

Sexual & Gender  
Minority Research

# Portfolio Analysis





# Table of Contents

Introduction .....	1
Health Needs of SGM Populations .....	2
Methods .....	2
The 2017 Portfolio Analysis .....	3
Number of SGM-Related Projects by NIH ICO .....	4
SGM Funding by ICO .....	5
SGM Projects Related to HIV/AIDS Research .....	6
SGM Projects by Disease Area/Health Condition .....	7
SGM Funding by Disease Area/Health Condition .....	8
Proportion of SGM-Related Projects by NIH Grant Mechanism .....	9
Proportion of SGM-Related Projects by Type of Training/Career Funding Mechanism .....	10
Proportion of Projects With New and Early Stage Investigators .....	11
U.S. Funding of SGM Research by Location of Administering Institution .....	12
Funding of International SGM Research by Country of Administering Institution .....	13
SGM Projects by Institution .....	14
SGM Projects by Category .....	15
Conclusion .....	16
Appendix: NIH Institutes, Centers, and Offices .....	17



# Introduction

The National Institutes of Health (NIH) comprises 27 Institutes, Centers, and Offices (ICOs). Each has its own scientific agenda, with a focus on particular diseases and conditions, organs and systems, populations, and specific types of research. All but three of these components receive their funding directly from Congress and administer their own budgets. NIH leadership plays an active role in shaping the agency's research planning and activities. The Office of the Director (OD) is the central office responsible for setting policy for the NIH and for planning, managing, and coordinating the programs and activities of all NIH components. The [Sexual & Gender Minority Research Office \(SGMRO\)](#) resides within the Division of Program Coordination, Planning, and Strategic Initiatives in the OD.

The SGMRO coordinates sexual and gender minority (SGM) research and related activities by working directly with the NIH ICOs. One of the ongoing activities of the Office is to serve as a resource for the NIH and the extramural research and stakeholder communities.

The NIH strives to support a range of biomedical, clinical, behavioral, and social science research to improve and protect the health of SGM populations. These populations include individuals who identify as lesbian, gay, bisexual, transgender, queer, or intersex (LGBTQI), and individuals who do not self-identify with one of these terms, but whose sexual orientation, gender identity, or reproductive development varies from traditional, societal, cultural, or physiological norms. The NIH adopted the term "SGM" to be fully inclusive of these diverse populations, whose health is understudied. This report summarizes NIH's investment in SGM research for Fiscal Year (FY) 2017.

Within the SGM portfolio, there is current and historical focus on HIV and AIDS among specific groups such as gay men, men who have sex with men, and transgender women. At the same time, there is a stated need among researchers and community members to diversify the portfolio. Specifically, there are other areas of HIV/AIDS research that need to be addressed, such as HIV/AIDS among sexual minority women, transgender men, and gender nonconforming individuals. There is also an urgent need to explore health conditions other than HIV/AIDS; stimulating additional grant applications in fields other than HIV/AIDS will help expand our understanding of the health of SGM individuals.

## Health Needs of SGM Populations

Progress has been made in recent years for SGM populations, with gains in legal rights and changing social attitudes. Stigmatization, hate crimes, violence, and discrimination, however, are still major barriers to optimal health outcomes among SGM populations. SGM populations not only have unique health concerns, but also continue to encounter difficulties in accessing care and finding culturally competent health care providers. SGM populations also exhibit higher rates of drug and alcohol use, depression, and suicide, which can further drive disparities in health outcomes and needs among these populations. The NIH recognizes that SGM-related research is in its infancy and not fully sufficient to meet current needs. Thus, increasing avenues and opportunities for SGM health research is paramount in assessing and addressing health disparities within these populations.

On October 6, 2016, the NIH designated sexual and gender minorities as a health disparities population for research. This designation builds on previous steps taken by the NIH to advance SGM health research. In 2011, the Institute of Medicine (now The National Academies of Sciences, Engineering, and Medicine) published an NIH-commissioned report on LGBT health issues. In response to the report recommendations, the NIH developed the [NIH SGM Research Strategic Plan](#), which spans the agency, and established the SGMRO to help eliminate barriers to conducting SGM-related research. The health disparities population designation marks an important and necessary step in realizing NIH's mission to advance the health of all Americans, and the [Mid-Course Strategic Plan Review](#) details progress to date on the first strategic plan.

## Methods

The projects identified in NIH's RePORTER that comprise the NIH SGM portfolio for FY 2017 were selected by using NIH's [Research, Condition, and Disease Categorization](#) (RCDC) spending categories. "Sexual and Gender Minorities" was added in FY 2015 to the official list of the currently reported 265 RCDC categories. As a result, this estimate of SGM projects and spending constitutes the third report of those data. RCDC uses text data mining (categorizing and clustering words and multiword phrases), in conjunction with a list of concepts and synonyms selected by NIH scientific experts, to define research categories. Reflecting NIH's inclusive approach to SGM health research, the RCDC definition includes lesbian, gay, bisexual, transgender, and queer populations, as well as many others. For example, those with differences of sex development (DSD), sometimes described as intersex, men who have sex with men (who may not identify as gay or bisexual), gender nonconforming individuals, and two-spirit populations are all included in the NIH definition of SGM. Using this method, the SGM fingerprint may include projects that are about a specific SGM-relevant disease or condition, such as HIV (as is the case with pre-exposure prophylaxis, commonly known as PrEP). Alternatively, a project may be incidentally related to SGM research, such as a study about mental health that includes some SGM participants who are HIV-positive.

