Collaborating to conquer cancer: a comprehensive approach to cancer control

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Abstract

Despite substantial contributions on the part of public, non-profit, and private sector organizations, the burden of cancer in the United States remains high. As public health organizations, particularly county, state, tribal, and territorial health departments, try to reduce the significant burden of cancer, they face additional issues that make it difficult to address cancer in a comprehensive way. These challenges along with the need to accelerate progress in reducing the U.S. cancer burden, prompted the Centers for Disease Control and Prevention (CDC) and its national partners to begin to work together to further define and describe comprehensive cancer control (CCC) as an approach to reducing the burden of cancer. CCC is defined as "an integrated and coordinated approach to reducing cancer incidence, morbidity, and mortality through prevention, early detection, treatment, rehabilitation, and palliation." This article describes the national effort to support comprehensive cancer control, outlines national and state level success in comprehensive cancer control, and provides a call to action to public, private, and non-profit organizations, governments of all levels, and individuals to renew their commitments to reducing the burden of cancer.

Introduction

In 1971, President Richard Nixon signed the National Cancer Act, establishing the National Cancer Program and declaring a war on cancer [1]. A decade later, Doll and Peto [2] reviewed the extant epidemiological evidence and identified the leading causes of cancer, including smoking and nutrition. Despite this knowledge, however, and despite efforts to curtail the use of tobacco products dating back to the first Surgeon General's Report [3] on the dangers of tobacco use, it was more than a decade later (around the 1990s) before the United States began to

Despite substantial contributions on the part of public, non-profit, and private sector organizations, the burden of cancer in the United States remains high. One of every four deaths in the United States is attributable to cancer. Over 19 million new cases of cancer have been diagnosed since 1990 and an additional 1.3 million new cases are expected in 2005 [4]. The financial costs of cancer are enormous. According to the National Institutes of Health, cancers cost the United States more than \$189 billion in 2004. This amount includes over \$69 billion in direct medical costs and more than \$120 billion in lost productivity [4]. The National Cancer Policy Board of the Institute of Medicine has estimated that in the areas of prevention and early detection alone, a 19% decline in the rate at which new cancer cases occur and a 29% decline in the rate of cancer deaths could be achieved by 2015 by implementing

experience a reduction in the overall age-adjusted cancer incidence and mortality rates (Figure 1).

Despite substantial contributions on the part of

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proven methods to change risky behaviors and increase screening [5].

As public health organizations, particularly county, state, tribal, and territorial health departments try to reduce the significant burden of cancer, they face additional issues that make it difficult to address cancer in a comprehensive way. These include the following:

- Inadequate infrastructure, such as administrative and organizational systems for cancer control;
- Limited resources, including staff and funding, for cancer control – there is strong competition for available resources;
- A lack of flexibility among categorical funding streams, making it difficult to support comprehensive cancer programs at the state and local level;
- Limited information resources for use in decisionmaking due to a lack of access to data or evidence, as well as insufficient training to interpret the data and information that are available;
- Lack of coordination among cancer control programs and services, particularly across the continuum of cancer care/services;
- Heavy and unequal cancer burden;
- Disparities in knowledge, access, treatment, and survival among racial and ethnic groups, such as African-Americans; and
- Insufficient information about effective programs and services due to a lack of evaluation and/or evaluation results not being disseminated

These challenges, along with the need to accelerate progress in reducing the burden of cancer in the United States, prompted the Centers for Disease Control and Prevention (CDC) and its national partners to begin to work together to further define and describe comprehensive cancer control (CCC) as an approach to reducing the burden of cancer. CCC is defined as "an integrated and coordinated approach to reducing cancer incidence, morbidity, and mortality through prevention, early detection, treatment, rehabilitation, and palliation" [6]. A comprehensive approach is based on the premise that effective cancer control planning and program implementation, at a local, state, or national level, should address a continuum of services, from primary prevention and early detection through quality cancer treatment and survivorship issues, such as pain control. This approach encourages integration and coordination of a broad range of cancer control activities, across all cancer sites. It emphasizes cooperation and collaboration among different disciplines (for example, basic and applied research, evaluation, health education, program development, public policy, surveillance, clinical

services), and key stakeholders to maximize limited resources and reduce unnecessary duplication of effort. The approach also emphasizes sharing of expertise, setting priorities for action, and more effectively reaching at-risk populations as a means of achieving desired outcomes.

Since 1994, CDC, the American Cancer Society (ACS), the National Cancer Institute (NCI), the American College of Surgeons (ACOS), the Intercultural Cancer Council (ICC), the North American Association of Central Cancer Registries (NAACCR), and the Chronic Disease Directors (CDD) have contributed expertise and resources to the development of comprehensive approaches to cancer control and the diffusion of the idea as a preferred way to address the cancer burden in states, tribes, and territories. More recently, this partnership of public and non-profit organizations has been joined by other key partners such as the Lance Armstrong Foundation (LAF) and C-Change to support the development and implementation of comprehensive cancer control plans, the blueprint for action that states, tribes, and territories use to guide coordination and integration of their cancer control programs.

