GAO U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Federal Funding and Coordination on Low-Dose Radiation Research

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About the 2017 Report: A Closer Look at Research Funding

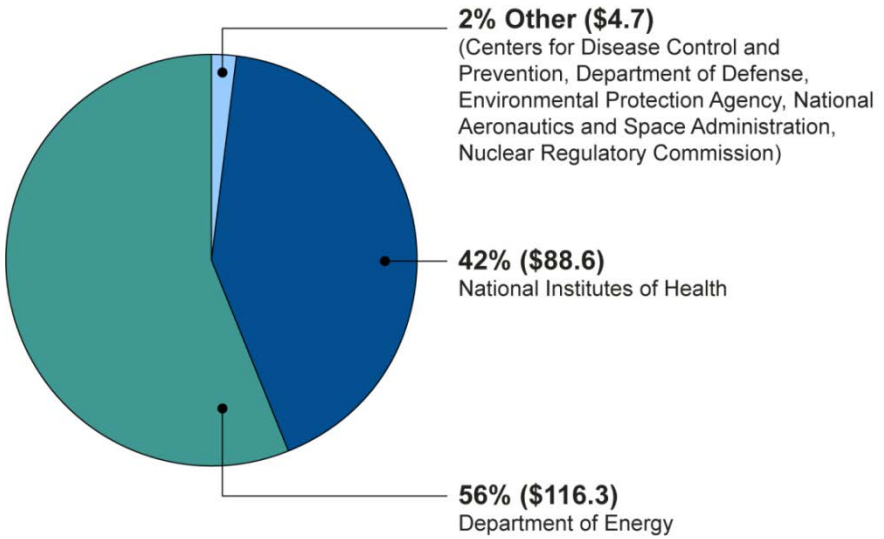
- House Committee on Science, Space, and Technology
- Our report described how selected federal agencies have developed and applied radiation protection requirements and guidance for workers and the public and examined the extent to which federal agencies have funded and collaborated on research on the health effects of low-dose radiation.

Further Research Could Address Uncertainty, But Funding Has Decreased

GAO has done work in this area since the 1980s. Uncertainty about the health effects continues to exist. Because of that, we still use the linear no-threshold model.

- 1981 (EMD-81-1)
- 2000 (RCED-00-152)

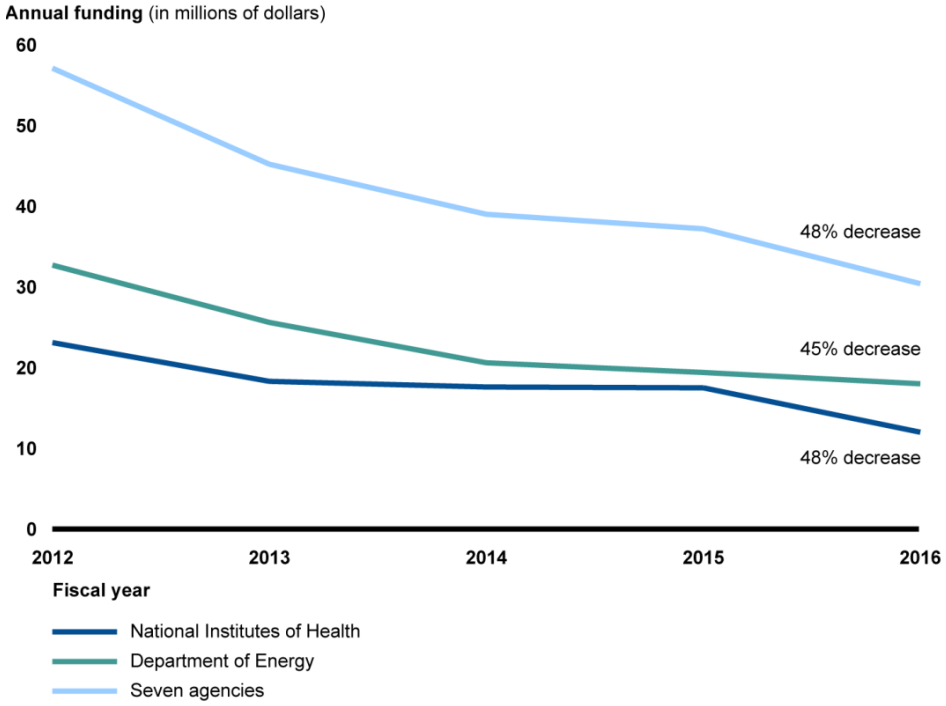
Seven federal agencies obligated $209.6 million for research on the health effects of low-dose radiation in fiscal years 2012 to 2016.



