United States Government Accountability Office

Report to Congressional Committees

September 2017

CENTERS FOR DISEASE CONTROL AND PREVENTION

Use of Special Interest Projects to Fund Prevention Research Centers

GAO-17-693

September 2017

CENTERS FOR DISEASE CONTROL AND PREVENTION

Use of Special Interest Projects to Fund Prevention Research Centers

GAO Highlights

Highlights of GAO-17-693, a report to congressional committees

Why GAO Did This Study

CDC, an agency within HHS, created the SIP program in 1993 as a supplemental funding mechanism to support health promotion and disease-prevention research being done at its PRCs. Currently, there are 26 PRCs. In fiscal years 2014 through 2016, CDC awarded more than $40 million for SIPs. SIP topics vary from year to year but are to be aligned with public health priorities, such as the Healthy People 2020 Objectives—HHS's 10-year national objectives for improving Americans' health. SIPs are sponsored and primarily funded by CDC organizational units, referred to as sponsoring units.

House Report 114-195 included a provision for GAO to review the SIP program. This report describes (1) what research CDC chooses to fund through the SIP mechanism, and (2) what have been identified as advantages and disadvantages of SIP eligibility being limited to PRCs. GAO reviewed documents from CDC and analyzed CDC data on SIPs awarded in fiscal years 2014 through 2016. GAO also interviewed CDC officials, including officials from 5 of the 10 sponsoring units that together accounted for over 90 percent of SIP funding during this time period, officials from 4 PRCs with varying experience with SIPs, and 4 organizations with knowledge of prevention research.

View GAO-17-693. For more information, contact Marcia Crosse at (202) 512-7114 or crossem@gao.gov

What GAO Found

The Centers for Disease Control and Prevention (CDC) uses the Special Interest Project (SIP) mechanism to fund community-based prevention research that would benefit from a multidisciplinary group of researchers. SIPs are supplemental funding awards that focus on topics of interest or gaps in knowledge or research and can also support the development of state and local public health interventions and policies. SIPs are only available to CDC's Prevention Research Centers (PRC)—selected academic health centers at universities with schools of public health or medical schools with residency programs in preventive medicine.

CDC officials said that they would choose the SIP mechanism when the research they want to fund is intended to involve community-based organizations or members of the community. They also use SIPs when they seek access to researchers who have established partnerships with diverse population groups across the country. They would not choose the SIP mechanism when the research they want to fund is not focused on public health prevention, including research that is clinical or laboratory-based; would be better suited for an entity other than an academic health center; or would be better funded through a contract to allow CDC to direct the research protocol. CDC's collaborations with experts in the field—including those at other federal agencies—help to inform its development of the research funding opportunities offered through SIPs. For example, CDC officials use information they learn through participation in multiagency workgroups and advisory committees to identify gaps in knowledge that SIP funding could help to address. CDC officials also stated that this collaboration can also help to avoid potential duplication of research.

The key advantage of SIPs being limited to PRCs is the ability to rapidly initiate research, according to officials with whom GAO spoke—including officials from CDC, PRCs, and organizations with knowledge of prevention research. Factors cited as contributing to this ability included the research infrastructure and community relationships already established at the PRCs. Officials from CDC and outside organizations also identified a few potential disadvantages to limiting eligibility for SIPs, including the potential for reduced access to expertise from researchers or others who are not affiliated with the universities in which PRCs are located, although some noted that PRCs may bring in outside expertise through subcontracts with other entities.

The Department of Health and Human Services (HHS) provided technical comments on a draft of this report, which GAO incorporated as appropriate.

Contents

Abbreviations

CDC	Centers for Disease Control and Prevention
FOA	funding opportunity announcement
HHS	Department of Health and Human Services
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion
NIH	National Institutes of Health
PRC	Prevention Research Center
SIP	Special Interest Project
SME	subject matter expert

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

September 7, 2017

The Honorable Roy Blunt
Chairman
The Honorable Patty Murray
Ranking Member
Subcommittee on Labor, HHS, Education, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Tom Cole
Chairman
The Honorable Rosa DeLauro
Ranking Member
Subcommittee on Labor, HHS, Education, and Related Agencies
Committee on Appropriations
House of Representatives

The Centers for Disease Control and Prevention (CDC) created the Special Interest Project (SIP) program in 1993 to be a supplemental funding mechanism for its Prevention Research Center (PRC) program. The PRC program was authorized by Congress and established by CDC to fund research and demonstration projects at academic health centers.[1] CDC funds PRCs—which are centers at universities that must have accredited schools of public health or schools of medicine with a preventive medicine residency program—every 5 years through a competitive process. For the current 5-year project period, which runs from fiscal year 2014 through fiscal year 2019, CDC is funding 26 PRCs.[2]

SIPs, which are only available to researchers affiliated with the universities in which the PRCs are located, are cooperative agreements to provide additional funding for health promotion and disease prevention research projects that focus on a topic of interest or a gap in knowledge or research. SIPs can also support the development of state and local public health interventions and policies. SIP topics vary from year to year

[1]Pub. L. No. 98-551, § 2(d), 98 Stat. 2815, 2816-17 (1984), adding section 1706 to the Public Health Service Act. See 42 U.S.C. § 300u-5.

