

## Drug Control Programs

## RESOURCE SUMMARY

	Budget Authority (in millions)		
	FY 2021 Final	FY 2022 CR	FY 2023 Request
<b>Drug Resources by Function</b>			
Research and Development: Prevention	\$592.103	\$600.944	\$736.638
Research and Development: Treatment	\$948.880	\$944.035	\$1,173.396
<b>Total, Drug Resources by Function</b>	<b>\$1,540.983</b>	<b>\$1,544.979</b>	<b>\$1,910.034</b>
<b>Drug Resources by Decision Unit</b>			
<i>National Institute on Alcohol Effects and Alcohol-Associated Disorders (NIAAA)</i>			
Research and Development: Prevention	\$53.304	\$53.470	\$54.607
Research and Development: Treatment	\$11.812	\$11.849	\$12.101
<i>National Institute on Drugs and Addiction (NIDA)</i>			
Research and Development: Prevention	\$538.799	\$547.474	\$682.031
Research and Development: Treatment	\$937.068	\$932.186	\$1,161.295
<b>Total, Drug Resources by Decision Unit</b>	<b>\$1,540.983</b>	<b>\$1,544.979</b>	<b>\$1,910.034</b>
<b>Drug Resources Personnel Summary</b>			
Total FTEs (direct only)	389	398	398
<b>Drug Resources as a Percent of Budget</b>			
Total Agency Discretionary Budget (in Billions)	\$41.4	\$41.5	\$50.5
Drug Resources percentage	3.72%	3.72%	3.78%

## NIDA PROGRAM SUMMARY

**MISSION**

The National Institute on Drugs and Addiction (NIDA) and the National Institute on Alcohol Effects and Alcohol-Associated Disorders (NIAAA), 2 of the 27 Institutes and Centers of the National Institutes of Health (NIH), support research in pursuit of the objectives of the National Drug Control Strategy.<sup>214</sup>

NIDA is the lead federal agency supporting scientific research on drug use and its consequences. Its mission is to advance science on drug use and addiction and apply that knowledge to improve individual and public health. This includes basic and clinical research on drug use (including nicotine), addiction, and the underlying neurobiological, behavioral, and social mechanisms involved. NIDA also works to ensure the effective translation, implementation, and dissemination of scientific research findings to improve the prevention and treatment of substance use disorder (SUD) and to enhance public awareness of addiction as a brain disorder.

<sup>214</sup> The FY 2023 President's Budget proposes to rename the National Institute on Drug Abuse to the National Institute on Drugs and Addiction and to rename the National Institute on Alcohol Abuse and Alcoholism to the National Institute on Alcohol Effects and Alcohol-Associated Disorders.

While NIDA’s mission broadly encompasses substance use, addressing opioid misuse and addiction is a top priority at NIDA.

Substance use and SUD cost the U.S. more than \$740 billion a year in healthcare, crime, and lost productivity;<sup>215</sup> but dollars cannot capture the devastating human cost of addiction to individuals, families, and communities. Drug overdose is now the leading cause of unintentional fatal injury in our nation. Centers for Disease Control and Prevention (CDC) show that a record high of nearly 92,000 people died of an overdose in the United States in 2020, an unprecedented one-year increase of 30 percent.<sup>216</sup> The collision of the overdose crisis with the coronavirus disease 2019 (COVID-19) pandemic puts people with substance use disorders (SUD) at particular risk. Individuals with SUD, particularly those with opioid use disorder (OUD), are at higher risk for COVID-19 and its adverse outcomes.<sup>217</sup>

## **METHODOLOGY**

NIDA’s entire budget is drug-related and classified as a part of the National Drug Control Budget.

### NIDA BUDGET SUMMARY

The FY 2023 Request for drug-related activities at NIH is \$1,910.0 million (\$1,843.3 million for NIDA and \$66.7 million for NIAAA), a 23.6 percent increase compared with the FY 2022 Continuing Resolution (CR) level.

NIH-supported research has provided and will continue to provide the scientific basis for drug control policy. For example, NIH continues to explore the many biological, behavioral, and environmental influences on substance misuse and addiction vulnerability, which will allow the development of more targeted and effective prevention approaches. Research shows that universal prevention programs not only reduce drug use, underage drinking, and other risky behaviors that can lead to HIV and other adverse outcomes, but can also promote other positive outcomes, such as strengthening young people’s sense of community or “connection” to school—key to reducing substance misuse, violence, and mental health problems.

