

National Cancer Institute

Division of Cancer Control
& Population Sciences

Informing Policy and Programs

2011 UPDATE



U.S. DEPARTMENT
OF HEALTH AND
HUMAN SERVICES
National Institutes
of Health

OVERVIEW

The Division of Cancer Control and Population Sciences (DCCPS) at the National Cancer Institute funds and supports science that helps to inform policies and programs aimed at preventing, detecting, and treating cancer. DCCPS proactively funds research that anticipates shifts in public health and public policy. The division also acts quickly to implement new research that is responsive to emerging legislation. A portion of the research DCCPS supports provides policy makers with the practical evidence they need to make effective decisions. The division's long-standing history of collaborating across the National Institutes of Health (NIH), Department of Health and Human Services (HHS), and other agencies makes it uniquely suited to continue to play a role in the generation of evidence to shape and respond to national policy. This brief provides examples of DCCPS' research contributions related to public policy and illustrates the division's role in developing a comprehensive base of scientific evidence for policy makers and public health practitioners.

PATIENT PROTECTION AND AFFORDABLE HEALTH CARE ACT

The passage of recent health care reform legislation ushers in a new era in the nation's health care system and will help influence portions of the division's research agenda for years to come.

Economic burden of cancer and rising health care costs

DCCPS conducts cutting-edge research on the economic burden of cancer and employs some of the nation's top health economists. The division examines the determinants of the cost of cancer care and develops estimates of the overall economic burden of cancer. To prepare this information, DCCPS has worked to develop new methods and is using the most recent data to estimate the cost of cancer care and to provide projections of cost of care in the future based on population trends. This information has important policy implications for health care planning and resource allocation.

DCCPS researchers have developed and reported to Congress estimates of both the overall cost of cancer care in the United States and specific costs by tumor type and site, sex, age group, geographic location, and phase of care (i.e., initial, continuing, and last year of life). For example, researchers found that the costs of cancer care to Medicare are substantial and vary by tumor site, phase of care, stage at diagnosis, and survival.

The cost of cancer care involves not only direct expenditures but also indirect costs borne by families, such as lost productivity, job loss, and time costs associated with treatment. DCCPS conducts and supports research to quantify these indirect costs. For example, DCCPS developed models using the human capital approach, which relies on earnings as a measure of productivity, to estimate the value of productivity lost as a result of cancer mortality. A DCCPS study was the first to estimate net patient time costs over the full course of cancer care for 11 of the most common cancer sites. In addition, DCCPS research found that time spent by informal caregivers was substantial. Incorporation of the value of informal caregiver time will be important when evaluating the costs and benefits of cancer control interventions.

Improved coverage of preventive health services rated A or B by the U.S. Preventive Services Task Force (USPSTF)

DCCPS plans, implements, and maintains a comprehensive research program to promote the appropriate use of effective cancer screening tests, as well as strategies for informed decision making regarding cancer screening technologies, in both community and clinical practice. For example, the USPSTF uses the evidence from the [Cancer Intervention and Surveillance Modeling Network \(CISNET\)](#), funded by DCCPS, as they revise screening recommendations for breast and colorectal cancers.

DCCPS research has also led to creation of guidelines around colorectal, prostate, and cervical cancer screening. Since 2001, DCCPS has collaborated with the Agency for Healthcare Research and Quality (AHRQ) to model how changes in screening, risk factors, and optimal use of chemotherapy would influence mortality rates from colorectal cancer. DCCPS worked with AHRQ and the Centers for Medicare and Medicaid Services (CMS) to produce an economic analysis CMS used to justify new coverage of a colorectal screening test, the immunochemical fecal occult blood test (FOBT). DCCPS research also informs the Centers for Disease Control and Prevention's (CDC's) National Breast and Cervical Cancer Early Detection Program (NBCCEDP), which provides access to breast and cervical cancer screening services to underserved women.

