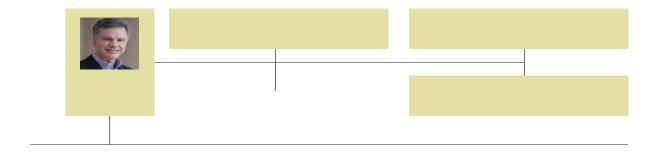
DCCPS: NCI's bridge to public health research, practice, and policy

Bob Croyle September 18, 2016 DCCPS New Grantee Workshop

Outline

- Overview of DCCPS
- NCI Leadership
- Funding
- Cross-cutting Areas of Science
- Research Gaps
- New Initiatives
- Cancer Moonshot
- Resources
- Future Directions

OVERVIEW OF DCCPS





NCI LEADERSHIP

NCI Scientific Program Leaders Group (SPL)

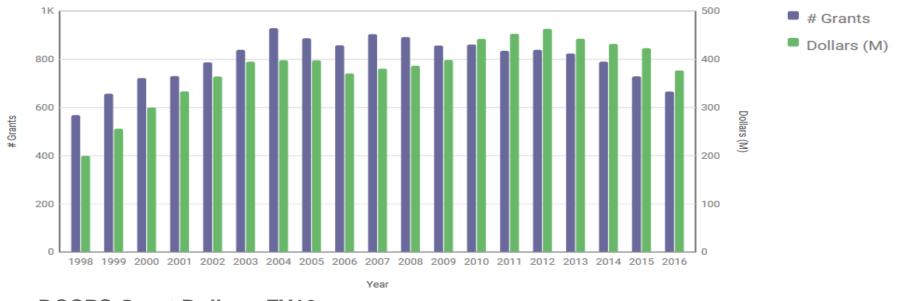
- Rigorous stewardship of limited resources
- Complement peer review to select the best research and address gaps in science
- Minimize duplication and overlap (esp. vs. other recently approved grants)
- Ensure appropriate mechanism to achieve goals
- Facilitate coordination of research across NCI divisions
- Ensures there is scientifically informed funding decisions at all levels of program leadership

FUNDING

NCI's Grant Selection

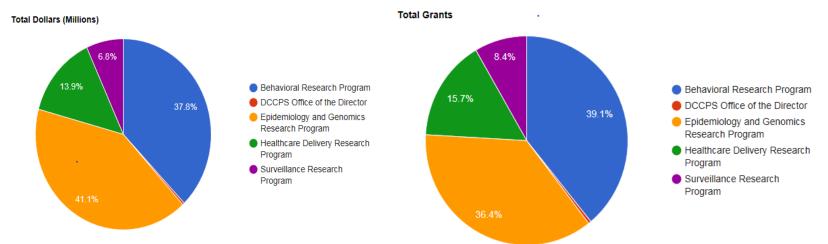
- In 2016, most R01 applications with scores up to the 10th percentile were funded.
- Applications with higher scores subject to branch, program, divisional and Scientific Program Leaders (SPL) review.
- Selection of grant applications for funding by exception
 - Not by an absolute payline instead by individual consideration
- Over 6267 grants awarded in FY2016
- Over 4464 Research Project Grants (RPGs)
- Over 1,230 competing Research Project Grants (RPGs),
- Approximately 158 new Investigator awards in FY16

DCCPS Funding FY98 - FY16



DCCPS Grant Dollars FY16

DCCPS Grants FY16



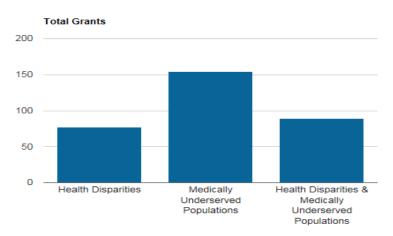
DCCPS FY16 Grants Summary

- 668 total grant awards in FY16
- \$378M total funding for DCCPS grants portfolio
- Additional \$128M total funding for operating budget, includes contracts, e.g., SEER Program, and collaborations (IAAs)

Will have data for FY17 soon



Health Disparities Research Portfolio



Dissemination and Implementation Science



Dissemination and Implementation Research in Health

Program Announcements With Special Receipt, Referral and/or Review (PARs)

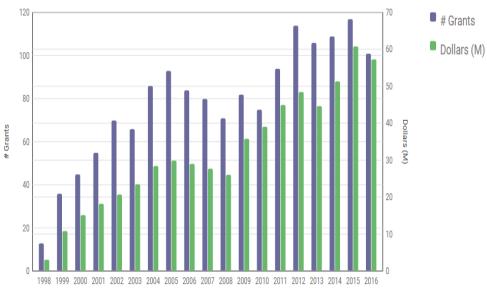
https://grants.nih.gov/grants/guide/pa-files/PAR-16-238.html (R01) https://grants.nih.gov/grants/guide/pa-files/PAR-16-237.html (R03) https://grants.nih.gov/grants/guide/pa-files/PAR-16-236.html (R21)