[2]The current PRC project period runs from September 30, 2014 through September 29, 2019.

but are to be aligned with public health priorities, such as the Healthy People 2020 Objectives—the Department of Health and Human Services' (HHS) 10-year national objectives for improving the health of Americans.

SIPs are sponsored and primarily funded by CDC organizational units, which we refer to as sponsoring units; as of fiscal year 2016, there are 10 CDC sponsoring units that have funded SIPs during the current PRC project period.[3] The number of SIPs varies from year to year, with at least some providing for multiple years of funding; the number of PRCs funded per SIP (i.e., the number of awards) and the funding amounts per award also vary. Total funding provided to date for the SIPs awarded in fiscal years 2014 through 2016—including initial funding and continuation funding—was $40.7 million.[4]

House Report 114-195, which accompanied the Departments of Labor, Health and Human Services, Education, and Related Agencies Appropriations Bill, 2016, included a provision for us to review certain aspects of the SIP program. This report describes:

1. what research CDC chooses to fund through the SIP mechanism, and
2. what have been identified as the advantages and disadvantages of SIP eligibility being limited to PRCs.

To describe what research CDC chooses to fund through the SIP mechanism, we reviewed the funding opportunity announcements (FOA) for the SIP program for fiscal years 2014 through 2016, and the fiscal year 2014 FOA for the PRC awards. In addition, we reviewed CDC data on SIPs, including the number of SIPs, the number of SIP awards, and SIP funding by CDC sponsoring unit and by PRC, for fiscal years 2014 through 2016, the most recent years for which funding had been awarded.[5] To assess the reliability of these data, we interviewed CDC officials who prepared the data for us, compared the data to publicly available information on CDC's website, and tested the data for missing

[3]Some SIPs may also be funded in part by other HHS agencies.

[4]The SIP funding is in addition to the PRC program funding provided by CDC. PRC program funding in fiscal years 2014 through 2016 totaled $57,642,000. Specifically, each of the 26 PRCs was awarded $750,000 in PRC program funding in fiscal year 2014, $733,000 in fiscal year 2015, and $734,000 in fiscal year 2016; for a total of $2,217,000 to date for the current project period.

[5]The number of SIP awards can exceed the number of SIPs, because CDC sponsoring units may make multiple awards (i.e., fund more than one PRC) for a particular SIP.

or erroneous values. We determined that the data we used were sufficiently reliable for the purposes of our reporting objectives. We interviewed CDC officials from the PRC program office—housed in the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)—to understand their role in administering the SIP program. We also interviewed officials from 5 of the 10 CDC sponsoring units that funded SIPs in fiscal years 2014 through 2016 about why they choose the SIP mechanism over other mechanisms, among other topics.[6] We selected these units because they sponsored the largest number of SIPs and greatest amount of SIP funding—together, they accounted for 88 percent of all SIPs and 93 percent of SIP funding during this time period. To corroborate their statements, we reviewed available documentation provided by CDC officials, including guidance provided by the PRC program office to sponsoring units about developing SIPs. We also reviewed information provided by CDC sponsoring units on their processes for gathering information on gaps in knowledge and topics of interest that can be developed into SIP research topics, including their collaboration with federal and nonfederal experts. We also reviewed relevant laws, regulations and agency policies for the SIP and PRC programs.

To describe what have been identified as the advantages and disadvantages of SIP eligibility being limited to PRCs, we conducted interviews with the CDC officials described above and officials from a nongeneralizable selection of four PRCs. We selected the four PRCs to obtain a variety of experiences with the SIP program in fiscal years 2014 through 2016. Our selection resulted in: a PRC that had applied for, but not been awarded any SIPs; the PRC with the greatest number of SIP awards; the PRC that was awarded the greatest amount of funding for an individual SIP; and a first-time PRC that received SIP funding.[7] We also interviewed officials from four organizations with knowledge of public health research and familiarity with the academic institutions conducting this work (referred to in this report as outside organizations) to obtain their perspective on the advantages and disadvantages of the limited eligibility

[6]The five selected sponsoring units were the National Center for Immunization and Respiratory Diseases' Division of Viral Diseases; the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention's Division of STD Prevention; and three divisions from NCCDPHP—the Division of Cancer Prevention and Control, the Division of Population Health, and the Division of Nutrition, Physical Activity and Obesity.

[7]The PRCs we selected were at the University of Pittsburgh, University of Washington, Johns Hopkins University, and University of Pennsylvania, respectively.

for SIPs.[8] We also used our review of the SIP and PRC FOAs to supplement the information obtained during our interviews.

We conducted this performance audit from October 2016 to September 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

To help fulfill its role as the nation's health protection agency, HHS's CDC conducts and supports research, including prevention research. Prevention research includes applied public health research that develops and evaluates health promotion and disease prevention and control strategies that are community- and population-based.

CDC's PRC Program and SIP Eligibility

Through legislation enacted in 1984, Congress authorized, and CDC later established, the PRC program to fund health promotion and disease-prevention research.[9] The legislation mandated that the PRCs to be funded be located at academic health centers capable of providing a multidisciplinary faculty with expertise in public health, relationships with professionals in other relevant fields, graduate training and demonstrated curricula in disease prevention, and a capability for residency training in public health or preventive medicine. The PRCs, the first of which were funded in 1986, also serve as demonstration sites for the use of new and innovative applied public health research and activities for disease prevention and health promotion. The PRC program is administered by CDC's NCCDPHP. CDC makes its PRC awards through a competitive process; there are currently 26 PRCs, located in 24 states, funded for fiscal years 2014 through 2019.