Two large randomized screening trials, one in Europe and one in the United States, led by the National Cancer Institute, have recently reported results on the use of prostate-specific antigen (PSA) screening and prostate cancer mortality. The European Randomized Study of Screening for Prostate Cancer (ERSPC) showed a 20 percent decline in prostate cancer mortality, while the U.S. study, the Prostate, Lung, Colorectal & Ovarian Cancer Screening Trial (PLCO), showed that annual, regular screening compared with the screening already occurring in the United States discovered more prostate cancers, but did not lead to further declines in mortality over seven to 10 years. Leaders of both trials have

agreed to work with DCCPS CISNET investigators to examine the trials in detail to determine the causes of the differences. In addition to the marked differences in use of PSA screening in the control groups in the two populations, other issues may play a role as well, such as differing systems of PSA use (e.g., PSA cutoffs and biopsy practices) and treatment practices. CISNET investigators will use the methods of systematic modeling they have developed to reconcile differences between the two trials and assist in translating them for use in the development of public health guidelines for PSA screening. Data from the DCCPS-supported [Surveillance, Epidemiology, and End Results \(SEER\) Program](#) enabled both of these studies.

CISNET members also provided one of the key evidence reports informing USPSTF's review of recommendations on breast cancer screening. For this new study of mammography, six modeling teams examined the hypothetical outcomes of 20 different mammography screening strategies that differed in the ages when screening began and ended and in the number of years between scheduled screenings. The models developed by these teams showed that screening every other year produced an average of 81 percent of the mortality reduction of yearly screening, but with nearly 50 percent fewer false-positive results. Screening women ages 50 to 69 every other year would provide a median reduction in breast cancer mortality of 16.5 percent compared with no screening. When compared with screening from ages 50 to 69, beginning screening every other year at age 40 produced a small additional reduction in mortality but increased the number of false-positive results by more than 50 percent.

The study above was possible, in part, because of the contributions on current screening practices and outcomes from the DCCPS-led [Breast Cancer Surveillance Consortium \(BCSC\)](#), a well-established research resource for studies designed to assess the delivery and quality of breast cancer screening. This large, standardized dataset presents a unique opportunity for investigators throughout the country to study how mammography screening performance may

be improved and how breast cancer screening relates to changes in disease stage at diagnosis, survival, and mortality. In the past 15 years, BCSC data have had an impact on a wide range of scientific and policy arenas beyond the immediate work of the consortium. For example, BCSC data have been used by the General Accounting Office (GAO) in two reports, *Mammography Services: Impact of Federal Legislation on Quality, Access, and Health Outcomes* and *Mammography Capacity Generally Exists to Deliver Services*. BCSC data contributed to the Institute of Medicine report, *Improving Imaging Quality Standards*, updates to USPSTF guidelines, and U.S. Food and Drug Administration reports. In addition, BCSC data represent U.S. breast screening in the work of the International Breast Screening Network (IBSN) and were cited in the World Health Organization's International Agency for Research on Cancer (IARC) 2002 *Handbooks for Cancer Prevention, Volume 7: Breast Cancer Screening*.

DCCPS experts also support the CDC's Guide to Community Preventive Services. The Guide is a free resource to help public health planners choose programs and policies to improve health and prevent disease in communities. DCCPS experts participate in literature reviews, oversee the development of new research, and contribute to the development of the Guide.

Creation of the private, nonprofit Patient-Centered Outcomes Research Institute (PCORI) to set a national research agenda and conduct comparative effectiveness research (CER)

DCCPS has supported CER studies and developed the methods and data sets needed to conduct high-quality CER and support PCORI. Results from CER, also known as patient-centered health research, will provide the evidence patients and physicians need to choose between a wide variety of options for diagnosis, treatment, and monitoring. Funds from the American Recovery and Reinvestment Act (ARRA) enabled DCCPS to support work in cancer prevention, screening, treatment, and genomics. In addition, DCCPS supports the [HMO Cancer Research Network \(CRN\)](#), a consortium

PATIENT PROTECTION AND AFFORDABLE HEALTH CARE ACT (CONT.)

of 14 nonprofit research centers based in integrated health care delivery organizations that cover more than 13 million individuals. CRN conducts research on the characteristics of patients, clinicians, communities, and health systems to improve cancer prevention and care. CRN also enables CER through the development of standardized approaches to data collection, data management, and analysis across health systems. Other projects that DCCPS supports around CER include CISNET, BCSC, physician surveys, and the [Cancer Care Outcomes Research and Surveillance Consortium \(CanCORS\)](#).

