

June 30, 2022



Progress Report: Executive Summary *9/30/04 - 9/29/21*

A summary of the activities, productivity, and impact of CPCRN during the previous year, over the current funding cycle, and across all years dating back to 2004.



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Executive Summary

The Centers for Disease Control and Prevention (CDC)-funded Cancer Prevention and Control Research Network (CPCRN) has been in operation since 2002 with additional support from the National Cancer Institute (NCI). From 2002 through the current funding cycle, the Network has included Collaborating Centers at a total of 19 academic institutions across the country, as well as Affiliate Members from a wide variety of organizations. The fifth 5-year funding cycle, “CPCRN5”, began in 2019 and will span until 2024. The Network is currently comprised of eight Collaborating Centers (Table 0.1), as well as Affiliate Members and CPCRN Scholars at 22 additional institutions. The Network includes Affiliate Members from six former CPCRN Collaborating Centers as well as 37 CPCRN Scholars across two cohorts.

This report demonstrates the impact of the work accomplished by CPCRN members during Year 2 of CPCRN5 and summarizes the research, dissemination, and implementation activities accomplished by CPCRN Collaborating Centers, cross-Center Workgroups, and the Coordinating Center over three time periods: in the past year (September 2020-2021), in CPCRN5 (Years 1 and 2), and across all years since 2004 (September 2004-2021), when the Network’s logic model and progress reporting system were introduced.

It is particularly notable that the first two years of the CPCRN5 funding cycle saw the onset and continuation of the COVID-19 pandemic. Readers will note throughout this executive summary and report that there were many research, dissemination, and collaborative partnership efforts made by members of CPCRN’s Network Centers and Workgroups to address issues related to the pandemic and its impact on cancer risk factors, cancer care, and cancer survivorship.

Executive Summary Table 1: Funded CPCRN Centers

CPCRN1: 2002-2004	CPCRN2: 2004-2009	CPCRN 3: 2009-2014	CPCRN4: 2014-2019	CPCRN5: 2019-2024
University of Washington	University of Washington	University of Washington	University of Washington	University of Washington
University of South Carolina	Morehouse School of Medicine	University of South Carolina	University of South Carolina	University of South Carolina
University of Kentucky – West Virginia University	Emory University	Emory University	University of Kentucky	Emory University
Harvard University	Harvard University	Harvard University	University of Pennsylvania	New York University - City University of New York
University of Texas, Houston	University of Texas, Houston	University of Texas, Houston	Case Western Reserve University	University of Arizona
	University of North Carolina <i>(Coordinating Center & Collaborating Center)</i>	University of North Carolina <i>(Coordinating Center & Collaborating Center)</i>	University of North Carolina <i>(Coordinating Center & Collaborating Center)</i>	University of North Carolina <i>(Coordinating Center & Collaborating Center)</i>
	St. Louis University	Colorado School of Public Health	Oregon Health & Science University	Colorado School of Public Health
	University of California, Los Angeles	University of California, Los Angeles	University of Iowa	University of Iowa
		Washington University		
		Central Texas (A&M)		

By the Numbers

CPCRN has had significant impact on the scientific literature in cancer prevention and control. In Year 2 of the CPCRN5 funding cycle, CPCRN members **published 147 CPCRN-related articles**, 13 of which reflected multicenter collaborations, and **delivered 96 CPCRN-related presentations**, six of which reflected multicenter collaborations. In the first two years of the CPCRN5 funding cycle, members **published a combined total of 295 CPCRN-related articles**, 21 of which reflected multicenter collaborations, and **delivered 204 CPCRN-related presentations**, 16 of which reflected multicenter collaborations. Finally, since Network inception in 2004, a **total of 2,031 CPCRN-related publications have been published in peer-reviewed journals**, 180 of which reflect multicenter collaborations. Also dating back to 2004, **CPCRN activity has led to 2,154 presentations delivered to outside organizations**, 182 of which were multicenter collaborations. Hundreds of these presentations have been delivered in collaboration with research partner organizations such as Federally Qualified Health Centers (FQHCs, 101 since 2004) and other health care providers (223 since 2004). In 2016, the CPCRN Coordinating Center began tracking trainings and educational workshops separately from other types of presentations. Since 2016, CPCRN Collaborating Centers have conducted **84 training and educational programs, 16 in the past year alone**, representing expanded collaborations between participating Collaborating Centers, as well as existing or new partnerships with external individuals and entities.

Seeking grant funding for new research and dissemination efforts is a priority for **CPCRN**. **In the past year, members submitted 44 CPCRN-related grant applications** (three of which were multicenter collaborations), **worth over \$67.1 million**. Of these, **35 applications (~80%) were funded for a total of \$44.8 million in grants awarded**.

All three multicenter grants were funded. In the first two years of CPCRN5, members **submitted 91 CPCRN-related grant applications** (five of which were multicenter collaborations), **worth over \$103.7 million**. Of these, **74 applications (~81%) were funded for a total of \$71.2 million in grants awarded**. Since 2004, CPCRN has **submitted a cumulative total of 1,368 grant applications (of which 123 were multicenter collaborations), worth \$1.67 billion**. Of these, **682 (~49%) applications were funded, totaling over \$731 million** in awards received since the beginning of the Network. Multicenter collaborations have clearly brought strength to members' grant applications. Of the 123 multicenter grant applications submitted since 2004, 72 (~59%) have been funded, securing over \$77.1 million in funding support for collaborative CPCRN research.