RCDC funding amounts are an estimate, based on the SGM fingerprint, text-mining approach, and attribution of all grant funds to a given category. The RCDC SGM category has been in use for only 3 years and was most recently updated in July 2017. In RePORTER, the total number of projects at the NIH decreased from 73,428 in FY 2015 to 72,978 in FY 2017.

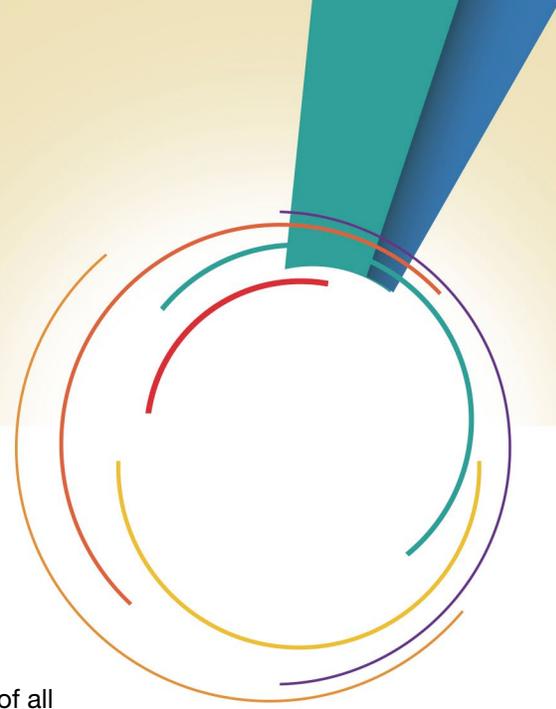
## The 2017 Portfolio Analysis

According to RePORTER, a total of 379 SGM-related projects were funded in FY 2017. The total dollar amount of SGM-related funding was \$234,264,435. Please note, the National Institute of Allergy and Infectious Diseases (NIAID) HIV/AIDS clinical trials (CT) networks are funded annually over a 7-year cycle through five large, multi-site, multi-Principal Investigator (PI) cooperative agreements. Due to the complex nature of tracking and reporting funding allocations to the NIAID HIV/AIDS CT networks, funding totals for NIAID may fluctuate from year to year. This may result in a large increase in SGM-related funding that does not correspond with the increase in projects. Key findings from the FY 2017 portfolio analysis, similar to those previously reported, include the following:

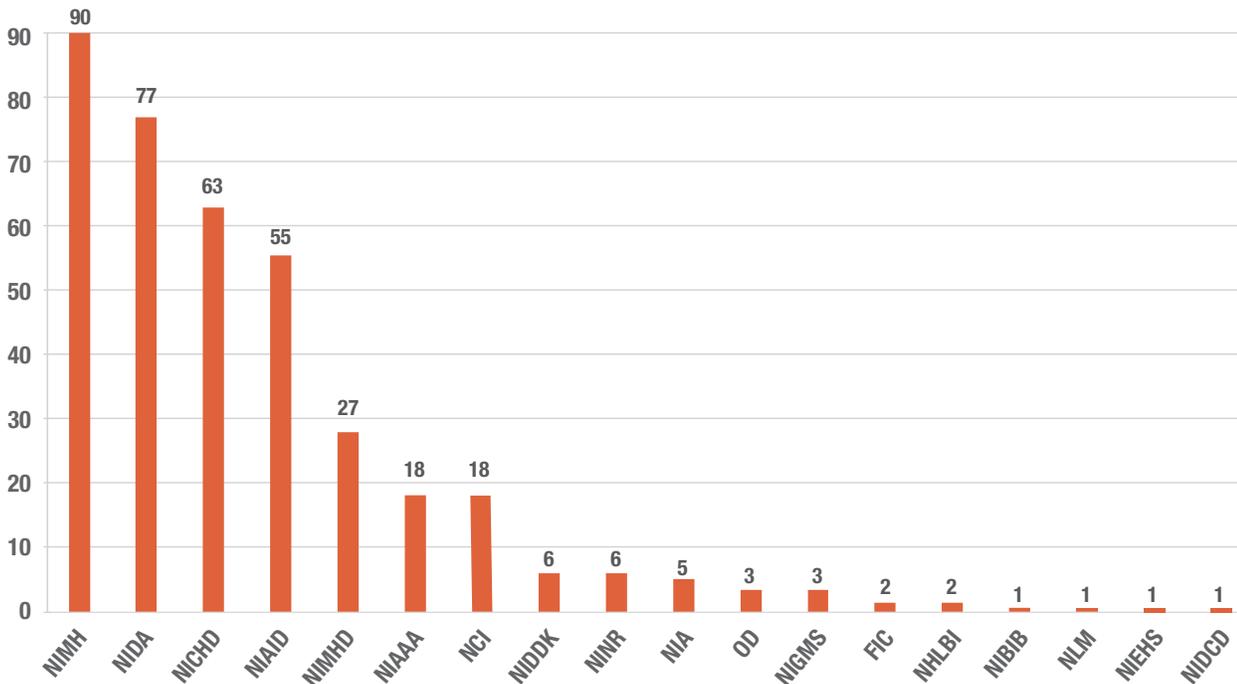
- ▶ The National Institute of Mental Health (NIMH) was the IC with the single largest number of SGM-related projects.
- ▶ Other than HIV and AIDS, substance abuse was the area with the largest amount of funding among SGM projects, with more than \$100 million.
- ▶ In FY 2017, the NIH funded SGM-related projects in 28 states and 8 countries.
- ▶ Funding for non-HIV/AIDS-related research increased by 30.1 percent since 2015.
- ▶ The number of non-HIV/AIDS-related projects increased by 53 percent since 2015.
- ▶ The number of all (both HIV/AIDS-related as well as other) SGM research projects increased from 301 to 379, or 25.9 percent, between 2015 and 2017.
- ▶ From FY 2016 to FY 2017, the number of new/early investigators receiving funding nearly doubled, from 7 to 13.