HHS development of a national strategy to improve health care quality

HHS draws upon the evidence developed by DCCPS and its partners to develop its strategic plan to improve the delivery of health care services, patient health outcomes, and population health. DCCPS established the [Quality of Cancer Care Committee \(QCCC\)](#) in 2000 to strengthen collaborative relationships with federal agencies and private organizations to ensure that cancer care decisions are guided by the best available scientific evidence. One major QCCC project with the Veterans Administration (VA) is the Colorectal Cancer Quality Enhancement Research Initiative (CRC QUERI), which demonstrated successful application of evidence to guide federal agency decision making. The VA is now using this foundation to set up system-wide surveillance and intervention systems to guide cancer care decision making. DCCPS also invests in enhanced population-based cancer registries, which improve statistical methods and provide additional data on outpatient treatments and patients' experiences with care. For example, the DCCPS-supported [Colon Cancer Family Registry \(C-CFR\)](#) is an international research infrastructure for investigators interested in conducting studies on the genetic and molecular epidemiology of colon cancer and its behavioral implications. These registries are used to more effectively monitor and improve the quality of cancer care.

TOBACCO CONTROL

Family Smoking Prevention and Tobacco Control Act

The landmark Family Smoking Prevention and Tobacco Control Act of 2009 granted the Food and Drug Administration (FDA) authority to regulate the manufacturing, marketing, and distribution of tobacco products. Evidence generated by DCCPS-funded research has contributed to FDA's ability to make informed decisions as it determines how to implement its new regulatory authorities. In 2010, DCCPS funded administrative supplements to NCI-funded cancer control research in order to expand the science base related to a number of regulatory provisions. DCCPS research directly informs many of the requirements of the law.

Ban on candy- and fruit-flavored cigarettes

DCCPS-funded research has demonstrated that several factors influence initiation and cessation of tobacco use, including flavorings. Data show that flavored cigarettes are more likely to appeal to youth than those without flavorings. Additionally, the FDA's Tobacco Products Scientific Advisory Committee (the DCCPS Director serves as the NIH Ex-Officio member of the committee) relies on publications resulting from DCCPS research as it reports on menthol cigarettes and public health. DCCPS co-sponsored the "2nd Conference on Menthol Cigarettes" in October 2009, highlighting the science base and research gaps.

Ban on misleading descriptors, including "light," "mild," and "low-tar"

DCCPS research has shown that machine-measured tar and nicotine yields do not provide meaningful information on the amount of tar and nicotine that smokers receive from a cigarette. Smokers of "light" cigarettes are at the same risk for disease as smokers of full-flavor cigarettes. These findings were reported in NCI Tobacco Control Monograph 13, *Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine*. The monograph also reported that many smokers of "light" cigarettes assume that these products present less of a health risk than other cigarettes, making continued research critical to the implementation of the legislation.

Enlarging warning labels and requiring graphic images

DCCPS held a workshop in 2009, "Cigarette Warning Labels, Packaging & Product Labeling: Current Science and Practice to Identify Research Priorities," and has funded a number of ongoing research grants to evaluate the impact and effectiveness of warning labels and packaging in deterring initiation of tobacco use and encouraging quit attempts. The Federal Trade Commission (FTC) used findings reported in NCI Tobacco Control Monograph 9, *Cigars: Health Effects and Trends*, to justify its recommendation that Congress mandate health warning labels on cigar packages.

Protecting and enhancing states' ability to enact other tobacco control measures

DCCPS has funded state and community tobacco control policy and media research and will fund additional research in 2011 to address high-priority, population-level research gaps in the areas of secondhand smoke, tax and pricing, and mass media interventions. Scientific findings in these areas will help inform effective tobacco control policy interventions.

Smoking cessation

DCCPS-funded research has contributed to the strong evidence base regarding effective treatments and interventions for tobacco dependence. Beginning in 2011, the Federal Employee Health Benefit Program must offer smoking cessation programs and medications without copayments or coinsurance to its beneficiaries. Research is also informing the Centers for Medicare and Medicaid Services (CMS) as it develops policies regarding smoking cessation as a covered benefit among recipients. For example, in June 2010, CMS proposed to expand coverage for tobacco cessation counseling to all Medicare beneficiaries who use tobacco. Currently, Medicare only covers cessation treatment for beneficiaries already diagnosed with a recognized tobacco-related disease or who exhibit symptoms consistent with tobacco disease. In September 2008, NCI received CEO Cancer Gold Standard Certification with "eliminating tobacco use" as one of its five pillars, and research informs implementation of this initiative.