A strong Network-wide emphasis on diversity, equity, and inclusion (DEI) and/or disparities-reduction is also a leading priority of the CPCRN. In the past year, the Coordinating Center began tracking these efforts, and found that in Year 2, members **published 66 peer-reviewed articles, delivered 47 presentations, and submitted 33 grant proposals that were related to DEI and/or disparities-reduction**. Common subpopulations around which these activities were focused include rural (19 pubs, 18 presentations, nine grant proposals), Asian American/Pacific Islander (15 pubs, 17 presentations, ten grant proposals), Black/African American (13 pubs, six presentations, 17 grant proposals), and Latinx/Hispanic (13 pubs, eight presentations, 15 grant proposals) among many others.

CPCRN progress reporting data reveal that CPCRN members develop meaningful and lasting relationships within the Network, as well as collaborate with external partners at local, state, and federal levels, including breast, cervical, and colorectal cancer (CRC) detection programs and large health care systems and FQHCs in their grant-seeking efforts.

Reports, Plans, and Policies Created in Conjunction with State and National Programs

In the past year, CPCRN Centers contributed to 11 state and federal cancer reports, plans, and policies, bringing the Network to 14 total reports, plans, and policies thus far in the CPCRN5 funding cycle. This notable surge in productivity around these activities since Year 1 alone reflects significant growth in Network capacity, a greater impact across efforts that inform both practice and policy, and an effort to develop/nurture partnerships with state and local health departments to bridge the bridge from research to practice and accelerate reach of D&I efforts. Reports, plans, and policies reported in Year 2 are listed briefly below, with more detailed summaries available in the Collaborating Center Narrative Summaries:

- **Reports:**
 - UW: *Annual Evaluation Report, Washington State – BCCEDP Program Year 3*
 - UI: *Cancer in Iowa 2021*
 - Emory / UW: *Field Guide for Assessing Readiness to Implement Evidence-Based Cancer Screening Interventions*
 - Emory: *NBCCEDP Community Clinical Linkage Program Phase 1*
 - UI: *Principles for Designing and Conducting Tobacco Product Perception and Intention Studies*
 - UW: *Tobacco-Free Policies and Programs at Washington State Agencies*
- **Plans:**
 - All CPCRN Collaborating Centers: *Advance & Strengthen Racial Equity, Diversity, and Inclusion in the Biomedical Research Workforce and Advance Health Disparities & Health Equity Research (RFI)*
 - CSPH: *A Path to Cure – Colorectal Cancer*
 - NYU-CUNY: *Stakeholder Input on Advancing Cancer Health Disparities Research (RFI)*
- **Policies:**
 - NYU-CUNY: *New York City Menthol Ban*
 - NYU-CUNY: *Vaccine Expansion-Related Bills: S.4807-A (Stavisky) / A.6476-A (Hyndman)*

Impactful Workgroup Research and Dissemination Activities

CPCRN Workgroups engaged in a variety of research and dissemination activities to drive public health impact. The projects reflected below are some of the many cross-Center Workgroups and Interest Groups that were active in the Network in the past year. A full list of all projects and their respective activities can be found in the Year 2 Cross-Center Project Reports section of the main report:

- **Cancer Survivorship Workgroup** – The Survivorship Workgroup published two papers related to COVID-19 and cancer in the past year, and Workgroup members from the UNC and UArizona developed a document listing resources for cancer survivors for the American Cancer Society. After a review of resources from ten national organizations, all 50 state health departments, and all 71 NCI-designated cancer centers, they created a list including 70 resources for cancer survivors, including cookbooks, videos related to exercise and cooking, programs and classes that are state-specific or online programs, among others.