Background and context

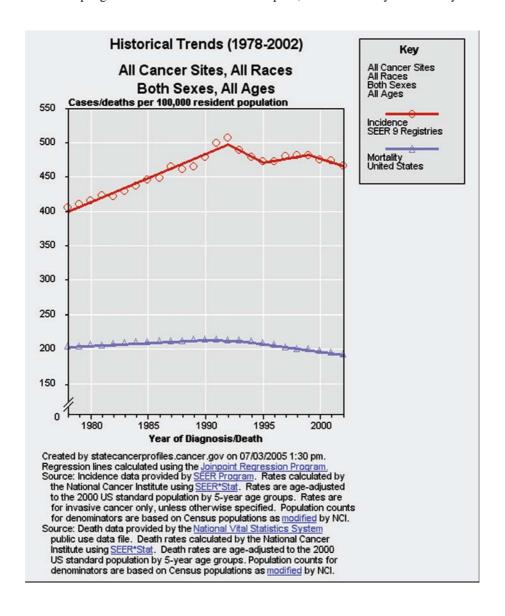
The roots of comprehensive cancer control are grounded historically in the Department of Health and Human Services, Public Health Service's *Healthy People* [7] initiative and the National Institutes of Health's National Cancer Program. In 1986, the NCI published *Cancer Control Objectives for the Nation*: 1985–2000 [8]. In producing this monograph, NCI brought together 36 experts from public health, primary care, and oncology specialty care, broken into three working groups (prevention, screening and detection, and treatment); this report set the ambitious goal of reducing the age-adjusted cancer mortality rate by 50% by the year 2000.

Based on known cancer risk factors at the time, an overall cancer mortality reduction ranging from 16% to 23% was projected to be achieved by (1) reducing fat intake to 25% of total calories and increasing fiber to 20–30 g per day (8% mortality reduction) and (2) reducing adult smoking prevalence to 16% by 1990 (15% mortality reduction) or 2000 (8% mortality reduction). For cancer screening, a projected 3% mortality reduction could be achieved if (1) 80% of women received a mammogram coupled with a clinical breast examination and (2) 90% of women aged 20–39 years and 80% aged 40–70 years received a Pap

(Papanicolaou) smear every 3 years. Finally for cancer treatment, a 10–26% mortality reduction was projected if all patients with cancers of the breast, colon, bladder, lung (small cell), cervix, corpus uteri, ovary, rectum, testis (non-seminoma), and prostate, as well as those with adult leukemia, adult non-Hodgkin's lymphoma, melanoma, childhood brain tumors, and childhood leukemia were either all to receive state-of-the-art treatment of that period or could benefit from more rapid progress in treatment efficacy through increased participation in clinical trials.

During the period of the 1980s and early 1990s, the NCI, the ACS, and the CDC initiated a large number of new research and program initiatives. These

included surveillance-driven interventions (e.g., Databased Intervention Research), tobacco control (e.g., COMMIT and ASSIST), dietary change (e.g., 5 A Day), cancer screening (e.g., National Breast and Cervical Cancer Early Detection Program), and increased access to clinical trials (e.g., Community Clinical Oncology Program) [9–13]. Although considerable investments were made by these agencies and other national and state public health and non-governmental organizations, few of the intermediate goals outlined in NCIs *Cancer Control Objectives for the Nation* report were achieved, and as Figure 1 indicates, the mortality reduction goals were not even approached. One factor recognized in this report, but not systematically addressed in the



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aforementioned categorical funding initiatives, was the important role state agencies, local governments, private industry, professional organizations, voluntary organizations, and the media would need to play to achieve the ambitious goals set for the year 2000. To achieve significant incidence and mortality reduction in the future, a more comprehensive approach would be needed, involving partners and collaborative efforts among the many and varied sectors affected by cancer.

In 1994, CDC, with other national partners such as the ACS, began to further define and describe CCC as an emerging public health concept in collaboration with those state health departments that had made a significant investment in state-based cancer control. Between the spring of 1995 and the fall of 1998, CDC conducted a series of meetings and conferences to gather input on the feasibility of implementing CCC programs at the state level and on potential barriers to and facilitators of the process. During this time CDC also conducted a baseline assessment of existing comprehensive cancer control efforts and case studies of cancer control planning processes in states.

Key concepts and products yielded between 1995 and 1998 include a framework for comprehensive cancer control [14], essential elements [15] and a planning model [16].

In 1998, CDC provided funding to five states and one tribal health board that had existing comprehensive cancer control plans: Colorado, Massachusetts, Michigan, North Carolina, Texas, and the Northwest Portland Area Indian Health Board. Since 1998, the number of programs participating in CDCs National Comprehensive Cancer Control Program (NCCCP) has grown from 6 to 63. With approximately \$15 million in Congressional appropriations in fiscal year 2005, CDC provides support for building coordinated and focused cancer control programs in all states, the District of Columbia, six tribes and tribal organizations, and six U.S. Associated Pacific Islands/territories. With this support, health agencies continue to establish broadbased CCC coalitions, assess the burden of cancer, determine priorities for cancer prevention and control, and establish the infrastructure necessary to develop and implement CCC plans. Additional CDC funding to NCCCP grantees supports colorectal, prostate, ovarian, and skin cancer control activities within CCC plans. The fiscal year 2005 status of the states, tribes, and territories that receive CDC funding to support comprehensive cancer control activities is shown in Figure 2.

