

Fall 2019

U.S. Investments in Medical and Health Research and Development

2013 - 2018



“ Our nation can and should fight harder to accelerate medical and public health progress. ”

Majority Say Current Spending on Research to Prevent, Cure and Treat Disease **Is Not Enough**

The percentage of people who think that spending 5 cents of every health dollar on research is not enough has increased by





11%

since 2018.

The U.S. spends about 5 cents of each health dollar on research to prevent, cure and treat disease and disability.

Do you think that this is too much, the right amount or not enough?



 63% Not enough	 16% The right amount	 4% Too much	 17% Not sure
--	--	---	--

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2019

INTRODUCTION

From 2017 to 2018, medical and health research & development (R&D) spending in the United States grew by 6.4%, reaching \$194.2 billion. This is the third straight year that medical and health R&D investment has grown faster than overall health spending (6.4% versus 4.5%), yet R&D still represents only about 5 cents of every dollar in health spending.

Over the last six years,¹ the biggest driver of growth in medical and health R&D investment was industry, which increased R&D spending by \$36.5 billion, or 39.3%, from 2013 to 2018. Over the same period, federal R&D investment grew by \$9.1 billion, or 26.9%.

While growth in spending in 2018 and over the six-year reporting period is a positive sign, the size of our investment in life-saving research is dwarfed by the weight of disease burden. Each year in the U.S. alone, nearly 130,000 people lose their lives by age 45 to health threats that research can overcome.² Year in and year out, people we know and love are losing independence, hope and quality of life. U.S. health spending to treat major chronic diseases and conditions topped \$1.1 trillion in 2018, more than 26 *times* federal medical and health research and development spending that year.^{3,4,5}

As the economic and human costs of deadly and debilitating diseases mount, the obvious question is: what can be done?

Our nation can and should fight harder to accelerate medical and public health progress.

The industry sector (including biopharmaceutical and medical technology R&D firms, companies in the health care services arena and others) is growing its R&D

investment at a fast pace, advancing the translational and clinical research needed to transform groundbreaking basic science in areas such as genetic sequencing and immunology into tangible, life-changing medical advances. Federal policymakers must not only drive federal research funding, but carefully consider how to simultaneously ensure private sector R&D investment continues to grow and that the medical advances that arise from this R&D are accessible and affordable. Policy solutions that curtail medical and public health progress would not only squander advances that prevent illness, restore health and save lives, but would choke off the path to ending diseases and the costs associated with them. Every sector of the medical and health ecosystem, including policymakers and the R&D community, must work together to innovate new ways of accelerating progress and addressing affordable access.

In the context of federal medical and health R&D, it is both right and smart to reconsider where ending disease fits among our national priorities. To place current spending in context, federal spending on medical and health R&D amounts to approximately \$43 billion, representing about 1% of the federal budget; spending on national defense, at about \$629 billion, represents approximately 14%.^{6,7,8} Yet research, too, protects and saves American lives.

It is time for our country to dramatically accelerate our science output, stoking the engine of discovery and development and fostering cross sector solutions to formidable, but surmountable, challenges in health and health care. It is not a matter of potential – across every sector described in this report, the talent and commitment exists to exponentially increase medical and public health progress. It is a matter of will.

¹ This report captures annual data beginning in 2013, when refinements were made to the methodology used to estimate annual research investment.

² Estimate based on analysis of CDC data: United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released 2018. Numbers are compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. ICD-10 system used to classify cause of death. This figure includes deaths caused by disease (codes A-N, P-R); pregnancy, childbirth and the puerperium (O); and intentional self-harm (X60-X84). <https://wonder.cdc.gov/wonder/help/ucd.html>

³ Direct costs are from 2016 and adjusted for inflation to reflect a 2018 estimate.

⁴ Direct costs do not include factors such as lost wages and earnings for patients and caregivers that result from missed work.

⁵ Waters and Graf. "The Costs of Chronic Disease in the U.S." The Milken Institute. August 2018. <http://milkeninstitute.org/sites/default/files/reports-pdf/ChronicDiseases-HighRes-FINAL.pdf>

⁶ National Defense expenditures calculated from National Defense category of FY2018 outlays as reported by the Office of Management and Budget. Medical and health R&D expenditures of the Department of Defense and Department of Homeland Security have been subtracted from this amount.

⁷ Office of Management and Budget. "Table 6.1—Composition of Outlays: 1940–2024." <https://www.whitehouse.gov/omb/historical-tables/>

⁸ Office of Management and Budget. "Table 5.1—Budget Authority by Function and Subfunction: 1976–2024." <https://www.whitehouse.gov/omb/historical-tables/>

Figure 1: National Defense as Compared to Federal Medical and Health R&D Spending, 2018 (\$ in millions)^{6,7}