- ***iCollab Workgroup and Health Equity & Social Determinants of Health (SDOH) Interest Group*** – The iCollab Workgroup published a manuscript in *Implementation Science Communications* based on CPRN case studies of aligning implementation science with improvement practice. After subsequent discussions with the Health Equity & SDOH Interest group, iCollab Workgroup members were invited to pursue additional projects under the umbrella of the Interest Group’s nine health equity “guiding principles” to be adopted by the Network. They explored the ways in which CPRN investigators are operationalizing the principles in their research and developed two examples for the primary manuscript that will be submitted to a special supplement in *Preventing Chronic Disease*. A subcommittee of the Health Equity & SDOH Interest Group is now conducting a mixed methods study with academic and community partners to further investigate how the CPRN can build capacity to integrate the principles across all facets of our research. They are specifically interested in how structural racism manifests itself both inside and outside the Network, and what actions can be taken to address it. They also partnered with the Consortium for Cancer Implementation Science (CCIS) to contribute to developing public goods that advance cancer health equity and community-engaged partnership in research.
- ***Modeling Evidence-Based Intervention (EBI) Impact Workgroup*** – The Modeling EBI Impact Workgroup developed a website to disseminate their Population Simulation for Healthcare Decisions (Cancer Control PopSim) work. The website provides information about the Workgroup team, their colorectal cancer (CRC) simulation model, and their publications. This website includes an interactive tool that will be linked to the main CPRN website and is designed for internal and external collaborators, colleagues, and partners to support decision-making about the implementation of interventions and health policy changes to promote CRC screening. Specifically, the interactive tool will provide an interface for public users to modify select variables (e.g., intervention type, cost-multiplier, effectiveness multiplier, intervention reach, health insurance expansion, and willingness to pay). Based on the current simulation models from NC and OR, the tool will then deliver population level simulation results, such as percent up-to-date with screening, CRC cases by stage, CRC cases averted, CRC deaths averted, life-years gained, cost for all payers combined, and incremental cost-effectiveness ratios. Results will be available for overall populations and for specific subgroups (e.g., by gender, race, ethnicity, and geographic location). Public users will be able to determine how sensitive the results are to the modifications they select. The website and tool are currently undergoing user testing to refine the content and appearance based upon user input. This group also published an article in *Implementation Science* focused on how to employ systems science and simulation methods for implementation research studies, particularly in informing costing and cost-effectiveness processes.
- ***Organizational Theory for Implementation Science (OTIS) Workgroup*** – In the past year, the OTIS Workgroup developed an Organization Theory for Implementation Science Framework by: (1) surveying scholars with expertise at the intersection of implementation and organization science to identify organization theories relevant to implementation science and texts that describe them; (2) abstracting constructs from the texts (abstraction forms were developed and posted to the CPRN website); and (3) consolidating the constructs and classifying them into theoretical domains through a concept mapping exercise among scholars with expertise at the intersection of implementation and organization science. They identified nine organization theories with implications for implementation science for inclusion in the OTIS framework: contingency, complexity, institutional, network, organizational learning, resource dependence, sociotechnical, and transaction cost economics. In addition, the OTIS workgroup made their summary forms for nine organization theories publicly available through the CPRN website. The summary forms describe each theory’s constructs, propositions, and relevance to implementation science.
- ***CPCRN Scholars Workgroup*** – During this past year’s funding period, the inaugural year of the CPRN Scholars Program was launched with 20 Scholars across six institutions. CPRN Scholars participated in a kick-off webinar, three educational webinars (topics: implementation in action, implementation science theories and frameworks, real-world implementation experiences of practitioners), and a wrap-up graduation ceremony. Evaluation surveys revealed high ratings for the webinars, and customized Trello app boards were used to give each Scholar (and their mentors) access to all curriculum materials for each Scholar’s customized needs. CPRN Scholars also attended live and/or recorded Zoom sessions of the updated CPRN *Putting Public Health Evidence in Action (PPHEIA)* training and/or updated NCI Implementation Science modules. Workgroup leadership also published a manuscript describing the development of the Program, which was published in the *Journal of Cancer Education*. In fall 2021, a new cohort of 17 CPRN Scholars began in the Program.

NOTE: Collaborating Centers and cross-Center projects were asked to report most significant contributions to the Network during the Year 2, CPCRN5 reporting period. The items marked 'most significant' are listed in the following sections of the Executive Summary. While these are just a few of the many activities and accomplishments of the Network that occurred this year, true totals and complete, detailed lists can be found for all Centers and projects in the main report.

Catalyzing Action and Effecting Change

CPCRN Collaborating Centers and Workgroups are engaged in a variety of activities that demonstrate the Network's impact via catalyzing action and effecting change in partnership with community and policy organizations:

- **NYU-CUNY investigators work with regional collaborators to address cancer health disparities** – The New York City Regional Cancer Collaborative (NYCRCC) is a partnership of the offices of community outreach and engagement from eight prominent academic and hospital cancer centers in and around the NYC Department of Health and Mental Hygiene and community-based organizations. For over two years, NYCRCC has been co-hosting outreach events and working together to address cancer health disparities in and around the NYC region. The Policy Work Group leverages the collective power of seven NYC metro area cancer centers to support policy and upstream change on a broad variety of subjects ranging from tobacco prevention and cessation, support for a universal Hepatitis B vaccine, and examining emergency Medicaid reimbursement claims.
- **UI works towards increasing HPV vaccination rates in Iowa** – UI partnered with the Iowa Department of Public Health (IDPH) to increase HPV vaccination rates. Through their analysis of Iowa's immunization registry in 2018-2019, they demonstrated how immunization registries can be used to target immunization efforts. They were able to merge zip code level data to immunization registry data and provide a contextual analysis of adolescent immunization rates. These results have been used by the IDPH to identify and target specific locations and populations for immunization uptake efforts. Work will continue around using these results to increase HPV vaccination rates in Iowa.
- **UW is catalyzing action and effecting change in pediatric clinics to increase vaccination rates in WA** – In collaboration with WA Department of Health (DOH), American Cancer Society (ACS), a Pediatric HPV Vax Champion, and pediatric clinic partners (n=9), UW is supporting implementation and evaluation of a system-level intervention to increase pediatric clinic's capacity to increase HPV vaccination initiation and completion, including recommending vaccination to children starting at age 9 or 10 (currently endorsed by CDC). Intervention supports include provision of training on how to provide strong recommendations, use of coverage rate reports to identify missed opportunities, and use of patient and provider-focused reminders. Successful implementation and increased HPV initiation and completion rates has resulted in the scaling and expansion of the pilot program to other clinics and pediatric systems.