(R01/R03/R21)

Cancer Survivorship



Survivorship Research Portfolio





RESEARCH GAPS



Examples:

- Etiology and survivorship of rare cancers
- Environmental risk factors and gene-environment interactions
- Health disparities across diverse populations
- Methods/measurement
- Data sharing, reproducibility, and replication

NEW INITIATIVES

Recently Released PAs

Epidemiology and Genomics

Core Infrastructure and Methodological Research for Cancer Epidemiology Cohorts

Improving Outcomes in Cancer Treatment-Related Cardiotoxicity

Secondary Analysis and Integration of Existing Data to Elucidate the Genetic Architecture of Cancer Risk and Related Outcomes

Cancer Surveillance

New Informatics Tools and Methods to Enhance U.S. Cancer Surveillance and Research

Integration of Individual Residential Histories into Cancer Research

Leveraging Population-Based Cancer Registry Data to Study Health Disparities

Recently Released PAs

Behavioral Research

Predicting Behavioral Responses to Population-Level Cancer Control Strategies

Leveraging Cognitive Neuroscience Research to Improve Assessment of Cancer Treatment Related Cognitive Impairment

Stimulating Innovations in Behavioral Intervention Research for Cancer Prevention and Control

Innovative Approaches to Studying Cancer Communication in the New Media Environment

Cancer-Related Behavioral Research through Integrating Existing Data

Perception Research to Improve Cancer Image Interpretation

Innovative Tobacco Control Policies to Reduce Disparities in Tobacco Use

Recently Released PAs

Implementation Science

Dissemination and Implementation Research in Health

Healthcare Delivery

Reducing Overscreening for Breast, Cervical and Colorectal Cancers Among Older Adults

Linking the Provider Recommendation to Adolescent HPV Vaccine Uptake

Intervening with Cancer Caregivers to Improve Patient Health Outcomes and Optimize Health Care Utilization

Oral Anticancer Agents: Utilization, Adherence, and Health Care Delivery

AI/AN

Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers

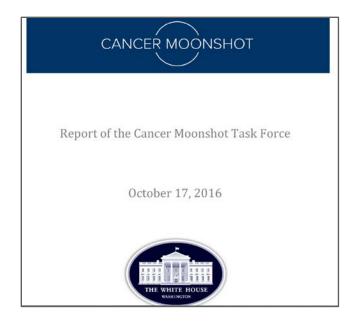
CANCER MOONSHOT UPDATES

CANCER MOONSHOT

Task Force

Blue Ribbon Panel Report Internal, federal inter-agency group. Report released October 17, 2016. Task Force was focused on making the most of federal investments, targeted incentives, private sector efforts from industry and philanthropy, patient engagement initiatives, and other mechanisms to support cancer research and enable progress in treatment and care.

External advisory group. Report Released on September 7, 2016 at the National Cancer Advisory Board meeting. Report outlines 10 recommendations to accelerate progress against cancer.



Blue Ribbon Panel Recommendations

A. Establish a network for direct patient involvement

Engage patients to contribute their comprehensive tumor profile data to expand knowledge about what therapies work, in whom, and in which types of cancer.

B. Create a clinical trials network devoted exclusively to immunotherapy

Establish a cancer immunotherapy clinical trials network devoted exclusively to discovering and evaluating immunotherapy approaches.

C. Develop ways to overcome cancer's resistance to therapy

Identify therapeutic targets to overcome drug resistance through studies that determine the mechanisms that lead cancer cells to become resistant to previously effective treatments.

D. Build a national cancer data ecosystem

Create a national ecosystem for sharing and analyzing cancer data so that researchers, clinicians and patients will be able to contribute data, which will facilitate efficient data analysis.

E. Intensify research on the major drivers of childhood cancers

Improve our understanding of fusion oncoproteins in pediatric cancer and use new preclinical models to develop inhibitors that target them.

F. Minimize cancer treatment's debilitating side effects

Accelerate the development of guidelines for routine monitoring and management of patient-reported symptoms to minimize debilitating side effects of cancer and its treatment

G. Expand use of proven cancer prevention and early detection strategies

Reduce cancer risk and cancer health disparities through approaches in development, testing and broad adoption of proven prevention strategies.

H. Mine past patient data to predict future patient outcomes

Predict response to standard treatments through retrospective analysis of patient specimens.

