

National Cancer Advisory Board (NCAB)
***ad hoc* Subcommittee on Population Science, Epidemiology, and Disparities**

Gaithersburg Marriott Washingtonian Center
Gaithersburg, MD
2 December 2024
7:10 p.m.–8:10 p.m. EST

SUMMARY

Subcommittee Members

Dr. Karen M. Winkfield, Chair
Dr. Nilofer S. Azad (absent)
Dr. Callisia N. Clarke
Dr. Luis Alberto Diaz (absent)
Dr. Andrea Hayes Dixon (absent)
Ms. Ysabel Duron
Dr. Gary L. Ellison, Executive Secretary

Dr. Karen M. Emmons
Ms. Tamika Felder
Dr. Christopher R. Friese (absent)
Dr. Ana Navas-Acien (absent)
Dr. Edjah K. Nduom
Dr. Fred K. Tabung

Other Participants

Mr. Mark Alexander, National Cancer Institute
(NCI)
Dr. LeeAnn Bailey, NCI
Dr. Shaalan Beg, NCI
Dr. David Berrigan, NCI
Dr. Chandrakanth Are, Board of Scientific Advisors
(BSA)
Dr. Karen M. Basen-Engquist, BSA
Dr. John D. Carpten, Chair, NCAB
Dr. Suzanne D. Conzen, BSA
Dr. Mark P. Doescher, BSA
Dr. Shelton Earp, Chair, BSA
Dr. Debra L. Friedman, BSA
Dr. Katrina A.B. Goddard, NCI
Dr. Dorothy K. Hatsukami, BSA
Dr. Ana Maria Lopez, BSA

Dr. Douglas R. Lowy, NCI
Dr. Karen M. Mustian, BSA
Dr. Lisa A. Newman, BSA
Dr. April Oh, NCI
Dr. Raymond U. Osarogiagbon, BSA
Dr. W. Kimryn Rathmell, Director, NCI
Dr. Jill Reedy, NCI
Dr. Erin Siegel, NCI
Dr. Sanya Springfield, NCI
Dr. Cornelia M. Ulrich, BSA
Ms. Stacey Vandor, NCI
Dr. Tiffany Wallace, NCI
Dr. George J. Weiner, BSA
Ms. Joy Wiszneauckas, NCI
Dr. Tamara Korolnek, The Scientific
Consulting Group, Inc., Rapporteur

Welcome and Opening Remarks

Dr. Karen M. Winkfield, Executive Director, Meharry-Vanderbilt Alliance, Ingram Professor of Cancer Research, Professor of Radiation Oncology, Vanderbilt University School of Medicine, and Dr. Gary Ellison, Deputy Director, Division of Cancer Control and Population Sciences (DCCPS), NCI

Dr. Karen M. Winkfield, Subcommittee Chair, welcomed Dr. W. Kimryn Rathmell, NCI Director, and other participants to the NCAB *ad hoc* Subcommittee on Population Science, Epidemiology, and Disparities (Subcommittee) meeting. Dr. Winkfield introduced the new Executive Secretary of the Subcommittee, Dr. Gary L. Ellison, and invited the Subcommittee members to introduce themselves briefly. Dr. Ellison reminded the Subcommittee that its purpose is to help inform and advise NCAB and the NCI Director on strategic approaches and opportunities to enhance NCI's contributions to population science, epidemiology, and diversity. The Subcommittee is responsible for identifying opportunities to

address populations facing disparities through multidisciplinary programs in research, surveillance, patient care, primary prevention, education, and cancer control.

Policy, Systems, and Environmental Approaches to Reduce Obesity and Cancer Risk

Dr. David Berrigan, DCCPS, NCI

Dr. David Berrigan provided an overview of the connection between cancer and obesity and discussed multilevel approaches and interventions for controlling obesity across the life course. He reminded the meeting participants that obesity is a risk factor for at least 13 types of cancer and noted a recent study linking obesity to 15 additional cancers. The prevalence of obesity is predicted to continue increasing through 2050, when half the U.S. population is expected to be obese. Dr. Berrigan emphasized that reducing obesity by any method (e.g., intentional weight loss, lifestyle interventions, bariatric surgery, or glucagon-like peptide-1 [GLP-1] agonist drugs) prevents cancer.

Dr. Berrigan reviewed barriers to widespread treatment for obesity. Treating obesity is expensive, and surgical and pharmacological approaches are associated with negative effects. For example, GLP-1 agonists are associated with high costs and side effects, and two out of three people discontinue their use within a year. Behavioral interventions associated with weight loss are intensive and require multiple sessions across several years. Shorter or less intensive interventions are associated with weight regain after treatment cessation.

