



RURAL
CANCER
CONTROL
RESEARCH

Abstracts

Rural Supplements to NCI-Designated Cancer Centers

September 13, 2018

Background

Evidence has shown that rural communities in the United States face disadvantages compared with urban areas, including higher poverty rates, lower educational attainment, and lack of access to health services. Populations living in rural areas have higher average death rates for all cancer sites combined, compared to populations in urban counties. Additionally, rural counties have higher incidence and death rates for cancers associated with smoking (e.g., lung and laryngeal cancers) and higher rates of incidence of cancers that can be prevented by screening (i.e., colorectal and cervical cancers).

Some of the higher incidence and mortality rates for cancer can be attributed to barriers in accessing health services in rural areas. Research has also shown that some of these cancer disparities relate to financial barriers (e.g., no insurance or insufficient insurance coverage), transportation issues, and lack of preventive and screening services. There are also rural-urban differences in health behaviors that are associated with cancer, including higher rates of tobacco use, alcohol consumption, and obesity, and less physical activity, less-frequent adoption of sun safety measures, and lower HPV vaccination rates in rural compared to urban areas.

Currently, DCCPS has few funded projects focused specifically on rural populations. This long-standing public health challenge calls for sustained support for research along the entire cancer control continuum. We also need to better understand the various definitions of the term “rural” and their uses in health research – and specifically for cancer control. Focused research initiatives would provide the groundwork to develop and implement cancer control programs that are sustainable in these communities across the United States. In recognition of this need and to inform NCI’s efforts to better address cancer disparities in rural communities, DCCPS staff are working closely with our agency partners and a wide variety of experts to analyze the current evidence and scale up our research efforts in rural cancer control.

List of centers

1. Stephenson Cancer Center at The University of Oklahoma
2. Mayo Clinic Cancer Center
3. Roswell Park Cancer Institute
4. University of Arizona Cancer Center
5. UC Davis Comprehensive Cancer Center
6. University of New Mexico Comprehensive Cancer Center
7. University of Wisconsin Carbone Cancer Center
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11. Norris Cotton Cancer Center at Dartmouth-Hitchcock
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Note: Centers 1-7, 19, and 21 focus on American Indian populations

Rural Cancer Control Supplements - P30 NCI-Designated Cancer Centers



<https://cancercontrol.cancer.gov/research-emphasis/rural.html>



Stephenson Cancer Center at The University of Oklahoma

Grant Number: P30CA225520

Project PI: Mark Doescher

Building Cancer Survivorship Research Capacity in Rural Oklahoma

The provision of high-quality cancer survivorship care in rural locations presents a major challenge for local primary care providers (PCPs) who may lack information on the health care needs of cancer survivors. This project will build capacity by conducting theory-guided, multi-component implementation science research on cancer survivorship in the rural primary care setting in close partnership with the Choctaw Nation Health Services Administration (CNHSA), which serves American Indians (AI) throughout rural southeastern Oklahoma, and the Washington County Wellness Initiative (WCWI), a 501(c)(3) coalition of primary care clinics serving patients in a rural northeastern Oklahoma county. We will help CNHSA and WCWI primary care clinics tailor the design of survivorship care services and pilot the implementation of one aspect of survivorship care, the use of nurses as rural cancer care coordinators (RC3s) to help rural PCPs receive timely, clinically actionable survivorship information from oncologists (ONCs). Specific aims are to 1) use community-engagement processes to co-design a tailored cancer care coordination system featuring nurse RC3s embedded within rural health care delivery systems who will help improve ONC-PCP communications; 2) test the preliminary effectiveness of the RC3 implementation by examining processes and outcomes using a quasi-experimental design with patient- and system-level care coordination measures collected before and after implementation in at least 30 CNHSA and 30 WCWI patients; and 3) identify factors that facilitate or hinder RC3 effectiveness. Lessons learned from this study will create a platform for building a robust program of community-engaged research to improve care for cancer survivors living in rural locations.

