



South Carolina Comprehensive Cancer Control Plan 2005 - 2010



South Carolina Cancer Alliance
"Creating A State of Hope"



SC Cancer Alliance Coordinating Council

(January 1, 2006)

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5. (SC Dept. of Health & Environmental
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Karl Pfaehler
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Anne Harvin Gavin
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District 45, Allendale, Beaufort, Charleston

SCCA Office

SC Cancer Alliance (SCCA)
P.O. Box 2722
Columbia, SC 29202
Toll Free: 1-866-745-5680
Website: www.sccanceralliance.org

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SC CANCER PLAN MISSION

Coordinate and promote partnerships and collaborations
to address cancer prevention and control strategies that
will reduce the impact of cancer on
all South Carolinians.

SC CANCER PLAN GOALS

Reduce the number of new cases of cancer.

Reduce deaths attributable to cancer.

Improve the quality of life of those living with
cancer and their families/caregivers.

Eliminate and/or reduce health disparities
attributable to cancer.

Improve access to and provision of
quality cancer care.

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A core planning team guided the process of completing the plan and provided general direction in completing time lines and reviewing progress. The core planning team was organized by the Department of Health and Environmental Control (DHEC), which provided staff support. Funding was provided through support from the state of South Carolina and federal funding from the Centers for Disease Control and Prevention Comprehensive Cancer Control Program.

The SC Comprehensive Cancer Control Plan will guide the activities of the SC Cancer Alliance to address the burden of cancer in the state. In addition to printed copies, the plan will be posted on the SCCA web site (<http://www.sccanceralliance.org/>) and will be updated as objectives are met and/or revised, best practices evolve, and new research emerges.

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Susan Bolick-Aldrich, MSPH, CTR, SC Central Cancer Registry, DHEC
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Michael Byrd, PhD, MPH, LMSW, Community Health and Chronic Disease Prevention, DHEC
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Peggy Baxter, LCSW, American Cancer Society
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Research

Swann Adams, PhD, Arnold School of Public Health, USC
Kim Creek, PhD, USC School of Medicine
Lynette Gibson, PhD, RN, Health Sciences, Clemson University
James Hebert, MSPH, ScD, Arnold School of Public Health, USC
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Betsy Levitas, MPH, Cancer Information Service, NCI
Conrad Otterness, MPH, Division of Cancer Prevention and Control, DHEC
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Tracy Mack Powell MSW, Division of Cancer Prevention and Control, DHEC
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Anastasia Kyriacou, American Cancer Society
Drew Monitto, MD, Spartanburg Regional Medical Center
Debra Seale, RN, MN, Palmetto Health SC Cancer Center
Henry Well, American Cancer Society
Staff: Virginie Daguisse, PhD, SC Cancer Alliance
Staff: Ian Hamilton, MSW, DHEC staff assigned to SCCA support

Survivor and Family Issues

Anthony Coggiola
Susie Busbee
Bart DeNoyior
Judith DeNoyior
Helen Haskel
Carol Ann Kern
Eddie Weinberg
Staff: Jim Allen, MSW, MPH, LMSW, DHEC

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INTRODUCTION



Introduction

Cancer touches all of our lives. One out of every two men and one out of every three women will develop cancer during their lifetime. There is probably not a person in South Carolina who has not watched a friend, a family member, a colleague, or a neighbor face this disease. We are all connected in the fight against cancer.

Cancer is the second leading cause of death in South Carolina. This year alone, over 21,000 people in our state will be told that they have been diagnosed with cancer (ACS, 2005a). Yet even in light of these grim statistics, there is cause for hope. Over the past three decades, the number of cancer survivors in the United States has more than tripled, from three million survivors in 1971 to almost ten million survivors in 2001. Today, more than half of all people diagnosed with cancer are expected to live at least five years after diagnosis. Yet despite these advances, there are still thousands of people every year who fall through the gaps in cancer prevention, detection and care.

The South Carolina Cancer Alliance (SCCA) is a non-profit organization committed to decreasing the impact of cancer on all South Carolinians. Today, the Alliance exceeds 800 members, most of whom volunteer their time. This grass-roots support illustrates the extraordinary potential and resources that the SCCA and the state of South Carolina can draw upon in the struggle against this devastating disease.

As a first step, the SCCA worked with its partners to develop the first South Carolina Cancer Report Card in 2004. That report provided a baseline on the state of cancer in South Carolina including new cancer cases, death rates, early detection measures, and health disparities. Key findings from the SCCA Cancer Report Card, along with new research, guided the development of this plan and include the following:

- The estimated annual cost of cancer in South Carolina is \$2.6 billion, yet only a fraction of health care dollars are allocated to prevention.
- South Carolina has one of the highest youth smoking rates in the nation. Each year at least 11,000 South Carolina kids become daily smokers.
- South Carolinians have higher rates of tobacco use and obesity than the nation at large, putting them at higher risk for cancer.
- Almost half of all cancer deaths are caused by three cancers: lung, colorectal, and breast. These are all cancers that can either be prevented or can be detected at early stages when chances for survival are greatest.
- There are glaring racial disparities in South Carolina cancer rates. African-Americans have higher death rates for most cancers, including breast, cervical, esophageal, oral/pharynx, and prostate cancers.

South Carolina can do better. The South Carolina Cancer Alliance is committed to finding workable solutions to reduce the terrible cost of cancer, in both economic terms and in human lives. SCCA members are united in understanding that every life counts.

Introduction

The SCCA seeks to provide a forum for those touched by cancer in South Carolina and to advocate for resources for cancer prevention, detection, care, and research. This alliance represents the best of South Carolina: people reaching across every imaginable boundary to work together to save lives and reduce the suffering carried by this disease.

The intent of the alliance is to serve as a network to bring these diverse groups together with a common purpose, and there are many issues that we can agree upon. We all want to prevent our kids from becoming addicted to tobacco before they even graduate from high school. We all want to find ways to connect South Carolinians with life-saving cancer detection and care. We all want to close the staggering gap in health disparities between African American and whites in our state. In order to accomplish these goals and achieve lasting change, the communities most at risk must be involved at every stage of this process. One of the critical roles of the SCCA is to act as a catalyst for community action: to work through the community — at all levels — to bring about change.

“Cancer is devastating for so many families in South Carolina. It is important that we develop community-wide partnerships – bringing together experts with a passion to fight this disease. We have the baseline data. We can now begin to implement programs across the state and track the success of our efforts“

South Carolina First Lady Jenny Sanford

Common sense tells us that in order to truly win the fight against cancer, we need resources. Political experience tells us that to garner funding, we must speak in a clear, consistent and unified voice.

Yet resources go beyond dollars and spreadsheets. The greatest asset South Carolina can draw upon is the power of collaboration. One illustration of unique collaboration is in cancer research: in July 2005, a special issue of the e-Journal of the South Carolina Medical Association was released, which highlighted cancer disparities in South Carolina. This was major step forward in the commitment of research groups at state and local levels to work collectively. Another example of collaboration is the combination of groundwork, grass-roots advocacy, and legislative support that led to increased funding for breast and cervical cancer care in 2005. This remarkable achievement could not have been accomplished without community involvement and support.

The South Carolina Comprehensive Cancer Plan is the next step forward. This plan is designed to be a dynamic document rather than a static finished report. To facilitate this process, the plan is published in loose-leaf format. The plan can be easily updated as new partners are engaged, the knowledge base changes, and new strategies are designed.

The most current version of the plan will be posted on the SCCA web site so that the plan is always accessible and all SCCA members are encouraged to participate in this process. In order to obtain the latest version, please go to the SC Cancer Alliance Website at <http://www.sccanceralliance.org/>.

Introduction

SCCA Background

South Carolina has a long history of collaboration on cancer treatment and care. This collaboration began in the late 1930's with the first days of the State Aid Cancer Program, which provided funding for poor people with cancer in South Carolina. However, until recently, cancer prevention and control strategies and resources have not been well coordinated among partners, and have not always involved the communities most affected by this disease.

This changed in 2001 when, under the direction of the South Carolina Department of Health and Environmental Control (DHEC) Cancer Control Advisory Committee, plans were initiated to forge a statewide cancer coalition. A steering committee consisting of twenty representatives from DHEC, the American Cancer Society, the two state medical schools, Medical University of South Carolina and the University of South Carolina, the state universities, and the state's major cancer treatment and research centers met to discuss the need for collaboration and coordination of resources to address cancer in South Carolina.

As a result of these meetings, two statewide cancer summits were held in January and May 2002 to energize cancer stakeholders and to introduce the need for a dedicated organization to coordinate and collaborate on all aspects of cancer prevention and control. Over 150 participants attended these sessions, including health professionals, consumers, cancer survivors, government officials, and business/industry representatives. At these sessions, the purpose and structure of a statewide cancer coalition were proposed and strategies were adopted on membership, operational structure, and goals.

Strategies were to be comprehensive and based on the Centers for Disease Control and Prevention's cancer control program. These strategies would address all major cancers, all population groups, and all geographic areas. Participants also agreed to develop a statewide comprehensive cancer control plan to provide a roadmap for addressing cancer throughout the state. The name "South Carolina Cancer Alliance" (SCCA) was proposed and accepted by participants.

Between May 2002 and February 2003, the steering committee continued to identify new members and to develop a structure for the South Carolina Cancer Alliance. During that time, five task forces were organized to address specific areas of comprehensive cancer control: Advocacy and Policy, Early Detection, Patient Care, Prevention, and Research. Each task force began to develop short- and long-term objectives to address cancer from a public health perspective.

Concurrently, staff from DHEC and the American Cancer Society (ACS) organized regional recruitment meetings to ensure broad participation in the SCCA from across the state. The DHEC Division of Cancer Prevention and Control also applied for a planning grant from CDC to facilitate the development of the SCCA and to support the completion of a comprehensive cancer plan. Effective June 2003, DHEC was awarded a CDC comprehensive cancer control program planning cooperative agreement.

Introduction

SCCA Background

The South Carolina Cancer Alliance held its first official meeting in March 2003. Since this initial meeting, the SCCA has continued to grow and refine its structure. The SC Women's Cancer Coalition became part of the SCCA, increasing consumer input into the organization. Today, there is an active mix of members, including representatives from the public health and medical communities, grass roots organizations, state and local government, and cancer survivors and family members. The South Carolina Cancer Alliance now exceeds 800 members.

"We must work together to reduce the number of people who get cancer, save lives by detecting cancer early, and engage every South Carolinian in efforts to reduce his or her own cancer risks".

Terry Day, MD, SC Cancer Alliance Chair

In May 2003, five SCCA task forces (Advocacy/Policy, Early Detection, Patient Care, Prevention, and Research) began to organize planning committees to work on sections of the comprehensive cancer plan. At the same time, the SCCA and DHEC organized a Core Planning Team (CPT) to oversee the completion of the cancer plan. Early in the process, consumer representatives were invited to ensure additional community input. Three special work groups were also created to address overarching and emerging issues – Survivor/Family Issues, Health Disparities, and Genetics. In 2005, the Survivor and Family work group was designated as a task force.

The SCCA task force subcommittees and workgroups (Health Disparities and Genetics) worked throughout the rest of 2003 and 2004 to draft objectives and strategies for the plan. These objectives were based on the most current research available, including data from the SC Central Cancer Registry and the SC Behavioral Risk Factor Surveillance System. Strategies were reviewed in light of best and promising practices and those adopted ensured that diverse populations are addressed.

By December 2004, work on the mission, goals, objectives, and strategies for the SC Cancer Plan was completed. At that time, six regional meetings were held to review the plan with community leaders and citizens. Additional input was obtained and the final draft sections were shared with the SCCA at their quarterly meeting in January 2005.

With full commitment from the SCCA, DHEC applied for and received implementation funding through CDC, which along with other lines of funding, will support the goals set forth in the plan. This cancer plan will be directed and implemented through the work of the SCCA Task Forces, working together in collaboration.

This collaboration is already in progress: a special issue of the e-Journal of the South Carolina Medical Association, which highlights South Carolina's most significant cancer disparities, was recently released. This work represents a major step forward in the commitment of groups across the state to work collectively and is a triumph for community-based participatory research in our state. Along with the South Carolina Cancer Alliance (SCCA) and its affiliates and members, this places South Carolina in the vanguard of cancer research in the United States.