# Number of SGM-Related Projects by NIH ICO

The 379 SGM projects at the NIH in FY 2017 were administered by 18 of the 24 grant-making components of the NIH. Approximately 75.2 percent of all projects (285 of 379), were administered by NIMH, the National Institute on Drug Abuse (NIDA), the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), and NIAID. The remaining 24.8 percent of projects were administered by 14 other ICOs. For a list of abbreviations for all NIH ICOs, see the Appendix.



**FY 2017, Number of SGM-Related Projects by NIH ICO (N=379)**

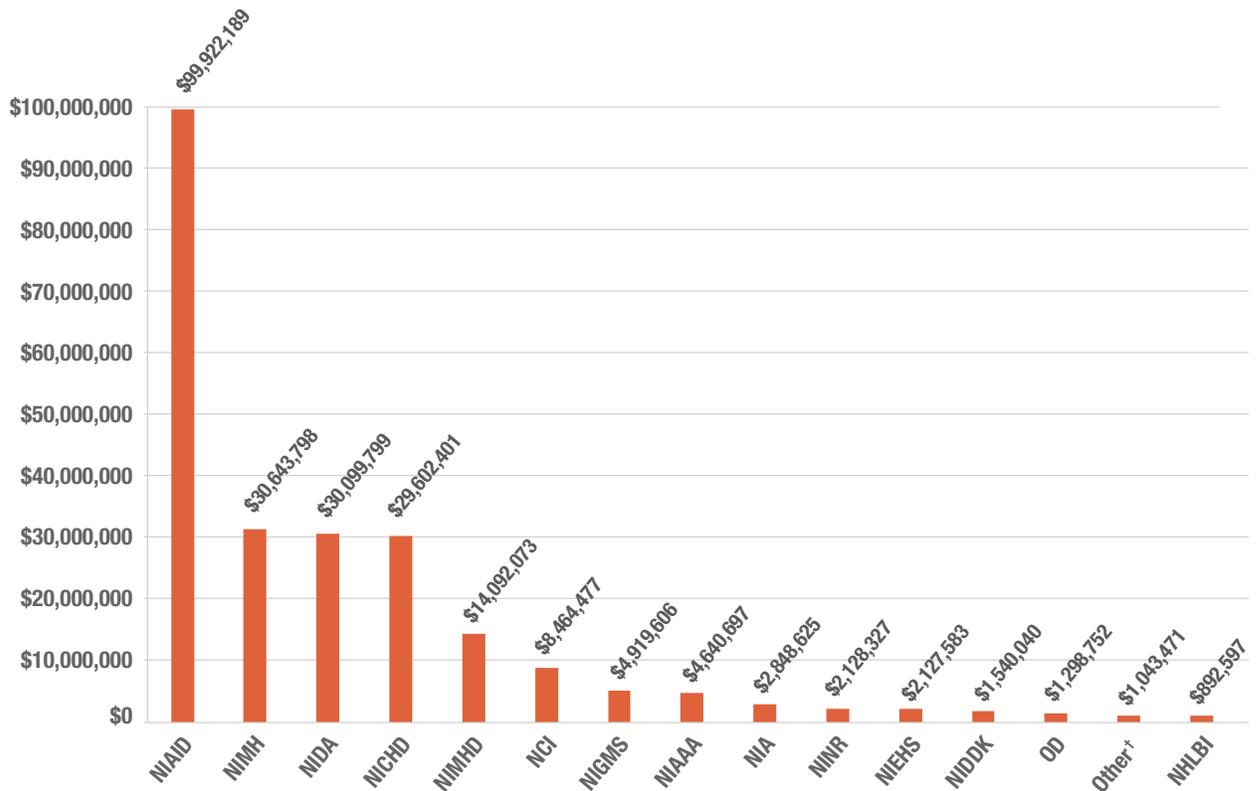




## SGM Funding by ICO

The total amount of funding for SGM-related research in FY 2017 was \$234,264,435. The same ICOs that fund the most projects also provide the most funding. NIAID, NIMH, NIDA, and NICHD together accounted for 81 percent of SGM funding in FY 2017.

**FY 2017, SGM Funding by NIH ICO (Total \$234,264,435)\***



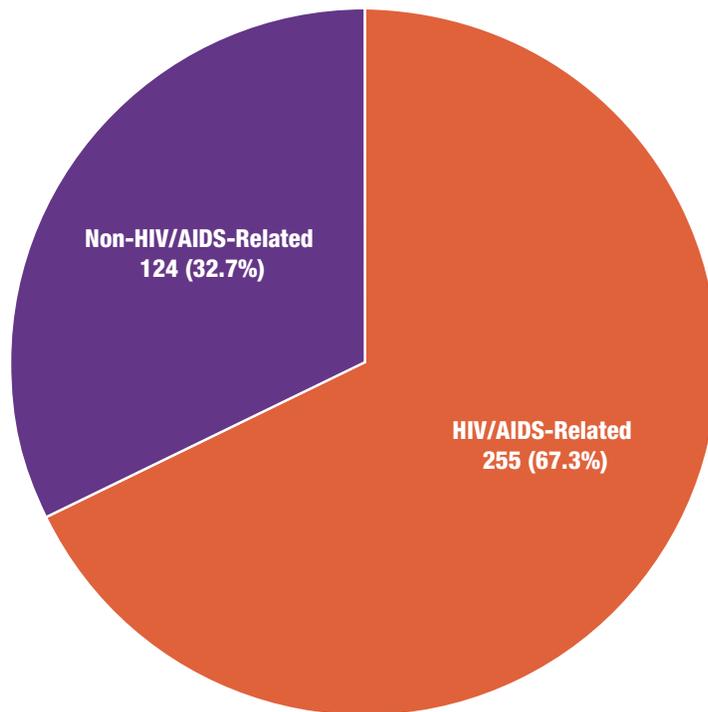
\* As noted previously, the NIAID HIV/AIDS clinical trials (CT) networks are funded annually over a 7-year cycle through five large, multi-site, multi-PI cooperative agreements. Due to the complex nature of tracking and reporting funding allocations to the NIAID HIV/AIDS CT networks, funding totals for NIAID may fluctuate from year to year. This may result in a large increase in SGM-related funding that does not correspond with the increase in projects.