Another top priority continues to be the development and deployment of therapeutic interventions to treat SUD, including medications, biologics, behavioral interventions, and non-pharmacological interventions such as transcranial magnetic stimulation or neurofeedback. NIH is now poised to capitalize on a greater understanding of the neurobiology underlying addiction, and of newly identified candidate molecules and brain circuits that show promise as potential targets for the treatment of SUD. However, discovering new therapies is not sufficient to combat SUD if these therapies do not reach the people who need them. In many cases, such as medications for the treatment of OUD (MOUD), studies suggest that effective treatments are under-utilized despite strong evidence of their effectiveness. To address this issue, NIH is also exploring ways of improving the dissemination and implementation of evidence-based practices (implementation science) in real-world settings to improve the prevention and treatment of SUD

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<sup>215</sup> <https://nida.nih.gov/drug-topics/trends-statistics>

<sup>216</sup> <https://wonder.cdc.gov/>

<sup>217</sup> [pubmed.ncbi.nlm.nih.gov/32929211/](https://pubmed.ncbi.nlm.nih.gov/32929211/)

and co-occurring conditions such as HIV and psychiatric disorders, thereby enhancing the public health impact of NIH-supported research.

In April 2018, NIH launched the HEAL Initiative, an aggressive, trans-agency effort to speed scientific solutions to stem the national opioid public health crisis. This Initiative is built on extensive, well-established NIH research, including basic science of the complex neurological pathways involved in pain and addiction, implementation science to develop and test treatment models, and research to integrate behavioral interventions with MOUD.

As part of the NIH HEAL Initiative, NIDA (and to a lesser extent, NIAAA) supports a variety of projects aimed at advancing our understanding of how to prevent and treat opioid misuse and addiction and reverse opioid overdose. This includes research studies focused on:

- Enhancing the NIDA Clinical Trials Network to Address Opioids<sup>218</sup>
- Focusing Medication Development to Treat Opioid Use Disorder and Prevent and Treat Opioid Use Disorder and Overdose<sup>219</sup>
- Determining strategies to reduce opioid overdose in communities hardest hit by the opioid crisis (the HEALing Communities Study)<sup>220</sup>
- Determining ways to improve the effectiveness and adoption of interventions within justice systems. (The Justice Community Opioid Innovation Network)<sup>221</sup>
- Preventing At-Risk Adolescents Transitioning into Adulthood from Developing Opioid Use Disorder<sup>222</sup>
- Prevention of Progression to Moderate or Severe Opioid Use Disorder<sup>223</sup>
- Optimizing the Duration, Retention, and Discontinuation of Medication Treatment for Opioid Use Disorder<sup>224</sup>
- Studying the effects of environmental factors, including opioids and other substance use, on early brain development from pregnancy through early childhood (HEALthy Brain and Child Development Study)<sup>225</sup>
- Integrative Management of Chronic Pain and Opioid Use Disorder<sup>226</sup>

Stimulants have also emerged as an overdose threat. From 2019 to 2020, overdose deaths involving methamphetamine increased by 45 percent, and overdose deaths involving cocaine increased by more than 24 percent.<sup>227</sup> Given the urgent need to confront these dramatic increases, NIDA has also prioritized the development of medications to treat stimulant use disorders.

## **National Institute on Drugs and Addiction** ***FY 2023 Request: \$1,843.3 million***

<sup>218</sup> <https://heal.nih.gov/research/research-to-practice/enhancing-clinical-trials-network>

<sup>219</sup> <https://heal.nih.gov/research/medication-options/focusing-development>

<sup>220</sup> <https://heal.nih.gov/research/research-to-practice/healing-communities>

<sup>221</sup> <https://heal.nih.gov/research/research-to-practice/jcoin>

<sup>222</sup> <https://heal.nih.gov/research/new-strategies/at-risk-adolescents>

<sup>223</sup> <https://heal.nih.gov/research/new-strategies/prevent-progression>

<sup>224</sup> <https://heal.nih.gov/research/new-strategies/duration-retention-discontinuation>

