

Comprehensive cancer control programs and coalitions: partnering to launch successful colorectal cancer screening initiatives

Laura C. Seeff · Anne Major · Julie S. Townsend · Ellen Provost ·
Diana Redwood · David Espey · Diane Dwyer · Robert Villanueva ·
Leslie Larsen · Kathryn Rowley · Banning Leonard

Received: 3 June 2010 / Accepted: 7 October 2010 / Published online: 18 November 2010
© US Government 2010

Abstract Colorectal cancer control has long been a focus area for Comprehensive Cancer Control programs and their coalitions, given the high burden of disease and the availability of effective screening interventions. Colorectal cancer control has been a growing priority at the national, state, territorial, tribal, and local level. This paper summarizes several national initiatives and features several Comprehensive Cancer Control Program colorectal cancer control successes.

Keywords Comprehensive cancer control · Colorectal cancer

Introduction

Colorectal cancer (CRC) is a very common and costly cancer [1, 2]. It is the second leading cause of cancer deaths among US men and women and primarily affects persons 50 years of age and older. Incidence rates increase with increasing age and are highest among blacks and Alaska Natives [1]. In 2006, 139,127 new cases of colorectal cancers were diagnosed in the United States and 53,196 adults died from this disease; over 90% of colorectal cancers were diagnosed in persons 50 years of age and older [1].

Most colorectal cancers develop from precancerous polyps in the colon or rectum that slowly develop into cancers over 10–15 years [3]. Colorectal polyps and early-stage colorectal cancers usually do not cause symptoms, and in the absence of screening, they may go undetected until an individual presents at a symptomatic advanced stage. Colorectal cancer screening has tremendous potential to save lives. Routine screening allows for the detection and removal of precancerous polyps, thereby preventing the development of colorectal cancer altogether, and for the detection of early-stage cancers which can be treated more effectively. It has been estimated that if all precancerous polyps were identified and removed before becoming cancerous, colorectal cancer incidence and mortality could be reduced by 76–90% and 70–90%, respectively [4, 5]. Unrealized financial savings are also possible, through the prevention and early detection of colorectal cancer [6].

Despite this knowledge, colorectal cancer screening remains underused. Currently, it is estimated that only half

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

L. C. Seeff (✉) · A. Major · J. S. Townsend
Division of Cancer Prevention and Control, Centers for Disease
Control and Prevention, Atlanta, GA, USA
e-mail: lseeff@cdc.gov

E. Provost · D. Redwood
Alaska Native Tribal Health Consortium, Anchorage, AK, USA

D. Espey
Centers for Disease Control and Prevention and Indian Health
Services, Albuquerque, NM, USA

D. Dwyer · R. Villanueva
Maryland Department of Health and Mental Hygiene,
Center for Cancer Surveillance and Control, Baltimore,
MD, USA

L. Larsen
New York State Department of Health, New York State
Comprehensive Cancer Control Program, Albany, NY, USA

K. Rowley · B. Leonard
Utah Department of Health, Utah Cancer Control Program,
Salt Lake City, UT, USA

of all US adults aged 50 or older have been screened for colorectal cancer as recommended, although there is considerable state-level variation [7]. While screening rates have slowly increased in recent years, disparities still exist in screening test utilization by race, income, and health insurance status [7, 8].

Development of comprehensive cancer control programs and plans

Since the mid-1990s, CRC control has increasingly become a priority nationally and locally and has been a priority area for the National Comprehensive Cancer Control Program (NCCCP) since its inception. In 1998, the Centers for Disease Control and Prevention (CDC) established the NCCCP, which provides funding and technical assistance to states, tribes and tribal organizations, US territories and Pacific Island jurisdictions for the establishment of cancer control coalitions, the development of cancer control plans, and the implementation of evidence-based cancer control activities. CDC funded the first comprehensive cancer control (CCC) pilot programs in 1998 for five states and one tribal health board with existing cancer control plans: Colorado, Massachusetts, Michigan, North Carolina, Texas, and the Northwest Portland Area Indian Health Board. Since then, the number of programs participating in the NCCCP has increased to all 50 US states, the District of Columbia, seven tribal governments and organizations, seven territories and U.S. Associated Pacific Island jurisdictions, with CDC funds supporting CCC management, cancer control planning and implementation, and coalition infrastructure [9]. Additional CDC funding is provided to select NCCCP grantees to support specific colorectal, prostate, ovarian and skin cancer control activities; funds are not provided for direct clinical services or research. The growth since 1998 from 6 to 69 published cancer plans and the success in developing and sustaining a collaborative national partnership has created a strong foundation to impact policy change and to support cancer control in all areas of the cancer continuum.