[8]The outside organizations we interviewed were the American College of Preventive Medicine, the American Public Health Association, the Association of Schools and Programs of Public Health, and the Society for Prevention Research. These organizations' members include PRCs, researchers affiliated with PRCs, as well as programs or researchers not affiliated with PRCs or the universities in which they are located.

[9]Pub. L. No. 98-551, § 2(d), 98 Stat. 2815, 2816-17 (1984), adding section 1706 to the Public Health Service Act. See 42 U.S.C. § 300u-5.

Funded PRCs are able to compete for SIPs, which were created by CDC in 1993 to provide supplemental funding to the PRCs to design, test, and disseminate effective applied public health prevention research strategies. According to CDC, eligibility for SIPs is limited to PRCs because the centers are "uniquely positioned to oversee, coordinate, and perform applied public health research that promotes the field of health promotion and disease prevention research due to their established relationships with multidisciplinary faculty and community partners."[10]

SIP Award Process and Public Disclosure

Subject matter experts (SME) within CDC sponsoring units propose potential SIPs each year, depending on unit needs—e.g., particular research gaps that have been identified—and available funding. After being approved by the leadership of the sponsoring unit, the sponsoring units' proposals are reviewed internally by NCCDPHP and others before being included in a SIP FOA. The SIP FOA is assembled by NCCDPHP's extramural research group, and when complete, is posted publicly on the grants.gov website. SIP applications are subject to an external peer review process, as well as a secondary internal review by CDC officials. SIP awards are generally made on the last day of the fiscal year. Sponsoring units fund both individual SIPs, which are awarded to one or more PRCs to work independently on a particular research topic, and thematic network SIPs, which are awarded to multiple PRCs to work collaboratively on a research agenda related to a specific health issue, such as cancer prevention or brain health.

In fiscal years 2014, 2015, and 2016, CDC announced the availability of 51 SIPs—of which 43 were funded.[11] The 43 funded SIPs resulted in a total of 76 awards to 22 of the 26 PRCs.[12] (See appendix 1 for detailed information on the SIPs awarded in fiscal years 2014 through 2016, including information on SIPs awarded by sponsoring unit, SIP funding by PRC, and a complete listing of all SIPs awarded during this period.)

[10]HHS policy specifies that agencies can limit eligibility for competitive awards with appropriate justification described in the FOA.

[11]CDC funded 29, 9, and 5 new SIPs in each year, respectively.

[12]CDC may award SIP funding to one or more PRCs. For example, a thematic network SIP, by its nature, would award funds to multiple PRCs.

CDC publicly discloses information on SIP awards on its website.[13] Specifically, CDC has a PRC project database on its website that, as of July 2017, included information on SIPs from fiscal years1999 through 2015, as well as other information related to the PRCs.[14] The project database includes the SIP number, project title, principal investigator, PRC funded, and the CDC sponsoring unit. It does not include the amount of the funding.

CDC Chooses the SIP Mechanism to Fund Community-Based Prevention Research

CDC Chooses the SIP Mechanism to Fund Research Focused on Public Health Prevention Involving Community Participation

In general, CDC officials we spoke with told us they will choose the SIP mechanism when seeking to fund prevention research that is community-based and would benefit from having access to a multidisciplinary group of researchers.[15] Specifically, CDC officials from most of the sponsoring units we spoke to told us that they use the SIP mechanism when community participation is important to the research. For example, one sponsoring unit used a SIP for the development and testing of an integrated comprehensive communication strategy to promote vaccination for the human papilloma virus in the United States. The SIP was focused on developing strategies that engaged local or regional health systems, community-based organizations, and state health departments as key community partners, in order to enhance the acceptability of the

[13]In addition, some information on SIPs is included in NIH's RePORTER system, an online searchable database on federally funded research projects. This information is captured as part of information on the PRC awards.

[14]Prevention Research Centers Project Database, accessed on July 25, 2017, https://nccd.cdc.gov/PRCResearchProjects/Search/SearchCriteria.aspx. In June 2017, CDC officials indicated that information on SIPs awarded in fiscal year 2016 should be posted to the project database soon.

[15]Officials from PRCs we spoke with explained that SIP principal investigators and research staff include faculty and staff with expertise in a variety of academic areas including nursing, public health, community health, medicine, education, social work, global health, biostatistics, and communications.

vaccination among parents with vaccine-eligible children and to increase the likelihood that a provider would recommend the vaccination. CDC officials from one sponsoring unit also told us they use the SIP mechanism when they need to engage community leaders and members of the public in order to answer the research questions. For example, CDC used the SIP mechanism to fund a research project focused on enhancing the knowledge, skills, and capacity of community health advocates and leaders from community-based organizations, with the goal to provide participants with the skills necessary to assess local community health needs in order to improve community health. According to CDC, an important aspect of the research was the evaluation of whether there was an increase in the skills and leadership capacities of participants and their influence on local improvements in their communities.

In addition, CDC officials told us that they choose the SIP mechanism to conduct research when seeking to access researchers who have established partnerships with diverse population groups across the country. PRCs are located across the United States and are expected to have cultivated relationships with their local communities. For example, one sponsoring unit used a SIP to fund research on the barriers to colorectal cancer screening among South Central Asian immigrants, primarily Indians and Pakistanis, who have been shown to have low screening rates. The purpose of the research was to inform the development of culturally relevant strategies to increase colorectal screening. As such, to be awarded the SIP, a PRC had to demonstrate that it had established relationships within the South Central Asian community and an ability to recruit from these populations.