Introduction

Report Organization

The SC Comprehensive Cancer Control Plan is organized into two main sections: Overarching Issues and Core Public Health Issues.

Overarching Issues include Health Disparities, Advocacy and Policy, Research, and Genetics. These areas will be integrated into every aspect of comprehensive cancer planning and set the course for achieving the priorities in this plan.

Core Public Health Issues encompass Prevention, Detection, and Patient Care, which are all fundamental to the implementation and success of this plan. Survivor and Family Issues are also highlighted, in recognition of the multi-faceted issues that face cancer survivors and their families.

If you are reading this as a hardcopy version, it may not be the most current iteration available. In order to obtain the latest version please go to the SC Cancer Alliance Website (<http://www.sccanceralliance.org/>).

HEALTH DISPARITIES



Health Disparities

One of the key goals of this SCCA cancer plan is to close the gap in cancer disparities in South Carolina. For the purposes of this report, cancer disparities are defined as differences in the incidence, prevalence, mortality, and burden of major cancers that exist between specific populations. Minority and underserved populations, distinguished by race/ethnicity, socioeconomic status, and geographic location, carry a greater cancer burden than the average American.

According to the NCI Center to Reduce Cancer Health Disparities, underserved populations groups are more likely to “be diagnosed with and die from preventable cancers; be diagnosed with late stage disease for cancers detectable at an early stage through screening; receive either no treatment or treatment that does not meet currently accepted standards of care; die of cancers that are generally curable; and suffer from terminal cancers in the absence of adequate pain control and other palliative care.” (NCI, 2005a)

As a crucial first step in addressing this health gap in South Carolina, the SCCA produced its first Cancer Report Card in 2004, which identified cancers for which racial disparities were greatest in our state. Key findings from the report card and from analyses of cancer registry data include:

- Prostate Cancer. In South Carolina, African-American men are much more likely to develop prostate cancer and almost three times more likely to die from prostate cancer than white men.
- Breast Cancer. Although white women are more likely to develop breast cancer than African-American women in South Carolina, African-American women are 1.5 times more likely to die from this disease than white women.
- Cervical Cancer. In South Carolina, African-American women are 2.5 times more likely to die (or have a 250 percent greater risk of dying) from cervical cancer than white women.
- Esophageal Cancer. Both incidence and mortality rates are at least twice as high for African Americans as for whites. Incidence rates for a certain type of esophageal cancer (squamous cell) are six times higher for African-American men than whites (SCCA, 2004)
- Oral/Pharynx Cancer. African-American men in South Carolina have higher rates of dying from oral/pharynx cancer than whites, and this health disparity is significantly higher in South Carolina than the rest of the nation (SCCA, 2004).

These findings are reflected in cancer incidence and mortality data for South Carolina/US (Tables 1 and 2), which provide summary data for six cancer sites. For more detailed data on cancer disparities in South Carolina and implications for cancer research, please refer to the July 2005 e-Journal of the South Carolina Medical Association (<http://www.scmanet.org/>).

Cancer Incidence

Incidence for all major cancers in South Carolina, except female breast cancer, is higher among African-Americans than all other groups (Table 1).

Table 1. Cancer Incidence: Age-adjusted incidence rates* ** and number of incident cases (italic) for selected cancers in SC by race/ethnicity. SC 1996-2001 rates, compared to 2001 US rates.

		Lung/Bronchus				Colorectal			
Race/ ethnicity	SC Men	US Men	SC Women	US Women	SC Men	US Men	SC Women	US Women	
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
	N	N	N	N	N	N	N	N	
All Races	106.4 10561	87.7 6293	48.1 34.7	53.2 47.7	65.8 6286	62.7 5938	45.4 50.1	45.8 52.0	
Black	110.3 2352	109.0 1090	34.7 5157	47.7 54.6	69.4 1459	66.7 4764	50.1 4309	52.0 45.0	
White	105.1 8158	86.8 5157	52.2 54.6	54.6 24.8	64.4 32.7	62.2 51.6	43.7 18.5	45.0 34.6	
Hispanic***	35.9 23	52.0 12	--	24.8	32.7 24	51.6 16	18.5 16	34.6	
Asian or Pacific Islander	81.3 35	50.4 31	46.6 25.2	25.2	82.4 35	46.7 29	37.9 29	33.9	

		Prostate		Oral		Breast		Cervical	
Race/ ethnicity	SC Men	US Men	SC Men	US Men	SC Women	US Women	SC Women	US Women	
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
	N	N	N	N	N	N	N	N	
All Races	175.5 17,338	161.2 2,030	19.5 15.3	15.3 2,030	123.0 15,696	127.2 15,696	11.2 1,395	8.4 1,395	
Black	264.1 5,385	234.1 602	24.8 17.3	17.3 602	108.0 3,505	106.7 3,505	15.4 515	11.9 515	
White	148.1 11,578	151.8 1,412	17.9 15.0	15.0 1,412	127.2 12,023	129.9 12,023	9.7 839	8.0 839	
Hispanic***	89.7 54	129.6 10	-- 11.3	11.3 10	61.3 54	86.6 54	11.6 17	11.8 17	
Asian or Pacific Islander	287 86	85.0 10	-- 9.5	9.5 10	122.1 100	78.1 100	22.8 22	7.5 22	

* The following suppression r□

** Incident Data are subject to change as datasets are updated. Data originates from the 1996-2001 masterfile (finalmaster2004).

***Rate per 100,000 population, age-adjusted to 2000 US standard million, using 19 age groups.

**Cells with 15 or fewer deaths do not have rates due to the instability of small numbers when calculating rates.

****Hispanic origin is not mutually exclusive from race categories (white, black, Asian/Pacific Islander).

Cancer Mortality

Cancer death rates for all major cancers in South Carolina, except lung cancer, are higher among African-Americans than all other groups (Table 2).

Table 2. Age-adjusted mortality rates* ** and number of deaths (*italic*) for selected cancers in South Carolina by race/ethnicity (SC 1996-2001, US 2002).

Race/ ethnicity	Lung/Bronchus				Colorectal			
	SC Men	US Men	SC Women	US Women	SC Men	US Men	SC Women	US Women
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
	N	N			N	N		
All Races	93.0 8983	73.5 5053	38.4 28.1	41.5 40.2	26.7 2396	23.8 2333	17.7 21.8	16.5 22.8
Black	104.0 2176	95.7 879	28.1 41.8	40.2 42.6	33.9 676	33.4 1717	21.8 16.4	22.8 16.0
White	90.2 6782	72.7 4160	41.8 42.6	42.6 1717	24.8 17.1	23.2 10	16.4 10	16.0 11.2
Hispanic***	---	36.7 10	---	14.8 10	---	17.1 10	---	11.2 10
Asian or Pacific Islander	41.1 18	36.6 10	---	17.6 <5	---	15.9 10	---	10.1 10

Race/ ethnicity	Prostate		Oral		Breast		Cervical	
	SC Men	US Men	SC Men	US Men	SC Women	US Women	SC Women	US Women
	Rate N	Rate N	Rate N	Rate N	Rate N	Rate N	Rate N	Rate N
All Races	40.7 3068	28.1 623	6.2 3519	4.1 1149	27.3 35.7	25.5 34.1	3.6 6.5	2.5 5.0
Black	82.9 1360	63.0 284	12.1 1149	6.3 2360	35.7 24.3	34.1 24.9	6.5 2.6	5.0 2.3
White	29.4 1702	25.8 335	4.4 335	3.9 2360	24.3 2360	24.9 15.7	2.6 ---	2.3 3.2
Hispanic***	---	22.0 10	---	2.7 ---	---	15.7 12.9	---	<5 2.3
Asian or Pacific Islander	---	10.3 <5	---	3.2 <5	---	12.9 10	---	2.3 10

* The following suppression □

** Mortality Data originates from the 1996-2003 cancer mortality file

***Rate per 100,000 population, age-adjusted to 2000 US standard million, using 19 age groups

****Cells with 15 or fewer deaths do not have rates due to the instability of small numbers when calculating rates.

*****Rates will not match SC published data for Whites, Blacks and All Races combined.

|||| Hispanic origin is not mutually exclusive from race categories (white, black, Asian/Pacific Islander).

Population data from SEER/NCI bridges population estimates.

Health Disparities

Socioeconomic Status and Disparities

The reasons for the staggering disparities in cancer rates in South Carolina are multi-faceted and not completely understood. Causes ranging from behavioral factors to genetic susceptibility to environmental exposures have been suggested, and may all play significant roles. At the same time, the complex interplay between socioeconomic status and health cannot be disregarded. (NCI, 2005a).

Health factors associated with socioeconomic status include reduced access to care, delayed diagnosis, and disparities in treatment (ACS, 2005b). The social environment, including deeply rooted cultural beliefs and expectations, contribute to and compound these factors.

Poverty. Over 14 percent of South Carolinians live below the poverty level. African Americans are far more likely to live in poverty than whites in South Carolina: 26.4 percent of African Americans live below the poverty level, compared to 8.6 percent of whites (SC Budget and Control Board, 2002).

Access to Care. An estimated one in five South Carolinians are uninsured, according to the SC Department of Insurance. For people living on the edge, regardless of race, health care is seen as a luxury, rather than a necessity. In a recent study, almost half of uninsured adults with chronic conditions reported that they went without needed medical care or prescription drugs due to cost (RWJ, 2005). The underinsured are also at risk. Even with coverage, people may delay getting tested or treated for cancer because they cannot afford co-payments, cannot afford to take time off work for appointments, or may have no way to reach medical facilities.

Geographic Isolation. In rural areas of the state, lack of transportation can restrict access to care. Public transportation is usually sparse or nonexistent in rural areas, and fewer residents own or have access to vehicles. Across all rural South Carolina counties, the percentage of residents who lack a vehicle ranges from 6 to 22 percent, with an average of 15.2 percent in majority African-American counties (SOHR, 2001).

Disparities in Stage at Diagnosis. SCCR data from 1998-2001 indicate that whites are more likely to be diagnosed with early-stage cancer than African-Americans. From 1998-01, 46.4 percent of whites were diagnosed in early stage (all cancers) compared to only 39.5 percent of African-Americans.

Disparities in Treatment. There is compelling evidence that minorities receive a different standard of health care than whites in America, even when income, insurance, and access are equal (IOM, 2003). A number of factors are thought to contribute, but there is evidence that bias and stereotyping drive these differences. The SCCA is committed to finding solutions to this disturbing and critical issue in cancer care through collaboration between the African American community, research and public health groups, and the medical and allied professional fields.

Health Disparities

Strategies for Action

These issues underscore the compelling need for a focused plan to eliminate cancer disparities in South Carolina. SCCA strategies span the spectrum of cancer prevention and care in South Carolina, from finding new ways to reach underserved rural people for cancer screening and care, to cutting-edge cancer research. Community-based participatory research shows particular promise in addressing health disparity issues in South Carolina. Collaboration is vital to this approach, especially partnership with the faith community, which is often the heart of African-American community in South Carolina.

Examples of strategies include:

- Informing and engaging local organizations and faith communities about the growing gap in health disparities in South Carolina and the need for cancer information, screening, and treatment services.
- Encouraging lifestyle changes to reduce risk factors including tobacco use, physical inactivity, and poor nutrition.
- Creating targeted public and professional education campaigns, with culturally appropriate messages for ethnic/racial/religious groups in South Carolina.
- Improving early cancer detection through screening procedures, increased access to screening and treatment services, and informed patient/client decision-making.
- Addressing transportation barriers for underserved cancer patients.
- Encouraging the participation of racial/ethnic minorities in research at all levels, from community-based interventions to clinical trials.
- Encouraging more minorities to enter the medical and allied professional fields.
- Encouraging more minority scientists to engage in public health research in South Carolina, particularly in research addressing health disparity issues.

In framing this plan, a commitment was made to use the best evidence available at this time to guide recommendations, including resources from the *Guide to Community Preventive Services*, *Promising Practices in Chronic Disease Prevention and Control*, and recommendations from the US Preventive Services Task Force. The SCCA is committed to designing flexible strategies and to reframe these strategies as new research emerges and new community partners join in these efforts.

