

# GAO Highlights

Highlights of [GAO-16-14](#), a report to congressional requesters

## Why GAO Did This Study

In fiscal year 2014, U.S. universities received nearly \$25 billion in federal grant funding for STEM research. Studies show women are largely underrepresented in STEM fields. Federal agencies are required to enforce Title IX—a law prohibiting discrimination on the basis of sex in education programs receiving any federal financial assistance—including at universities they fund. GAO was asked to provide information on federal grant-making to women in STEM.

This report examines: (1) the extent to which differences exist in federal grant awards between women and men in STEM fields, (2) the extent to which federal agencies enforce Title IX at universities they fund for STEM research, and (3) possible actions federal agencies could take to address the representation of women in STEM research. GAO analyzed data on all STEM research grants made in fiscal years 2009 through 2013—the most recent data available—by the six federal agencies that provided 90 percent of STEM research funding in fiscal year 2012 through 2014; reviewed literature, federal laws and regulations, and agency documents; interviewed federal officials; and consulted 19 STEM diversity experts.

## What GAO Recommends

GAO recommends that DOD, DOE, and NASA collect additional data; DOD and HHS conduct Title IX compliance reviews; and DOJ facilitate information sharing among STEM agencies. Agencies agreed in principle, but some cited potential implementation challenges. GAO maintains action is feasible and warranted as discussed in the report.

View [GAO-16-14](#). For more information, contact Melissa Emrey-Arras at (617) 788-0534 or [emreyarrasm@gao.gov](mailto:emreyarrasm@gao.gov).

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## WOMEN IN STEM RESEARCH

### Better Data and Information Sharing Could Improve Oversight of Federal Grant-making and Title IX Compliance

## What GAO Found

GAO's analysis of Science, Technology, Engineering, and Mathematics (STEM) research grant awards made between fiscal years 2009 and 2013 identified no disparities in success rates between women and men at three agencies selected for review, but data limitations provided limited insight into success rates at three other agencies selected for review. At two of the agencies with data limitations—the Departments of Defense (DOD) and Energy (DOE)—GAO found evidence of disparities in success rates for women and men within certain agency components. Data limitations at the National Aeronautics and Space Administration (NASA) prevented GAO's analysis of success rates altogether. This lack of complete, linked electronic proposal and award data at NASA and some components at DOD and DOE impacts their ability to fully evaluate their programs' performance against their stated goals of funding the most qualified scientists, irrespective of gender. Adhering to federal internal control standards regarding data collection of an entire process can ensure that these agencies have the data needed for effective program management and monitoring.

Success Rates between Women and Men at Federal STEM Grant-making Agencies					
No evidence of disparities in success rates			Evidence of disparities varied or insufficient data to analyze success rates		
NIH (HHS)	NSF	NIFA (USDA)	DOD	DOE	NASA

Source: GAO analysis of STEM grant data for fiscal years 2009 through 2013 from Health and Human Services (HHS) National Institutes of Health (NIH); National Science Foundation (NSF); Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA); Department of Defense (DOD); Department of Energy (DOE); and NASA. | GAO-16-14

Two of six agencies GAO reviewed that fund STEM research at universities—DOD and the Department of Health and Human Services (HHS)—are not conducting required Title IX compliance reviews. Since HHS oversees Title IX compliance of National Institutes of Health (NIH) funding recipients, which account for the bulk of STEM research grantees, billions of federal research dollars may not be subject to potential Title IX oversight. The Department of Justice (DOJ) is designated by Executive Order to coordinate Title IX compliance across federal agencies, including information sharing, but it has no formal information sharing process among STEM agencies. Officials at five of the six agencies GAO interviewed reported a desire for DOJ to facilitate interagency information sharing on Title IX best practices for compliance activities. Without such information sharing, these STEM agencies may miss opportunities to improve their compliance programs and coordinate with each other.

GAO identified through a literature review and expert interviews 13 potential actions federal agencies could take to address the underrepresentation of women in STEM research. These actions fell into four areas: (1) enhancing agency leadership and collaboration, (2) establishing family-friendly policies for grantees, (3) overseeing the research proposal review process, and (4) funding and assisting academic institutions. While not all of the actions GAO identified are relevant to or feasible for each agency, all six agencies in GAO's review indicated that they are either taking actions in some of these areas, or would be willing to explore their applicability. Most of the agency officials GAO spoke with acknowledged the potential benefits of these actions.