A more promising approach involves preventing unhealthy weight gain by changing the obesogenic environment. This model would mimic campaigns that successfully reduced U.S. tobacco use, combining multiple interventions, including changes to food and physical activity environments (e.g., promotion of active transportation, school-based nutrition and healthy food access programs, new labeling and taxation policies) and policy changes that enable equitable access to health care systems. Dr. Berrigan emphasized that implementing just one or a few of these interventions would be inadequate to prevent obesity.

To clarify the state of the science, the National Collaborative on Childhood Obesity Research (NCCOR) partnered with NIH, the Centers for Disease Control and Prevention, the Robert Wood Johnson Foundation, and the U.S. Department of Agriculture to organize the Obesity-Related Policy, Systems, and Environmental Research in the U.S. (OPUS) project, a two-part workshop series exploring how to advance progress toward designing and rigorously evaluating policy, systems, and environmental (PSE) interventions to address childhood obesity. The goal was to advance childhood obesity research by examining key findings from past research and discussing future directions for the field. The workshops highlighted the need for multilevel and multisectoral approaches to obesity prevention. Key insights included the critical need to engage communities and other partners authentically; the availability of many successful PSE efforts but few whole-of-systems approaches (WSAs); the potential for complex systems models and design thinking to strengthen and improve the design, implementation, and evaluation of PSE approaches; the pressing need for demonstration projects addressing multiple influences on childhood obesity; and the importance of addressing both proximal and distal factors that affect obesity to ensure equitable outcomes.

Dr. Berrigan reviewed several lines of evidence that support the implementation of multiple PSEs and WSAs. He cited a 2024 Surgeon General's Report, *Eliminating Tobacco-Related Disease and Death: Addressing Disparities—A Report of the Surgeon General*, which concluded that effective tobacco control requires social and structural interventions, as well as a comprehensive multilevel effort comprising a combination of complementary approaches. Dr. Berrigan also referenced the National Heart, Lung, and Blood Institute's Healthy Communities Study, which provides evidence that community investment to implement more comprehensive community policies and programs (i.e., those affecting an increased number of distinct behaviors) resulted in lower child adiposity. Initiatives like the Shape Up Somerville

program and the Amsterdam Healthy Weight Program, which have been recognized as evidenced-based community obesity prevention models, highlight the need for intervention efforts that embrace the complexity of obesity through multilevel approaches to promote active living and healthy eating. A report on the Shape Up Somerville program, which ran from 1998 to 2013, noted that the key ingredients for success were funding support, political will, and community partnerships. Other efforts supporting readiness for WSA intervention studies include the NIH Obesity Research Task Force, the NCCOR, a growing community of NIH- and NCI-funded policy evaluation researchers, advances in design and systems thinking for addressing obesity, the Pathways to Prevention workshop on Methods for Evaluating Natural Experiments in Obesity, and important lessons from the Common Fund Community Partnerships to Advance Science for Society (COMPASS) program addressing health equity structural interventions.

In October 2024, DCCPS announced a Notice of Special Interest (NOSI), Administrative Supplements for Assessing Capacity to Address Obesity for Cancer Prevention and Control, to encourage NCI-funded investigators to apply for administrative supplement funds to support research addressing obesity for cancer prevention and control. The aim is to build capacity and readiness for the development of WSAs via policy, systems, and environmental approaches. NCI is seeking supplement applications that define the problem of obesity in a geographic area, characterize current efforts to address obesity, and convene diverse partners to explore the potential for integrating multiple policy, systems, and environmental approaches into WSAs for obesity. Awards will comprise up to \$100,000 in total costs for the entire allowable 1-year project period, and applications are due on January 31, 2025. A video recording of a pre-application webinar held for the NOSI on November 18, 2024, is available on the NCI website.

Dr. Berrigan listed potential next steps for supporting PSE approaches and WSAs for obesity and cancer risk. Summaries of the OPUS workshops can be published in peer-reviewed journals, relevant speakers can be invited to DCCPS or Subcommittee meetings, a focused portfolio review can be conducted, supplement awardees can be convened, and additional funding opportunities can be developed. He noted that several major challenges must be addressed. PSE approaches and WSAs are likely to involve a mix of randomized controlled trials (RCTs) and natural experiments (i.e., non-randomized longitudinal analyses). Future research must determine whether causal inference can be determined using the latter form of study and best practices for robust study design and data analysis. Rigorous evaluation of complex combinations of interventions will require measurement at multiple levels, from biomarkers to policy implementation factors, and efficient teams must be formed to achieve this goal. Engaging with multiple sectors and communities requires time and effort, and the best ways to support researchers and their partners during these developmental stages must be determined. Obesity stigma and other public health and social priorities create barriers to addressing obesity, and ways to mobilize different sectors and communities to prioritize obesity should be determined.