<sup>225</sup> <https://heal.nih.gov/research/infants-and-children/healthy-brain>

<sup>226</sup> <https://heal.nih.gov/news/stories/new-impowr-research-program-puts-people-first>

<sup>227</sup> <https://wonder.cdc.gov/mcd-icd10.html>

**(\$363.7 million above the FY 2022 CR Level)**

NIDA’s efforts consist of Neuroscience and Behavioral Research; Epidemiology, Services and Prevention Research; Therapeutics and Medical Consequences; Clinical Trials Network; High-Tech Biomedical Product Development; Responding to the Opioid Crisis; Intramural Research Program (IRP); and Research Management and Support (RMS). The section entitled “Responding to the Opioid Crisis” details how NIDA is using dollars budgeted to the HEAL Initiative for the purpose of opioid research, but those dollars supplement base funding for opioid and pain research that are included within other NIDA program areas. Funding for the HEAL Initiative® in NIDA will increase by \$135.1 million or 50.0 percent compared with the FY 2022 CR level. In addition, funding for research into opioids and pain management outside the HEAL Initiative® will increase by an additional \$196.3 million.

**Division of Neuroscience and Behavioral Research*****FY 2023 Request: \$603.5 million*****(\$107.6 million above the FY 2022 CR Level)**

NIDA’s Division of Neuroscience and Behavior (DNB) advances knowledge of the basic biological mechanisms that underlie substance use and SUDs and that guide the development of novel prevention and treatment strategies for SUDs and overdose. This includes identifying the effects of illicit substances on brain structure and function throughout the lifespan and across stages of drug use and SUDs. Areas of focus include identifying the genetic variants and epigenetic modifications that determine vulnerability to SUDs; the effects of drugs on gene expression and brain development and function; the nature and dynamics of drug-receptor interactions at the atomic level; and the cellular signaling engaged by these interactions that may underlie the development of addiction. DNB-supported research has elucidated the neurobiology of opioid, nicotinic, cannabinoid, and benzodiazepine receptors, and this knowledge is being leveraged to guide the development of novel therapeutics to treat SUD, the adverse consequences of illicit drugs, and pain. The DNB portfolio also includes research that is advancing our understanding of the mechanisms by which neuromodulation, such as transcranial stimulation, deep brain stimulation, and neurofeedback, can be used to treat SUD by identifying specific brain circuits that can be modulated by these approaches with precision to yield therapeutically beneficial effects. DNB-supported research using cutting-edge genetics and neuro-engineering approaches to interrogate and modulate populations of brain cells is revealing a complex map of neural circuits that are engaged by addictive drugs and that underlie their rewarding and aversive effects. Research using advanced computational approaches including theoretical modeling and novel methods for analyzing large, diverse data sets are being used to link SUD-related behaviors to underlying neural mechanisms.

DNB is also pioneering Big Data Science as a tool to understand the biology of addiction. A cross-cutting research theme in the Division is that of sex differences. DNB promotes research to elucidate the neurobiological basis of sex differences in drug effects and in the development of addiction. This is critical for developing individually tailored prevention and treatment strategies. Finally, DNB supports a robust research portfolio focused on the shared biological mechanisms underlying drugs and HIV, and how these mechanisms are involved in HIV-associated neurological disorders.

**Division of Epidemiology, Services, and Prevention Research*****FY 2023 Request: \$421.3 million*****(\$75.1 million above the FY 2022 CR Level)**

NIDA's Division of Epidemiology, Services, and Prevention Research (DESPR) supports integrated approaches to understanding and addressing the interactions between individuals and environments that contribute to drug use, addiction, and related health problems. Through the annual Monitoring the Future survey of substance use and related attitudes among youth and young adults, the Population Assessment of Tobacco and Health, which collects biospecimens and behavioral data associated with tobacco use, as well as other studies, DESPR monitors trends in drug use, including marijuana, vaping/e-cigarettes, and other drugs, as well as the potential risks and health outcomes related to these behaviors. Preventing the initiation of substance use to minimize risks of harmful consequences is an essential part NIDA's mission. To this end, DESPR funds a portfolio of prevention research to understand and intervene upon mechanisms that underlie risk for and resilience to drug use and addiction, and common comorbidities. This includes studies on how biological, psychosocial, and environmental factors operate to enhance or mitigate an individual's propensity to initiate substance use or to escalate from use to misuse to SUD across different developmental stages. This information, along with rapidly growing knowledge about substance use and addiction, is helping to inform the development of evidence-based prevention strategies. NIDA also supports research on integrating prevention and treatment services into healthcare and community systems to reduce the burden of drug problems across the lifespan. For example, ongoing research is examining efforts to implement evidence-based SUD treatment in jails and prisons, expand the use of effective medications for OUD in primary care settings, develop strategies to reduce transmission of viral infections related to substance use (e.g., HIV and Hepatitis C), and increase uptake and retention in treatment for SUDs and HIV. DESPR also funds research into the efficacy of screening, brief intervention, and referral to treatment in primary care settings for reducing drug use and SUDs.