Mayo Clinic Cancer Center

Grant Number: P30CA15083

Project PI: Carmen Radecki Breitkopf

Cancer is the leading cause of death among American Indian and Alaska Native (AI/AN) women and the second leading cause of death in AI/AN males. The cancer burden in AI/AN populations reflects disparities in access, utilization, and adequacy of cancer screening services, as well as differences in behavioral risk and protective factors. The Mayo Clinic Cancer Center (MCCC) will leverage a community-engaged approach that honors cultural nuances and strong, existing platforms with Native populations to develop a collaborative cancer control plan with two tribes in rural Minnesota. The goals of this supplement are to 1) develop a collaborative, specific plan with tribal health leadership to implement and sustain a cancer control strategy and research program (the plan will be based on shared knowledge of the needs expressed, the risk factors identified, and the uptake of cancer screening and HPV vaccination); 2) assess behavioral risk factors for cancer, screening rates, and attitudes toward change/maintenance of cancer risk/prevention behaviors (through community surveys) and describe existing as well as desired prevention programs/activities (through key informant interviews); and 3) determine HPV vaccination rates among age-eligible children and characterize attitudes, beliefs, and knowledge regarding HPV vaccination as a cancer prevention behavior. Efforts will be guided by the Partnership Readiness for CBPR Model, where we will elicit input on a range of potential cancer control efforts and prioritize them based on perceived importance, likelihood of impact, and availability of resources, with the understanding that efforts and priorities may differ between the tribes.

Roswell Park Cancer Institute

Grant Number: P30CA016056

Project PI: Elizabeth Gage Bouchard

Roswell Park Comprehensive Cancer Center is located in western New York State (WNY), serving both dense urban centers and remote rural areas. The objective of this P30 supplement is to enhance our research capacity and feasibility among Native American and underserved rural communities. Our activities will build an infrastructure to facilitate a community-based approach that takes into account contextual factors to make Roswell Park research and outreach more acceptable and relevant to members of Native American and rural communities. The first goal of our supplement is to conduct a targeted community health assessment to understand opportunities and barriers for cancer control initiatives and research in rural areas in the Roswell Park catchment area. We will engage community partners to help develop and implement a community-based survey (N = 200), targeting three rural Appalachian counties. Data will provide critical nuanced understanding of multilevel factors (geographic, community, social, interpersonal) and allow for local customization and adaptation of programs and research for rural communities. The second goal of our project is to enhance the partnerships and infrastructure between Roswell Park, Native American, and rural communities in our catchment area to build capacity for cancer prevention and control research and the implementation of evidence-based programs focused on rural and Native American community needs. Achievement of this goal will provide meaningful partnerships between Roswell Park scientists and community stakeholders that provide a framework for formalized processes to engage rural and Native American communities in cancer-relevant programs and research.

University of Arizona Cancer Center

Grant Number: P30CA023074

Project PI: Beth Calhoun

The University of Arizona Cancer Center (UACC), in collaboration with Arizona Center for Rural Health and the Arizona Cancer Coalition, will develop and/or implement programs for research in cancer prevention and control in rural communities in Arizona. This effort will build a framework for an integrated approach that supports transdisciplinary cancer research by identifying and strengthening existing collaborations across rural Arizona, including the US-Mexico Border and tribal lands. The goals inform the development of an infrastructure that will equip rural communities with high-quality resources, services to build the cancer prevention and control capacity of rural communities. We also will evaluate the effectiveness of dissemination training, products, programs, and partnerships to facilitate diffusion and adoption of successful strategies that promote sustainability of multilevel change that will positively affect cancer disease patterns within rural Arizona. The goals are to 1) assess the existing resources and capacities for research, including data sources, and human and material research resources, and assess what is needed to implement effective activities to promote healthy lifestyles, cancer prevention, and cancer treatment; 2) improve linkage to care throughout the UACC catchment area; 3) develop strategies to reach rural, Hispanic, and Native American populations who are frequently underserved; 4) assist with the integration and coordination of activities with programs driven by public health authorities; and 5) promote evidence-based strategies to improve health in the community and social mobilization to promote timely demand for medical care, and increase number of cancer screenings through targeted outreach and linkage to the UACC through diagnostic and treatment services.

