

DIVISION OF CANCER CONTROL  
AND POPULATION SCIENCES

# 2020 OVERVIEW AND HIGHLIGHTS

**SPECIAL FOCUS ON  
IMPLEMENTATION SCIENCE  
AT NCI**





# TABLE OF CONTENTS

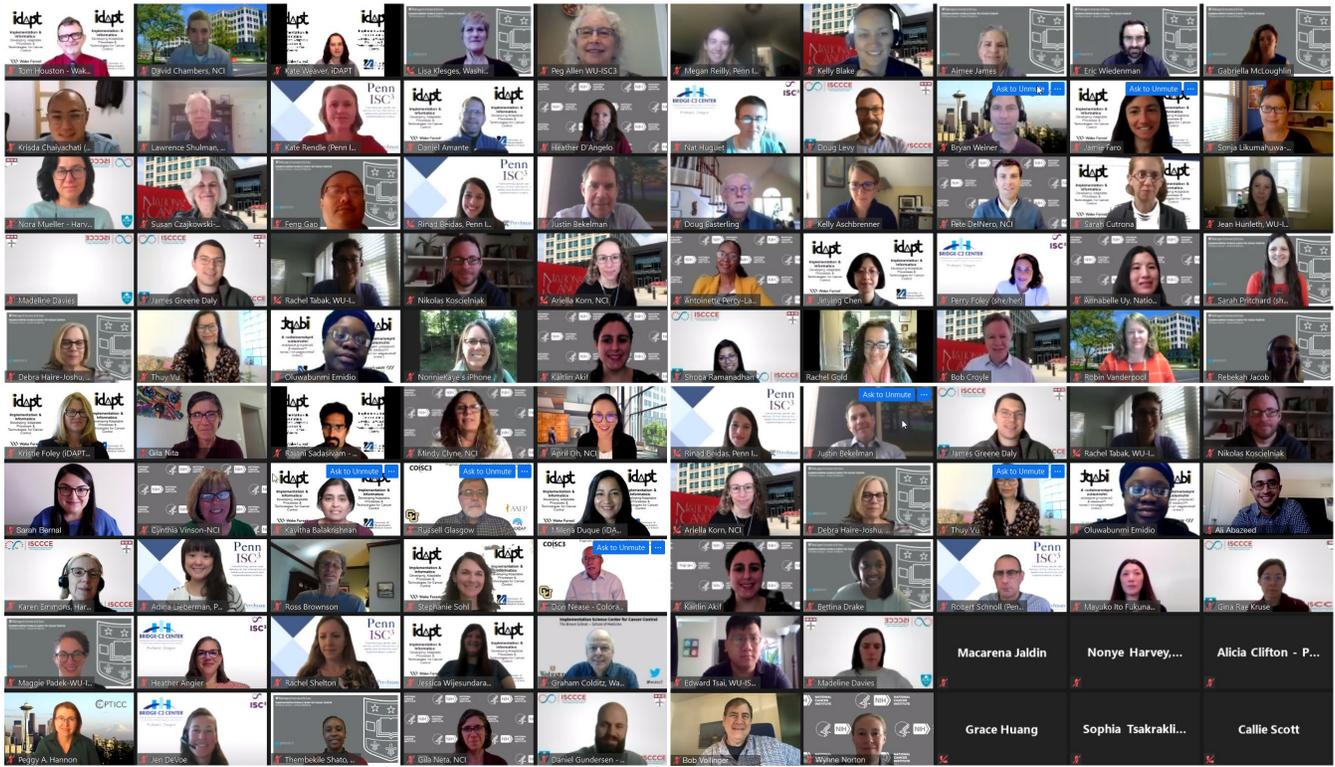
- I** MESSAGE FROM THE DIRECTOR
- III** LEADERSHIP AT A GLANCE
- 1** BUILDING FROM THE SUCCESSES AND ONGOING ACTIVITIES OF DCCPS
- 3** IMPLEMENTATION SCIENCE IN CANCER CONTROL
- 7** TRAINING AND CAPACITY BUILDING
- 11** RESOURCES AND TOOLS FOR IMPLEMENTATION SCIENCES
- 15** CANCER CENTER SUPPLEMENTS
- 17** PARTNERSHIPS
- 19** CANCER MOONSHOT-SUPPORTED RESEARCH INITIATIVES WITH IMPLEMENTATION SCIENCE COMPONENTS
- 21** ROLE OF IMPLEMENTATION SCIENCE TO INFORM HEALTH POLICY
- 24** FUTURE DIRECTIONS
- 25** OPPORTUNITIES FOR RESEARCHERS
- 27** INVESTMENTS IN CANCER CONTROL RESEARCH
- 31** BY THE NUMBERS – 2020



# MESSAGE FROM THE DIRECTOR

This year, we have faced unprecedented challenges to public health and well-being, with the devastation from COVID-19 and intensified concerns about racial inequality. In our work, both have critical implications for research and population health outcomes. Every year, we share this report to spotlight cross-cutting work across the cancer control continuum, from prevention to diagnosis and treatment to survivorship, where progress and innovation are all the more important given the ongoing crises. In light of these challenges, we've chosen to feature a key area of science that is integrated into the research supported across the division, as well as across the National Institutes of Health (NIH) more broadly, which strategically seeks to reduce the burden of cancer through multidisciplinary teams, innovative approaches, and community engagement: implementation science.

Implementation science bridges the gap between research and practice to ultimately improve individual and population health outcomes. The opportunities to improve population health by optimizing care delivery strategies, collaborating with key stakeholders in the research process, and building capacity in clinical and community practice settings are all central to implementation science. Recently in the cancer research enterprise, implementation science has been elevated to a starring role by NIH, the National Cancer Institute (NCI), the Cancer Moonshot<sup>SM</sup> Blue Ribbon Panel,



and numerous professional organizations and advocacy groups. There has been a tremendous expansion of related activities in cancer control planning and care delivery, reflecting the recognition among researchers, clinicians, and other stakeholders that strategies to promote cost-effective, optimal cancer care require examination through an implementation science lens.

Leadership for implementation science funding, initiatives, training, methods development, resources, and tools resides largely within DCCPS. The division's Implementation Science Team oversees these efforts, working to support the research community and promote the adoption and integration of evidence-based practices, interventions, and policies into routine care and public health settings. In close partnership and collaboration with our colleagues across NIH, this team works with our funded researchers, practitioners, policymakers, and advocates to improve the impact of cancer control research on population health through sustained support of implementation science at NCI.

While it is not possible to capture the full spectrum of implementation science activities at NCI in these few pages, we hope this report provides a helpful glimpse of the critical role of implementation science in cancer control as well as the various ways our division works to advance science across the cancer control continuum. As always, we acknowledge the work of our funded investigators, who continue to move the science forward and help ensure that our research investments have the most rapid impact for all Americans.

**ROBERT T. CROYLE, PHD**

Director  
 Division of Cancer Control and Population Sciences  
 National Cancer Institute

