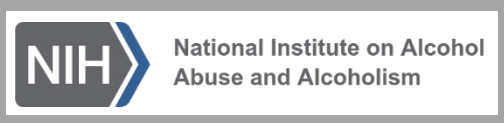
National Institute on Alcohol Abuse and Alcoholism

CONGRESSIONAL JUSTIFICATION
FY 2022

Department of Health and Human Services
National Institutes of Health



DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

Director's Overview

NIAAA DIRECTOR GEORGE F. KOOB, PH.D.

Alcohol misuse has profound effects on the health and well-being of individuals, families, and communities. Although underage and college drinking continue to decline, alcohol-related mortality in the United States is rising. A recent report revealed that the number of death certificates listing alcohol as an underlying cause doubled between 1999 and 2017.[1] The highest rates of alcohol-related deaths occurred among adults aged 45-74, results generally consistent with recent reports of increases in deaths of despair, commonly defined as deaths related to alcohol, opioid and other substance overdoses, alcohol-associated liver cirrhosis, and suicides. Alcohol misuse also imposes a massive economic burden; the most recent estimate indicates that alcohol misuse costs the country $249 billion a year. Although effective options are available to help the millions of Americans with alcohol use disorder (AUD), fewer than 10 percent receive treatment.[2]

NIAAA's mission is to generate and disseminate fundamental knowledge about the effects of alcohol on health and well-being and to apply that knowledge to improve the diagnosis, prevention, and treatment of alcohol-related problems, including AUD, across the lifespan. At a time when alcohol misuse has contributed to the pre-pandemic decline in lifespan in the United States and may play a significant role in the coronavirus disease 2019 (COVID-19) pandemic, it is more important than ever to increase public awareness of the risks associated with all levels of alcohol consumption and to expand the use of evidence-based strategies to intervene with alcohol misuse and its adverse consequences.

Responding to the COVID-19 pandemic and emergent public health needs

The full impact of the COVID-19 pandemic on alcohol misuse is not yet clear, but early reports have indicated that, on average, drinking has increased slightly during the pandemic. One survey found that 40 percent of participants reported consuming more alcohol during the pandemic than before (with others reporting a decrease or no change). These results suggest that mild increases observed in overall consumption levels may be driven by more dramatic increases among subgroups. For example, multiple studies have indicated that women and parents with children in the home are more likely to increase alcohol consumption during the pandemic, with some studies linking increased drinking to coping with stress.

Research advances and technological developments made over the past half-century have enabled alcohol research to move quickly in response to public health emergencies such as the COVID-19 pandemic. Timely response is particularly important as alcohol misuse may influence COVID-19 susceptibility and severity. Specifically, alcohol not only compromises immune function, increasing the risk and severity of lung infections, but chronic alcohol

[1] pubmed.ncbi.nlm.nih.gov/31912524/

[2] AUD is a medical condition characterized by an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences. The term AUD encompasses the conditions that some people refer to as alcohol abuse, alcohol dependence, and the colloquial term, alcoholism. In 2019, approximately 15 million Americans had AUD according to the 2019 National Survey of Drug Use and Health: www.samhsa.gov/data/report/2019-nsduh-detailed-tables

consumption also elevates the risk for acute respiratory distress syndrome (ARDS), a condition often seen in severe cases of COVID-19. The disinhibiting effects of alcohol misuse may also impair a person's ability to take the necessary precautions to prevent the spread of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus. The broad consequences of the pandemic, in turn, may contribute to alcohol misuse. Physical distancing can lead to social isolation or loss of social support, which can contribute to elevations in stress and be deleterious for recovering individuals. Preliminary findings suggest the pandemic-related increases in alcohol use described above are likely due in part to coping with stress, a factor that both increases a person's likelihood of developing AUD and increases the risk of relapse for those in recovery from AUD.

In response to the urgent needs of the pandemic, NIAAA supports COVID-related research through NIAAA-sponsored funding opportunities and collaborative trans-National Institutes of Health (NIH) research initiatives to understand the biological, behavioral, and social impacts of COVID-19 and to speed up the development of diagnostics and therapeutic interventions. To date, many NIAAA-supported researchers have received supplemental funding to study the bidirectional relationship between alcohol and the pandemic and the role of telehealth in mitigating pandemic-related effects on alcohol misuse. NIAAA also provides resources for researchers, including the Alcohol Policy Information System (APIS),[3] a database that is collecting information on state-level policies affecting the availability of alcohol during the COVID-19 pandemic period, and the Alcohol Epidemiologic Data System (AEDS),[4] a resource that is collecting data on monthly alcohol sales during the COVID-19 pandemic for states with available data. Through its intramural research program, NIAAA is building on an ongoing clinical study to investigate the impact of the pandemic on alcohol use, consequences, and related outcomes in individuals across the spectrum of alcohol use, including AUD. Given the unprecedented nature and scale of the pandemic, the disparate impact on vulnerable populations, and the likelihood for long-term biological and behavioral impacts, NIAAA anticipates future research opportunities in this domain, such as an expansion of telemedicine approaches to improve access to AUD prevention, treatment, and recovery services.

Reducing health disparities and supporting a diverse research workforce

The COVID-19 pandemic has highlighted persistent disparities in healthcare in the United States, indicating that much more work is needed to achieve health equity. NIAAA supports research on alcohol-related health disparities across a variety of disciplines, including epidemiology, genetics, prevention, and treatment and health services research. One strategy for combatting alcohol-related health disparities is developing culturally tailored interventions for underserved and vulnerable populations. NIAAA recently supported a randomized clinical trial of a family-centered alcohol prevention program for African American adolescents. The researchers found that the program prevented and reduced alcohol use, particularly among adolescents whose families attended all or most sessions of the intervention. Another study of young African American men revealed that racial discrimination was predictive of increased binge drinking across the span of their early twenties, and this effect was moderated by protective, supportive parenting. As another example, NIAAA-funded researchers and the Alaska Native Yup'ik community are examining the effectiveness of an intervention grounded in

[3] alcoholpolicy.niaaa.nih.gov/resource/covid-19/98
[4] pubs.niaaa.nih.gov/publications/surveillance-covid-19/COVSALES.htm

Yup'ik culture and Indigenous knowledge for preventing underage alcohol use and suicide.[5] Such intervention models described above may be applicable in other communities across the United States, and NIAAA will continue its role in exploring opportunities for scaling up preventive interventions and disseminating research findings to the public to help ensure that the benefits of alcohol research reach all Americans.

Increasing representation among the scientific voices that ask research questions and design studies to answer those questions is another strategy for addressing health disparities at a fundamental level. NIAAA remains committed to increasing opportunities for groups historically underrepresented in science in order to cultivate a diverse workforce.

Since 1995, NIAAA has awarded more than 250 diversity supplements, additional funds added to a research project grant that support development activities for trainees or early-career investigators from underrepresented groups. In FY 2020, NIAAA increased support for this program by 25 percent compared to FY 2019. Through a specialized center award, NIAAA has also supported a successful collaborative partnership between North Carolina Central University (NCCU) and the Bowles Center for Alcohol Studies at the University of North Carolina School of Medicine. The award was designed to support infrastructure development at a minority-serving institution to enhance the research careers of minority scientists and attract qualified minority undergraduate and graduate students to careers in alcohol research. At the time of the initial award in 2010, NCCU had no faculty engaged in alcohol research; there are now 11 alcohol research faculty who have worked with over 35 trainees. In addition to providing a new funding opportunity in FY 2020 to support similar collaborative programs, NIAAA is taking steps to eliminate funding disparities among grantees from underrepresented groups.

Basic research is a critical foundational investment to improve diagnosis, prevention, and treatment of alcohol-related conditions

Basic research provides the foundation for the development of evidence-based strategies for diagnosis, prevention and treatment of alcohol-related consequences, including AUD, alcohol-associated liver disease (ALD), and fetal alcohol spectrum disorders (FASD).

