unique to each person. The treatment regimen recommend by a health care provider varies based on the type of cancer, its stage at diagnosis, and the age, sex, and overall health of the patient. The medical treatments for cancer include surgery, radiation therapy, and chemotherapy.

Modern advancements in cancer treatment technology, including new chemotherapy drugs, better surgical techniques, and the increasing use of combination therapies have led to a significant increase in the number of cancer survivors. Successful treatment involves a partnership of health care professionals, patients, family, and other informal caregivers.

Patients and their families must be empowered to act as fully engaged self-advocates, capable of determining and participating in their treatment plans based on their needs and preferences. To receive optimal cancer treatment, patients must be aware of the need for and availability of treatment services. Knowledge about treatment options can empower patients and their families to make decisions about all aspects of care. Receiving a second opinion by another health care provider may be important to ensure that the patient is receiving the best advice on medical treatments.

DISPARITIES OF CANCER TREATMENT UTILIZATION AMONG ALABAMIANS

In rural and underserved areas, access to optimal cancer treatment may be limited. Barriers that contribute to increased mortality rates include accessibility and affordability of care, educational attainment, cultural and language barriers, immigration status, and sexual orientation. Community, patient, and physician education is important to decrease the barriers that exist in our state.

In addition, African Americans are less likely to be diagnosed with cancer at a localized stage and are more likely to have cancers that are diagnosed late or remain unstaged.[52] Of great concern is that for nearly every cancer site, African Americans and minorities have lower five-year survival rates than do Caucasians for each stage of diagnosis, suggesting the possible influence of disparities in access to and receipt of quality health care and of differences in co-morbid conditions.

EXAMPLES OF CURRENT ACTIVITIES TO INCREASE QUALITY CANCER TREATMENT AND CARE IN ALABAMA

An example of a collaborative effort is **Community Health Advisors in Action Program (CHAAP)**, funded by the Avon Foundation and ADPH, in which local natural helper volunteers are

trained as lay referrers and case managers to assist breast cancer patients or those who have a suspicious breast cancer screening result navigate through the difficult and at times challenging health care delivery and social service systems. Because of the efforts of 34 trained volunteers, more than 80 women and men have received service through CHAAP, and out of a total of 449 appointments navigators were successful in helping clients keep 433 of their appointments, a 96% success rate.

Additionally, other community-based programs such as the three **ADPH Special Projects** focusing on prostate, ovarian, and colorectal cancers are building community capacity by training volunteers, developing culturally appropriate health messages to disseminate throughout the community, collaborating with and offering training to providers and specialists who work in these areas, and using various media outlets (for example, billboards, mass transit advertisements, radio and television public service announcements) to disseminate appropriate health messages to vulnerable populations in Alabama.

As a direct result of project relationships developed with health care professionals, ACCCC and ADPH in conjunction with the UAB Minority Health and Research Center cosponsored the **Alabama Academy of Family Physicians Conference** in June 2004. Presenters were distinguished scientists who specialize in prostate, ovarian, and colorectal cancer. More than 150 family physicians from around the state attended and evaluation from conference participants confirmed the meeting was successful in accomplishing the objectives of primary care providers becoming more knowledgeable about preventive measures, risk factors, screening and treatment options, and follow-up care in relation to cancer in Alabama.

CONCLUSION AND FUTURE DIRECTIONS

There have been many accomplishments in survivorship in the past five years; however, more work is to be performed at the individual, community, and state levels to further cancer treatment in Alabama. ACCCC will work to educate and collaborate with health care professionals, elected officials, academia, researchers, nonprofit organizations, and local residents to ensure that all survivors know about, have access to, and are offered the latest health care regimens that will lead to healthier lives and a healthier Alabama.

TREATMENT

GOAL: All Alabamians diagnosed with cancer will have access to quality cancer treatment services.

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabama cancer patients for whom treatment according to established protocols is initiated or planned within four months of diagnosis.

Data Source: ADPH/ASCR; ADPH/Health Promotion & Chronic Disease; Medicaid

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabamians who are knowledgeable about available options for quality cancer treatment.

Data Source: ACS; NCI/CIS

OUTCOME: By 2010, establish a baseline and set an appropriate target to decrease the proportion of Alabama cancer patients who report experiencing severe or increasing pain on a daily basis.

Data Source: ACS Pain Survey; Alabama Hospital Association; AQAF

OBJECTIVE 1: Educate health care professionals and the public about the clinical guidelines for cancer treatment and care.

Data Source: ACS; NCI/CIS; Medicaid and Medicare data

STRATEGY 1-1: Disseminate treatment guidelines provided by the National Cancer Institute (NCI) and the National Comprehensive Cancer Network (NCCN) / American Cancer Society (ACS).

Principal Agency/ies: ACCCC; ACS; NCI/CIS

Others Partners and Programs: AQAF; Alabama health care professional associations

Linkages: Alabama Oncology Nursing Association; Medicare; NCCN

STRATEGY 1-2: Increase public awareness about the benefits of obtaining treatment from ACoS-accredited cancer facilities.

Principal Agency/ies: ACS; ACoS; NCI/CIS

Other Partners and Programs: Local community-based outreach programs

Linkages: ADPH/ASCR; NCCN

OBJECTIVE 2: Promote the use of cancer treatment resources for low-income patients who are under- or uninsured.

Data Source: ACS; Medicaid; Medicare

STRATEGY 2-1: Disseminate information about low- or no-cost treatment resources to community groups, social organizations, and health care professionals.

Principal Agency/ies: ADPH/Pharmacy; ADSS/Senior Rx; ALPHCA; Cancer screening and treatment centers

Other Partners and Programs: Social workers; Case managers

Linkages: ADPH state planning grant data; AHO; AQAF; Covering Kids of Alabama; Medicaid; Pharmaceutical companies

STRATEGY 2-2: Disseminate information about transportation resources.

Principal Agency/ies: ACS; ALPHCA; Cancer screening and treatment centers

Other Partners and Programs: ABCCEDP; Alabama Rehabilitation Services; ALL Kids; Community Care Network; KidOne Transport; Local community-based outreach programs; Local faith-based organizations; Local transport networks; Medicaid

Linkages: AHO; Alabama Partnership; ALDOT/Rural Transit #5311 and 5307; UAB/CHAAP

STRATEGY 2-3: Identify and promote collaboration to address transportation service gaps, including access to pharmacies.

Principal Agency/ies: ACS; Cancer screening and treatment centers

Other Partners and Programs: Local faith-based organizations; Local pharmacies

Linkages: Local community-based outreach programs

OBJECTIVE 3: Increase awareness among health care professionals and the public about the benefits of and effective strategies for symptom management.

Data Source: Alabamians for Pain Relief

STRATEGY 3-1: Educate health care professionals about recognizing and managing cancer- and treatment-related physical symptoms such as pain, nausea and vomiting, constipation, and shortness of breath.

Principal Agency/ies: Alabama health care professional associations; Alabamians for Pain Relief; Alabama Pharmacy Association; and other continuing education granting organizations

Other Partners and Programs: ALPHCA; Alabama Schools of Medicine, Nursing, and Pharmacy

Linkages: ACS; Pharmaceutical companies; Philanthropic organizations

STRATEGY 3-2: Educate the public about recognizing and managing cancer- and treatment-related physical symptoms such as pain, nausea and vomiting, constipation, and shortness of breath.

Principal Agency/ies: Alabamians for Pain Relief

Other Partners and Programs: ACS/Patient Support; Local cancer support groups; Local faith-based organizations; Local hospitals; SISTAS CanSurvive; Us Too

Linkages: Media; NCI/CIS

STRATEGY 3-3: Promote the activities of organizations working to improve the quality of cancer pain management statewide.

Principal Agency/ies: ACCCC; ACS

Other Partners and Programs: ACES

Linkages: NCI/CIS

FOLLOW-UP

Follow-up is a very necessary and valued component of surveillance in comprehensive cancer care. Its purpose is to monitor a patient's progress during and after curative treatment, to detect any recurrence of disease, and to implement a plan of care to palliate any problems related to the disease. Follow-up care can include home care, occupational or vocational therapy, pain management, physical therapy, and support groups.

Initially planned by the treating physician, who may initiate interventions and referrals, follow-up care is tailored to meet the individual patient's anticipated needs, depending on the type of cancer, the stage of disease, the type of treatment received, and the person's age and overall health. Some medical organizations also have follow-up guidelines for certain cancers and update this information as researchers develop new approaches to follow-up care. Monitoring and follow-up care is provided in the treating hospital and, especially for patients living in rural areas, in the community. Established channels of communication with community providers and coordination of services are essential for appropriate, effective, and timely intervention

Research is just beginning to show what people can do to lower their risk of getting certain cancers; however, the reason cancer recurs in some people and not others is still unknown. Cancer survivors are encouraged to engage in certain activities that can make them feel better and lower the chances of developing other health problems, for example, eating better and exercising more, lowering alcohol consumption, and quitting smoking.

Pain and symptoms associated with treatment may still be present during follow-up care. Survivors must be aware of the need to discuss all symptoms with their health care provider. Understanding that pain and symptoms associated with cancer can be managed is important to increasing the quality of life of cancer survivors.

The role of Alabama's cancer surveillance efforts is to produce accurate, evidence-based data regarding the incidence and prevalence of cancer within the state. It enables government leaders and health care policy makers to make appropriate strategic decisions to ensure that all Alabamians with a diagnosis of cancer will have access to comprehensive cancer care services.

CONCLUSION AND FUTURE DIRECTIONS

Currently there is no single agency in Alabama that collects follow-up data for individual patients diagnosed with cancer, and many patients are lost to follow-up. A statewide database is required to

identify all cancer cases and their follow-up treatment and care-related activities, from the time of diagnosis and along the entire disease continuum. Data collection should also include relevant patient and caregiver demographic variables, frequency and location of services accessed by individual patients, and types and complexities of services required.