I. Develop a 3-D cancer atlas

Create dynamic 3-D maps of human tumor evolution to document the genetic lesions and cellular interactions of each tumor as it evolves from a precancerous lesion to advanced cancer.

J. Develop new cancer technologies

Develop new enabling cancer technologies to characterize tumors and test therapies.

DCCPS Implementation of Blue Ribbon Panel Recommendations

- Tobacco Cessation
- Lynch Syndrome / Hereditary Cancers
- Health Disparities
- Symptom Management
- Colorectal Cancer Screening
- Cancer Data Ecosystem

Implementation groups currently underway

Pre-Application Webinar on Approaches to Identify and Care for Individuals with Inherited Cancer Syndromes (RFA-CA-17-041)

■ When: October 4, 2017 from 1:30 – 2:30 p.m. ET

Where: via WebEx

(Register at https://healthcaredelivery.cancer.gov/media/)

Speakers:



Erica S. Breslau, Ph.D., M.P.H.

Program Director

Health Systems and Interventions Research Branch
Healthcare Delivery Research Program

Division of Cancer Control and Population Sciences



Nonniekaye Shelburne, C.R.N.P., M.S., A.O.C.N.
Program Director
Clinical and Translational Epidemiology Branch
Epidemiology and Genomics Research Program
Division of Cancer Control and Population Sciences

Approaches to Identify and Care for Individuals with Inherited Cancer Syndromes (RFA-CA-17-041)

About the FOA:

- Associated with the <u>Beau Biden Cancer Moonshot Initiative</u> that is intended to accelerate cancer research
- Purpose is to increase case ascertainment and optimize delivery of evidence-based health care for individuals at high risk of cancer due to an inherited genetic susceptibility.
- Invites U01 applications for projects aimed at identifying best practices to improve case ascertainment of hereditary cancers, with the goal of improving prevention and detection

Application Due Date: January 9, 2018

RESOURCES







STATE CANCER PROFILES

Cancer Prevalence and Cost of Care Projections



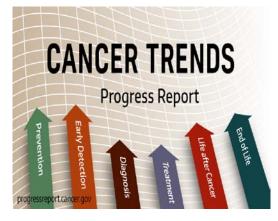
What is HINTS? HINTS collects data about the use of cancer-related information by the American public. These data provide opportunities to understand and improve health communication. Read More > National Cancer Institute You are here: Home > Advanced Search **Advanced Search** Find Content With. Hide Options Then narrow your results by. Section Name HINTS 1 HNTS2 HINTS 3 ☐ HINTS 4 Cycle 1 ☐ HINTS 4 Cycle 2 ☐ HINTS 4 Cycle 3 HINTS 4 Cycle 4 HINTS FDA Article(s) attached Who was asked -Select a term Clear Search



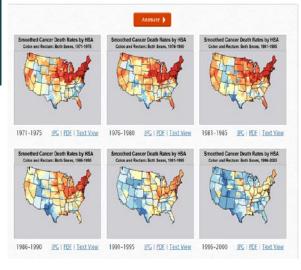
SEER Did You Know? Video Series







Animated Historical Cancer Atlas



FUTURE DIRECTIONS

Improving Cancer-Related Outcomes with CONNECTED HEALTH



A Report to the President of the United States from the President's Cancer Panel



THE PRESIDENT'S CANCER PANEL

Chairperson

Barbara K. Rimer, DrPH



Gillings School of Global Public Health Alumni Distinguished Professor of Health Behavior and Health Education The University of North Carolina at Chapel Hill Chanel Hill NC

Members

Hill Harper, JD



Cancer Survivor
Four-Time New York Times Best-Selling Author, Actor, and Philanthropic
Hollswood, CA.

Owen N. Witte, ME



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Connected Health: Improving Patients' Engagement and Activation for Cancer-Related Health Outcomes

President's Cancer Panel 2014-2015 Series

The power and utility of connected health technologies are growing. Many forces are catalyzing a national U.S. effort to engage and activate individuals to be more proactive about their health and healthcare and to translate this engagement to enhanced activation among patients. These forces have important implications for the prevention and treatment of cancer and for optimal survivorship. They include but are not limited to:

- "Meaningful Use" incentives to healthcare providers focus on requirements to demonstrate "patient engagement" through health information technology (Phases 2 & 3).
- The "Quantified Self" movement is creating new tools to encourage and reinforce a variety of healthy behaviors relevant to cancer control.
- The Internet has made vast amounts of health information available, and social media platforms have