In contrast, CDC officials explained that they would not choose the SIP mechanism if the desired research would be better suited for an entity other than an academic health center. For example:

- Officials from one sponsoring unit told us that a different mechanism was used for a project testing obesity prevention and management strategies because the project required working directly with health care service providers in the community, such as federally qualified health centers.
- Officials from another sponsoring unit chose not to use a SIP for a project to evaluate vaccine impact on recurrent respiratory papillomatosis (a disease in which tumors grow in the respiratory

tract). This research was being conducted by the providers who care for the patients, as opposed to academic researchers.

CDC officials provided examples of other instances when they would not use a SIP, and instead choose another mechanism to support the desired research. Specifically, officials from one sponsoring unit told us that when conducting a research project related to cervical cancer, they did the work through a contract in order to allow the SME to direct the research protocol, which included collaboration with organizations that maintained cancer data, as well as the deliverables and timeline for completion of the work. Sponsoring unit officials also told us that they will not choose the SIP mechanism when the research they want to fund is not focused on public health prevention, such as when the research is clinical or laboratory based, or when the timing of the research does not align with the PRC funding cycle (e.g., a longitudinal study or a study that would cross two PRC funding cycles).

Collaboration with Federal and Nonfederal Experts Informs Development of SIP Funding Opportunities and Reduces Potential for Unnecessary Duplication

CDC officials told us that CDC SMEs' relationships and collaboration with experts in the field—including federal and nonfederal experts—help inform the development of the research funding opportunities made available through SIPs, as well as other mechanisms. In our prior work, we found that interagency collaboration, which can include information sharing and communication among federal experts, may reduce the likelihood of unnecessary duplication.[16]

According to officials from all of the sponsoring units we spoke with, SMEs have developed collaborative relationships with federal and nonfederal experts in their fields; these relationships develop through SMEs' participation in workgroups, advisory committees, and joint projects, as well as through informal interactions at in-person meetings and conferences. (See table 1 for examples of the workgroups and advisory committees in which CDC SMEs participate.) These interactions, as well as the SME's review of the scientific and nonscientific literature, are used to determine gaps in knowledge and inform the research proposed to be funded through SIPs or other mechanisms.

[16]GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms,* GAO-12-1022 (Washington, D.C.: Sept. 27, 2012); and GAO, *Fragmentation, Overlap and Duplication: An Evaluation and Management Guide*, GAO-15-49SP (Washington, D.C.: April 14, 2015).

Table 1: Examples of Groups in Which Centers for Disease Control and Prevention (CDC) Subject Matter Experts (SME) Participate

Name of Group	Description of Group
HHS Interagency Collaborative to Advance Research in Epilepsy	Includes SMEs from the Health Resources and Services Administration, National Institutes of Health (NIH), Department of Veterans Affairs, and Centers for Medicare & Medicaid Services that work to coordinate epilepsy research activities and collaboration across the agencies.
National Collaborative on Childhood Obesity Research	Includes SMEs from CDC, NIH, Department of Agriculture, and the Robert Wood Johnson Foundation, who focus on efforts to accelerate the process in reducing childhood obesity.
Federal Physical Activity Surveillance Workgroup	Includes SMEs from CDC, NIH, Environmental Protection Agency, National Park Service, Department of Transportation, and others that work to create better physical activity surveillance across the government.
Advisory Committee on Breast Cancer in Young Women	Physicians, researchers, advocates, and breast cancer survivors who are tasked with providing advice and guidance to CDC regarding the research, development, implementation and evaluation of evidence-based approaches to prevent breast cancer—particularly among those at heightened risk—and support early cancer detection and support among young women, who develop the disease.
Advisory Committee on Immunization Practices' HPV Vaccines Workgroup	Comprised of federal experts, academic researchers and medical associations, including the American Academy of Pediatrics, who are tasked with reviewing data and providing options for recommendations regarding use of human papilloma virus (HPV) vaccines for consideration by the full Advisory Committee on Immunization Practices, which is responsible for establishing the immunization recommendations for the United States.

Source: GAO review of CDC and publicly available information. | GAO-17-693.

CDC SMEs' collaboration with federal and nonfederal experts may lead to the development of specific research projects that are funded through a SIP. For example:

- SMEs from one sponsoring unit identified a series of research gaps that existed within skin cancer prevention while working on the *Surgeon General's Call to Action to Prevent Skin Cancer Report* with multiple federal agencies, including the Food and Drug Administration, the National Institutes of Health's (NIH) National Cancer Institute, the Environmental Protection Agency and the Office of the Surgeon General.[17] CDC developed a SIP to address one of these gaps—assessing the knowledge, attitudes and beliefs about skin cancer in order to develop and test communication strategies for skin cancer prevention, specifically for adults aged 18 to 49.