The ACS, during this same period of the late 1990s, also developed a comprehensive approach to cancer control. The ACS placed cancer control planning field staff in every division, and collaborative planning

initiatives began among the ACS, State Cancer Registries, state health department cancer control staff, and the American College of Surgeons. These planning initiatives, called "Triads," had as their goal to bring together the triad of the cancer control, cancer data, and the clinical communities to create comprehensive, databased, outcomes-oriented cancer plans. A comprehensive cancer control-planning framework was developed and used at state and community levels.

In 1999, many national partners recognized that further significant growth of cancer prevention and control programs within state health agencies and elsewhere would require increased coordination of partner activities and enhanced collaboration (e.g., modifying one's activities to achieve common goals) to achieve cancer prevention and control outcomes. As a result, in 2000 the national CCC partners began supporting a series of Leadership Institutes designed to spur action on the part of comprehensive cancer control stakeholders in states to move their CCC planning and implementation efforts forward. All 50 states have participated in two rounds of these Leadership Institutes where they have the opportunity to interact with leaders across the United States. (See http://www.cdc.gov/cancer/ncccp/institutes.htm for a description of the Leadership Institutes.)

As the national partners worked with each of the states to help them develop and implement CCC plans through the CCC Leadership Institutes, they realized that some states could benefit from targeted technical assistance with key leaders, delivered in that particular state. The C-Change State Cancer Plan Team took the lead in designing and supporting a series of Planning Assistance Team Visits (PAT) – one-day customized, facilitated planning sessions that were developed based on interviews with key cancer control leaders and were designed to help the state overcome specific barriers to moving forward with their CCC planning effort. Since 2003, 13 states have participated in a PAT.

Also initiated was a parallel effort to develop web-based resources to support the planning, implementation, and evaluation of state-based comprehensive cancer control efforts. The NCI, in collaboration with the ACS, the Agency for Healthcare Research and Quality (AHRQ), CDC, and the Substance Abuse and Mental Health Service Agency (SAMHSA), developed the Cancer Control PLANET (Plan, Link, Act, Network with Evidence-based Tools) web portal (http://cancercontrolplanet.cancer.gov). The PLANET serves as a one-stop shop for identifying state-specific high-risk populations and partners in comprehensive cancer control, synthesis reports of research evidence to inform practice decisions, research-tested intervention programs that can be adapted for local use, and national

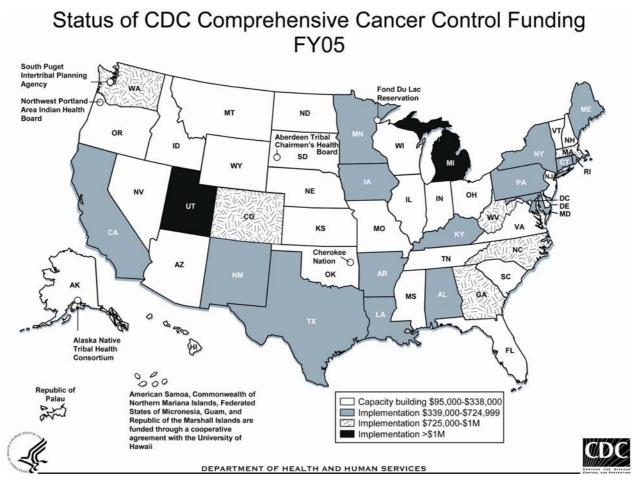


Fig. 2.

and state-specific planning documents, implementation approaches and evaluation tools in CCC. That commitment of the national organizations to consolidate and coordinate these resources and work together to provide training represents a model for interagency collaboration.

Theoretical basis for Comprehensive Cancer Control

The national CCC initiative is outcome-oriented and focused on accomplishing cancer control goals such as *Healthy People 2010* and American Cancer Society 2015 goals [4]. CDC and its partners continue to refine CCC conceptual models begun during the late 1980s, based on the input of experts and experiences of state, tribe, and territory cancer control leaders who practice CCC every day. CDC and a group of national and program level advisors developed a logic model for CCC (Figure 3). On the far left-hand side of the model are the foundations of comprehensive

cancer control. These activities or building blocks lead to integrated and coordinated plans for cancer control, which in turn should lead to effective interventions, increased resources targeted to cancer control priorities and partners who are mobilized to support the efforts. Evaluation and accountability for progress occur throughout the process of plan, creation, and implementation. The "then" or right-hand side of the model describes short, intermediate, and long-term outcomes across the continuum of cancer care, leading to decreased morbidity, decreased mortality, decreased health disparities, and an increase in quality of life. See the article "The Evaluation of Comprehensive Cancer Control: Common Techniques and Unique Requirements" in this edition of the journal for more information about CCC logic models.