Comprehensive cancer control has offered an ideal framework for collaboration toward colorectal cancer control. Each CCC program has a well-established cancer coalition, comprised of active representatives from state, tribal, and territorial health departments, cancer treatment centers, individual cancer survivors, clinicians, local cancer organizations and task forces, and others involved in the cancer continuum. When CCC programs were first formed, many early coalition members included those already active in colorectal cancer coalitions and engaged in activities to increase colorectal cancer awareness and access to early detection and screening. The inclusion of

coalition members with CRC control expertise who were already active in public awareness and screening efforts provided strong support for programs to focus on state/tribal/territorial and local screening and work toward colorectal cancer prevention.

Each coalition works with their CDC-funded program to review existing cancer data and develop a cancer plan that reflects the cancer burden in that state, tribe, or territory and includes priorities and evidence-based strategies and interventions aimed at reducing the cancer burden (<http://www.cancercontrolplanet.gov>). As early state/tribal/territorial and local programs assessed cancer burden data and determined cancer plans priorities, colorectal cancer control emerged as a focus area for many CCC programs based on the consistently high burden of colorectal cancer and low screening rates. Over the past decade, programs moved from planning to the implementation of the public health strategies in their cancer plans and set annual measurable implementation goals and objectives. CDC's 2005 *Comprehensive Cancer Control Plans—A Content Review* described the impact of the CCC approach and illustrated that the majority of plans included CRC goals, objectives, and interventions [10].

Support by national cancer partners

The Comprehensive Cancer Control National Partnership has supported CCC efforts through the contribution of tools, support for policy and legislative initiatives, and professional education around screening and prevention. Many partner organizations have provided scientific expertise and contributed to the development of the CRC screening evidence base and screening guidelines, enabling programs to advance colorectal cancer control efforts. The National Colorectal Cancer Roundtable, supported by the American Cancer Society (ACS) and CDC who are both comprehensive cancer control national partners, developed an evidence-based CRC screening toolkit entitled “How to Increase Colorectal Cancer Screening Rates in Practice: A Primary Care Clinician’s Evidence-Based Toolbox and Guide, 2008,” which has been distributed widely by many programs [11]. The Comprehensive Cancer Control National Partnership developed a series of Comprehensive Cancer Control Leadership Institutes (CCCLI) that have been held across the United States to help CCC programs and coalitions move into program implementation [12]. A CRC module was included among Phase II and Phase III CCCLI workshops in 2004–2007, which resulted in the development of CRC action plans written by the coalition leadership in the NCCCP programs. Additionally, a number of partners, including CDC, the National Cancer Institute, the North American Association of Central

Cancer Registries, ACS, and other collaborators, focused this year's Annual Report to the Nation on colorectal cancer and the projected reduction in disease burden through increases in screening, risk factor modifications, and treatment [13].

Federal CRC control initiatives

At the same time that the NCCCP was growing across the United States, several important federal CRC initiatives occurred nationally, creating vital opportunities for CCC programs.

Adoption of CRC HEDIS measure

The National Committee for Quality Assurance (NCQA) supports the Healthcare Effectiveness Data and Information Set (HEDIS), a tool used by over 90% of US health plans to measure performance on many critical health care and service interventions. Health plans use HEDIS data to make improvements in the quality of their service, employers use them to help select health plan for their employees, and consumers can access HEDIS results through the "State of Health Care Quality" Report (<http://www.ncqa.org/Default.aspx?tabid=136>), which provides a comprehensive assessment of the quality of the nation's health care system [14].

CDC supported an initiative to test a CRC screening HEDIS measure, which was then adopted in 2004. This measure has placed tremendous focused attention on improving CRC screening rates by encouraging health plans to cover CRC screening tests or change their practices and policies around CRC screening [7, 15]. Following the establishment of the HEDIS measure, CRC screening rates have increased, likely due to a combination of the impact of the measure itself, changes in how insurers collected the HEDIS data and follow-up efforts by all cancer control organizations, including CCC programs, to implement the measure.

Measuring screening capacity

In the late 1990s, CDC began working toward developing a CRC screening program modeled in part on the National Breast and Cervical Cancer Early Detection Program [16]. An important consideration in the planning for widespread colorectal cancer screening was an assessment of screening capacity. Since sigmoidoscopy and colonoscopy, two recommended colorectal cancer screening tests require that providers have specialized training and equipment, and procedures must be performed in appropriate facilities, the potential for capacity shortages existed for those two tests.