Health Disparity Objectives

A number of the objectives in this section are listed elsewhere in the plan under the relevant sections (i.e., Prevention, Early Detection). They are restated here to emphasize the commitment of the members of the SCCA to respond to these inequalities in health measures. Members of the Health Disparities work group will monitor and assist other task forces in ensuring disparities are addressed through this long-range plan.

Health Disparities

Awareness

"The unequal burden of disease in our society is not just a scientific and medical challenge. It also presents a moral and ethical dilemma for our Nation."

Making Cancer Health Disparities History, 2004

In South Carolina, African-American men are more likely to be diagnosed with prostate cancer than white men and are almost three times more likely to die from this disease. (from report)

Objective 1. By June 2006, increase public and professional awareness about cancer health disparities and cancer prevention, treatment, and screening.

Strategy 1. Collaborate with government agencies, schools of public health and medicine, community groups, and the faith community to educate the public and professionals about topics related to health disparities and cancer. These include:

- The importance of social, economic, and environmental factors influencing community health;
- The role of behavioral and biological factors in deterring cancer risk;
- Types of interventions and strategies that can reduce the risk for developing cancer.

Strategy 2. Provide current and accurate information about cancer prevention and treatment issues.

Strategy 3. Identify best practices for health communication and interventions for minority populations to improve service delivery strategies and resource allocation.

Strategy 4. Encourage schools of public health and health sciences (medicine, nursing, etc) to better coordinate programs and recruitment activities with Historically Black Colleges and Universities.

Health Disparities

Prevention

Objective 1. **By June 2006, develop collaborative relationships with at least four statewide and local community and state entities with similar missions and goals for physical activity and nutrition policies in South Carolina.**

Strategy 1. Promote policies and legislation that provide safe, enjoyable, and accessible environments for physical activities in schools and for transportation and recreation in communities (i.e., Green Spaces; walking paths).

Strategy 2. Develop collaborative relationships to initiate programs to promote healthy eating patterns, including the consumption of recommended quantities of fruits and vegetables.

Objective 2. **By June 2010, decrease the rate of tobacco use among adult South Carolinians (age 18+) from 26% to 12% (SC BRFSS, 2003).**

Strategy 1. Increase awareness among African-American men about the dangers of mentholated cigarettes, through targeted media campaigns.

Strategy 2. Increase local presence and activity in communities through development of local tobacco coalitions.

Strategy 3. Increase capacity and diversity of local tobacco coalitions in coordination with the SC Tobacco Collaborative.

Objective 3. **By June 2010, increase the proportion of the SC population that consumes at least five servings of fruits and vegetables from 23.9% to 50% (SC BRFSS, 2003).**

Strategy 1. Promote adequate nutrition intake among children and adults, targeting African-Americans.

Strategy 2. Promote the integration of healthy eating habits within the routine health education given by health care providers.

Objective 4. **By June 2010, increase the proportion of adults who engage regularly in moderate physical activity for at least 30 minutes per day from 24.1% to 30% (SC BRFSS, 2003).**

Strategy 1. Develop partnerships with city planners, and transportation entities to modify environments and promote policies that support physically active lifestyles.

Strategy 2. Work with communities and law enforcement agencies to provide safe, convenient areas to enhance physical activity.

Health Disparities

Early Detection

Objective 1. By June 2010, increase the proportion of women age 40+ who have received a clinical breast exam (CBE) within the preceding two years from 77.4% to 82% (SC BRFSS, 2002).

Strategy 1. Promote core competencies in CBE for providers; integrate CBE materials developed through the Breast and Cervical Cancer Early Detection Program (BCCEDP) into medical and nursing graduate education, and residency training programs.

Strategy 2. Identify and address barriers to the implementation of CBE training for continuing medical education.

Strategy 3. Collaborate with faith-based organizations, breast cancer service providers, and community organizations to recruit women who are rarely or never screened.

Objective 2. By June 2010, increase the proportion of women age 40+ who have received a mammogram within the preceding two years from 76% to 80% (SC BRFSS, 2002).

Strategy 1. Identify data sources in addition to BRFSS to establish more accurate mammography screening rates in SC.

Strategy 2. Implement findings from SC research on efficacy of public education campaigns to promote breast cancer screening, focusing on groups at highest risk for not being screened (i.e., small media campaigns; faith-based outreach).

Strategy 3. Collaborate with the Advocacy/Policy Task Force to seek state funding to extend mammography services comparable to BCCEDP to uninsured women who do not qualify for the program.

Strategy 4. Develop a campaign with the SC Medical Association, SC Nurse's Association, Physician Assistant associations, and the Carolina Medical Review to promote mammography referral for all women 40+ seen by providers in primary care or internal medicine practices.

Health Disparities

Early Detection

Objective 3. By June 2010, increase the proportion of women at risk for cervical cancer (including never/rarely screened* who comprise but are not limited to racial/ethnic minorities, uninsured, age-specific and rural populations) who have received screening services within the preceding three years from 83% to at least 90% (SC BRFSS, 2002).

* Never/Rarely screened includes women who have never had a Pap test and those who have not had a Pap test in the past five years.

Strategy 1. Collaborate with faith-based organizations and community organizations, and other community partners to disseminate cervical cancer information.

Strategy 2. Collaborate with the Research Task Force to:

- Identify areas/sub-populations who are at highest risk for not being screened for cervical cancer;
- Utilize community-based participatory research activities and findings to identify factors contributing to the disparities;
- Adapt and implement evidence-based interventions relevant to South Carolina's at-risk population.

Strategy 3. Engage and support community and program partners in existing cervical cancer screening efforts and priorities to reach never/rarely screened women for Pap tests. Program partners can include the Breast and Cervical Cancer Early Detection Program, Team-Up Project, Witness Project, Community Networks Program, and other programs as they are identified.

Objective 4. By June 2010, increase the proportion of men newly diagnosed with prostate cancer at the localized stage from 72.6% to at least 75%.

Objective 5. By June 2010, raise men's awareness of the need to make informed decisions about screening for prostate cancer.

Strategy 1. Convene a task force of experts to include African Americans and community activists to review current national screening guidelines and make recommendations for implementation of guidelines for best practice in South Carolina.

Strategy 2. Add a question to BRFSS to learn what SC males 40+ know about their personal risk for prostate cancer.

Strategy 3. Support dissemination of new information to provide the public, and especially African-American males, with evolving science, technology, and guidelines for prostate cancer.

Health Disparities

Early Detection

Objective 6. By June 2010, increase the proportion of oral/pharyngeal cancers newly diagnosed among African-American males at early stage (in-situ or localized) from 22.1% to at least 30%.

Strategy 1. Collaborate with dental and medical associations and other health organizations to promote public and professional awareness of risk factors for oral/pharyngeal cancer.

Strategy 2. Support dissemination of new information to provide the public with evolving science, technology, and guidelines for prevention/ early detection of oral/pharyngeal cancer.

Strategy 3. Collaborate with faith-based organizations and community organizations to raise awareness about oral/pharyngeal cancer.

Objective 7. By June 2010, increase the proportion of esophageal cancers newly diagnosed among African-American males at early stage (in-situ or localized) from 20.5% to at least 33%.

Strategy 1. Monitor ongoing science and research regarding the early detection and treatment of precursors to esophageal disease and the possible efficacy of screening/detection methods for esophageal cancer.

Strategy 2. Support dissemination of new information to provide the public with evolving science, technology and guidelines for prevention/ early detection of esophageal cancer.

Strategy 3. Collaborate with faith-based organizations, community organizations, and employers in targeted geographical areas to reach high-risk, African-American males concerning risk factors.

Health Disparities

Patient Care

Objective 1. By 2006, assess and address the magnitude of indigent cancer care to improve access to care.

Strategy 1. Conduct a literature review to establish the state of indigent cancer care.

Strategy 2. Create a workgroup to review and analyze appropriate and relevant data:

- Collaborate with and assist the SC Central Cancer Registry (SCCCR) in securing the appropriate resources to compile the data.
- Identify sources of free care and ascertain related cost and charges.
- Conduct data linkage between Hospital Discharge Data (1996-2002) and SCCR incident cases (1996-2001).
- Analyze linked data, report by payer status, race, cancer type, and stage.

Strategy 3. Identify existing resources in communities to promote access to care in South Carolina.

Strategy 4. Work with other partners to advocate for a cancer Medicaid waiver in South Carolina.

Objective 2. By 2006, identify and address transportation barriers for cancer patients.

Strategy 1. Survey radiation oncology centers on issues related to patient transportation.

Strategy 2. Cultivate networks within communities in order for them to develop their own transportation solutions.

Strategy 3. Distribute, periodically update, and educate health care providers on additional transportation resources.

Strategy 4. Re-survey radiation oncology centers routinely to assess changes.

Health Disparities

Advocacy and Policy

Objective 1. **To secure sustained legislative support to extend Medicaid coverage for treatment of breast and cervical cancer to all indigent women in South Carolina.** Through the collaborative efforts of the SCCA, this objective was achieved for FY2006-2007.

Strategy 1. Educate key legislators and program officials to maintain support for the coverage.

Objective 2. **By June 2007, secure legislative support to extend Medicaid coverage for screening, early detection, and treatment of colorectal cancer to indigent persons.**

Strategy 1. Research the experiences of other states on obtaining Medicaid coverage; develop a briefing paper on issue.

Strategy 2. Educate key legislators and program officials to gain support for the coverage.

Strategy 3. Explore option of using tobacco tax increase (excise/sales tax) and/ or Tobacco Settlement funds for the required state match.

Health Disparities

Research

- Objective 1.** **By June 2006, re-publish reports prioritizing cancer research in South Carolina in a hard copy of the Journal of the SC Medical Association.**
Note: These reports were originally published in a special on-line symposium (July 2005) issue of the journal. This republication will allow comments from the communities/ constituencies involved to be incorporated into the final papers. To our knowledge, this is the first time that community-based participatory research (CBPR) has been part of the process of developing research priorities and strategies.
- Objective 2.** **By June 2006, the SCCA will launch/sponsor a public relations campaign to educate the South Carolina public about scientific research and participation in cancer research studies.**

Strategy 1. Hire public relations firm/individual to work with the SCCA to develop/create the core purposes of the campaign and its priority messages.

- Compose culturally appropriate messages for ethnic/ racial/religious groups in South Carolina;
- Assure that messages will be understandable to low health literacy audiences;
- Develop timeline and target areas for campaign rollout;
- Create media pieces for above campaign (radio, TV, print);
- Implement timeline in targeted areas;
- Evaluate effectiveness of campaign;
- Revise/edit campaign and rollout to rest of state.

Strategy 2. Create a model recruitment campaign that capitalizes on the statewide generic campaign above, which can be used by a variety of research disciplines in cancer control.

- Determine effective messages and culturally appropriate methods of communicating research information;
- Offer research seminars at Historically Black Colleges and Universities (HBCUs) in South Carolina to raise research awareness and increase interest in pursuance of cancer research careers among minorities;
- Make research findings available for dissemination through community-based organizations and outreach projects (posters, brochures, etc.).

Health Disparities

Research

Objective 3. **By October 2007, develop a core resource that will assist cancer researchers with the recruitment, retention, and compliance of human subjects into cancer research protocols of all types.**

Strategy 1. Build on existing resources, and create new core competencies to assist basic science researchers, clinician scientists, and population-oriented researchers with recruiting human subjects into a variety of studies.

- Promote recruitment into cancer research protocols of all types through outreach projects, community health initiatives, and telephone surveys.
- Determine the demographic characteristics of people participating in clinical trials across the state.
- Increase by 15% the number of minorities participating in cancer clinical trials.
- Increase by 15% the number of cancer screening, prevention, and treatment clinical trials that target African-Americans.

Objective 4. **By 2008, establish and maintain closer partnerships among researchers, communities, and community leaders.**

Strategy 1. Develop and encourage relationships with community gatekeepers.

Strategy 2. Establish a caucus of community members, gatekeepers, and researchers to address community problems and expand knowledge related to cancer research and control.

ADVOCACY AND POLICY



Advocacy and Policy

The South Carolina state legislature, public health groups, and the research and medical communities have a legacy of collaboration on cancer prevention and care. An example of this collaboration is the funding passed in June 2005 that ensured cancer treatment for indigent women with breast and cervical cancer. During some of the leanest years in budget history, bi-partisan legislators have worked to find ways to put funding in place for cancer care. Now, through the membership and leadership of the South Carolina Cancer Alliance, we have the potential to accomplish even more.

