Cancer Prevention and Control Research Network produces supplemental issue of Preventive Medicine highlighting disparities in cancer prevention and control

In 2019, nearly 2 million Americans will receive a cancer diagnosis and more than 600,000 will die of cancer. Cancer diagnoses and deaths are disproportionately high among people who live in rural counties, have a low socioeconomic status, and are members of underserved racial and ethnic groups.

The Cancer Prevention and Control Research Network (CPCRN), a collaborative national network of academic centers engaged in cancer research, has produced a supplemental issue of Preventive Medicine with 12 articles that examine stakeholder-engaged implementation science and population approaches to improve equity in cancer prevention and control. The research findings reported in the supplement investigate factors at the level of the patient, community, health care provider, health care system, and the wider socio-political context.

The supplemental issue represents a diversity of collaborative research products made possible by the research and scientific networking infrastructure enabled by CPCRN, which has been funded by the Centers for Disease Control and Prevention (CDC) and the National Cancer Institute (NCI), part of the National Institutes of Health (NIH), since 2002. CPCRN is a thematic network of the CDC's Prevention Research Centers (PRCs) in which multiple centers collaborate on research related to the dissemination and implementation of evidence-based approaches to reduce the burden of cancer, especially in disproportionately affected populations. The University of North Carolina at Chapel Hill's PRC, the Center for Health Promotion and Disease Prevention, hosts the network's coordinating center.

For the 2014-2019 funding cycle, the CPCRN member centers included cancer investigators at Case Western Reserve University, Oregon Health & Science University, University of Iowa, University of Kentucky, University of North Carolina at Chapel Hill, University of Pennsylvania, University of South Carolina, and University of Washington.

"We are fortunate to be part of the CPCRN for three consecutive cycles," says <u>Daniela Friedman</u>, principal investigator for the SC CPCRN and professor health promotion, education, and behavior at the University of South Carolina's Arnold School of Public Health. "The innovative research described in this special issue reflects our creative and intellectual input and showcases the incredible partnerships and collaborators across the state and country dedicated to cancer prevention and control."

"In this supplemental issue, CPCRN researchers take on two tasks that are essential to reducing disparities in cancer outcomes," said Jennifer Leeman, a guest editor on the issue and principal investigator of the University of North Carolina CPCRN collaborating center. "First, they examine the multilevel factors that are contributing to cancer disparities, and, second, they identify strategies to speed the implementation of cancer screening interventions across the different levels where factors occur. Taken together, these articles report findings that will aid public health practitioners, policymakers, and others as they design and implement interventions to reduce the burden of cancer in underserved communities."

"As we have documented in our prior work, South Carolina has higher than U.S.-average cancer incidence rates, and our cancer mortality rates converge even more from the national average," says James Hébert, co-principal investigator for the SC CPCRN and Health Sciences Distinguished Professor in the Arnold School's Department of Epidemiology and Biostatistics. "Over the years, we have found that collaborative efforts such as those represented by the Cancer Prevention and Control Research Network (CPCRN) can provide us with opportunities to prevent and control cancer."

The 12 articles included in the supplement illustrate the types of research that are possible within a network of geographically dispersed centers all thematically linked by a common cause — reducing cancer burden in diverse populations. The supplement begins with an article authored by CPCRN federal agency partners at the CDC and NCI that provides an overview of the network and its purpose and history. The supplement ends with an article authored by several network leaders about the potential impact of CPCRN on cancer control and prevention.

In four articles, researchers report findings from their cross-center research on factors that contribute to rural disparities in cancer outcomes and present a conceptual framework to guide future research to reduce rural disparities. In five articles, CPCRN researchers report findings related to interventions to increase colorectal cancer screening rates in underserved populations. In one of these articles, researchers report on a national survey of patient navigators and the barriers they encounter to enabling populations to receive timely colorectal, breast, and cervical cancer screening.