# LEADERSHIP AT A GLANCE



**OFFICE OF THE DIRECTOR**  
**Dr. Robert Croyle**  
DIRECTOR OF DIVISION  
OF CANCER CONTROL AND  
POPULATION SCIENCES



**OFFICE OF THE DIRECTOR**  
**Dr. Deborah Winn**  
DEPUTY DIRECTOR  
*On Detail to the Division of Cancer Prevention*



**OFFICE OF THE DIRECTOR**  
**Dr. David Chambers**  
DEPUTY DIRECTOR FOR  
IMPLEMENTATION SCIENCE

## 4 RESEARCH PROGRAMS



**BEHAVIORAL RESEARCH  
PROGRAM**  
**Dr. William Klein**  
ASSOCIATE DIRECTOR



**BEHAVIORAL RESEARCH  
PROGRAM**  
**Dr. Linda Nebeling**  
DEPUTY ASSOCIATE  
DIRECTOR



**BASIC BIOBEHAVIORAL AND  
PSYCHOLOGICAL SCIENCES**  
**Dr. Paige Green**  
BRANCH CHIEF



**HEALTH BEHAVIORS RESEARCH**  
**Dr. Susan Czajkowski**  
BRANCH CHIEF



**HEALTH COMMUNICATION AND  
INFORMATICS RESEARCH**  
**Dr. Robin Vanderpool**  
BRANCH CHIEF



**TOBACCO CONTROL RESEARCH**  
**Dr. Michele Bloch**  
BRANCH CHIEF



**EPIDEMIOLOGY AND GENOMICS  
RESEARCH PROGRAM**  
**Dr. Kathy Helzlsouer**  
ASSOCIATE DIRECTOR



**EPIDEMIOLOGY AND  
GENOMICS  
RESEARCH PROGRAM**  
**Dr. Pothur Srinivas**  
DEPUTY ASSOCIATE  
DIRECTOR



**METHODS AND TECHNOLOGIES**  
**Dr. Mukesh Verma**  
BRANCH CHIEF



**ENVIRONMENTAL EPIDEMIOLOGY**  
**Dr. Gary Ellison**  
BRANCH CHIEF



**GENOMIC EPIDEMIOLOGY**  
**Dr. Elizabeth Gillanders**  
BRANCH CHIEF



**CLINICAL AND TRANSLATIONAL  
EPIDEMIOLOGY**  
**Dr. Andrew Freedman**  
BRANCH CHIEF



**RISK FACTOR ASSESSMENT**  
**Dr. Jill Reedy**  
BRANCH CHIEF



**OFFICE OF THE DIRECTOR**  
**Dr. Shobha Srinivasan**  
 SENIOR ADVISOR  
 FOR HEALTH DISPARITIES



**OFFICE OF CANCER SURVIVORSHIP**  
**Dr. Emily Tonorezos**  
 DIRECTOR



**HEALTHCARE DELIVERY  
 RESEARCH PROGRAM**  
**Dr. Paul Jacobsen**  
 ASSOCIATE DIRECTOR



**HEALTHCARE DELIVERY  
 RESEARCH PROGRAM**  
**Dr. Janet de Moor**  
 DEPUTY ASSOCIATE  
 DIRECTOR



**HEALTHCARE ASSESSMENT  
 RESEARCH**  
**Dr. Paul Doria-Rose**  
 BRANCH CHIEF



**HEALTH SYSTEMS AND  
 INTERVENTIONS RESEARCH**  
**Dr. Sarah Kobrin**  
 BRANCH CHIEF



**OUTCOMES RESEARCH**  
**Dr. Ashley Wilder Smith**  
 BRANCH CHIEF



**SURVEILLANCE RESEARCH  
 PROGRAM**  
**Dr. Lynne Penberthy**  
 ASSOCIATE DIRECTOR



**SURVEILLANCE  
 RESEARCH PROGRAM**  
**Dr. Kathleen Cronin**  
 DEPUTY ASSOCIATE  
 DIRECTOR



**DATA QUALITY, ANALYSIS,  
 AND INTERPRETATION**  
**Dr. Serban Negoita**  
 BRANCH CHIEF



**SURVEILLANCE INFORMATICS**  
**Dr. Elizabeth (Betsy) Hsu**  
 BRANCH CHIEF



**DATA ANALYTICS**  
**Dr. Angela Mariotto**  
 BRANCH CHIEF



**STATISTICAL RESEARCH AND  
 APPLICATIONS**  
**Dr. Eric Feuer**  
 BRANCH CHIEF

# BUILDING FROM THE SUCCESSES AND ONGOING ACTIVITIES OF DCCPS



The Division of Cancer Control and Population Sciences, which aligns a vibrant research portfolio across research programs and several cross-cutting themes, has long worked to develop a knowledge base to support epidemiology and genomics, surveillance, behavioral, and health care delivery research. It has also recognized the important cross-cutting themes necessary to reduce the burden of cancer and optimize population health, including health disparities, survivorship, and, as spotlighted here, implementation science.

Each of the four DCCPS programs has strong portfolios, multiple initiatives, and research priorities that generate evidence and effective interventions that implementation science works to integrate into community and clinical systems of care. The Epidemiology and Genomics Research Program, for example, has long supported a series of epidemiologic cohorts and a wealth of studies that have resulted in new insights into etiology and risk based on genetic, environmental, lifestyle, and other



influences of cancer. It also contributes to important efforts to improve research methods and measurement of key risk factors. The Surveillance Research Program sets the standard for collecting and analyzing data on the cancer burden among the US population through the Surveillance, Epidemiology, and End Results (SEER) Program and leads national and international efforts to use comparative modelling to inform policy and practice decision making in cancer control. The Behavioral Research Program traverses the landscape, from basic behavioral research that identifies new mechanisms and targets for intervention to studies of subsequent interventions to improve health behavior and health communication. In addition, it supports a full complement of studies on tobacco control, including development of new approaches to cessation, policy, and regulatory science, all with the goal of reducing the burden of cancer due to tobacco use. The Healthcare Delivery Research Program includes multiple initiatives to characterize the access, cost, quality, and outcomes of cancer-related

care, and novel interventions to improve the multiple levels (patient, provider, organization, system) through which cancer care is provided.

While these examples are by no means a full representation of the breadth of research supported by DCCPS, they underscore the urgency with which the division regards its ultimate mission—how the research products and findings can optimally benefit population health and reduce the burden of cancer. This is the fuel that drives implementation science.

# IMPLEMENTATION SCIENCE IN CANCER CONTROL

Implementation science is defined as the scientific study of the use of strategies to adopt and integrate evidence-based health interventions into clinical and community settings to improve individual outcomes and benefit population health. Broadly speaking, implementation science seeks to understand how best to disseminate, integrate, and sustain evidence-based interventions in health care and public health settings. Implementation science in cancer research has made significant strides in recent years, moving beyond identifying barriers toward the adoption of interventions, and increasingly focused on intervention adaptation, sustainment, implementation strategies, and de-implementation of ineffective practices. This significant work is most often addressed by interdisciplinary collaboration of research teams and practitioners to implement effective cancer control programs in their efforts to prevent and mitigate the effects of the disease.

Implementation science has long been supported across the entire NIH. At NCI, implementation science is largely led by DCCPS, through funded studies, conferences, priority setting, and training programs. The mission of the DCCPS Implementation Science Team is to develop and apply the implementation science knowledge base to improve the impact of cancer control and population science on the health and health care of the population, and foster rapid integration of research, practice, and policy. Much of this work is carried out in partnership with other institutes across NIH; other government agencies, such as the Agency for Healthcare Research and Quality and the US Department of Veteran Affairs; and with non-governmental organizations, such as AcademyHealth and the Patient-Centered Outcomes Research Institute.



In 2016, the importance of implementation science in cancer control was elevated when the [Cancer Moonshot<sup>SM</sup>](#) Blue Ribbon Panel selected implementation science as one of the seven focus areas around which to form a working group. The working group led discussions that would ultimately inform the panel's recommendations for accelerating progress toward the reduction of cancer burden in the population. The final Blue Ribbon Panel group refined recommendations and came up with three areas that the NCI should take on, each of which became a Cancer Moonshot Implementation Team:

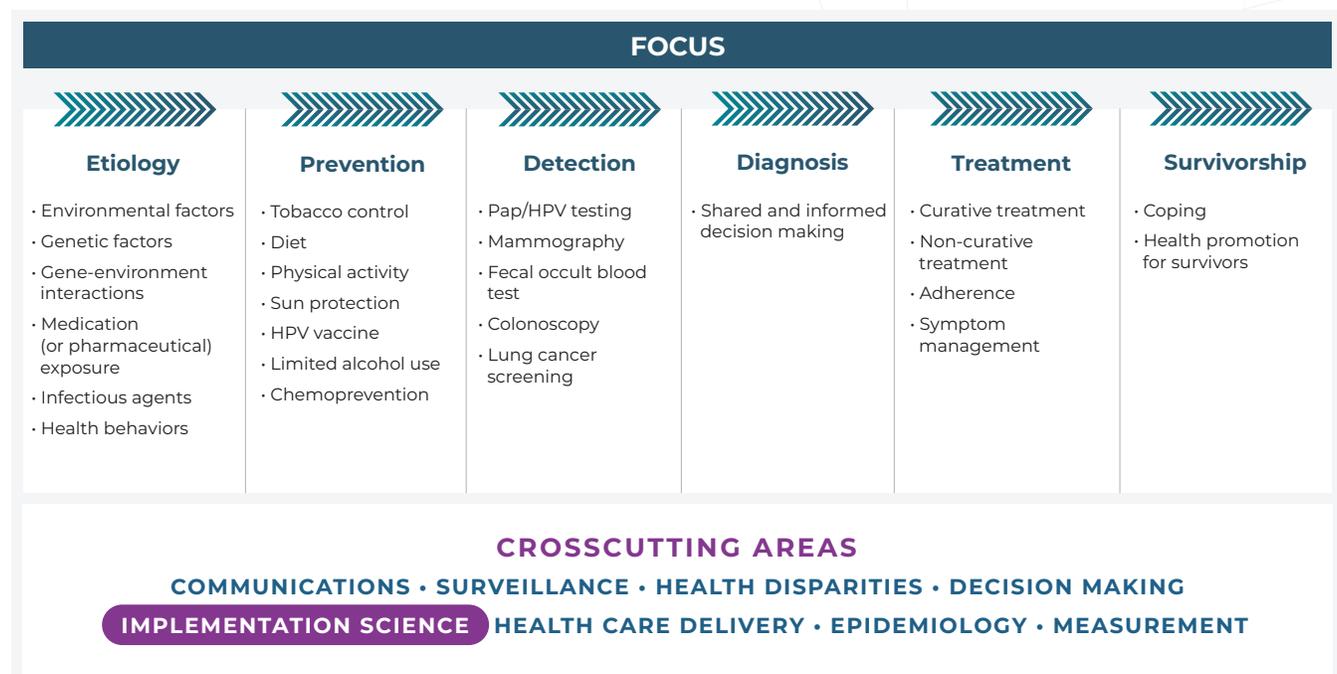
- Hereditary cancers
- Expanding use of cancer prevention and early detection strategies
- Symptom management

In its [Annual Plan & Budget Proposal for FY 2021](#), NCI also [featured implementation science](#) as a high-priority area of research for the institute. The plan emphasizes the institute's commitment to continued investment

in building the field and its workforce, as well as NCI's goal of moving toward a future of "precision implementation," by continuing to provide resources, training, and collaborative opportunities.