Source: GAO analysis of agencies' data. | GAO-17-546

Data on obligations for research on low-dose radiation include both epidemiological and radiobiological research but do not include research on products or medicines used for emergency preparedness or response to a radiation accident or for treating cancer, where radiation exposure is part of the treatment.

Federal Agencies' Obligations for Research on Health Effects of Low-Dose Radiation, Fiscal Years 2012–2016



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Notes: The seven agencies include the Department of Energy, National Institutes of Health, Nuclear Regulatory Commission, National Aeronautics and Space Administration, Department of Defense, Centers for Disease Control and Prevention, and Environmental Protection Agency. Annual funding amounts have not been adjusted for inflation.

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Funding for Little “c” and Big “C” Collaborations

Agencies have several ways to collaborate on individual projects:

- Joint funding of individual research projects
- Participation in interagency committees
- Participation in meetings and conferences

But agencies did not use collaborative mechanisms to address overall research priorities, such as research needs that a scientific body identified.

Funding Research With Decreasing Budgets: The Business Case for Collaborative Mechanisms

We have a body of work on leading practices for interagency collaboration around science issues. Examples of mechanisms for collaboration are:

- The BRAIN Initiative
- Subcommittee on Quantum Information Science

Interagency Collaboration Is Critical So That Research Can Be Prioritized

These collaborative mechanisms serve multiple purposes:

- Develop and coordinate science and tech policies across the government
- Better manage fragmentation, overlap, and duplication of federal programs
- Our open recommendation is for the Secretary of Energy to lead the development of a mechanism for interagency collaboration related to research on the health effects of low-dose radiation.

Recent Congressional Activity

- November 2017 hearing on future of low-dose radiation research
- 2017 provision for OSTP to coordinate radiation biology research
- 2018 provision directing DOE to carry out a low-dose radiation research program
- Funding the Million Person Study

GAO SUPPORT FOR CONGRESSIONAL OVERSIGHT, INSIGHT AND FORESIGHT IN S&T

GAO is uniquely suited to meet Congressional needs and provide oversight, insight and foresight for science & technology policy. This framework is critical for solving complex problems.

- **Oversight:** Policy analysts from across GAO with experience in auditing a wide range of science and technology-related federal programs
- **Insight**: Operations researchers with expertise in cost, schedule, and technology readiness assessments
- **Foresight:** Scientists and engineers across a range of specialties

SCIENCE & TECHNOLOGY OVERSIGHT:
SELECT PERFORMANCE AUDITS

GAO assesses the management and coordination of federal research and development efforts, including investments in scientific facilities (such as telescopes and research ships) and emerging technologies (like synthetic biology and quantum computing).

S&T OVERSIGHT OF SCIENCE & INNOVATION

We assess programs to promote innovation (such as federal support for advanced manufacturing institutes), as well as federal policies and funding for the protection of intellectual property.

SELECTED WORK

- U.S. Competitiveness in Transformational Research Areas (GAO-18-656)
- Licensing of Patented Laboratory Inventions (GAO-18-327)
- Manufacturing USA (GAO-17-320)
- Patent Quality at USPTO (GAO-16-490)

S&T OVERSIGHT OF HEALTH

We assess new technologies for emerging infectious diseases, such as technologies that can simultaneously test for multiple infectious diseases at or near the site of patient care, and the impacts of new technology on human health, disease prevention, and the delivery of health care.

SELECTED WORK

- Veterans Affairs Research (GAO-18-325)
- Low Dose Radiation (GAO-17-546)
- High-Containment Labs (GAO-18-145)
- Sunscreen Review (GAO-18-61)