To achieve these goals, the national, state, tribal, and territory CCC partnership efforts are driven by three essential considerations: (1) the fragmented organizational environment, (2) the added value of "collaborative synergy [17]," and (3) practical factors for

Comprehensive Cancer Control LOGIC MODEL

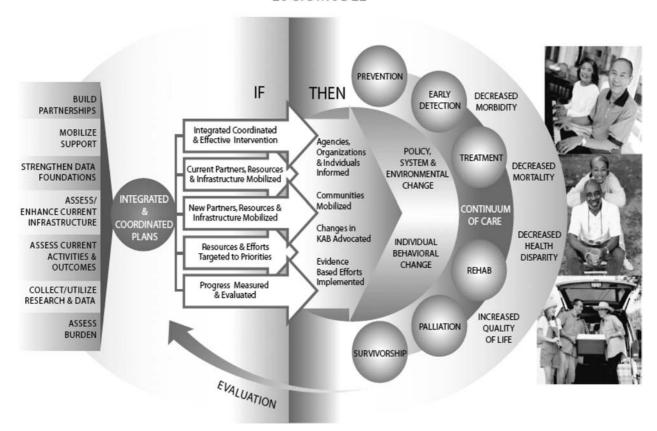


Fig. 3.

successful planning, implementation, and evaluation of CCC.

Fragmented organizational environment

The concept of "institutional isomorphism" [18] suggests that organizational and strategic fragmentation at the national level creates the conditions for a similar fragmentation at the state and community levels. As noted previously, cancer control in the United States historically has suffered from organizational and strategic fragmentation. For example, many state health departments' cancer efforts are organized by cancer sites and risk factors, such as breast and cervical cancers and tobacco control. These efforts are often insular from each other and focus on a vertical organizational hierarchy rather than horizontal, cross-departmental efforts. These isolated efforts may result in the inefficient use of resources and actions that do not meet their potential effectiveness.

Similarly, the inter-organizational environment is fragmented, with cancer-related organizations often focusing only on their internal mission and goals. In doing so, they fail to recognize gaps and duplication of effort among organizations that address cancer issues.

The above intra- and inter-organizational fragmentation leads to fragmented strategic planning. The most effective way to change the behavior of large populations is through multilevel integrated strategies [19]. The CCC initiative has been formed to promote the coordination of national, state, and local resources in the areas of policy change, increased awareness through media, information delivery, educational programs, and community mobilization.

To accomplish the national cancer control goals, it is necessary to overcome organizational fragmentation and move toward a coordinated, integrated approach to cancer control.

Collaborative synergy – the whole is greater than the sum of its parts

Collaborative efforts seek to combine perspectives, resources, and skills, enabling new, holistic, and integrated actions – a whole that is greater than the sum of its parts. This synergy characterizes CCC partnership

efforts. High-quality collaborative partnerships, through the development of "synergy," have the potential for greater impact by "leveraging, combining, and capitalizing on their complementary strengths and capabilities" [17]. Comprehensive cancer control efforts that combine academic scientists and health professionals, especially at the local level, also create a practical thinking that enables the successful translation of science into practice to ensure a more successful implementation of CCC plans.

The benefits of the CCC collaborative synergy are

- 1. Development of a shared, comprehensive perspective;
- 2. Ability to plan and implement comprehensive, evidence-based interventions that integrate programs, organizations, and sectors;
- 3. Ability to identify gaps in cancer control efforts to help prioritize actions;
- 4. Elimination of duplication to increase efficiency;
- 5. Reallocation of existing and identification of new resources to address gaps; and
- 6. Speaking with one voice to maximize political power

Prime examples of the success of comprehensive and collaborative public health approaches are the tobacco prevention and control efforts in California, Massachusetts, Oregon, and Florida. Through collaboration and the combining of resources, and using evidence-based, multi-level interventions, the above states significantly reduced tobacco consumption and saved lives from lung cancer. (See the article "Use of Data to Motivate Action: Data Quality, Presentation, and an Action Context for Decision Making" in this edition of the journal for more information.) A comprehensive cancer control approach is required to systematically accomplish these high-impact interventions.

Practical factors

Successful collaborations in CCC are complex and require an unwavering focus on the structure of the collaboration itself so that it not only remains viable, but also can be flexible and adapt to any changes in the organizational environment. Sustaining collaboration requires a set of practical activities, or "building blocks," to support the planning, implementation, and evaluation of policies and programs [16]. These building blocks include mobilizing support, developing strong partnerships, developing an infrastructure – staff support, resources, leadership, management, communication, governance procedures, accountability structures – strengthening the data foundation for cancer control and conducting ongoing evaluation. These activ-

ities, established during the CCC plan creation phase, are the foundation of a CCC effort and are important throughout the CCC plan implementation phase.