The information provided by a statewide database will identify the needs of individuals and groups of cancer patients and highlight any service inconsistencies and inequities. It will also allow geographic comparisons of service demand and supply and thus enable more efficient and effective cancer care services to be implemented in the state of Alabama.

FOLLOW-UP

GOAL: All Alabama cancer survivors will participate in life-long follow-up care and services.

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabamians who are knowledgeable about the importance of cancer follow-up care and surveillance.
Data Source: ADPH/ASCR

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabamians who are knowledgeable about available options for cancer follow-up care.
Data Source: ADPH/ASCR

OUTCOME: By 2010, establish a database that will track follow-up care service utilization by cancer survivors in Alabama.
Data Source: ADPH/ASCR

OBJECTIVE 1: Increase awareness among health care professionals about the importance of routine follow-up care, surveillance, continuum of care services to meet the needs of cancer survivors.
Data Source: Alabama healthcare professional associations; Alabama Schools of Medicine, Nursing, and Pharmacy

STRATEGY 1-1: Promote supportive care and follow-up care guidelines provided by NCI and NCCN.

Principal Agency/ies: ACS; NCI/CIS

Other Partners and Programs: Alabama healthcare professional associations; Alabama Schools of Medicine, Nursing, and Pharmacy

Linkages: Local hospitals; Pharmaceutical companies

STRATEGY 1-2: Compile and disseminate information about availability of the continuum of care and supportive services, including palliative care (especially for, pain, ataxia, dizziness, neurotoxicity, lymphedema, etc.); rehabilitation/physical therapy/occupational therapy; body image awareness/aesthetics; insurance and employment issues (job retraining, workplace barriers); and other support programs.

Principal Agency/ies: ACS; NCI/CIS

Other Partners and Programs: Alabama Pharmacy Association; Hospital social workers; Lakeshore Foundation; UAB/Palliative Care; USA/Health System; VA

Linkages: Health insurance disease management programs

OBJECTIVE 2: Increase awareness among the public about the importance of routine follow-up care, surveillance, continuum of care services to meet the needs of cancer survivors.

Data Source: ADPH/ASCR

STRATEGY 2-1: Promote supportive care and follow-up care guidelines provided by NCI and NCCN.

Principal Agency/ies: ACS; NCI/CIS

Other Partners and Programs: Alabama Pharmacy Association; Hospital social workers; Lakeshore Foundation; UAB/Palliative Care; USA/Cancer Research Institute; USA/Health System; VA

Linkages: Local hospitals; Pharmaceutical companies

STRATEGY 2-2: Compile and disseminate information about availability of the continuum of care and supportive services, including palliative care (especially for, pain, ataxia, dizziness, neurotoxicity, lymphedema, etc.); rehabilitation/physical therapy/occupational therapy; body image awareness/aesthetics; insurance and employment issues (job retraining, workplace barriers); and other support programs.

Principal Agency/ies: ACS; NCI/CIS

Other Partners and Programs: Alabama Pharmacy Association; Hospital social workers; Lakeshore Foundation; UAB/Palliative Care; USA/Health System; VA

Linkages: Health insurance disease management programs

END-OF-LIFE CARE

Before the development of antibiotics and other medical advances, people often died quickly, usually of infectious diseases or accidents. Today, the vast majority of Americans have a more protracted experience with death. Terminally ill patients and their families, whether young or old, have a broad range of physical, psychological, social, spiritual, and practical needs. Though each may react in a different way, most people, when faced with mortality, hope for a "good death," however they may define it.

Many people who are terminally ill choose to remain at home or enter a long-term homelike alternative care setting known as hospice care. At times, short-term inpatient care may be required for one of two reasons: palliative care to treat an acute medical episode such as increased pain or infection, or respite care to provide the care giver with a short hiatus from the provision of care, usually no more than five days. Palliative care is usually for the sake of the patient while respite care is for the care giver. Palliative and respite care can both be administered on an outpatient or inpatient basis. Contrary to popular misconceptions, hospice care is not "giving up" on the patient, but focuses on enhancing quality of life of patients and families when curative efforts are no longer bringing about desired outcomes.

The first hospice opened in New Haven, Connecticut, in 1974, inaugurating the hospice movement in the United States. The mission of hospice was to allow patients to live as long as possible before dying with the basic elements of a good death: care, communication, continuity, control, calmness, and closure. As other hospices opened across the nation, the basic premises of hospice care began a broader consideration of end-of-life care across all health care settings, focusing on improving and maintaining a patient's comfort, dignity, and quality of life, whether in an inpatient or outpatient setting.

It is important for a person to express preferences about health care at the end-of-life. This can be done in advance through the use of formal legal documents such as a living will or advance directive that should be tailored to meet specific situations and varying state laws. In addition, there are also practical issues such as arrangements for eldercare, estate planning, and planning for funeral and memorial services.

Many faith traditions place emphasis on the importance of conscious preparation for death as a way of showing respect for and acceptance of life's final journey. Contact with death often provides an opportunity to become more aware of spiritual realities. Getting one's affairs in order may include working through deep emotions with friends and loved

ones, including dealing with grief and bereavement.

Finally, consideration must be given to the family and the impact the disease process has on the family's structure and stability at diagnosis, through treatment, care, and eventually after death. Family coping techniques are critical to both the patient and family. Comprehensive end-of-life care must be mindful of the family's condition throughout the dying process. A good death for the patient must be a good death for the family as well.

CONCLUSION AND FUTURE DIRECTIONS

Despite advances in the provision of end-of-life care, many cancer patients continue to suffer symptoms that are managed poorly or not at all, including an unacceptable level of acute pain. Pain includes physical and spiritual manifestations (feelings of abandonment, anger, betrayal, despair, fear, guilt, meaninglessness, regret, self-pity, and sorrow or remorse).

Some health care professionals are inadequately trained for comprehensive end-of-life care and do not know how to talk with patients and family regarding end-of-life issues. In addition, despite the widespread availability of hospice and other end-of-life care providers in the state, there is insufficient integration of these services into the mainstream health care system.

Many people who could benefit from comprehensive end-of-life care are not able to do so because of insurance restrictions and financial constraints. Most private insurers offer some type of hospice benefit, but the benefit is usually limited to a defined time period or capped at a total dollar amount. Expenditures for end-of-life care are anticipated to continue to rise due to the aging population, increasing interest and concern about palliative care and end-of-life issues, and rising health care costs.

The public is often culturally unprepared for, unaware of, and reluctant to seek end-of-life care. In American culture, there is a recognizable lack of acceptance of death. Western culture often tries to deny death as a natural process. This culture may create an atmosphere where some people are unprepared for their own death or the death of a loved one. They may also be unaware of the services and support that are available or they may be reluctant to seek out those services and support. The Plan will address these barriers through promoting public awareness and educating health care professionals of the issues that surround end-of-life care.

END-OF-LIFE CARE

GOAL: Quality end-of-life care services will be geographically available and accessible to all Alabama cancer survivors.

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of end-stage cancer survivors receiving palliative care or hospice care services.
Data Source: 2002 FACTS on Dying: Alabama; AHO Cost Report; NHPCO

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the number of in-patient hospice, palliative care, and respite care programs in the state.
Data Source: AHO; ADPH

OUTCOME: By 2010, establish a baseline and set an appropriate target to increase the proportion of Alabama adult cancer survivors who report having a medical advance directive.
Data Source: Alabama Hospital Association

OBJECTIVE 1: Increase awareness among health care professionals and the public about the availability, range of services, and benefits of hospice and palliative care.
Data Source: AHO; NHPCO

STRATEGY 1-1: Educate health care professionals about the benefits and availability of palliative care and hospice services.

Principal Agency/ies: AHO; AQAF

Other Partners and Programs: ADPH/Home Care; Alabama health care professional associations; UAB/Palliative Care

Linkages: CMS/Medicare and Medicaid

STRATEGY 1-2: Educate the public about the benefits of palliative care and hospice services, their availability, and how to obtain a timely referral.

Principal Agency/ies: AARP; AHO; AQAF

Partners and Programs: ADPH/Home Care; Alabama State Bar; UAB/Community Health Resource Development; UAB/Palliative Care

Linkages: CMS/Medicaid and Medicare

STRATEGY 1-3: Promote awareness of and access to reliable directories and databases of palliative care and hospice care providers and services in the state.

Principal Agency/ies: ACCCC; AHO

Other Partners and Programs: ADPH/Home Care; UAB/Palliative Care; UAB/School of Medicine Hospital

Linkages: ADPH/Directory for Health Care Facilities

OBJECTIVE 2: Advocate for policy initiatives that increase access to and geographic availability of in-home, residential, and in-patient palliative care and hospice care services statewide.

Data Source: AHO; ADPH/Directory for Health Care Facilities

STRATEGY 2-1: Educate about adequate reimbursement of palliative care and hospice care services by Medicaid, Medicare, and private insurance.

Principal Agency/ies: AHO; Local hospice organizations

Partners and Programs: AARP; ACS; Health insurance providers; Alabama health care professional associations

Linkages: Alabama Arise; Black Belt Action Commission; Local faith-based organizations; Alabama state and US legislators

OBJECTIVE 3: Develop in-patient hospice, palliative care, and respite care programs for each county or region.

Data Source: Alabama Hospital Association

STRATEGY 3-1: Develop a partnership among existing providers to serve as a resource for program expansion.

Principal Agency/ies: Alabama Hospital Association; AHO; AQAF; Cooper Green Hospital; Local oncology nurses association UAB/Palliative Care; VA

Other Partners and Programs: Local community-based outreach programs; Local hospitals

Linkages: NHPCO

STRATEGY 3-2: Develop a self-instruction program for establishing in-patient palliative care units.

Principal Agency/ies: Partnership (from Strategy 3-1)

Other Partners and Programs: Local community-based outreach programs; Local hospitals

Linkages: NHPCO

STRATEGY 3-3: Disseminate literature to hospitals about the importance and financial viability of in-patient palliative care programs.