**Division of Therapeutics and Medical Consequences*****FY 2023 Request: \$136.0 million*****(\$24.2 million above the FY 2022 CR Level)**

NIDA's Division of Therapeutics and Medical Consequences (DTMC) supports research to evaluate the safety and efficacy of pharmacological and non-pharmacological interventions to prevent and treat SUDs and drug overdose. This work spans all phases of medical product development including synthesis and preclinical evaluation of potential therapeutics, clinical trial design and execution, and preparing regulatory submissions. Through these investments, NIDA helps to mitigate the risks of developing new treatments for SUDs. For example, in collaboration with US WorldMeds, DTMC supported clinical trials on LUCEMYRA™, the first medication targeted specifically to treat the physical symptoms associated with opioid withdrawal,<sup>228</sup> which was approved by the FDA in May 2018. NIDA also supports research to identify promising compounds and make them more feasible for pharmaceutical companies to

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<sup>228</sup> <https://nida.nih.gov/about-nida/noras-blog/2018/05/nida-supported-science-leads-to-first-fda-approved-medication-opioid-withdrawal>

complete costly clinical studies for SUD indications. As part of the HEAL Initiative<sup>SM</sup>, described below, DTMC leads efforts to develop safe and effective new and repurposed medications to prevent and treat OUD and overdose. NIDA is also prioritizing the development of new treatments for stimulant (i.e., cocaine and methamphetamine) overdose and stimulant use disorders. This portfolio includes developing novel pharmacotherapies, repurposing medications already approved by the U.S. Food and Drug Administration for other indications, as well as developing novel vaccines and monoclonal antibodies to treat stimulant use disorders. (See program portrait for “Immunotherapies for Substance Use Disorder and Overdose” in the NIDA chapter of the NIH Congressional Justification documents.)

### **Center for Clinical Trials Network**

***FY 2023 Request: \$48.0 million***

**(\$8.6 million above the FY 2022 CR Level)**

The overarching mission of the NIDA Clinical Trials Network (CTN) is to allow treatment providers, treatment researchers, patients, and NIDA to collaboratively develop, validate, refine, and deliver new treatment options to patients. The CTN comprises 16 research nodes with 30 Node principal investigators affiliated with academic medical centers and large health care networks; 2 research coordinating centers; and more than 240 community-based treatment programs and provider organizations. This unique partnership enables the CTN to conduct studies of behavioral, pharmacological, and integrated treatment interventions in multisite clinical trials to test their effectiveness across a broad range of settings and populations. It also allows the CTN to facilitate the transfer of research results to providers and patients. The network evaluates interventions, implementation strategies, and health system approaches to addressing SUD and co-occurring conditions such as mental illnesses and HIV. Using support from the NIH HEAL Initiative, the CTN was able to add five new nodes, expanding its geographical reach and capacity to develop and test interventions in diverse populations.