Impact of Comprehensive Cancer Control

National level impact

CCC has created significant initiatives not only at the state level, but also at the national level. The national CCC initiative creates powerful collaborations, increased resources, and policy support for cancer programs, as well as coordination across the continuum of cancer control, including a focus on survivorship issues.

The creation of the CCC national partnership has enabled integrated interventions and tools for CCC programs that would not have been possible if the individual organizations (ACS, CDC, NCI, LAF, etc.) had continued to act alone. The stronger public health focus on survivorship, palliative care, and end-of-life issues is an example of the CCC partnership synergy resulting in a more comprehensive perspective. For example, a new/renewed focus on the public health role in cancer survivorship resulted in the publication of *A National Action Plan for Cancer Survivorship: Advancing Public Health Strategies* [20]. See the article "Survivorship and Comprehensive Cancer Control" in this issue of the journal for more information about the impact of CCC planning on cancer survivorship.

Another result of the national synergy is the development of integrated CCC interventions, such as the CCC Leadership Institutes and the Planning Assistance Team Visits, which are instrumental in assisting states in moving forward with developing and implementing comprehensive cancer control plans. These collaborative interventions are developed and delivered through the combined resources and efforts of all of the CCC national partners.

A powerful collaboration created through national CCC efforts brings together traditional public health practitioners and medical professionals, such as oncology specialists. The ACOSs Commission on Cancer is an active national partner in CCC. ACOS supports a network of State Chairs and Cancer Liaison Physicians who serve as members of state CCC coalitions and local cancer control efforts, providing leadership and expertise related to access to care, quality improvement of cancer care, cancer disparities, and professional education, as well as access to a network of ACOS Commission on Cancer-approved facilities and an extensive data set colleted from those facilities called the National Cancer Data Base. For more information, see

the ACOS Commission on Cancer website: http://www.facs.org/cancer/index.html.

The synergy from national level CCC collaboration creates an increase in resources for and a political awareness of cancer programs. Comprehensive cancer control web tools - the CCC web portal, PLANET, and the CCC web site, CancerPlan.org - are examples of new resources. Leadership Support Teams, an initiative bringing together ACS cancer control field planners, CDC program consultants, ICC regional networks, and NCI Cancer Information Service managers in several regions of the country to provide support and assistance for state, tribe, and territory cancer planning and implementation processes is another example of an increase in resources. Strengthening the political and organizational will to support CCC efforts has, in turn, increased efforts of organizations such as C-Change, governors, and legislators to ensure that states develop and implement comprehensive cancer plans. For example, the Council of State Governments, in partnership with CDC, has recently released a toolkit about comprehensive cancer control (http://www.healthy states.csg.org/Publications/). The tool kit is designed to give state policy-makers the information and resources they need to champion a more coordinated approach to cancer in their own states.

State level impact

Even before CDC funding for the NCCCP began in 1998, state, tribes, and territories strived to coordinate their cancer control and related chronic disease efforts, particularly within the governmental health department. With the establishment of the NCCCP and national partner efforts to support CCC leaders, all states, tribes, and territories are beginning to create and implement CCC plans. Many are now beginning to realize short and intermediate outcomes as a result of their efforts. Two state examples of success are illustrated below.

Texas

In 1998, Texas became one of the first six states to be funded by the CDC for comprehensive cancer control. The state has already seen many successes from the comprehensive cancer control experience. The Texas Department of Health (now renamed the Texas Department of State Health Services) worked with the Texas Cancer Council (TCC), another state agency charged with creating and working to implement the state cancer plan, to develop the initial goals of the comprehensive cancer control program. These were

- To improve and expand the collaborative efforts already in place among the different stakeholders working on cancer control in Texas through creation and support of a Texas Comprehensive Cancer Coalition;
- To increase the use of the Texas Cancer Plan as the statewide document directing cancer control efforts;
- To develop a data-driven and science-based process for prioritizing the elements of the Texas Cancer Plan; and
- To disseminate the information available to local communities and provide technical assistance to communities working on local cancer control efforts.

One of the first activities undertaken by the Texas Comprehensive Cancer Coalition was to conduct an inventory of cancer-related activities in the state that are in accordance with the *Texas Cancer Plan*. This activity, called a "building block," focusing on assessing and addressing the cancer burden, helped the coalition to establish a baseline assessment of the state of cancer control in Texas and a sense of where the state was in terms of implementation of the state cancer plan. A copy of this initial inventory can be found at http://www.dshs.state.tx.us/tcccp/default.shtm.

Another "building block" (use data and research) and early success of the Comprehensive Cancer Program was the commissioning of a study by the University of Texas at Austin Lyndon B. Johnson School of Public Affairs to estimate the economic costs of cancer in Texas. The total estimated costs due to cancer in 1998 were determined to be approximately \$14 billion, including \$4.9 billion in direct medical costs and \$9.1 billion in indirect costs and lost productivity. Additional breakdown of the total cost estimates by the major preventable cancer types were approximately \$1.2 billion for colorectal cancer, \$2.2 billion for lung cancer, \$1.2 billion for breast cancer, and \$445 million for prostate cancer. Release of this report received widespread media coverage and drew attention to the burden of cancer in Texas. The report also provided additional information for the Comprehensive Cancer Coalition to utilize in prioritizing implementation of the Texas Cancer Plan. The report can be accessed at http:// www.dshs.state.tx.us/tcccp/default.shtm.