In 2002, to gauge the capacity to screen the US population using endoscopy, CDC conducted a survey (Survey of Endoscopic Capacity or SECAP) of a national sample of medical practices known to have purchased or leased lower endoscopic equipment and developed a forecasting model to project numbers of tests needed to screen the US population [17, 18]. The findings indicated that while there was sufficient immediate endoscopic capacity to conduct widespread screening with fecal occult blood testing (FOBT), using colonoscopy only for follow-up of positive FOBTs, endoscopic screening for the US population 50 years of age and older would need to be conducted over a 5- to 10-year period. This study provided critical data that informed the planning for national colorectal cancer screening efforts. In follow-up to the national study, CDC reached out to state Chronic Disease Directors initially and CCC Program Directors in later years and assisted 15 states (Colorado, Georgia, Iowa, Maine, Maryland, Massachusetts, Minnesota, Michigan, North Carolina, New Mexico, New York, Ohio, South Carolina, Texas, and Washington state) from 2003 to 2006 in performing state-specific CRC screening capacity assessments. These assessments showed that state-level capacity varied tremendously, with some states having sufficient capacity to implement widespread screening programs using endoscopy. The study findings guided the development of many state and local CRC screening programs, including programs in Colorado and New York City. Since the capacity assessment conducted in 2002, rates of test use have changed, with the use of colonoscopy increasing more than the use of other screening tests [8]. In 2010, the capacity for widespread screening will be re-estimated nationally and in 14 additional CCC programs (Alabama, Alaska Native Tribal Health Consortium, Arkansas, Florida, Guam, Hawaii, Kentucky, Nebraska, Nevada, New Jersey, North Dakota, Pennsylvania, Utah, and West Virginia).

CDC's colorectal cancer screening demonstration program

Screening for colorectal cancer is complex, since multiple screening tests are acceptable, each with a different recommended repeat interval and each performed by different types of health care specialists. In an effort to better understand how to structure and implement population-level colorectal cancer screening before launching a larger national effort and to explore the most viable and cost-effective models, CDC initiated a four-year colorectal cancer screening demonstration program (CRCSDP) in 2005 in five sites across the United States. These programs were designed for low-income persons 50–64 years of age, who were under or uninsured for CRC screening. The program was developed following a series of internal and

external stakeholder meetings convened to gather clinical, public health, and programmatic input.

CDC was able to fund five programs at a total of \$2.6 million per year, from August 2005 through August 2009 [19]. The 5 sites represented diverse settings, including county, city and state-wide programs, and each worked with their CCC program. In addition to colorectal cancer screening, the program sites also provided diagnostic follow-up, conducted public education and outreach, assured tracking and follow-up of patients screened, provided case management, supported partnerships, and collected outcomes data. CDC conducted close evaluation of these programs to understand effective program development, measure the number of clinical outcomes by program design and screening test type, and measure costs and cost efficiencies [20–22].

Throughout 2008, CDC obtained broad stakeholder input through a series of in-person meetings with state, tribal and territorial health departments, CCC Program Directors and state CCC coalition chairpersons, nationally recognized clinical experts, health economists, and other federal health agencies on the design of a second CDC-funded screening program focused on integrating colorectal cancer screening with other cancer or chronic disease programs.

CDC's colorectal cancer control program

In 2009, CDC was appropriated an additional \$25 million to launch an expanded CRC screening program and awarded funds to 26 states and tribal grantees. Programs focus on population-level efforts to increase CRC screening. Funds support program management, screening, and diagnostic follow-up for those eligible, case management/patient navigation, data collection and tracking, public education, provider education and evaluation [23]. Several programs highlighted in this article have been able to participate in one or both of these CDC-funded CRC programs.

NCI's state of the science conference

In early 2010, the National Institutes of Health convened a State of the Science Consensus Conference entitled "Enhancing Use and Quality of Colorectal Cancer Screening" to provide health care providers, patients, public health practitioners, and the general public with an assessment of currently available data on use and quality of colorectal cancer screening [24]. A non-federal, non-advocate 13-member panel representing a wide array of basic science and public health disciplines was convened and heard presentations from 20 experts from pertinent fields who presented data to the panel and conference

audience. A systematic review of the literature was prepared and presented by the RTI International–University of North Carolina Evidence-based Practice Center, through the Agency for Healthcare Research and Quality.

The panel found that, despite substantial progress toward higher colorectal cancer screening rates nationally, screening rates still fall short of desirable levels. Targeted initiatives to improve screening rates and reduce disparities in under-screened communities and specific population subgroups could further reduce colorectal cancer morbidity and mortality. This could be achieved by better utilizing the full range of screening options and evidence-based interventions for increasing screening rates. To close the gap in screening, the report identified several priority areas for implementation and research to enhance the use and quality of CRC screening, including eliminating financial barriers to CRC screening and appropriate follow-up; implementing effective interventions to increase CRC screening, including patient reminder systems and one-on-one interactions with providers, educators, or navigators; developing systems to assure high quality of colorectal cancer screening programs; and conducting studies to determine the comparative effectiveness of the various CRC screening methods in usual practice settings. CCC programs provide excellent settings in which many of these questions could be answered.