Dissemination Communications

During the previous reporting period, CPCRN received a wide variety of coverage across the media and other dissemination avenues:

- **NYU-CUNY** – Co-I, Dr. Victoria Ngo, was interviewed for the New York Times article "A Lonely New York Holiday: 'Miss This One and Be Alive for the Next'" and was interviewed for an MSNBC Live Interview called "Coronavirus Pandemic: Focusing on Mental Wellness During the Holiday Season."
 - NYU investigators helped and provided technical assistance to the City Health Dashboard team to create Asian American subgroup maps and tables for their City Health Dashboard project, which provides demographic density maps and tables for every U.S. city with a population greater than 50,000 (766 cities) that display racial/ethnic groups (including percent foreign-born) and racial/ethnic subgroups at the census tract level. It features data that has been less publicly available for Asian and Hispanic subgroup populations, including Samoans, Pakistanis, Cubans, Puerto Ricans, and many more. These data literally put racial/ethnic minority populations on the map, empowering community partners and policy makers to identify and intervene in places with substantial minority populations, among other uses.
- **UI** – Investigators' work on cancer control in rural communities was promoted on university websites multiple times, on ruralhealthinfo.org, a podcast for Rural Health Leadership Radio, and the ASSPH Friday letter. PI, Dr. Natoshia Askelson's work to increase HPV vaccinations was featured on the local CBS station, and Dr. Mary Charlton's work highlighting the State Cancer Registry's findings that Black Iowans face higher cancer mortality rates and are more likely to develop cancer at younger ages in comparison to White Iowans was featured on many Iowan news outlets, including the local NBC station, The Gazette, Iowa Public Radio, WHO News Radio, Ames Tribune, Iowa City Press-Citizen, and Radio Iowa.
- **UNC** – CPCRN's *Putting Public Health Evidence into Action* (PPHEIA) training curriculum, developed to support community program planners and health educators in best practices for planning, implementation, and evaluating

evidence-based interventions, was updated in the previous funding year. The CPCRN website was updated to include the latest version of the curriculum and to include video content. In the nearly three months from 7/7/21 to 9/29/21, the new page received 899 page views and 525 new users (approximately 58% of the total pageviews were from first-time visitors). In that same period, the archived version of the original training curriculum received 92 page views. Prior to the update, from 9/30/20 to 7/6/21, the earlier version of the training page featuring the original curriculum received 1,944 total pageviews (64% were first-time visitors). The updated training was recorded and uploaded to YouTube for further dissemination. The training videos have received a combined total of 815 views on YouTube.

- **UW** – Co-I, Dr. Barbara Baquero, led authorship of an opinion piece published in the *Seattle Times Newspaper*, highlighting that the COVID-19 “pandemic provides an opportunity to address some of the longstanding social inequities that lead to disparate outcomes.” PI, Dr. Linda Ko, was invited by community partners who serve Asian Americans across the country to discuss the importance of complying with cancer screening guidelines during the COVID-19 pandemic.

Quotable Quotes

CPCRN members’ work generated many quotable quotes and anecdotes throughout the funding year. A few of those quotes are featured below. More details are featured in the full report:

- Dr. Stephanie Wheeler, PI of the CPCRN Coordinating Center at UNC, was featured in “Federal Agencies’ Investment in Rural Cancer Control Fosters Partnerships between Researchers and Rural Communities.” Dr. Wheeler summarized issues that contribute to a greater financial burden to cancer patients in rural communities: “[Rural patients] often have smaller social networks with insufficient capital on which they can rely when catastrophic medical expenses occur, fewer local resources such as nonprofits and cost assistance organizations, and they are often employed by smaller employers that can’t afford comprehensive and generous insurance plans, and many are self-employed so purchasing insurance on their own can be cost-prohibitive.”
- UI’s widely publicized report highlighting cancer disparities for Black lowans generated two notable quotes:
 - “Some lowans may have had the perception that these disparities are found mostly in other states, other than Iowa, that have larger urban areas The data in the report ... should open all of our eyes to the fact that health care disparities are in our own backyard in our own communities, and are causing undue pain and suffering for our fellow lowans.” - *Dr. George Weiner, Director of the Holden Comprehensive Cancer Care Center*
 - “It’s not only important to examine the data, but to examine the data in the most appropriate way,” Johnson says. “In this case, understanding that we need to compare age-adjusted rates of disease in order to have a true understanding of the cancer burden in the state, given the higher proportion of older adults who are white and the fact that an individual has a greater risk for cancer as they age.” Identifying the disparities is important, Johnson says, as adopting a “one size fits all” strategy won’t bring different health outcomes. “This age-adjusted analysis shows us that black lowans have the highest cancer incident rates for those ages 50 to 79 years, while white lowans have the highest rate for those 80 years and older,” Johnson says. “Of the 12 major causes of death, black lowans have the highest mortality rate in ten conditions, including cancer.” – *Dr. Nalo Johnson, Director of Health Promotion and Chronic Disease prevention at the Iowa Department of Public Health*

Requests for Scientific Expertise

CPCRN members’ expertise was in high demand throughout the funding year. Members were asked to deliver presentations to researchers and staff, join national roundtables, and join planning committees, among other activities. A few of these requests are listed briefly below. A full of requests are detailed in the full report:

- The expertise of CSPH’s Drs. Betsy Risendal, PI and Patricia Valverde, Co-I was requested by the Office of Rural Health in the Veteran’s Health Administration regarding the development, implementation, and evaluation of a patient navigation program to serve rural Native Veterans.
- UI PI, Dr. Natoshia Askelson, and her research team were asked to create resources specific to cancer and COVID-19 for critical access hospitals.
- UNC Co-PI, Dr. Jennifer Leeman, was asked by the Dean of Research at the USF College of Nursing to collaborate on the resubmission of an R01 grant proposal; adding her expertise in implementation science and CRC screening, according to the proposal leads, was “exactly what we need on the team.”
- UW PI, Dr. Linda Ko, was invited to serve as a standing member of the study section Healthcare and Health Disparities (HHD) of NIH, selected as a Vice-Chair of the American Society of Preventive Oncology (ASPO) Behavioral Science and Health Communication Special Interest Group, and invited to join the editorial board of

Contemporary Clinical Trials. Her expertise in health disparities research was also sought out by MD Anderson Cancer Center where she mock reviewed a K01 proposal for a postdoctoral fellow, which has since been funded by the NIH.