Through the HEAL Initiative, the CTN has launched several multisite trials examining methods for optimizing the treatment of OUD. One study will examine if rapid transition to extended-release naltrexone following detoxification is more effective than standard detoxification and naltrexone initiation. Another study is underway to evaluate strategies to improve medication treatment retention and strategies to improve outcomes among patients who have achieved stable remission on OUD medications and want to discontinue medication. The CTN is conducting studies to evaluate a collaborative care intervention for preventing progression of opioid misuse to OUD, medications for treating OUD during pregnancy, and strategies for integrating OUD screening and treatment into emergency departments, hospitals, primary care clinics, and AI/AN communities. The network has supported studies to capture important data for research on SUD in electronic health record (EHR) systems in primary care and emergency departments and is currently testing clinical decision support that integrates with EHR systems to help doctors diagnose OUD and provide treatment or refer patients to appropriate care. Complementing the work supported through NIDA’s DTMC, CTN studies are investigating the effectiveness and safety of pharmacotherapies, and transcranial magnetic stimulation, for methamphetamine and cocaine use disorders. A CTN study recently demonstrated that a combination of bupropion and extended-release naltrexone successfully reduced methamphetamine use and cravings in adults with methamphetamine use disorder.

**Office of Translational Initiatives and Program Innovations*****FY 2023 Request: \$48.5 million*****(\$8.6 million above the FY 2022 CR Level)**

NIDA’s Office of Translational Initiatives and Program Innovations (OTIPI) takes research discoveries in prevention, detection, and treatment of SUDs into candidate health applications for commercialization. OTIPI manages NIDA’s Small Business Innovation Research/Small Business Technology Transfer Programs to advance health applications. It also uses novel fit-for-purpose funding authorities, such as Prizes and Open Competitions, and establishes teaching programs that equip scientists with the competence to translate advances in addiction research into products. Many of these efforts take the form of innovative new technology applications, from mobile apps that help patients find open beds in addiction treatment facilities or connect to support communities, to more sophisticated medical devices. These tools provide or support psychosocial and medication-based treatment, help individuals sustain their recovery from SUDs, and even facilitate prevention. For example, reSET and reSET-O are mobile applications (apps) that deliver cognitive behavioral therapy to people with non-opioid SUDs (reSET) and OUD (reSET-O), and were the first “digital medicines” to receive FDA approval for the treatment of addiction.<sup>229</sup> With NIDA support, another company developed a hospital bassinet pad that delivers gentle, random vibrations to reduce irritability and improve cardiorespiratory function in newborns born dependent on opioids, which received breakthrough device designation from the FDA. In addition, a cloud-based referral tool called OpenBeds was expanded to facilitate patient referrals to addiction treatment facilities.<sup>230</sup> OTIPI also helps startups develop technology to help people in recovery. For example, Sober Grid is an app that connects patients with others in recovery and with peer coaches to help them remain drug-free.<sup>231</sup> We the Village, Inc. uses telehealth and a social support network to deliver a care model based on community reinforcement and family training.<sup>232</sup> Finally, to prevent diversion of drugs, one company developed systems to monitor controlled substances in hospitals, and another developed a tool to detect and report illicit online sales of controlled substances.<sup>233,234</sup>

**Responding to the Opioid Crisis*****FY 2023 Request: \$405.4 million*****(\$135.1 million above the FY 2022 CR Level)**

Through the HEAL Initiative, NIDA continues to expand support for research to combat opioid misuse and addiction and increase the efficiency of translating research into benefits for people. HEAL funds are being used to accelerate the development and availability of novel treatments for OUD and overdose, including developing longer-acting formulations of existing OUD drugs like buprenorphine and methadone, and developing novel immunotherapies including vaccines

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<sup>229</sup> <https://peartherapeutics.com/products/reset-reset-o/>

<sup>230</sup> <https://apprishhealth.com/solutions/openbeds/>

<sup>231</sup> <https://www.sobergrid.com/>

<sup>232</sup> <https://wethevillage.co/>

<sup>233</sup> <https://investics.com/>

<sup>234</sup> <https://www.s-3.io/>

that could block the effect of opioids in the brain to help people with OUD and decrease overdoses.

Opioid misuse often begins during adolescence and young adulthood, so behavioral interventions and treatment options tailored to this population are crucial to maximize positive outcomes. HEAL funds are used to support research to develop and test effective technology-driven, scalable interventions that can prevent opioid misuse and OUD among adolescents and young adults, with a focus on vulnerable populations such as AI/AN and Black communities.