<http://cancercontrol.cancer.gov/>

Secondhand smoke

DCCPS-funded research has shown that smoke-free laws benefit nonsmokers by eliminating exposure to tobacco smoke and benefit smokers by providing an environment that encourages and facilitates quitting. As of March 2011, 32 states, Washington, D.C., and Puerto Rico had enacted comprehensive smoke-free laws. Several of the U.S. territories also have enacted comprehensive smoke-free laws. NCI instituted a smoke-free meeting policy, effective January 1, 2007, requiring all meetings and conferences primarily organized by NCI to be held in a jurisdiction that has adopted a comprehensive smoke-free policy.

Tracking tobacco use, cessation practices, and tobacco control policies

DCCPS tracks tobacco use, cessation practices, and tobacco-control policies across 50 states in the Tobacco Use Supplement to the Current Population Survey (TUS-CPS), an NCI-sponsored survey of tobacco use and policy information that has been administered as part of the U.S. Census Bureau's and the Bureau of Labor Statistics' (BLS) Current Population Survey. Linking these data on actual use with data from the state legislative database has allowed examination of how the extent of implementation of tobacco-control policies contributes to reductions in tobacco use both nationally and for each state.

Researchers use the data to monitor long-term progress in the control of tobacco use, conduct tobacco-related research, evaluate tobacco control programs, and examine tobacco use-related health disparities. Unique features are the ability to link TUS-CPS data to other social and economic U.S. Census Bureau and BLS data, as well as other sponsor-supported supplement data; cancer and other cause-specific mortality data through the National Longitudinal Mortality Study; and occasional TUS-CPS 1-year prospective follow-up data on a subset of respondents (e.g., 2002–2003 and 2010–2011). In addition, the Robert Wood Johnson Foundation's ImpacTEEN program made extensive use of the TUS-CPS 15-year data in its recent tobacco chart book, *Cigarette Smoking Prevalence and Policies in the 50 States: An Era of Change*.

A HEALTHIER GENERATION

A renewed emphasis on improving health behaviors has been spearheaded by the Let's Move Initiative, The President's Challenge, and HHS Small Step Initiative. In addition to these new initiatives, DCCPS supports and provides a wide range of research to help inform ongoing public health efforts across the United States and the world.

Setting national objectives for promoting health and preventing disease

The Healthy People 2020 initiative provides science-based, 10-year national objectives for promoting health and preventing disease. DCCPS co-leads the Healthy People 2020 Cancer Chapter Workgroup with the CDC. Since 1979, Healthy People has set and monitored national health objectives to meet a broad range of health needs, encourage collaborations across sectors, guide individuals toward making informed health decisions, and measure the impact of our prevention activity. With oversight from the NIH Office of Disease Prevention, the Cancer Workgroup has representation from the DCCPS Office of the Director, the NIH Office of Minority Health, the NIH Office of Research on Women's Health, the National Center for Health Statistics (NCHS), AHRQ, the American Cancer Society, and C-Change, and works toward setting new objectives and targets for the next decade while measuring progress from the past decade.

Making healthier dietary choices

The Dietary Guidelines are jointly issued and updated every 5 years by the Department of Agriculture (USDA) and HHS. They form the basis for federal nutrition policy and provide authoritative dietary advice to promote health and reduce risk for major chronic diseases. To be effective, these guidelines require an extensive evidence base to ensure the most accurate and up-to-date information is included. DCCPS-supported researchers developed methodologies for estimating usual dietary intake distributions and identifying sources of key dietary constituents, including added sugars, and the resulting data have proven to be critical for the new guidelines. In addition, DCCPS worked with researchers at USDA to develop the Healthy Eating Index-2005 (HEI-2005), a measure of dietary quality.

The DCCPS research portfolio includes studies aimed at understanding behaviors and barriers, along with effective interventions to increase the availability of healthy food in the home, at schools, and in childcare settings. In addition, DCCPS has supported research on school nutrition policy, including changes in competitive food laws across states and in elementary schools, and impact on changing behaviors and reducing obesity. The division has supported the 2007 Food Attitude and Behaviors (FAB) Survey as well the School Nutrition Policy Classification System, which provides an empirical and regularly updated scoring system that is used by researchers, policy makers, and the public to evaluate and track changes in state laws related to school nutrition. DCCPS also provides Web resources and information related to the Measures of the Food Environment, through a Web site that provides a compilation of articles that include community-level measures of the food environment, as well as some of the instruments themselves.