Principal Agency/ies: Partnership (from Strategy 3-1)

Other Partners and Programs: Alabama Hospital Association; AQAF; Cooper Green Hospital; UAB/Palliative Care; VA

Linkages: NHPCO

OBJECTIVE 4: Educate Alabamians about the effective management of pain, other physical symptoms, and psychosocial and spiritual issues of survivors with end-stage cancer.

Data Source: To be determined

STRATEGY 4-1: Educate health care professionals about the medical, legal, ethical, and psychological issues surrounding effective management of pain, other physical symptoms (nausea/vomiting, constipation, shortness of breath, compromised nutritional status), and psychosocial and spiritual issues, including grief and aftercare.

Principal Agency/ies: Alabama healthcare professional associations; Alabama Hospital Association; Alabama Schools of Medicine, Nursing, and Pharmacy; Alabamians for Pain Relief

Other Partners and Programs: ACES; AHO; Cancer screening and treatment centers; County medical societies

Linkages: Continuing education granting organizations; Pharmaceutical companies

STRATEGY 4-2: Educate the public about the myths and medical and ethical aspects of effective management of pain, other physical symptoms (nausea/vomiting, constipation, shortness of breath, compromised nutritional status), and psychosocial and spiritual issues, including grief and aftercare.

Principal Agency/ies: ACS; Alabamians for Pain Relief; NCI/CIS

Partners and Programs: ACES; Local hospitals; Local faith-based organizations; Local community-based outreach programs; Media

Linkages: CMS/Medicaid and Medicare websites; NCI/CIS; WebMD

OBJECTIVE 5: Increase awareness among Alabamians 19 and older about the need for medical advance directives.

Data Source: To be determined

STRATEGY 5-1: Educate the public (Alabamians 19 and older) about the importance of discussing their end-of-life treatment preferences in advance with their appointed decision maker and documenting their wishes.

Principal Agency/ies: Alabama health care professional associations

Partners and Programs: Alabama State Bar; Local community-based outreach programs; Local faith-based organizations; Worksites human resource departments

Linkages: Legal Services Alabama

STRATEGY 5-2: Educate health care professionals about the need and effective methods for encouraging their patients to discuss with their appointed decision maker and document in advance their end-of-life treatment preferences.

Principal Agency/ies: Alabama health care professional associations; Alabama Schools of Medicine, Nursing, Social Work, and Pharmacy

Partners and Programs: Alabama State Bar

Linkages: Continuing education granting organizations; Legal Services Alabama

STRATEGY 5-3: Advocate for changes in the state's Advance Directive legislation to make it easier for Alabamians to understand, communicate, and document their end-of-life treatment preferences, including specifically allowing the use of the "Five Wishes" document.

Principal Agency/ies: AHO; Alabama Hospital Association

Other Partners and Programs: Alabama State Bar

Linkages: Aging with Dignity/Five Wishes

RESEARCH

Cancer survivorship research in a public health context focuses efforts on applying knowledge about the issues survivors face to the development of appropriate interventions.[52] Behavioral and clinical research in survivorship addresses barriers to quality treatment, pain management, follow-up care, and end-of-life care. The goal of all cancer survivorship research studies should be to ensure that all cancer survivors have access to needed services.

Strategies for research include initiating studies to identify characteristics associated with certain types of cancer and/or secondary health concerns; identifying modifiable behaviors (for example, limited physical activity or poor eating habits) that can reduce the likelihood of additional health problems; and developing primary education programs and interventions to inform survivors about their susceptibility and behavioral changes they can make to reduce their risk.[52]

RESEARCH

GOAL: Clinical and behavioral research will improve treatment and quality of life for Alabama cancer survivors, particularly for those populations affected by disparities.

OUTCOME: By 2010, increase by 10% the number of Alabamians who are participating in cancer survivorship research studies.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of Alabamians from populations affected by disparities in cancer survivorship research studies.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of cancer survivorship research studies in Alabama that specifically target populations affected by disparities.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OUTCOME: By 2010, increase by 10% the number of community-based cancer survivorship research projects in Alabama that are funded through a peer review process.
Data Source: ACS; NCI/CIS; Pharmaceutical companies; Research institutions

OBJECTIVE 1: Increase public awareness about the importance of recruitment and retention in cancer survivorship research studies, particularly for populations affected by disparities.

Data Source: Research institutions

STRATEGY 1-1: Develop a database to determine the characteristics of individuals who participate in cancer survivorship research studies in the state.

Principal Agency/ies: Research institutions

Other Partners and Programs: Local community-based outreach programs; Pharmaceutical companies

Linkages: ASC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-2: Disseminate general information to the public about cancer survivorship research studies through community-based outreach programs.

Principal Agency/ies: ACS/Mid-South Division; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Other Partners and Programs: Mobile Infirmary/Cancer Disparities Research

Linkages: ASC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-3: Disseminate educational and culturally appropriate materials about cancer survivorship research studies to populations affected by cancer disparities through community-based outreach programs.

Principal Agency/ies: ACS/Mid-South Division; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Other Partners and Programs: Mobile Infirmary/Cancer Disparities Research

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 2: Increase the number of health care professionals who conduct cancer survivorship research studies with populations affected by cancer disparities.

Data Source: ACS; Medicaid and Medicare data; NCI/CIS

STRATEGY 2-1: Provide information to institutions and physicians about conducting cancer survivorship research studies through referrals, education, and marketing.

Principal Agency/ies: Alabama health care professional associations; ACS; NCI/CIS; Pharmaceutical companies; Research institutions

Others Partners and Programs: ACCCC; Local cancer support groups; Media

Linkages: CDS; DHHS; NIH/Minority Health

OBJECTIVE 3: **Disseminate cancer survivorship research findings to populations affected by disparities through appropriate communication methods and channels.**

Data Source: Local community-based outreach programs; Local faith-based organizations

STRATEGY 3-1: **Promote research to determine effective messages and appropriate methods of communicating information to populations affected by survivorship disparities.**

Principal Agency/ies: Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ACES; ADPH/Minority Health; Alabama Partnership; Local community-based outreach programs; Local faith-based organizations

Linkages: ASC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 3-2: **Disseminate research findings to the public, especially populations affected by survivorship disparities.**

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ACES; ADPH/Minority Health; Media

Linkages: ASC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 4: **Involve the community as an equal partner with researchers in designing, implementing, evaluating, and disseminating results of cancer survivorship research studies.**

Data Source: Research institutions

STRATEGY 4-1: **Promote relationships among researchers, community-based organizations, and the community at large, particularly involving populations affected by disparities.**

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Others Partners and Programs: ADPH/Minority Health

Linkages: ASC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 4-2: **Expand the development and implementation of Community Health Advisor (CHA) networks working in cancer survivorship across the state.**

Principal Agency/ies: UAB

Others Partners and Programs: ADPH/Cancer Prevention

Linkages: ASC; DHHS; NCI/CIS; NIH/Minority Health

ENVIRONMENTAL, MEDICAL, AND OCCUPATIONAL EXPOSURE

Overall Goal:

Cancer cases in Alabama will decrease through limiting exposure to environmental, medical, and occupational carcinogens.

INTRODUCTION TO ENVIRONMENTAL, MEDICAL, AND OCCUPATIONAL EXPOSURE

According to the National Institute for Occupational Safety and Health, each year in the United States an estimated 20,000 cancer deaths and 40,000 new cases of cancer are attributed to occupational exposure.[54] Each day millions of workers nationwide are exposed to substances that have been demonstrated under laboratory conditions to be carcinogens.

Carcinogens may be found in environmental, medical, and occupational settings to serve beneficial purposes or as contaminants. The mere presence of a carcinogen does not produce cancer. Three events must occur for cancer to develop: the carcinogen must enter the human body in a way that allows it to damage the structure or function of specific cells; the damaged cells must produce a tumor; and the tumor must become malignant. Cell damage from carcinogens is usually assisted by other factors in the production of a tumor (for example, genetics, age, use of certain medications, or certain lifestyle behaviors). Therefore, the key to preventing cancers that may potentially arise from environmental, medical, and occupational carcinogens is to prevent or minimize human exposure.

The Alabama Comprehensive Cancer Control Coalition takes a comprehensive approach to promoting cancer control activities that prevent or limit human exposure to carcinogens in environmental and occupational settings.

To identify carcinogens, the Environmental, Medical, and Occupational (EM&O) Committee selected those chemical, metal, and radiological compounds with sufficient human evidence to be ranked as known or probable carcinogens by the following organizations:

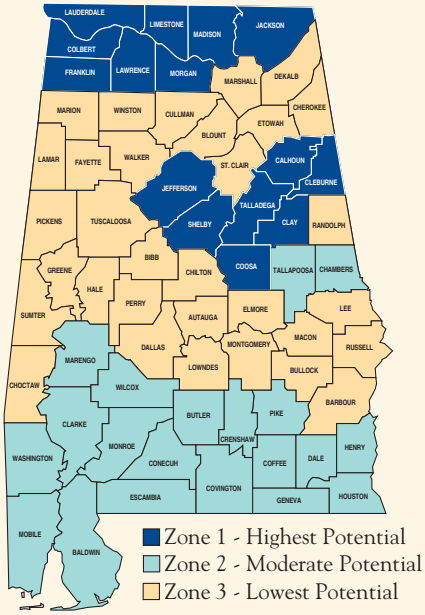
- **World Health Organization / International Agency for Research on Cancer.**
- **U.S. Department of Health and Human Services / National Toxicology Program.**
- **U.S. Environmental Protection Agency / Integrated Risk Information System.**

By the end of 2005, a table of known and probable carcinogens with links to the above agencies will be posted on a Web site for the Alabama Department of Public Health Risk Assessment and Toxicology Branch. Because substances are reviewed and their status updated on a regular basis, ADPH/Risk Assessment will monitor and update the list on a quarterly basis. This list of carcinogens will guide EM&O Committee activities as priorities are developed and assigned.