[17]U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent Skin Cancer.* Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2014. Accessed on June 20, 2017, https://www.surgeongeneral.gov/library/calls/prevent-skin-cancer/call-to-action-prevent-skin-cancer.pdf

- SMEs from another sponsoring unit participate in the Interagency Coordinating Committee on the Prevention of Underage Drinking with 15 federal partners, including the Substance Abuse and Mental Health Services Administration, Federal Trade Commission, Department of Justice, and NIH's National Institute on Alcohol Abuse and Alcoholism. According to CDC, this group meets regularly to discuss their work and efforts to address prevention of underage drinking.[18] Based on this collaboration and the review of other resources, including research projects and reports by committee members, CDC SMEs determined there was a gap in knowledge related to monitoring youth exposure to alcohol marketing on the Internet, and developed and awarded a SIP in 2014 to address this issue.
- In 2011, CDC SMEs hosted an expert conference—including federal and nonfederal researchers, health care providers, and representatives from advocacy groups—to discuss how patients and health care providers can communicate effectively before, during, and after prostate cancer screenings. Recommendations from this conference resulted in a 2014 SIP focused on the development of a multimedia decision aid to help patients and their family members understand treatment options after a positive prostate cancer diagnosis.

Collaboration with experts may also increase the resources available for a specific research project. For example, officials from the CDC unit that sponsors the National Cancer Prevention and Control Research Network SIP told us that the network is jointly funded with NIH's National Cancer Institute. This joint funding allows for an expanded pool of resources, and officials stated that the network is able to achieve more than any individual PRC could achieve on its own.

CDC officials told us that the knowledge gained through coordination and information sharing also mitigates the potential for duplication of research efforts. For example, officials from one sponsoring unit told us that as a part of their ongoing discussions with NIH on sexually transmitted disease prevention, they learned of research NIH was conducting that was related to a SIP that CDC planned to fund. CDC decided not to fund the SIP and instead entered into a joint funding arrangement with NIH to address its

[18]HHS, on behalf of the Interagency Coordinating Committee, was mandated by the Sober Truth on Preventing Underage Drinking Act to prepare an annual report summarizing all federal agency activities designed to prevent underage alcohol use. The Act also requires HHS to collect information on alcohol marketing to underage drinkers, which is carried out through CDC.

research needs. The joint funding arrangement allowed CDC and NIH to expand the number of sites involved in the research NIH already had underway.

Ability to Rapidly Initiate Research Cited as Key Advantage of Limited Eligibility for SIPs; Disadvantages Included Potentially Reduced Access to Outside Expertise

The main advantage of limiting eligibility for SIPs to the PRCs is the ability to rapidly initiate high-quality research, due to the infrastructure and relationships the PRCs have in place, according to officials from CDC, outside organizations, and PRCs.[19] For example, officials we spoke with from one PRC told us that they typically learn from CDC if their application for a SIP has been successful in August of a given year, and awards are made at the end of September, with the expectation that the research should begin shortly thereafter. These officials added that because many SIPs are only providing funds for one or two years, there is no time to waste in getting the research up and running. Officials from one outside organization noted that this faster turnaround in getting the research started can result in faster publication of results.

Officials from CDC and others told us that PRCs have infrastructure in place to do multidisciplinary research, which an official from one outside organization told us includes the ability to manage federal funds and recruit study participants. This infrastructure contributes to the speed with which PRCs can start a SIP. For example, officials from one CDC sponsoring unit told us that a PRC's existing infrastructure means that it is not starting from scratch when it conducts research through a SIP. In addition, a representative from one outside organization said that it is a good use of federal resources to continue to invest in federally supported infrastructure—as in the case of offering supplemental funding to PRCs in the form of SIP awards.

In addition to research infrastructure, officials also told us that PRCs have established relationships with community partners. One outside organization told us that these relationships are particularly important for prevention research, which often involves working with populations who may be reluctant to participate in research. Research has confirmed the need for community engagement when studies include disadvantaged

[19]Officials from some sponsoring units also noted that another advantage of using the SIP mechanism is that it reduces administrative burden for them during the pre-award process. The burden is lessened because they do not need to develop the FOA or coordinate the peer review process of applications; those steps are handled by NCCDPHP's extramural research group.

groups. Specifically, a systematic review of the literature on strategies for increasing participation of disadvantaged groups in research concluded that researchers need to operate via community partnerships, because they can increase trust among the study population.[20] Similarly, one sponsoring unit told us about the importance of the PRCs' credibility in the neighborhoods where the research is being done. Given this, for some SIPs, the FOA explicitly requires PRCs to outline their partnerships with community organizations in their applications or notes that descriptions of these relationships will be considered when applications are scored by reviewers. For example, the fiscal year 2015 FOA for a SIP that was to identify means for increasing screening rates for breast and cervical cancer in Muslim women asked that applicants "describe and provide evidence (such as supporting letters and publications) of sufficient institutional, community and other necessary support for carrying out this project."

In addition, officials from CDC and outside organizations noted that there are benefits of having eligibility limited to entities that have already been vetted, such as an increased likelihood of the research being successful. To become a PRC, the eligible academic institutions must go through a competitive peer review process, through which they are evaluated based on their ability to contribute to improved community and population health, impact public health programs and practice, and advance the field of public health promotion and disease prevention, among other things. Because of this vetting, an official from one outside organization told us that PRCs are likely to be successful in their work—mitigating the risk faced were an award to be made to an unknown entity. An official from another outside organization noted that CDC sponsoring units work closely with the PRCs on implementing the SIPs, and it is beneficial that the PRCs are "known entities" who have established relationships with CDC.