- A professor at Rutgers Medical School sought the collective expertise of CPCRn investigators and their work to assist with her K99 award, an aim of which was inspired by a cross-Center project CPCRn publication from 2018 about CRC screening in FQHCs. COVID had interfered with the K99 awardee's plans to use a detailed process to develop a survey similar to the CPCRn FQHC survey; she instead built upon the CPCRn survey provided.

Awards and Honors

CPCRn members received many awards and honors throughout the funding year, some of which are listed below. Further details are featured in the full report:

- USC Co-I, Dr. Sue Heiney, was honored by the Children's Treehouse Foundation, which has created the *Sue P. Heiney Award for Program Excellence* to recognize her invaluable contribution to the CLIMB Program.
- Emory PI, Dr. Cam Escoffery, was appointed Vice-Chair of Research for the Department of Behavioral, Social and Health Education Sciences in the Emory Rollins School of Public Health.
- UArizona Co-I, Dr. Purnima Madhivanan, was awarded the University's *Maria Teresa Valez Outstanding Mentoring Award* and the *Government of the Indian state of Karnataka's Vision Group on Science and Technology's Award for Research Publications*
- UI Co-I, Dr. Susan McKernan, was appointed as the Director of the Board of Directors for the American Board of Dental Public Health.
- UNC Coordinating Center PI, Dr. Stephanie Wheeler, was awarded the 2021 *Bernard G. Greenberg Alumni Endowment Award* for mentorship, teaching, research, and service; one of the most prestigious awards offered by the UNC Gillings School of Public Health.
- UW Co-I, Dr. Barbara Baquero, received the 2021 Society of Behavioral Medicine *Leading the Narrative Award*, which recognizes community engagement and successful communication of behavioral science to the general public.
- UW Co-I, Dr. Wendy Barrington, was named inaugural Director of the UW Center for Anti-Racism & Community Health

Other Significant Network Activities

Centers reported a wide variety of additional activities that they deemed as highly significant. These include:

Significant Grants

- **Colorado Cancer Screening Program (CCSP) re-funded through 2023** – The CCSP is funded by the Colorado Cancer Cardiovascular and Pulmonary Disease competitive grants program (CCPD) to provide patient navigation and support the use of evidence-based approaches in increasing the use of preventive cancer screenings. Since its inception in 2006, the Program has partnered with federally qualified health centers (FQHCs), rural and community clinics, faith-based and community-based organizations to successfully navigate over 30,000 Coloradans to receive colonoscopies. According to CSPH Project Director, Ms. Andrea Dwyer, the Program was set to sunset in the summer of 2021 but has been refunded for two additional years; at a time needed to address the gap in services related to elective procedure bans during the initial stages of the COVID-19 pandemic.
- **UNC received Lineberger Development Award for new cervical and colorectal cancer screening initiative** titled "My Body My Test 4: A Cervical and Colorectal Cancer Screening Study." Those involved from the Network include Drs. Alison Brenner, UNC Co-PI and Stephanie Wheeler, CPCRn Coordinating Center PI; Dr. Brenner will serve as Co-PI and Dr. Wheeler as Co-I on the project. The team will test the impact of bundling mailed outreach of HPV self-testing kits with CRC screening FIT kits as compared to sending either kit on its own on test completion.

Significant Publications

- Friedman, D. B.*, Escoffery, C.*, Noblet, S. B.*, Agnone, C. M.*, & Flicker K. J.* (2021 July 9 Epub). Building capacity in implementation science for cancer prevention and control through a research network Scholars Program. *Journal of Cancer Education*. doi: [10.1007/s13187-021-02066-3](https://doi.org/10.1007/s13187-021-02066-3).
- Jonas, D. E., Reuland, D. S.*, Reddy, S. M., Nagle, M., Clark, S. D., Weber, R. P., Enyioha, C., Malo, T. L., Brenner, A. T.*, Armstrong, C., Coker-Schwimmer, M., Middleton, J. C., Voisin, C., & Harris, R. P. (2021).

Screening for lung cancer with low-dose computed tomography: Updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*, 325(10), 971-987. doi: [10.1001/jama.2021.0377](https://doi.org/10.1001/jama.2021.0377).