IONIZING RADIATION EXPOSURE

There are two major divisions of radiation: non-ionizing radiation and ionizing radiation. Non-ionizing radiation has enough energy to move atoms around in a molecule but not enough energy to remove electrons from atoms. Examples of non-ionizing radiation include sound waves, visible light, microwaves, and radar. Ionizing radiation has enough energy to remove tightly bound electrons from atoms, thus creating ions. Ionizing radiation is used in diagnostic and therapeutic nuclear medicine, medical and dental x-ray, and in manufacturing processes.

Figure 27. Alabama Radon Test Results by County, 1993



Source: Alabama Cooperative Extension (ACES), 1993

Three main types of ionizing radiation exist and may be harmful to humans if they are exposed. The first is alpha particles. These particles can be blocked by a sheet of paper or human skin; however, ingestion, inhalation, or entry of alpha particles through skin can be harmful. The second type of ionizing radiation is beta particles. These particles are stronger and more penetrating than alph particles. Like alpha particles, if beta particles enter the body they may be harmful. The most penetrating type of ionizing radiation is gamma rays and x-rays. These rays may require thick layers of lead or concrete to provide sufficient shielding. These types of ionizing radiation may cause severe damage to internal organs. X-rays essentially have the same properties as gamma rays but are typically lower in energy and less penetrating. X-rays are the single largest source of manmade radiation exposure. Protection from x-ray exposure may require a shield that contains several millimeters of lead.

SOURCES OF IONIZING RADIATION

Humans are exposed to natural radiation from the sun, cosmic rays, and naturally occurring radioactive elements found in the earth's crust. Radon, which emanates from the ground, is another important source of natural radiation. Manmade radiation is used more and more in medical facilities, research and

teaching institutions, industrial applications, and federal facilities involved in nuclear weapons production.

HEALTH EFFECTS OF IONIZING RADIATION EXPOSURE

Human exposure to radiation can cause a health risk by causing cell damage, cell death, or damage to genes and chromosomes. In most cases there may be no identifiable health effect. In other cases, the cell may survive but become abnormal, either temporarily or permanently, and an abnormal cell may become malignant. Evidence of injury from low or moderate does of radiation may not be known for months or years after the exposure occurred. The health effects depend on the dose of the radiation received.

RADON

Radon is a natural occurring radioactive gas – without color, odor, or taste – that undergoes radioactive decay and emits ionizing radiation. Radon comes from the natural radioactive breakdown of uranium and thorium in the soil, rock, and groundwater found all over the United States. The largest proportion of the public's exposure to natural radiation comes from radon, mostly from soil under homes.[55]

While outside air typically contains very low levels of radon, indoor air may contain much higher levels from buildup from soil under the foundations of homes, schools, and office buildings. The U.S. Environmental Protection Agency (EPA) estimates that the national average annual indoor radon level in homes is about 1.3 picocuries per liter (pCi/l) of air; however, over 6 percent of all homes nationwide have elevated levels at or above EPA's voluntary action level[§] of 4 pCi/l. Levels greater than 2,000 pCi/l of air have been measured in some homes.[48]

Ingestion and inhalation of radon is the main source of exposure. Exposure to radon increases the risk of developing lung cancer, and is the second leading cause of lung cancer in the United States. The damage that occurs to the lungs is not caused by the radon gas itself but by radon's short-lived decay products. When inhaled, these decay products may be deposited in the airways of the lungs especially if they are attached to dust particles. As the subsequent alpha particles decay, further damage is done to the cells lining the airways.

EXAMPLES OF CURRENT ACTIVITIES TO MONITOR IONIZING RADIATION EXPOSURE IN ALABAMA

The **ADPH Office of Radiation Control** registers or licenses the possession and use of all sources of ionizing radiation in Alabama. Registrants and licensees are inspected to assure that radiation exposure to patients, occupational workers, and the public is maintained as low as reasonably achievable. Inspections of medical, dental, chiropractic, and veterinary x-ray units, particle accelerator therapy centers, diagnostic and therapeutic nuclear medicine facilities, industrial operations using radiation sources, research centers, and educational institutions are performed to assure that exposure to persons is minimal and in accordance with appropriate state radiation rules. ADPH Office of Radiation Control collaborates with the Alabama Cooperative Extension System to promote and provide

§ Defined in glossary, see Appendix B

residential testing for radon and to promote radon-resistant new construction. ADPH/Radiation Control also monitors radiation levels in the environment around the state's two nuclear power facilities as well as several industrial operations that use radioactive material.

CONCLUSION AND FUTURE DIRECTIONS

As the EM&O committee looks toward future activities, promoting awareness among Alabamians will be the main focus during the next five years. By establishing a centralized Web site that lists carcinogens and areas where large exposures may occur, Alabamians may become advocates for their own health and explore opportunities to limit their exposures.

IONIZING RADIATION EXPOSURE

GOAL: Alabamians' exposure to ionizing radiation will be minimized.

OUTCOME: By 2010, establish a communication system to provide information about the dangers of excessive ionizing radiation exposure to primary healthcare providers, citizens, employers, regulatory agencies, and the media.

Data Source: Agency for Toxic Substances and Disease Registry; National Toxicology Program; US Environmental Protection Agency (EPA); World Health Organization (WHO)/International Agency for Research on Cancer

OUTCOME: By 2010, increase from 5% to 10% the percentage of Alabama households in high-risk counties which report having been tested for radon exposure.

Data Source: ACES; ADPH/Radiation Control

OUTCOME: By 2010, increase from 3 to 5 the number of Alabama municipalities which have adopted radon testing policies as part of residential building codes.

Data Source: ACES; ADPH/Radiation Control

OBJECTIVE 1: Educate Alabamians about the risks and control of radon (ionizing radiation) both inside and outside the home.

Data Source: ACES; ADPH/Radiation Control

STRATEGY 1-1: Increase public awareness of the radon problem in Alabama and of the relationship between indoor radon exposure and lung cancer.

Principal Agency/ies: ACES; ADPH/Radiation Control

Other Partners and Programs: American Lung Association of Alabama; County Health Departments; County Medical Societies

Linkages: Media

STRATEGY 1-2: Promote adoption of radon control measures as a part of residential building codes for new home construction.

Principal Agency/ies: ACES; ADPH/Radiation Control

Other Partners and Programs: Alabama Homebuilders Association

Linkages: Alabama League of Municipalities

OBJECTIVE 2: Advocate for mandatory standards for radiology technicians in Alabama.

Data Source: ACCCC; ACS

STRATEGY 2-1: Increase awareness among health care professionals about the risk associated with excessive diagnostic procedures.

Principal Agency/ies: ACCCC; ACS

Other Partners and Programs: Alabama Society of Radiologic Technologists

Linkages: ACS/CME On-line; ADPH/Radiation Control

STRATEGY 2-2: Increase public awareness about the risk associated with excessive diagnostic procedures.

Principal Agency/ies: ACCCC; ACS

Other Partners and Programs: Alabama Society of Radiologic Technologists

Linkages: ADPH/Radiation Control

STRATEGY 2-3: Promote awareness of state policymakers about the risk associated with excessive diagnostic procedures.

Principal Agency/ies: ACCCC; ACS

Other Partners and Programs: Alabama Society of Radiologic Technologists

Linkages: ADPH/Radiation Control

RISK ASSESSMENT AND TOXICOLOGY

The field of environmental health is relatively new and rapidly growing. Few cancers can currently be attributed solely to exposure to carcinogens in environmental and occupational settings; the development of most cancer is assisted by other factors such as genetics, age, certain medications, and certain lifestyle behaviors. Therefore, cancer cases cannot be identified as environmental or occupational for statistical analysis based on ICD10 coding. Additional data or investigations are required to generate environmental and occupational statistics.

The vast majority of cancer cluster investigations conducted nationwide in the past ten years have failed to confirm carcinogens in environmental or occupational settings as causative factor. This has led to narrowing the criteria recommended for initiating such investigations. Since 1993, ADPH/Risk Assessment has investigated suspected or real cancer clusters among communities near contaminated areas; however, carcinogens have not been confirmed as the cause of any cluster. Consequently, the foci of risk assessment and toxicology are assessment of cancer risk, particularly among populations at risk of exposure, and minimization of exposure through promotion of protective behaviors.

EXAMPLES OF CURRENT ACTIVITIES TO MONITOR CARCINOGENS IN ALABAMA

The activities reported below are conducted throughout state funding and/or non-ACCCC federal funding and are thus in-kind contributions to ACCCC.

The **Alabama Department of Environmental Management (ADEM) Air Division** monitors adherence to recommended federal standards for control of hazardous airborne carcinogens from major sources identified under the Title V Air Pollution Control Program.

ADEM Field Operations collects fish from major state bodies of water and analyzes them for selected carcinogens. ADPH/Risk Assessment prepares fish consumption advisories based on ADEM data and disseminates them to the public through the media, mail, public health departments, the Alabama Department of Natural Resources, the Alabama Department of Travel and Tourism, and ADEM. Other edible aquatic organisms and wildlife are not sampled.

ADEM Land Division and the **EPA** investigate carcinogen contamination and monitor remediation efforts at residences, public lands, industrial facilities, and military installations. Both agencies collaborate with the ADPH/Risk Assessment for public health evaluation of the contamination.

ADEM Water Division monitors mandatory sampling by public water utilities to ensure compliance with federal drinking water standards and maximum concentration limits for regulated carcinogens to ensure that public water systems report to consumers. No sampling or reporting of private wells is required in Alabama. The Water Division also monitors the status of underground storage tanks for compliance with federal standards.

The **ADPH Risk Assessment and Toxicology Branch** evaluates environmental sampling data provided by ADEM and the EPA and disseminates its findings through community and physician education. The ADPH/Risk Assessment and the Alabama Statewide Cancer Registry collaborate in the evaluation of carcinogens and cancer concerns. The ADPH/Risk Assessment also previously cataloged unintended releases of hazardous substances, including carcinogens, both in transit and at fixed locations, and conducted quarterly outreach to educate emergency responders; however, this activity ended in December 2004.