A patient with a complex chronic condition receives a prescription for an app that is downloaded to a mobile device. Using information the patient enters, the app delivers automated clinical coaching and sends reports to the physician, recommending evidence-based protocols for adjusting the patient's treatment regimen, if needed. Equipped with a tool that offers personal, relevant

National Academy of Medicine

- NAM report co-funded by ACS, CDC, and NCI
- Focus: A National Strategy for Cancer Control in the United States
- \$1.3M total costs
- Beginning FY17



Also in 2018:

- Workshop to focus on small/underrepresented populations
- Partnership with RWJF, NIMHD, OBSSR

Future of Cancer Research

Progress against Cancer

Understanding Cancer

Preventing Cancer

Detecting and Diagnosing + Cancer

Treating Cancer

+

Advancing Public Health + in Cancer

The Research Enterprise

Budget Proposal











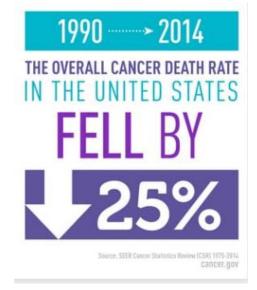
Investing in the Future of Cancer Research



Highlights of the NCI Annual Plan & Budget Proposal for Fiscal Year 2019

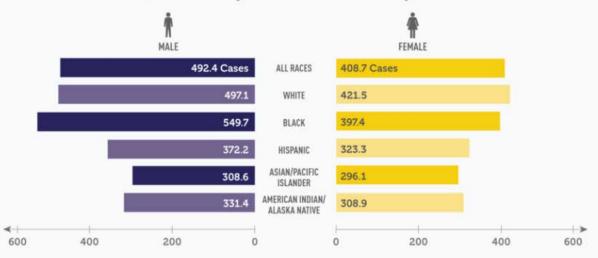
Every day, scientists and physicians dedicated to cancer research work to make discoveries that will advance new treatments and tools into the clinic. Patients participate in clinical trials with the hope of finding new options for themselves and producing better outcomes for future patients who will face the same disease. Their combined efforts—enabled by research funding—have led to new ways to prevent, detect, and treat cancer and a 25% decline in the rate of death from cancer over the past two decades.

Despite this progress, more work remains. Nearly 40% of Americans will be diagnosed with cancer in their lifetimes. In 2017, cancer is expected to take the lives of about 600,000 adults and 2,000 children in the United States. Many of us have had a family member, friend, or neighbor with cancer or have been affected by cancer ourselves. Continued progress requires strong and sustained federal investment in cancer research.



Number of New Cancer Cases Each Year

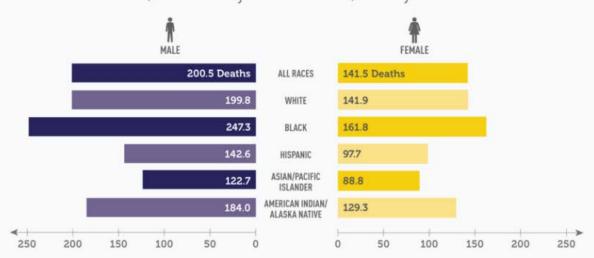
Per 100,000 Persons by Gender and Race/Ethnicity: All Cancers



Source: SEER 18, 2010-2014 cancer.gov

Number of Deaths Each Year

Per 100,000 Persons by Gender and Race/Ethnicity: All Cancers



Source: SEER 18, 2010-2014

Providing Resources to Advance Research

NCI develops and maintains resources to help researchers prevent, diagnose, and treat cancer, including databases and specimen repositories, cancer-related tools, and other materials that are available to scientists and the public via NCI's website. The following represent just two of these kinds of resources.

 The Surveillance, Epidemiology, and End Results (SEER) Program facilitates the collection and analysis of cancer statistics at the population level. SEER serves as the authoritative source of information on cancer incidence and survival in the United States. The program oversees the only population-based cancer registries in the country that include a broad set of clinical elements, with the registries located at or associated with NCI-Designated Cancer Centers. NCI manages the program and collaborates with other organizations, including the American Cancer Society and the Centers for Disease Control and Prevention, to make SEER a success. Furthermore, SEER data are used extensively to support research beyond NCI, with 4,000 downloads of its public-use files annually. For example, researchers use SEER to track trends in cancer at the national, state, and local levels; understand factors that influence these trends; and describe cancer disparities among different populations.