The South Carolina Cancer Alliance provides a voice for the diverse group of individuals and organizations working to fight cancer in South Carolina. In addition to the key role of partnership and collaboration, the SCCA works to provide consistent, reliable information on cancer; to translate cancer data into everyday terms that can be used by policy makers, community leaders, and the media; and to make this information available to everyone in South Carolina through its website. This ranges from health care economics, to the toll of cancer on human lives, to recognition of the incredible community-based work being done all around this state to fight cancer.

Cancer continues to take the lives of more South Carolinians than any disease besides heart disease, and we can do more to fight back. The loss of the State Aid Cancer Program has left thousands of South Carolinians without resources for cancer treatment. Reducing the terrible cost of tobacco use is another central goal of the SCCA:

- South Carolina's youth tobacco rates are among the highest in the nation. An alarming 36% of high school students in South Carolina use tobacco, and more than 11,000 kids become new daily smokers each year (CTFK, 2005).
- South Carolina ranks 51st in the nation in funding for tobacco prevention (CTFK, 2005).
- South Carolina's current tobacco tax rate is the lowest in the entire nation – even though the majority of South Carolinians support an increase.

Tobacco policy is not a simple issue in states like South Carolina, with deep historical roots in tobacco production. Yet other tobacco-growing states, with equally strong traditions, have found ways to bridge their ties to the past with innovative policy-making. These states have worked to support family farmers, provide decent health care for their citizens, and fund prevention programs for tobacco at the same time.

Advocacy and Policy

South Carolina currently has the lowest cigarette tax of the six tobacco-growing states. Previous attempts to pass legislation to increase this tax have not met with success. But South Carolina public opinion polls show that this legislative policy does not reflect the will of the people of South Carolina. An overwhelming majority of South Carolinians, 77 percent, supports a substantial increase in cigarette taxes to fund health care. This public support cuts across racial, political and geographic lines (State Newspaper, 2003).

There is good cause for this public support: increased cigarette taxes have been shown to reduce youth smoking, reduce health care costs and raise state revenues. Yet South Carolina's tax rate is only 7 cents per package, far below the national average of 85 cents per package.

South Carolina can do better. The SCCA, in partnership with the SC Tobacco Collaborative and its organizational members, will continue to work with the SC State Legislature to enact a reasonable tax rate for tobacco products in South Carolina. The SCCA will also promote policies that ensure tobacco settlement funds are allocated to preventing tobacco use and reducing the devastating cost of cancer to our state.

Advocacy and Policy

- Objective 1.** **To secure sustained legislative support to extend Medicaid coverage for treatment of breast and cervical cancer to all indigent women in South Carolina.** Through the collaborative efforts of the SCCA, this objective was achieved for FY2006-2007.

Strategy 1. Educate key legislators and program officials to maintain support for the coverage.

- Objective 2.** **By June 2007, secure legislative support to extend Medicaid coverage for screening, early detection, and treatment of colorectal cancer to indigent persons.**

Strategy 1. Research the experiences of other states on obtaining Medicaid coverage; develop a briefing paper on issue.

Strategy 2. Educate key legislators and program officials to gain support for the coverage.

Strategy 3. Explore option of using tobacco tax increase (excise/sales tax) and/ or Tobacco Settlement funds for the required state match.

“Many of the most important cancer decisions are made not just in the doctor’s offices, but also in state houses... Government officials make decisions everyday about health issues that affect people’s lives. Laws and policies can fund cancer research, ensure access to care, offer prevention, early detection and quality cancer care to the medically underserved and reduce suffering from tobacco-related illnesses.”

American Cancer Society, 2005

- Objective 3.** **By June 2007, increase insurance coverage (public and private) for breast/ cervical, colorectal, and prostate cancer screening by 15%.**

Strategy 1. Work with insurance commission officials, key legislators and staff to promote changes in regulation/s/policies to increase cancer screening coverage.

Strategy 2. Support and work with partners to launch a media campaign to promote support for increased coverage.

Advocacy and Policy

Objective 4. By June 2006, increase the SC sales tax on cigarettes to \$1.00 per pack.

Strategy 1. Develop and implement/disseminate a plan to educate and inform SC citizens regarding the rationale for increased user's fees (sales tax) on tobacco products.

Strategy 2. Publicize research findings supporting tax increase as an effective tool for preventing youth smoking.

Strategy 3. Ensure that the SC Department of Education collect/ secure data regarding youth behavior via Youth Risk Behavior Surveillance Survey (YRBSS); recruit a Department of Education representative for SCCA.

Strategy 4. Conduct town meetings at four targeted locations in SC to promote the increase in sales tax on cigarettes.

Strategy 5. Gain support of the necessary number of legislators to support tax increase to ensure passage.

"South Carolina currently has the lowest cigarette tax of the six tobacco-growing states. Yet South Carolina public opinion polls show that this policy does not reflect the will of the people. An overwhelming majority of South Carolinians, 77 percent, supports a substantial increase in cigarette taxes to fund health care." (from report)

Objective 5. By 2008, ensure that 25% of SC Tobacco Settlement funds and tobacco sales tax is earmarked for comprehensive cancer control.

Strategy 1. Mobilize cancer control advocates to educate and inform legislators and staff.

Strategy 2. Gain understanding of how these funds are currently committed.

Strategy 3. Recruit SCCA members to visit with key legislators and staff to provide briefings, education, and information on the benefits of a tax increase.

RESEARCH



Research

Cancer research spans the continuum from work in human genetics, to tracking statewide patterns of disease incidence and mortality, doing laboratory animal and cell culture experiments, and conducting clinical and population-based studies. In order for this work to have real impact, research findings must be translated into everyday practice. Yet historically, it has taken years, even decades, for cancer prevention and control research to reach average people. For example: the relationship between tobacco smoking and lung cancer was hypothesized before World War I; the first scientific papers linking tobacco smoke to lung cancer appeared over thirty years later (just after World War II); the Surgeon General's Report confirming the relationship was published nearly 15 years later (in 1964); and it was another 15 years before most doctors counseled most of their smoking patients to quit. In terms of early detection and screening, the Pap smear was developed in the early 1940's but was not widely used until the 1970's. Mammography became available in the 1950's but was not widely promoted until the early 1980's. These long lag times have cost people their lives, especially members of minority groups and the medically underserved who tend both to have high rates of cancers and to be the last ones to benefit from technological advances in early detection and treatment.

Over the past decades, a major focus of public health has been directed toward bridging this gap, with some notable successes, including better screening rates for breast and cervical cancers. However, the growing gulf in health disparities underlines the limitations inherent in strategies that are oriented toward secondary prevention. For some cancers, such as prostate, complex public health and psychosocial issues mitigate against making strong, simple suggestions for population-based screening. A public health consensus has not emerged on prostate cancer detection, yet targeted health education for communities at greatest risk is imperative. This is one of many areas that will require research competence across a wide spectrum of disciplines, and active engagement with community members and organizations.

Cancer rate disparities and the inconsistencies between what we learn in conducting studies in easier-to-get-at populations (that also tend to be at lower risk) and what we can apply in less-accessible, higher-risk populations, underscore the gap between public health research and the communities we are working to reach. In response, the focus of public health research has shifted to community-based participatory research (CBPR), where community-based organizations and members are engaged in every aspect of research. This involvement can range from recruiting community members as partners, to study development, to engaging community members in the design of interventions and education materials. This approach shows particular promise in reducing the cancer-related health disparities that persist in South Carolina.

Research

The 2004 SCCA Cancer Report Card and the special (July 2005) symposium issue of the *Journal of the South Carolina Medical Association* have described several areas where health disparities called for more focused research in South Carolina. While a brief description is provided for four major cancer sites here, additional information is available from the Cancer Report Card (on most sites) and the special symposium issue of the Journal of the South Carolina Medical Association which focuses in much greater depth on seven sites (breast, prostate, colorectal, lung and bronchus, oral cavity and pharynx, cervix, and esophagus).

Prostate Cancer. South Carolina consistently ranks among the highest states in the nation for deaths due to prostate cancer. In South Carolina, African-American (AA) men are more likely to be diagnosed with prostate cancer than European-American (EA) men and are almost three times more likely to die from prostate cancer than EA men (SCCCR 2005, Drake et al., 2005). Although these disparities have been attributed to factors ranging from socioeconomic differences to genetics, the underlying reasons are not well understood and demand additional research. Community-based research is also needed to develop effective health education programs aimed at helping men make individual decisions regarding the benefits and risks of prostate cancer testing.

Breast Cancer. Although European-American women are more likely to develop breast cancer than African-American women in South Carolina, AA women are 43 percent more likely to die of this disease. African American women are more likely to be diagnosed with late stage breast cancer than European American women (44% versus 32%, respectively). More research is needed to help understand the root causes of these disparities, particularly biological risk factors. Participation of African-American women in clinical trials in South Carolina is crucial to this process (Adams, et al., 2005).

Esophageal Cancer. South Carolina ranks third in the nation for deaths due to esophageal cancer. Both incidence and mortality rates are at least twice as high for African American men as European American men. Rates for a certain type of esophageal cancer, squamous cell carcinoma, are six times higher for African Americans than for European Americans in South Carolina. Smoking and drinking are believed to account for about 95 percent of esophageal cancer. However, the profound disparity in South Carolina death rates cannot be attributed to these factors, as African-American men smoke less than their EA counterparts and their rate of alcoholic beverage consumption is about the same (Hebert, et al., 2005).

Oral/Pharyngeal Cancers. South Carolina consistently ranks among the highest states in the nation for deaths due to oral and pharyngeal cancers. African-American men in South Carolina have far higher mortality rates from these cancers than EA men, and this disparity is significantly more extreme in South Carolina than the rest of the nation (Yen, et al., 2005). About three-quarters of risk for oral and pharyngeal cancers can be attributed to tobacco use and alcohol consumption. However, as with esophageal cancer, behavioral risk factors cannot account for this cancer disparity in South Carolina. The actual causes for these disparities can only be resolved through further research that includes study of social, behavioral, and biological factors (Yen, et al., 2005).

Research

In resolving these questions, South Carolina is fortunate to have several academic institutions that have earned a national reputation for cutting-edge research. These include the University of South Carolina and its cancer research program, which is well known in the fields of diet, physical activity and alternative medicine, as well as for the study of colon, breast, mouth, and prostate cancers. The Medical University of South Carolina/ Hollings Cancer Center (MUSC/HCC) researchers are leaders in basic science research across a wide range of cancers and in clinical research on esophagus, lung, oral cavity, and bladder cancers. The Greenville Hospital System/ Cancer Center of the Carolinas has a strong cancer research program, whose specialty is Phase I clinical trials. Other clinical research is based in the Pee Dee, at McLeod Health Systems, and in Orangeburg, at Orangeburg Hospital. Clemson University, through its Department of Public Health in the College of Health, Education, and Human Development, is involved in research in cancer prevention, education, and outreach. A new program in Public Health at Benedict College and strong collaborations between both Claflin University and South Carolina State University and the major research universities in the state round out the very competent array of partners who will implement, modify, and evaluate this plan.

“No matter how well-meaning, research conducted elsewhere - or spearheaded by scientists based elsewhere - will not lead to practical advancement of knowledge as to why rates of important diseases are so much higher in South Carolina. Simply put: If we are not willing or able to understand – let alone solve – our problems, no one will be able to understand or solve them for us.”

Dr. James Hebert, Arnold School of Public Health, USC

To address the needs for prevention and control of cancer in South Carolina, MUSC/HCC and USC formed a collaborative arrangement for a statewide Cancer Prevention and Control Program in September 2003. The program places high priority on cancer disparities, of particular importance given the excess cancer risk among African-Americans in South Carolina.

This collaborative effort is networked with the SC DHEC Cancer Prevention and Control Program, the South Carolina Central Cancer Registry, the NCI-funded South Carolina Cancer Disparities Community Network, and the South Carolina Cancer Alliance (SCCA). The SCCA, through its broad-based constituency of community-based organizations, faith-based organizations, cancer survivors, advocates, and researchers, provides an unparalleled opportunity to connect researchers across the cancer spectrum with community members from across the state and to reach and engage the communities in greatest need.