Focus on CRC by CCC programs

As the field of public health increasingly promotes evidence-based interventions, research on effective interventions for CRC screening has led to several *Community Guide* recommendations for improving CRC screening utilization. Currently, client reminders, reducing structural barriers, small media, provider assessment and feedback, and provider reminders/recall are recommended intervention strategies for raising CRC screening rates [25]. In a content review of CCC plans, nearly 60% of CCC programs mention using evidence-based interventions described above for CRC prevention and early detection [26]. However, the number of Research Tested Intervention Programs (RTIPs) [27] available for CRC is lower than for breast cancer, so CCC programs have fewer effective interventions to choose from compared to other cancer sites.

Programs and coalitions have used evidence-based and other interventions to increase screening rates and reduce the burden of CRC, including initiatives to increase awareness in their population about the importance of screening, to raise provider referrals rates for screening, to increase awareness of family risk factors, and to implement policy and system changes that support insurance coverage

for screening. Among the 17 programs that currently receive additional funding for CRC initiatives from the NCCCP, activities include the following: supporting additional CRC questions for the Behavioral Risk Factor Surveillance System (BRFSS); supporting provider education of primary care staff to implement CRC screening referrals through the Primary Care Practice Quality Improvement Initiative; additional efforts on quality improvement to decrease rates of false negative colonoscopies by providing small-quality improvement grants to endoscope facilities; and targeted media with evaluation by focus groups to ensure the message speaks to that particular population. Each of these initiatives either utilizes evidence-based interventions or contributes to the evidence base. Programs are sharing these CRC success stories and documenting the success of the comprehensive approach in published and electronic form. For example, Minnesota publishes an annual report that includes major policy and prevention accomplishments and progress toward their incidence and mortality target objectives (<http://www.cancerplanmn.org>); this document includes baseline and target objectives for CRC screening.

CDC developed a set of performance measures for CCC programs in order to ensure accountability, document outcomes, and facilitate quality improvement. These performance measures were piloted with CCC programs in 2008. In 2008, 14 programs ($n = 61$ total) reported successfully enacted or pending policies regarding CRC screening. In 2009, this increased to 21 programs ($n = 67$ total). Examples of screening policies include creating/funding screening programs, mandating insurance companies cover CRC screening tests, setting limits or eliminating out-of-pocket expenses on copayments and deductibles for colonoscopy, and requiring that employers allow employees time off for cancer screening appointments.

Four examples of comprehensive cancer control program success

Four examples of program success are highlighted in this article. Selection criteria for inclusion emphasized programs that have shown substantial increases in CRC screening rates, use evidence-based interventions, have partnered extensively with outside organizations, or have had to overcome substantial barriers in developing their CRC program. To reflect a diversity of experience, we present one CCC program that participated in the CRCSDP (who currently also participates in the CRCCP), along with three programs that are currently participating in the CRCCP but did not directly participate in the CRCSDP. All but one program also receive CRC optional funds through the NCCCP.

The Alaska Native Tribal Health Consortium (ANTHC) faces unique issues with the geography of Alaska and the high rates of *Helicobacter pylori* (*H. pylori*) infection in the Alaska Native population which limits use of guaiac-based FOBT. These unique issues are being addressed through partnerships with other organizations and innovative methods for increasing access to screening. Maryland has been a national leader in CRC screening and was involved in CDC's CRCSDP. For a number of years, New York has had multiple efforts around CRC screening and early detection, including a program to provide screening to uninsured and underinsured New Yorkers, and statewide Dialogue for Action meetings. Utah has seen a 13 percentage point increase in their CRC screening rates from 2002 to 2006, and they have an active partnership addressing CRC screening priorities along with media campaigns around CRC screening.

Alaska native tribal health consortium (ANTHC)

Cancer is the leading cause of death among Alaska Native (AN) people, and colorectal cancer (CRC) is the second leading cause of cancer mortality [28]. Alaska Native people are disproportionately affected by colorectal cancer, experiencing almost twice the incidence and mortality as US whites [28]. Although CRC screening is an effective way to reduce CRC mortality [29], AN screening prevalence varies significantly between regions of the state, from 7 to 64%, with a median of 44% (Government Performance and Results Act data, 2008).

Alaska Native people are concerned about the increasing burden of cancer, which has led to a focus on cancer prevention within tribal health organizations statewide, collectively called the Alaska Tribal Health System (ATHS). The ATHS is a hub and spoke network of small village-based clinics, subregional clinics, regional hospitals, and a large urban secondary and tertiary care facility. The ATHS comprises cradle-to-grave comprehensive care for eligible Alaska Native people. This integrated system of care has the potential for significant impact on CRC disease burden by increasing CRC screening.