Today, there is a clear recognition across the entire cancer research community that implementation science plays a crucial role in public health and cancer control. Implementation science is integrated throughout the cancer control continuum—from etiology through survivorship—and it is similarly present throughout the DCCPS research grant portfolio. To ensure maximum impact and continued growth of the field, sustained research funding, training, tools, and methods development will all be critical. As the hub for implementation science at NCI, DCCPS is committed to advancing the field and supporting our investigator community's efforts to ensure robust evaluation and adoption of effective implementation strategies so that optimal cancer care reaches every segment of the population.

## The Cancer Control Continuum



# Implementation Science

Research discoveries have led to interventions, tools, and programs to better prevent, diagnose, and treat cancer. Yet these innovations can be underused and overused. Implementation science is a research endeavor that studies ways to optimally deliver these innovations to those who will benefit.





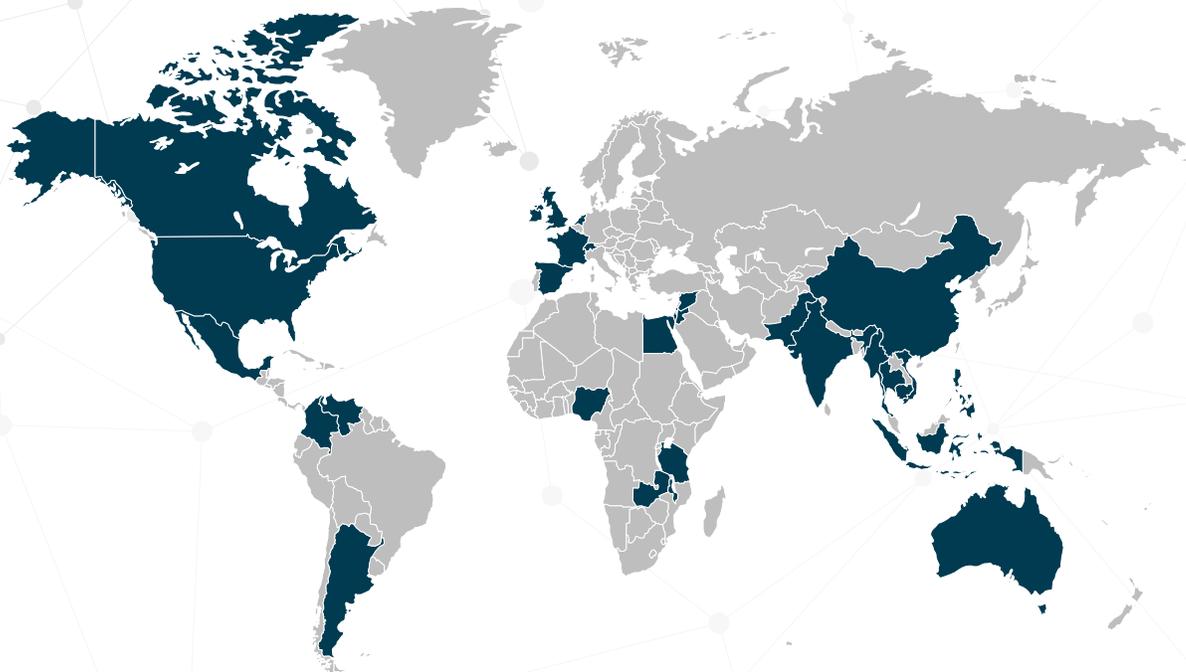
# TRAINING AND CAPACITY BUILDING

To advance implementation science, it is essential that we grow a cadre of both new and established scientists in the field. The DCCPS Implementation Science Team collaborates with academic institutions, professional organizations, and other funding agencies to coordinate and support numerous training and capacity-building activities. These include [a monthly webinar series](#), training programs, and conferences—both in person (prior to the COVID-19 pandemic) and virtual. It is important to note that the focus on training extends beyond the borders of this country. In fact, at the time of publication, the Implementation Science Team has trained researchers from 38 countries.

In 2010, NCI began collaborating with NIH's Office of Behavioral and Social Sciences Research, the National Institute of Mental Health, and the US Department of Veteran Affairs to develop a [Training Institute for Dissemination and Implementation Research in Health \(TIDIRH\)](#) to build capacity for dissemination and implementation (D&I) research. First held in August 2011 as a 5-day residential training program, the annual TIDIRH became a hybrid online and in-person training program in Washington, DC, in 2016. The program ceased in 2020, following the creation of NCI's [Training Institute for Dissemination and Implementation Research in Cancer \(TIDIRC\)](#), which launched in 2018.

---

Investigators in the highlighted countries have received NCI-led implementation science training.



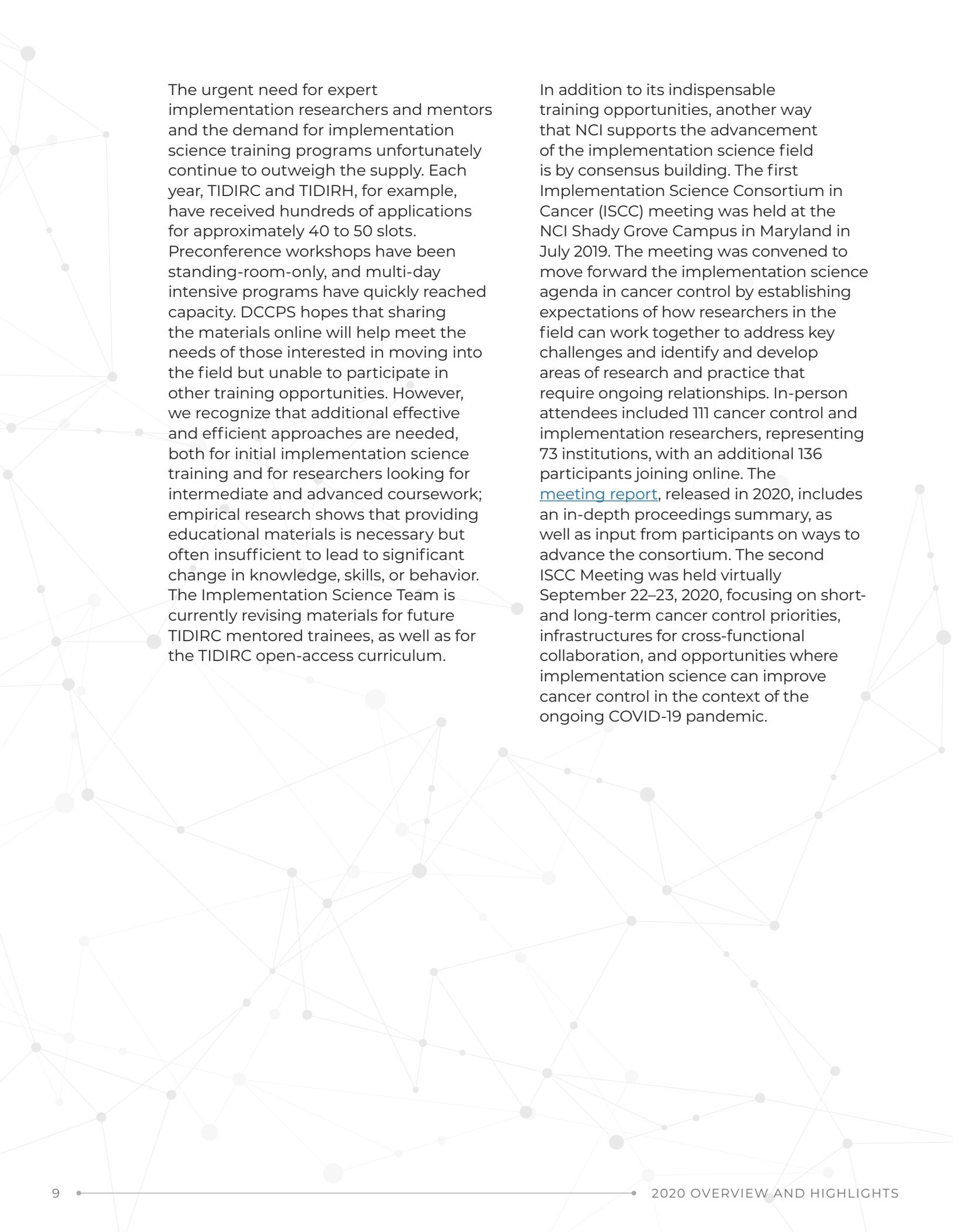
The annual TIDIRC provides participants a thorough grounding in conducting D&I research—with a specific focus on cancer—across the cancer control continuum. The 2018 and 2019 institutes utilized a combination of online coursework and in-person training, and the most recent TIDIRC, in August 2020, was 100% virtual, due to the COVID-19 pandemic. Faculty and guest lecturers included leading experts in D&I theories, models, and frameworks; intervention fidelity and adaptation; stakeholder engagement and partnership for D&I; research methods and study designs for D&I; and measures and outcomes for D&I. While attendees must be accepted to participate in TIDIRC, all training materials are [publicly available online](#).