Officials from CDC and outside organizations identified a few potential disadvantages to limiting eligibility for SIPs, including the potential for reduced access to expertise outside of the PRCs and the risk of being

[20]Bonevski, B., M. Randell, C. Paul, K. Chapman, L. Twyman, J. Bryant, I. Brozek, and C. Hughes, "Reach the Hard-to-Reach: A Systematic Review of Strategies for Improving Health and Medical Research with Socially Disadvantaged Groups," *BMC Medical Research Methodology*, vol. 14, no. 42 (2014).

unable to conduct desired research at the desired time.[21] Specifically, officials from outside organizations told us that there may be reduced access to the expertise of researchers from other universities or other entities. CDC officials and officials from PRCs said that PRCs have the ability to bring in the expertise from outside the PRC institution through subcontracts with other entities, which could help alleviate this concern. For example, for a SIP on skin cancer prevention messaging, the PRC officials at the University of Pennsylvania told us they had multiple subcontracts, including one with a researcher at another university with expertise on indoor tanning.

Officials from two outside organizations stated that there is a missed potential for innovation and new approaches if new entities are not eligible for SIPs or added to the pool of PRCs. Although there is a competition for PRCs every 5 years, the PRCs have been fairly stable in recent years—2 new PRCs were added in fiscal year 2014, while more than half (15 of 26) of the current PRCs have been continuously funded by CDC for at least 15 years.

Because SIPs are only announced once per year and are awarded at the end of the fiscal year, one other potential disadvantage of SIPs' limited eligibility is the risk that CDC's desired research may not be conducted, or may not be able to be conducted at the desired time. If the research project is ultimately not funded through the SIP, there is not sufficient time within the fiscal year to pursue an alternative mechanism.[22] CDC sponsoring unit officials described instances where they did not receive any applicants or did not receive enough qualified applicants for individual SIPs and thus were not able to fund a SIP or made fewer awards than planned. In fiscal years 2014 through 2016, 5 of 51 SIPs included in the FOAs were ultimately not funded because they received no applications or the applications received were not a good fit for the desired project. For an additional 2 SIPs, the sponsoring units funded fewer awards than planned because they did not receive enough quality applications.

[21]Officials from some sponsoring units also noted that going through the PRC program office to fund research through a SIP adds an additional administrative layer post-award, particularly for those housed under a different organizational unit within CDC. Officials told us that this made scheduling meetings related to the work more difficult, because more people needed to be included.

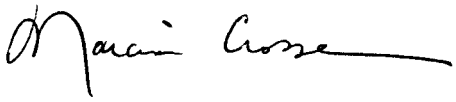
[22]The risk of not being able to conduct the desired research, or conduct the research at the desired time, could also arise with other funding opportunities that are awarded at the end of the fiscal year.

Agency Comments

We provided a draft of this report to HHS for review. HHS provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the Secretary of the Department of Health and Human Services, the Director of the Centers for Disease Control and Prevention, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-7114 or crossem@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



Marcia Crosse
Director, Health Care

Appendix I: Information on Centers for Disease Control and Prevention (CDC) Special Interest Projects (SIPs)

Tables 2, 3, and 4 below present data on SIPs awarded in fiscal years 2014 through 2016.

Table 2: Number of Special Interest Projects (SIP) and Funding by Sponsoring Unit, Fiscal Years 2014-2016

Centers for Disease Control and Prevention (CDC) sponsoring unit	Number of SIPs funded	Number of SIP awards	Total SIP funding awarded
National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), Division of Cancer Prevention and Control	16	26	**$16,064,229**
NCCDPHP, Division of Population Health	14	29	**$15,790,320**
NCCDPHP, Division of Nutrition, Physical Activity, and Obesity	5	11	**$3,991,728**
National Center for Immunization and Respiratory Diseases, Division of Viral Diseases	1	2	**$1,289,984**
NCCDPHP, Division of Reproductive Health	1	1	**$1,251,607**
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Division of STD Prevention	2	2	**$924,995**
NCCDPHP, Division of Community Health	1	2	**$596,195**
National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention	1	1	**$399,980**
NCCDPHP, Office on Smoking and Health	1	1	**$236,245**
NCCDPHP, Division of Oral Health	1	1	**$175,000**
Total	**43**	**76**	**$40,720,283**

Source: GAO analysis of CDC data. | GAO-17-693.

Notes: CDC sponsoring units may make multiple awards for a particular SIP. Total funding includes initial funding and continuation funding for fiscal years 2014, 2015, and 2016.

Table 3: Centers for Disease Control and Prevention (CDC) Special Interest Project (SIP) Funding by Prevention Research Center (PRC), Fiscal Years 2014-2016

Prevention Research Center	Year became a PRC	Number of SIP awards	Total SIP funding awarded
Case Western Reserve University	2009	4	**$1,909,550**
Dartmouth College	2009	1	**$1,042,886**
Johns Hopkins University	1993	4	**$4,189,016**
Morehouse School of Medicine	1998	1	**$719,000**
New York University School of Medicine	2009	6	**$2,317,214**
Oregon Health and Science University	2004	2	**$1,099,404**
Tulane University	1998	1	**$296,195**
University of Alabama at Birmingham	1993	1	**$699,995**
University of Arizona	1998	3	**$1,263,700**
University of California San Francisco	2014	4	**$2,902,595**
University of Illinois at Chicago	1990	6	**$1,935,978**
University of Iowa	2002	3	**$1,224,756**
University of Kentucky	2000	3	**$1,730,671**
University of Massachusetts Medical School-Worcester	2009	1	**$243,200**
University of Minnesota	1996	4	**$1,538,067**
University of New Mexico Health Sciences Center	1994	1	**$243,200**
University of North Carolina Chapel Hill	1986	6	**$4,529,695**
University of Pennsylvania	2014	7	**$4,077,246**
University of Rochester	2004	3	**$1,267,733**
University of South Carolina at Columbia	1993	3	**$1,300,497**
University of Washington	1986	11	**$5,964,927**
Yale University	1998	1	**$224,758**
Total		**76**	**$40,720,283**

Source: GAO analysis of CDC data. | GAO-17-693.