† Other includes the FIC, NIBIB, NIDCD, and NLM.

## SGM Projects Related to HIV/AIDS Research

The majority of SGM projects (67.3%, or 255 of 379) pertain to HIV/AIDS and are considered “HIV/AIDS-specific” based on a metric established for the categorization of projects by spending category. Some projects are “HIV/AIDS-relevant,” meaning that they pertain in some way to HIV/AIDS but are not included in the HIV/AIDS group as there is another methodological or population focus that is considered primary. The prevalence of HIV/AIDS-related projects (both HIV-specific and HIV-relevant) reflects the historical and contemporary disproportionate incidence and prevalence of HIV/AIDS among SGM persons, particularly men who have sex with men and transgender women. In addition, for decades, people conducting SGM research could more readily obtain funding by doing HIV/AIDS-related research. The proportion of HIV/AIDS-related projects in the FY 2017 SGM research portfolio is approximately 6 percent less than the 73 percent HIV/AIDS-related projects funded in FY 2016.

**FY 2017, Percentage of SGM Projects Related to HIV/AIDS (N=379)**

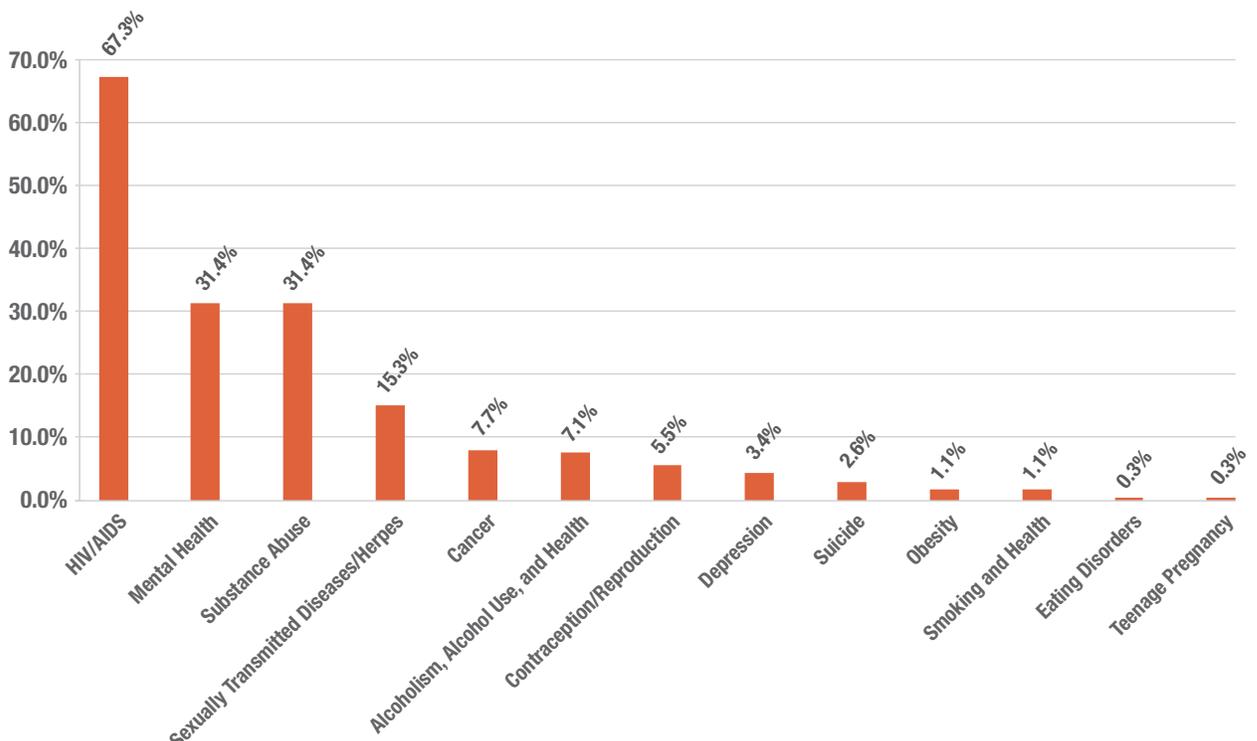




## SGM Projects by Disease Area/Health Condition

Although the majority of SGM projects are in some way related to HIV/AIDS, a broad range of disease areas and health conditions were addressed in SGM-related projects funded by the NIH in FY 2017. Besides HIV/AIDS, studies focusing on mental health, substance abuse, sexually transmitted diseases/herpes, and cancer were the most common types of projects funded. Other projects addressed alcoholism, alcohol use and health; contraception/reproduction; depression; suicide; obesity; smoking and health; eating disorders; and teenage pregnancy. In FY 2017, NIH funded eight projects related to DSD or intersex populations. Categories reported below are not mutually exclusive; therefore, percentages do not add up to 100 percent.