Over the past 2 years, the Texas Comprehensive Cancer Coalition has identified tobacco use and colorectal cancer as its top two priorities. This is not to say that other important cancer issues are not being addressed, but in looking at the burden of cancer in Texas and the gap between what is currently being done and what is needed to address the problem, these two issues were chosen as initial priorities. One change that resulted from this focus included a large increase in the number of Continuing

Medical Education and Continuing Nurse Education programs offered by the Texas Medical Association and Texas Nurses Association that were focused on tobacco and colorectal cancer-related issues. The Texas Department of State Health Services, the Texas Chapter of the American Cancer Society and other Coalition members are also demonstrating "collaborative synergy" by working to implement a comprehensive tobacco control pilot program in East Texas and to promote smoke-free ordinances across the state. Another example includes a project that involved coordination between the Texas Department of Health, the TCC and TCC-funded colorectal cancer community projects to develop a guide to community outreach activities to increase colorectal cancer screening. This Guide was designed to help communities get organized, conduct assessments, and identify ideas and events to involve the media to increase messages promoting colorectal cancer awareness and action. A copy of the guide can be found at www.tdh.state.tx.us/ tcccp/reportfiles/colguide.pdf.

The Texas Comprehensive Cancer Coalition has served an important role to broaden the coordination and to improve dissemination of knowledge about the state cancer plan. During the recent revision of the Texas Cancer Plan, the Coalition coordinated a planning process that involved over 70 individuals from across the State to provide active input in the writing of the plan. This will be very important to continuing to expand the buy-in and support for coordinated implementation of the plan.

The Texas Comprehensive Cancer Coalition is currently involved in pilot efforts in selected regions of the state to further disseminate the Comprehensive Cancer Control model to the local level. Activities include development of a "Tool Kit" that will include practical materials for community mobilization to address cancer and to promote implementation of many of the action items in the *Texas Cancer Plan*.

Over time, the Texas Comprehensive Cancer Coalition has realized that making an impact on cancer in Texas cannot be accomplished by just one organization. To be successful and to efficiently use the limited resources that are available will take coordination of activities and contribution of resources by all of the groups that are addressing cancer in Texas. The comprehensive cancer control model is playing an important role in making this become a reality.

Washington State

In Washington State, comprehensive cancer control has its roots in the advocacy efforts of two cancer survivors. Their efforts to focus attention on prostate cancer eventually led to the gathering of an informal planning group consisting of stakeholders from various organizations including the Washington State Department of Health. The initial focus of the group was on taking a broader approach to addressing cancer issues in Washington rather than focusing on specific cancers independently. In early 2001, they recommended that the Department of Health apply for a planning grant for comprehensive cancer control from the CDC. The Department received the grant funding in October 2001 and formed the Washington Comprehensive Cancer Control Partnership.

Due to the initial and ongoing support for a more comprehensive approach to cancer, Washington State has made progress in addressing many of the operational challenges in cancer prevention and control. Prior to 2001, there was a lack of infrastructure for coordinating and integrating statewide efforts. The formation of the Partnership represents an important step forward in building infrastructure for comprehensive cancer control. Currently, the Partnership consists of over 100 members representing nearly 40 organizations and agencies from health care, public health, academia, advocacy, insurance, and government. The Comprehensive Cancer Control Program at the Washington State Department of Health represents additional infrastructure. The program provides administrative, technical, and financial support to the Partnership.

The purpose of the Partnership is to develop, implement, and evaluate a state cancer plan. In February 2002, the Partnership began a planning process that involved reviewing cancer burden data, identifying priority issues, developing goals and objectives, reviewing scientific literature for evidence-based interventions, and developing strategies. For example, an effort was made to expand the usage of cancer registry data. The epidemiologist from the Washington State Cancer Registry presented the results of a published study that used registry data to assess the quality of care provided to patients diagnosed with colorectal cancer. The study results were presented to the Medical Care Work Group and helped demonstrate to participants the potential value of cancer registry data in assessing quality of care issues. This approach to planning ensured that decisions were based on available data and research and would result in a plan that was grounded in science. The Washington State Comprehensive Cancer Control Plan (WSCCC Plan) was published in January 2004. The purpose of the WSCCC Plan is to

 Provide a framework and guide for coordinated and integrated statewide efforts to reduce the burden of cancer;

- Highlight important cancer issues for future prioritization (i.e., during plan implementation phase);
- Set goals and objectives for improvement;
- Propose evidence-based or theory-based strategies to achieve goals and objectives; and
- Draw interested organizations and individuals together to work collaboratively toward shared goals

The formation of the Partnership and development of the WSCCC Plan has drawn new partners together and has resulted in new opportunities and resources for addressing priority cancer issues in Washington State. Colorectal cancer is an initial priority selected by the Partnership.