Reversing the childhood obesity trend

Obesity is a well-established risk factor for chronic diseases, including heart disease, diabetes, and cancer. Between 1980 and 2004, the prevalence of obesity more than tripled among children, and today nearly one-third of all children in the United States are overweight or obese. Recognizing the need to focus attention on reversing that alarming trend, HHS, the Surgeon General, and the White House Task Force on Childhood Obesity have focused renewed attention on the childhood obesity epidemic and the need to implement coordinated obesity prevention efforts. Aiding in this national effort, DCCPS participates in the National Collaborative on Childhood Obesity Research (NCCOR), a partnership of CDC, NIH, the U.S. Department of Agriculture, and the Robert Wood Johnson Foundation. NCI has the lead role for NIH in NCCOR, which seeks to improve the efficiency, effectiveness, and application of childhood obesity research by developing common measures and methods, evaluating and identifying effective interventions, and assessing policy and environmental changes related to childhood obesity.

Increasing physical activity

The HHS Physical Activity Guidelines (2008) were the first-ever such guidelines released for Americans. They describe the types and amounts of physical activity that offer substantial health benefits. DCCPS-funded investigators served on the committee, and a DCCPS staff member coordinated the process for HHS. DCCPS funded the Health, Eating, Activity, and Lifestyle (HEAL) Study, which examines relationships between physical activity, biomarkers and breast cancer prognostic factors, as well as intermediate outcomes and recurrence in women with early stage breast cancer. DCCPS stimulated novel research in the assessment of physical activity through the Improving Diet and Physical Activity Assessment program announcements. DCCPS also funds a number of research initiatives that focus on enhancing the research base for physical activity and its effects on cancer, including mechanisms of physical activity behavior change, physical activity in women with infants, the protective effects of physical activity on adolescent smoking prevention, and active video games and sustainable physical activity.

DCCPS also supports the [Transdisciplinary Research on Energetics and Cancer \(TREC\) program](#). The initiative fosters transdisciplinary research to elucidate underlying biological mechanisms of obesity and cancer, explore new biomarkers, develop potential for genetics/genomics to advance individualized treatment, expand translational research focus, add particular emphasis on cancer survivors, and strengthen use and integration of theoretical constructs. DCCPS also has supported a range of research and tool development on school physical education policy, including the Physical Education-Related Policy Classification System (PERSPCS). The PERSPCS provides a platform for the evaluation of physical education laws across states and associations between state physical education staffing and curriculum standards with reported school practices. The PERSPCS and the School Nutrition Policy Classification System form the Classification of Laws Associated with School Students (C.L.A.S.S.). Consisting of two databases,

C.L.A.S.S. is a resource for researchers, policy makers, and school officials interested in improving school nutrition and physical education as a means to address childhood obesity.

DCCPS also created the Standardized Questionnaires of Walking and Bicycling Database Web site, a database containing questionnaire items and a list of validation studies for standardized items concerning walking and biking from multiple national and international physical activity questionnaires. The purpose of this database is to provide easy access to a large number of items assessing duration and frequency of walking and bicycling in the non-disabled adult population.

This research directly provides federal agencies the evidence they need to implement programs to improve the healthy choices of the youngest generation.

BREAST CANCER AND THE ENVIRONMENT

The U.S. public has long been concerned about whether chemical and physical exposures increase the risk of breast cancer. This concern has led to proactive research initiatives led by NCI and the National Institute of Environmental Health Sciences (NIEHS) and several public laws that directed NCI and NIEHS research on this topic.

Breast Cancer and Environmental Research Act of 2008

The Breast Cancer and Environmental Research Act of 2008 established an Interagency Breast Cancer and Environmental Research Coordinating Committee. It also authorized funding for research activities aimed at determining the genomic and environmental etiology of breast cancer. NCI shares responsibility with lead agency NIEHS in implementing the act by managing the committee. This committee's primary objectives are to review federal research activities on environmental factors that may be related to the etiology of breast cancer, summarize advances in understanding the environmental etiology of breast cancer, and make recommendations to the HHS Secretary regarding research gaps and needs.