UC Davis Comprehensive Cancer Center

Grant Number: P30CA93373

Project PI: Moon Chen

The focus of the University of California, Davis Comprehensive Cancer Center's (UCDCCC) response to develop rural cancer control research capacity is to collaborate with Northern Valley Indian Health (NVIH) Inc., in developing, implementing, and evaluating a human papillomavirus (HPV) vaccination program aimed at accelerating vaccine uptake among rural and Native American adolescents, ages 11-17 (the majority being 138% below the poverty level) at their Willows clinic headquarters in Glenn County, RUMC=7. HPV vaccination coverage with at least one dose remains disproportionately lower

among rural adolescents compared to adolescents residing in urban areas, and the rate of series completion is lower among Native American adolescent girls compared to non-Hispanic White adolescent girls. A preliminary rate determined by the Willows Clinic electronic health system revealed that their adolescent HPV vaccination completion rate was below 30%. Our specific aims are to 1) develop an HPV vaccination program based on our prior HPV vaccination work and with input from the Community Steering Committee (CSC) and clinic to ensure we have a measurable impact on the populations served by the Willows Clinic; 2) implement a program to increase uptake of the HPV vaccine among rural and Native American adolescents served at the Willows Clinic; and 3) evaluate the integration of pilot study activities designed by the UCDCCC and NCIH partnership into standard clinic practice. Achievement of these aims is expected to measurably increase HPV vaccination rates among rural and Native American adolescents and enhance research capacity at NCIH and research collaborations with the UCDCCC.

University of New Mexico Comprehensive Cancer Center

Grant Number: P30CA118100

Project PI: Andrew Sussman

Creation of an Innovative Rural Cancer Survivorship Navigation Program using Project ECHO

There are more than 15 million cancer survivors in the US, and this number is expected to exceed 20 million by 2026. The majority of these patients are older and ethnically diverse, and a significant fraction (20%) are residents of rural counties. Rural cancer survivors face unique health care challenges in terms of access to care and are older, poorer, less educated, and more likely to be uninsured. National organizations have released guidelines supporting the implementation of survivorship care plans. Despite this recognition, research clearly documents the persistence of unmet needs among cancer survivors, including less than optimal preventive and cancer surveillance screening rates. These circumstances underscore the urgent need to develop more effective models of care integration. The overall objective of this NCI P30 supplement is to plan and implement a rural cancer control health care delivery research program, initially focused on survivorship care transitions between University of New Mexico Comprehensive Cancer Center and rural primary care providers. We will establish a training network of primary care providers in cancer survivorship and care transition using the Project ECHO telementoring platform. The anticipated outcome is to develop the foundation upon which further health care delivery research aimed at transitioning patients through oncology nurse navigation and coordinated follow-up with a multidisciplinary specialist care team at the UNM Comprehensive Cancer Center will be conducted, and, in the future, to expand this model and collaboration to address cancer screening and prevention in rural New Mexico settings.

University of Wisconsin Carbone Cancer Center

Grant Number: P30CA014520

Project PI: Tracy Downs

Approximately 5% of Wisconsin's 5 million residents live in the 19 rural counties classified as most rural (RUCC 7, 8, and 9). The cancer mortality rate in these counties is 12.3% higher than the rate for urban counties, and incidence and mortality rates for Wisconsin's American Indians/Alaskan Natives (AI/AN) are higher yet. The University of Wisconsin Carbone Cancer Center (UWCCC) aims to lay a foundation for broader implementation of evidence-based cancer prevention and control strategies throughout rural and AI/AN communities in Wisconsin. Drawing upon the infrastructure of our Wisconsin Comprehensive Cancer Control Program and its long-standing Wisconsin Cancer Council, we will first establish a Committee on Rural Cancer Research (CRCR), which will advise this project on research priorities and provide community connections for research partnerships. The CRCR will include rural and AI/AN community members, particularly those representing lower income populations, as well as cross-disciplinary University of Wisconsin faculty who conduct research with cancer and/or rural and AI/AN communities. Community groups and researchers will participate in training sessions on conducting cancer research in rural and AI/AN communities. Second, we will

conduct interviews and focus groups with rural cancer clinics and community groups to understand the cancer burden in rural Wisconsin, focusing on priorities identified by the CRCC. Finally, we will launch a UWCCC-sponsored pilot program offering funds to research partners toward conducting innovative pilot projects in rural cancer control with community partners. The outcome of this work will be a broad-based infrastructure that supports the conduct of research in rural Wisconsin.