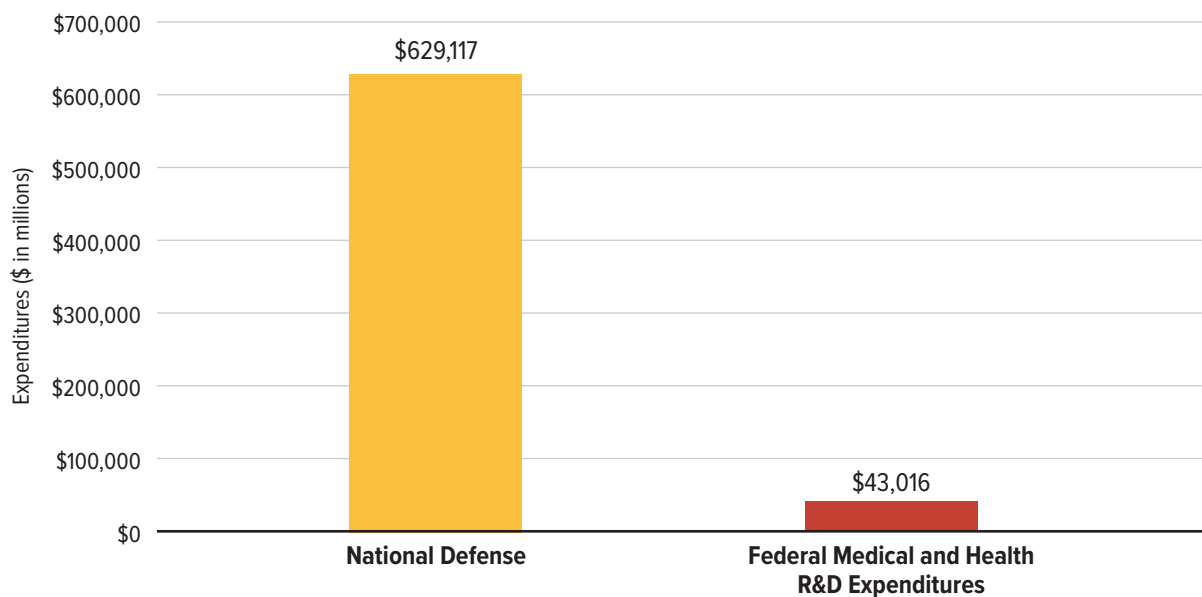
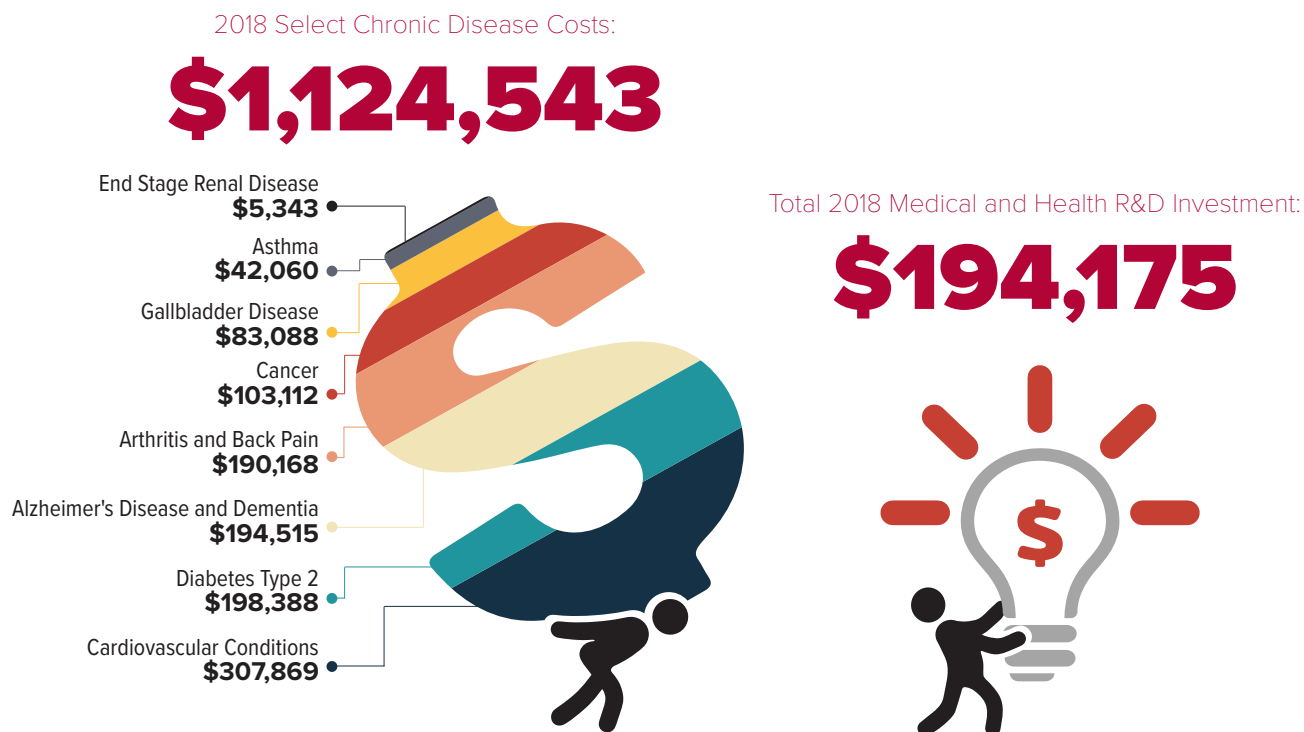


Figure 2: 2018 Estimated Direct Medical Costs of Major Chronic Health Conditions Compared to Total U.S. Medical and Health R&D Investment (\$ in millions)^{3,4,5}



HIGHLIGHTS

- In 2018, total U.S. medical and health R&D spending was \$194.2 billion. Of that:
 - Industry invested \$129.5 billion in medical and health R&D (66.7%).
 - Federal agencies invested a total of \$43 billion (22.2%).
 - Academic and research institutions including colleges and universities, independent research institutes, and independent hospital medical research centers dedicated more than \$15.7 billion of their own funds (8.1%).
 - Foundations invested \$2.3 billion into medical and health R&D, state and local governments invested \$2.1 billion, and voluntary health associations and professional societies invested \$1.5 billion (overall, 3.1%).
- Over the six-year reporting period, medical and health R&D investment grew by 39.3% for industry, 26.9% for federal agencies, 38.7% for academic and research institutions, 21.9% for foundations, 14.5% for voluntary health associations and professional societies and 23.9% for state and local government.
- Overall, U.S. medical and health R&D grew by \$51 billion or 35.7% from 2013 to 2018, yet still accounts for just five cents of every health dollar.