Using HEAL funds, NIDA supports research to develop effective implementation strategies for evidence-based interventions, with a focus on high-risk populations. The Justice Community Opioid Innovation Network (JCOIN) is testing strategies for expanding effective OUD treatment and care for people in justice settings in partnership with local and state justice systems and community-based treatment providers. This research will help improve OUD treatment access for vulnerable individuals during incarceration and after release. The HEALing Communities Study, an unprecedented multisite implementation study being conducted in 67 communities across New York, Massachusetts, Kentucky, and Ohio, aims to reduce opioid-related overdose deaths by deploying evidence-based strategies to prevent and treat opioid misuse and OUD. Researchers work with community members and local coalitions to launch intervention activities and communications campaigns, engage at-risk populations, create data dashboards to help guide community decision-making, and develop community action plans to implement specific evidence-based practices to facilitate sustainable, successful solutions tailored to the needs of the local communities.

The HEALthy Brain and Child Development Study is a trans-NIH effort led by NIDA with support from HEAL and 10 NIH Institutes and Offices to prospectively examine brain and behavioral development in children from birth to 9-10 years of age. This study is establishing a cohort of pregnant women across a variety of regions and demographics in the USA and will follow their children through the first decade of life to determine how environmental factors, including maternal drug exposure and genetics, influence early brain development and behavioral and clinical outcomes, such as mental illnesses and addiction.

Finally, the HEAL Initiative is building the Integrative Management of chronic Pain and OUD for Whole Recovery (IMPOWR) network to develop effective treatment interventions for people who experience both chronic pain and OUD. The IMPOWR network consists of clinical research centers that collaborate to develop effective interventions, best models of care for delivery of services, and sustainable implementation strategies for a variety of patients with co-occurring chronic pain and OUD or opioid misuse, with an emphasis on highly vulnerable groups, such as AI/AN, Black, Hispanic, and rural populations.

### **Intramural Research Program**

***FY 2023 Request: \$106.8 million***

**(\$2.6 million above the FY 2022 CR Level)**

NIDA conducts research in high priority areas through its Intramural Research Program (IRP). The IRP portfolio includes research to 1) elucidate the mechanisms underlying the development of SUDs; 2) evaluate potential new therapies for SUDs, including pharmacological and non-

pharmacological interventions; and 3) identify and characterize emerging drugs such as synthetic opioids, stimulants, and cannabinoids.

One example of treatment evaluation at the IRP is a bench-to-bedside project in which IRP investigators are testing a novel compound to treat OUD that activates the same receptors as traditional opioids but has only a subset of their cellular actions. IRP investigators are testing whether the compound reduces self-administration of opioids in animal models and people with OUD, and whether it prevents opioid withdrawal with fewer side effects than medications in current use. If successful, this compound could be a new medication for OUD.

The IRP is also working with the National Center for Advancing Translational Sciences on a dopamine D3 receptor antagonist that could be taken together with opioid pain relievers to reduce the chance of developing OUD. Preliminary animal studies suggest that the compound reduces opioid self-administration and drug-seeking behavior without reducing the pain-relieving effects of opioids. This compound holds promise as an adjunct to opioid treatment for pain and potentially for OUD.

Non-pharmacological addiction treatments are also being developed in NIDA's IRP. The on-site treatment-research clinic includes efforts to develop a smartphone app that uses machine learning to detect or predict stress, craving, and drug use within hours—and a parallel project to develop content that the app could deliver “just in time.” Because current apps purporting to serve these functions do not meet scientific standards of evidence, IRP is addressing a major gap in mobile health. Using passive measurement and digital phenotyping techniques, the IRP is also developing interventions and big data methodologies to prevent HIV transmission associated with unprotected sex in the context of substance use.

### **Research Management and Support**

***FY 2023 Request: \$82.3 million***

**(\$1.8 million above the FY 2022 CR Level)**

Research Management and Support (RMS) activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts. Additionally, the functions of RMS encompass strategic planning, coordination, dissemination of latest research findings and funding opportunities, and evaluation of NIDA's programs, regulatory compliance, international coordination, and liaison with other Federal agencies, Congress, and the public. RMS staff at NIDA play leadership roles in helping to coordinate NIDA's involvement in the NIH HEAL<sup>SM</sup> Initiative, spearheading NIH's response to the opioid overdose epidemic.