University of Kansas Cancer Center

Grant Number: P30CA168524

Project PIs: Christie Befort, Allen Greiner

Developing Cancer Control Research Capacity in Kansas Rural Primary Care Networks

Building on our history of conducting research within rural primary care practices in Kansas, in this project we will strengthen collaborations with key partners and local providers from two newly developed rural Accountable Care Organizations (ACOs). These ACOs bring together a diverse group of rural practices, most in sparsely populated counties, and with varied ownership and affiliations. With no integrated health care system throughout our catchment area, the formation of these new rural ACOs will allow us to capitalize on newly integrated data systems, common data metrics, and coordinated efforts to enhance care delivery. Each ACO is in the early stages of using integrated systems to pull data from EMRs while transforming their practices to reduce costs and improve care. Several relevant quality metrics relate to cancer control, including cancer screening, weight loss counseling, and smoking cessation. We will engage rural providers to collaborate as physician-scientists while at the same time being key stakeholders in the pragmatic outcomes of research related to cancer prevention and control. Specific Aims for this supplement are to 1) develop a sustainable collaborative to guide rural cancer-related research; 2) develop a sustainable data infrastructure; 3) assess rural clinic capacity and opportunities for engagement in research; and 4) develop innovative research that can drive improvements in cancer control. The long-term goal of this work is to improve cancer outcomes through more effective care to address tobacco cessation, weight loss, mammography, lung and colorectal cancer screening, and cancer survivorship care.

UK Markey Cancer Center

Grant Number: P30CA177558

Project PIs: Robin Vanderpool and Kim Carter

Nationally, Kentucky ranks first in both cancer incidence and mortality for all cancer sites combined. The state's elevated cancer rates are primarily attributable to disparities present in the 54-county region of Appalachian Kentucky, which is recognized as one of the most rural, economically disadvantaged, medically underserved, and disease-burdened areas in the nation. Thus, a comprehensive approach to cancer prevention and control research is needed, including the leadership of the University of Kentucky (UK) Markey Cancer Center (MCC), along with the expertise of valued community partners. The goal of this supplement is to leverage a strong program of community engagement at the MCC and build capacity for developing, implementing, and sustaining cancer control research in collaboration with well-established partners in Appalachian Kentucky. Therefore, our specific aims are to 1) establish and convene a Community Advisory Board to provide critical guidance and support of supplement activities, identify community assets, and connect Markey investigators to new clinical and community partners in the Appalachian region; 2) conduct formative evaluation to identify and describe the barriers and facilitators to collaborative cancer control research among community and clinical partners in Appalachian Kentucky; and 3) develop, implement, and evaluate a multilevel pilot project in collaboration with clinical and community partners to assess capacity, infrastructure, personnel, and resources needed for future cancer control research implementation and sustainability. UK investigators will collaborate with the Northeast Kentucky Area Health Education Center, a valued partner for connecting to rural-located community and clinical stakeholders and training the next generation of health care providers.

The Ohio State University Comprehensive Cancer Center**Grant Number: P30CA043703****Project PI: Electra Paskett**

The catchment area for the Ohio State University Comprehensive Cancer Center bears a considerable cancer burden, ranking 10th for males and 7th for females in mortality among states. Ohio incidence and mortality rates for many cancers are higher in rural areas than non-rural areas. There are more uninsured/underinsured people in rural Ohio, access to primary care is limited, and cancer care is difficult to access. For example, within the 55 rural counties, 18 (33%) do not have a Federally Qualified Health Clinic, while 17 (31%) have only one. Prevalences of deleterious health behaviors (e.g. tobacco smoking, obesity) are higher in the rural counties. Across the cancer control continuum, some evidence-based interventions have proven to reduce the cancer burden. These include prevention-related interventions (e.g., tobacco prevention/cessation, vaccination, sun safety, diet/exercise), screening (e.g., colonoscopy), and access to timely diagnosis/treatment (patient navigation). The overall goal of this study is to build research capacity in clinics in rural Ohio counties, then partner with these clinics to conduct research to address the high cancer burdens and high rates of cancer-promoting behaviors. This project will use the Give-Get Model, Community Based Participatory Research (CBPR) strategies for engaging rural communities, and the research framework of the Warnecke Model. Specific aims will facilitate and enhance collaborations with rural community partners (FQHCs, community coalitions), and engage new partners in health care, public health, policy and non-profit domains. These data will help develop and expand applied cancer control research and implementation science to address local-level health disparities in rural counties.

