Tobacco Control Research at the National Cancer Institute

Presentation to the National Advisory Council on Alcohol Abuse and Alcoholism, National Cancer Advisory Board, and the National Advisory Council on Drug Abuse

February 2016

Robert T. Croyle, Director, Division of Cancer Control and Population Sciences
Tobacco control. Tobacco use is the single most important known preventable cause of cancer. In addition to being the major cause of cancers in the lung, smoking contributes to cancers elsewhere in the body as well as to cardiovascular and other diseases. It is estimated that the typical smoker in the United States reduces his or her life expectancy by more than 10 years. More than 87 percent of lung cancer deaths, 61 percent of all pulmonary disease deaths, and 32 percent of all deaths from coronary heart disease are attributable to smoking and to exposure from secondhand smoke. If current trends continue, it is estimated that smoking will cause the premature deaths of 5.6 million American youths who are now under the age of 18.

The serious health consequences of tobacco use were highlighted by the landmark 1964 U.S. Surgeon General’s Report on smoking and health, which laid the foundation for tobacco control efforts in the United States. Adult smoking rates in the United States declined from 42 percent in 1965 to 18 percent in 2012, preventing serious disease for many Americans. However, more than 42 million Americans still smoke. Epidemiologic research indicates that many of the negative health consequences associated with tobacco consumption are potentially reversible for smokers who quit. For example, compared with someone who continues to smoke, 35- to 44-year-olds who quit can gain about 9 years of life expectancy, 45- to 54-year-olds can gain 6 years, and 55- to 64-year-olds can gain...
Smoking Cessation: Despite the enormous progress in reducing the prevalence of tobacco use in the United States, national smoking rates continue to be substantially above public health targets. Analysis has repeatedly revealed that the large reduction in smoking rates are not consistent across the U.S. population, with progress in reducing smoking in some subpopulations lagging far behind the general population. Prioritizing smoking cessation in groups that continue to demonstrate elevated smoking prevalence is essential to achieving further progress in tobacco control.

In addition to maintaining a substantial investigator-initiated grant portfolio relating to smoking and tobacco control, NCI has partnered with other NIH institutes and centers to fund targeted research on smoking cessation. This includes an initiative with National Heart, Lung, and Blood Institute (NHLBI) that focuses on hospitalized patients and an initiative with the National Institute on Drug Abuse to conduct cessation interventions in people with schizophrenia. NCI also plans to fund new research, including grant awards during FY 2016, in response to a Funding Opportunity Announcement (FOA) on smoking cessation in the context of lung cancer screening. This initiative will test interventions at lung cancer screening sites that are designed to increase cessation rates among the population of current smokers who are undergoing lung cancer screening.

NCI also is developing a new FOA for FY 2017-2020 that calls for research to improve cessation rates in low-income populations. Low-income populations have less access to treatment and more obstacles to engaging in and maintaining behavioral change, which contribute to less success in quitting smoking. Future research under this FOA includes directly addressing smoking cessation in low-income populations through approaches targeted to individuals, systems, or populations.
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NCI Signature Research Infrastructures

- Cancer Centers
- Clinical Trials Program
- Cancer Epidemiology Cohorts
- Surveillance, Epidemiology, and End Results (SEER) Program

Find an NCI-Designated Cancer Center

NCI-Designated Cancer Centers deliver cutting-edge cancer treatments to patients in communities across the United States. Find a center near you and learn about its patient services and research capabilities.
Tobacco Control Research Addresses Health Disparities

43 grants (43.4%) emphasized a special population

*Note: Groups pictured are not mutually exclusive*
RFA CA-15-011 Smoking Cessation within the Context of Lung Cancer Screening

- Lung cancer screening using low-dose computed tomography (LDCT) is rapidly expanding

- Smoking cessation service should be incorporated into LDCT screening

- Research is needed to provide models of smoking cessation services for this setting

- Approximately 6 awards to be funded in FY16
Proposed PAR: Improving Smoking Cessation in Socioeconomically Disadvantaged Populations via Scalable Interventions

- Goal: Identify smoking cessation interventions which can dramatically reduce the disparities in smoking rates in socioeconomically disadvantaged vulnerable populations

- Mechanism: PAR w/ multiple submission dates

- Research focus: Improve outcomes of scalable smoking cessation interventions

- Target Population: Socioeconomically disadvantaged smokers

- General Research Approaches:
  - Test enhancements of interventions currently scaled or ready to scale
  - Evaluation of existing interventions which could be scaled if evidence supports
Example Research Questions

- In what ways can scalable interventions be developed or modified to increase engagement with treatment and enhance long-term behavioral change?