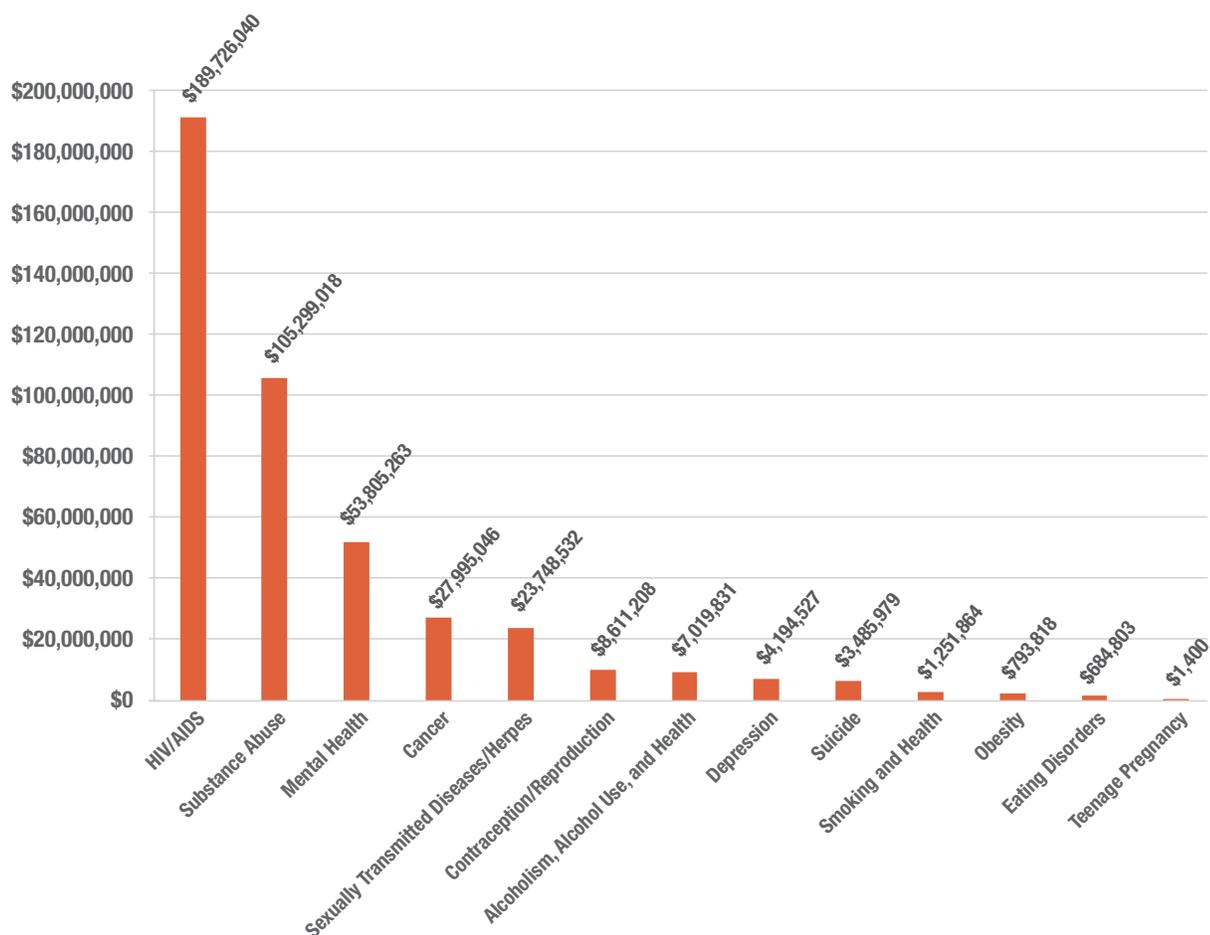
**FY 2017, Proportion of SGM Projects by Disease Area/Health Condition (N=379)**



## SGM Funding by Disease Area/Health Condition

The amount of funding in each of the disease areas/health conditions corresponded roughly to the number of grants in those areas. Funding in HIV/AIDS totaled \$189.7 million. Funding for SGM research in substance abuse, mental health, cancer, and sexually transmitted diseases/herpes all exceeded \$23 million. Categories reported below are not mutually exclusive and represent multiple areas of research within the RCDC categorization system. Therefore, dollars may be counted toward more than one disease area or health condition.