The **Alabama Department of Agriculture and Industries (ADAI)** regulates the sale, transport, storage, and use of pesticides, some of which are carcinogens. ADAI or ADEM investigate regulatory violations.

CONCLUSIONS AND FUTURE DIRECTIONS

The priorities for the upcoming years are to keep the web information updated, to develop promotional materials and publicize the system to primary health care professionals and citizens near major contaminated areas, and to establish links to the ADPH/Risk Assessment Web site on current EM&O member agency Web sites. Promotion to the media will be linked to promotion to the communities they serve. Evaluation of feedback from those who visit the Web site will allow ACCCC to better serve those who use the available information.

RISK ASSESSMENT AND TOXICOLOGY

GOAL: Alabamians' exposure to environmental and occupational carcinogens will be minimized.

OUTCOME: By 2010, establish a communication system to provide information about known or probable carcinogens to primary health care providers, citizens, employers, regulatory agencies, and the media.

Data Source: Agency for Toxic Substances and Disease Registry; EPA; National Toxicology Program; World Health Organization/International Agency for Research on Cancer

OBJECTIVE 1: **Characterize known and probable carcinogens according to their degree of risk for cancer, and promote guidelines and recommendations for risk reduction.**

Data Source: National Institute for Occupational Safety and Health; National Toxicology Program; EPA/Integrated Risk Information System; Occupational Safety and Health Administration (OSHA); World Health Organization/ International Agency for Research on Cancer

STRATEGY 1-1: **Review and update quarterly a list of known and probable carcinogens that will be included on the ADPH/Risk Assessment and Toxicology website.**

Principal Agency: ADPH/Risk Assessment

Other Partners and Programs: ADEM

Linkages: EPA/Integrated Risk Information System; Occupational Safety and Health Administration; US Department of Health and Human Services/National Toxicology Program; World Health Organization/International Agency for Research on Cancer

STRATEGY 1-2: **Publicize and promote the use of the carcinogen list and additional resource links on the ADPH website.**

Principal Agency: ADPH/Risk Assessment

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease

Linkages: Alabama Department of Public Health

STRATEGY 1-3: **Increase access to the carcinogen list and the ADPH website by placing links on related websites.**

Principal Agency: ADPH/Risk Assessment

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease

Linkages: ACCCC/EM&O member agencies

RESEARCH

Behavior change in general is the result of multiple influences. Influences such as economic and some demographic characteristics are not readily changed and tend to remain stable throughout an individual's life. However, influences such as public health messages, recent medical research findings, and news of environmental contamination may stimulate changes in perception of risk and willingness to modify health behaviors.

The EM&O Committee seeks to initiate effective educational activities that will result in preventive behavior (that is, avoidance of exposure to carcinogens). EM&O will initiate a search of health behavior change literature and seek to document correlations of change models with Alabama's citizen populations that are targeted for education and outreach activities, in order to design and implement educational methods and materials that will effectively promote exposure reduction behaviors may be designed and implemented and reduce the risks of developing cancer by preventing or minimizing exposure to carcinogens in environmental and occupational settings.

RESEARCH

GOAL: Alabamians' exposure to environmental and occupational carcinogens will be limited by evidence-based educational activities.

OUTCOME: By 2010, establish a clearinghouse of evidence-based data to guide effective education activities for limiting or reducing exposure to carcinogens in Alabama.

Data Source: ADPH Programs; U.S. Census Bureau; CDC; NIH; other published sources

OBJECTIVE 1: Increase effective exposure reduction education and outreach to Alabamians at risk.

Data Source: ADPH; CDC; NIH; US Census Bureau; Other published sources

STRATEGY 1-1: Review education literature to identify effective education and outreach models.

Principle Agency/ies: ADPH/Risk Assessment

Other Partners and Programs: ADEM; ADPH/Radiation Control

Linkages: CDC; EPA; NIH

STRATEGY 1-2: Analyze state demographics to determine evidence-based interventions that are most likely to succeed with Alabama audiences and will reduce exposure to carcinogens.

Principal Agency/ies: ADPH/Risk Assessment

Other Partners and Programs: ADEM; ADPH/Radiation Control

Linkages: CDC; EPA; NIH

STRATEGY 1-3: Develop, pilot test, and evaluate educational materials that promote exposure reduction methods for Alabamians at risk.

Principal Agency/ies: ADPH/Risk Assessment

Other Partners and Programs: ADEM; ADPH/Radiation Control

Linkages: CDC; EPA; NIH

SURVEILLANCE

Goal:

The ACCCC website will become a clearinghouse for all databases relevant to the control of cancer (cancer risk, incidence, prevalence, quality of life, survival, mortality) in Alabama.

SURVEILLANCE

The accurate and timely collection, analysis, and interpretation of cancer data is essential to analyze trends in cancer incidence and mortality, to identify ways in which risk factors can be reduced and to plan, implement, and evaluate public health practices. More specifically, cancer surveillance data are crucial for identifying areas where greater prevention efforts are needed and for identifying potential causes of cancer.

The Surveillance Committee has made considerable progress in achieving the overall goal and objectives set in the 2001 – 2005 Alabama Comprehensive Cancer Control Plan. To date, a list of more than 20 databases that pertain to cancer in Alabama has been assembled for inclusion on the ACCCC Web site. Investigations to identify additional databases are ongoing. Two public health graduate students have recently been hired by ACCCC to assist with these investigations and to address other important needs of the coalition. The Surveillance Committee Chair will direct these students as they gather information for the databases and undertake literature reviews to identify published research studies that are based on cancer control data from Alabama.

EXAMPLES OF CURRENT CANCER DATA COLLECTION AND SURVEILLANCE ACTIVITIES

The **National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER)** program collects cancer incidence data from regions of the United States that are useful for tracking trends. United States mortality rates are based on counts of cancer deaths compiled by the National Center for Health Statistics.

In 1998 the **Alabama Statewide Cancer Registry (ASCR)** began collecting state-specific data for all cancers in Alabama. ASCR data is used to identify cancer trends, patterns, and variation for directing cancer control efforts, planning and carrying out public health practices, and conducting research. The final step of the ASCR is application of the data to cancer prevention and control programs by evaluating program effectiveness and planning for the future.

Cancer mortality rates are determined by data from both ASCR and the **Alabama Center for Vital Statistics**.

Annual assessment of risk factors for chronic disease and conditions is conducted through the **CDC Behavioral Risk Factor Surveillance System (BRFSS)**. This telephone survey is administered annually to a random population and is used to compare health risks at the state and national levels. Core content is collected by all states, and additional

questions may be asked to gather needed data on other health-risk behaviors. ADPH uses the data to determine cancer-specific behaviors. These behaviors include physical activity levels, nutrition, smoking status, and utilization of cancer screening methods. Alabamians age 18 and older are asked to respond to the survey questions. All data from the BRFSS is self reported, and researchers must take this into consideration when using and evaluating this data.

The **Youth Risk Behavioral Survey (YRBS)** was developed to monitor the priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth. These behaviors are typically established during childhood and early adolescence. The YRBS includes national, state, and local school-based surveys of representative samples of students from grades 9 through 12. This survey is administered every two years and measures cancer specific risk behaviors regarding tobacco use, unhealthy dietary behaviors, and inadequate physical activity. Like the BRFSS, data from the YRBS is self reported, which must be considered in interpreting the data.

The **Alabama Breast and Cervical Cancer Early Detection Program (ABCCEDP)** collects data on breast and cervical cancer screening utilization by women who are un- or underinsured. These data are useful in reporting Pap test, clinical breast exam, and mammography usage among underserved populations in Alabama.

Data from the **ADPH Office of Radiation Control** allows researchers to report the number of mammograms that are administered on an annual basis. Each mammogram is counted and reported as utilization by Alabama women. Through this data researchers are unable to tell the age, race, and insurance status of women, but it is useful in comparing the total annual rate of Alabama women who are receiving mammograms.

CONCLUSION AND FUTURE DIRECTIONS

In the upcoming year, a priority is to begin evaluating all databases for quality and comprehensiveness. The Surveillance Committee has discussed the feasibility of linking certain databases, although such linkages have not yet been attempted. As implementation of the 2006 – 2010 Alabama Comprehensive Cancer Control Plan develops and other committees identify needs for cancer data, priority will be given to obtaining and interpreting cancer data of interest.

SURVEILLANCE

GOAL: The ACCCC website will become a clearinghouse for all databases relevant to the control of cancer (cancer risk, incidence, prevalence, quality of life, survival, mortality) in Alabama.

OUTCOME: By 2010, post and maintain a comprehensive, accessible, and up-to-date electronic directory of all databases relevant to planning and implementing cancer control interventions or conducting cancer control research in Alabama.

Data Source: ACCCC

OBJECTIVE 1: Compile a list of databases maintained within ADPH, elsewhere in Alabama, and by regional and federal agencies that are relevant to cancer control in Alabama.

Data Source: ADPH/Health Promotion & Chronic Disease; ADPH/ASCR; BRFSS; other agencies listed below

STRATEGY 1-1: Request information on databases relevant to cancer control in Alabama from offices within ADPH and state, regional, and federal agencies.

Principal Agency: ABCCEDP; ADPH/ASCR

Other Partners and Programs: ACS; ADEM; Cancer screening and treatment centers; Alabama Schools of Agriculture, Medicine, Pharmacy, and Veterinary Medicine; The University of Alabama/Capstone Center; UAB/School of Public Health; UAB/Preventive Medicine; USA/Cancer Research Institute

Linkages: CDC; NCI; SEER

STRATEGY 1-2: Identify published research studies (in public health, epidemiology, medicine, demography, psychology, health care, etc.) and published reports (by foundations, civic groups, public servants) that include data or references to data on cancer in Alabama.