- What strategies can be used to increase reach into socioeconomically disadvantaged populations so that consumer demand for cessation services increases?

- How might available infrastructures that provide services to socioeconomically disadvantaged populations be utilized to also deliver smoking cessation interventions?

- How may individual, quitline, mobile health, and/or health care system-based treatments of tobacco dependence be personalized for low-income smokers to enhance treatment efficacy?
Additional Priority Areas Under Development

- Cancer communication in the new media environment
- Predicting behavioral responses to population-level cancer control strategies
- Cancer-related behavioral research through combining existing data
- Dual and poly tobacco product use among youth and young adults
- Second hand smoke policy research
Activities to Support Research

- Global Smokeless Tobacco Report (2014)
- NCI Monograph Series (ongoing)
- Special Supplement to *Tobacco Control* on ENDS (2014)
It doesn't matter where you start. Just start.
Smokefree e-Health Projects

• **Smokefree.gov (2003)**
  – 1st HHS eHealth Cessation resource
  – Mobile app (QuitGuide)
  – Social media: Facebook, Twitter

• **Smokefree Women (2009)**
  – Website
  – Social media: Facebook, Twitter, Pinterest, YouTube

• **Smokefree Teen (2011)**
  – Website
  – Social Media: Facebook, Twitter, Tumblr
  – Mobile app (QuitSTART)

• **Spanish Smokefree (2012)**
  – Website
  – Social media

• **SmokefreeTXT (2011)**
  – Teen
  – Young Adult
  – Spanish Language
  – QuitNow Library

• **Smokefree Pregnancy**
  – Web content
  – Online video
NCI established the SCTC Research Initiative in 2009 to address high-priority research gaps in state and community tobacco control research:

- Secondhand smoke policies
- Tax and pricing policies
- Mass media countermeasures
- Community and social norms
- Tobacco industry marketing and promotion and company practices
SCTC Evaluation Logic Model

Inputs
- Infrastructure & Organizational Support
  - Funding
  - NCI & Partner Guidance
  - Member Capacity

Collective Activities/Outputs
- Strengthen/Expand SCTC Network Relationships
  - Conduct Scientifically Rigorous and Relevant Studies
- Produce and Disseminate SCTC Products (Research Findings, Experiences & Recommendations)

Proximal Outcomes
- Greater Dissemination Reach
- Greater Reported Utility of SCTC Research Findings & Products
- Increased Utilization of Disseminated Findings, Experiences & Recommendations
- Improved Evidence-based Tobacco Control Policies and Practices

Distal Outcomes
- Enhanced Impact of Tobacco Control Policies and Practices
- Improved Sustainability Potential
- National, state, and sub-state level data on tobacco use patterns, policies, and attitudes

- Fielded every 3-4 years since 1992 - NCI sponsored (earlier tobacco supplements in 1955, 1967-68, 1985, 1989-90)

- Useful for evaluating long-term trends and interventions, and in researching special topics (e.g. health disparities, smoke-free policies, cost of cigarettes, cessation patterns)

- Linkages to other topic CPS supplement data & to outcome cancer incidence, all cause mortality and CMS treatment data through NLMS
Future TUS-CPS Data Release

- The 2014-2015 fielding was sponsored by FDA-CTP and NCI

- Currently being processed and will be released to the public in Fall 2016

- Includes more details on e-cigarette use and use of other flavored tobacco products

- Includes first-time detail on attitude towards smoke-free policies in multi-unit housing.

Global Research Activities

- Co-funds grants with Center for Global Health and Fogarty International Center, USAID PEER
- World Health Organization (WHO)’s mHealth and eHealth initiatives
- WHO Tobacco Product Regulation committee
- WHO Tobacco Laboratory Network committee to combine testing and research science, developing standard protocols for lab testing of tobacco products
Investments to Launch the Next Phase of Cancer Research

The following information has been adapted from a White House Fact Sheet. Please check back in the coming days and weeks for more updates on the Cancer Moonshot and what it means for cancer research.

In late January 2016, President Barack Obama announced the establishment of a new Cancer Moonshot Task Force – to be led by Vice President Joe Biden – to focus on making the most of Federal investments, targeted incentives, private sector efforts from industry and philanthropy, patient engagement initiatives, and other mechanisms to