Colorectal cancer is the fourth most common cancer and the second leading cause of deaths from cancer in Washington. Despite the high burden of colorectal cancer and the availability of effective screening tests, according to Behavioral Risk Factor Surveillance System data for Washington in 2002, only about half $(53\% \pm 3\%)$ of adults aged 50 years and over have been screened according to American Cancer Society guidelines [21] and U.S. Preventive Services Task Force guidelines (http://www.ahrq.gov/clinic/3rduspstf/colorectal/colorr.htm).

Before the establishment of the Partnership, the Colorectal Cancer Screening Task Force (Task Force) consisted of about 45 health professionals and advocates working together with limited funding and infrastructure. The Task Force is now part of the organizational structure of the Partnership and is supported through a \$350,000 grant from CDC in 2003. The Task Force is implementing strategies from the WSCCC Plan with the objective of increasing colorectal cancer screening rates and the long-term goal of reducing colorectal cancer mortality. The merging of the Task Force with the Partnership is evidence of the willingness of partners to integrate efforts.

Collaboration among partners is a key aspect to comprehensive cancer control. The Alliance for Reducing Cancer, Northwest (ARC NW) is a major partner in Task Force efforts to increase colorectal cancer screening rates. ARC NW is one of eight members of the National Cancer Prevention and Control Research Network (Network) funded by CDC and the National Cancer Institute [22]. The mission of the Network is "to conduct cancer prevention and control research that extends the knowledge base, addresses critical gaps, and leads to adoption, replication, implementation, and diffusion of successful programs in communities."

The mutual interest in implementing successful programs in communities creates a natural linkage between ARC NW and the Partnership. Since the evidence base

for effective interventions to increase colorectal cancer screening rates is weak, the collaborative relationship with academic researchers such as ARC NW has been especially important for comprehensive cancer control in Washington. Their role has been to review scientific literature, conduct data analyses and assessment activities, and make recommendations to the Task Force regarding interventions. As the Partnership moves further into plan implementation, the role of ARC NW will focus more on the evaluation of interventions.

One assessment project initiated by ARC NW was developing a survey of primary care providers in Washington. The survey was adapted from the national survey conducted by Klabunde and colleagues and was designed to assess provider knowledge, attitudes, and practices concerning colorectal cancer screening [23]. Analysis of the survey data will provide baseline information to guide the Task Force in the development of provider-focused interventions.

Comprehensive cancer control is still a new approach that is continuing to evolve and expand in Washington as the Partnership moves further into the plan implementation phase. Early experience with this approach suggests that increased coordination and integration of activities among stakeholders can indeed lead to better statewide cancer prevention and control. Before the integration of the Task Force with the Partnership, limited resources were being directed to colorectal cancer, which is clearly a priority cancer issue in Washington. As additional plan priorities are selected, further collaboration among partners will lead to the identification and implementation of appropriate strategies.

Call to action

Great progress has been made since this country's declaration of war on cancer in 1971. However, many challenges remain. The organization-specific, categorical investments of the 1980s and early 1990s helped turn the tide with respect to the overall burden of cancer. Given a rapid growth in ethnic diversity of the U.S. population, however, a growing gap between the haves and havenots within society, the growth in the number of cancer cases and deaths due to an aging population, and the flattening of the rate of growth in U.S. investments in cancer control service delivery programs, comprehensive approaches to cancer control are needed now more than ever. A collective commitment to comprehensive approaches to cancer control is necessary if we are to maximize the impact of our agency-specific cancer control investments, eliminate duplication of effort, and build on the national, state, territorial, and tribal foundations that have been supported by the national partners during the past 5 years. To achieve the very ambitious goals articulated by *Healthy People 2010*, the ACS 2015 goals, and most recently the goal set by the NCI to eliminate suffering and death from cancer by 2015, new and expanded efforts must be made to plan, implement, and evaluate comprehensively. Three action priorities for the next 10 years are

- 1. National and state agencies and organizations need to review their specific cancer control priorities and investments to identify areas where networking, coordination, cooperation, and collaboration can increase synergistic initiatives in cancer control. The path of least resistance will always be to work unilaterally, so a more concerted effort to recognize opportunities for both leadership and partnership must be made by all those concerned with reducing the overall burden of cancer in the United States;
- 2. Agencies and organizations serving populations that bear the greatest burden of cancer (e.g., the poor and ethnic and racial minorities) must work together to demand not only the commitment to but also an increased investment in eliminating disparities at national, state, and local community levels; and
- 3. A concerted effort must be made to ensure that the benefits of our investments in cancer prevention and control research are rapidly disseminated so that evidence-based interventions can be adapted and adopted by those who provide prevention, early detection, treatment, and survivorship services. A critical challenge will be to increase our commitment to and investment in research-practice partnerships. Not only should research evidence influence cancer control practice, but service delivery evidence should also influence the types of cancer control research questions in which we choose to invest.