Norris Cotton Cancer Center at Dartmouth-Hitchcock Grant Number: P30CA023108**Project PI: Tracy Onega**

The Dartmouth-Hitchcock Norris Cotton Cancer Center (NCCC) is one of the few NCI Cancer Centers that is predominantly rural, does not contain a major urban core, and has many counties classified as 7,8, or 9 (9/24) in the Rural Urban Continuum Codes (RUCCs). We will leverage our cooperative network of community-based primary care practices (COOP) to address the low (<4%) uptake of lung cancer screening among eligible individuals in our rural counties. Importantly, a majority of COOP practices within NCCC's catchment (23/40) are located within RUCC 7,8,9 counties, where we have ongoing partnerships, working with over 20 local leaders/organizations to advance cancer screening in our catchment. We will use lung cancer screening as a pilot case to establish infrastructure for cancer control implementation strategies in our catchment, with generalizable capacity for future cancer control research. Specifically, within targeted COOP rural clinics, we will develop microsystem models for each clinic's lung cancer screening (LSC) pathway(s) using the Consolidated Framework for Implementation Research to characterize the inner (clinic context) and outer settings (community context), the individuals involved, and processes of care, as foundational pilot work for an implementation strategy and framework that will extend beyond the proposed supplement. We will also conduct a pilot adaptation of existing telemedicine and mobile health technologies currently used within our rural populations for behavioral and pretreatment interventions to facilitate shared decision making for lung cancer screening and uptake of tobacco treatment/smoking cessation. The overarching objective is to expand rural community engagement as we strategically build rural cancer control research capacity through an initial focus on LCS. In addition to improving LCS use in our most rural communities, we will enhance our infrastructure for implementation studies that will serve future cancer control initiatives.

Huntsman Cancer Institute**Grant Number: P30CA042014****Project PIs: Deanna Kepka, Mia Hashibe*****Intermountain West Rural Cancer Control Research Capacity***

Since the mid-1990s, Huntsman Cancer Institute (HCI) has been the official Cancer Center of the state of Utah, serving the state's residents in the areas of cancer education, prevention, and care. In addition, HCI serves as the proximal NCI-Designated Comprehensive Cancer Center for the vast Mountain West region of the United States, an area of 523,700 square miles that includes Utah, as well as Idaho, Montana, Wyoming, and Nevada. This five-state region represents 17% of the continental United States landmass. Patients from nearby states drive from many hours away and are rural residents (% rural: 52% Idaho, 70% Nevada, 74% Montana, 98% Wyoming). Outreach to, and research with, rural communities is a major institutional priority. We plan to work closely with rural communities to build strong partnerships and capacity for collaborative cancer prevention and control initiatives. As a first step, we will leverage existing networks for HPV vaccination and improve evidence-based HPV vaccine intervention strategies to address this major public health concern in the rural region served by HCI. We also aim to establish a Rural Mountain West Cancer Prevention and Control Advisory Board (R-CAB) to improve HCI's understanding of the cancer burden in rural Mountain West communities and to provide guidance on the development of programs for research in cancer prevention and control. Lastly, we will develop a sustainability plan to address barriers to implementation in rural health clinics and workforce, patient barriers, cancer center staff time, and costs using telehealth, integrated electronic health records, and web-based systems.

Holden Comprehensive Cancer Center at The University of Iowa

Grant Number: P30CA086862

Project PI: Mary Charlton

Developing a Rural Cancer Control Plan for Critical Access Hospitals in Iowa

The goal of this project is to enhance interactions among cancer control efforts in Iowa through the Holden Comprehensive Cancer Center (HCCC), Iowa Cancer Consortium (ICC), and the Iowa Cancer Registry with Critical Access Hospitals (CAHs), and provide CAHs with resources necessary to enhance their involvement in rural cancer control research. The specific aims of the project focus on enhancing HCCC capacity to generate data, identify research priorities and mobilize infrastructure to further strengthen cancer control research in Iowa's rural underserved populations. To do this we will 1) identify and engage CAHs from six underserved rural counties that will serve as the core of a rural cancer research advisory board; 2) generate descriptive maps and reports that provide actionable, relevant evidence to guide community health assessments and cancer control decision making in the six identified counties; 3) convene a rural cancer research advisory board at HCCC to develop strategic initiatives for addressing rural cancer prevention and control research needs and capacity; and 4) establish and disseminate a community-engaged research agenda to collaborate with CAHs, rural communities, providers, and other local stakeholders to conduct cancer prevention and control research. Finally, this project will provide the HCCC with a sustainable approach to continually obtain community input and foster research collaborations with rural communities and health care providers. The rural cancer research advisory board will provide a collaborative infrastructure for future research studies and will serve as a model for the development of HCCC's Community Outreach and Engagement efforts in collaboration with the ICC.