Figure 3: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions), 2013-2018

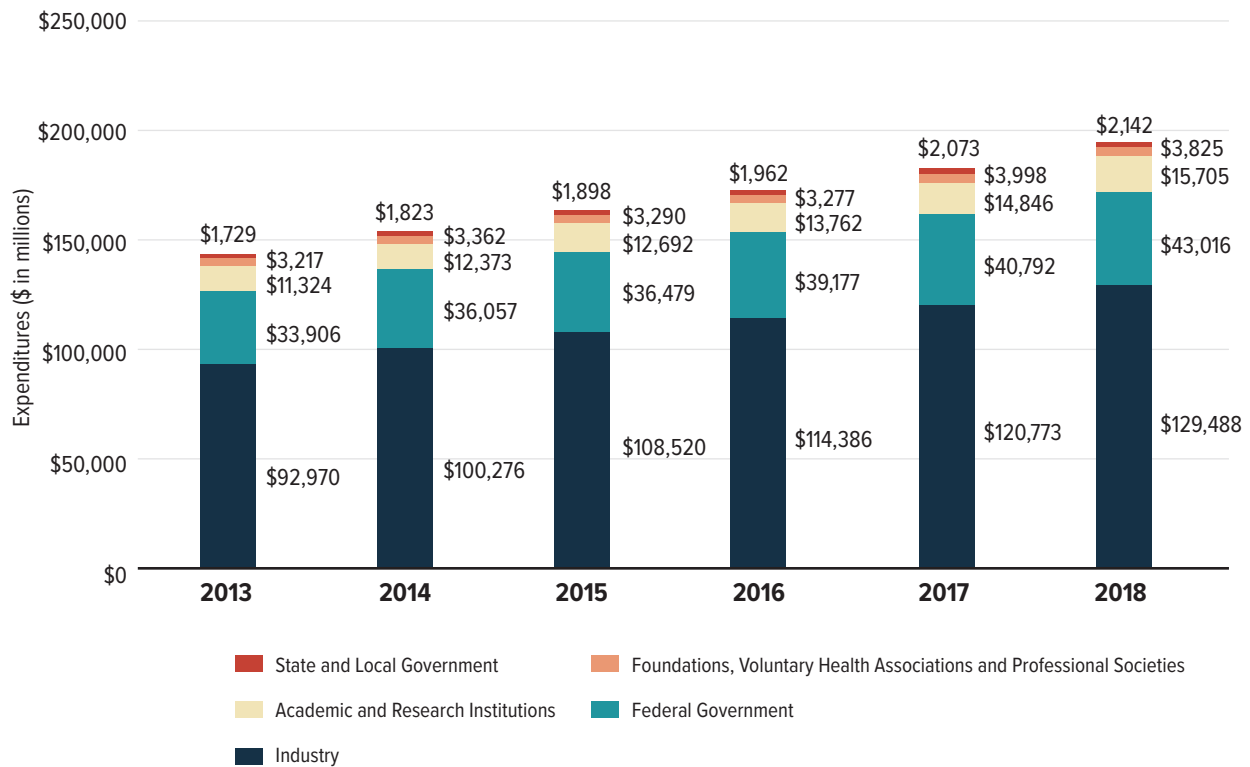
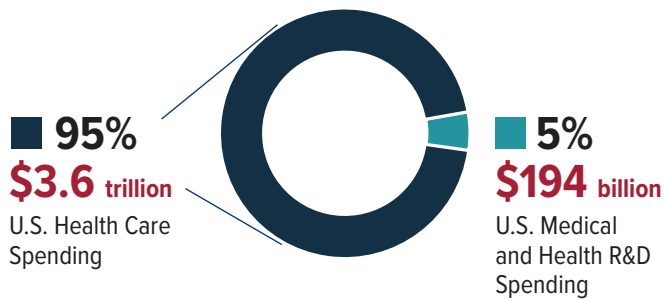


Figure 4: R&D Investment as a Percentage of Overall U.S. Health Spending, 2018



Total 2018 Health Spending:

\$3.8 trillion

Figure 5: U.S. Medical and Health R&D Expenditures by Funding Source, 2018

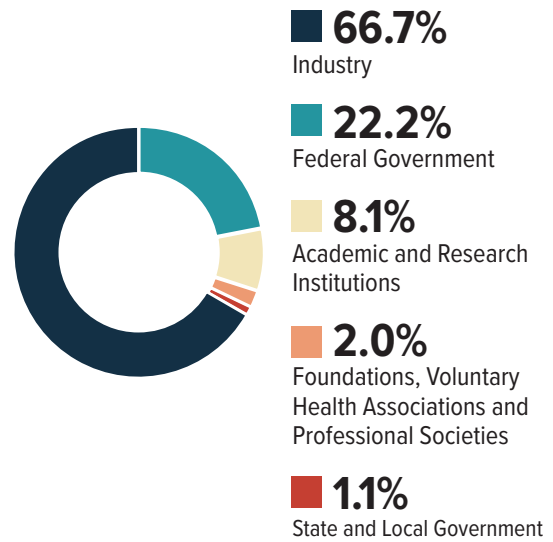


Table 1: Total Health Spending versus Medical and Health R&D Investments (\$ in millions)