Breast Cancer and the Environment Research Program

To address how environmental exposures and personal susceptibility factors influence breast cancer risk, NIEHS and NCI co-funded the [Breast Cancer and the Environment Research Program \(BCERP\)](#) in 2003. This program aims to study environmental exposures that may predispose a woman to breast cancer throughout her life, with a focus on specific periods of time referred to as "windows of susceptibility," when the developing breast may be more vulnerable to environmental exposures. BCERP broadly addresses the multiple factors that may influence pubertal onset and long-term risk of breast cancer, with laboratory studies aimed at understanding biological mechanisms in rodents and tissue culture models, and with population studies focused on pubertal development in young girls. The program has evolved to include other critical breast

developmental periods, from in utero to postmenopause. BCERP has become part of NIH's response to the Breast Cancer and Environmental Research Act.

Public Law 103-43 to investigate potential environmental risks for breast cancer through the Long Island Breast Cancer Study Project

Prior to initiating BCERP, NCI, in collaboration with NIEHS, funded and coordinated the Long Island Breast Cancer Study Project (LIBCSP) in response to Public Law 103-43 (<http://epi.grants.cancer.gov/LIBCSP>). LIBCSP, which began in 1993, was a multi-study effort to investigate whether environmental factors were responsible for breast cancer in selected counties in New York and Connecticut. Collectively, LIBCSP consisted of more than 10 studies and the development of a research tool, the Geographic Information System for Breast Cancer Studies on Long Island (LI GIS), which remains available (<http://li-gis.cancer.gov>). The project included human population studies, the establishment of a family breast and ovarian cancer registry, and laboratory research on mechanisms of action and susceptibility in development of breast cancer. The studies did not identify any environmental factors that could be responsible for the elevated incidence of breast cancer on Long Island.

Northeast and Mid-Atlantic Breast Cancer Study

In response to a request of the 1992 Senate Appropriations Committee, DCCPS assumed lead responsibility at NIH, and was joined by NIEHS, in funding research on factors that may have contributed to high breast cancer mortality rates in the northeastern and mid-Atlantic regions of the United States. The six collaborating projects of the Northeast and Mid-Atlantic Breast Cancer Study found no association between breast cancer risk and blood levels of organochlorine compounds. Data from the studies were analyzed separately and in combination.

PRACTICAL DATA AND EVIDENCE FOR POLICY MAKERS

DCCPS develops multiple tools to provide the evidence policy makers and public health officials need to develop thoughtful and comprehensive public health programs. The data and evidence available cover a wide range of topics, including quality of cancer care, the economic burden of cancer, geographic information systems, statistical methods, communication science, tobacco control, and the translation of research into practice.

Health Information National Trends Survey (HINTS)

HINTS collects nationally representative data about the American public's use of cancer-related information. The Health Information Technology for Economic and Consumer Health (HITECH) Act calls for the "meaningful use" of health information technology (HIT) within medical practice. To help HHS define "meaningful use," DCCPS researchers have agreed to use items in HINTS to serve as a policy-informing benchmark on the public's awareness of, and benefits from, this significant legislative activity. DCCPS has also established a Web site cooperatively with other agencies to serve as a collaboration hub for consumer informatics. (hints.cancer.gov)

Surveillance, Epidemiology, and End Results (SEER) Program

The National Cancer Act of 1971 mandated the collection, analysis, and dissemination of data useful in the prevention, diagnosis, and treatment of cancer, leading to the establishment of the SEER program in 1973. SEER is the authoritative source of information on cancer incidence and survival in the United States, and currently collects and publishes cancer incidence and survival data from population-based cancer registries covering approximately 26 percent of the U.S. population. (seer.cancer.gov)

Annual Report to the Nation on the Status of Cancer

Produced in collaboration with the American Cancer Society, CDC, and the North American Association of Central Cancer Registries, and relying on data from SEER, this annual report provides an update on cancer occurrence and trends in the United States. Each report includes a <http://cancercontrol.cancer.gov/>

Special Features section, providing an in-depth look at particular cancer trends. Most recently, the report featured colorectal cancer trends. Past reports have featured topics such as trends in lung cancer, tobacco use, and tobacco control; cancer in American Indians and Alaska Natives; cancer in the U.S. Hispanic/Latino population; and population-based trends in cancer treatment, to name a few examples. (seer.cancer.gov/publications)

Cancer Trends Progress Report

Providing a summary of our nation's progress against cancer, the online report includes key measures of progress along the cancer control continuum and uses national trend data to illustrate where advances have been made. The content, design, and production of this report are the results of a collaboration of federal and state agency partners, consumer advocates, the American Cancer Society, and others. (progressreport.cancer.gov)