UAB Comprehensive Cancer Center

Grant Number: P30CA013148

Project PI: Isabel C. Scarinci

Cancer Prevention and Control in Rural Alabama: Development of a Participatory and Integrated Action Plan

The University of Alabama at Birmingham Comprehensive Cancer Center (UAB CCC) has a longstanding history of working with rural populations in Alabama and Mississippi. The overall goal of this supplement is to expand our community and institutional capacity on rural cancer control in underserved rural counties in Alabama through an integrated academic-health care facilities-community partnership. This goal will be accomplished utilizing principles of Community-Based Participatory Research and will be guided by a multilevel approach addressing four target levels:

policy makers, organizational systems, agents of change, and individuals. We will initially focus on the two most rural and underserved counties in Alabama (Clay and Choctaw Counties). We will also start with a primary focus on breast, cervical, and colorectal cancers for two reasons: (a) all three cancers can be prevented (colorectal and cervical cancer) and/or detected early through screening; and (b) because evidence-based screening is available for these cancers, they represent a great model to establish research infrastructure throughout the continuum of care. We will first establish a coalition of community representatives, researchers/staff at the UAB CCC, and state-wide partners. The next step will consist of a needs/assets assessment regarding breast/cervical/colorectal cancer screening and capacity building to promote engagement in research in these rural communities and UAB CCC. Based on these results, the coalition will develop a Stakeholder Action Plan to promote breast/cervical/colorectal cancer screening and research engagement. Once we complete the proposed work, we expect to be well positioned to launch structured research on rural cancer control as a collaborative effort between the UAB CCC, local hospitals/clinics, state-level partners, and the community-at-large.

University of Michigan Rogel Cancer Center
Grant Number: P30CA046592
Project PI: Sarah Hawley

An estimated 57,600 people in Michigan will be diagnosed with cancer in 2018, while the number of cancer survivors continues to rise. While many receive treatment at the Rogel Cancer Center, the majority return to their homes and communities—many in rural locations—for ongoing care, including prevention of cancer recurrence or development of new cancers. There is a critical need to reach these populations with cancer prevention and control activities. Our objectives are to 1) disseminate an evidence-based cancer prevention and control SMS/texting program (“Tips4Health”) to rural cancer patients/survivors and community members and evaluate its impact on users and practices using the “Choosing All Together” (CHAT) framework, and 2) create and support a network of rural clinic-based cancer prevention and control behavioral counselors who can engage in initial and long-term cancer prevention and control priority and infrastructure setting. We aim to extend the reach of the Rogel Cancer Center into rural Michigan, and specifically to develop the infrastructure for long-term relationships supporting ongoing dissemination of cancer prevention and control resources. We will utilize a Community-Based Participatory Research (CBPR) framework for engaging communities, and partner with Michigan Oncology Quality Collaborative (MOQC), primary care practices, and communities. We will disseminate the existing evidence-based cancer prevention and control program, Tips4Health, and evaluate the impact of these activities on overall cancer prevention and control metrics and infrastructure development. This work will prioritize cancer prevention and control activities in rural Michigan by addressing priorities in rural cancer patients, survivors, and community members.