	2013	2014	2015	2016	2017	2018 (est.)
Total U.S. Medical and Health R&D Spending	143,145	153,891	162,879	172,563	182,483	194,175
Total U.S. Health Spending ⁹	2,978,298	3,138,789	3,322,261	3,486,035	3,623,850	3,787,579
Medical and Health R&D as % of U.S. Health Spending	4.81%	4.90%	4.90%	4.95%	5.04%	5.13%

Table 2: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions), 2013-2018

Research Segment	2013	2014	2015	2016	2017	2018 (est.)
Industry	92,970	100,276	108,520	114,386	120,773	129,488
Federal Government	33,906	36,057	36,479	39,177	40,792	43,016
Academic and Research Institutions	11,324	12,373	12,692	13,762	14,846	15,705
Foundations, Voluntary Health Associations and Professional Societies	3,217	3,362	3,290	3,277	3,998	3,825
State and Local Government	1,729	1,823	1,898	1,962	2,073	2,142
Total	143,145	153,891	162,879	172,563	182,483	194,175

Table 3: Estimated U.S. Medical and Health R&D Expenditures Annual Percentage Change, 2013-2018

Research Segment	'13-'14 Change	'14-'15 Change	'15-'16 Change	'16-'17 Change	'17-'18 Change	'13-'18 Change
Industry	7.86%	8.22%	5.40%	5.58%	7.22%	39.28%
Federal Government	6.34%	1.17%	7.40%	4.12%	5.45%	26.87%
Academic and Research Institutions	9.27%	2.58%	8.43%	7.88%	5.78%	38.69%
Foundations, Voluntary Health Associations and Professional Societies	4.51%	-2.14%	-0.39%	22.00%	-4.34%	18.89%
State and Local Government	5.43%	4.14%	3.35%	5.68%	3.34%	23.92%
Total	7.51%	5.84%	5.95%	5.75%	6.41%	35.65%

⁹ Total U.S. Health Spending = U.S. Health Care Spending + U.S. Medical and Health R&D Spending

SECTOR BY SECTOR

The data captured and discussed in this report represent an estimate of the dollars invested in medical and health R&D performed in the U.S. The data are categorized by funding source, not by the sector that performed the R&D.

Industry

Industry spending grew by \$8.7 billion or 7.2% from 2017 to 2018, and by \$36.5 billion or 39.3% over the reporting period.

Figure 6: 2018 Industry Investment in Medical and Health R&D, by Funding Sector

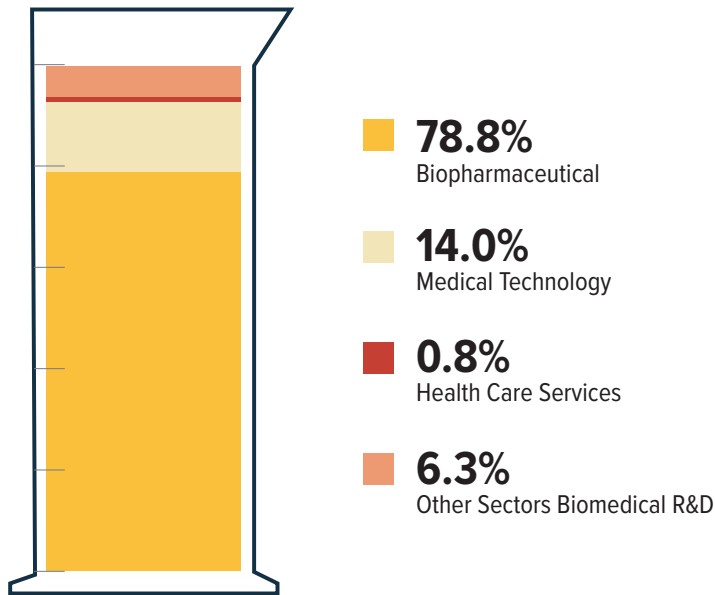


Table 4: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions) and Percentage Change, 2013-2018 – Industry

Industry (U.S. Operations)	2013	2017	2018 (est.)	'17-'18 Change	'13-'18 Change
Biopharmaceutical	72,294	94,402	102,095	8.15%	41.22%
Medical Technology	14,399	17,489	18,174	3.91%	26.21%
Health Care Services ¹⁰	442	992	1,000	0.81%	126.25%
Other Sectors Biomedical R&D ¹¹	5,834	7,890	8,219	4.18%	40.89%
Total	92,970	120,773	129,488	7.22%	39.28%

¹⁰ "Health Care Services" represents research conducted by companies that perform services ancillary to the direct provision of care (e.g., R&D expenditures by diagnostic testing companies and electronic medical record firms).

¹¹ "Other Sectors" includes medical and health-related R&D expenditures by firms not typically included in the medical and health industry (e.g., health-related R&D performed by software and computer firms).

Federal Government

Federal government spending grew by \$2.2 billion or 5.5% from 2017 to 2018, and by \$9.1 billion or 26.9% over the reporting period.