State Cancer Profiles Web site

Produced in collaboration with CDC, this comprehensive system of interactive maps and graphs enables the investigation of cancer trends at the national, state, and county levels. The goal of the site is to provide a system to characterize the cancer burden in a standardized manner in order to motivate action, integrate surveillance into cancer control planning, characterize areas and demographic groups, and expose health disparities. (statecancerprofiles.cancer.gov)

Tobacco Control Monograph Series

Established in 1991, the series of 20 monographs provides ongoing and timely information about emerging public health issues in smoking and tobacco use control. The series reduces the time between availability of information from research projects and the publication and wide dissemination of this information and enhances the rapidity with which NCI can use findings from research trials to reduce cancer morbidity and mortality. (cancercontrol.cancer.gov/tcrb/monographs)

PRACTICAL DATA AND EVIDENCE FOR POLICY MAKERS (CONT.)

Classification of Laws Associated with School Students (C.L.A.S.S.)

C.L.A.S.S. is a scoring system that monitors and evaluates state-level school physical education and nutrition policies that have been codified into law. C.L.A.S.S. includes databases, Web tools, state profiles, and research documentation materials in a Web-based resource for researchers, policy makers, school boards, teachers, and the general public. (class.cancer.gov)

INTERNATIONAL POLICY IMPACT

International Agency for Research on Cancer

The World Health Organization's (WHO) International Agency for Research on Cancer (IARC) convenes expert panels to evaluate the world's scientific research on environmental agents to determine whether exposure to those agents causes cancer. Experts from DCCPS are frequently called upon to serve on these panels. The resulting reports are highly authoritative and used extensively worldwide to provide the scientific basis for regulatory purposes and public health action. DCCPS and IARC jointly support investigators studying lung and head and neck cancer risk factors. Working with other organizations, DCCPS and IARC also support workshops on topics of joint interest, such as guidelines for assessing evidence for gene-environment interactions.

Framework Convention on Tobacco Control

The WHO Framework Convention on Tobacco Control (WHO FCTC) is the first treaty negotiated under the auspices of WHO. The FCTC was developed in response to the globalization of the tobacco epidemic and is an evidence-based treaty that reaffirms the right of all people to the highest standard of health. DCCPS is funding a number of projects, including evaluating the effectiveness of tobacco control policies in high- versus

low-income countries and through the support of a special journal issue is working to stimulate the field of global tobacco research to inform future practice and the implementation of the FCTC. A DCCPS scientist is a member of two WHO committees informing FCTC: "Study Group on Tobacco Product Regulation" and "Tobacco Laboratory Network."

International Cancer Screening Network

The International Cancer Screening Network (ICSN) is a voluntary consortium of countries that have active population-based cancer screening programs. These programs can be national or subnational in scope, and established or pilot-based. Administered by the Applied Research Program in DCCPS, the consortium encompasses 33 countries and addresses screening for breast, colorectal, and cervical cancers. The ICSN is dedicated to collaborative research aimed at identifying and fostering efficient and effective approaches to cancer control worldwide through population-based screening. ICSN members have worked together to evaluate cancer screening and improve outcomes through collaborative projects or working groups focused on targeted data research, collection, and assessment that result in best practices recommendations. The work of these groups is often coordinated with comparable activities within the European Cancer Network (ECN), now administered by IARC.

LOOKING AHEAD: THE POLICY HORIZON

Environmental health and toxins

The President's Cancer Panel recently reported findings and conclusions based on testimony from 45 experts from academia, government, industry, and the environmental and cancer advocacy communities, as well as from members of the public, related to environmental causes of cancer. The report also called for information sharing and coordination across agencies. DCCPS remains strongly committed to assessing and identifying risks that could affect an individual's chances of getting cancer.

Combining cancer epidemiology and economics

Due to changes in cancer-related risk factors, improvements in diagnostic procedures and treatments, and the aging of the population in most developed countries, cancer accounts for a major and increasing proportion of national health care expenditures. Measuring the burden of disease is of great interest to public health researchers and policy makers. At the September 2010 international and interdisciplinary meeting in Rome, Italy, health economists, statisticians, and epidemiologists from multiple European countries, the United States, and Canada 1) compared and discussed different methodologies developed in country-specific contexts, in terms of data availability, prevention and health care policies, and health care systems, and 2) improved the dialogue among fields of research with the common aim to estimate present and future costs of cancer.