UNC Lineberger Comprehensive Cancer Center
Grant Number: P30CA016086
Project PI: Daniel Reuland

A Cancer Screening Registry to Enhance Research Capacity in Rural Community Health Centers
In the United States, rural areas bear a disproportionate cancer burden compared to less rural areas. North Carolina (NC) has many rural counties, with 21 of its 100 counties classified as highly rural. In these areas, community health centers (CHCs) play a critical role in cancer prevention and control efforts, including colorectal cancer. Although NC has robust cancer and tumor registry infrastructure, there is a critical need to increase capacity to form sustainable, state-level partnerships to collect, securely manage, and analyze data relevant to cancer screening. Accessing cancer screening-related data from rural CHCs has been challenging for researchers due to both a lack of resources to support programming at individual CHCs and lack of a common electronic health record platform across CHCs. Traditionally, researchers must interface individually with under-resourced CHCs to

obtain data. A more efficient model would be to develop state-level data sharing capacity and infrastructure to house data across CHCs (a state-level health information exchange). Developing such a model has potential to enhance rural cancer control research capacity and improve patient care. Using NCI-P30 supplement funds, the Carolina Cancer Screening Initiative, housed within the UNC Lineberger Comprehensive Cancer Center, will work with rural NC clinics, organizations, and communities to plan, develop, and test a prototype for an integrated state-level cancer screening registry for colorectal cancer screening. The immediate aim is to improve screening in low-income, underserved rural populations. The ultimate goal is to build capacity to support future research aimed at reducing cancer burden in rural NC populations.

UVA Cancer Center

Grant Number: P30CA044579

Project PI: Jamie Zoellner

Building Research Capacity to Improve Colorectal Cancer (CRC) Screening in Rural Southwest Virginia Clinics

Virginia's rural areas have the highest cancer burden in the state, with population-level risk factors that include high poverty rates, low health literacy, and chronic barriers to accessing preventive services. The disproportionate rural rates of advanced colorectal cancer (CRC) are entirely preventable and exemplify the important gaps and missed opportunities that exist in rural regions to lower cancer mortality. For example, though national CRC screening rates are 63%, this rate falls dramatically to about 22% among age-eligible individuals in the rural Southwest Virginia region of Central Appalachia targeted by our administrative supplement. Unfortunately, this CRC screening rate is well below the national goal of "80% by 2018 and beyond." Therefore, the overall goal is to build capacity within Stone Mountain Health Services (SMHS) to better understand barriers and plan research aimed at implementing evidence-based strategies to increase CRC screening. SMHS is an 11-clinic Federally Qualified Health Center that serves populations in categories 7-9 as defined by the Rural-Urban Continuum Codes. Our administrative supplement aims to 1) build research capacity among a multidisciplinary Cancer Control Leadership Team from SMHS and the University of Virginia (UVA's) Cancer Center, aimed at increasing and sustaining CRC screening rates among rural residents in Southwest Virginia; 2) use a stakeholder/patient-centered approach to assess and understand system-level and patient-level barriers and opportunities to CRC screening; and 3) apply a dissemination and implementation (D&I) framework to plan for the feasibility testing of an evidence-based CRC screening program integrated into SMHS' clinics and develop a pilot proposal.

Vanderbilt-Ingram Cancer Center

Grant Number: P30CA068485

Project PI: Debra Freeman

The Vanderbilt-Ingram Cancer Center (VICC), the only NCI-Designated Comprehensive Cancer Center in Tennessee (TN) serving both pediatric and adult populations, is located in a region of the country with some of the highest rates of both cancer incidence and death. Our catchment area includes ~2.8 million individuals living in 70 rural counties, in which we seek to increase our capacity to bring cancer prevention and control initiatives. To accomplish this, we will 1) conduct a multilevel environmental scan in partnership with our Community Advisory Board at the patient-, provider-, and system-level, to assess the needs, barriers, and access to care for cancer prevention and control services among rural populations within 70 rural counties in the VICC catchment area; and 2) establish a network of rural health care providers, hospitals, and clinics to further build capacity for cancer prevention and control research, education, and care delivery initiatives, develop strategies for ongoing provider engagement, and pilot test the delivery of cancer prevention and control-focused telehealth services. A summary document will be prepared to synthesize existing and new data, to be shared with catchment area health departments, primary care associations, our rural health care provider network, and other organizations. We will also track 1) participation of rural health care

providers in the network; 2) modalities to engage providers in cancer control efforts; and 3) the proportion of eligible patients to whom telehealth services are offered and then successfully delivered; and 4) we will identify geographic and demographic factors associated with successful network participation and uptake of telehealth services.