Improving HPV Vaccination Rates Will Help Save Lives



National coverage is 63% Coverage by state:

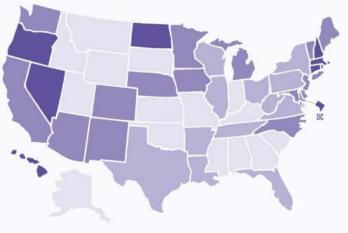
59% or less

60-64%

65-69%

70% or greater

Percentage of Adolescent Girls Who Have Received One or More Doses of HPV Vaccine*



NATIONWIDE

5 OF 10

BOYS HAVE STARTED THE HPV VACCINE SERIES

National coverage is 50% Coverage by state:

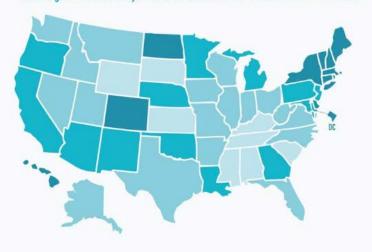
39% or less

40-49%

50-59%

60% or greater

Percentage of Adolescent Boys Who Have Received One or More Doses of HPV Vaccine*



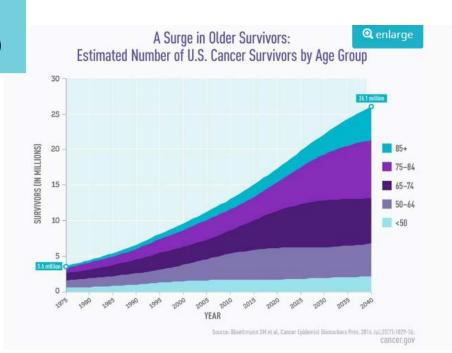
HPV VACCINATION IS THE BEST WAY TO PREVENT SEVERAL TYPES OF CANCER. YET MANY ADOLESCENTS HAVE NOT STARTED THE HPV VACCINE SERIES.

*Estimated coverage with ≥1 dose of human papillomavirus (HPV) vaccine among adolescents age 13-17 years (Source: National Immunization Survey—Teen, United States, 2015)

Source: MMWR August 26, 2016 Cancer.gov

CHALLENGES THAT CANCER SURVIVORS FACE

- · Risk of recurrence
- Increased risk of second primary cancer
- · Reduced quality of life
- Economic burden (financial toxicity)
- Treatment side effects (cardiotoxicity, cognitive challenges)
- Emotional distress (depression, anxiety/uncertainty, altered body image, survivor's guilt)
- Denial of health and/or life insurance
- · Physical problems
- Loss of fertility and/or diminished reproductive health
- Difficulty maintaining or finding employment
- Barriers to health care (high insurance and out-of-pocket costs for health care, lack of coordination of health care, and limited access to specialty care)



Reducing Tobacco Use Before and After a Cancer Diagnosis

Understanding the Influence of Body Weight and Physical Activity on Cancer Risk and Outcomes

Michael Fiore, M.D., M.P.H., M.B.A. Hilldale Professor of Medicine, University of Wisconsin School of Medicine and Public Health Founder and Director, University of Wisconsin Center for Tobacco Research and Intervention

Working to Reduce the Cancer Burden Caused by Tobacco

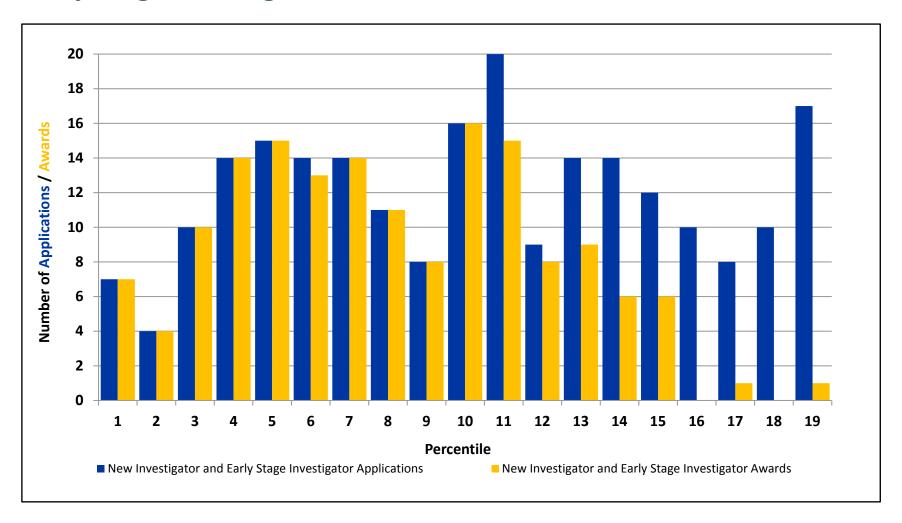
Delivering High-Quality Cancer Care to All Americans







NCI FY2016 Competing R01 Applications And Awards: New and Early Stage Investigators



RESOURCES