This special issue of *Cancer Causes & Control* provides a series of articles that describe this conceptual framework for continuing and increasing our commitment to and investment in comprehensive cancer control.

References

- Public Law 92–218, 92nd Congress, S-1828, December 23.1971 (http://www3.cancer.gov/legis/1971canc.html; http://rex.nci.nih.gov/massmedia/CANCER_RES RCH_WEBSITE/1971.html).
- Doll R, Peto R (1981) The causes of cancer: Quantitative estimates of avoidable risks of cancer in the United States today. *JNCI* 66: 1191–1308.
- 3. http://www.cdc.gov/tobacco/sgr/sgr_1964/1964%20SGR%20 Intro.pdf.
- American Cancer Society (2005) Cancer Facts and Figures 2005, Atlanta: American Cancer Society.

- Curry SJ, Byers T, Hewitt M, eds (2003) Fulfilling the Potential of Cancer Prevention and Early Detection. National Cancer Policy Board, Washington D.C., p. 1.
- Abed J, Reilley B, Butler MO, Kean T, Wong F, Hohman K (2000) Comprehensive cancer control initiative of the centers for disease control and prevention: an example of participatory innovation diffusion. J Publ Health Manag Pract 6(2): 79.
- Public Health Service (1983) Public Health Service implementation plans for attaining the objectives for the Nation. *Publ Health Rep* 98(suppl): 1–178.
- 8. Cancer Control Objectives for the Nation: 1985–2000 In: Greenwald P, Sondik EJ, (eds). NCI Monographs, Number 2, 1986.
- Goodman RM, Steckler A, Alciati MH (1997) The impact of the National Cancer Institute's data-based intervention research program on state health agencies. *Health Educ Res* 12(2): 199– 211
- National Cancer Institute. Community-based Interventions for Smokers: The COMMIT Field Experience. Smoking, Tobacco Control Monograph No.6. Bethesda MD: U.S. Department of Health and Human Services, NIH, NCI. NIH Pub. No. 95–4028. August 1995.
- National Cancer Institute. ASSIST: Shaping the Future of Tobacco Prevention and Control. Tobacco Control Mongraph No. 16 Bethesda, MD: U.S. Department of Health and Human Services, NIH, NCI. NIH Pub. No. 05–5645, May 2005.
- Potter JD, Finnegan JR, Guinard JX, et al. 5 A Day for Better Health Program Evaluation Report. Bethesda, MD: U.S. Department of Health and Human Services, NIH, NCI. NIH Pub. No.01–4904. November 2001.
- Kaluzny AD, Lacey LM, Warnecke R, Morrissey JP, Sondik E, Ford L. (1994) Using a community cancer treatment trials network for cancer prevention and control research: challenges and opportunities. Cancer Epidemiol Biomarkers Prev 3(3): 261 269.
- 14. Abed J, Reilley B, Butler MO, Kean T, Wong F, Hohman K (2000) Developing a framework for comprehensive cancer prevention and control in the United States: an initiative of the Centers for Disease Control and Prevention. J Public Health Manag Pract 6(2): 67–78.
- 15. Butler MO, Abed J, Hare ML, Orians C, Rose, JM. Essential Elements for Developing/Expanding Comprehensive Cancer Control Programs: Design Options for State Health Agncies. Prepared for CDC, Division of Cancer Prevention and Control by Battelle CPHRE. May 1999. (http://www.cdc.gov/cancer/ncccp/ elements/index.htm).
- CDC (2002) Guidance for Comprehensive Cancer Control Planning, Atlanta, GA: Department of Health and Human Services.
- Lasker, R, Weiss, E, Miller, R (2001) Partnership synergy: a practical framework for studying and strengthening the collaborative advantage. *The Milbank Quarter*, 79 (2).
- DiMaggio P, Powell W (1983) The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. Am Sociol Rev 48: 147–160.
- Harvard Center for Cancer Prevention (1997) Summary. Cancer Causes Control 8(suppl 1): S50.
- Lance Armstrong Foundation and the Centers for Disease Control and Prevention (2004) A National Action Plan for Cancer Survivorship: Advancing Public Health Strategies. Available from: http://www.cdc.gov/cancer/survivorship/overview.htm.
- Washington State Comprehensive Cancer Control Plan, 2004– 2008. Olympia, WA: Washington Comprehensive Cancer Control Partnership, January 2004. Available from: URL: http:// www.doh.wa.gov/ccc.

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- 22. Harris JR, Brown PK, Coughlin S, *et al.* The Cancer Prevention and Control Research Network. Prev Chronic Dis [serial online] 2005 Jan [date cited]. Available from: URL: http://www.cdc.gov/pcd/issues/2005/jan/04_0059.htm.
- 23. Klabunde CN, Frame PS, Meadow A, Jones E, Nadel M, Vernon SW (2003) A national survey of primary care physicians' colorectal cancer screening recommendations and practices. *Prev Med* **36**(3): 352–362.