In addition to the infrastructure required to support research and training, NIDA strives to provide evidence-based resources and educational materials about substance use and addiction, including information about timely public health topics such as opioid overdose prevention, marijuana research, use rates and consequences of vaping, synthetic drug trends, and medications for treatment of SUDs, including OUD. To this end, the RMS portfolio incorporates education and outreach activities to inform public health policy and practice with the goal of ensuring that NIDA is the primary trusted source for scientific information on substance use and addiction in

English and Spanish. Staff supported by NIDA's RMS budget coordinate key activities that help to train the next generation of addiction scientists. In addition, NIDA's RMS portfolio includes the NIDAMED initiative, which is aimed at engaging and educating clinicians in training and in practice in the latest science related to substance use and addiction.

## NIAAA PROGRAM SUMMARY

### **MISSION**

NIAAA's mission is to generate and disseminate fundamental knowledge about the effects of alcohol on health and well-being, and apply that knowledge to improve diagnosis, prevention, and treatment of alcohol-related problems, including alcohol use disorder, across the lifespan. A major priority within NIAAA's mission is research on the prevention and treatment of underage drinking and its harmful consequences.

Alcohol misuse has profound effects on the health and well-being of individuals, families, and communities, costing the United States an estimated \$249 billion per year. NIAAA is committed to reducing the burden of alcohol misuse for individuals at all stages of life and supports a diverse portfolio of research to accomplish this goal. Research areas include biological and behavioral mechanisms underlying alcohol misuse, alcohol use disorder (AUD), and alcohol-related health conditions; epidemiological assessments of patterns and trends in alcohol use; and the development and evaluation of interventions to identify, prevent, and treat alcohol misuse and its consequences, including among youth. NIAAA also supports efforts to translate research findings to improve prevention and treatment of alcohol-related problems and co-occurring conditions and to disseminate evidence-based information to health care providers, researchers, policy makers, and the public. These ongoing efforts have significantly broadened our understanding of alcohol misuse and AUD and have provided support for the integration of alcohol prevention and treatment services into mainstream health care.

### **METHODOLOGY**

The prevention and treatment components of NIAAA's underage drinking research program are classified as a part of the National Drug Control Budget. Underage drinking research is defined as research that focuses on alcohol use by youth (individuals under the legal drinking age of 21), as well as the negative consequences of underage alcohol use (e.g., alcohol-related injuries, impact on adolescent development including on the developing brain, and risk for AUD). It includes basic biological and behavioral research, epidemiological research, screening studies, the development and testing of preventive and treatment interventions, and efforts to disseminate evidence-based information. NIAAA's methodology for developing budget estimates for the Budget and Performance Summary is a two-step process. First, NIAAA identifies its underage drinking projects using NIH's automated, electronic text mining system for research, condition, and disease categorization. Once these projects are verified as underage drinking projects, NIAAA conducts a manual review of the project listing and codes each verified project as relevant to prevention or treatment.

## NIAAA BUDGET SUMMARY

**National Institute on Alcohol Effects and Alcohol-Associated Disorders**  
***FY 2023 Request: \$66.7 million***  
**(\$1.4 million above the FY 2022 CR Level)**

Although the prevalence of alcohol consumption among 8th, 10th, and 12th graders has declined by one-third over the past decade, alcohol remains the most widely used substance among U.S. youth. Binge drinking<sup>235</sup> and high intensity drinking (i.e., two or more times the gender-specific binge drinking thresholds) among young people remain significant concerns. These drinking patterns are particularly troubling as they increase risks for poor academic performance, alcohol-related blackouts, injuries, overdoses, sexual assault, unsafe sexual behavior, AUD, and other detrimental consequences. NIAAA supports a broad range of basic, translational, and clinical research to improve our understanding of the impact of alcohol exposure on adolescent health and to improve interventions for alcohol-related problems among youth in community and healthcare settings. NIAAA also disseminates information about evidence-based interventions through the development of resources for the public.

Basic research is key to informing the development of innovative prevention and treatment strategies for underage drinking. Within its portfolio on adolescent brain research, NIAAA supports two key initiatives: 1) the Neurobiology of Adolescent Drinking in Adulthood (NADIA) consortium to examine, using animal models, the mechanisms by which adolescent drinking leads to changes in brain structure and function that persist into adulthood; and 2) the National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA), a longitudinal study of approximately 800 youth ages 12-21 to identify brain characteristics that may predict alcohol misuse or occur as a consequence of adolescent alcohol exposure. NCANDA laid the methodological foundation for NIH's Adolescent Brain Cognitive Development (ABCD) study, the largest longitudinal study of brain development and child health in the United States.