Figure 7: 2018 Federal Investment in Medical and Health R&D, by Funding Sector

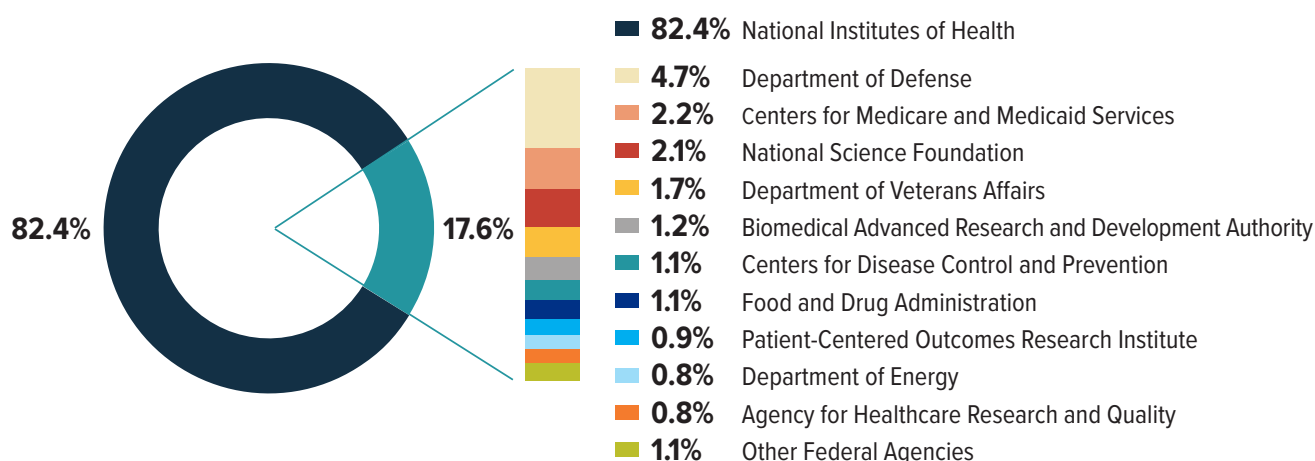


Table 5: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions) and Percentage Change, 2013-2018 – Federal Government

Federal Government	2013	2017	2018 (est.)	'17-'18 Change	'13-'18 Change
National Institutes of Health (NIH)	28,331	33,212	35,424	6.66%	25.04%
Department of Defense (DoD)	1,111	2,102	2,040	-2.95%	83.59%
Centers for Medicare and Medicaid Services (CMS)	656	1,136	931	-18.03%	41.95%
National Science Foundation (NSF)	726	826	895	8.44%	23.35%
Department of Veterans Affairs (VA)	604	669	720	7.71%	19.26%
Biomedical Advanced Research and Development Authority (BARDA)	415	510	537	5.13%	29.33%
Centers for Disease Control and Prevention (CDC)	363	471	479	1.72%	32.03%
Food and Drug Administration (FDA)	361	375	453	20.92%	25.74%
Patient-Centered Outcomes Research Institute (PCORI) ¹²	49	400	385	-3.95%	691.59%
Department of Energy (DoE)	284	306	351	14.73%	23.77%
Agency for Healthcare Research and Quality (AHRQ)	430	323	333	3.00%	-22.49%
National Aeronautics and Space Administration (NASA)	147	140	140	0.00%	-4.57%
Environmental Protection Agency (EPA)	126	118	118	0.11%	-6.34%
Health Resources and Services Administration (HRSA)	37	46	46	0.28%	26.95%
U.S. Agency for International Development (USAID)	75	46	46	0.00%	-38.16%
Department of Commerce (DoC)	31	35	35	0.50%	13.62%
Department of Transportation (DoT)	58	28	33	17.72%	-43.30%
Department of Agriculture (USDA)	56	22	23	2.93%	-59.25%
Other Health and Human Services (Other HHS)	22	22	21	-5.66%	-5.25%
Department of Homeland Security (DHS)	26	3	4	32.71%	-85.68%
Total	33,906	40,792	43,016	5.45%	26.87%

¹² PCORI is not technically a federal agency, but rather a congressionally-authorized, non-governmental, independent organization funded through the federal appropriations process. However, for this report's purposes, it was categorized as a federal agency due to its funding source.

Academic and Research Institutions

Academic and research institution spending grew by \$859 million or 5.8% from 2017 to 2018, and by \$4.4 billion or 38.7% over the reporting period.

Figure 8: 2018 Academic and Research Institution Investment in Medical and Health R&D, by Funding Sector

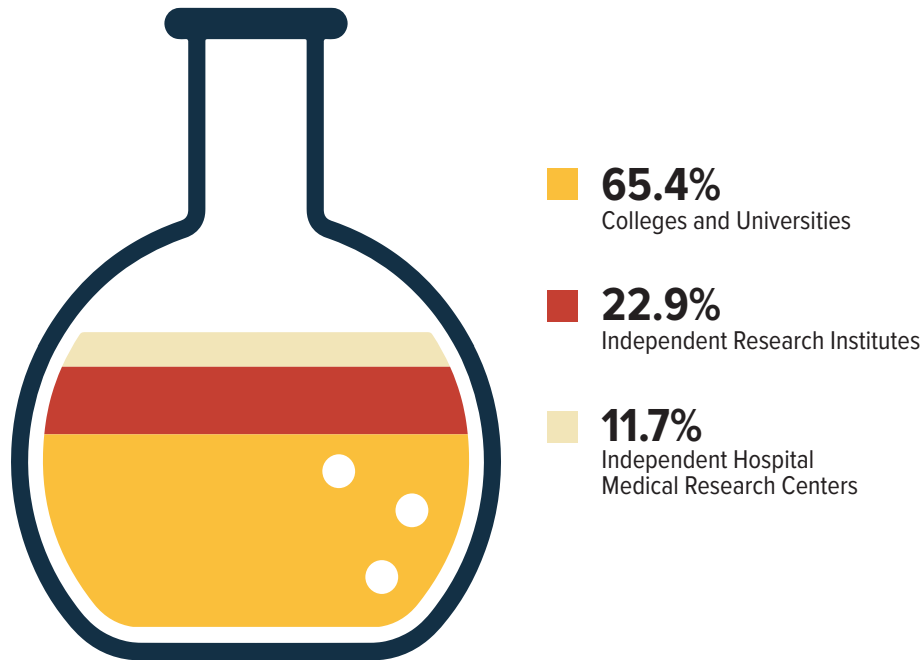


Table 6: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions) and Percentage Change, 2013-2018 – Academic and Research Institutions