The lack of U.S. Food and Drug Administration (FDA)-approved treatments for ALD represents a major unmet clinical need. Although no single experimental model captures the complete progression of ALD, animal models have enabled the study of the mechanisms that underlie different stages of the disease. NIAAA supports basic research that investigates the pathological mechanisms that lead to the development of ALD and explores diverse diagnostic and therapeutic approaches to prevent or treat ALD (see Program Portrait: Advancing Research on Alcoholic Hepatitis). Recent NIAAA-funded research developed a protein-based contrast agent for magnetic resonance imaging that can detect and accurately quantify early stage fibrosis in multiple animal models of liver disease. With further validation, this contrast agent could potentially be used to noninvasively and accurately detect early stage fibrosis in the liver and other organs in humans, allowing for earlier diagnosis, treatment, and better patient outcomes. Another NIAAA-supported study used multiple animal models to demonstrate that genetic and pharmacological blockade of IL-17, a protein involved in the body's immune response, reduced

[5] https://videocast.nih.gov/watch=38651

alcohol-induced liver and brain injury and suppressed escalation of voluntary alcohol drinking. These results suggest that IL-17 is a common mediator of alcohol-related pathology in the brain and liver and support IL-17 as a target for treatment of co-occurring AUD and ALD.

Basic research also continues to identify targets to mitigate the effects of FASD which contribute to a broad range of lifelong learning deficits, physical disabilities (e.g., impaired motor skills), and other problems that impact overall health and well-being. For example, after identifying a specific receptor in the motor cortex of the brain that is increased following alcohol exposure in utero, NIAAA researchers linked this receptor with motor learning impairment in animals that had been prenatally exposed to alcohol. The researchers also demonstrated that blocking this receptor lessened the motor learning deficits in the animal model, providing evidence that the receptor may be a potential therapeutic target for FASD-related disabilities.

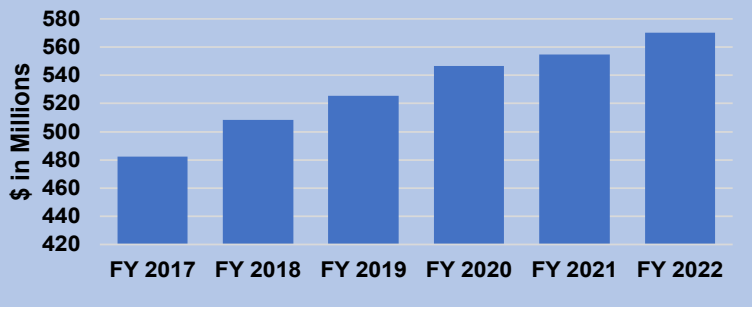
Overall Budget Policy: The FY 2022 President's Budget request is $570.2 million, an increase of $15.3 million or 2.8 percent compared to the FY 2021 Enacted level. NIAAA will continue to focus on spreading knowledge about the effects of alcohol misuse and to improve the diagnosis, prevention, and treatment of alcohol-related problems, including AUD.

National Institute on Alcohol Abuse and Alcoholism

History of NIAAA

For over 50 years, NIAAA has served as the primary U.S. agency for conducting and supporting research on the causes, consequences, diagnosis, prevention, and treatment of alcohol-related problems across the lifespan. NIAAA also translates and disseminates evidence-based research findings for healthcare professionals, researchers, policymakers, and the general public. NIAAA's efforts have contributed to two decades of steady declines in underage drinking, the development of effective treatments for alcohol use disorder (AUD), and the recognition of AUD as a medical disorder.

NIAAA Appropriations History



NIAAA Research Highlights

- A recent study showed that alcohol-related mortality is increasing in the United States, with the highest rates among people age 45-74 and the largest increases over time among people age 25-34. This finding is consistent with reports of increased alcohol-involved emergency department visits and hospitalizations.
- Extramural researchers found that the prevalence of fetal alcohol spectrum disorders is higher than previously thought, with rates among first graders being on par with autism spectrum disorders.
- Research on adolescent brain development demonstrated that youth with a history of alcohol use exhibit weakened connections between brain networks involved in the regulation of emotional and cognitive functioning.
- Intramural researchers developed the Addictions Neuroclinical Assessment, a framework for classifying individual differences in AUD by functional domain; the framework is being used to inform precision medicine approaches to prevention and treatment.
- Researchers identified a novel imaging agent that could accurately assess the severity or stage of chronic liver disease without the need of biopsy in animal models, paving the way for earlier diagnosis and better outcomes for liver disease patients.

George F. Koob, Ph.D., assumed the role of NIAAA director in 2014. He is an internationally-recognized expert on alcohol and stress, and the neurobiology of alcohol and drug addiction.

Alcohol Facts

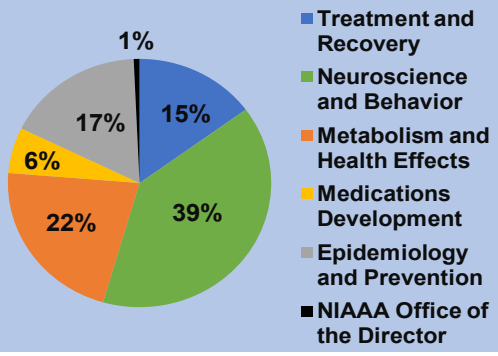
- 200+ diseases/health conditions associated with alcohol misuse
- Around 50 percent of all liver disease deaths are linked to alcohol misuse
- Nearly 15 million Americans have AUD
- Less than 10 percent of people with AUD get treatment
- Alcohol misuse costs the United States an estimated $249 billion every year

NIAAA Facts and Figures

- 238 Full Time Employees
- 790 Research Project Grants in FY 2020

Support for Training and Career Development

FY 2020 Spending by Scientific Division



National Institute on Alcohol Abuse and Alcoholism

Responding to the COVID-19 pandemic

In response to the urgent need for research on how the ongoing COVID-19 pandemic is affecting many aspects of health, NIAAA is encouraging research on the complex relationships between alcohol consumption and COVID-19.

In addition to research on behavioral, social, and economic consequences of the pandemic, the Institute is interested in both the study of alcohol as a biological contributor to COVID-19 outcomes and in assessing the impact of the pandemic on alcohol misuse, alcohol use disorder (AUD), and the treatment of AUD. Such studies could provide not only key information on how alcohol might affect the spread of the virus and severity of symptoms, but also on the effects of physical isolation/social isolation of alcohol misuse, AUD, and the treatment of AUD. These efforts will help inform the nation's response to future public health emergencies and provide opportunities for interventions in populations with limited access to health care.

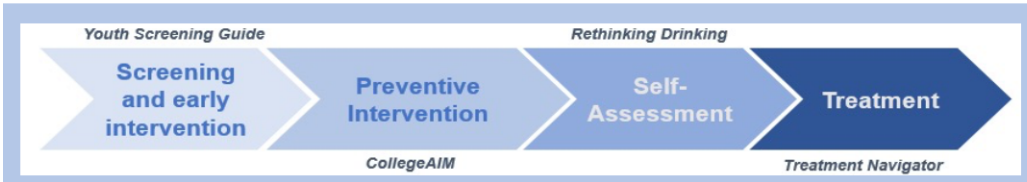
NIAAA is also collaborating in NIH-wide COVID-19 research initiatives, and as a result NIAAA is encouraging the integration of alcohol-related research questions into broader areas of study, such as stress, mental health, and health disparities.