- Thomson, C. A.*, Overholser, L. S.*, Hébert, J. R.*, Risendal, B. C.*, Morrato, E. H.*, & Wheeler, S. B.* (2021). Addressing cancer survivorship care under COVID-19: Perspectives from the Cancer Prevention and Control Research Network. *Am J Prev Med*, 60(5): 732-736. doi: [10.1016/j.ampere.2020.12.007](https://doi.org/10.1016/j.ampere.2020.12.007).
- Leeman, J.*, Rohweder, C.*, Lee, M., Brenner, A.*, Dwyer, A.*, Ko, L. K.*, O'Leary, M. C.*, Ryan, G.*, Vu, T.*, & Ramanadhan, S*. (2021). Aligning implementation science with improvement practice: A call to action. *Implement Sci Commun*, 2(1), 99. doi: [10.1186/s43058-021-00201-1](https://doi.org/10.1186/s43058-021-00201-1).
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- O'Leary, M. C.*, Hassmiller Lich, K., Frerichs, L., Leeman, J.*, Reuland, D. S.*, & Wheeler, S. B.* (2022). Extending analytic methods for economic evaluation in implementation science. *Implement Sci*, 17(1):27. doi: [10.1186/s13012-022-01192-w](https://doi.org/10.1186/s13012-022-01192-w). PMID: 35428260.

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Significant Presentations

- Birken, S.*, Ko, L.*, Leeman, J.*, Wangen, M.*, Richardson, L.*, Choy-Brown, M.*, Lee, M.*, Huang, T.*, Adsul, P.*, Bender, M., Nilsen, P.* (2020, December). Using organization theory to support the selection of strategies that target organization-level implementation barriers: The Cancer Prevention and Control Research Network's Organization Theory for Implementation Science (OTIS) project. Poster presented virtually at the 13th Annual Conference on the Science of Dissemination and Implementation in Health. Washington, D.C.
- Hébert J.* & Noblet, S.* SC-CPCRN Community Health Intervention Program mini-grants. Virtual presentation at: CPCRN Mini-grants Lunch and Learn; August 2021; Columbia, SC.
- Risendal, B.*, Bilenduke, E.*, Dwyer A, Valverde, P.*, & Kilbourn, K*. RESULTS: Resources, Engagement, and Support for the Use of Lifetime Tailored Cancer Prevention and Control Services (Local Project). Collaborative virtual presentations to community partners in Colorado, October 2020 - September 2021.
- Werts, S. J.*, Lopez-Pentecost, M.*, Skiba, M. B.*, Vogel, R.*, Ingram, M.*, Enriquez, T.*, Garcia, L.*, & Thomson, C. A.* Vida Plena: A Qualitative Investigation of the Lifestyle Programming Needs of Mexican-Origin Breast Cancer Survivors Living on the U.S./Mexico border. (Oral Presentation) UArizona Social Justice Symposium, Mel and Enid Zuckerman College of Public of Health, Tucson, Arizona. March 19, 2021.

***CPCRN presenters**

Significant Training Workshops

- **UW Implementation Studio Training** – Implementation Studio is a structured training through workshops to facilitate the selection, adaptation, and implementation of cancer prevention and control EBIs, with ongoing consultation to support adaptation and implementation of EBIs. Implementation Studio is delivered through either two half-day studio workshops, or one-hour workshops spread out across two weeks to partner CBOs. The training includes five steps:
 1. Creation of an implementation blueprint
 2. Review of EBIs and adaptation to rural context
 3. Identifying CBO partners and collaborators
 4. Training and education
 5. Monitoring of implementation steps
- **UNC/Emory – Putting Public Health Evidence in Action** – The CPCRN's flagship training, *Putting Public Health Evidence in Action (PPHEIA)*, was updated and delivered four separate times during the funding year:
 1. Between March-May 2021, Mary Wangen, Co-Project Director and Dr. Jennifer Leeman, Co-PI of UNC and Dr. Cam Escoffery, PI Emory University delivered the PPHEIA training to CPCRN members, Scholars, and related networks in a six-part virtual series. Approximately 55-70 participants attended each session.
 2. On April 9th, 2021, Dr. Escoffery, Ms. Wangen, and Dr. Leeman delivered the PPHEIA curriculum as a virtual skill-building session at the Society for Public Health Education 2021dX Conference. The presentation was titled "Putting Public Health Evidence into Practice: Tools for Implementing and Adapting Evidence-Based Programs" and was attended by 73 people.

3. In June 2021, Dr. Escoffery, Ms. Wangen, and Dr. Leeman presented an overview of the PPHEIA virtually to grantees of the CDC's Colorectal Cancer Control Program (CRCCP). There were approximately 60 attendees.
4. On August 12 and 26, 2021, Ms. Wangen, Dr. Leeman, and Dr. Catherine Rohweder, Co-PD of UNC, presented parts of the PPHEIA training virtually at the Chatham Health Alliance Research Series. Approximately 20 participants attended the two sessions.

Significant Local Center Partnership

- **UArizona partnership with Mariposa County Health Center** – focused on improving the health of and reducing morbidity among border-dwelling Hispanic cancer survivors. Through a simultaneous mixed method qualitative approach, integrating semi-structured interviews from Year 1 and photovoice (Year 2), this group is focused on promoting healthy lifestyle behaviors in border-dwelling Hispanic cancer survivors and the most acceptable approach for program adaption and delivery. The aims of this project include:
 - Characterize the knowledge, attitudes, and beliefs towards healthy lifestyle behaviors.
 - Identify facilitators or barriers towards meeting healthy lifestyle recommendations in cancer survivorship.
 - Distinguish participation preferences for healthy lifestyle programming.

