

Applied Research Program

Overview

The Applied Research Program (ARP) is one of five programs in the National Cancer Institute's (NCI) Division of Cancer Control and Population Sciences (DCCPS).

ARP's mission is to understand how and why cancer care and control activities in the United States influence patterns of care and trends in cancer incidence, morbidity, mortality and survival. Pursuit of this mission is possible through ARP's support of methodological research to improve survey data collection and evaluation of existing data collected through grants, contracts, NCI divisions, and other agencies. These data are used to evaluate patterns and trends in cancer-associated health behaviors and risk factors, health care services, economics, and outcomes, including patient-reported outcomes.

ARP and Its Branches

ARP supports research and evaluation activities in three branches:

- **Health Services and Economics Branch.** Focuses on the study of cancer-related health services.
- **Risk Factor Monitoring and Methods Branch.** Focuses on monitoring of cancer-related health behaviors and risks in populations, as well as improved measurement of those factors.
- **Outcomes Research Branch.** Focuses on cancer outcomes measurement, analysis, and improvement.

The **Office of the Associate Director** sets Program priorities, determines ARP resource use and staff responsibilities, and carries out initiatives that support the mission of the ARP within the DCCPS.

Areas of Research

Research supported by ARP is targeted to:

- Monitoring risks and health behaviors and developing methods to assess these behaviors.

- Improving methods for assessing cancer-relevant exposures.
- Monitoring cancer screening behaviors in populations.
- Examining the dissemination of cancer treatments in populations.
- Advancing methods and systems for measuring and monitoring quality of cancer care.
- Evaluating and improving methods for measuring cancer outcomes.
- Estimating costs and benefits of cancer interventions at the population level.
- Describing and understanding cancer-related health disparities.
- Improving methods for questionnaire design and testing.
- Improving dissemination of efficacious cancer control interventions.
- Evaluating cancer-related risks associated with drug therapies.
- Identifying clinical, lifestyle, and genomic factors associated with cancer therapy response and adverse events.

Research in each area informs policy decisions in cancer prevention, treatment, and control. Staff also provide analytical support to

guidance, evaluation, and policy development.

Research Tools and Surveys

SEER-Medicare Linked Database. SEER-Medicare data consist of a linkage of the clinical data collected by SEER registries with claims for health services collected by Medicare. These combined datasets can be used to assess patterns of care for persons

with cancer, uses of tests and procedures, and costs of treatment.

SEER-Medicare Health Outcomes Survey (SEER-MHOS) Linked Database. Sponsored by the NCI and the Centers for Medicare & Medicaid Services (CMS), this resource is designed to improve the understanding of the health-related quality of life (HRQOL) of cancer patients and survivors enrolled in Medicare health plans.

Dietary Assessment Instruments. ARP has developed numerous tools for assessing dietary intakes for use in surveys and studies. These include those designed to capture total diet as well as short screeners.

Tobacco Use Supplement to the Current Population Survey (TUS-CPS). This survey of tobacco use contains information on a nationally representative sample of about 240,000 individuals. The data have been used to monitor trends in tobacco use, conduct tobacco-related research, and evaluate tobacco control programs.

Physician Surveys. The ARP tracks the use of screening modalities, therapies, new technologies, and other factors that may influence the national cancer burden. Staff periodically assess physician practice to see whether research findings are having the desired impact on physician knowledge and practice.

National Health Interview Survey (NHIS) Cancer Control Topical Module. ARP participates in the NHIS by providing questions for the survey on cancer risk factors and screening and by analyzing data upon completion of the national survey.

Pharmacogenomics/Pharmacoepidemiology Resources. NCI has developed a website to assist clinicians and researchers who are interested in investigating relationships between pharmaceutical agents, genomic factors, and cancer prevention and treatment. This website provides a wide variety of resources pertaining to pharmacogenomics and pharmacoepidemiology.

Patient-Reported Outcomes Measurement Information System (PROMIS). PROMIS is a publicly available web-based resource that can be used to measure key health symptoms and health-related quality of life (HRQOL) domains. These domains are relevant to a variety of chronic diseases, including cancer. Branch staff are actively involved in PROMIS; they are

contributing to the development of the item banks and cancer specific HRQOL domains. The PROMIS Assessment Center, which assists investigators in using patient-reported outcomes for research studies, can be accessed at <http://www.nihpromis.org>.

More detailed listings of Tools and Surveys: <http://appliedresearch.cancer.gov>

Working with Us

The ARP welcomes the opportunity to explore our areas of research with a broad range of investigators. Some of the mechanisms used by scientists and students to work with us include NIH Training Programs such as the Cancer Research Training Award or the Division of Cancer Prevention Fellowship Program. ARP also works with NIH Guest Researchers and Special Volunteers who donate their time and gain research experience. ARP funding mechanisms for cancer research include the full range of NIH mechanisms, including grants and contracts, educational training grants, small business innovation research grants, and cooperative agreements.

ARP currently has Program Announcements calling for applications in areas including:

- Geographic and Contextual Influences on Energy Balance-Related Health Behaviors
- Cancer Surveillance Using Health Claims-Based Data System
- Development, Application, and Evaluation of Prediction Models for Cancer Risk and Prognosis
- Diet & Physical Activity Assessment
- Methodology and Measurement in the Behavioral and Social Sciences
- Research on the Economics of Diet, Activity, and Energy Balance
- The Effect of Racial and Ethnic Discrimination/Bias on Health Care Delivery
- Effects of Emerging Cellular, Molecular, and Genomic Technologies on Cancer Health Care Delivery
- Improving Health Care for Obese Patients