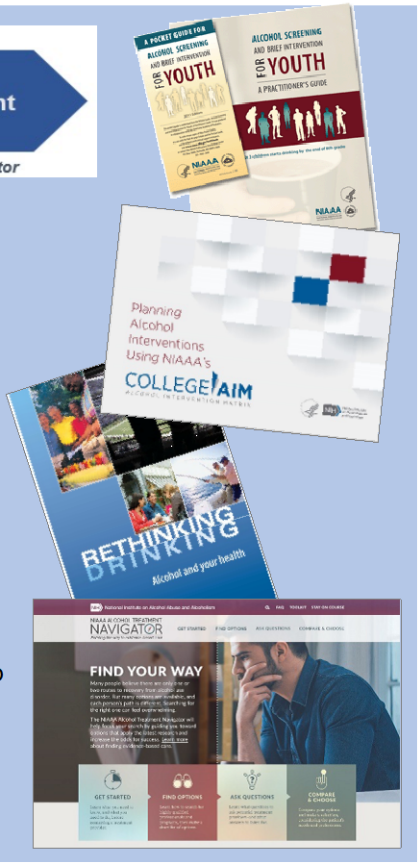
Future Directions

Aging and Alcohol: NIAAA is expanding research on the effects of alcohol use/misuse in older adults and the factors that promote alcohol misuse in this population. In collaboration with National Institute on Aging, NIAAA recently awarded a series of grants exploring alcohol and Alzheimer's disease pathology.

"Whole person" treatment approach: NIAAA is fostering a paradigm shift to integrate research on treatment of alcohol-associated liver disease with AUD treatment. These efforts will help transform management of both conditions into routine health care practice.

Recovery Research: To improve consistency in recovery research, NIAAA has developed a definition which describes recovery as a process through which an individual pursues both remission from AUD and cessation of heavy drinking. The definition is being refined based on stakeholder feedback and will inform new recovery research opportunities.





NIAAA Recent Accomplishments – Translating research findings into evidence-based resources

Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide helps health care professionals identify youth who are at risk for alcohol use, are using alcohol, or have AUD, and to intervene as appropriate.

College Alcohol Intervention Matrix (CollegeAIM) assists colleges and universities in choosing from more than 60 evidence-based college drinking interventions based on cost, effectiveness, and barriers to implementation.

Rethinking Drinking, NIAAA's most popular resource for the public, is an interactive website and accompanying booklet that offers research-based information to help individuals evaluate their relationship with alcohol and find ways to make a change.

NIAAA Alcohol Treatment Navigator® is a web-based resource designed to help individuals and their loved ones understand treatment options for AUD and search for nearby treatment that is professionally led and evidence-based. More recent updates include addition of information about telehealth services and a portal to assist healthcare providers in making referrals for their patients.

Major Changes in the Fiscal Year 2022 President's Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2022 President's Budget request for NIAAA, which is $15.3 million above the FY 2021 Enacted level, for a total of $570.2 million.

Research Project Grants (+$7.1 million; total $325.5 million): NIAAA will support a total of 745 Research Project Grant (RPG) awards in FY 2022. Noncompeting RPGs will increase by 6 awards and competing awards will increase by 35 awards and $17.7 million.

Research Centers and Other Research Grants (+$3.6 million; total $86.1 million): NIAAA will support a total of 24 Research Centers and 206 Other Research Grants in FY 2022.

Research and Development Contracts (+$1.5 million; total $44.0 million): Funds are included in R&D contracts to support the expansion of clinical trials to test promising therapeutic agents for alcohol use disorders.

Intramural Research and Research Management and Support (+$2.7 million; total $98.3 million): This funding level will support NIAAA laboratories within the Division of Intramural Clinical and Biological Research as well as the Intramural Office of Laboratory Animal Science.

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Budget Mechanism - Total[1]

(Dollars in Thousands)

MECHANISM	FY 2020 Final		FY 2021 Enacted		FY 2022 President's Budget		FY 2022 +/- FY 2021 Enacted	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Projects:								
Noncompeting	568	$225,539	550	$239,000	556	$226,928	6	-$12,072
Administrative Supplements	*(61)*	6,139	*(21)*	4,000	*(21)*	4,000	*(0)*	0
Competing:								
Renewal	23	15,298	19	12,460	36	17,900	17	5,440
New	136	61,546	111	49,880	130	62,519	19	12,639
Supplements	2	414	1	338	0	0	-1	-338
Subtotal, Competing	161	$77,258	131	$62,678	166	$80,419	35	$17,741
Subtotal, RPGs	729	$308,936	681	$305,678	722	$311,347	41	$5,669
SBIR/STTR	21	14,603	18	12,730	23	14,200	5	1,470
Research Project Grants	750	$323,539	699	$318,408	745	$325,547	46	$7,139
Research Centers:								
Specialized/Comprehensive	21	$31,739	23	$34,500	24	$36,000	1	$1,500
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
Comparative Medicine	0	0	0	0	0	0	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Research Centers	21	$31,739	23	$34,500	24	$36,000	1	$1,500
Other Research:								
Research Careers	130	$22,490	130	$22,500	144	$24,000	14	$1,500
Cancer Education	0	0	0	0	0	0	0	0
Cooperative Clinical Research	1	7,233	1	7,500	1	7,500	0	0
Biomedical Research Support	0	0	0	0	0	0	0	0
Minority Biomedical Research Support	0	500	0	500	0	600	0	100
Other	51	17,834	51	17,567	61	18,039	10	472
Other Research	182	$48,057	182	$48,067	206	$50,139	24	$2,072
Total Research Grants	953	$403,335	904	$400,975	975	$411,686	71	$10,711
Ruth L Kirschstein Training Awards:	FTTPs		FTTPs		FTTPs		FTTPs	
Individual Awards	108	$5,009	109	$5,109	109	$5,237	0	$128
Institutional Awards	215	10,509	215	10,719	215	10,987	0	268
Total Research Training	323	$15,517	324	$15,828	324	$16,224	0	$396
Research & Develop. Contracts	55	$34,138	57	$42,500	59	$44,000	2	$1,500
(SBIR/STTR) (non-add)	*(7)*	*(1,827)*	*(6)*	*(3,900)*	*(0)*	*(3,613)*	*(-6)*	*(-287)*
Intramural Research	86	56,498	93	57,628	93	59,241	0	1,613
Res. Management & Support	133	37,207	145	37,951	145	39,014	0	1,063
SBIR Admin. (non-add)	*(0)*	*(0)*	*(0)*	*(0)*	*(0)*	*(0)*	*(0)*	*(0)*
Construction		0		0		0		0
Buildings and Facilities		0		0		0		0
Total, NIAAA	219	$546,696	238	$554,882	238	$570,165	0	$15,283

[1] All items in italics and brackets are non-add entries.

NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

For carrying out section 301 and title IV of the PHS Act with respect to alcohol abuse and alcoholism, [$554,923,000]*$570,165,000*.