Notes: Year became a PRC refers to the year that the institution was first funded by CDC through the PRC program. PRCs listed here have been continuously funded since the date listed, except for University of Illinois at Chicago, which was not funded during fiscal years 2009 through 2013. Total funding includes initial funding and continuation funding for fiscal years 2014, 2015, and 2016. In addition to the SIP funding, CDC awarded each PRC $750,000 in PRC program funding in fiscal year 2014, $733,000 in fiscal year 2015, and $734,000 in fiscal year 2016; for a total of $2,217,000 to date to each for the current project period, or $48,774,000 across the 22 PRCs that received SIP awards during this period.

Table 4: Special Interest Projects (SIP) and Awardees by Centers for Disease Control and Prevention (CDC) Sponsoring Unit, Fiscal Years 2014-2016

SIP topic	Fiscal year awarded	Length of project period (years)	Prevention Research Center awardee(s)	Total funding awarded to date
National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) Division of Cancer Prevention and Control				
Pilot Program of Mailed Fecal Immunochemical Tests to Increase Colorectal Cancer Screening Rates	2014	5[a]	University of California San Francisco	**$1,252,728**
			University of Washington	**$839,787**
Cancer Prevention and Control Research Network – Coordinating Center	2014	5	University of North Carolina Chapel Hill	**$2,324,999**
Cancer Prevention and Control Research Network – Collaborating Centers	2014	5	Case Western Reserve University	**$824,699**
			Oregon Health and Science University	**$824,141**
			University of Iowa	**$825,000**
			University of Kentucky	**$823,183**
			University of Pennsylvania	**$824,120**
			University of South Carolina at Columbia	**$824,997**
			University of Washington	**$825,000**
Understanding the Barriers to Colorectal Cancer Screening among South Central Asian Immigrants in the United States	2014	1	New York University School of Medicine	**$250,000**
			University of California San Francisco	**$249,942**
Development and Evaluation of Active Surveillance Decision aid for Men with Low-grade, Local-stage Prostate Cancer	2014	2	University of Rochester	**$398,648**
Utilizing Data Linkages to Populate Treatment Summaries for Cancer Survivors	2014	2	University of Kentucky	**$247,500**
Skin Cancer Prevention: Finding Messages that Work to Reduce Incidental and Intentional UV Exposure	2014	3	University of Pennsylvania	**$1,489,802**
Integrating Self-Management Education with Cancer Survivorship Care Planning	2015	3	University of Pennsylvania	**$549,711**
Economic Impact of Clinical Trials Among Children Diagnosed with Cancer	2015	2	University of Pennsylvania	**$240,000**
Using Cancer Registry Data to Promote Proactive Tobacco Cessation among Adult Cancer Survivors	2015	3	New York University School of Medicine	**$447,500**
Utilizing Targeted Community Interventions to Increase Breast and Cervical Cancer Screening Among Muslim Women	2015	3	New York University School of Medicine	**$349,999**
Economic Costs of Quality Assurance in Lung Cancer Screening Programs	2015	1	University of Washington	**$249,952**

SIP topic	Fiscal year awarded	Length of project period (years)	Prevention Research Center awardee(s)	Total funding awarded to date
Evaluating the Adoption and Implementation of an Evidence-based Patient Navigation Intervention for Colonoscopy Screening	2016	2	University of Washington	**$250,000**
Formative Development of an Instrument to Predict Adherence to Active Surveillance (AS) for Localized Prostate Cancer	2016	2	University of Iowa	**$224,756**
Implementation of Community-based, Small Media Interventions to Promote Colorectal Cancer Screening Among Chinese Americans	2016	2	University of California San Francisco	**$249,926**
Multi-Level Communication Strategies to Promote Human Papilloma Virus Vaccination Uptake	2016	2	University of Minnesota	**$250,000**
			University of North Carolina Chapel Hill	**$229,193**
			University of Washington	**$198,646**
			NCCDPHP, Division of Population Health	
Healthy Brain Research Network Coordinating Center	2014	5	University of Washington	**$574,999**
Healthy Brain Research Network Collaborating Centers	2014	5[b]	Oregon Health and Science University	**$275,263**
			University of Arizona	**$275,500**
			University of Illinois at Chicago	**$180,070**
			University of Pennsylvania	**$273,639**
			University of South Carolina at Columbia	**$275,500**
Public Health Communications: Culturally Relevant Messages and Strategies to Promote Awareness about Dementia, including Alzheimer's Disease	2014	2	University of Pennsylvania	**$399,974**
Promoting Public Health Understanding of Dementia	2014	1	Case Western Reserve University	**$99,855**
Evaluating Cost Information about Alzheimer's Disease and Dementia	2014	1	University of Washington	**$99,940**
Managing Epilepsy Well Network Coordinating Center	2014	5	Dartmouth College	**$1,042,886**
Managing Epilepsy Well Network Collaborating Center	2014	5	Case Western Reserve University	**$744,997**
			Morehouse School of Medicine	**$719,000**
			New York University School of Medicine	**$744,753**
			University of Illinois at Chicago	**$744,996**