Significant Efforts to Address Diversity / Equity / Inclusion (DEI) and/or Disparities-Reduction

- **CSPH** – Prior to joining the Network as Project Director of CSPH, Emily Bilenduke was a member of the inaugural CPCRN Scholars cohort that spanned from 2020-2021. For her Scholars project, Bilenduke built upon existing goals shared by CSPH's local project, which aims to reduce disparities in hereditary cancer screening. Through the use of intervention mapping and community engagement, the project identified evidence-based strategies to address the barriers that are potentially contributing to inequity in hereditary cancer screening. Multiple presentations were made to audiences of key partners statewide to identify relevant and appropriate opportunities for action to be supported in mini-grants and patient navigation. Informed by emerging work at the intersection of health equity and implementation science (IS), work with the iCollab Workgroup sparked the question of how implementation strategies are being selected based on the disparities faced by specific communities. The research question prompted collaboration with the Health Equity & SDOH Interest Group to combine efforts and identify how CPCRN Centers are addressing health equity through their local projects. During the January CPCRN meeting, Co-I, Dr. Jamie Studts, presented on equitable implementation of lung cancer screening, This informed by several of the CSPH investigators who are involved in related efforts across the state.
- **NYU-CUNY** – In Year 2, NYU-CUNY developed a Cancer Center Community Needs Assessment which was designed to better understand the cancer-related resources, challenges, and needs of diverse communities across NYC in multiple languages, including English, Spanish, Arabic, Russian, Urdu, Bangla, Haitian Creole, Chinese and Korean. This survey will also include an optional structural racism module, which will include questions pertaining to structural racism, discrimination, vicarious racism, racism and discrimination during the COVID-19 pandemic, and healthcare and food security/benefits. Through NYU-CUNY's work with *Stamp Out Cancer Brooklyn* (SOCB), which is a multi-pronged, community-engaged initiative that aims to reduce the overall burden of cancer and alleviate cancer-related disparities in Brooklyn, we have created a new Community Health Worker program, an empowering and community-driven approach to deepen social cohesion and social capital and address the experience of systemic racism in community and clinical settings. CUNY was also awarded an NIH grant to carry out a randomized controlled study of an integrated mental health and economic empowerment community intervention for Black and Hispanic populations. Their final effort centers around eliminating COVID-related disparities in vaccine uptake, information, and additional elements related to SDOH.
- **UI** – The UI Prevention Research Center (PRC) has a three-level approach to issues of equity and inclusion, which all UI CPCRN members are invited to participate in. First all members of the UI PRC/CPCRN are invited to spend one hour per week focused on the personal, inner work that each must do. Once a month, they are invited to a session designed to promote progress on their personal journeys. Second, they focus on the way the PRC/CPCRN are run, who the staff are, how the meetings are conducted, and what the projects are that they select. Third, they intentionally consider research methods and processes.
- **UNC** – UNC's core research projects have an implicit or explicit focus on reducing disparities and improving health equity:
 - **NC PICCS**: The clinical partners for North Carolina's Colorectal Cancer Control Program (CRCCP) are Federally Qualified Health Centers (FQHCs), which serve a high proportion of uninsured patients.
 - **Cancer Screening Change Package (CSCP)**: This CDC-funded initiative takes into consideration the increasing role of community members and organizations within healthcare, and the pressing need and demand to address underlying inequities in social determinants of health. Therefore, the scope of the traditional change package has been expanded to include approaches that reflect this changing landscape. The CSCP provides tools/resources for community-based organizations and practitioners to

implement evidence-based interventions (EBIs) to promote breast, cervical, colorectal, and prostate cancer screening and includes a focus on community-clinical linkages, reducing economic barriers, and improving overall population health.

- *Putting Public Health Evidence into Action*: The PPHEIA training includes a new module focusing on external partner engagement. Addressing health disparities is intentionally woven throughout all of the modules.
- *PharmFIT*: The purpose of increasing access to CRC screening by distributing FIT kits in pharmacies is to reach more under-screened and underserved populations, particularly rural residents. Because pharmacies are more evenly distributed, frequently visited, and open during non-traditional hours as compared to primary care settings, they may provide more opportunities for cancer screening.
- **UW** – UW’s Implementation Studio project works with rural CBOs to select, adapt, and implement an EBI to promote cancer screening. Some of their work this past year was in Spanish and some English (serving English-speaking Hispanic populations). Their FIT Optimization project partnered with an FQHC to test and optimize strategies to increase CRC screening rates among Spanish-speaking patients with limited English proficiency.