Prevention of underage drinking has long been one of NIAAA's top priorities. NIAAA's portfolio in this area includes studies to develop, evaluate, and implement evidence-based prevention programs for youth. These programs include individual-, family-, school-, community-, and environmental-level interventions for underage individuals at large, as well as those tailored for underserved populations and specific settings, including the college setting. NIAAA provides the College Alcohol Intervention Matrix (CollegeAIM), an online resource that rates over 60 evidence-based alcohol interventions in terms of effectiveness, cost, and other factors, allowing school officials to select among the many potential interventions to address harmful and underage student drinking. NIAAA also supports research to address alcohol misuse in young adults who are not enrolled in college.

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<sup>235</sup> NIAAA defines binge drinking as a pattern of drinking that increases an individual's blood alcohol concentration to 0.08 percent or higher. This typically occurs after 4 drinks for women and 5 drinks for men— in about 2 hours. Research suggests that fewer drinks in the same timeframe result in the same blood alcohol concentration in youth.

Increasing implementation of alcohol screening and brief intervention in primary care and developing evidence-based behavioral therapies to reduce underage drinking is another priority area for NIAAA. For example, NIAAA developed the Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide to assist pediatric and adolescent health practitioners in identifying patients at risk for underage drinking and associated problems. This screening resource has been validated among youth in pediatric emergency room settings, in school settings, in primary care settings (including among racially and ethnically diverse youth), and among youth with chronic health conditions.

## EQUITY

Equity is a vital consideration in NIDA and NIAAA efforts to support the objectives of the National Drug Control Strategy. Both NIDA and NIAAA support the NIH UNITE initiative that was established to identify and address structural racism within the NIH-supported and greater scientific community. Both Institutes are also part of NIH's broader efforts to advance health equity research by improving minority health, reducing health disparities, and removing barriers to advancing health disparities research as well as the agency's efforts to expand, sustain, and promote scientific workforce diversity.

The COVID-19 pandemic highlighted racial health disparities that are particularly stark in the field of addiction, where punitive approaches to drug use have disproportionately affected Black individuals and other communities of color.<sup>236</sup> Moreover, the fastest increases in opioid overdose deaths are among Black Americans,<sup>237,238</sup> and children of minority groups are more likely to have lost a parent to COVID-19 than white children.<sup>239</sup>

To address these disparities, in July 2020 NIDA established its Racial Equity Initiative to eliminate racism in NIDA's workplace, scientific workforce, and research portfolio. NIDA is tracking its minority health and health disparities portfolios to identify gaps and create targeted funding opportunities to which \$100 million will be dedicated over 10 years. NIDA is funding research on the impact of racism on drug use outcomes, ameliorating disparities in SUD care, and implementing culturally-tailored interventions. In addition, researchers are developing solutions to address digital inequalities in communities heavily impacted by drug addiction. NIDA is also increasing its support for highly meritorious projects carried out by scientists from underrepresented minority groups.

NIAAA supports a range of efforts aimed at reducing health disparities and promoting health equity. One area of interest is the social determinants of health that influence the initiation of underage alcohol use. Current studies are exploring factors that drive alcohol misuse—including sleep quality, adverse childhood experiences, and family or peer stress—among minority adolescent populations. Understanding the social and environmental factors that influence

<sup>236</sup> [www.tandfonline.com/doi/pdf/10.1080/07418825.2012.761721?needAccess=true](http://www.tandfonline.com/doi/pdf/10.1080/07418825.2012.761721?needAccess=true)

<sup>237</sup> [ajph.aphapublications.org/doi/10.2105/AJPH.2021.306431](http://ajph.aphapublications.org/doi/10.2105/AJPH.2021.306431)

<sup>238</sup> [pubmed.ncbi.nlm.nih.gov/33211981/](http://pubmed.ncbi.nlm.nih.gov/33211981/)

<sup>239</sup> <https://pubmed.ncbi.nlm.nih.gov/34620728/>

alcohol misuse can inform targeted prevention approaches. NIAAA also supports development of culturally-adapted interventions to reduce underage drinking.