Principal Agency: UAB/Epidemiology

Other Partners and Programs: ADPH/Health Statistics; USA/Cancer Research Institute

Linkages: MedLine; OVID; PubMed

OBJECTIVE 2: Evaluate identified cancer control databases for content, comprehensiveness, quality, and timeliness.

Data Source: ADPH/Health Promotion & Chronic Disease; ADPH/ASCR; BRFSS; other agencies listed below

STRATEGY 2-1: Interview individuals who maintain these databases to collect objective and subjective information on strengths and limitations of each database.

Principal agency: ADPH/Health Promotion & Chronic Disease

Other Partners and Programs: UAB/Epidemiology

Linkages: CDC; Holders of databases; NCI

STRATEGY 2-2: Independently review databases for content, comprehensiveness, quality, timeliness, strengths, and limitations.

Principal agency: UAB/Biostatistics

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; ADPH/Health Statistics; UAB/Epidemiology

Linkages: CDC; NCI

STRATEGY 2-3: Promote quality improvement by offering constructive feedback to holders of cancer control databases.

Principal agency: ADPH/Health Promotion & Chronic Disease

Other Partners and Programs: ADPH/ASCR; UAB/Biostatistics; UAB/Epidemiology

Linkages: CDC; NCI; SEER

OBJECTIVE 3: Determine the feasibility of electronically linking databases at the county, zip code, census tract, or individual level, for better understanding of cancer control needs in Alabama.

Data Source: ADPH/Health Promotion & Chronic Disease; ADPH/ASCR; BRFSS; other agencies listed below

STRATEGY 3-1: Review content, comprehensiveness, and quality of each database to identify which are appropriate for linkage.

Principal agency: UAB/Epidemiology

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; ADPH/Health Statistics; ADPH/ASCR

Linkages: CDC; NCI

STRATEGY 3-2: Develop a protocol for electronically linking databases.

Principal Agency: ADPH/Health Statistics

Other Partners and Partners: ADPH/ASCR; UAB/Biostatistics

Linkages: NCHS

OBJECTIVE 4: Disseminate a master table of cancer control databases in Alabama.

Data Source: ACCCC website

STRATEGY 4-1: Develop summaries of content, comprehensiveness, quality, timeliness, means of electronic linkage, and contact information.

Principal Agency/ies: ACCCC

Other Partners and Partners: UAB/Epidemiology

Linkages: Holders of member databases

STRATEGY 4-2: Post cancer control databases on the ACCCC website.

Principal Agency/ies: ACCCC

Other Partners and Programs: UAB/Epidemiology;

Linkages: Holders of member databases

OBJECTIVE 5: Promote the use of the master table of databases for cancer control interventions and research.

Data Source: ACCCC

STRATEGY 5-1: Educate public health and health care professionals about the existence and importance of the cancer control databases to better understand cancer control needs.

Principal Agency: ACCCC

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease

Linkages: Holders of member databases

STRATEGY 5-2: Promote use of the databases by cancer control researchers.

Principal Agency: UAB/Epidemiology

Other Partners and Programs: ACS; ADPH/Health Promotion & Chronic Disease; UAB/Preventive Medicine; USA/Cancer Research Institute

Linkages: CDC; NCI

STRATEGY 5-3: Provide guidance and technical support to agencies that use the databases to plan cancer control interventions and research.

Principal Agency: ADPH/Health Statistics

Other Partners and Programs: ADPH/Health Promotion & Chronic Disease; UAB/Biostatistics; UAB/Epidemiology

Linkages: CDC; NCHS; NCI; SEER

NEW AND EMERGING RESEARCH

Goal:

New and emerging research will improve cancer prevention and control in Alabama, particularly for those populations affected by cancer disparities.

NEW AND EMERGING RESEARCH

New and emerging research in cancer prevention and control studies and other basic, clinical, and translational research have the potential to significantly prevent, control, and minimize the burden of disparities associated with cancer. The Road Map proposed by the National Institutes of Health, and supported by other organizations such as the Centers for Disease Control and Prevention and the Institute of Medicine, delineates very clearly the importance of integration of research throughout the whole spectrum from basic science to translational research. An improved knowledge of molecular biology and other scientific breakthroughs have influenced public health strategies related to cancer prevention and control. These scientific advances represent cutting-edge innovations in areas such as chemoprevention, genomics, proteomics, and genetic admixture which could improve public health outcomes related to cancer.

Alabama has premier cancer researchers contributing to the nation's progress in dealing with the entire spectrum of cancer prevention and control; however, further work is necessary to integrate "discovery" and "delivery" at all levels. A mechanism to keep health care professionals and the public informed of local, national and international research findings is essential to have a positive impact on public health. This is particularly true for citizens of Alabama who are negatively affected by the health disparities and disproportionate burden associated with cancer.

NEW AND EMERGING RESEARCH

GOAL: New and emerging research will improve cancer prevention and control in Alabama, particularly for those populations affected by cancer disparities.

OUTCOME: By 2010, establish a communication system to disseminate new and emerging cancer research findings that will have a positive impact on strategic cancer prevention and control initatives.

Data Source: ADPH/Cancer Prevention Tracking System

OUTCOME: By 2010, increase the number of health care professionals who report being aware of new and emerging research in Alabama's cancer prevention and control programs.

Data Source: Alabama health care professional associations; Alabama Schools of Medicine

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OUTCOME: By 2010, increase public awareness of and participation in new and emerging research studies related to cancer prevention and control.

Data Source: Cancer screening and treatment centers; CDC; NCI/CIS; NIH; Pharmaceutical companies

OBJECTIVE 1: Develop a communication system to effectively disseminate information about new and emerging cancer prevention and control research studies to health care professionals and the general public.

Data Source: ACCCC Web site

STRATEGY 1-1: Identify and analyze sources of information about new and emerging cancer research.

Principal Agency/ies: ACCCC/Surveillance

Other Partners and Programs: Pharmaceutical companies; Philanthropic organizations; Research institutions

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 1-2: Establish links on the ACCCC website to credible sources of new and emerging cancer prevention and control research studies.

Principal Agency/ies: ACCCC/Surveillance

Other Partners and Programs: Pharmaceutical companies; Philanthropic organizations; Research institutions

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 2: Increase awareness among health care professionals about new and emerging cancer prevention and control research and its application to Alabama's cancer patient populations.

Data Source: ACS; CDC; NCI/CIS

STRATEGY 2-1: Promote health care professional's utilization of the ACCCC website link to new and emerging cancer prevention and control research.

Principal Agency/ies: ACCCC/Executive

Other Partners and Programs: Alabama health care professional associations; Mobile Infirmary CDRP; Pharmaceutical companies; Research institutions

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

OBJECTIVE 3: Increase public awareness about the importance of new and emerging cancer prevention and control research studies, particularly for populations affected by cancer disparities.

Data Source: Local community-based outreach programs; Media

STRATEGY 3-1: Disseminate general information to the public through local and statewide media sources about new and emerging cancer prevention and control research studies.

Principal Agency/ies: ACS/Mid-South Division; Mobile Infirmary/Gulf Coast Minority-based CCOP; Philanthropic organizations; Research institutions

Other Partners and Programs: Media; Mobile Infirmary CDRP

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

STRATEGY 3-2: Disseminate educationally and culturally appropriate information about new and emerging cancer prevention and control research studies to populations affected by cancer disparities through community-based outreach programs.

Principal Agency/ies: Alabama Partnership; Mobile Infirmary/Gulf Coast Minority-based CCOP; Research institutions

Other Partners and Programs: ADPH/Minority Health

Linkages: ACS; CDC; DHHS; NCI/CIS; NIH/Minority Health

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APPENDICES

APPENDIX A: ABBREVIATIONS USED

AAFP .....Alabama Academy of Family Physicians
AAHERD.....American Alliance for Health Education, Recreation, and Dance
AARP.....American Association of Retired Persons
ABCCEDP .....Alabama Department of Public Health/Bureau of Family Health Services/Alabama Breast and Cervical Cancer Early Detection Program
ABC/Responsible Vendor.....Alcoholic Beverage Control Board/Responsible Vendor Programs
ACCCC.....Alabama Comprehensive Cancer Control Coalition
ACCCC/Advocacy.....Alabama Comprehensive Cancer Control Coalition/Advocacy Committee
ACCCC/Executive.....Alabama Comprehensive Cancer Control Coalition/Executive Committee
ACCCC/Surveillance.....Alabama Comprehensive Cancer Control Coalition/Surveillance Committee
ACCCP .....Alabama Comprehensive Cancer Control Plan
ACES.....Alabama Cooperative Extension System
ACoS .....American College of Surgeons
ACS.....American Cancer Society
ACS/CME DVD.....American Cancer Society/Continuing Medical Education DVD
ACS/CME On-line....American Cancer Society/Continuing Medical Education On-line
ACS/C-Tools.....American Cancer Society/C-Tools PDA cancer prevention, diagnosis, and treatment information
ACS/Man to Man .....American Cancer Society/Man to Man prostate cancer support program
ACS/Mid-South Division .....American Cancer Society/Mid-South Division
ACS/Patient Support .....American Cancer Society/Patient Support Services Programs for Patients and Survivors
ACS/PPIP.....American Cancer Society/Putting Prevention into Practice
ACS/PPS+ .....American Cancer Society/Physician Practice Strategy Plus
ACS/Working Well.....American Cancer Society/Working Well cooperate wellness program
ADECA.....Alabama Department of Economic and Community Affairs
ADEM .....Alabama Department of Environmental Management
ADMHMR/Substance Abuse.....Alabama Department of Mental Health and Mental Retardation/Division of Substance Abuse Services
ADPH.....Alabama Department of Public Health
ADPH/Arthritis.....Alabama Department of Public Health/Bureau of Health Promotion and Chronic Disease/Chronic Disease Prevention Branch/Arthritis Prevention Branch

ADPH/ASCR.....Alabama Department of Public Health/Alabama Statewide Cancer Registry

ADPH/Cancer Prevention.....Alabama Department of Public Health/ Bureau of Health Promotion and Chronic Disease/ Cancer Prevention Division