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Summary of Changes

(Dollars in Thousands)

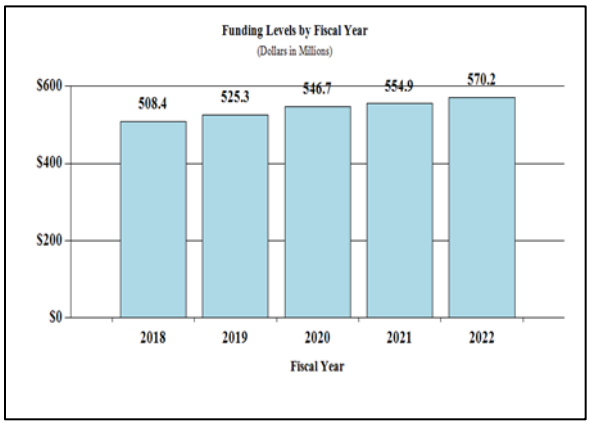
FY 2021 Enacted	$554,882
FY 2022 President's Budget	$570,165
Net change	$15,283

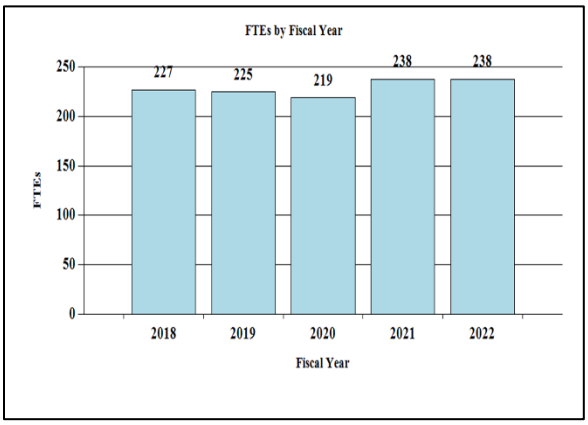
CHANGES	FY2021 Enacted		FY 2022 President's Budget		Built-In Change from FY 2021 Enacted	
	FTEs	Budget Authority	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:						
1. Intramural Research:						
a. Annualization of January 2021 pay increase & benefits		$19,682		$20,264		$54
b. January FY 2022 pay increase & benefits		19,682		20,264		528
c. Paid days adjustment		19,682		20,264		0
d. Differences attributable to change in FTE		19,682		20,264		0
e. Payment for centrally furnished services		9,484		9,958		474
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		28,462		29,867		941
Subtotal						$1,997
2. Research Management and Support:						
a. Annualization of January 2021 pay increase & benefits		$27,616		$28,452		$73
b. January FY 2022 pay increase & benefits		27,616		28,452		763
c. Paid days adjustment		27,616		28,452		0
d. Differences attributable to change in FTE		27,616		28,452		0
e. Payment for centrally furnished services		276		290		14
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		10,059		10,272		356
Subtotal						$1,206
Subtotal, Built-in						$3,203

CHANGES	FY2021 Enacted		FY 2022 President's Budget		Program Change from FY 2021 Enacted	
	No.	Amount	No.	Amount	No.	Amount
B. Program:						
1. Research Project Grants:						
a. Noncompeting	550	$243,000	556	$230,928	6	-$12,072
b. Competing	131	62,678	166	80,419	35	17,741
c. SBIR/STTR	18	12,730	23	14,200	5	1,470
Subtotal, RPGs	699	$318,408	745	$325,547	46	$7,139
2. Research Centers	23	$34,500	24	$36,000	1	$1,500
3. Other Research	182	48,067	206	50,139	24	2,072
4. Research Training	324	15,828	329	16,224	5	396
5. Research and development contracts	57	42,500	59	44,000	2	1,500
Subtotal, Extramural		$459,303		$471,910		$12,607
	FTEs		FTEs		FTEs	
6. Intramural Research	93	$57,628	93	$59,241	0	-$384
7. Research Management and Support	145	37,951	145	39,014	0	-143
8. Construction		0		0		0
9. Buildings and Facilities		0		0		0
Subtotal, Program	238	$554,882	238	$570,165	0	$12,080
Total built-in and program changes						$15,283

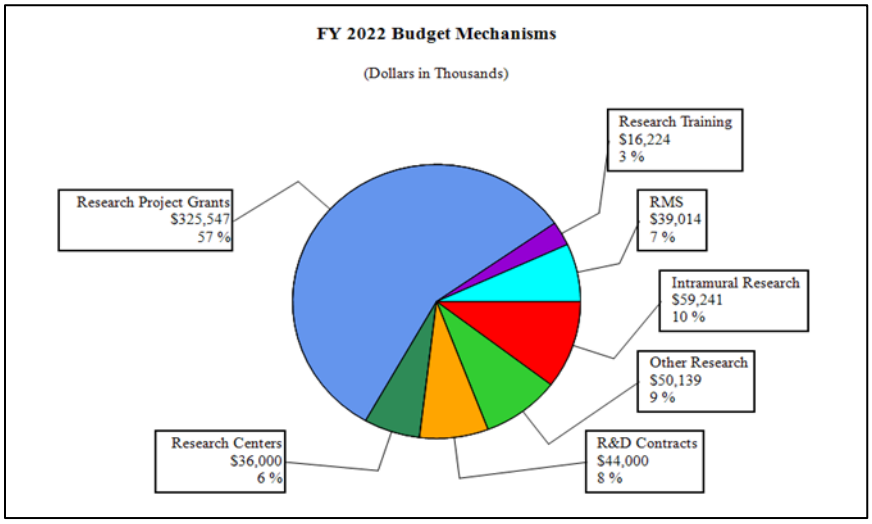
Fiscal Year 2022 Budget Graphs

History of Budget Authority and FTEs:

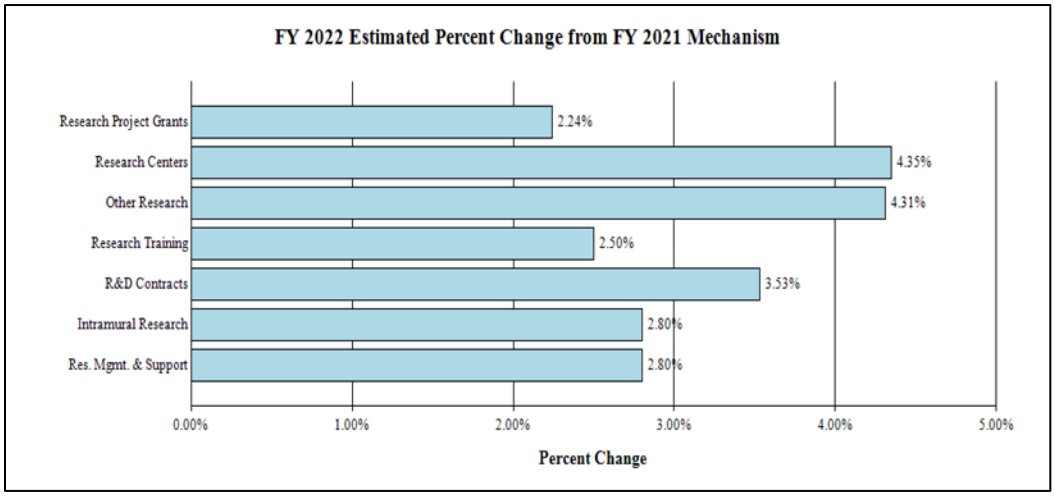




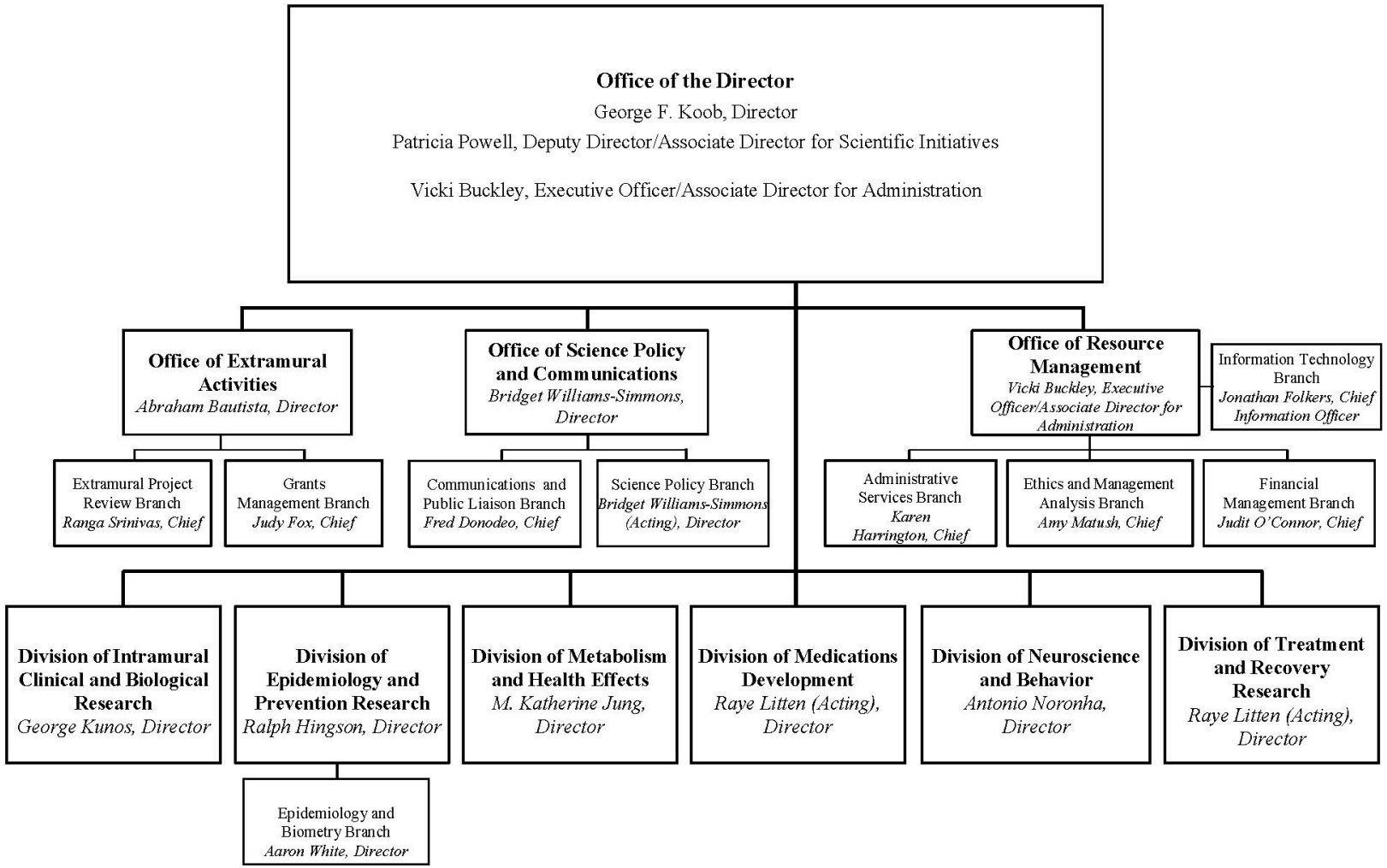
Distribution by Mechanism:



Change by Selected Mechanisms:



National Institute on Alcohol Abuse and Alcoholism



NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Budget Authority by Activity[1]

(Dollars in Thousands)

	FY 2020 Final		FY 2021 Enacted		FY 2022 President's Budget		FY 2022 +/- FY 2021 Enacted	
Extramural Research	**FTE**	**Amount**	**FTE**	**Amount**	**FTE**	**Amount**	**FTE**	**Amount**
Detail								
Embryo and Fetus		$18,120		$18,372		$18,876		$504
Youth/Adolescence		45,299		45,930		47,191		1,261
Young Adult		199,316		202,093		207,640		5,547
Mid-Life		135,897		137,791		141,573		3,782
Senior Adult		54,359		55,116		56,629		1,513
Subtotal, Extramural		**$452,991**		**$459,303**		**$471,910**		**$12,607**
Intramural Research	**86**	**$56,498**	**93**	**$57,628**	**93**	**$59,241**	**0**	**$1,613**
Research Management & Support	**133**	**$37,207**	**145**	**$37,951**	**145**	**$39,014**	**0**	**$1,063**
TOTAL	**219**	**$546,696**	**238**	**$554,882**	**238**	**$570,165**	**0**	**$15,283**

[1] Includes FTEs whose payroll obligations are supported by the NIH

Justification of Budget Request

National Institute on Alcohol Abuse and Alcoholism

Authorizing Legislation: Section 301 and title IV of the Public Health Service Act, as amended.

Budget Authority (BA):

	FY 2020 Final	FY 2021 Enacted	FY 2022 President's Budget	FY 2022 +/- FY 2021
BA	$546,696,000	$554,882,000	$570,165,000	$15,283,000
FTE	219	238	238	0

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

Program Descriptions

NIAAA's extramural programs are organized by stage of life to highlight the changes in biology, behavior, and environmental inputs over time that influence the emergence and progression of alcohol misuse and associated health consequences. Improvements in the diagnosis, prevention, and treatment of alcohol-related problems across the lifespan is integral to fulfilling NIAAA's mission; accordingly, key basic, translational, and clinical research advances in these areas have been highlighted within each program description.

Embryo and Fetus

Alcohol exposure during embryonic and fetal development is a leading preventable cause of birth defects and can result in FASD. Basic, translational, and clinical research is providing valuable insight into the mechanisms that underlie the cognitive and behavioral deficits and health problems associated with FASD and is shedding light on potential intervention strategies. NIAAA-supported researchers recently demonstrated that any level of reported alcohol exposure in utero was associated with subtle but significant psychological and behavioral effects in children, including greater psychopathology, separation anxiety, attention deficits, and impulsivity. In another recent study, analysis of patient health data led researchers to uncover a link between prenatal alcohol exposure and metabolic disorders in adulthood. They then identified potential developmental, behavioral, and molecular regulators underlying this link using a preclinical model of FASD. An additional study conducted by an international team of investigators (the Prenatal Alcohol in SIDS and Stillbirth [PASS] Network) found that dual exposure to alcohol and tobacco prenatally was associated with a substantially higher risk of sudden infant death syndrome (SIDS)—the sudden, unexplained death of an infant younger than

one year—than either substance alone. The findings suggest that combined exposure to alcohol and tobacco has a synergistic effect on SIDS risk. NIAAA also supports the Collaborative Initiative on Fetal Alcohol Spectrum Disorders (CIFASD), a multidisciplinary international consortium of FASD researchers that focuses on improving the diagnosis, prevention, and treatment of FASD. CIFASD researchers recently created a mobile phone app for caregivers of children with FASD designed to help them learn new skills to manage their children's behavior and connect with other caregivers for support.

Budget Policy: The FY 2022 President's Budget request is $18.9 million, an increase of $0.5 million or 2.7 percent compared to the FY 2021 Enacted level. FASD will continue to be a focus for NIAAA.

Youth/Adolescence

Alcohol use is commonly initiated during adolescence. About 40 percent of 12 to 20-year-olds report having tried alcohol at least once, and about 11 percent report current binge drinking.[6] Early alcohol use is linked to increased risk for AUD, dangerous behaviors such as driving under the influence, alcohol-induced memory blackouts, and other short- and long-term consequences. NIAAA continues to encourage research to develop evidence-based behavioral interventions to prevent and reduce adolescent alcohol use for delivery in schools and other settings. An NIAAA-funded study recently demonstrated that a web-based personalized feedback intervention (eCHECKUP TO GO) aimed at targeting cognitive risk factors (such as perceived norms and alcohol expectancies) successfully reduced alcohol use among a sample of high school seniors.

DATA SHARING AND THE FUTURE OF BIG DATA IN ALCOHOL RESEARCH

Sharing de-identified individual-level data from human subject studies has many benefits for public health research. For example, data sharing allows for additional analyses of clinical data that have already been collected, offering a low-cost, high-yield approach for investigating new research questions based on existing data (known as secondary analyses). In addition, combining shared data into large datasets overcomes barriers of small sample sizes, increases reliability and confidence of results, and enables the identification of subgroups of patients for whom a treatment may be particularly beneficial (or harmful). Such a data sharing approach is particularly useful in the era of precision medicine and big data.