The Implementation Science Team has shared its TIDIRC curriculum with colleagues around the world. Partners in Australia and Ireland have held country-specific trainings based on our TIDIRC model, using the NCI-generated resources. We also have shared our TIDIRC materials with colleagues in Mexico, who have translated the materials into Spanish and are using them to deliver a course that is tentatively scheduled for February 2021. In addition, the Implementation Science Team began partnering with the American University in Beirut in November 2020. The training uses the TIDIRC online materials, and Implementation Science Team staff serve as faculty for their online practice sessions.

Other training opportunities have been developed and adapted to meet the diverse needs of trainees. For example, the Mentored Training for Dissemination and Implementation Research in Cancer (MT-DIRC) supported the creation and assessment of a first-of-its-kind program, applying state-of-the-art training methods to build capacity among postdoctoral researchers focusing on D&I research in cancer prevention and control. This NCI/NIH R25 education program at the Washington University in St. Louis trained 55 fellows over the years. The

work of the faculty and fellows addressed cancer risk factors and populations with high burden, where substantial intervention knowledge regarding evidence-based programs and policies was not commonly applied, and where a large reduction in cancer mortality would be feasible if the knowledge were more widely implemented into practice and policy. The MT-DIRC concluded in 2019; all of the resources developed for and as part of this project are available [online](#).





The urgent need for expert implementation researchers and mentors and the demand for implementation science training programs unfortunately continue to outweigh the supply. Each year, TIDIRC and TIDIRH, for example, have received hundreds of applications for approximately 40 to 50 slots. Preconference workshops have been standing-room-only, and multi-day intensive programs have quickly reached capacity. DCCPS hopes that sharing the materials online will help meet the needs of those interested in moving into the field but unable to participate in other training opportunities. However, we recognize that additional effective and efficient approaches are needed, both for initial implementation science training and for researchers looking for intermediate and advanced coursework; empirical research shows that providing educational materials is necessary but often insufficient to lead to significant change in knowledge, skills, or behavior. The Implementation Science Team is currently revising materials for future TIDIRC mentored trainees, as well as for the TIDIRC open-access curriculum.

In addition to its indispensable training opportunities, another way that NCI supports the advancement of the implementation science field is by consensus building. The first Implementation Science Consortium in Cancer (ISCC) meeting was held at the NCI Shady Grove Campus in Maryland in July 2019. The meeting was convened to move forward the implementation science agenda in cancer control by establishing expectations of how researchers in the field can work together to address key challenges and identify and develop areas of research and practice that require ongoing relationships. In-person attendees included 111 cancer control and implementation researchers, representing 73 institutions, with an additional 136 participants joining online. The [meeting report](#), released in 2020, includes an in-depth proceedings summary, as well as input from participants on ways to advance the consortium. The second ISCC Meeting was held virtually September 22–23, 2020, focusing on short- and long-term cancer control priorities, infrastructures for cross-functional collaboration, and opportunities where implementation science can improve cancer control in the context of the ongoing COVID-19 pandemic.



# RESOURCES AND TOOLS FOR IMPLEMENTATION SCIENCES

DCCPS recognizes that advances in our understanding of implementation processes will have maximum benefit if communicated in a way that supports and informs the important work of cancer control researchers and practitioners, providing them with the tools and resources necessary to help them better understand, plan for, and conduct rigorous D&I studies. Below, we highlight some tools and resources for use in implementation science, which are also of use in population science more broadly.

## STATE CANCER PROFILES

[State Cancer Profiles](#), an invaluable tool accessible on cancer.gov, is a collaboration of NCI and the Centers for Disease Control and Prevention (CDC). State Cancer Profiles supplies health planners, policymakers, and cancer information providers with data, maps, and interactive graphs to help guide and prioritize cancer control activities at the state and local levels. The site illuminates the cancer burden in a standardized manner to motivate action, integrate surveillance into cancer control planning, characterize areas and demographic groups, and expose health disparities.

## EVIDENCE-BASED CANCER CONTROL PROGRAMS

Another important tool, also accessible on cancer.gov, is [Evidence-Based Cancer Control Programs \(EBCCP\)](#), formerly Research-Tested Intervention Programs (RTIPs). The EBCCP website is a searchable database of evidence-based cancer control interventions and program materials, designed to provide program planners and public health practitioners easy and immediate access to research-tested materials. The online directory offers a review of programs available for use in a community or clinical setting.

## DISSEMINATION AND IMPLEMENTATION MODELS IN HEALTH RESEARCH AND PRACTICE

The Dissemination and Implementation Models in Health Research and Practice webtool was developed and is maintained as a collaborative effort with D&I science colleagues around the country. The interactive tool is designed to help researchers and practitioners develop a logic model or diagram for their research or practice question, select the D&I model(s) that best fit(s) their research question or practice problem, combine multiple D&I models, adapt the D&I model(s) to the study or practice context, use the D&I model(s) throughout the research or practice process, and find existing measures to assess the key constructs of the D&I model(s) selected.



In addition to the implementation science tools mentioned on the previous page, DCCPS supports numerous data sets and analysis tools that inform implementation of evidence-based practices, interventions, and policies:

### HEALTHY EATING INDEX

The [Healthy Eating Index \(HEI\)](#) is a measure of dietary quality that assesses conformance to the [Dietary Guidelines for Americans \(DGA\)](#). Scientists at NCI collaborate with colleagues at the US Department of Agriculture to update the index to correspond to the DGA updates that occur every 5 years. The 2020 Dietary Guidelines Advisory Committee applied the HEI using [National Health and Nutrition Examination Survey \(NHANES\)](#) data to assess the current American diet; using this information, the committee made recommendations to the federal government about updates needed to the DGAs. Furthering the reach of the HEI, NCI researchers have recently created an HEI report that provides research participants with feedback about their HEI score and advice on how to improve their diet based on responses to the Diet History Questionnaire, a frequency questionnaire developed by NCI DCCPS researchers. The HEI report has been pilot tested in a cancer survivorship clinic, and additional user testing is planned.

### CLASSIFICATION OF LAWS ASSOCIATED WITH SCHOOL STUDENTS (CLASS)

[CLASS](#) is a scoring system that monitors, classifies, and evaluates the strength of school physical education and nutritional policies, state by state and over time. These data help researchers, policymakers, and the educational community examine the relationship of state laws with student behavioral and school environment outcomes to inform public policy. CLASS data are available for 2003–2018 and are updated annually. Interactive maps and tables allow users to visualize and compare data by grade level and state. State profile visualizations provide an in-depth view of a selected state's policies by grade level and changes over time. CLASS is distinct from other school policy scoring systems because it captures policies codified into law by school level, rather than informal policies that have not been made into law. It also uses valid and reliable empirical scoring systems based on independent coding by attorneys and policy analysts according to prevailing national standards for nutrition and physical education. CLASS data have been used in high-impact publications, are a recommended data source for school policy surveillance in two Institute of Medicine reports, and CLASS is listed in the Catalogue of Surveillance Systems by the National Collaborative of Childhood Obesity Research.

## AUTOMATED SELF-ADMINISTERED 24-HOUR DIETARY ASSESSMENT TOOL

The [Automated Self-Administered 24-Hour \(ASA24\) Dietary Assessment Tool](#) is a free, web-based application to collect dietary intake data. The ASA24 system consists of a respondent website used to collect dietary intake data and a researcher website used to manage study logistics and obtain nutrient and food group data files. Although it was designed by NCI DCCPS researchers for use among the general population, ASA24 was recently implemented and evaluated among low-income women and found to provide high-quality dietary intake data, even when self-administered. Future implementation work will further examine how the tool can be applied among other subpopulations to provide additional insights for diverse communities.



## WHO 2020 GLOBAL RECOMMENDATIONS ON PHYSICAL ACTIVITY FOR HEALTH

DCCPS is also playing a role in the World Health Organization's (WHO's) Guideline Development Group (GDG), which is in the process of [updating the WHO 2010 Global Recommendations on Physical Activity for Health](#), to support the implementation of the Global Action Plan on Physical Activity 2018–2030. The GDG met in Geneva, Switzerland, in July 2019 and February 2020 to provide an evidence-based synthesis that is the basis for the 2020 WHO Guidelines on Physical Activity and Sedentary Behavior, approved by the WHO Guideline Review Committee, with an anticipated release by the end of 2020.

The updated guidelines package a complex body of research on physical activity and sedentary behavior across various health outcomes, study designs, and populations into a relatively straightforward, smaller set of public health recommendations to improve population health. The guidelines include recommendations for children and adolescents, adults, older adults, and, for the first time, specific recommendations on physical activity in subpopulations such as pregnant women and those living with chronic conditions or disability.

Also new to this update is a discussion of the relationship of sedentary behavior to health outcomes. Provision of these guidelines by WHO will facilitate adoption and implementation by WHO member countries that do not have the resources to develop their own national guidelines. WHO does recommend customizing messaging around the guidelines to specific national and cultural settings.



# CANCER CENTER SUPPLEMENTS

DCCPS awards Administrative Supplements to NCI-Designated Cancer Centers to enhance and expand efforts that address specific focus areas of challenge. Below are some examples of current cancer center supplements intended to address implementation science challenges.