Comprehensive Cancer Center - Wake Forest Baptist Health

Grant Number: P30CA012197

Project PIs: Karen Winkfield, Kathryn Weaver

Rural Survivorship naVigation Program (RSVP): Building Community Capacity for Cancer Control

Traditional cancer prevention control efforts to date have failed to sufficiently impact the cancer burden in rural communities. Cancer disparities are particularly pronounced for rural residents of the Appalachian region, with higher cancer incidence and mortality and lower survival rates. To address the need for new strategies and resources to reduce rural cancer-related disparities, Wake Forest Baptist Comprehensive Cancer Center will leverage its expertise to expand community capacity building in six priority rural counties of northwest North Carolina (NW NC) through the RSVP. The overarching goal of the program is to enhance cancer control activities and cancer care quality among residents of Alleghany, Ashe, Avery, Mitchell, Watauga, and Wilkes counties through expanded research and engagement. The aims of RSVP are to 1) enhance our understanding of the comprehensive psychosocial and medical needs of cancer survivors and caregivers in rural NW NC and acceptable, testable strategies to address these needs through survivor and caregiver assessments and by providing navigation services to rural cancer survivors; and 2) build community capacity in rural NW NC for future cancer prevention and control research by developing collaborations and training community stakeholders and regional medical providers. We will build capacity for future cancer control activities through the addition of a community-based rural cancer navigator with a focus on survivorship, and enhanced engagement with primary care providers. Through data collection efforts, building partnerships, and generating feasibility data, the program will enhance our ability to conduct rural cancer prevention and control research.

Alvin J. Siteman Cancer Center at Barnes-Jewish Hospital and Washington University School of Medicine

Grant Number: P30CA091842

Project PI: Graham A. Colditz

Increasing recognition that residents of rural areas face cancer health disparities requires that rurality be prioritized, alongside other factors, in addressing disparities. Rural areas tend to overlap with areas of low medical resources. Rural communities are often classified as medically underserved and rural residents may face additional barriers to follow-up such as long distances to care and limited access to medical services. Siteman Cancer Center (SCC) has addressed disparities through its Program for the Elimination of Cancer Disparities – with institutional and NCI funding addressing access to mammography and colorectal cancer screening, to name a few. The SCC catchment area includes 82 counties in Missouri and Illinois that count for more than 85% of new patients treated at Siteman. Over one-quarter (26%) live in a Medically Underserved Area, while 12.8% of the patients live in a rural zip code. Of the patients who live in rural areas, 60.5% live in Illinois and 35.9% in Missouri. In this supplement, we will engage rural health clinics in rural mid-Missouri and southeastern Illinois to better understand cancer prevention and control needs and challenges in these remote clinics. We will assess needs and adapt materials to the needs of primary care providers and community, and work with clinic IT systems to implement improved systems for cancer screening appointment reminders and follow-up of positive screening tests. Finally, through our Community Research Fellows Training program, we will build capacity by training community partners (medical and non-medical) to engage in research to address cancer disparities.

Barbara Ann Karmanos Cancer Institute at Wayne State University

Grant Number: P30CA022453

Project PIs: Lauren M. Hamel, Hayley S. Thompson

Residents of rural communities bear a disproportionate cancer burden compared to residents of urban communities. The Centers for Disease Control and Prevention reports that rural counties experience higher cancer mortality rates, compared to urban counties, despite having a lower average cancer incidence rate. The higher death rates are, in part, due to higher prevalence of cancer risk factors, including cigarette smoking, obesity, and physical inactivity. Approximately 20% of the residents of Michigan live in a rural area. Many of these residents are served by Karmanos Cancer Institute (KCI), an NCI-Designated Comprehensive Cancer Center. KCI is part of McLaren Health Care, a fully integrated health network. Isabella and Clare Counties are classified as rural counties, and located in them is one of the McLaren cancer treatment clinics, eight McLaren primary care clinics, and Isabella Citizens for Health, a Federally Qualified Health Center. Modifiable risk factors are a major contributor to the rural-urban disparity in cancer mortality; thus, it is imperative that primary care clinics that can provide services to support changes in those factors for rural populations work closer with the cancer clinics. Therefore, we propose to conduct an environmental scan of local capacity to conduct cancer prevention and control research in Isabella and Clare counties (Aim 1), leverage existing clinical trial infrastructure to develop a rural cancer prevention and control research program (Aim 2), and use findings from Aims 1 and 2 to implement behavioral pilot intervention(s) that connects rural populations from primary care to oncology care (Aim 3).