Research

Objective 1. By August 2005, produce a report prioritizing cancer research in South Carolina. The initial phase of the needs reporting was done as part of the Cancer Research Network, funded by the CDC. This occurred on the same timeline as the initial development of the SCCA (i.e., in 2003-4). Refined versions of these reports were published in a special symposium (July 2005) issue of the journal of the South Carolina Medical Association. In June 2006, we will republish these articles in a hardcopy special symposium issue of the Journal of the South Carolina Medical Association. This will allow for incorporating comments from the various communities/constituencies involved. To our knowledge, this is the first time that community-based participatory research (CBPR) has been part of the process of developing research priorities and strategies for a statewide cancer plan.

“Many of us have experienced cancer through the eyes of a loved one and understand that cancer is not just about statistics, it’s about people struggling to stay alive.”

Governor Mark Sanford

Strategy 1. Determine the specific cancer research needs in the state and focus research efforts across institutions conducting cancer research and providing cancer-related care.

By 2 September 2005, begin to inventory and catalogue existing, information resources, databases, systems, and networks for cancer research; through the Data Needs Committee, Research Task Force of the SCCA, monitor this as an ongoing activity. Based on this work, identify needs and refine future plans.

By 15 October 2005, begin to identify specific target populations in relation to specific target cancers where research is warranted (e.g., in rural communities, among high-risk minority populations we could conduct a tobacco-related intervention and combine it with etiologic study of oral cancer and precancerous lesions from which we would learn the underlying reasons for the high rates of disease and poor prognosis in African Americans); through the Research Task Force of the SCCA, monitor this as an ongoing activity.

Strategy 2. Plan for and begin to develop a cadre of junior faculty in the state's colleges and universities that can promote and conduct research across the full spectrum of cancer prevention and control; including basic epidemiologic and bench-science studies, clinical trials, and health services and policy research.

Research

Objective 2. **By October 2005, begin to develop a Core Resource of wide-ranging scientific and administrative expertise to assist South Carolina-based researchers in focusing on specific cancer-related problems and administrative issues.**

Strategy 1. Recruit cancer experts from institutions outside South Carolina to consult and assist with developing the capacity to perform in-depth cancer research across the cancer prevention and control spectrum; organize working groups consisting of these individuals who would consult on grant applications, review protocols, and function as consultants or as subcontractors, as appropriate.

Strategy 2. Develop relationships that will lead to long-term collaborations and improve recruitment of faculty into SC-based research (and support) institutions.

Objective 3. **By June 2006, the SCCA will launch/sponsor a public relations campaign to educate the South Carolina public about scientific research and participation in cancer research studies.**

Strategy 1. Hire a public relations firm/individual to work with the SCCA to develop/create the core underpinnings of the campaign and its priority messages.

Strategy 2. Create a model study participant recruitment campaign that capitalizes on the statewide public relations campaign, which can be used by a variety of research disciplines in cancer control.

Objective 4. **By January 2007, gain broad-based institutional support for cancer research by encouraging organizations to assist in cultivating South Carolina as a vibrant, active, and important place to conduct cancer research.**

Strategy 1. Obtain the unequivocal political support of leaders in academia, medical care, NGOs, grass roots organizations, and other places of relevance.

Strategy 2. Enable the appropriate group within each research institution to become a strong, unrelenting advocate for cancer prevention and control research.

Research

Objective 5. **By June 2007, provide researchers with the most complete and uncomplicated access to research resources of any place in the United States.**

Strategy 1. Allow researchers access to identified data to be used at points of greatest efficiency (e.g., around the tissue bank).

Strategy 2. Recognizing that there is not a long track record of academic researchers conducting epidemiologic research utilizing statewide resources such as DHEC's South Carolina Central Cancer Registry (SCCCR) and the Budget and Control Board's Office of Research and Statistics, to create a climate of trust and cooperation that will result in streamlined approval processes to optimize scientific potential.

Strategy 3. Gain support of leaders from organizations providing cancer diagnosis and care to remove the barriers that place South Carolina in an unfavorable position for conducting cancer research optimally responsive to the highest risk population.

Objective 6. **By October 2007, develop a core resource that will assist cancer researchers with the recruitment, retention, and compliance of human subjects into cancer research protocols of all types.**

Strategy 1. Build on existing resources, and create new core competencies to assist basic science researchers, clinician scientists, and population-oriented researchers with recruiting human subjects into a variety of studies.

Strategy 2. For both observational and intervention studies, develop resources to assist with subject follow-up and retention.

Strategy 3. For intervention trials of all types, develop centralized resources to enhance compliance with protocols.

Strategy 4. Assure that these resources are allocated efficiently in order to optimize effect on cancer incidence, mortality, and post-diagnosis quality of life.

Research

Objective 7. By October 2007, develop training and networking-specific expertise to focus on specific cancer-related problems and issues.

Strategy 1. Recruit senior faculty with established track records in cancer research at a ratio of about 1:6 with junior faculty (use the matching fund provisions of the Centers of Economic Excellence whose signatories include USC, MUSC, Palmetto Health, and the Greenville Hospital System).

Strategy 2. Recruit junior faculty with promise in cancer research at a ratio of about 6:1 with senior faculty (use mechanisms such as the Centenary Program at USC).

Strategy 3. Produce the next generation of skilled cancer researchers in South Carolina, by writing training grants that will focus on ties to populations at highest risk.

Objective 8. By October 2008, develop and oversee a Statewide Tissue Bank, which will collect cancer specimens from all pathology services associated with the three largest medical centers in South Carolina (USC/Palmetto Health, Hollings Cancer Center/MUSC, and the Greenville Hospital System) and provide technical assistance to all other entities that treat cancer patients in South Carolina.

Strategy 1. Obtain strong support for a statewide network of tissue banking from all large medical facilities in the state.

Strategy 2. Expand and deepen research capacity at each of the three largest medical centers, USC/Palmetto Health, the Hollings Cancer Center/MUSC, and the Greenville Hospital System.

Strategy 3. Develop capacity for technical assistance across these three centers and a mechanism for transfer to other facilities to participate using approved protocols.

Strategy 4. Ensure that tissue bank resources can be used for epidemiologic research; ensure linking of these data with descriptive patient information obtained from other state resources (e.g., SCCR) and data collected as part of approved (at local IRBs) human subjects research.

Research

Objective 9. **By October 2008, establish a network of physicians to disseminate Best Practices to community physicians practicing in rural areas.**

Strategy 1. Develop an Alumni Network of South Carolina-trained physicians to refer and encourage patients to participate in cancer research projects.

Strategy 2. Work with the medical universities to recruit new physicians to actively participate in research and Best Practices.

Strategy 3. Develop reward systems so that Strategy 2 can really work.

Strategy 4. Involve the SCCA in physician-group state meetings to promote cancer research in the state.

Objective 10. By 2008, establish and maintain closer partnerships among researchers, communities, and community leaders.

Strategy 1. Develop and encourage relationships with community gatekeepers.

Strategy 2. Establish a caucus of community members, gatekeepers, and researchers to address community problems and expand knowledge related to cancer prevention and control research.

GENETICS



Genetics

Most cancers occur by chance in individuals who have no family history of the disease. However, for certain types of cancer, including breast, ovarian, colorectal, and prostate, heredity has been identified as an important risk factor for developing cancer. Between five and ten percent of women who develop breast or ovarian cancer will have a strong family history of one or more of these cancers. People with a first-degree relative with colorectal cancer are two to three times more likely to develop the disease (NCI, 2005b). Men with a family history of prostate cancer (father or brother) have two to three times greater risk (NCI, 2005c). Thus, having a family history of one of these cancers means higher chance of developing one of these cancers, and in some cases, other cancers as well.

The formal family history is a tool that can help trained medical professionals identify individuals at higher risk for certain cancers. The first step in this process is construction of a three-generation, cancer-targeted pedigree. When patients show a strong family history of cancer, the next step is to refer the patient for genetic counseling and cancer risk assessment. This involves education on the nature and magnitude of cancer risks, options for prevention and detection, and the risks and benefits of genetic testing. For some individuals, the next action may involve medical management strategies such as more frequent cancer screening. For some, the next step may also involve genetic testing, when a genetic susceptibility to these cancers is indicated. Cancer can run in families due to an inherited mutation in a cancer-disposing gene (e.g., for breast and ovarian cancer, BRCA1 and BRCA2). Although genetic risk factors account for a relatively small proportion of all cancers (only about 5-10 percent), the individuals who carry these genetic markers have a significantly higher long-term cancer risk. For women who carry a BRCA1 mutation, lifetime risk of breast cancer has been estimated at 85 percent.

Genetic testing has opened up an opportunity to act for prevention and improved treatment, sometimes even before a cancer diagnosis. This technology has the potential to save lives. At the same time, these advances bring challenges to medical and public health professionals. It is imperative that testing be done through qualified professionals, so that both the medical and psychosocial aspects of testing are fully addressed. This is particularly relevant in an age of direct-to-consumer advertising for medical testing and procedures.

Privacy is also a critical issue in genetic testing. Individuals must be able to choose genetic testing without fear of discrimination in employment or insurance coverage. Collaborative efforts in South Carolina led, in the late 90's, to successful legislation to protect patient's insurance rights. As part of its long-term plan, the SCCA will work to ensure that patient's rights to medical privacy are protected in South Carolina.

Genetics

Objective 1. **By June 2010, 50% of women affected by pre-menopausal breast cancer or ovarian cancer will have met with a genetics professional to learn about risk reduction strategies.**

Strategy 1. Establish partnerships between physicians and genetics professionals to develop a referral network.

Strategy 2. Inform physicians of genetic counseling resources.

"Genetic testing has opened up an opportunity to act for prevention and improved treatment, sometimes even before a cancer diagnosis." *(from report)*

Objective 2. **By June 2010, 80% of primary care physicians will integrate genetic counseling and consultation for prophylactic reduction among high-risk women for breast and ovarian cancer.**

Strategy 1. Survey primary care physicians on knowledge of prophylactic procedures for breast and ovarian cancer and integration of genetic counseling within their practice.

Strategy 2. Educate primary care physicians on preventing recurrence or occurrence of breast and ovarian cancer among high-risk women.

Strategy 3. Analyze and report survey results.

Objective 3. **By June 2010, 80% of primary care physicians will incorporate a three-generation family history to identify persons for genetics consultation, testing, and screening for familial cancer.**

Strategy 1. Survey primary care physicians on knowledge of familial cancers and significance of obtaining a three-generation family history and ability to integrate genetic counseling within their practice.

Strategy 2. Educate primary care physicians on conducting a three-generation family history appropriately.

Strategy 3. Analyze and report survey results.

Genetics

Objective 4. **By June 2010, 50% of people affected by early onset colon cancer (diagnosed < age 50 years) will have met with a genetics professional to learn about risk reduction strategies.**

Strategy 1. Establish partnerships between physicians and genetics professionals to develop a referral network.

Strategy 2. Educate physicians about risk management strategies.

Strategy 3. Integrate genetic consultation into practices that involve appropriate referrals.

Objective 5. **By June 2010, a genetics service network related to cancer genetics, available to every South Carolina resident within 50 miles of home, will be established.**

Strategy 1. Assess the need for additional genetic services around the state.

Strategy 2. Identify partners who will assist in developing additional resources to fund and establish genetic services.

Objective 6. **By June 2010, all major clinical genetics services providing consultation and testing for familial cancer will be able to demonstrate ongoing relationships with research institutes that are advancing knowledge in this field.**

PREVENTION



Prevention

Cancer is the second leading cause of death in South Carolina. Each year, cancer claims the lives of more South Carolinians than homicide, suicide, motor vehicle crashes, and drug and alcohol use combined. Almost two-thirds of cancer deaths are related to lifestyle factors such as tobacco use, diet, and physical inactivity.

While we do not yet know what causes all types of cancer, we do know what causes some of the most prevalent cancers – including lung cancer, colorectal, and skin cancers. Tobacco use alone is responsible for almost one-third of all cancer deaths. We also know that South Carolina is not making the grade in prevention compared to the rest of the nation.

- South Carolina has higher smoking rates than the national average, as reflected by the “D” grade the state received in the SCCA Cancer Report Card for tobacco use.
- South Carolina has one of the highest teen smoking rates in the country. At least one in three high school students in South Carolina - 85,000 kids - use tobacco. (CTFK, 2005)
- Diet contributes to an estimated 30 percent of all cancer deaths. Yet fewer than one in four adults in South Carolina meet recommendations for healthy eating (SC BRFSS, 2003).
- Physical inactivity, which is a primary factor in obesity, contributes to at least five percent of all cancer deaths. As reported in the SCCA Cancer Report Card, our state ranks far below the rest of the nation in maintaining a healthy weight.