SIP topic	Fiscal year awarded	Length of project period (years)	Prevention Research Center awardee(s)	Total funding awarded to date
			University of Minnesota	**$744,867**
			University of Washington	**$745,000**
Testing New Communication Strategies to Improve Attitudes Toward Epilepsy	2014	2	Case Western Reserve University	**$239,999**
Reducing Youth Exposure to Alcohol Marketing	2014	5	Johns Hopkins University	**$2,949,894**
Global and Territorial Health Research Network – Coordinating Center	2014	5	University of Rochester	**$625,885**
Global and Territorial Health Research Network – Collaborating Centers	2014	5	University of Illinois at Chicago	**$224,951**
			Yale University	**$224,758**
Workplace Health Research Network – Coordinating Center	2014	2	University of North Carolina Chapel Hill	**$499,824**
Workplace Health Research Network – Collaborating Centers	2014	2	Johns Hopkins University	**$299,793**
			New York University School of Medicine	**$299,962**
			University of Illinois at Chicago	**$299,561**
			University of Minnesota	**$300,000**
			University of Washington	**$300,000**
Evaluation of Work-Related Outcomes Effects of the Chronic Disease Self-Management Program	2014	3	University of North Carolina Chapel Hill	**$839,454**
NCCDPHP, Division of Nutrition, Physical Activity and Obesity				
Physical Activity Policy and Evaluation Research Network Plus: Coordinating Center	2014	5	Johns Hopkins University	**$694,400**
Physical Activity Policy Research Network Plus: Collaborating Center	2014	5	University of Arizona	**$243,200**
			University of Illinois at Chicago	**$243,200**
			University of Massachusetts Medical School-Worchester	**$243,200**
			University of Rochester	**$243,200**
Nutrition and Obesity Policy Research and Evaluation Network – Coordinating Center	2014	5	University of California San Francisco	**$1,149,999**
Nutrition and Obesity Policy Research and Evaluation Network – Collaborating Center	2014	5	Johns Hopkins University	**$244,929**
			University of Illinois at Chicago	**$243,200**
			University of Minnesota	**$243,200**
			University of New Mexico Health Sciences Center	**$243,200**

SIP topic	Fiscal year awarded	Length of project period (years)	Prevention Research Center awardee(s)	Total funding awarded to date
Planning, Implementing and Evaluating Physical Activity and Public Health Training Courses	2015	4	University of South Carolina at Columbia	**$200,000**
National Center for Immunization and Respiratory Diseases, Division of Viral Diseases				
HPV Vaccine Impact among Men who have Sex with Men (MSM)	2015	2	University of Kentucky	**$659,988**
			University of Washington	**$629,996**
NCCDPHP, Division of Reproductive Health				
Progestin Contraception and HIV risk: Clinical and Laboratory Follow-up of a Cohort of HIV-Infected and Uninfected Women	2014	5	University of Washington	**$1,251,607**
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Division of STD Prevention				
Prospective Study of Immune Response to Chlamydial Infection to Inform Development of Rational Prevention Strategies	2014	3	University of Alabama at Birmingham	**$699,995**
Serosorting and Other Seroadaptive Behaviors Among Men Who Have Sex With Men (MSM) in the US-designing a Brief Survey Tool for Use in Clinical Practice	2015	1	New York University School of Medicine	**$225,000**
NCCDPHP, Division of Community Health				
Building Local Community Health Leadership for Action on Preventing Chronic Disease	2015	2	Tulane University	**$296,195**
			University of Pennsylvania	**$300,000**
National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention				
Facilitating the Evaluation of the Processes and Impacts of the State Driven Fall Prevention	2014	2	University of North Carolina Chapel Hill	**$399,980**
NCCDPHP, Office on Smoking and Health				
Applied Research and Development of Tools to Address Point-of-Sale Tobacco Marketing	2014	2	University of North Carolina Chapel Hill	**$236,245**
NCCDPHP, Office on Oral Health				
Environmental Scan of Oral Health and Chronic Disease Integration	2016	1	University of Iowa	**$175,000**

Source: GAO analysis of CDC data. | GAO-17-693.

Notes: Total funding awarded to date includes initial funding and continuation funding for fiscal years 2014, 2015, and 2016.

[a]The project period for the University of Washington is only 4 years, as that PRC was awarded funding in fiscal year 2015, the second year of the SIP.

[b]The project period for the University of Illinois at Chicago is only 4 years, as that PRC was awarded funding in fiscal year 2015, the second year of the SIP.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Marcia Crosse, (202) 512-7114 or crossem@gao.gov

Staff Acknowledgments

In addition to the contact named above, Michelle B. Rosenberg (Assistant Director), Julie T. Stewart (Analyst-in-Charge), and Romonda McKinney Bumpus made key contributions to this report. Also contributing were Sam Amrhein and Jacquelyn Hamilton.