NIAAA encourages secondary analyses of existing alcohol datasets. Recent examples include the use of advanced machine learning techniques to analyze existing clinical trials data to evaluate alternative endpoints for clinical trials of novel treatments for alcohol use disorder (AUD), identify new subgroups that respond to AUD pharmacotherapy, and characterize different profiles of recovery from AUD. Electronic health records (EHR) are another valuable data source. The Institute currently funds multiple projects that are using EHR data to improve clinical identification and management of people with AUD, and to assess the relationship between measures of alcohol misuse or AUD and subsequent health outcomes. Data from EHR registries and other similar databases can be leveraged to address critical public health questions related to the full course and spectrum of alcohol-related problems, including recovery.

NIAAA recently launched a new data-sharing initiative to create a repository for NIAAA-funded clinical research data: the NIAAA Data Archive.[a] NIAAA-funded investigators conducting research with human participants are expected to submit de-identified, individual-level data to this repository. Data will be catalogued and made available to the general research community after an embargo period following the end-date of the research award through which the data were collected.

Looking forward, capitalizing on the promise of data science will require an alcohol research workforce that is adequately trained in data science and a strong data infrastructure with the capacity to meet future needs of big data.

[a] nda.nih.gov/niaaa

[6] www.samhsa.gov/data/report/2019-nsduh-detailed-tables

Alcohol use can also alter developmental trajectories of the maturing adolescent brain. To better characterize predictors and consequences of adolescent alcohol consumption, NIAAA supports the National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA) and the Adolescent Brain Cognitive Development (ABCD) study (see trans-NIH initiatives). Both are multisite longitudinal studies that examine brain structure and function in youth before and after they begin using alcohol or other substances. For example, NCANDA researchers have shown that youth with a history of alcohol use exhibit weakened connections between brain networks involved in the regulation of emotional and cognitive functioning. More recent findings from NCANDA suggest that youth who have experienced childhood trauma have disrupted patterns of connections between brain networks. The altered connections are associated with harmful consequences and could predict future progression to AUD, enabling targeted interventions for vulnerable individuals. In another report, Adolescent Brain Cognitive Development (ABCD) researchers showed that children of parents with AUD—compared to those with parents without AUD—have different brain activity patterns during a task where they are asked to inhibit a response. Varying patterns of brain activity could relate to this population's increased risk for AUD later in life. Finally, early evidence (supported by a COVID supplement to the ABCD study) has suggested that shifts in parental monitoring during the COVID-19 pandemic influence youth substance use. Youth with reduced monitoring during the pandemic were more likely to transition to substance use whereas youth with increased monitoring during this time were more likely to stop ongoing substance use.

Budget Policy: The FY 2022 President's Budget request is $47.2 million, an increase of $1.3 million or 2.7 percent compared to the FY 2021 Enacted level. Researching effects of adolescent drinking, as well as prevention and reduction of adolescent drinking will continue to be a focus for NIAAA.

Young Adult

The prevalence of harmful drinking behavior peaks during young adulthood. According to a 2019 survey, 23 percent of underage young adults aged 18-20, 42 percent of young adults aged 21-25, and 39 percent of young adults aged 26-29 reported current binge drinking.[7] Binge drinking increase risks for AUD, alcohol overdose, injuries, and death. Accordingly, epidemiological data have revealed greater increases in the negative consequences of alcohol use among young adults relative to other age groups: recent reports have revealed greater increases in emergency department visits resulting from chronic alcohol use, ALD, and overall alcohol-related mortality among young adults aged 25-34 than any other age groups.[8] These studies have consistently revealed that increases in alcohol-related harm and death are even greater in young women than young men, suggesting the need for prevention strategies that target this population.

[7] www.samhsa.gov/data/report/2019-nsduh-detailed-tables

[8] pubmed.ncbi.nlm.nih.gov/31912524/
pubmed.ncbi.nlm.nih.gov/29293274/
pubmed.ncbi.nlm.nih.gov/30021785/
pubs.niaaa.nih.gov/publications/surveillance114/Cirr17.htm

National survey data collected prior to the pandemic indicated that a third of young adults enrolled in college reported current binge drinking.[9] NIAAA developed the College Alcohol Intervention Matrix (CollegeAIM[10]) to assist colleges and universities in choosing from more than 60 college drinking interventions based on their effectiveness, anticipated costs, and barriers to implementation. This resource was revised in 2019 to reflect new research findings. NIAAA has also made efforts to raise awareness about the increased risks associated with alcohol misuse and COVID-19 for the college population. In particular, reduced inhibitions from drinking and being intoxicated may affect a young person's ability to take the precautions needed to reduce the risk of contracting the coronavirus or spreading it to others, such as maintaining appropriate physical distance and wearing a mask. A recent NIAAA-supported study of young adults who engaged in alcohol misuse demonstrated a link between compromised adherence to physical distancing guidelines, with suboptimal compliance linked to days on which drinking occurred.

Budget Policy: The FY 2022 President's Budget request is $207.6 million, an increase of $5.5 million or 2.7 percent compared to the FY 2021 Enacted level. Research aimed at preventing, reducing, and treating alcohol misuse and its consequences, in addition to assisting colleges and universities, will continue to be a focus for NIAAA.

Mid-Life

Midlife is the time when individuals with AUD are most likely to seek treatment. Effective, evidence-based AUD treatments include professionally led treatments such as behavioral therapies, three FDA-approved medications, and peer-led support such as Alcoholics Anonymous (AA) and other mutual-support groups. NIAAA-supported researchers recently confirmed that AA

ADVANCING RESEARCH ON ALCOHOLIC HEPATITIS

Alcohol is involved in nearly half of all liver disease deaths—approximately 22,000—in the United States each year. Alcohol-associated liver disease (ALD) is the most common alcohol-related cause of death and has replaced hepatitis C virus infection as the leading cause of liver transplantation due to a chronic disease. Since 1999, ALD-related deaths have increased by more than 40 percent and the greatest increase in deaths has been driven by alcohol-associated cirrhosis in young adults aged 25-34. Improving diagnosis and treatment of ALD remains an area of clinical need.

Alcoholic hepatitis (AH), a sudden-onset and particularly serious form of ALD, has a mortality rate of more than 50 percent within the first 60 days of diagnosis in severe cases. Recently, extracellular vesicles (EV), particles that transport "cargo" between different cells, have emerged as novel diagnostic and prognostic biomarkers for AH. NIAAA-supported research demonstrated that levels of EV particles in blood plasma are correlated with AH disease severity and are significantly elevated among patients with AH compared to those with other liver diseases. EV levels are also predictive of 90-day survival rate for AH patients. NIAAA-supported research also linked the presence of a specific bacterium in the gut to AH severity and mortality. The same study also provided promising preclinical evidence for treatment of AH using therapy that targeted the harmful gut bacterium and reduced liver injury.

In 2012, NIAAA funded four research consortia to stimulate research into the causes of and cures for AH. Six years later, NIAAA consolidated the consortia into a single network, the NIAAA Alcoholic Hepatitis Clinical and Translational Network, to conduct a multi-site phase II clinical trial, along with studies aimed at increasing our understanding of AH pathogenesis and developing new treatment and management approaches for AH. Today the network is a collaborative effort of 11 clinical and translational research centers and is known as the Alcoholic Hepatitis Network, or AlcHepNet. The goal of the AlcHepNet is to collect and store clinical data to facilitate investigations of the epidemiology, diagnosis, pathophysiology, natural history, and treatment of alcoholic hepatitis, and to develop a biospecimen bank obtained from individuals with and without AH. Combined, these approaches will accelerate improved treatment and care for patients with this devastating liver condition.

[9] www.samhsa.gov/data/report/2019-nsduh-detailed-tables
[10] www.collegedrinkingprevention.gov/collegeaim/

and other 12-step programs can offer a low-cost, effective treatment option for maintaining abstinence among those with AUD.