Academic and Research Institutions	2013	2017	2018 (est.)	'17-'18 Change	'13-'18 Change
Colleges and Universities	7,130	9,637	10,273	6.60%	44.09%
Independent Research Institutes	2,901	3,490	3,601	3.19%	24.14%
Independent Hospital Medical Research Centers	1,293	1,719	1,830	6.45%	41.55%
Total	11,324	14,846	15,705	5.78%	38.69%

Foundations, Voluntary Health Associations and Professional Societies

Foundation, voluntary health association and professional society spending decreased by \$174 million or 4.3% from 2017 to 2018, but increased by \$608 million or 18.9% over the reporting period.

Figure 9: 2018 Foundation, Voluntary Health Association and Professional Society Investment in Medical and Health R&D, by Funding Sector

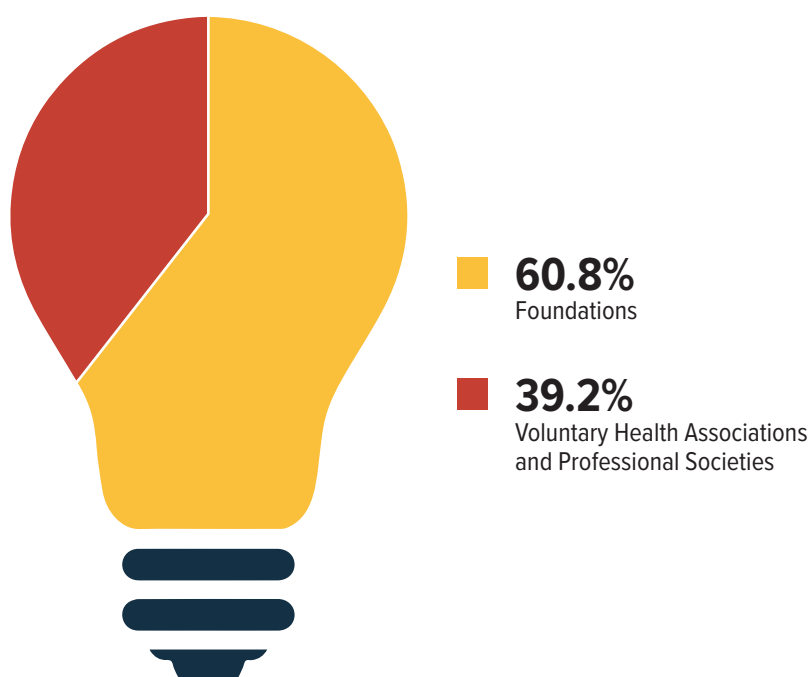


Table 7: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions) and Percentage Change, 2013-2018 – Foundations, Voluntary Health Associations and Professional Societies

Foundations, Voluntary Health Associations and Professional Societies	2013	2017	2018 (est.)	'17-'18 Change	'13-'18 Change
Foundations	1,907	2,569	2,326	-9.47%	21.94%
Voluntary Health Associations and Professional Societies	1,310	1,429	1,499	4.88%	14.45%
Total	3,217	3,998	3,825	-4.34%	18.89%

State and Local Government

State and local government spending grew by \$69 million or 3.3% from 2017 to 2018, and by \$414 million or 23.9% over the reporting period.

Figure 10: 2018 State and Local Government Investment in Medical and Health R&D, by Funding Sector

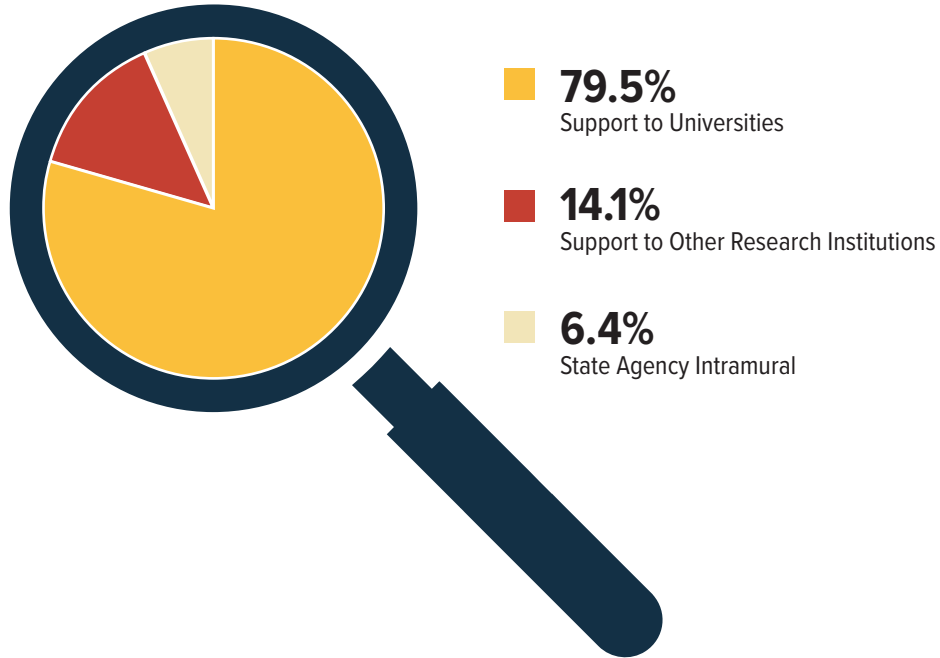


Table 8: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions) and Percentage Change, 2013-2018 – State and Local Government