Significant Efforts to Address COVID-19

- **Emory** – Investigators are assessing the impact of COVID-19 on rural cancer survivors in Southwest Georgia. This Winship Cancer Institute Community Engagement mini-grant will conduct surveys with survivors around attitudes and behaviors around the COVID vaccine and the impact of COVID on their employment, finances, and households.
 - Additionally, Dr. Cam Escoffery, PI, has an R01 evaluating the scalability of the *SurvivorLink Program*, an online personal health record where caregivers and survivors can learn and share about their late effects. For the study, they’re asking questions about COVID-19 attitudes, beliefs, and behavioral practices, including caregivers’ and their child survivors’ receipt of the vaccine and the impact of the pandemic on their families and healthcare utilization among trial participants. Investigators have questions on their baseline survey and will administer a cross-sectional survey to all enrolled participants in spring 2022.
- **UArizona** – The UArizona Prevention Research Center (AzPRC) was awarded a one-year, \$500,000 supplement by the CDC to support ongoing efforts focused on promotion of the COVID-19 vaccine among rural, border, and underserved Arizona communities by informing strategies to increase confidence, and subsequently, enhance uptake. The effort is led by CPCRn Co-Is of UArizona, Drs. Tomas Nuño and Scott Carvajal, and Ms. Maia Ingram, among other collaborators not affiliated with the Network.
- **UI** – Members of the UI CPCRn team have been involved in state-/national-level data collection efforts to better understand how the pandemic is impacting cancer prevention, screening, and treatment. One project, titled "The Impact of COVID-19 and Social Distancing on Cancer-Related Behaviors" is in concert with a core group of NCI-designated cancer centers at the UA, UI, CU, Ohio State, and Wayne State. UI CPCRn members—Drs. Mary Charlton, Co-I and Natoshia Askelson, PI—are among those collaborating to develop questions that will be administered across populations, in conjunction with modules that can be applied to specific subpopulations in diverse catchment areas. The overall objective of this project is to assess how differences in demographics may impact execution of cancer preventive behaviors and cancer management/survivorship behaviors among members of the general adult population, cancer patient population, and cancer survivors in Iowa.
- **UNC** – Core projects involve primary care and pharmacy providers who are highly-impacted by the demand for COVID-19 testing, vaccination, and diagnosis/treatment of patient symptoms. In recognition of the additional burdens that the pandemic has placed on the Network’s practice partners, the UNC team has imbedded questions on COVID-related issues into their data collection instruments. For example, community health center partners in their CRCCP project have focus group discussions on the effects of COVID-19 on CRC screening rates. National surveys of patients and pharmacists for their PharmFIT study now include items about COVID-19.
- **USC** – Trinity Baptist Church Health and Wellness Ministry in Richland County, SC used mini-grant funds to help communities get up-to-date with health screenings that have been inactive or missed due to COVID-19 and/or limited resources. The 'Catch Up' initiative provided on-site and neighborhood screenings along with referrals for individuals who elect to screen at a different time.
- **UW** – The UW CPCRn Team, led by PI, Dr. Linda Ko, received a total of \$6.5 million in funding from the NIH to improve COVID-19 testing and vaccination in rural communities. The first project (\$5 million award) supports partnership with 14 elementary schools in the largest school district in the Yakima Valley of WA to implement risk communication around COVID-19 for safe return to school. 65% of the population in these communities are Hispanic, many of whom are employed in agricultural industries (farming and packing). The second project (\$1.5 million supplement) supports partnerships with two rural agricultural communities in WA and Montana to implement a home-based COVID-19 testing and assess its acceptability and usability. Both projects were funded under Rapid Acceleration of Diagnostics-Underserved Population (RADx-UP), an NIH initiative to ensure underserved populations access to COVID-19 testing during the pandemic.

CPCRN Coordinating Center & Steering Committee

With leadership from the Coordinating Center and Co-Chairs, Drs. Betsy Risendal, CSPH PI and Linda Ko, UW PI, the Steering Committee met monthly to discuss Network strategic planning, scientific direction and productivity, completion of Workgroup research projects, and dissemination of Network products. During Year 2 of CPCRN5, the Coordinating Center continued to develop and improve processes and structures to support Network activities by:

- Orienting new CPCRN staff and members to the Network and helping them integrate into the Network
- Hosting an annual meeting virtually due to the COVID-19 Pandemic (January 2021)
- Facilitating Network participation in the Conference on the Science of D&I in Health (December 2020)
- Facilitating multiple efforts to advance racial and health equity through CPCRN
- Facilitating the development of one new Workgroup and four additional Interest Groups
- Creating opportunities for relationship-building among Network investigators and Affiliate Members
- Creating new initiatives such as the COE Social Hour and CPCRN Lunch & Learn (e.g., Community Grants) sessions to encourage community building and resource sharing
- Engaging in meetings with each Center's PI and each Workgroup/Interest Group's leaders to learn about ways that the Coordinating Center can best support their work
- Providing support for Workgroup/Interest Group activities, including:
 - Programming four Workgroup surveys
 - Providing project management assistance across four Workgroups/Interest Groups
 - Funding support for: participant incentives (one Workgroup); qualitative research-related costs (one Workgroup); software licenses (two Workgroups); and publication fees (one Workgroup).
- Continuing to guide the Network through the COVID-19 pandemic and the adaptations it necessitated.
- Implementing the Network communications and dissemination strategy via adaptations, additions, and revisions to the CPCRN website, as well as regular dissemination through our quarterly newsletter, social media accounts including a new YouTube channel, Network listserv, and scientific publications.

Conclusion

CPCRN has made substantial impact in cancer prevention and control and implementation science across its history dating back to 2002. The Network continues to grow, with 44 new members added this year in a wide range of capacities, including as investigators, Affiliate Members, Federal Agency Partners, CPCRN Scholars, community and clinical partners, staff, and students. Network members continue to innovate, develop, implement, and evaluate evidence-based approaches to cancer prevention and control with their local, state, and national partners, influencing everything from local clinic practices to state cancer plans to national organizations' practices and policies.

The Network's extensive history of producing nearly 2,100 publications, more than 2,200 presentations and trainings, and funded grants totaling over \$731 million in research dollars since 2004 demonstrate just a few of many ways the Network and its members' expertise have significant impact on the nation's dissemination and implementation of evidence-based cancer prevention and control research.