NIAAA's robust program to develop new AUD medications includes preclinical studies, a Human Laboratory Program that screens candidate compounds for potential effectiveness prior to clinical trials, and the NIAAA Clinical Investigations Group, a network of research sites for conducting rapid phase II clinical trials of promising compounds. Recent and ongoing work is exploring the efficacy of ghrelin (a hormone that regulates appetite and food intake) and oxytocin (a hormone which plays a role in regulating stress and social affiliation) for treatment of AUD. NIAAA also continues to work with the FDA to identify alternative alcohol-related outcomes, such as improvements in mental and physical health and psychosocial functioning, that define success in alcohol clinical trials and could increase the number of effective medications. Numerous studies support alternative treatment endpoints, including a recent brain imaging study funded by NIAAA. Researchers found comparable improvements in brain volume within the frontal cortex among patients who maintained abstinence following AUD treatment and non-abstinent individuals who maintained reduced drinking levels that were associated with improvements in psychosocial functioning in previous studies. In order to improve consistency across recovery research studies, NIAAA engaged stakeholders to develop a consensus research definition of recovery. The proposed definition describes recovery as a process through which an individual pursues both remission from AUD and cessation of heavy drinking.[11] NIAAA has disseminated the definition to the broader research community via a recent public virtual roundtable and is using the feedback from these stakeholders to refine the definition and to inform the direction of new recovery research opportunities.

Budget Policy: The FY 2022 President's Budget request is $141.6 million, an increase of $3.8 million or 2.7 percent compared to the FY 2021 Enacted level. Research aimed at preventing, reducing, and treating alcohol misuse and its consequences will continue to be a focus for NIAAA.

Senior Adult

Alcohol use has steadily increased in the population age 60 and above over the past 2 decades, particularly among women.[12] Approximately 20 percent of adults aged 60-64 and around 11 percent over age 65 report current binge drinking.[13] Chronic, heavy drinking contributes to accelerated and exacerbated aging-related symptoms and aging increases sensitivity to the physiological and neurobiological effects of alcohol. NIAAA encourages research to increase understanding of the effects of alcohol use/misuse in older adults and the factors that promote alcohol misuse in this population. In collaboration with the National Institute on Aging, NIAAA recently awarded a series of grants exploring the potential interaction of alcohol with Alzheimer's disease pathology. Funded grants include a longitudinal study of the effects of alcohol on brain function in adults over age 50 as well as preclinical studies investigating potential molecular and cellular mechanisms by which alcohol may influence the tau protein pathology that characterizes Alzheimer's disease. The Institute is also encouraging new grant

[11] Heavy drinking is defined as more than 3 drinks on any day or more than 7 drinks per week for women, and more than 4 drinks on any day and more than 14 drinks per week for men.
[12] pubmed.ncbi.nlm.nih.gov/28340502/
[13] www.samhsa.gov/data/report/2019-nsduh-detailed-tables

applications aimed at understanding the effects of alcohol consumption on aging at molecular, cellular, tissue, organ, organism, and societal levels. Elucidating the biological pathways that underlie such effects could provide targets for better diagnosis, prevention, and treatment of AUD among older adults. Finally, NIAAA's interest in supporting research on the relationships between alcohol and cancer includes understanding how alcohol consumption may interfere with diagnosis and treatment of cancer in senior adults.

Budget Policy: The FY 2022 President's Budget request is $56.6 million, an increase of $1.5 million or 2.7 percent compared to the FY 2021 Enacted level.

Intramural Research Program

NIAAA's Intramural Research Program (IRP) conducts high-caliber research with the goals of improving the understanding of the biological and behavioral bases of AUD and the processes underlying the effects of alcohol on the brain and body, and developing treatments for AUD, ALD, and other alcohol-related conditions such as FASD. The NIAAA IRP also has a robust training program and provides opportunities for basic, translational, and clinical alcohol researchers and trainees to collaborate on studies investigating a broad range of alcohol-related topics across NIH.

One intramural study recently found that specifically and selectively inhibiting aldehyde dehydrogenase 2 (ALDH2; an enzyme that detoxifies a harmful byproduct of alcohol metabolism) in the liver decreased excessive alcohol drinking in mice, and may be a potential treatment approach for AUD. NIAAA intramural investigators also found that alirocumab, an antibody that robustly reduces cholesterol, significantly reduced alcohol-induced liver damage in a preclinical model of chronic alcohol exposure. Further research is needed to investigate the therapeutic efficacy and safety of alirocumab in individuals with AUD and ALD. Another preclinical study conducted by intramural researchers examined consequences of prenatal alcohol exposure and found that specific changes in a brain circuit involved in learning and decision-making may underlie some of the known behavioral impairments observed in children and adults who were exposed to alcohol prenatally. The results of this study point to new treatment targets that might help ameliorate impaired decision-making associated with FASD.

Budget Policy: The FY 2022 President's Budget request is $59.2 million, an increase of $1.6 million or 2.8 percent compared to the FY 2021 Enacted level. The support and success of alcohol research will continue to be a focus for IR at NIAAA.

Research Management and Support

Research Management and Support provides for administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of grants, training awards, and contracts; strategic planning, coordination, and evaluation of the NIAAA's programs; regulatory compliance; and liaison with other Federal agencies, Congress, and the public.

Budget Policy: The FY 2022 President's Budget request is $39.0 million, an increase of $1.1 million or 2.8 percent compared to the FY 2021 Enacted level. The support and success of alcohol research will continue to be a focus for RMS at NIAAA.

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2013	$457,104,000		$458,489,000	$459,518,865
Rescission				$919,038
Sequestration				($23,064,687)
2014	$463,848,000		$460,765,000	$446,025,000
Rescission				$0
2015	$446,017,000			$447,408,000
Rescission				$0
2016	$459,833,000	$456,012,000	$469,355,000	$467,700,000
Rescission				$0
2017[1]	$467,445,000	$480,330,000	$488,782,000	$483,363,000
Rescission				$0
2018	$361,356,000	$490,796,000	$500,491,000	$509,573,000
Rescission				$0
2019	$469,109,000	$515,658,000	$525,867,000	$525,591,000
Rescission				$0
2020	$452,419,000	$551,278,000	$556,010,000	$545,373,000
Rescission				$0
2021	$497,346,000	$550,063,000	$564,498,000	$554,923,000
Rescission				$0
2022	$570,165,000			

[1] Budget Estimate to Congress includes mandatory financing.

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2021 Amount Authorized	FY 2021 Enacted	2022 Amount Authorized	FY 2022 President's Budget
Research and Investigation	Section 301	42§241	Indefinite	$554,882,000	Indefinite	$570,165,000
National Institute on Alcohol Abuse and Alcoholism	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				$554,882,000		$570,165,000

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Amounts Available for Obligation[1]

(Dollars in Thousands)

Source of Funding	FY 2020 Final	FY 2021 Enacted	FY 2022 President's Budget
Appropriation	$545,373	$554,923	$570,165
Mandatory Appropriation: (non-add)			
Type 1 Diabetes	*(0)*	*(0)*	*(0)*
Other Mandatory financing	*(0)*	*(0)*	*(0)*
Rescission	0	0	0
Sequestration	0	0	0
Secretary's Transfer	0	0	0
Subtotal, adjusted appropriation	$545,373	$554,923	$570,165
OAR HIV/AIDS Transfers	1,323	-41	0
HEAL Transfer from NINDS	0	0	0
Subtotal, adjusted budget authority	$546,696	$554,882	$570,165
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	$546,696	$554,882	$570,165
Unobligated balance lapsing	-5	0	0
Total obligations	$546,691	$554,882	$570,165

[1] Excludes the following amounts (in thousands) for reimbursable activities carried out by this account:
FY 2020 - $5,074 FY 2021 - $6,000 FY 2022 - $6,150

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Budget Authority by Object Class[1]

(Dollars in Thousands)