**FY 2017, Total Grant Dollars by SGM Disease Area/Health Condition (Total \$234,264,435)**

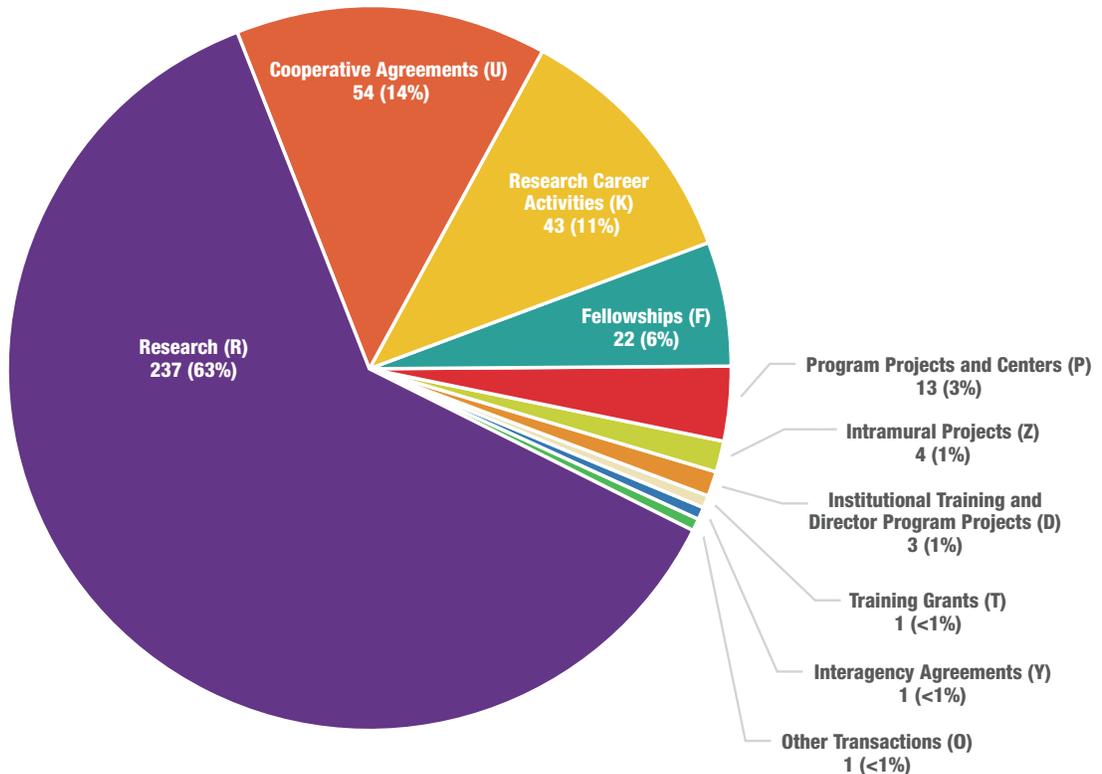




## Proportion of SGM-Related Projects by NIH Grant Mechanism

The Research (R) Project mechanism constituted the majority of grants (63%), followed by Cooperative Agreements (U) at 14 percent, and Research Career Activities (K) at 11 percent. Fellowships (F; 6%), Program Projects and Centers (P; 3%), Intramural Projects (Z; 1%), Institutional Training and Director Program Projects (D; 1%), and Training Grants (T), Interagency Agreements (Y), and Other Transactions (O)—each less than 1 percent—together accounted for 45 projects, or 12 percent, of the total SGM portfolio.

**FY 2017, Proportion of Projects by Grant Mechanism (N=379)**

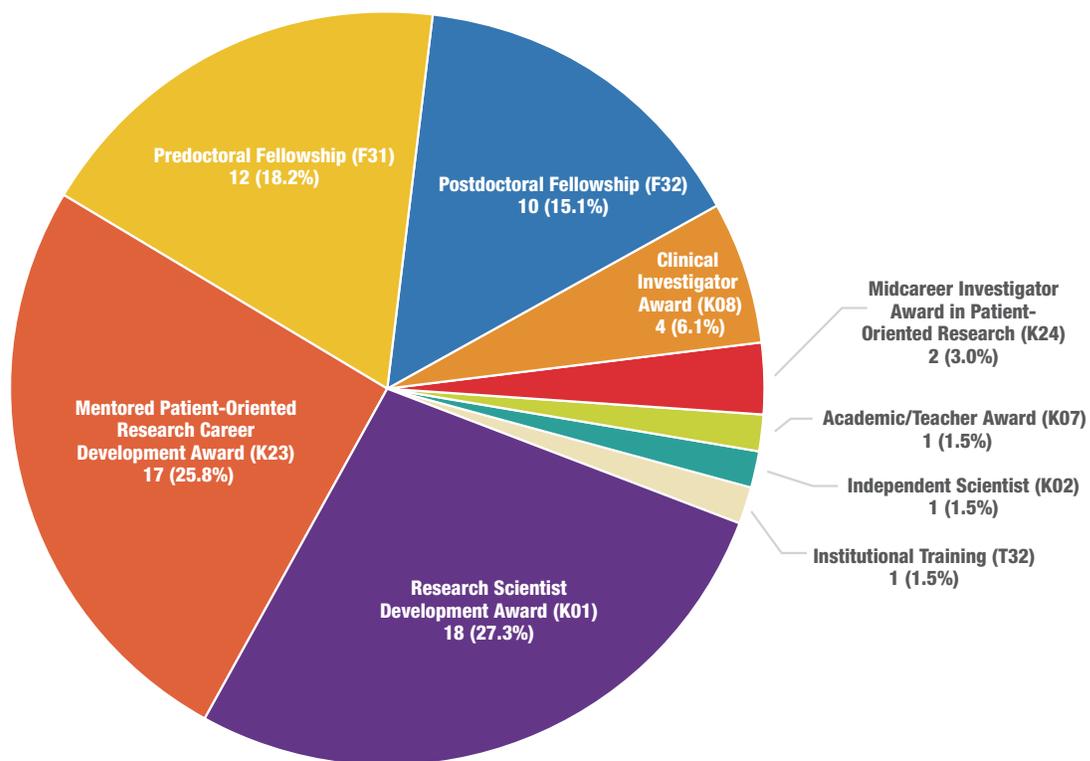


# Proportion of SGM-Related Projects by Type of Training/ Career Funding Mechanism



Research Scientist Development Awards (K01), Predoctoral Fellowships (F31), and Mentored Patient-Oriented Research Career Development Awards (K23) accounted for more than two-thirds (71%) of projects pertaining to training and career development in FY 2017. In FY 2015, the total number of training-related awards was 49, compared to 60 in FY 2016 and 66 in FY 2017, which amounts to an increase of 35 percent over 2 years.