ADPH/Communications.....Alabama Department of Public Health/ Bureau of Health Promotion and Chronic Disease/ Communications and Social Marketing Branch

ADPH/Directory for Health Care Facilities.....Alabama Department of Public Health/Bureau of Health Provider Standards/ Provider Services Unit/The Directory for Health Care Facilities

ADPH/Family Health.....ADPH/Bureau of Family Health Services

ADPH/Health Promotion & Chronic Disease.....Alabama Department of Public Health/Bureau of Health Promotion and Chronic Disease

ADPH/Health Statistics.....Alabama Department of Public Health/ Bureau of Information Services/Center for Health Statistics

ADPH/Home Care.....Alabama Department of Public Health/Bureau of Home and Community Services/Home Care Division

ADPH/Minority Health.....Alabama Department of Public Health/ Office of Minority Health

ADPH/Nutrition & Physical Activity.....Alabama Department of Public Health/ Office of Professional and Support Services/ Nutrition and Physical Activity Unit

ADPH/Obesity Task Force...Alabama Department of Public Health/Obesity Task Force

ADPH/Pharmacy.....Alabama Department of Public Health/ Office of Professional and Support Services/Pharmacy Unit

ADPH/Radiation Control.....Alabama Department of Public Health/ Office of Radiation Control

ADPH/Risk Assessment.....Alabama Department of Public Health/ Risk Assessment and Toxicology Branch

ADPH/Tobacco Prevention.....Alabama Department of Public Health/ Bureau of Health Promotion and Chronic Disease/ Tobacco Prevention and Control Division

ADPH/WIC.....Alabama Department of Public Health/Bureau of Family Health Services/WIC (Women Infants Children) Division

ADPH/Worksite Wellness.....Alabama Department of Public Health/Bureau of Health Promotion and Chronic Disease/Worksite Wellness Division

ADSS.....Alabama Department of Senior Services

ADSS/Nutrition.....Alabama Department of Senior Services/ Nutrition Education Services

ADSS/Senior Rx.....Alabama Department of Senior Services/ Senior Rx Prescription Medication Program

AHO.....Alabama Hospice Organization

Alabama 4-H.....Alabama Cooperative Extension System/4-H

Alabama Partnership.Alabama Partnership for Cancer Control in the Underserved, Inc.

ALDOT.....Alabama Department of Transportation
ALDOT/Rails to Trails.....Alabama Department of Transportation/ Bureau of Multimodal Transportation/Rails to Trails Program
ALDOT/Rural Transit.....Alabama Department of Transportation/ Bureau of Multimodal Transportation/ Rural Transit Assistance Program
ALFA.....Alabama Farmers Federation
ALL Kids.....Alabama Department of Public Health/ Office of Children's Health Insurance/Alabama ALL Kids
ALPHCA.....Alabama Primary Health Care Association
ALSDE.....Alabama State Department of Education
ALSDE/Child Nutrition.....Alabama State Department of Education/ Child Nutrition Program
ALSDE/Coordinated School Health.....Alabama State Department of Education/ Coordinated School Health Program
ALSDE/Obesity Task Force.....Alabama State Department of Education/ Obesity Task Force
ALYTS.....Alabama Youth Tobacco Survey
AQAF.....Alabama Quality Assurance Foundation
ASAHPERD.....Alabama State Association for Health, Physical Education, Recreation, and Dance
Avon/Breast Care.....Avon Foundation Breast Cancer Fund
BC/BS.....Blue Cross Blue Shield of Alabama
BMI.....Body Mass Index
BRFSS.....Behavioral Risk Factor Surveillance System
CDC.....Centers for Disease Control and Prevention
CDC/Choose Your Cover.....Centers for Disease Control and Prevention/ Choose Your Cover Skin Protection Campaign
CDC/Community Guide.....Centers for Disease Control and Prevention/ Task Force on Community Preventive Services/ Guide to Community Preventive Services
CDC/DASH.....Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion/ Division of Adolescent and School Health
CDC/Smoking and Health/Media Campaign.....Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion/Office of Smoking and Health/ Media Campaign Resource Center
CMS/Medicare and Medicaid.....Centers for Medicare and Medicaid Services
DHHS.....US Department of Health and Human Services
EM&O.....ACCCC/Environmental, Medical, and Occupational Committee
EPA.....Environmental Protection Agency
FOBT.....Fecal Occult Blood Test
HCCA.....Healthy Child Care Alabama
Komen Foundation.....Susan G. Komen Breast Cancer Foundation/ North Central Alabama Affiliate

Mobile Infirmary/Gulf Coast Minority-based CCOP.....Mobile Infirmary/ Gulf Coast Minority-based Community Clinical Oncology Program

Mobile County Health Partnership.....Mobile County Department of Health/ Health Partnership Coalition

Mobile Infirmary/Cancer Disparities Research .....Mobile Infirmary/Cancer Disparities Research Partnership Program

NASW-AL.....National Association of Social Workers – Alabama Chapter

NCI/CIS .....National Cancer Institute/Cancer Information Services

NHPCO.....National Hospice and Palliative Care Organization

NIH.....National Institutes of Health

NIH/Minority Health.....National Institutes of Health/Office of Minority Health

PEEHIP .....Alabama Public Education Employees' Health Insurance Plan

SEER .....National Institutes of Health/National Cancer Institute/ Surveillance, Epidemiology, and End Results Program

SEIB .....Alabama State Employees' Insurance Board

SYNAR Report.....US Department of Health and Mental Hygiene/ Alcohol and Drug Abuse Administration/Synar Report

UAB/Biostatistics.....University of Alabama at Birmingham/School of Public Health/ Department of Biostatistics

UAB/CHAAP .....University of Alabama at Birmingham/Division of Preventive Medicine/Community Health Advisors in Action Program

UAB/CME .....University of Alabama at Birmingham/ Department of Continuing Medical Education

UAB/Community Health Resource Development.....University of Alabama at Birmingham/School of Public Health/ Center for Community Health Resource Development

UAB/Comprehensive Cancer .....University of Alabama at Birmingham/ Comprehensive Cancer Center

UAB/Deep South Network.....University of Alabama at Birmingham/ Comprehensive Cancer Center/Community Outreach/ Deep South Network for Cancer Control

UAB/Epidemiology.....University of Alabama at Birmingham/ School of Public Health/Department of Epidemiology

UAB/Minority Health & Research .....University of Alabama at Birmingham/ Division of Preventive Medicine/ Minority Health and Research Center

UAB/Palliative Care .....University of Alabama at Birmingham/ Division of Gerontology and Geriatric Medicine/ Center for Palliative Care

UAB/Preventive Medicine.....University of Alabama at Birmingham/ Division of Preventive Medicine

UAB/REACH 2010 .....University of Alabama at Birmingham/ Division of Preventive Medicine/Racial and Ethnic Approaches to Community Health by 2010

UAB/Urology .....University of Alabama at Birmingham/ School of Medicine/Department of Surgery/Division of Urology

USA/Cancer Research Institute .....University of South Alabama/ Cancer Research Institute
USA/CME .....University of South Alabama/ Department of Continuing Medical Education
USA/Health System.....University of South Alabama/Health System
USA/Women's Health .....University of South Alabama Health System/ Department of Obstetrics and Gynecology/ Center for Women's Health
Us Too .....Us Too Prostate Cancer Education and Support Program
UV.....Ultraviolet Light
VA.....US Department of Veterans Affairs/Veterans Health Administration
YMCA .....Young Men's Christian Association
YRBS.....Youth Risk Behavior Survey
YWCA.....Young Women's Christian Association

APPENDIX B: GLOSSARY OF TERMS

BODY MASS INDEX (BMI)

– is a formula for indicating weight status in adults, based on height and weight.

$$\text{BMI formula} = \frac{(\text{weight in pounds}) \times 703}{(\text{height in inches}) \times (\text{height in inches})}$$

For adults over 20 years of age, BMI falls into one of the following categories

- Below 18.5 – Underweight
- 18.5 – 24.9 – Normal
- 25.0 – 29.9 – Overweight
- 30.0 and Above – Obese

BODY MASS INDEX (BMI) FOR AGE

– is used to assess the body mass index for children and youth ages 2 to 20. It is gender and age specific to adjust for the changes in body fat in children. The following percentile cutoff points are used to identify underweight and overweight in children

- < 5th percentile – Underweight
- 85th percentile to < 95th percentile – At risk of overweight
- > 95th percentile – Overweight

BORG SCALE

– Practitioners generally agree that perceived exertion ratings between 12 to 14 on the Borg Scale suggests that physical activity is being performed at a moderate level of intensity. During activity, use the Borg Scale to assign numbers to how you feel (see "moderate activity" and "vigorous activity" below). Self-monitoring how hard your body is working can help you adjust the intensity of the activity by speeding up or slowing down your movements.

BUILT ENVIRONMENT

– is human formed, developed, or structured areas. The built environment embraces a wide range of concepts, from the design and integrity of housing, to land-use and urban planning. A high quality environment is essential for the public to achieve optimal health and development. Building and land-use policies, including the quality and design of the physical environment, can cause or prevent illness, disability and injury, and degrade natural resources.

LINKAGES

– are individuals, organizations, and programs that can provide resources to achieve the strategy. For example, material; funding; information; etc.

METABOLIC EQUIVALENTS (MET)

– is the standard metabolic equivalent, or MET, level. This unit is used to estimate the amount of oxygen used by the body during physical activity.

1 MET = the energy (oxygen) used by the body as you sit quietly, perhaps while talking on the phone or reading a book.
The harder your body works during the activity, the higher the MET.

- Any activity that burns 3 to 6 METs is considered moderate-intensity physical activity.
- Any activity that burns > 6 METs is considered vigorous-intensity physical activity.