		FY 2021 Enacted	FY 2022 President's Budget	FY 2022 +/- FY 2021 Enacted
Total compensable workyears:				
	Full-time equivalent	238	238	0
	Full-time equivalent of overtime and holiday hours	0	0	0
	Average ES salary	$199	$204	$5
	Average GM/GS grade	13.0	13.0	0.0
	Average GM/GS salary	$130	$134	$4
	Average salary, Commissioned Corps (42 U.S.C. 207)	$110	$112	$2
	Average salary of ungraded positions	$111	$113	$3
OBJECT CLASSES		**FY 2021 Enacted**	**FY 2022 President's Budget**	**FY 2022 +/- FY 2021**
	Personnel Compensation			
11.1	Full-Time Permanent	23,315	23,846	530
11.3	Other Than Full-Time Permanent	8,627	8,823	196
11.5	Other Personnel Compensation	789	807	18
11.7	Military Personnel	197	203	5
11.8	Special Personnel Services Payments	2,947	3,014	67
11.9	**Subtotal Personnel Compensation**	**$35,876**	**$36,693**	**$817**
12.1	Civilian Personnel Benefits	11,215	11,811	596
12.2	Military Personnel Benefits	206	212	6
13.0	Benefits to Former Personnel	0	0	0
	Subtotal Pay Costs	**$47,297**	**$48,716**	**$1,418**
21.0	Travel & Transportation of Persons	220	195	-25
22.0	Transportation of Things	71	66	-5
23.1	Rental Payments to GSA	0	0	0
23.2	Rental Payments to Others	1	1	0
23.3	Communications, Utilities & Misc. Charges	95	87	-8
24.0	Printing & Reproduction	4	4	0
25.1	Consulting Services	12,874	13,296	422
25.2	Other Services	3,059	2,800	-258
25.3	Purchase of goods and services from government accounts	43,116	45,790	2,674
25.4	Operation & Maintenance of Facilities	190	177	-13
25.5	R&D Contracts	22,758	23,424	666
25.6	Medical Care	52	48	-3
25.7	Operation & Maintenance of Equipment	1,543	1,365	-178
25.8	Subsistence & Support of Persons	0	0	0
25.0	**Subtotal Other Contractual Services**	**$83,592**	**$86,900**	**$3,309**
26.0	Supplies & Materials	3,522	3,285	-237
31.0	Equipment	3,167	2,898	-270
32.0	Land and Structures	109	102	-7
33.0	Investments & Loans	0	0	0
41.0	Grants, Subsidies & Contributions	416,803	427,910	11,107
42.0	Insurance Claims & Indemnities	0	0	0
43.0	Interest & Dividends	0	0	0
44.0	Refunds	0	0	0
	Subtotal Non-Pay Costs	**$507,585**	**$521,449**	**$13,865**
	Total Budget Authority by Object Class	**$554,882**	**$570,165**	**$15,283**

[1] Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Salaries and Expenses

(Dollars in Thousands)

OBJECT CLASSES	FY 2021 Enacted	FY 2022 President's Budget	FY 2022 +/- FY 2021
Personnel Compensation			
Full-Time Permanent (11.1)	$23,315	$23,846	$530
Other Than Full-Time Permanent (11.3)	8,627	8,823	196
Other Personnel Compensation (11.5)	789	807	18
Military Personnel (11.7)	197	203	5
Special Personnel Services Payments (11.8)	2,947	3,014	67
Subtotal Personnel Compensation (11.9)	**$35,876**	**$36,693**	**$817**
Civilian Personnel Benefits (12.1)	$11,215	$11,811	$596
Military Personnel Benefits (12.2)	206	212	6
Benefits to Former Personnel (13.0)	0	0	0
Subtotal Pay Costs	**$47,297**	**$48,716**	**$1,418**
Travel & Transportation of Persons (21.0)	$220	$195	-$25
Transportation of Things (22.0)	71	66	-5
Rental Payments to Others (23.2)	1	1	0
Communications, Utilities & Misc. Charges (23.3)	95	87	-8
Printing & Reproduction (24.0)	4	4	0
Other Contractual Services:			
Consultant Services (25.1)	12,874	13,296	422
Other Services (25.2)	3,059	2,800	-258
Purchases from government accounts (25.3)	23,647	26,222	2,574
Operation & Maintenance of Facilities (25.4)	190	177	-13
Operation & Maintenance of Equipment (25.7)	1,543	1,365	-178
Subsistence & Support of Persons (25.8)	0	0	0
Subtotal Other Contractual Services	**$41,313**	**$43,860**	**$2,547**
Supplies & Materials (26.0)	$3,522	$3,285	-$237
Subtotal Non-Pay Costs	**$45,226**	**$47,499**	**$2,273**
Total Administrative Costs	**$92,524**	**$96,215**	**$3,691**

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Detail of Full-Time Equivalent Employment (FTE)

OFFICE/DIVISION	FY 2020 Final			FY 2021 Enacted			FY 2022 President's Budget		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Division of Epidemiology and Prevention Research									
Direct:	17	-	17	18	-	18	18	-	18
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	17	-	17	18	-	18	18	-	18
Division of Intramural Research Program									
Direct:	78	1	79	85	1	86	85	1	86
Reimbursable:	7	-	7	7	-	7	7	-	7
Total:	85	1	86	92	1	93	92	1	93
Division of Medications Development									
Direct:	5	-	5	6	-	6	6	-	6
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	5	-	5	6	-	6	6	-	6
Division of Metabolism and Health Effects									
Direct:	8	-	8	10	-	10	10	-	10
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	8	-	8	10	-	10	10	-	10
Division of Neuroscience and Behavior									
Direct:	15	-	15	16	-	16	16	-	16
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	15	-	15	16	-	16	16	-	16
Division of Treatment and Recovery Research									
Direct:	5	-	5	6	-	6	6	-	6
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	5	-	5	6	-	6	6	-	6
Office of Extramural Activities									
Direct:	20	-	20	21	-	21	21	-	21
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	20	-	20	21	-	21	21	-	21
Office of Resource Management									
Direct:	38	-	38	40	-	40	40	-	40
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	38	-	38	40	-	40	40	-	40
Office of Science Policy and Communications									
Direct:	16	-	16	18	-	18	18	-	18
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	16	-	16	18	-	18	18	-	18
Office of the Director									
Direct:	9	-	9	10	-	10	10	-	10
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	9	-	9	10	-	10	10	-	10
Total	218	1	219	237	1	238	237	1	238
Includes FTEs whose payroll obligations are supported by the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements.	0	0	0	0	0	0	0	0	0

FISCAL YEAR	Average GS Grade
2018	12.9
2019	12.9
2020	13.0
2021	13.0
2022	13.0

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Detail of Positions[1]

GRADE	FY 2020 Final	FY 2021 Enacted	FY 2022 President's Budget
Total, ES Positions	1	1	1
Total, ES Salary	196,725	198,987	203,514
General Schedule			
GM/GS-15	27	30	30
GM/GS-14	50	56	56
GM/GS-13	42	47	47
GS-12	20	23	23
GS-11	8	9	9
GS-10	1	1	1
GS-9	7	8	8
GS-8	3	3	3
GS-7	4	4	4
GS-6	0	0	0
GS-5	0	0	0
GS-4	0	0	0
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	162	181	181
Commissioned Corps (42 U.S.C. 207)			
Assistant Surgeon General	0	0	0
Director Grade	0	0	0
Senior Grade	1	1	1
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	1	1	1
Ungraded	78	78	78
Total permanent positions	167	186	186
Total positions, end of year	242	261	261
Total full-time equivalent (FTE) employment, end of year	219	238	238
Average ES salary	196,725	198,987	203,514
Average GM/GS grade	13.0	13.0	13.0
Average GM/GS salary	128,853	130,335	133,854

[1] Includes FTEs whose payroll obligations are supported by the NIH Common Fund.