## CANCER CENTERS CESSATION INITIATIVE (C3I)

C3I was created in 2017 as part of the Cancer Moonshot<sup>SM</sup>. It has provided resources to 52 NCI-Designated Cancer Centers to develop and implement sustainable programs to systematically address tobacco cessation with cancer patients. The coordinating center at the University of Wisconsin Carbone Cancer Center supports funded sites by ensuring that science-based cessation services are integrated into clinical care, providing technical assistance, and serving as the hub of knowledge integration. Two-year supplements were awarded to 22 centers in 2017 and to 20 centers in 2018. In 2020, DCCPS awarded supplemental funding to 10 centers that were not previous C3I recipients and 11 centers that were previously funded. The purpose of the supplemental funding is to provide resources for centers to plan, implement, evaluate, and sustain the capacity and infrastructure of comprehensive tobacco cessation programs. In 2020, the awards for previously funded centers also support pilot research to enhance the reach and effectiveness of cessation programs. Awardees are expected to integrate these treatments into existing cancer center clinical services and workflows and to continue to support dedicated resources/staff for the program (e.g., cessation counselors). C3I fosters a unique consortium to examine and disseminate strategies that facilitate effective implementation and sustainability.

*D'Angelo H et al. [Pragmatic Application of the RE-AIM Framework to Evaluate the Implementation of Tobacco Cessation Programs within NCI-Designated Cancer Centers](#). *Front Public Health*. 2020;8:221.*

*Croyle RT, Morgan GD, Fiore MC. [Addressing a Core Gap in Cancer Care – The NCI Moonshot Program to Help Oncology Patients Stop Smoking](#). *N Engl J Med*. 2019; 380(6):512-515.*

## ACCELERATED CONTROL OF CERVICAL CANCER

Control of human papillomavirus (HPV)-related cancers and cancer health disparities were specifically identified as high-priority areas in the recommendations of the Blue Ribbon Panel. This proposal is focused on accelerating research in cervical cancer prevention and screening, with implications for the US—where cervical cancer remains a significant problem for African American, American Indian, Hispanic, and Appalachian women as well as for women with limited access to care generally—and globally. The goal is to prevent cervical cancer by combining new screening tools and increased vaccination across settings with varying resource levels. Therefore, the initiative promotes extramural research focused on both underserved, low-resource settings in the US, as well as understanding and improving implementation of new screening tools, risk-based management of screening test results, and prevention strategies in all settings.



### CATCHMENT AREA SUPPLEMENTS

The Health Communication and Informatics Research Branch in DCCPS is leading a supplemental funding opportunity to conduct research to better characterize the populations and communities within the NCI-Designated Cancer Center catchment areas. The supplemental funding enhances cancer centers' capacity to acquire, aggregate, and integrate data from multiple sources as well as to plan, coordinate, and enhance catchment area analysis activities. The surveys conducted at each of the cancer centers include common demographic and behavioral measures in order to facilitate cross-site and local versus national comparisons on constructs relevant to cancer control. The short-term goal is to conduct local research to better define and describe the cancer center catchment areas using a multilevel population health framework. The long-term goal is to facilitate collaborations in which local area providers, public health practitioners, policymakers, and nonprofit organizations can utilize data to develop or expand applied cancer control research, planning, intervention, and implementation efforts, with particular attention to local-level health disparities and communication inequalities.

*Blake KD, Ciolino HP, Croyle RT. [Population Health Assessment in NCI-Designated Cancer Center Catchment Areas](#). *Cancer Epidemiol Biomarkers Prev*. 2019;28(3):428-430.*

### COMMUNITY OUTREACH AND ENGAGEMENT ACTIVITIES ACROSS THE TRANSLATIONAL RESEARCH CONTINUUM

NCI-Designated Cancer Centers are expected to work with communities to disseminate and implement evidence-based interventions and guidelines, public education, and public health policy recommendations. Through community outreach and engagement (COE) activities, centers now have an enhanced opportunity to translate research into practice with an implementation science lens. The purpose of this supplement opportunity is to understand how COE programs at NCI cancer centers work with community partners to identify, adapt, and implement existing evidence-based interventions to meet the needs of the communities that they serve. This supplement initiative is part of a larger NCI research effort to engage cancer centers and communities in collaborative, translational research focused on decreasing the cancer burden across the US, including among minority and underrepresented populations. The long-term goal of this supplement opportunity is to build capacity for cancer centers' COE programs to adapt and implement evidence-based programs in partnership with community members. The projects proposed will serve as a model for subsequent COE initiatives conducted within individual cancer centers as well as across the NCI cancer centers community.

# PARTNERSHIPS

Research-practice partnerships enable the integration of evidence-based practices, programs, and interventions into health care and public health settings. These Implementation Science Team partnerships further highlight the different ways that DCCPS seeks to improve the health of all populations.

## **CANCER PREVENTION AND CONTROL RESEARCH NETWORK**

NCI is a federal partner with CDC on the Cancer Prevention and Control Research Network (CPCRN). The CPCRN is a national network of academic, public health, and community partners who work together to accelerate the adoption and implementation of evidence-based cancer prevention and control strategies in communities and enhance large-scale efforts to reach underserved populations and reduce their burden of cancer. CPCRN conducts community-based, participatory cancer research across its eight network centers. NCI co-funded the CPCRN with CDC continuously from 2009 to 2019, and remains active as a federal partner in the sixth iteration of the network.

## **COMPREHENSIVE CANCER CONTROL NATIONAL PARTNERSHIP**

Also with CDC, the Implementation Science Team is a member of the Comprehensive Cancer Control National Partnership (CCCNP), a collaborative group of diverse national organizations working together to build and strengthen comprehensive cancer control efforts across the nation. Through coordination and collaboration, the CCCNP assists comprehensive cancer control coalitions to develop and sustain implementation of comprehensive cancer control plans at the state, tribe, territory, US Pacific Island Jurisdiction, and local levels.

## **ANNUAL CONFERENCE ON THE SCIENCE OF DISSEMINATION AND IMPLEMENTATION IN HEALTH**

NCI also leads the NIH collaboration with AcademyHealth on the Annual Conference on the Science of Dissemination and Implementation in Health. This conference helps bridge the gap between research, practice, and policy. By outlining the priorities in the field, the Science of D&I in Health Conference aims to ensure that evidence is used to inform decisions that will improve the health of individuals and communities. The 13th Annual Conference will be held virtually this year December 15–17, 2020.





## Partnership with the Center for Global Health

Implementation of cancer prevention and control strategies that are known to work has been a key challenge in the global reduction of cancer burden. NCI's DCCPS, along with other institutes and centers at NIH, is supporting both domestic and international D&I research in health through its **Dissemination and Implementation Research in Health** funding opportunities ([PAR-19-274](#), [PAR-19-275](#), and [PAR-19-276](#)).

The implementation of cancer prevention and control strategies is a particular challenge among people in low- and middle-income countries (LMICs) and in other populations experiencing disparities. While implementation of effective, evidence-based interventions has been central to cancer control in many high-income countries (HICs), in LMICs and other low-resource environments, such interventions are underused or have

limited impact, due to implementation challenges that have yet to be identified, researched, and addressed. DCCPS is partnering with NCI's Center for Global Health (CGH) and the Global Alliance for Chronic Diseases (GACD) to support implementation research related to cancer prevention and control in LMICs and in low-resource settings through their **Notice of Special Interest (NOSI): Dissemination and Implementation Science for Cancer Prevention and Control in Low Resource Environments** funding opportunity ([NOT-CA-20-025](#)). DCCPS and CGH are seeking innovative approaches to identifying, understanding, and developing strategies for overcoming barriers to the adoption, adaptation, integration, scale-up, and sustainability of evidence-based interventions, tools, policies, and guidelines in low-resource settings.

# CANCER MOONSHOT-SUPPORTED RESEARCH INITIATIVES WITH IMPLEMENTATION SCIENCE COMPONENTS

Below, we describe a few examples of DCCPS-led funding announcements and initiatives that feature implementation science as a key component.

## **IMPROVING MANAGEMENT OF SYMPTOMS ACROSS CANCER TREATMENTS (IMPACT)**

Historically, there have been major barriers to effective symptom control among cancer patients, and a lack of systematic efforts to translate research into practice. The Cancer Moonshot<sup>SM</sup> Blue Ribbon Panel emphasized the need to gather and monitor patient-reported symptoms and to provide decision support and care using evidence-based symptom management guidelines. Two RFAs encouraged the development of scalable, transferrable, and sustainable models for monitoring and addressing symptoms in routine practice. The RFAs supported three [research centers](#) and a [coordinating center](#) to form a [research consortium](#), with the overall goal to develop evidence that will guide efforts to improve symptom control for cancer patients during treatment and survivorship, to build a foundation for effective cancer symptom management in standard clinical care. The research centers are deploying integrated electronic systems to monitor and manage cancer symptoms in diverse practice settings and testing them in pragmatic trials to understand the effects on patient health, treatment delivery, health care utilization, and

implementation outcomes. The coordinating center provides scientific expertise and logistical support to unite the consortium. Together, the centers are poised to test the state-of-the-science symptom management interventions, using implementation science approaches. Multiple working groups support shared components, including development of common data elements, integration of clinical informatics, understanding and addressing health inequities, and implementation science approaches to evaluating and improving the interventions over time.