There are a number of challenges to the delivery of CRC screening. First, about 40% of Alaska Native people live in widely dispersed remote communities that are not connected by road. Most of these communities are only accessible year round by air, with seasonal access by boat or snowmobile. Second, AN people experience a high prevalence ($\sim 75\%$) of *H. pylori* infection [30]. Because *H. pylori* causes low-grade chronic blood loss from the stomach, screening with guaiac-based fecal occult blood tests has been discouraged as a screening modality, with colonoscopy the preferred method [31]. Endoscopy services are available in Anchorage with limited availability

at regional hub communities. Thus, CRC screening requires a costly trip away from home to access endoscopy services.

Over the past decade, the ANTHC has worked to improve CRC screening prevalence through various pilot projects and the creation of a Tribal Comprehensive Cancer Control Program. The CRC pilot projects include the development and implementation of a flexible sigmoidoscopy training program for rural mid-level providers; the provision of itinerant endoscopy services at rural tribal health facilities; the development and implementation of a CRC screening Patient Navigator project integrated within a CDC-funded tribal Breast and Cervical Cancer Early Detection Program (BCCEDP); the creation and use of a CRC first-degree relative database to identify and screen relatives of CRC patients; and a study to test the specificity and sensitivity of a newer human hemoglobin-specific stool blood assay (Fecal Immunochemical Test—FIT) as a screening option for CRC in Alaska Native people. In this past year, ANTHC was awarded funds for CDC's new CRCCP and is focused on improving CRC screening for Alaska Native people living throughout the state.

Lessons learned from past projects include the need for patient navigation and the need to address capacity and systems barriers. Further research should address recognized barriers to screening and expand the CRC screening options available to Alaska Native people. These efforts will increase CRC screening prevalence and, ultimately, decrease the excess morbidity and mortality caused by CRC among the Alaska Native population.

Maryland

In 1998 as part of Maryland's portion of the multi-state Master Settlement Agreement with the tobacco industry, the Cigarette Restitution Fund Program (CRFP) was created by the Maryland General Assembly and signed into law by the Governor. As set forth in CRFP statute, major goals of the program are to reduce cancer mortality and to lessen cancer disparities among ethnic and racial minorities in Maryland. Under this funding, 23 of Maryland's 24 jurisdictions developed CRC education programs and screening programs for people with low incomes who were uninsured or underinsured for CRC screening. Baltimore City and its Community Health Coalition, on the other hand, elected to focus on prostate, oral, breast, and cervical cancer screening rather than CRC. As a result, underserved residents of Baltimore City were unable to obtain CRC screening services at no cost through the CRFP.

In the absence of a funding for a public health CRC screening program, the CRC Committee of the Baltimore City Coalition focused on CRC education. The CRC Committee was led by a representative of the American

Cancer Society, and representatives of the state and City health departments and major hospitals in the City were part of the "collaborative." City CRC Committee representatives served on the CRC Chapter Committee of the Maryland Comprehensive Cancer Plan and added to the Plan an objective stating, "Increase funding for colorectal cancer screening among uninsured, low-income Maryland residents, especially in Baltimore City."

The Maryland state health department and the City CRC Collaborative were, therefore, well positioned to have the support of the Comprehensive Control Plan coordinator in their application for CDC's CRCSDP grant in April 2005. The successful Maryland application built on the strength and experiences of its CRF CRC screening program: At the time the CRCSDP began, the CRPF had performed 8,091 FOBTs, 8,292 colonoscopies, and had detected 87 cancers outside of Baltimore City; the results of the Maryland-SECAP were complete; and Maryland had held a state Dialogue for Action. The CRCSDP award brought additional funds to the state health department, which contracted with five Baltimore City hospitals for CRC screening services, case management, data entry and bill paying for service providers. The hospitals used template contracts, case management procedures, screening database, and quality assurance procedures modified from the existing statewide CRF screening program. From 2005 to 2009, the CRCSDP performed 744 colonoscopies and detected three cancers. The successes of this program and the ongoing CRPF led to successful new funding under the federal CRCCP in 2009.

Maryland recognized the need for additional funding for its cancer programs. In 2004, the Maryland General Assembly established the Maryland Cancer Fund (MCF) within the state health department. The MCF funds are donated through an income tax check off on the Maryland annual tax return or through other direct donations. The funds are for cancer prevention, screening, treatment, and research in Maryland. MCF funds have been used to pay for treatment for patients found to have CRC in Maryland screening programs. Also, additional CRC screening in Maryland was made available through grants funded by the Maryland Cancer Fund.

New York

The New York State Comprehensive Cancer Control Program (CCC) has been involved in several statewide initiatives to support early detection of colorectal cancer (CRC). As the state program charged with working with the New York State Cancer Consortium (NYSCC), the network of organizations implementing the New York State Comprehensive Cancer Control Plan (the Plan), the CCC constantly seeks to develop connections with and

between promising initiatives, maximizing existing resources and sharing knowledge.