Prevention is perhaps the most powerful weapon available in the fight against cancer. Yet, while South Carolina spends over two billion dollars a year on health care costs related to cancer, we allocate only a tiny fraction of health care dollars to prevention (SCCCR, 2005). We are not doing enough to use the knowledge and power at hand to prevent cancer, and we must devote more resources to this fight.

Tobacco Use

Tobacco use is the single most preventable cause of death and disease in the US and in South Carolina. In addition to being responsible for 87 percent of all lung cancer cases, smoking is also associated with cancers of the mouth, pharynx, larynx, esophagus, pancreas, kidney, and bladder. People who quit smoking live longer than people who continue to smoke, regardless of age (SCCCR, 2001). An estimated 26 percent of South Carolina adults smoke, according to the 2003 Behavioral Risk Factor Survey. Among current smokers, 53.7 percent of adults reported that they tried to quit smoking for at least one day during the past year.

According to the Youth Risk Behavior Surveillance System, 36 percent of high school youth reported current cigarette use. Each year, more than 11,000 kids in South Carolina become new daily smokers (CTFK, 2005). This is of paramount concern, as the vast majority of long-term smokers try their first cigarette before age 18.

Diet and Nutrition

Research suggests that approximately 30 percent of all cancer deaths in the United States each year are due to dietary factors. Dietary factors that can affect cancer risk include type of food, food preparation methods, portion sizes, and overall caloric balance. Diets high in saturated fat have been associated with an increased risk of colon/rectum, prostate, and uterine cancers. Cancer risk can be reduced by an overall dietary pattern that includes a high proportion of plant foods (fruits, vegetables, grains, and beans), limited amounts of high-fat foods (meats and dairy products), and limited consumption of alcoholic beverages (SCCCR, 2001). According to the 2003 Behavioral Risk Factor Surveillance System, only 23.9 percent of South Carolina adults ate the recommended five servings of fruits and vegetables per day.

Physical Activity

Regular physical activity and maintenance of a healthy weight can reduce the risk of developing some cancers and other chronic diseases. According to the 2003 BRFSS survey, only 24.1 percent of South Carolina adults participated in moderate physical activity on a regular basis. Moderate physical activity is defined as at least 30 minutes per day of physical activity, regardless of functional capacity.

Ultraviolet Radiation

Overexposure to ultraviolet radiation is believed to be the primary risk factor for skin cancer, including melanoma, the deadliest form of the disease. The most effective way to reduce deaths from skin cancer is to prevent the disease from ever developing. The American Cancer Society recommends that people limit or restrict exposure to the sun during mid-day hours (10am to 4pm), wear sunscreen with a solar protection factor (SPF) of 15 or higher, and wear sunglasses and a hat which shades the face, neck, and ears. These guidelines are especially important for children: severe sunburns in childhood are believed to greatly increase the risk of melanoma in later life. SC BRFSS data on skin cancer/excess sun exposure will be collected as part of the 2005 survey.

Environmental Factors

Although the exact causes of all cancers remain unknown, we do know that cancer can be caused by both external factors (e.g., tobacco, chemicals, radiation, and infectious organisms) and internal factors (e.g., inherited mutations, hormones, immune conditions). Links have been established between cancer and certain occupational hazards, such as exposure to benzene, radium, coal tar, and radiation. However, the connection between cancer and other environmental factors, including exposure to toxic waste, nuclear power plants, or pesticides, has not been conclusively proven. The lag time between exposure to a cancer-causing agent and the development of cancer can be decades; therefore, causes are often difficult to identify. In South Carolina, hundreds of investigations have been requested of the SC Central Cancer Registry since its inception in 1996, but only one true cancer cluster has been identified in this state.

The SCCA, in conjunction with DHEC's SCCR and Division of Biostatistics and Health GIS, will work to provide a balanced perspective of environmental cancer risk in South Carolina and to broaden awareness of proven risks, whether the source is geographic, occupational or industrial. SCCA will assist South Carolinians in informed decision-making from individual behavioral choices, to community awareness, to statewide policy development.

Prevention

Tobacco Use

Objective 1. **By June 2010, decrease the rate of tobacco use among adult South Carolinians (age 18+) from 26% to 12% (SC BRFSS, 2003).**

Strategy 1. Increase awareness among African-American men about the dangers of mentholated cigarettes, through targeted media campaigns.

Strategy 2. Increase local presence and activity in communities through development and support of local tobacco coalitions.

Strategy 3. Increase capacity and diversity of local tobacco coalitions in coordination with the SC Tobacco Collaborative.

Strategy 4. Increase the availability of effective cessation programs.

Strategy 5. Promote the training of health care providers to promote and/or implement tobacco cessation programs.

Strategy 6. Support and coordinate with smoke-free ordinance initiatives for Columbia, Newberry, Greenville and Charleston.

Objective 2. **By June 2010, decrease the percentage of high school students in South Carolina using tobacco from 36% to 16%.**

Strategy 1. Promote youth participation in Rage Against the Haze, the youth-led program that advocates for decreasing youth tobacco use.

Strategy 2. Increase the cigarette tax to the national average and support advocacy efforts to direct a proportion of the revenue toward tobacco prevention programs.

Strategy 3. Include tobacco use prevention programs in youth activities and organizations targeting youth.

Strategy 4. Partner with the SC Department of Education and local school districts to integrate tobacco prevention/ cessation education into existing curricula.

Strategy 5. Promote youth participation in advocacy efforts to reduce tobacco use among youth (i.e., tax increase, youth access ordinances).

Objective 3. **By June 2006, increase the number of smoke-free facilities in the state, including: increase the number of hospitals with smoke-free campuses by two; increase to six the number of colleges/ universities with campus-wide smoke-free policies; and increase the number of state agencies with smoke-free government vehicle policies by one.**

Strategy 1. Promote policies, regulations and legislation that eliminate smoking in hospitals, colleges/universities, government agencies, restaurants, bars, and other public locations.

Strategy 2. Coordinate SCCA efforts with local tobacco coalitions, the SC Tobacco Collaborative, and DHEC's Tobacco Use Prevention program.
(Note: this objective is coordinated with the SC Tobacco Collaborative and the DHEC Tobacco Use Prevention Program.)

Healthy Diet and Physical Activity

Objective 4. **By June 2006, develop collaborative relationships with at least four statewide and local community and state entities with similar missions and goals for physical activity and nutrition policies in South Carolina.**

Strategy 1. Promote policies and legislation that provide safe, enjoyable, and accessible environments for physical activities in schools and for transportation and recreation in communities (i.e., Green Spaces; walking paths).

Strategy 2. Develop collaborative relationships to initiate programs to promote healthy eating patterns, including the consumption of recommended quantities of fruits and vegetables.

Objective 5. **By June 2010, increase the proportion of the SC population that consumes at least five servings of fruits and vegetables from 23.9% to 50% (SC BRFSS, 2003).**

Strategy 1. Promote adequate nutrition intake among children and adults, targeting African-Americans.

Strategy 2. Promote the integration of healthy eating habits within the routine health education given by health care providers.

Strategy 3. Advocate with schools and work sites to provide healthy eating choices in vending machines and food service.

Strategy 4. Promote the use of the SCCA's Cancer Education Guide to increase awareness of the benefits of healthy eating as related to cancer prevention.

Prevention

Healthy Diet and Physical Activity

Objective 6. By June 2010, increase the proportion of adults who engage regularly in moderate physical activity for at least 30 minutes per day from 24.1% to 30% (SC BRFSS, 2003).

Strategy 1. Develop partnerships with city planners, and transportation entities to modify environments and promote policies that support physically active lifestyles.

Strategy 2. Work with communities and law enforcement agencies to provide safe, convenient areas to enhance physical activity.

Strategy 3. Promote regular physical activity as a routine component of health education counseling provided by health care providers.

Strategy 4. Promote the use of the SCCA's Cancer Education Guide to increase awareness of the benefits of regular physical activity as related to cancer prevention.

"Almost two-thirds of all cancer deaths are related to lifestyle factors such as tobacco use, diet, and physical inactivity." *(from report)*

Skin Cancer

Objective 7. By June 2010, increase the proportion of persons who use at least one of the following protective measures that may reduce the risk of skin cancer: avoid the sun between 10 am and 4 pm; wear sun-protective clothing; use sunscreen rated SPF 15 or higher; routinely check for unusual moles; and avoid artificial sources of ultraviolet light (SC BRFSS data to be collected in 2005).

Strategy 1. Collect BRFSS baseline data on exposure.

Strategy 2. Promote strict regulations and policies for tanning booths and facilities.

Strategy 3. Target daycare and elementary school settings with multiple skin cancer prevention interventions focused on UV radiation protective behaviors.

Strategy 4. Educate adolescents and young adults regarding the dangers of severe burns (from sun or tanning beds).

Prevention

Environmental Risks

*“Prevention is perhaps the most powerful weapon available in the fight against cancer. Yet, while South Carolina spends over two billion dollars a year on health care costs related to cancer, we allocate only a tiny fraction of health care dollars to prevention.”
(from report)*

- Objective 8.** By June 2006, obtain appropriate GIS data on cancer and potential environmental risks and conduct an awareness campaign on potential environmental risks in selected areas.

Strategy 1. Review appropriate GIS data and conduct spatial analysis on cancer and potential environmental risks to determine areas where risks may be high in the state. Enhance the existing DHEC Internet GIS mapping tool (SCAN – South Carolina Community Assessment Network) with Model Cancer Atlas functions to investigate individual and contextual factors for comprehensive cancer control.

Strategy 2. Conduct an awareness campaign to increase knowledge about reducing potential environmental risks in areas where risks may be high.

EARLY DETECTION



Early Detection

There are more than one hundred types of cancer, but most share a common element: the earlier the cancer is found, the better the chances for survival. Some of the most common types of cancer in South Carolina – colorectal, breast, and prostate – can all be detected through routine tests. The challenge for the public health and medical communities is to make people aware of these life-saving tests, to understand the importance of informed decision-making in weighing the benefits and risks of particular cancer screening choices, and to remove the barriers that keep people from receiving the health care they need.

Colorectal Cancer

Colorectal cancer claims more lives in South Carolina than any other malignancy except lung cancer, even though existing medical technology can detect signs of this cancer long before it becomes deadly. Survival of this disease depends upon the stage at which the cancer is diagnosed. When the cancer is detected at an early stage, the 5-year survival rate is 90 percent (ACS, 2005c). Unfortunately, in South Carolina, more than half of all colorectal cancers (53.8%) are diagnosed in later stages of the disease, when successful treatment and survival are less likely (SCCCR, 2005).

The most effective ways to detect colorectal cancer are colonoscopy and sigmoidoscopy. But only about half of all South Carolinians are receiving these crucial tests. The 2003 BRFSS survey shows that only 55 percent of South Carolinians 50 and older had received either of these procedures in the past ten years.

In addition to colonoscopy and sigmoidoscopy, inexpensive home-test kits which can be done every year are also available and include the fecal occult blood test (FOBT) or fecal immunochemical tests (FIT). However, flexible sigmoidoscopy, together with FOBT is preferred over either test alone (Smith, et al., 2005).

Breast Cancer

Breast cancer is the most commonly diagnosed cancer in South Carolina women, and the second leading cause of cancer death. Early detection is critical: five-year survival rates range from almost 96 percent for cancers diagnosed at an early stage to 20 percent for distant cancers. Mammography and clinical breast examination are the primary methods of screening for breast cancer. The American Cancer Society recommends annual mammograms and clinical breast exams for all women beginning at age 40 (ACS, 2005a).

Over the past decade, South Carolina has made tremendous progress through the CDC-funded Best Chance Network (BCN) program in increasing screening rates for breast cancer. Since inception, the BCN program has provided over 91,000 Pap smear tests and more than 64,000 mammograms to 55,246 women (Brandt, et al., 2005). During 2004-2005 alone, 8,204 South Carolina women were able to receive breast/cervical cancer screening because of this program.