**FY 2017, Projects by Training/Career Funding Mechanism (N=66)**

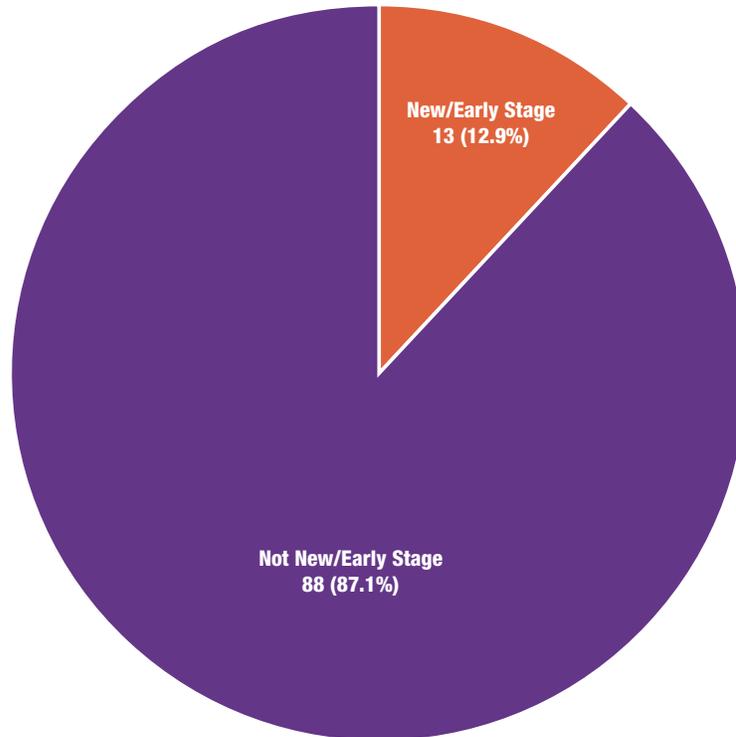




## Proportion of Projects With New and Early Stage Investigators

Of the 101 R01s in SGM health research, 13 (12.9%) were awarded to either New Investigators (NI), who have not received substantial NIH funding, or Early Stage Investigators (ESI), who have received their terminal degree within the last 10 years but have not yet received a substantial NIH research award. Please note that this indicates NI and ESI at the time of their initial application and reflects the status of only the primary investigator, not others working on the project. Among the grant awards falling under the SGM (SGM/LGBT) RCDC category, 11 awards were flagged as NI and two were flagged as ESI.

**FY 2017, Proportion of Projects With a New/Early Stage Investigator (N=101)**

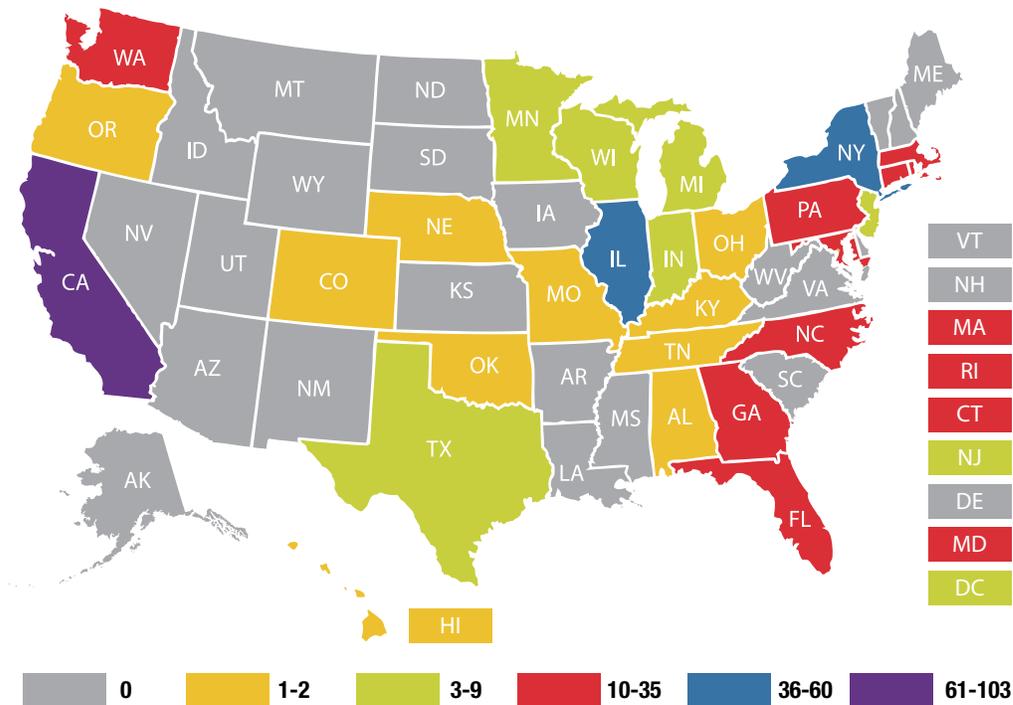


# U.S. Funding of SGM Research by Location of Administering Institution



SGM funding was provided to organizations in 28 states and the District of Columbia. Approximately 365 of the projects in the SGM portfolio were domestic, and 14 projects were funded in other countries. The states with the largest number of projects (35 or more each) were California, New York, and Illinois. More than one in three projects (37%, or 134 of 365) were funded through institutions based in either California or New York. Neither Colorado nor Hawaii had any funded projects in FY 2016, but both had one project in FY 2017. The map below indicates the location of the funded institution and not necessarily where an activity on a project took place.