New York State (NYS) has long recognized the importance of screening for the early detection of CRC. In 1997, the NYS Cancer Services Program (CSP) began providing CRC screening to un- and under-insured New Yorkers, utilizing fecal testing for average risk clients through the Fecal Occult Blood Test (FOBT). This program has expanded over the years and now CRC screening is integrated into every CSP screening partnership statewide. In 2006, when the CCC received CRC optional additional funding, it was used to pilot the use of FIT (fecal immunochemical test) kits for average risk screening in the CSP as an option to FOBT. The results of the pilot were used to inform the expansion of the CSP infrastructure and, at present, most of the CSP's contractors choose FIT as their preferred tool for average risk screening. Optional additional funding is now used for a worksite initiative involving the training of CSP contractors to reach out to employers with a high percentage of un- and under-insured employees to help increase screening rates. The state continues to expand its CRC screening efforts through the 'Integrating CRC Screening Within Other Chronic Disease Programs' grant, funded by the CDC and administered by the CSP. The CCC continues working with the CSP to implement population-based strategies under this grant.

NYS's CCC initiatives have included supporting the statewide Dialogue for Action meeting and subsequent regional groups. The CCC staff has attended several New York City CRC Screening Initiative annual C5 conferences. These meetings provide partners with the opportunity to hear about the impact of projects such as patient navigation models on colonoscopy rates and to network with providers working in the field. In addition, the Director of the NYC Department of Health and Mental Hygiene's Cancer Prevention and Control Program sits on the Steering Committee of the NYSCC and provides a valuable resource to the Consortium and, currently, its effort to revise the Plan. Staff also works with other local initiatives, including the Dutchess County Comprehensive Cancer Control Initiative and, in the past, with the SCOPE pilot project conducted by the State University of New York at Stony Brook, which was one of five CDC-funded population-based CRC screening pilot sites.

The NY CCC program is of course only a part of these efforts. The CCC and the NYSCC constantly seek opportunities to share knowledge and to promote promising initiatives that will maximize existing resources. Working directly with the NYSCC, staff of the CCC work to develop 'State of the State' evaluation reports on various cancers, including CRC, participate in workgroups for implementation of local coalitions and pilot projects, sit on committees involved in the implementation of the Plan, provide

presentations on state efforts to the NYSCC Steering Committee, and constantly seek to engage new potential Consortium members. Behind all of this activity is one constant: the desire to add value and weave together partner efforts. This is accomplished by providing information, sharing insights, and connecting stakeholders in cancer control statewide.

Utah

In 2001, the Utah Department of Health published the Utah Comprehensive Cancer Control Initiative Plan, and the Utah Cancer Action Network (UCAN) was formed as a comprehensive cancer coalition to implement and evaluate the plan.

The goal for colorectal cancer as outlined in the plan is to promote, increase, and optimize the use of quality colorectal cancer screening and follow-up services, in part through (1) educating the public and health care providers about the needs for colorectal cancer screening and (2) pursuing grant opportunities that would fund colonoscopies and treatment for the uninsured and underinsured at-risk populations in Utah.

Since its inception, UCAN has grown to 119 members representing 64 different organizations including hospitals, private clinics, government and community agencies, and nonprofits. Its members include nurses, policy makers, physicians, advocates, and community members. UCAN activities are funded in part by grants from the CDC through the Utah Cancer Control Program (UCCP), which operates within the Utah Department of Health (UDOH).

In 2002, the UCCP and the Utah Colorectal Cancer Task Force sponsored the first annual Utah Colorectal Cancer Summit, titled *Dialogue for Action: Impacting Colorectal Cancer*. The dialogue was implemented by the chair of UCAN, Dr. Edward J. Eyring, a Utah colon and rectal surgeon who saw the value of a comprehensive approach to cancer education, screening, and treatment. Dr. Eyring currently serves as the co-chair elect of UCAN.

The goal of the summit was to develop a community-wide plan to decrease colorectal cancer incidence and mortality in Utah and improve quality of life for all colorectal cancer survivors. Participants decided that Utah needed a public awareness campaign to increase screening rates. The dialogue allowed the UCCP to apply for and receive funding from the CDC to create its first media campaign in 2003 to raise awareness of the importance of colon cancer screening. The campaign has since been modified and updated to reflect Utahans' changing attitudes toward cancer screening.

Thanks in part to the continuing media campaign, and there has been a significant increase in the number of Utah residents who report having been screened for colon

cancer. The proportion of Utah's population aged 50 and older who have ever had a sigmoidoscopy or colonoscopy increased dramatically from 44.1% in 1999 to 67.2% in 2008 [32]. There has also been a decline in colon cancer mortality from 17.8 in 2000 to 10.9 age-adjusted per 100,000 in 2008 [33].