While BCN has been successful in screening eligible women at risk for breast and cervical cancer, there are still women in South Carolina who do not receive early cancer testing, and whose cancers go undetected until they have reached an advanced stage where chances of survival are limited. The challenge ahead is to find ways to identify and reach these women. An additional challenge to the Best Chance Network is to reach more women with the limited federal funds currently available.

Early Detection

Cervical Cancer

South Carolina has one of the highest mortality rates in the nation for cervical cancer, a disease which is nearly 100 percent curable, if found in its earliest stages. Infection with high-risk types of human papillomavirus (HPV) is the cause of nearly all cases of cervical cancer. The risk for contracting HPV is influenced by age, lifetime number of sexual partners, number of recent sexual partners, early age at first sexual contact, and race/ethnicity.

A primary risk factor for the development of cervical cancer is failure to screen: not getting Pap smears, or receiving infrequent Pap smears. Physician recommendation has been shown to significantly increase screening for cervical cancer (Coughlin, 2005). The American Cancer Society recommends that screening for cervical cancer begin approximately three 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 two years using liquid-based tests. At or after age 30, women having three normal test results in a row should be screened every 2-3 years. Women who choose to receive HPV DNA testing, a newer screening method, should receive counseling and education about HPV and the risk of cervical cancer.

As with breast cancer, screening rates for cervical cancer have significantly improved over the past decade. However, there are still women who fall through gaps in the health care system, particularly in rural areas of the state where poverty and lack of access to medical resources create additional barriers to care.

Prostate Cancer

Prostate cancer is the most common cancer in South Carolina men, regardless of race, and the second leading cause of cancer death in men after lung cancer. South Carolina ranks third in the nation for deaths due to prostate cancer. African-American men have the highest incidence of prostate cancer in the world. In South Carolina, African-American men are more likely to be diagnosed with prostate cancer than white men and are almost three times more likely to die from this disease (SCCCR, 2005).

The efficacy of prostate cancer screening for the general population is currently under review and at this time, the SCCA focus is to raise men's awareness of the need to make informed decisions on the individual benefits and risks of prostate cancer testing.

Oral/Pharyngeal Cancer

South Carolina currently ranks third in the nation for deaths attributable to oral/pharyngeal cancer, with African-American men in South Carolina having the highest incidence of any other race-sex group.

Survival is highly dependent upon stage at diagnosis. When detected early, these cancers have a greater than 80 percent survival rate after five years. However, in South Carolina, the majority of oral/pharyngeal cancers (54%) are diagnosed at a late stage when treatment is often less effective.

Many cancers of oral cavity can be found during routine screening examinations by a doctor or dentist (SCCCR, 2001). However, most South Carolinians are not receiving this care. The 2000 BRFSS reports that only 23 percent of South Carolinians reported having had an oral examination. The SCCA will work with community organizations, as well as with dental and medical professionals, to promote oral examination in all patients.

Early Detection

Emerging Issues

The development of improved methods for the early detection of cancer is critical in the war on cancer and represents a central focus of cancer research. New developments are certain to emerge during the implementation of this comprehensive cancer plan. The SCCA, with its broad range of partners, has the opportunity to act as a bridge between research, public health, medical practice, and the community.

Emerging trends in cancer detection offer the promise of improved outcomes. For cervical cancer, trends include screening for distinct HPV variants that are known to cause cancer using DNA sequencing, as well as preventive measures, such as the development of vaccines that may protect against HPV. For breast cancer, new screening technologies using ultrasound, magnetic resonance imaging (MRI), and computer-assisted diagnosis are under development. Promising research in colorectal cancer screening includes new computer-assisted imaging techniques, and DNA analysis of stool samples to detect cancerous or precancerous polyps.

Some of these new measures may be years away from everyday medical use. Other measures, such as HPV DNA testing, are available now and have been endorsed by national organizations such as the American College of Obstetricians and Gynecologists (ACOG, 2003).

As part of this plan, the SCCA will continue to monitor the development of new detection methods, stay abreast of changing recommendations regarding public health application, and continue to design strategies in response to new developments and recommendations.

Early Detection

Colorectal Cancer

Objective 1. By June 2010, increase the proportion of adults age 50+ who have had a colonoscopy or sigmoidoscopy procedure within the past 10 years from 49.2 to 53% (SC BRFSS, 2002).

Strategy 1. Add a two-part BRFSS question asking individuals 50+ if they have been offered a Fecal Occult Blood Test (FOBT) within the last year and if they have returned the test.

Strategy 2. Measure baseline data on the percentage of South Carolinians who follow American Cancer Society recommendations on colorectal screening.

Strategy 3. Assess gaps in, and barriers to, screening for colorectal cancer in SC among populations experiencing disparities, and review geographic distribution of incidence rates, and stages at diagnosis.

Strategy 4. Assess current insurance coverage for colorectal testing by principal SC providers; identify gaps; and collaborate with Advocacy/Policy Task Force to address gaps.

Strategy 5. Evaluate capacity for colorectal cancer screening in South Carolina, including the availability of fecal occult blood tests (FOBT), sigmoidoscopy, and colonoscopy. Assessment should include cost analysis of screening and geographic distribution of services.

Strategy 6. Identify, implement, and evaluate evidence-based strategies for public and professional education on the importance of early detection of colorectal cancer.

Strategy 7. Collaborate with faith-based and community organizations to raise awareness about colorectal cancer.

Breast and Cervical Cancer

Objective 2. By June 2010, increase the proportion of women age 40+ who have received a clinical breast exam (CBE) within the preceding two years from 77.4% to 82% (SC BRFSS, 2002).

Strategy 1. Promote core competencies in CBE for providers; integrate CBE materials developed through the Breast and Cervical Cancer Early Detection Program (BCCEDP) into medical and nursing graduate education, and residency training programs.

Strategy 2. Identify and address barriers to the implementation of CBE training for continuing medical education.

Early Detection

Breast and Cervical Cancer

Strategy 3. Collaborate with faith-based organizations, breast cancer service providers, and community organizations to recruit women who are rarely or never screened.

- Objective 3.** **By June 2010, increase the proportion of women age 40+ who have received a mammogram within the preceding two years from 76% to 80% (SC BRFSS, 2002).**

Strategy 1. Identify data sources in addition to BRFSS to establish more accurate mammography screening rates in SC.

Strategy 2. Implement findings from SC research on efficacy of public education campaigns to promote breast cancer screening, focusing on groups at highest risk for not being screened (i.e., small media campaigns; faith-based outreach).

Strategy 3. Collaborate with the Advocacy/Policy Task Force to seek state funding to extend mammography services comparable to BCCEP to uninsured women who do not qualify for the program.

Strategy 4. Develop a campaign with the SC Medical Association, SC Nurse's Association, Physician Assistant associations, and the Carolina Medical Review to promote mammography referral for all women 40+ seen by providers in primary care or internal medicine practices.

- Objective 4.** **By June 2010, increase the proportion of women at risk for cervical cancer (including never/rarely screened, uninsured, age-specific populations) who have received screening services within the preceding three years from 83% to at least 90% (SC BRFSS, 2002).**

Strategy 1. Collaborate with providers to develop office-tracking systems to support timely re-screening.

Strategy 2. Support dissemination of new information to provide the public, as well as clinicians and public health professionals, with current and evolving science, technology, and guidelines specific to cervical cancer screening.

Strategy 3. Collaborate with faith-based organizations and community organizations to disseminate cervical cancer information.

Strategy 4. Collaborate with community partners and medical providers to expand current screening and diagnostic resources, with an emphasis on high-risk women.

Strategy 5. Collaborate with the Research Task Force to identify areas/sub-populations who are at highest risk for not being screened for cervical cancer.

Early Detection

Prostate Cancer

Over the past decade, South Carolina has made tremendous progress through the CDC-funded Best Chance Network (BCN) program in increasing screening rates for breast cancer. Since inception, the BCN program has provided over 91,000 Pap smear tests and more than 64,000 mammograms..." (from report)

Objective 5. By June 2010, increase the proportion of men newly diagnosed with prostate cancer at the localized stage from 72.6% to at least 75% (SC BRFSS, 2002).

Objective 6. By June 2010, raise men's awareness of the need to make informed decisions about screening for prostate cancer.

Strategy 1. Convene a task force of experts to include African Americans and community activists to review current national screening guidelines and make recommendations for implementation of guidelines for best practice in South Carolina.

Strategy 2. Add a question to BRFSS to learn what SC males 40+ know about their personal risk for prostate cancer.

Strategy 3. Support dissemination of new information to provide the public, and especially African-American males, with evolving science, technology, and guidelines for prostate cancer.

Strategy 4. Collaborate with faith-based organizations and community organizations to disseminate prostate information to those at high risk.

South Carolina has one of the highest mortality rates in the nation for cervical cancer, a disease which is nearly 100 percent curable, if found in its earliest stages. (from report)

Early Detection

Oral/Pharyngeal Cancer

Objective 7. **By June 2010, increase the percentage of South Carolinians who report having had an oral examination from 23 to 30%. (SC BRFSS, 2000).**

Strategy 1. Support dissemination of new information to provide the public with evolving science, technology, and guidelines for early detection of oral/pharyngeal cancer.

Strategy 2. Collaborate with faith-based organizations and community organizations to raise awareness about oral/pharyngeal cancer.

Strategy 3. Collaborate with dental and medical associations and other health organizations to promote oral examination in all patients.

Strategy 4. Collaborate with dental and medical associations and other health organizations to promote patient counseling on the dangers of tobacco use and the importance of tobacco use cessation.

Objective 8. **By June 2010, increase the proportion of oral/pharyngeal cancers newly diagnosed among African-American males at early stage (in-situ or localized) from 22.1% to at least 30%.**

Strategy 1. Collaborate with dental and medical associations and other health organizations to promote public and professional awareness of risk factors for oral/pharyngeal cancer.

Strategy 2. Support dissemination of new information to provide the public with evolving science, technology, and guidelines for early detection of oral/pharyngeal cancer.

Strategy 3. Collaborate with faith-based and community organizations to raise awareness about oral/pharyngeal cancer.

Objective 9. **By June 2010, increase the proportion of esophageal cancers newly diagnosed among African-American males at early stage (in-situ or localized) from 20.5% to at least 33%.**

Strategy 1. Monitor ongoing science and research regarding the early detection and treatment of precursors to esophageal disease and the possible efficacy of screening/detection methods for esophageal cancer.

Strategy 2. Support dissemination of new information to provide the public with evolving science, technology, and guidelines for prevention/ early detection of esophageal cancer.

Strategy 3. Collaborate with faith-based organizations, community organizations, and employers in targeted geographical areas to reach high-risk, African-American males concerning risk factors.

Early Detection

Health Education

Objective 10. By 2010, increase the curriculum content for health promotion and disease prevention topics and related core competencies for disease detection in schools of medicine, dentistry, nursing, and allied health sciences.

Strategy 1. In collaboration with SCCA Prevention Task Force, identify faculty responsible for curriculum selection at major SC universities with graduate programs in medicine, dentistry, nursing, and public health.

Strategy 2. Recruit faculty in positions of leadership who agree to work with SCCA Early Detection Task Force and Prevention Task Force to undertake the following:

South Carolina currently ranks third in the nation for deaths attributable to oral/pharynx cancer, with African-American men in South Carolina having the highest incidence of any other race/sex group.
(from report)

- Review of standardized guidelines for health promotion and disease prevention selected for their programs;
- Assess adequacy or gaps in curriculum content specific to diet, exercise, alcohol, and tobacco as related to predisposition to cancers;
- Develop annual systems of communication between SCCA and faculty to exchange information on needs and accomplishments in the implementation of curriculum topics and standardized core competencies for health promotion and disease prevention.

PATIENT CARE



Patient Care

Whether South Carolinians receive the recognized standard of cancer treatment and benefit from a multidisciplinary team approach, best clinical practices, and clinical trials depends on many factors, including income and where they live.

The likelihood of being covered by health insurance rises with income (DeNavas et al., 2003). The Institute of Medicine estimates that 18,000 adults in America die each year because they are uninsured and do not have access to the medical care they need. Individuals without health care coverage are much less likely to obtain preventive care, get timely diagnoses for cancer, receive treatments, and take prescription medications as recommended by physicians (RWJ, 2005).