State and Local Government	2013	2017	2018 (est.)	'17-'18 Change	'13-'18 Change
Support to Colleges and Universities	1,431	1,651	1,704	3.20%	19.07%
Support to Other Research Institutions	163	292	302	3.60%	85.39%
State Agency Intramural	135	130	136	4.60%	1.11%
Total	1,729	2,073	2,142	3.34%	23.92%

Table 9: Estimated U.S. Medical and Health R&D Expenditures (\$ in millions), 2013-2018

Research Segment	2013	2014	2015	2016	2017	2018 (est.)
Industry (U.S. Operations)						
Biopharmaceutical	72,294	78,810	85,282	90,475	94,402	102,095
Medical Technology	14,399	15,045	15,092	15,450	17,489	18,174
Health Care Services	442	478	489	813	992	1,000
Other Sectors Biomedical R&D	5,834	5,944	7,657	7,647	7,890	8,219
Industry Total	92,970	100,276	108,520	114,386	120,773	129,488
Federal Government						
National Institutes of Health (NIH)	28,331	29,367	29,519	31,486	33,212	35,424
Department of Defense (DoD)	1,111	1,803	1,746	2,121	2,102	2,040
Centers for Medicare and Medicaid Services (CMS)	656	997	971	1,156	1,136	931
National Science Foundation (NSF)	726	705	786	777	826	895
Department of Veterans Affairs (VA)	604	553	643	677	669	720
Biomedical Advanced Research and Development Authority (BARDA)	415	415	473	512	510	537
Centers for Disease Control and Prevention (CDC)	363	409	489	521	471	479
Food and Drug Administration (FDA)	361	389	376	486	375	453
Patient-Centered Outcomes Research Institute (PCORI)	49	162	277	346	400	385
Department of Energy (DoE)	284	304	290	294	306	351
Agency for Healthcare Research and Quality (AHRQ)	430	436	443	334	323	333
National Aeronautics and Space Administration (NASA)	147	149	142	145	140	140
Environmental Protection Agency (EPA)	126	128	124	122	118	118
Health Resources and Services Administration (HRSA)	37	38	41	41	46	46
U.S. Agency for International Development (USAID)	75	41	24	16	46	46
Department of Commerce (DoC)	31	31	32	31	35	35
Department of Transportation (DoT)	58	49	25	32	28	33
Department of Agriculture (USDA)	56	21	22	23	22	23
Other Health and Human Services (Other HHS)	22	23	22	23	22	21
Department of Homeland Security (DHS)	26	36	32	34	3	4
Federal Government Total	33,906	36,057	36,479	39,177	40,792	43,016
Academic and Research Institutions						
Universities	7,130	7,992	8,369	9,012	9,637	10,273
Independent Research Institutes	2,901	3,065	2,945	3,073	3,490	3,601
Independent Hospital Medical Research Centers	1,293	1,316	1,378	1,677	1,719	1,830
Academic and Research Institutions Total	11,324	12,373	12,692	13,762	14,846	15,705
Foundations, Voluntary Health Associations and Professional Societies						
Foundations	1,907	2,050	1,944	1,853	2,569	2,326
Voluntary Health Associations and Professional Societies	1,310	1,312	1,346	1,424	1,429	1,499
Foundations, Voluntary Health Associations and Professional Societies	3,217	3,362	3,290	3,277	3,998	3,825
State and Local Government						
Support to Universities	1,431	1,503	1,558	1,554	1,651	1,704
Support to Other Research Institutions	163	191	214	284	292	302
State Agency Intramural	135	129	125	123	130	136
State and Local Government Total	1,729	1,823	1,898	1,962	2,073	2,142
Total U.S. Medical and Health R&D Spending	143,145	153,891	162,879	172,563	182,483	194,175

METHODOLOGY

The total U.S. medical and health R&D data developed and discussed in this report represents an estimate of the full amount of medical and health R&D investment performed in the U.S. over a six-year period (2013-2018). The data is categorized by the originating source of the investment whether industry, the federal government or other contributors to the pool of resources, including foreign parents of U.S.-located facilities. These data are distinct from data capturing the performance of R&D that align the resources with where they are spent (e.g., NIH research grants would be captured within universities or other research institutes who received the NIH award).

Within the context of this report, the terms funding, expenditures, spending, investments and contributions have all been used interchangeably, all in reference to U.S.-based resources leading to U.S.-based medical and health R&D expenditures. To the extent that the data and estimates in this report rely on publicly available data sources, the most current data available is used for all data years presented. Due to corrections and restatements within these data, values presented in this current report are deemed to be more accurate and supersede previously released data.

Industry Figures¹³

Industry medical and health R&D expenditures were developed using the NSF National Center for Science and Engineering Statistics (NCSES) Business R&D and Innovation Survey (BRDIS) data as the baseline. Industry components captured include pharmaceuticals, electromedical devices, medical equipment and supplies, scientific R&D (apportioned to the biopharmaceutical and medical technology sectors using data from BRDIS and the 2012 U.S. Economic Census), health care services and firms in other industry sectors. Extensions and approximations to these data to develop the 2018 estimates relied on additional data 10K (annual) reporting to the U.S. Securities and Exchange Commission (SEC) of key firms in the bioscience industry. To the extent possible, these SEC data are examined for new financial investments in R&D rather than relying strictly on accounting-based statements of R&D expenditures (e.g., removing the value of in-process R&D obtained through mergers and acquisitions (M&A) activities that are stated within R&D discussions).