In 2009, The UCCP received federal funding to expand its services to provide colon cancer screening and education and named the new program Utah Colon Cancer Screening and Awareness (UCCSA) program. In the first week after an initial media campaign informing Utahns about the program, there were over 1,000 calls requesting more information. To date, 327 colonoscopy vouchers have been issued and 166 people have been screened through the program. These screenings have found 42 polyps and one case of colorectal cancer.

Conclusion

Colorectal cancer initiatives have grown rapidly over the past 10 years and have been supported by the work of CCC programs and coalitions and other cancer programs. The collaborative work of the CCC programs, including those described in this article, has led to increased local screening rates and will lead to further decreases in colorectal cancer incidence and mortality. Through many local and national initiatives, and the collective efforts of the public health and clinical communities, CCC programs have continued to work toward colorectal cancer control, although there is work yet to be done. In an era of health reform, where screening services should ultimately become covered benefits for all persons, public health colorectal cancer control programs will increasingly focus on primary prevention; on efforts to systematize screening delivery in large clinical settings; on initiatives to refer and navigate patients through the health system; and on policy, system and environmental changes to sustain cancer control. These are areas in which CCC programs and coalitions have been actively engaged and in which they are well positioned to continue to engage and support. Across all high-burden cancers, CCC programs will increasingly focus their efforts on primary prevention, on coordinating early detection and treatment activities, and on addressing the needs of cancer survivors, while working to achieve successful health policies, to reduce health disparities, and to measure the impact of interventions through the use of outcomes data. In building on the many successful collaborative efforts of the NCCCP, CCC programs will continue to link the clinical and public health communities to dramatically reduce the incidence and mortality of this preventable cancer.

References

1. U.S. Cancer Statistics Working Group (2009) United States cancer statistics: 1999–2005 incidence and mortality web-based report. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, Atlanta. Available at www.cdc.gov/uscs
2. Wong YN, Meropol NJ, Speier W, Sargent D, Goldberg RM, Beck JR (2009) Cost implications of new treatments for advanced colorectal cancer. *Cancer* 115(10):2081–2091
3. Winawer SJ, Zauber AG, Ho MN, O'Brien MJ, Gottlieb LS et al (1993) Prevention of colorectal cancer by colonoscopic polypectomy. The national polyp study workgroup. *N Engl J Med* 329(27):1977–1981
4. Vogelaar I, van Ballegooijen M, Schrag D, Boer R, Winawer SJ, Habbema JDF, Zauber AG (2006) How much can current interventions reduce colorectal cancer mortality in the US? Mortality projections for scenarios of risk factor modification, screening and treatment. *Cancer* 107:1624–1633
5. Zauber AG, Winawer SJ, O'Brien MJ (2007, May) National polyp study. *Dig Dis Week*
6. Seeff LC, Doroshenko M, Berger BM, Cerulli MA, DaVanzo JE, et al (2008, June) Potential savings to medicare from increased colorectal cancer screening among 50–64 years olds: report of the national colorectal cancer roundtable policy action task group. Annual Research Meeting of Academy Health, Washington DC
7. Joseph DA, Rim SH, Seeff LC (2008) Use of colorectal cancer tests—United States, 2002, 2004, and 2006. *MMWR* 57(10): 253–258
8. Shapiro JA, Seeff LC, Thompson TD, Nadel MR, Klabunde CN, Vernon SW (2008) Colorectal cancer test use from the 2005 national health interview survey. *Epidemiol Biomarkers Prev* 17(7):1623–1630
9. Center for Disease Control and Prevention, National Comprehensive Cancer Control Program [Internet] (2010) Available at <http://www.cdc.gov/cancer/ncccp/>. Accessed 1 June 2010
10. Comprehensive Cancer Control Plans—A Content Review [Internet.] (2010) National Comprehensive Cancer Control Web site. Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, CDC. Available at <http://www.cdc.gov/cancer/dpcp/publications/ncccp.htm>. Accessed 1 June 2010
11. National Colorectal Cancer Roundtable [Internet] (2008) How to Increase Colorectal Cancer Screening Rates in Practice: A Primary Care Clinician's Evidence-Based Toolbox and Guide. Available at toolkit <http://www.nccrt.org/Documents/General/IncreaseColorectalCancerScreeningRates.pdf>. Accessed 1 June 2010
12. Comprehensive Cancer Control Leadership Institutes [Internet] (2010) Available at https://www.cancerplan.org/portal/server.pt?open=512&objID=825&parentname>Login&parentid=0&mode=2&in_hi_userid=4231284&cached=true. Accessed 1 June 2010
13. Edwards BK, Ward E, Kohler BA, Ehemann C, Zauber AG, Anderson RN, Jemal A, Schymura MJ, Lansdorp-Vogelaar I, Seeff LC, van Ballegooijen M, Goede SL, Ries LA (2010, Feb) Annual report to the nation on the status of cancer, 1975–2006, featuring colorectal cancer trends and impact of interventions (risk factors, screening, and treatment) to reduce future rates. *Cancer* 116(3):544–573
14. The National Committee of Quality's Healthcare Effectiveness Data and Information Set (HEDIS) [Internet] (2010) <http://www.ncqa.org/tabid/187/Default.aspx>. Accessed 1 June 2010
15. Sarfaty M, Myers RE (2008) The effect of HEDIS measurement of colorectal cancer screening on insurance plans in Pennsylvania. *Am J Manag Care* 14(5):277–282