In South Carolina, 21 percent of those under age 65 are uninsured (SC Dept Insurance, 2004). Uninsured adults are unable to see a doctor when needed and are far less likely to have a personal physician (RWJ, 2005). Forty-two percent of uninsured people in South Carolina did not have a personal provider compared to 15 percent of the insured (RWJ, 2005).

People who are uninsured are much more likely to report being in poor or fair health than those who are insured. Lack of health insurance often leads to unnecessary suffering, delayed diagnoses, and death.

Individuals without health care coverage are much less likely to obtain preventive care, get timely diagnoses for cancer, receive treatments, and take prescription medications as recommended by physicians (RWJ, 2005). (from report)

Access to Care

From cancer prevention and healthy lifestyle education, to supportive and advanced technology treatments for cancer, access to quality health care is an issue. The SC Household Survey (2004), documents the state of health care access in South Carolina:

- At least 19.4 percent, or 796,794 South Carolinians, are uninsured (compared to 15.2 percent for the nation).
 - Among the uninsured, 74 percent list affordability as the reason they have not purchased health insurance.
 - In South Carolina, 60 percent of the uninsured are working adults.

For those who live in rural counties without doctors specializing in cancer care and without hospitals offering cancer services, transportation becomes an issue. In a recent SCCA survey, 95 percent of Radiation Oncology Facilities surveyed in South Carolina reported being aware of patients who had missed cancer treatment due to lack of transportation (SCCA, 2003).

Patient Care

Objective 1. By June 2006, re-establish cancer pain initiative efforts in South Carolina.

Strategy 1. Assess interest in re-establishing cancer pain initiative efforts in South Carolina.

Strategy 2. Collaborate with SCCPI leadership to explore the status of initiative activities.

Strategy 3. Recruit both former SCCPI members and new resources to revitalize cancer pain initiative efforts and education.

Strategy 4. Assess the status of cancer pain management, use of practice guidelines, and next steps.

Objective 2. By 2006, assess and address the magnitude of indigent cancer care to improve access to care.

Strategy 1. Conduct a literature review to establish the state of indigent cancer care.

Strategy 2. Create a workgroup to review and analyze appropriate and relevant data:

- Collaborate with and assist the SC Central Cancer Registry (SCCCR) in securing the appropriate resources to compile the data.
- Identify sources of free care and ascertain related cost and charges.
- Conduct data linkage between Hospital Discharge Data (1996-2002) and SCCR incident cases (1996-2001).
- Analyze linked data, report by payer status, race, cancer type, and stage.

Strategy 3. Identify existing resources in communities to promote access to care in South Carolina.

Strategy 4. Work with other partners to advocate for a cancer Medicaid waiver in South Carolina.

Objective 3. By 2006, identify and address transportation barriers for cancer patients.

Strategy 1. Survey radiation oncology centers on issues related to patient transportation.

Strategy 2. Cultivate networks within communities in order for them to develop their own transportation solutions.

Strategy 3. Distribute, periodically update, and educate health care providers on additional transportation resources.

Strategy 4. Re-survey radiation oncology centers routinely to assess changes.

Patient Care

Objective 3. By June 2010, provide education and awareness about cancer clinical trials.

Strategy 1. Recruit health care professionals to work with the Patient Care Task Force to establish a statewide network of clinical research staff.

Strategy 2. Formulate a plan to address concerns and issues related to clinical trial recruitment and the educational needs of health care providers and the public:

- Internal marketing in hospitals with clinical trial departments;
- Educate physicians;
- Establish baseline/benchmark participation in clinical trials;
- Use national cooperative group marketing tools and media experts to heighten awareness and educate the public;
- Develop an informational presentation for the lay public that various members can present to professionals and the public.

The Institute of Medicine estimates that 18,000 adults in America die each year because they are uninsured and do not have access to the medical care they need.

(from report)

Objective 4. By June 2010, educate health care providers regarding the current accepted cancer practice guidelines.

Strategy 1. Prepare informational materials on accepted cancer practice guidelines for health care providers.

Strategy 2. Develop or gather materials to be used to exhibit at professional meetings.

Strategy 3. Arrange to make presentations at professional meetings.

SURVIVOR AND FAMILY ISSUES



Survivor and Family Issues

Over the past three decades, the number of cancer survivors in the US has more than tripled, from three million survivors in 1971 to almost ten million survivors in 2001. Today, more than half of all people (62 percent) diagnosed with cancer are expected to live at least five years after diagnosis (CDC, 2004).

Along with this extraordinary rise in survival rates, there has been a concurrent shift in public health policy, with a new focus on cancer survivorship. Programs for people living with arthritis, heart disease, and diabetes are commonplace. But we are just beginning to recognize that many people will live for years, and perhaps decades, as cancer survivors. The SCCA has taken the challenge to implement cancer programs with quality of life for cancer survivors as a key component.

Individuals diagnosed with cancer and their caregivers face multi-dimensional and sometimes overwhelming decisions regarding their illness. These issues, which cut across all diagnoses, demographic categories, and cultures, include:

- Access to information and resources about their disease
- Financial and legal issues
- Psychosocial and spiritual issues
- Long-term survivorship issues
- Coping with the loss of a loved one

In addition to these challenges, the SCCA recognizes that poverty, lack of education, and cultural differences can introduce barriers that may require targeted interventions and strategies.

The SCCA objectives and strategies were designed to address these complex issues and recommend ways to alleviate them. The SC Cancer Alliance can harness multi-faceted resources to promote cancer survivor and family empowerment. A key strategy in this regard is the promotion of patient navigators: individuals who are prepared to guide patients through an often confusing and fragmented health care system.

Survivor and Family Issues

The focus of this section is meant to increase the support system for and communication among cancer survivors and families to assist them in obtaining the best possible information and treatment. The SCCA objectives and strategies include the development of written and electronic resources that can be easily accessed by cancer survivors. The goal of these resources is to give South Carolinians the most current medical information available, and at the same time, to help individuals maintain an outlook of personal healing while seeking a cure. These strategies recognize that cancer survivors must often face a barrage of life-or-death decisions, under conditions of tremendous stress.

The strategies in this section focus on cancer as a family issue. As a reflection, this section also addresses end-of-life issues, including the needs of families and supporters of cancer patients who are left to cope after the death of the patient.

Survivor and Family Issues is a new arena in public health planning, grounded in the belief that when we approach cancer, we should embrace the cancer patient as a whole person in the wider context of family and community. The SCCA believes that there is no better resource for current cancer survivors or caregivers than those who have experienced cancer. Members of the Survivor and Family Task Force and other experienced individuals can serve as a valuable resource for support, advice, and information to those currently experiencing cancer-related issues.

“I never dreamed I would have cancer. But I realized there was very little support out there for people who were really thinking longer term about their lives. Not, will I live or die? But how well will I live?”

Doug Ulman, Lance Armstrong Foundation

Survivor and Family Issues

Objective 1. **By June 2006, conduct a survey on resources to address cancer rehabilitation services, including location and financial requirements, and quality of life services for those living with cancer, and provide this information to cancer patients, their caregivers, and to cancer care providers.**

Strategy 1. Conduct an inventory of current available resources.

Strategy 2. Compile and categorize resources.

Strategy 3. Identify contacts, unmet needs, and possible links for additional information.

Strategy 4. Identify HIPAA issues regarding confidentiality and work to remove barriers to information sharing.

Objective 2. **By July 2007, to promote survivor and family empowerment, develop a comprehensive, flexible, electronic database, which is easily accessible, that will provide relevant information and be updated at least quarterly.**

Strategy 1. Conduct an inventory of current available resources (include options for treatment and continuing care).

Strategy 2. Compile and categorize resources.

Strategy 3. Identify contacts, unmet needs, and possible links for additional information.

Strategy 4. Identify HIPAA issues regarding confidentiality and work to remove barriers to information sharing.

Objective 3. **By September 2007, conduct a survey on resources to address end-of-life issues and publish a database accessible to patients, family, and survivors, which include best practices and end-of-life empowerment resources.**

Strategy 1. Conduct an inventory of current available resources.

Strategy 2. Compile and categorize resources.

Strategy 3. Identify contacts, unmet needs, and possible links for additional information.

Survivor and Family Issues

Objective 4: By December 2007, to promote cancer survivor and family empowerment, advocate with the American College of Surgeons (ACOS) to include specific requirements and minimum standards for cancer patient navigation services for cancer treatment centers to obtain and retain ACOS certification.

Strategy 1. Meet with state ACOS representatives to assess current patient navigation services and determine the areas that show need for increased patient navigation services.

Strategy 2. Provide information and data to hospital administrators and physician practices regarding the importance of navigation services, stressing the economic value of trained lay navigators supplementing professional navigators.

Strategy 3. Advocate with government health plans and private insurers to increase reimbursement for patient navigators.

Today, more than half of all people (62 percent) diagnosed with cancer are expected to live at least five years after diagnosis (CDC, 2004).
(from report)

Objective 5: By July 2008, to promote cancer survivor and family empowerment, organize a group of lay volunteers who have experience navigating through the medical, financial, legal, and psychosocial systems that cancer patients, caregivers, and survivors must access to ensure quality care, rehabilitation services, and end-of-life assistance.

Strategy 1. Through the survivor and family task force, recruit volunteers to counsel and advise current survivors, care givers, and family members on issues related to the objectives below.

Strategy 2. Provide training on the systems that impact patients, caregivers, and survivors, training on how to access those systems, and training on how to provide support necessary to work through the systems.

Strategy 3. Compile written and electronic information on systems navigation to be provided to hospitals and other healthcare facilities for personal distribution to cancer patients, care givers and survivors to ensure that they have current information on available services and guidance to interpret it.

Survivor and Family Issues is a new arena in public health planning, grounded in the belief that when we approach cancer, we should embrace the cancer patient as a whole person in the wider context of family and community.
(from report)

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Data Sources

SC Behavioral Risk Factor Survey (BRFSS). The Behavioral Risk Factor Surveillance System is a state-based surveillance system administered by the South Carolina Department of Health and Environmental Control, in collaboration with the Centers for Disease Control and Prevention. Risk factor and screening data from BRFSS were used as a baseline to guide the objectives for this comprehensive cancer plan. The majority of the BRFSS data were drawn from the 2003 Survey. Optional questions, such as examination for oral cancer, are included on an alternating or episodic basis. Baseline data on this issue were drawn from the 2000 BRFSS survey. (http://www.scdhec.gov/hs/epidata/brfss_index.htm)

SC Youth Risk Behavioral Survey (YRBS) provides prevalence data on health risks for students in grades 9-12 in South Carolina, including tobacco use data. This information was used as baseline data for cancer plan objectives in Cancer Prevention and Advocacy/Policy. Note that the latest complete YRBSS survey conducted in South Carolina was in 1999. (<http://apps.cdc.gov/yrbss/SelHealthTopic.asp?Loc=SC>)

SC Central Cancer Registry (SCCCR). The South Carolina Central Cancer Registry is located within the Division of Public Health Statistics and Information Services (PHSIS) of the Department of Health and Environmental Control. Incidence and mortality data from the SCCR were used throughout this report. This information was generously provided through a pre-release of the SCCR South Carolina Facts and Figures, 2004-2005. Any errors in interpretation are the responsibility of the authors of this report and not the SCCR. Because health disparities are one of the key priorities of this plan, the SCCA requested specific data on cancer disparities by race and gender, as well as disparities in stage at diagnosis for the Health Disparity section of the report. (<http://www.scdhec.net/co/phsis/biostatistics/SCCCR/sccrmain.htm>)

SC Cancer Alliance (SCCA) *SC Cancer Report Card* was used to compare South Carolina incidence and mortality rates and corresponding national rates, by race and gender. This information was especially critical in discussions of health disparities. In addition, a special survey on transportation issues for radiology patients in South Carolina was also conducted by the SCCA and was used to develop Patient Care objectives in this plan. (<http://www.sccanceralliance.org/>)

NOTE: Cancer rates, and comparisons between rates related to race/ethnicity and gender, will vary slightly by source and the time period used as a basis (for example, 1998-2001 vs. 1998 data alone). Cancers with low numbers of cases are particularly susceptible to variations in incidence rates.



South Carolina Cancer Alliance
P.O. Box 2722
Columbia, SC 29202
Toll-Free: 1-866-745-5680
Website: www.sccanceralliance.org