CPCRN facilitates and coordinates timely, high-impact research across the eight collaborating centers. Each center conducts research in its own community and region, as well as collaborates with other centers to conduct multi-state research studies in topic-oriented workgroups. The articles in this issue report on several workgroup initiatives and findings completed during the latest round of network funding between 2014 and 2019.

"Because it leverages geographically dispersed, interdisciplinary teams of investigators, CPCRN is in a unique position to study the individual, geographic, policy, and other multilevel factors that increase the risk for poor cancer outcomes," said Stephanie Wheeler, the principal investigator for the CPCRN Coordinating Center. "The articles in this supplement highlight the diversity and strength of scientific ideas and leadership that a robust thematic research network like CPCRN can produce, where the network's contribution to science and practice is clearly greater than the sum of its parts."

The supplement has been published open access by Elsevier, and the <u>full issue is available for download</u>. Articles included in the supplement can also be individually downloaded by following the links below:

- The cancer prevention and control research network: Accelerating the implementation of evidence-based cancer prevention and control interventions (Guest Editor Commentary).
 Leeman J, Glanz K, Hannon P, Shannon J.
- The Cancer Prevention and Control Research Network (CPCRN): Advancing public health and implementation science (Funder Commentary).
 White A, Sabatino SA, Vinson C, Chambers D, White MC.
- Multilevel analysis in rural cancer control: A conceptual framework and methodological implications.
 Zahnd WE, McLafferty SL, Eberth JM.

• <u>Financial Hardship among Rural Cancer Survivors: An Analysis of the Medical Expenditure Panel Survey</u>

Odahowski CL, Zahnd WE, Zgodic A, Edward JS, Hill LN, Davis MM, Perry CK, Shannon J, Wheeler SB, Vanderpool RC, Eberth JM.

- Mortality-to-incidence ratios by US Congressional District: Implications for epidemiologic, dissemination and implementation research, and public health policy.
 Eberth JM, Zahnd WE, Adams SA, Friedman DB, Wheeler SB, Hébert JR.
- <u>Challenges of using nationally representative, population-based surveys to assess rural cancer</u> disparities.

Zahnd WE, Askelson N, Vanderpool RC, Stradtman L, Edward J, Farris PE, Petermann V, Eberth JM.

- Estimating the impact of insurance expansion on colorectal cancer and related costs in North Carolina: A population-level simulation analysis.
 - Lich KH, O'Leary MC, Nambiar S, Townsley RM, Mayorga ME, Hicklin K, Frerichs L, Shafer PR, Davis MM, Wheeler SB.
- Patient navigator reported patient barriers and delivered activities in two large federally-funded cancer screening programs.

Barrington WE, DeGroff A, Melillo S, Vu T, Cole A, Escoffery C, Askelson N, Seegmiller L, Gonzalez SK, Hannon P.

 Mailed FIT (fecal immunochemical test), navigation or patient reminders? Using microsimulation to inform selection of interventions to increase colorectal cancer screening in Medicaid enrollees.

Davis MM, Nambiar S, Mayorga ME, Sullivan E, Hicklin K, O'Leary MC, Dillon K, Hassmiller Lich K, Gu Y, Lind BK, Wheeler SB.

- <u>Understanding quality improvement collaboratives through an implementation science lens.</u> Rohweder C, Wangen M, Black M, Dolinger H, Wolf M, O'Reilly C, Brandt H, Leeman J.
- Advancing the use of organization theory in implementation science.
 Leeman J, Baquero B, Bender M, Choy-Brown M, Ko LK, Nilsen P, Wangen M, Birken SA.
- Putting Evidence Academies into action: Prostate cancer, nutrition, and tobacco control science. Glanz K, Green S, Avelis J, Melvin CL.
- <u>An application of the Science Impact Framework to the Cancer Prevention and Control Research</u> Network from 2014-2018.

Ko LK, Jang SH, Friedman DB, Glanz K, Leeman J, Hannon PA, Shannon J, Cole A, Williams R, Vu T.

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