16. Center for Disease Control and Prevention (2010) National Breast and Cervical Cancer Early Detection program <http://www.cdc.gov/cancer/nbccedp/>. Accessed 1 June 2010
17. Seeff LC, Manninen D, Dong F, Chattapodhyay SK, Nadel MR, Tangka F, Molinari N (2004) Is there endoscopic capacity to provide colorectal cancer screening to the unscreened population in the United States? *Gastroenterology* 127:1661–1669
18. Seeff LC, Richards TB, Shapiro JA et al (2004) How many endoscopies are performed for colorectal cancer screening? Results from CDC's survey of endoscopic capacity. *Gastroenterology* 127:1670–1677
19. Seeff LC, DeGross A, Tangka F, Wanliss E, Major A, Nadel M et al (2008) Development of a federally funded demonstration colorectal cancer screening program. *Prev Chronic Dis* 5(2):A64
20. DeGross A, Holden D, Green SG, Boehm J, Seeff LC, Tangka F (2008) Start-up of the colorectal cancer screening demonstration project. *Prev Chronic Dis* 5(2):A38
21. DeGross A, Boehm J, Green SG, Holden D, Seeff LC (2008) Facilitators and challenges to start-up of the colorectal cancer screening demonstration program. *Prev Chronic Dis* 5(2):A39
22. Tangka FKL, Subramanian S, Bapat B, Seeff LC, DeGross A, Gardner J et al (2008) Cost of starting colorectal cancer screening programs: results from five federally funded demonstration programs. *Prev Chronic Dis* 5(2):A47
23. Division of Cancer Prevention and Control (2010) National Center for Chronic Disease Prevention and Health Promotion, CDC, Colorectal Cancer Control Program [Internet] <http://www.cdc.gov/cancer/crccp/about.htm>. Accessed 1 June 2010
24. NIH State-of-the-Science Conference: Enhancing Use and Quality of Colorectal Cancer Screening [Internet] (2010, Feb) Rockville, MD. <http://consensus.nih.gov/2010/colorectal.htm>. Accessed 1 June 2010
25. The Guide to Community Preventive Services [Internet] (2010) Centers for Disease Control and Prevention, Atlanta. Available at <http://www.thecommunityguide.org/index.html>. Accessed 30 Apr 2010
26. Townsend JS, Richardson LC, Steele CB, White DE (2009) Evidence-based interventions and screening recommendations for colorectal cancer in comprehensive cancer control plans: a content analysis. *Prev Chronic Dis* 6(4):A127
27. Research-tested Intervention Programs [Internet] (2010) National Cancer Institute and Substance Abuse and Mental Health Services Administration. Available at <http://rtips.cancer.gov/rtips/index.do>. Accessed 30 Apr 2010
28. Lanier A, Kelly J, Maxwell J, McEvoy T, Homan C (2006) Cancer in Alaska natives: thirty-five year report 1969–2003. Office of Alaska Native Health Research and Alaska Native Epidemiology Center, Anchorage
29. U.S. Preventive Services Task Force (2002) Agency for health-care research and quality. Screening for colorectal cancer: recommendations and rationale, Rockville
30. Parkinson AJ, Gold BD, Bulkow L et al (2000) High prevalence of *Helicobacter pylori* in the Alaska native population and association with low serum ferritin levels in young adults. *Clin Diagn Lab Immunol* 7:885–888
31. Yip R, Limburg PJ, Ahlquist DA et al (1997) Pervasive occult gastrointestinal bleeding in an Alaska native population with prevalent iron deficiency. Role of *Helicobacter pylori* gastritis. *JAMA* 277:1135–1139
32. Centers for Disease Control and Prevention (CDC) (2008) Behavioral risk factor surveillance system survey data. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta
33. Utah Mortality Database (2010) From Utah Department of Health, Center for Health Data, Indicator-Based Information System for Public Health website <http://ibis.health.utah.gov/>. Retrieved on 5 May 2010