Federal Government Figures

NIH research spending data was provided by the NIH Office of Budget. The DoD value was derived from American Association for the Advancement of Science (AAAS) budget analysis. Beyond NIH and DoD, many department specific medical and health research expenditures were developed using the NSF NCSES Survey of Federal Funds for Research and Development (SFFRD). Research funding within the medical sciences discipline was the primary field used in this analysis. Based upon individual agency missions and efforts, other disciplines were also included such as biological sciences, other life sciences, other engineering (which includes biomedical engineering) and psychology, as appropriate. This process was supplemented or replaced for NSF, CDC, DoE, PCORI and CMS, where specific profiles, operations and budget documents were used.

¹³ Industry data reflects U.S. operations only.

Academic and Research Institutions, Institutional Funds

College and University Figures

The NSF NCSES Higher Education Research and Development Survey (HERD) Survey was used to estimate institutional internal funding (including direct institutional funding from budgets and endowments and waived indirect expenses on research grants). Combined data for all U.S. higher education institutions in the medical sciences, biological sciences, other (non-agricultural) life sciences, bioengineering and psychology fields were used for the years 2013–2017 with an estimate developed for 2018.

Independent Research Institutes Figures

Using a sample of independent research institutes drawn from the NIH Research Portfolio Online Reporting Tools (RePORT) database and cross checked against/supplemented by membership information provided by the Association of Independent Research Institutes (AIRI), a calculation was made for each research institute to determine its total expenses (including research and any other expenses), net of contributions/grants and program service revenue, and, where applicable, increased by an amount equal to additional annual internal funds (income/revenue from internal investments, endowments or related organizations) as the basis for an annual “funding” estimate. Some of these institutes also perform contract research; this data estimates and only pertains to direct “internal” funding. Having developed these sample-based values for 2013–2017, a statistical approach was used to increase the combined annual values based upon the relationship of these sample institutions to the total list of NIH-funded research institutes with an estimate developed for 2018.

Independent Hospital Research Center Figures

These independent hospital research centers are part of independent stand-alone hospitals (e.g., not as a research center or research arm of a university; includes many children’s hospitals throughout the U.S.). Data for these institutions were developed similarly to the independent research institutes using the NIH RePORT database to identify non-academic medical centers receiving at least \$5 million in NIH research funding in 2018 (reflecting a significant research presence). To estimate the additional and not externally funded research resources of these research centers (often through numerous, small individual donations), we focused, conservatively, on the net community benefit research as captured in IRS 990s for hospitals. In some instances, this information was supplemented by organizational budget information. Having developed these sample-based values for 2013–2017, a statistical approach was used to estimate the 2018 values based upon the relationship of these sample institutions to the total list of independent hospitals receiving NIH research funding.

Foundations, Voluntary Health Associations and Professional Societies

Foundation Figures

Organizations included in this segment are philanthropic grant-awarding bodies filed as foundations with the U.S. government on official tax documents. Baseline medical and health R&D funding was developed using data from the Foundation Center’s Foundation Maps grants and recipient database with additional information gathered from the GuideStar nonprofit information database. Using historical data from the Foundation Center, and more recent and complete financial reporting (both annual financial reports and IRS form 990s), estimates were developed, with emphasis on the funding efforts of key major foundations that historically have accounted for a significant majority of medical and health-related R&D funding. These data also include funding from institution-specific foundations (e.g., funding for the Bill & Melinda Gates Medical Research Institute is captured in this investment category, not the

Independent Research Institutes category). Finally, these data were updated and restated in this year's Investment Report to better exclude research funding from these foundations that went to non-U.S. recipients.

Voluntary Health Association and Professional Society Figures

Funding estimates for U.S. voluntary health associations and professional societies were developed from a continually updated master list of such associations developed by Research!America and TEconomy Partners, LLC and based in part from data provided by the Health Research Alliance. Data was built using specified research grant funding expenditures (distinct from education, patient advocacy or other types of expenditures) as identified within the association's annual reports and/or IRS form 990s. Data consistency and funding magnitude was also checked against both grants received and granting activities (via the Foundation Center database and IRS form 990s).

State and Local Government Figures

The NSF NCSSES HERD Survey data were used to estimate R&D funding from state and local governments to colleges and universities. The NSF NCSSES Survey of State Government Research and Development (SSGRD) was used to capture state funding for other (non-university) research institutions and for government agency intramural research. Funding for other research institutions is a combination of both health mission-specific funding (e.g., a state department of health funding required research with an external consultant) and supportive funding (e.g., a state department of economic development's industry research grant program or a signature research effort such as the California Institute for Regenerative Medicine). To the extent possible, state resources that flow to these signature research "institutes" that are, in turn, granted to state universities are captured and reflected within the "state and local government support to universities" investment line. The NSF SSRGD data also allow for an estimation of the amount of medical and health-related research performed by state agency employees (intramural) typically within state departments of health.

Though the three sources of state and local funding described above are significant, additional state support for R&D through tax incentives is not captured in these values. However, to the extent medical and health firms use these tax incentives to increase the amount of research performed, the increased value would be captured within increased industry funding metrics.



241 18th Street South, Suite 501
Arlington, Virginia 22202

703.739.2577

www.researchamerica.org

The data for U.S. medical and health R&D were developed and estimated by TEconomy Partners, LLC (www.teconomypartners.com) under contract to Research!America.