## **ACCELERATING COLORECTAL CANCER SCREENING AND FOLLOW-UP THROUGH IMPLEMENTATION SCIENCE (ACCSIS)**

[ACCSIS](#) is working to promote colorectal cancer screening, follow-up, and referral-to-care among populations for whom screening rates are far below national standards. In underserved populations, among whom common challenges keep screening rates low, many also share common strengths that could support innovative approaches to increasing implementation. The goals of the ACCSIS program are to provide a robust evidence base for 1) multilevel interventions that increase rates of colorectal cancer screening, follow-up,

and referral-to-care; and 2) how these interventions can be scaled up to reduce the burden of colorectal cancer on the US population. Currently, five research projects and one coordinating center have been awarded. All five research projects and the coordinating center participate in trans-ACCSIS working groups focusing on common data collection, common multilevel intervention components, and data sharing. Data will be shared with the broader research community to allow for others to build on the ACCSIS evidence. Preparing for sustainability is integral, as all projects are collaborating with local experts to ensure local acceptability, feasibility, and effectiveness.

### **APPROACHES TO IDENTIFY AND CARE FOR INDIVIDUALS WITH INHERITED CANCER SYNDROMES**

Despite the availability of genetic testing and counseling, a substantial number of those at risk for inherited cancer syndromes are not identified and thus may not benefit from available prevention and early-detection approaches. The purpose of these funding opportunity announcements is to increase case ascertainment and appropriate follow-up care, optimizing the delivery of evidence-based health care for individuals at high risk of cancer due to an inherited genetic susceptibility. [Twelve grants have been funded across FY 2018 through FY 2020.](#)

### **COMMUNICATION AND DECISION MAKING FOR INDIVIDUALS WITH INHERITED CANCER SYNDROMES**

One of the most challenging tasks confronting an individual with an inherited cancer syndrome is understanding his or her risk of disease and applying this understanding to decisions involving disease risk management and disclosure of genetic test results to family members. The purpose of [this funding opportunity announcement](#) is to develop, test, and

evaluate interventions and implementation approaches, or adapt existing approaches, to improve patient/provider/family risk communication and decision making for individuals and families with an inherited susceptibility to cancer. Grants supported from this initiative include one grant funded in FY 2019 and five more funded in FY 2020.

### **IMPLEMENTATION SCIENCE CENTERS FOR CANCER CONTROL (ISC3)**

The [Implementation Science Centers in Cancer Control \(ISC3\) Program](#) supports the rapid development, testing, and refinement of innovative approaches to implement a range of evidence-based cancer control interventions. Centers all feature “implementation laboratories” involving clinical and community sites that will engage in implementation research across the cancer control continuum to advance methods in studying implementation and develop and validate reliable measures of key implementation science constructs. These centers collectively provide leadership for an implementation science consortium across this and other Cancer Moonshot initiatives.



# ROLE OF IMPLEMENTATION SCIENCE TO INFORM HEALTH POLICY

While implementation science has often focused on the adoption, implementation, and sustainment of a range of different interventions, concentrating on patients, providers, and systems, we see great opportunities for researchers studying implementation of cancer control policies. DCCPS has had a robust portfolio specifically in the tobacco research policy domain, but we recognize that other policy domains (e.g., diet and physical activity, HPV vaccination, built environment, labor, housing) also may have significant influence on the provision of cancer control interventions. We are continuing to explore how implementation science may contribute to understanding the translation of scientific evidence to health-related policy in governmental and non-governmental sectors—an area of inquiry that we refer to as *policy implementation science (IS)*.

DCCPS is engaged with national stakeholders with expertise in national and global health policy who work in diverse disciplines, including political science and public policy, public health law, behavioral science, and social policy, among others. Together with colleagues at NCI and other federal agencies, the Implementation Science Team is exploring novel directions for areas of research focus and is working to understand the barriers and facilitators to the conduct of policy IS.

There are several key actions we are engaged in to build additional strength in the policy IS field. First, an upcoming DCCPS webinar series will include experts within and outside the cancer control community who will discuss how implementation scientists can conduct studies across the policy life cycle (e.g., formulation, implementation, sustainment). Second, we have made policy IS a recurring theme within the Implementation Science Consortium, which is intended to stimulate ideas for “public goods” that can support investigators working in underrepresented areas of science. Third, we are working to analyze the existing literature and grant portfolio to highlight additional gaps and opportunities. Taken as a whole, our efforts to support the field in advancing the knowledge base reflects the important role that policy IS can play in the improvement of population health.





# FUTURE DIRECTIONS

Over the next several years, we see continued opportunities to grow implementation science within the cancer control community. Many of the initiatives are still in their early stages and are charting a course toward increasing capacity to do innovative, relevant research. The efforts begun under the Cancer Moonshot, including the ISC3, ACCSIS, IMPACT, C3I, and hereditary cancers, will continue to make progress on their specific aims, while the expanding Implementation Science Consortium will work to share research findings; identify common research questions; and engage the research, practice, and policy communities to identify additional “public goods” for the field.

Several of the themes mentioned previously, including expanded concentration on policy-relevant implementation science and increasing the global footprint of research, will continue to progress, and the trans-NIH activities (including funding opportunities, training programs, conferences and workshops, and publications) will extend the knowledge base in areas common to cancer control, including enhanced understanding of the effectiveness of implementation strategies, mechanisms of action that predict adoption and implementation of evidence-based practice, and closing gaps in measurement and research methods.

In addition, we are excited to see heightened focus on areas of implementation science underrepresented in our portfolio. First, the continuation of disparities in access and quality of care, resulting in inequities at all stages of the cancer continuum, demands ever greater attention to the interface between health equity and implementation science. Future studies must attend to important social determinants of health that establish

the context upon which effective interventions are implemented and the degree to which the evidence base meets the needs of the population. Increased efforts are also needed as we look at the longer-term decisions to be made about the use of existing interventions. We need more studies that examine and enhance the sustainability of evidence-based practices, increase our understanding of how interventions are adapted and optimized within services systems, and build a knowledge base to inform de-implementation of ineffective or low-value care.

Finally, future implementation science should examine how evidence-based cancer control is scaled up across practices, networks, systems, and communities, in order to achieve population-level improvements in adoption, implementation, and sustainment. Investigators are encouraged to move beyond studies of individual interventions to consider how broad models of care delivery can meet the needs of patients and families across the cancer continuum. In all of these activities, DCCPS will work to build field capacity, integrate implementation science into the larger cancer control and population science portfolio, and enhance collaborations among our researchers, practitioners, and policymakers.



# OPPORTUNITIES FOR RESEARCHERS

In addition to encouraging scientific ideas for researchers through investigator-initiated applications and omnibus solicitations, DCCPS develops and participates in NIH funding opportunities aimed at stimulating new directions in specific research to examine, discover, and test methodologies to improve public health. The following are examples of recent funding opportunity announcements to encourage research projects in emerging or priority areas:

- Dissemination and Implementation Research in Health ([PAR-19-274](#), [PAR-19-275](#), [PAR-19-276](#))
- Modular R01s in Cancer Control and Population Sciences ([PAR-18-869](#))
- Notice of Special Interest (NOSI): Dissemination and Implementation Science for Cancer Prevention and Control in Low Resource Environments ([NOT-CA-20-025](#))
- Notice of Special Interest (NOSI): De-implementation of Ineffective or Low-value Clinical Practices along the Cancer Care Continuum ([NOT-CA-20-021](#))
- Tobacco Control Policies to Promote Health Equity ([PAR-20-302](#), [PAR-20-303](#))

*More information about funding opportunities can be found at [cancercontrol.cancer.gov/funding.html](https://cancercontrol.cancer.gov/funding.html).*





# INVESTMENTS IN CANCER CONTROL RESEARCH

Researchers funded by DCCPS have advanced the science to improve public health for more than two decades, and we celebrate their scientific advances and research accomplishments in cancer control and population sciences. Major programmatic areas include epidemiology and genomics research, behavioral research, health care delivery research, surveillance research, and survivorship research.

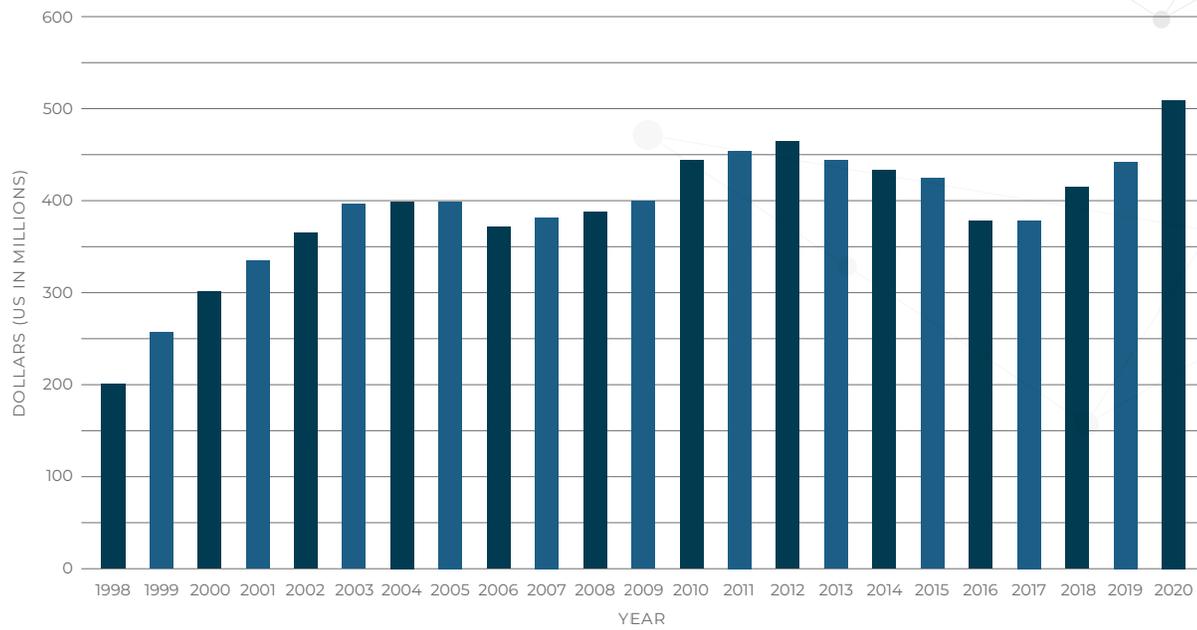
In fiscal year 2020, DCCPS funded 767 grants valued at more than \$509 million, with work in the US and internationally aimed to reduce risk, incidence, and deaths from cancer, and to enhance the quality of life for cancer survivors.