Discussion

Dr. Winkfield asked whether the community obesity prevention initiatives engaged with school systems. Dr. Berrigan noted that the Somerville program included physical education, fitness testing, and gardening components in local schools. He emphasized that programs addressing children at home and in school are more likely to succeed than those that focus on a single area of a child's life.

Dr. Winkfield wondered whether an agricultural perspective would be needed to address the link between obesity and certain types of foods (e.g., genetically modified organisms). Dr. Jill Reedy shared that a joint NIH–U.S. Food and Drug Administration Nutrition Regulatory Science workshop will be held on December 18 and 19, 2024, and this topic will be discussed. The meeting is open to the public.

Ms. Ysabel Duron noted concerns in Latino communities about obesity. She emphasized that the effects of stress on obesity, overeating, and certain food choices should be studied, especially in health disparities populations. Ms. Duron also noted that investigators should be cognizant of subpopulations within

communities (i.e., “micro-communities”) and seek to understand and tailor their approaches to the unique challenges facing certain communities and micro-communities (e.g., genetic predispositions, cultural and language barriers, discrimination, inadequate access to healthy food and environments). Dr. Berrigan reviewed intensive NCI efforts to improve measurement in and adapt measures to diverse communities. NCI also has been involved in cross-border projects involving migrant communities. The ComPASS program is emerging as a new health equity research model for community-led, multisectoral structural intervention research across NIH and other federal agencies.

One participant noted that WSAs already have been implemented for childhood obesity. She highlighted the opportunity to develop similar programs to address obesity in adults. Dr. Berrigan pointed out that many questions remain about optimal approaches across the lifespan and how to sequence the implementation of these approaches.

Dr. Cornelia M. Ulrich remarked that weight gain is a side effect of many medications that should be measured during clinical studies. She also discussed successful efforts to lower sugar levels in sweetened beverages in the United Kingdom, noting that tax policies making lower sugar levels more economical were more successful than the demonization of the beverage industry.

Discussion: Future Agenda Items

Dr. Winkfield noted the need to establish an *ad hoc* Working Group and focus the efforts of the Subcommittee. Dr. Ellison listed possible topics and future directions. Structural and society-level interventions are a potential area of interest. A portfolio analysis of structural and society-level interventions has been initiated, and relevant information will be shared with the Subcommittee. Dr. Ellison listed multilevel/multisectoral interventions and alcohol policy as additional topics. He requested that the meeting participants share their thoughts regarding future focus areas and potential partners for collaboration.

Dr. Ana Maria Lopez highlighted lessons on beneficial diet and lifestyle characteristics that can be gleaned from blue zones (i.e., areas where humans are healthier and live longer than average).

Dr. Ellison commented that trust and trustworthiness could be another area of focus.

Dr. Fred K. Tabung noted that school lunches are supposed to be aligned with dietary guidelines, but schools might not interpret the guidelines uniformly across the country. Studies of the nutritional quality of school lunches across the country would be beneficial.

Dr. Karen M. Mustian observed that increases in bike and walking lanes have made bikers and pedestrians safer but have not led to many behavioral changes (i.e., increased numbers of people biking and walking). She pointed out that smoking cessation efforts were successful only when smoking became very difficult. Dr. Mustian emphasized that broad policy changes will be more important than targeted interventions when addressing obesity.

Dr. Edjah K. Nduom remarked that incoming Cabinet nominees might be open specifically to major policy changes related to food, obesity, and public health. He suggested that NCI promote its decades of research on preventing cancer through reducing obesity.

Dr. Winkfield requested that the minutes from previous Subcommittee meetings be sent to the new members. Dr. Rathmell encouraged the meeting participants to be ambitious with their goals for the Subcommittee and added that multiple *ad hoc* working groups might be needed to achieve their aims.

Adjournment

Dr. Winkfield thanked the participants and adjourned the meeting at 8:10 p.m. EST.

Dr. Karen M. Winkfield
Chair

Date

Dr. Gary L. Ellison
Executive Secretary

Date