Benefits of screening evolves with advances in treatment and screening technology

The recent intense debate surrounding the updated USPSTF recommendations on breast cancer are a reflection of a broader discussion about the effectiveness of broad-based population screening for cancers in general. As technologies and treatments improve, the benefits of screening will need to be continually assessed in the context of the modern era of targeted cancer therapies. DCCPS will continue to conduct and support the research that examines the role of various screening modalities in preventive health care.

<http://cancercontrol.cancer.gov/>

Cost of care

The director of the Congressional Budget Office (CBO) has stated that comparative clinical effectiveness research, combined with changes in payment incentives, "offers a promising mechanism for reducing health care costs to a significant degree over the long term while maintaining or improving the health of Americans." America's Health Insurance Plans, a trade association representing health insurance plans, has urged Congress to give CMS the authority to use comparative effectiveness and cost-effectiveness information in its coverage and reimbursement decisions. Costs are not always easy to define or measure. The total treatment costs may differ, sometimes dramatically, depending upon which perspective (e.g., patient, government payer, private insurer, society) is taken in the analysis and which costs are included. Much of the controversy surrounding whether costs should be included in comparative effectiveness research lies in the questions, "When, how, and by whom will the research results be used to make decisions?" The issue is most controversial if results that include costs are used to make insurance reimbursement, pricing, or coverage decisions. The inclusion of costs in research tends to be less controversial when the results are not directly linked to medical and health policy decision making.

DCCPS will address these cost-of-care questions by continuing to fund comparative effectiveness research and through the division's support of the Medical Expenditure Survey (MEPS), a set of large-scale surveys of families and individuals, their medical providers, and employers across the United States. MEPS is the most complete source of data on the cost and use of health care and health insurance coverage.

LOOKING AHEAD: THE POLICY HORIZON (CONT.)

Health IT

Despite modern advances in health IT, the way that evidence on cancer screening, early detection, and treatment is gathered and applied has not moved forward rapidly enough. Individuals and institutions working both in cancer research and treatment could take better advantage of existing resources and create new mechanisms for assessing and sharing information on the effectiveness and value of each individual treatment. DCCPS is engaging the broader community of scientists and practitioners to develop innovative Web-based tools and applications that leverage cancer-relevant data and build upon the behavioral and communication science evidence base to inform cancer prevention and control. The division's PopSciGrid Community Health Portal is one example of an evolving platform that demonstrates how health behavior, policy, and demographic data can be integrated, visualized, and communicated to help empower communities and support new avenues of research and policy for cancer prevention and control. As a proof of concept for cyber-enabled population health research, the portal is designed to encourage multidisciplinary collaboration, data harmonization, and development of new computational methods to rapidly analyze and identify longitudinal, multi-level patterns in health-related data.

The ability to combine data across the diverse cancer registration systems in the United States has also been a top priority for NCI, which led to the implementation of the coding system known as Collaborative Staging System version 2. An expert team developed an algorithm for computing stage across the various existing systems (SEER, AJCC, etc.), an important advancement for determining patient prognosis. The implementation team has started five studies related to the new data elements and planned studies for 2011 as well.

Cancer survival statistics

DCCPS is supporting research and participating in international meetings to improve the statistical methods used to determine survival rates. Current research is focused on developing more accurate models that consider a variety of factors that may influence survival, such as co-morbidities. The research will provide more reliable and efficient statistical methods that can facilitate scientists' understanding of cancer.

Genomics and health policy

DCCPS is increasingly sponsoring research in public health genomics, a new multidisciplinary field concerned with the effective and responsible use of genome-based technologies for the benefit of population health. This research helps inform policies and activities of various government groups such as FDA, CMS, AHRQ, and CDC. It also informs independent evidence review panels, such as the Evaluation of Genomic Applications in Practice and Prevention (EGAPP) working group, an independent multidisciplinary committee sponsored by CDC, which makes recommendations on use of genomic applications in medicine and public health. EGAPP has already addressed several topics related to cancer and, given that more than two-thirds of new genomic applications in practice are cancer related, the panel is likely to address more in the near future. In addition, a DCCPS senior scientist sits on the Institute of Medicine (IOM) Roundtable on Genomics-Based Research for Health. In light of DCCPS' work in genomics, the division is well suited to provide advice on the medical, ethical, legal, and social implications of genomic technologies.

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