In addition, the division funded \$88 million in contracts, which include the SEER Program. While the majority of DCCPS funding is for investigator-initiated research project grants, the division also uses a variety of strategies to support and stimulate research, such as multi-component specialized research centers, cancer epidemiology cohorts, and supplements to NCI-Designated Cancer Center support grants.

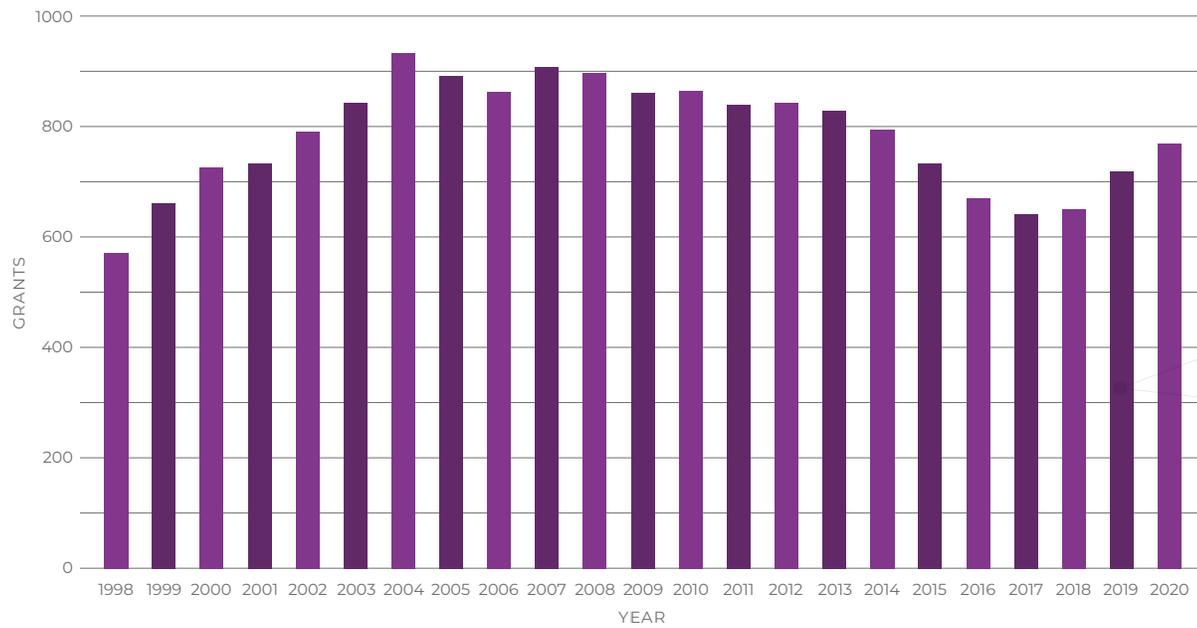
Learn more about the DCCPS grant portfolio and funding trends at [maps.cancer.gov/overview/](https://maps.cancer.gov/overview/).



## Total Dollars (in Millions)



## Total Number of Grants



# Investments in Health Disparities Research

Eliminating disparities and achieving health equity, the attainment of the highest level of health for all people, have been a major focus of all of the programs within DCCPS since the division's inception.

For example, given that genetic factors and environmental exposures may underlie differences in cancer risks and outcomes, DCCPS supports epidemiological cohorts and consortia to facilitate new discoveries and the sharing of biospecimens and data among investigators.

DCCPS research programs such as the Surveillance, Epidemiology, and End Results (SEER) Program are helping researchers better understand some of the potential factors that may influence cancer disparities.

Cancer Moonshot initiatives such as Dissemination of a Colorectal Cancer Screening Program Across American Indian Communities in the Southern Plains and Southwest US support clinical and research opportunities to expand the use of proven cancer prevention and early detection strategies to improve patient outcomes in critically underserved populations.

DCCPS provides support to NCI-Designated P30 Cancer Centers to expand their capacity to conduct research, plan strategy, facilitate professional collaborations, and implement efforts to improve cancer control and care among rural populations. Other funding opportunities include funding in rural areas to improve quality and coordination of care.

Current funding opportunities such as Research to Improve Native American Health and Collaborative Minority Health, and Health Disparities Research with Tribal Epidemiology Centers, support cancer research to better understand and ultimately eliminate health disparities in Native populations. Other current funding announcements (e.g., Tobacco Control Policies to Promote Health Equity [[PAR-20-303](#)]) address emerging issues such as new and modified tobacco product use and the impact of menthol-flavored tobacco product use among Black consumers.

DCCPS supports grants and collaborations that address cancer disparities that encompass the entire cancer control continuum—from identifying and understanding the role of biology in etiological disparities, to cancer prevention and diagnoses, access to treatment, and survivorship care. In fact, approximately 75% of all grants currently supported by DCCPS include a health disparities component.

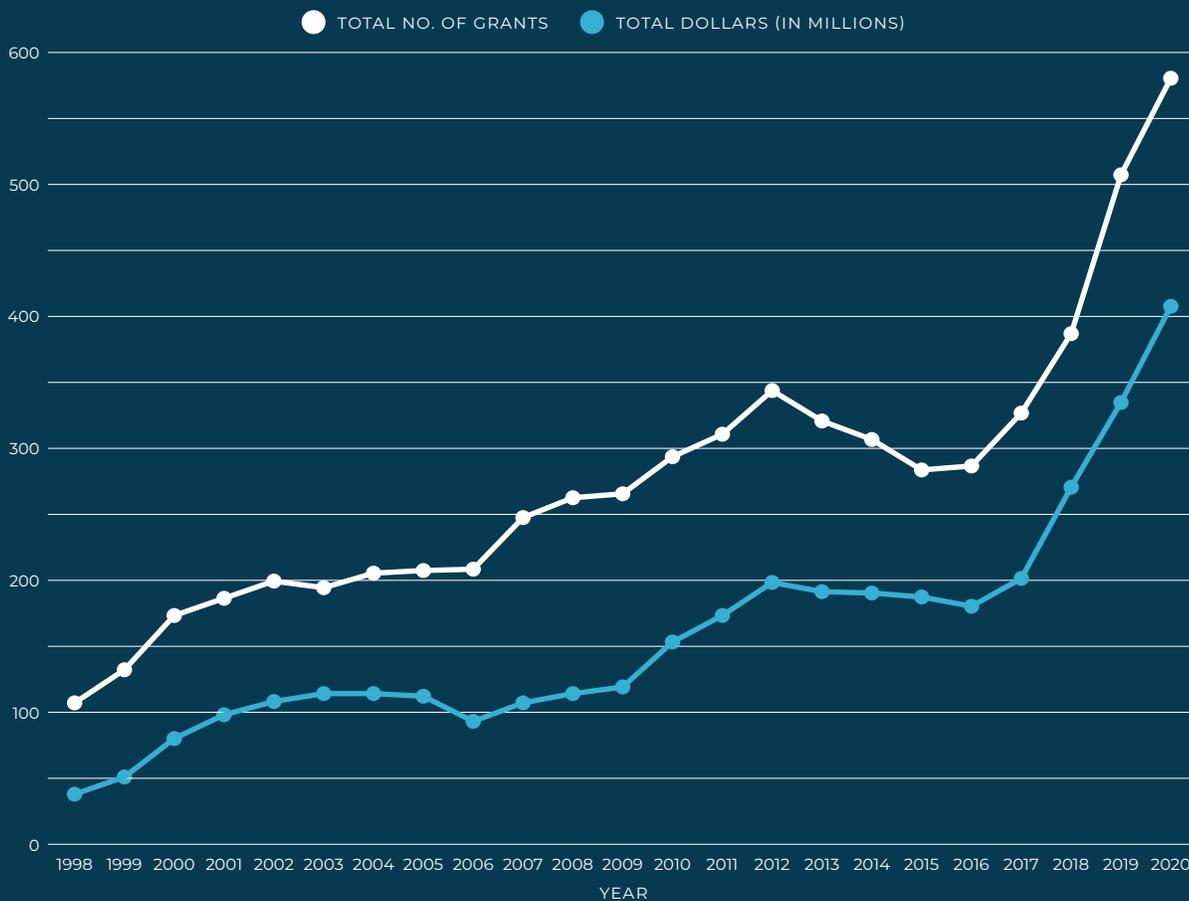
Looking to the future, the division hopes to continue to increase our investment in developing interventions for underserved and disadvantaged populations through a complement of transdisciplinary scientific activities that will reduce the burden of specific risk factors, inform policy, and improve outcomes for cancer patients across all populations.



