

Cancer prevention and control: an overview of a decade of progress and the decade ahead

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The year 2020 marked the beginning of the 10th anniversary of the launch of the Society of Behavioral Medicine journal *Translational Behavioral Medicine: Practice, Policy, Research* (TBM). Over the past 5 years, TBM published 11 high-impact special-themed issues and 8 special sections that addressed behavioral prevention and control of disease across diverse health domains. As part of TBM's innovative portfolio that represents some of the most promising advances in research to practice and policy change, we seek to accelerate the tempo of this progress by bringing even greater attention to the field's impressive growth. This includes the future potential of the science of health behavior change for individuals and communities, and the setting and systems in which they co-exist. Cancer, of course, remains one of our nation's most pressing health concerns. A leading cause of death for many Americans and people around the globe, the remarkable strides made in treating cancer must be complemented by equal efforts to prevent and control its occurrence.

As one of the core disciplines in the field of cancer population sciences, behavioral medicine continues to make major practice- and policy-changing discoveries that are enlightened by knowing how, when, and under what circumstances people are most likely to alter their health behaviors and practices. With that in mind, TBM is proud to present its timely special issue on “Cancer Prevention and Control for a New Decade,” developed in collaboration with the Division of Cancer Control and Population Sciences (DCCPS) at the National Cancer Institute (NCI) of the National Institutes of Health. As we commemorate the National Cancer Act and reflect on 50 years of progress in cancer research, we are reminded of what's possible when a community comes together and commits to scientific discovery to improve the lives of millions of people. The Act established many of the programs that are the backbone of today's cancer research enterprise.

This special issue includes 12 articles that define the state-of-the-science in core areas of cancer population sciences research, coauthored by senior experts in behavioral and preventive medicine. Our goal is to significantly impact the mission and

vision of cancer prevention and control research, practice, and policy over the next decade. In doing so, this issue seeks to inspire and shepherd the next generation of scholars, highlighted by TBM's commitment that each article includes one or more early-career behavioral medicine scientist coauthors (e.g., trainees, early-stage faculty). The articles focus on the authors' perspectives on the future of research related to their areas of expertise. The articles also coaddress research related to two or more stages of the cancer control continuum (from etiology to prevention and detection, to diagnosis/treatment and survivorship, to end-of-life care).

The contributions to this special issue are divided into five subsections. Beginning with the subsection “A Decade of Progress, A Decade Ahead,” we start with this editorial overview as well as an article in tribute to Robert T. Croyle—who is in his final year as Director of the NCI's DCCPS, before his retirement in December 2021—as one of NCI's most effective and visionary leaders. This tribute by Barbara K. Rimer recognizes Dr. Croyle's and the division's many accomplishments and contributions in the behavioral and related domains, and his and the division's impact on the landscape of cancer control and population sciences.

Next, the subsection on “Realizing Our Greatest Impact on Population Health” revolves around the following themes: policy, implementation science, and health care delivery. Emmons et al. explore policy-focused implementation science and the need to consider policy implementation as crucial for translating evidence to practice moving forward. Rendle and Beidas focus on behavioral economics, rapid bidirectional learning, mixed methods and health equity as four strategic areas that can advance cancer control and implementation science. O'Malley et al. discuss cancer prevention, risk reduction, and cancer treatment and survivorship, as well as opportunities to equitably improve health outcomes in the face of system barriers.

Intervention optimization, emerging technologies, and cancer communication are the themes for the subsection “Smarter and Better Behavior Change Strategies.” Collins et al. focus on the role that wider

adoption of intervention optimization can have on cancer prevention and control interventions, and intervention science more broadly. Hesse et al. highlight the adoption of digital health technologies in the cancer field and stress the need to continue effective integration of these technologies into cancer control systems. Conley et al. discuss the domains where cancer communication may occur, while also considering the impact of health communication technologies on the communication landscape.

The following subsection “Foundations of Behavioral Medicine in Cancer Control and Prevention” focuses on health disparities, financial toxicity, and decision making. Hughes-Halbert and Allen consider the evolution of conceptual models and frameworks, as well as intervention development, and describe the barriers to conducting transdisciplinary translational behavioral research in the field of minority health and health disparities. Abrams et al. highlight the recent growth in financial toxicity research, and the need to address costs of cancer care and determine optimal strategies for health care providers and institutions to minimize financial toxicity, promote access to high-value care, and reduce health disparities. Gillman and Ferrer highlight the importance of examining the interpersonal dynamics of shared decision making, as well as identifying and reducing inequities in health decision making.

Finally, in the subsection “A New Way Forward,” William M.P. Klein provides an integrative summary of the issues that highlight the future directions of NCI and delineates how the special issue articles have contributed to defining and setting priorities for the institute’s funding agenda.

TBM has had a positive impact on the field of behavioral medicine during its still young existence, and we are committed to working to maintain and enhance this impact. We have the following suggestions for future research directions to build on these articles and to enhance the field of behavioral medicine.

1. Focus on real-world implementation. This will be accomplished through a combination of new and innovative designs, a focus on research evidence that is ready for implementation, and better measurement of multi-level factors that influence health outcomes.
2. Population health focus. Improving the health of the population will require attention to novel outcomes

such as biobehavioral interactions, environmental factors, and social determinants of health.

3. Emphasis on the equitable application of resources and interventions to all subpopulations, and sustainable evaluation of programs to ensure that improvements are long-lived.
4. Integration with industry and technology resources. Given current use patterns, we must modernize our research targets to include novel technologies and applications.
5. New partnerships. These new partnerships can be multilevel and should include provider/patient to organizational partnerships, as applicable.
6. Incentivizing the above efforts through supporting policies, legislation and funding on the federal and state levels. Policy support is crucial to allow for the development of innovative, evidence-based initiatives and to ensure long-lasting programmatic changes.

In conclusion, we highlight that what the field needs right now, more than ever, is to continue its strong leadership and advocacy efforts to shape the agenda for U.S. cancer research and cancer policy going forward. We pay tribute to DCCPS and what it means for CPC researchers to have that resource—the primary and most valuable and influential funding source that powers nearly all the science conducted. NCI has long been an ally of behavioral medicine, and many leaders of SBM and in the field are members of NCI expert and review panels. Together, the articles in this special issue provide a review of where we have been but, even more importantly, train our outlook to the future and the challenges and opportunities ahead.

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Compliance with Ethical Standards

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