MODERATE ACTIVITY

– is moderate-intensity physical effort in which a person should experience:

- some increase in breathing or heart rate;
- a "perceived exertion" of 11 to 14 on the Borg scale (for example, the effort a healthy individual might expend while walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain);
- 3 to 6 metabolic equivalents (METs); or
- any activity that burns 3.5 to 7 Calories per minute (kcal/min).

PRINCIPAL AGENCY/IES

– are individuals, agencies/organizations, or programs that will have primary responsibility/key involvement for a given activity.

OTHER PARTNERS AND PROGRAMS

– are individuals, agencies/organizations, or programs who are partners with a supportive role to play in achieving the given strategy. In most cases they are members of the ACCCC (or should be); however, their mission may not be strictly relevant to cancer prevention and control.

VIGOROUS ACTIVITY

– is vigorous-intensity physical effort may be intense enough to represent a substantial challenge to an individual and in which a person should experience:

- a large increase in breathing or heart rate (where conversation is difficult or "broken");
- a "perceived exertion" of 15 or greater on the Borg scale (for example, the effort a healthy individual might expend while jogging, mowing the lawn with a nonmotorized push mower, participating in high-impact aerobic dancing, swimming continuous laps, or bicycling uphill, carrying more than 25 pounds up a flight of stairs, standing or walking with more than 50 pounds);
- greater than 6 metabolic equivalents (METs); or
- any activity that burns more than 7 kcal/min.

VOLUNTARY ACTION LEVEL

– is the Environmental Protection Agency's (EPA) maximum level of exposure to radon that corresponds to the approximate annual average exposure for radon decay products in the home. In 1988, EPA and the U.S. Surgeon General issued a Health Advisory recommending that all homes below the third floor be tested for radon and fixed if the radon level is at or above 4 picocuries per liter (pCi/l). For more information, please visit http://www.epa.gov/iaq/radon.

APPENDIX C: 1988 CANCER COMMITTEE MEMBERS

- **Jeanette Free, MSN, RN**
  Staff Development Coordinator
  Nursing Section
  Alabama Department of Public Health

- **Ruth Harrell, RN, MPH**
  Director of Nursing
  Alabama Department of Public Health

- **Jean Hicks**
  Cancer Coordinator
  Bureau of Family Health Services
  Division of Family Planning
  Alabama Department of Public Health

- **Barbara Karr, RN, PhD**
  Public Health Area VI
  Alabama Department of Public Health

- **Elaine Turnipseed**
  Baptist Hospice
  Montgomery, Alabama

- **John Waterbor, MD, DrPH**
  Assistant Professor
  Staff Development Coordinator
  UAB School of Public Health

APPENDIX D: EXAMPLE OF LOGIC MODEL

EXAMPLE - Prevention: Tobacco: Objective 1: Reduce number of tobacco product sales to minors

Input	Activity/Strategy	Implementation	Short-term outcome	Intermediate outcome	Long-term outcome
Principal Agency/ies: Alcoholic Beverage Control Board (ABC)/ Responsible Vendor Program Other Partners and Programs: Alabama Department of Mental Health and Mental Retardation/Substance Abuse Prevention Program; Alabama Department of Public Health (ADPH) Chronic Disease Prevention Program Linkages: Alabama Association of Convenience Stores; Alabama Oilman's Association; Alabama Retail Association	Continue to educate clerks who sell tobacco products, and increase efforts to educate merchants and outside merchant associations, about tobacco sales laws and the consequences of noncompliance.	To be compiled from the submitted monitoring reports detailing activities completed in response to the strategy.	To reduce the number of sales of tobacco products to minors.	By 2010, reduce from 13% to 10% the proportion of youth, grades 6-8, who smoke cigarettes. By 2010, reduce from 24% to 16% the proportion of youth, grades 9-12, who smoke cigarettes.	To reduce the percentage of Alabamians who smoke cigarettes.

APPENDIX E: ACCCC MONITORING FORM

Alabama Comprehensive Cancer Control Program

Implementation Record for the Period _____ to _____

This tool is designed to assist the Coalition members and the Program staff in collecting records of cancer prevention and control activities that are carried out in Alabama. Notice that there is an additional question at the end of the form asking about any "success stories." It is important that we make sure that our reports include descriptions of the accomplishments of people and programs that help with cancer prevention and control activities in the community. Descriptions showing how cancer-related programs have helped particular individuals in Alabama are especially appreciated.

This form was completed by _____(name), on _____ (date)

Program Goal: _____

Objective: _____

STRATEGIES:

Strategy
_____
_____
_____
_____
_____

This strategy is/was:

__ Included in Cancer Plan

__ Revised from the Cancer Plan

__ New, not included in the Cancer Plan

IMPLEMENTATION:

Strategy:___ Ongoing
___ One-time event

Strategy status [as of _____(date)]
__ Not achieved
__ Partially achieved
__ Fully achieved
__ Other (describe)
_____
_____

Describe what you did (evidence of program implementation):
_____
_____
_____
_____

Challenges you had:
_____
_____
_____
_____

SUCCESS STORY

We are particularly interested in learning about any "success stories" that show how coalition or committee activities have led to improvement in early detection of cancer, access to treatment, access to clinical trials, or improved quality of life. Successes can be related to patients, families, providers, institutions or other entities.

Success Story:

APPENDIX F: JOINING THE ACCCC

The Alabama Comprehensive Cancer Control Coalition seeks to add community members, organizations, or partnerships who are working to address the comprehensive continuum of services that range from primary prevention and early detection through effective treatment, quality of care, and end-of-life issues. If you would like to become involved with ACCCC, please complete and return the form below.

Name: _____

Organization: _____

Address: _____

City/State/Zip: _____

Phone: _____

Fax: _____

Email: _____

Please send to:

Alabama Comprehensive Cancer Control Coalition
Alabama Department of Public Health
201 Monroe Street, Suite. 1400G
Montgomery, AL 36104

Fax: (334) 206-5324

American Cancer Society Screening Guidelines

for the Early Detection of Cancer in Asymptomatic People

Site	Recommendation
Breast	■ Yearly mammograms are recommended starting at age 40. The age at which screening should be stopped should be individualized by considering the potential risks and benefits of screening in the context of overall health status and longevity. ■ Clinical breast exam should be part of a periodic health exam, about every 3 years for women in their 20s and 30s, and every year for women 40 and older. ■ Women should know how their breasts normally feel and report any breast change promptly to their health care providers. Breast self-exam is an option for women starting in their 20s. ■ Women at increased risk (e.g., family history, genetic tendency, past breast cancer) should talk with their doctors about the benefits and limitations of starting mammography screening earlier, having additional tests (i.e., breast ultrasound and MRI), or having more frequent exams.
Colon & Rectum	Beginning at age 50, men and women should begin screening with 1 of the examination schedules below: ■ A fecal occult blood test (FOBT) or fecal immunochemical test (FIT) every year ■ A flexible sigmoidoscopy (FSIG) every 5 years ■ Annual FOBT or FIT and flexible sigmoidoscopy every 5 years* ■ A double-contrast barium enema every 5 years ■ A colonoscopy every 10 years * Combined testing is preferred over either annual FOBT or FIT, or FSIG every 5 years, alone. People who are at moderate or high risk for colorectal cancer should talk to with a doctor about a different testing schedule.
Prostate	The PSA test and the digital rectal examination should be offered annually, beginning at age 50, to men who have a life expectancy of at least 10 years. Men at high risk (African American men and men with a strong family history of 1 or more first-degree relatives diagnosed with prostate cancer at an early age) should begin testing at age 45. For both men at average risk and high risk, information should be provided about what is known and what is uncertain about the benefits and limitations of early detection and treatment of prostate cancer so that they can make an informed decision about testing.
Uterus	**Cervix:** Screening should begin approximately 3 years after a woman begins having vaginal intercourse, but no later than 21 years of age. Screening should be done every year with regular Pap tests or every 2 years using liquid-based tests. At or after age 30, women who have had 3 normal test results in a row may get screened every 2 to 3 years. Alternatively, cervical cancer screening with HPV DNA testing and conventional or liquid-based cytology could be performed every 3 years. However, doctors may suggest a woman get screened more often if she has certain risk factors, such as HIV infection or a weak immune system. Women 70 years and older who have had 3 or more consecutive normal Pap tests in the last 10 years may choose to stop cervical cancer screening. Screening after a total hysterectomy (with removal of the cervix) is not necessary unless the surgery was done as a treatment for cervical cancer. **Endometrium:** The American Cancer Society recommends that at the time of menopause all women should be informed about the risks and symptoms of endometrial cancer, and strongly encouraged to report any unexpected bleeding or spotting to their physicians. Annual screening for endometrial cancer with endometrial biopsy beginning at age 35 should be offered to women with or at risk for hereditary nonpolyposis colon cancer (HNPCC).
Cancer-related checkup	For individuals undergoing periodic health examinations, a cancer-related checkup should include health counseling, and, depending on a person's age and gender, might include examinations for cancers of the thyroid, oral cavity, skin, lymph nodes, testes, and ovaries, as well as for some nonmalignant diseases.

American Cancer Society guidelines for early detection are assessed annually in order to identify whether there is new scientific evidence sufficient to warrant a reevaluation of current recommendations. If evidence is sufficiently compelling to consider a change or clarification in a current guideline or the development of a new guideline, a formal procedure is initiated. Guidelines are formally evaluated every 5 years regardless of whether new evidence suggests a change in the existing recommendations. There are 9 steps in this procedure, and these "guidelines for guideline development" were formally established to provide a specific methodology for science and expert judgment to form the underpinnings of specific statements and recommendations for the Society. These procedures constitute a deliberate process to ensure that all Society recommendations have the same methodological and evidence-based process at their core. This process also employs a system for rating strength and consistency of evidence that is similar to that employed by the Agency for Health Care Research and Quality (AHCRQ) and the US Preventive Services Task Force (USPSTF).

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

Alabama Department of Public Health
Cancer Prevention Division
201 Monroe Street, Suite 1400
P.O. Box 303017
Montgomery, AL 36104

www.alabamacancercontrol.org