**FY 2017, SGM Projects by U.S. State (N=365)**

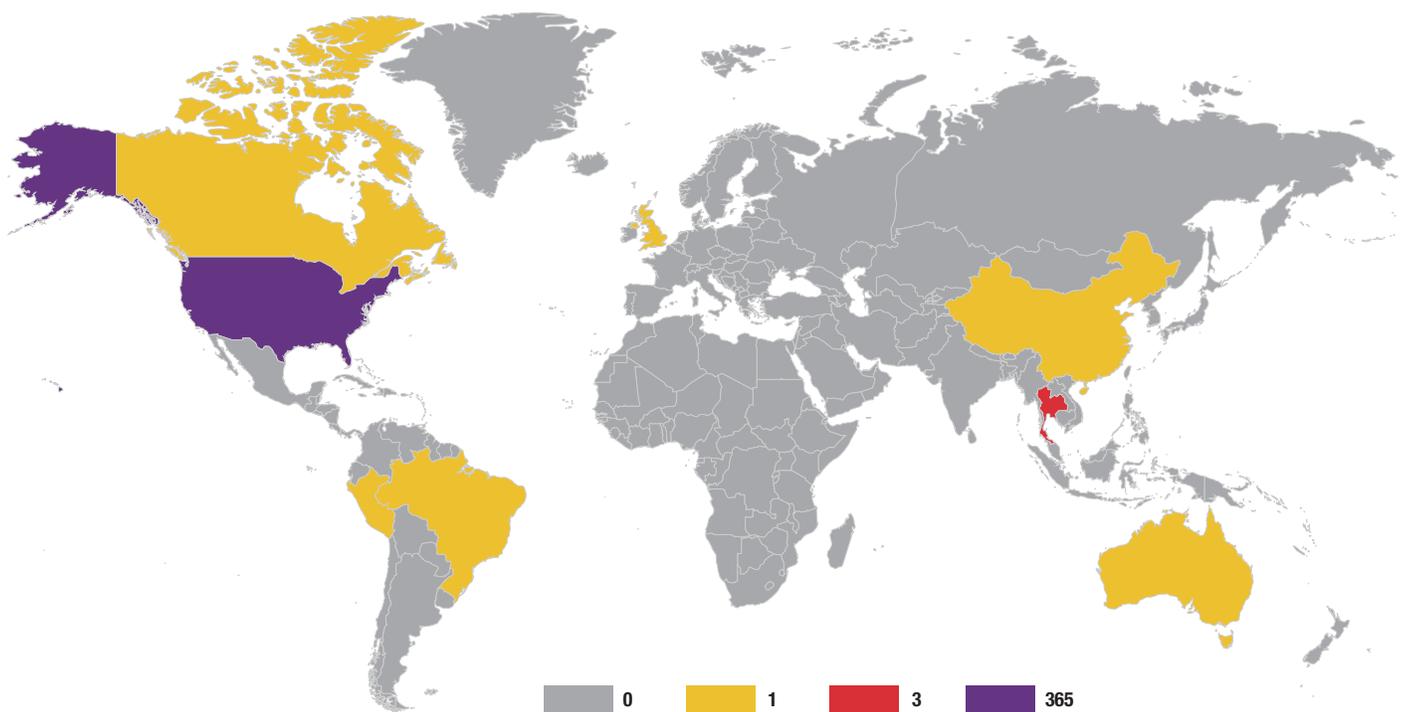




## Funding of International SGM Research by Country of Administering Institution

SGM funding was provided to organizations in seven nations outside the United States, including Canada, Peru, Brazil, the United Kingdom, China, Thailand, and Australia. It should be noted that five international SGM projects were funded but were not categorized with respect to geographic location. Only Thailand had more than a single project, with a total of three.

**FY 2017 SGM Projects by Country (N=374)**









## Conclusion

In summary, the NIH acknowledges that HIV/AIDS remains an important area of research in the SGM health research portfolio, and it is the single largest funded topic in the portfolio. At the same time, various other disease areas and health conditions are known to disproportionately impact the SGM community, and funding and research in these areas have experienced some growth. The NIH now funds SGM-related research in 28 states, the District of Columbia, and seven foreign countries. Furthermore, in comparison to FY 2015, data indicate there have been modest to substantial increases in the proportions of non-HIV/AIDS-related funding, training grants, and the number of New and Early Stage Investigators. Increases in these areas are important indicators of NIH's progress in supporting SGM-related research.

# Appendix: NIH Institutes, Centers, and Offices

## NIH Offices

Office of the Director (OD)

## NIH Institutes

National Cancer Institute (NCI)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

*Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD)

National Institute on Drug Abuse (NIDA)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute of Environmental Health Sciences (NIEHS)

\*National Institute of General Medical Sciences (NIGMS)

National Institute of Mental Health (NIMH)

National Institute on Minority Health and Health Disparities (NIMHD)

National Institute of Neurological Disorders and Stroke (NINDS)

National Institute of Nursing Research (NINR)

National Library of Medicine (NLM)

## NIH Centers

†Clinical Center (CC)

†Center for Information Technology (CIT)

†Center for Scientific Review (CSR)

\*Fogarty International Center (FIC)

\*National Center for Advancing Translational Sciences (NCATS)

National Center for Complementary and Integrative Health (NCCIH)

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\*Indicates no intramural program.

†Indicates no grant-making authority.





National Institutes of Health  
*Sexual & Gender Minority Research Office*