## Summary of DCCPS Health Disparities (HD) Portfolio FY 2020/FY 2019

FY 2020 HD SUMMARY		
Total no. of HD grants	Total no. of DCCPS grants	% HD
580	767	75.6%

FY 2019 HD SUMMARY		
Total no. of HD grants	Total no. of DCCPS grants	% HD
507	717	70.7%



### Factoid- historical comparison

FY 1998		
Total no. of HD grants	Total no. of DCCPS grants	% HD
108	570	18.9%

# BY THE NUMBERS – 2020

As a window into the many ways DCCPS provides return on investment, we highlight here just a few snapshots of progress from the past year.



## 28,000

*Strategies for Team Science Success: Handbook of Evidence-Based Principles for Cross-Disciplinary Science and Practical Lessons Learned from Health Researchers* has been **downloaded 28,000 times** since its publication in December 2019. This team science textbook was edited by Drs. Kara Hall, Amanda Vogel, and Robert Croyle, and it features innovative tools and resources for effective, cross-disciplinary team science that can be beneficial for researchers and practitioners.



## 607

As of September 2020, **607 publications** in 234 peer-reviewed journals had used data from the [Health Information National Trends Survey](#) (HINTS), which monitors changes in the rapidly evolving fields of health communication and health information technology.



## 15,800

In FY 2020, the National Collaborative on Childhood Obesity Research [Youth Compendium of Physical Activities](#) was **accessed 15,800 times**. This resource provides a list of 196 activities common in youth and the estimated energy cost of each activity.



## 30,000

In FY 2020, more than **30,000 quit plans** were created using Smokefree.gov's updated [Create My Quit Plan](#), an interactive web-based tool for people seeking to develop a comprehensive step-by-step plan to quit smoking.



## 689

The [Perspectives on Cancer and Aging: The Arti Hurria Memorial Webinar Series](#) was established in FY 2020 to honor the legacy of the late Arti Hurria, MD, a pioneer in the fields of geriatrics and oncology and a DCCPS grantee and collaborator. The webinar series serves as a platform to engage and build a community of researchers dedicated to cancer and aging research. In its inaugural year, the quarterly webinars attracted **689 participants**.



# 70

Since 1987, the [Patterns of Care \(POC\) initiative](#) has evaluated the dissemination of state-of-the-art cancer therapy and diagnostics into community oncology practice; identified patient-, provider-, and system-level factors that are associated with receipt and utilization of cancer care; and disseminated findings through scientific publications and presentations. To date, POC has collected information on 20 types of cancer, and **70 papers** have been published highlighting the results of this work.

---



# 31,997

There were **31,997 randomly selected adults** who participated in the redesigned 2019 National Health Interview Survey, which includes a 5-minute Cancer Control Supplement. 2019 NHIS data were released in September and are publicly available for analysis.

---



# 30

Over **30 language translations** are available—and 10 more are in development—for the Patient-reported Outcomes version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE), a patient-reported outcome measurement system developed by NCI to capture symptomatic adverse events in patients on cancer clinical trials.

---



# 2,592

There have been **2,592 publications** using the [HealthMeasures resource](#), which includes the PROMIS, NeuroQOL, ASCQ-Me, and NIH Toolbox patient-centered measurement tools that enable investigators to capture data on symptoms, functioning, and health-related quality of life.

---



# 174

There were **174 requests** in FY 2020 for new or updated [SEER-CMS linked data](#), including SEER-Medicare (148 requests), SEER-MHOS (11 requests), and SEER-CAHPS (15 requests).

---



# 1,000+

The [NCI Community Oncology Research Program \(NCORP\)](#) is a national network that brings cancer prevention clinical trials and cancer care delivery research to people in their communities. Seven research bases develop and coordinate clinical trials and cancer care delivery research for 46 community sites to bring NCI-approved trials to patients in **1,000+ locations** in diverse, community-based hospitals, private practices, and other locations.



## 7 MILLION

The [NCI Cohort Consortium](#) has more than **7 million participants** in 60 international cohorts and more than 50 projects that have made scientific discoveries about cancer risk factors and technical advances in cohort methodologies.



## 60

The Cancer Epidemiology Descriptive Cohort Database (CEDCD) contains descriptive information from more than **60 cohorts** in 17 different countries. The CEDCD includes brief descriptions of the cohorts, contact information, questionnaires, types of data collected, enrollment numbers, number of cancer cases, and number of biospecimens collected. Its purpose is to foster collaborations and encourage cohort-based research.



## 111

In 2020, an average of **111 studies per month** registered to use the [Automated Self-Administered 24-hour \(ASA24®\) Dietary Assessment Tool](#), accounting for 7,920 recall/record days per month collected by researchers. The ASA24 is a web-based tool that enables multiple, automatically coded, self-administered 24-hour recalls. Beginning with the 2016 release, ASA24 also permits data collection using single or multi-day food records.



## 1,690

Between January and September 2020, code for the [Healthy Eating Index-2015 \(HEI-2015\)](#) was **downloaded 1,690 times**. Scientists in DCCPS and the USDA collaborated to create the HEI, a measure of diet quality that can be used to assess compliance with the US Dietary Guidelines for Americans and monitor changes in dietary patterns. The HEI also is a valuable tool for epidemiologic and economic research and can be used to evaluate nutrition interventions and consumer nutrition education programs.



## 63

The [database of Genotypes and Phenotypes \(dbGaP\)](#) at the National Center for Biotechnology Information (NCBI) archives datasets and makes them available to the scientific community. As of 2020, **63 datasets** from DCCPS-funded studies can be accessed through dbGaP.



## 42

The 2020 [Training Institute in Dissemination and Implementation Research in Cancer \(TIDIRC\)](#) provided **42 investigators** with a thorough grounding in conducting dissemination and implementation (D&I) research with a specific focus on cancer across the cancer control continuum. In its third year, the institute was delivered entirely online and was led by a faculty of leading experts in theory, methods, and evaluation approaches in implementation science.

---



## 403

In 2020, **403 participants** attended the main sessions of the second [Implementation Science Consortium in Cancer \(ISCC\)](#) meeting, convened online. The objectives of the ISCC are to foster communication among investigators engaged in implementation science projects across the cancer continuum; promote collaborative research projects to fill implementation science gaps that would extend beyond a single study; identify common theoretical, methodological, or empirical challenges in implementation science in cancer; and develop solutions.

---



## 97%

DCCPS hosts more than 45 fellows each year, with [opportunities](#) for people at most levels of educational training, from high school students to post-docs. In a recent survey, **97%** of DCCPS fellows noted that they were Satisfied or Very Satisfied with their experience as a fellow.

---



## 36%

Diversity is an important value throughout the division, which is reflected in the diversity of its fellows. Of the current fellows in DCCPS, **36%** are African American, Hispanic, or Asian.

---



## 31

NCI's [Classification of Laws Associated with School Students](#) includes data, maps, and state profiles to compare **31 policy areas** governing school nutrition and physical education across all 50 states and the District of Columbia to assess differences across states and changes over time.



# 258,345

There have been **258,345 views** of the [“Did You Know? HPV Español” video](#), part of the “Did You Know?” video series. A collaboration between DCCPS’ Surveillance, Epidemiology, and End Results (SEER) Program and NCI’s Office of Communications and Public Liaison, each brief “Did You Know?” video discusses a specific cancer type or a cancer-related topic. The series may be viewed on [SEER’s website](#), as well as on [NCI’s YouTube Channel](#) under the “Cancer Statistics” playlist. There is now a total of 26 “Did You Know?” videos available.



# 34.6%

DCCPS’ [Surveillance, Epidemiology, and End Results \(SEER\) Program](#) collects and publishes cancer incidence, prevalence, and survival data from population-based cancer registries covering approximately **34.6%** of the US population. The SEER Program is the only comprehensive source of population-based information in the United States that includes stage of cancer at the time of diagnosis and patient survival data. Begun with nine registries in 1973, it provides the greatest longevity for population-based cancer statistics in the United States.



# 1.6 MILLION

From January through September 2020, there were **1.6 million hits** on [SEER\\*Rx](#). SEER\*Rx was developed as a one-step lookup for coding oncology drug and regimen treatment categories in cancer registries.



# 13,352

From January through September 2020, there were **13,352 downloads** of [SEER\\*Stat](#). The SEER\*Stat statistical software provides a convenient mechanism for analysis of SEER and other cancer-related databases, enabling users to view individual cancer records and to produce statistics for studying the impact of cancer on a population.



# 5,003

From January through September 2020, there were **5,003 downloads** of [Joinpoint](#), a statistical software for the analysis of trends using joinpoint models—models in which several different lines are connected together at the “joinpoints.”



