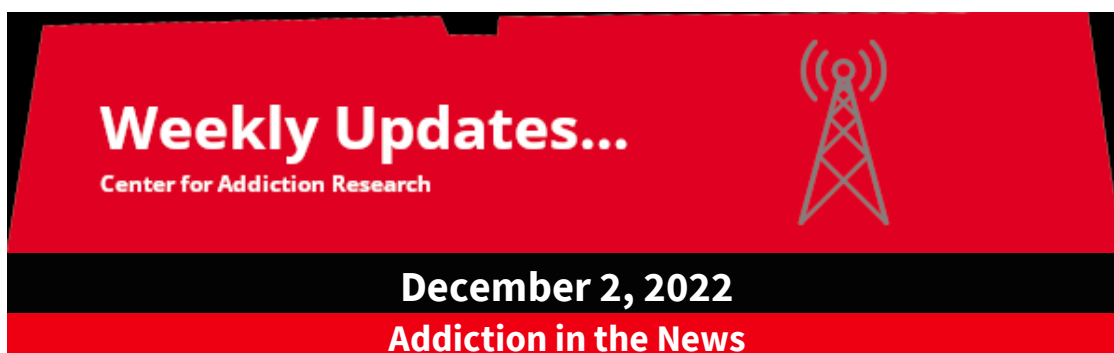


Welcome to the weekly newsletter from the Center for Addiction Research! Each newsletter includes highlights from addiction in the news topics, active funding opportunities offered by NIDA/NIAAA, and information about any new publications from CAR members. Please email Jen Rowe ([roweji@ucmail.uc.edu](mailto:roweji@ucmail.uc.edu)) to change your communication preferences. Thank you.

Thank you for your interest in the Center for Addiction Research - our mission is to accelerate scientific progress in the prevention and treatment of substance use disorders and their consequences by fostering research collaborations across: 1) UC departments, colleges, and centers including Cincinnati Children's Hospital Medical Center; 2) Local, regional, and state community and governmental partners; and 3) Other academic institutions and industry."



### **UC/ Regional News**

#### **CNN: More adolescent e-cigarette users report vaping within five minutes of waking up**

UC's Ashley Merianos, an associate professor of human services, is cited as an expert for national media in a review of new tobacco and vaping research on adolescents and vaping. The research, which CNN covered and appears in [JAMA OPEN Network](#), found that among adolescents who only use e-cigarettes, the percentage who used the products within the first five minutes of waking up in a day was less than 1% between the years 2014 and 2017, but that shifted to 10.3% from 2017 through 2021. This study's findings suggest that e-cigarettes may be putting a new generation of adolescents at risk for nicotine addiction, and research has shown that many adolescents are unaware that most e-cigarettes... **(CAR member, Dr. Ashley Merianos)**

#### **CoM Office of Research Gallery of Awardees**

The CoM Office of Research publicizes faculty who have been awarded external grants of \$100,000/yr. or more and recently featured **CAR Member, Dr. Jason Blackard** (and CAR Affiliate member, Dr. Jennifer Brown).

**Jason T. Blackard, PhD**, Professor, Department of Internal Medicine

- Award: National Institute on Alcohol Abuse and Alcoholism R01
- Project Title: Therapeutic and Mechanistic Significance of Altered Metabolism of HIV Medicines by Alcohol- or Alcohol/Synthetic Opioid Combination

- Project Period: 9/10/2022-7/31/2027
- Summary: Excessive alcohol use has been linked directly to increased HIV viral load, high risk HIV behaviors, and poor adherence to anti-HIV medications including both pre-exposure prophylaxis (PrEP) and treatment as prevention (TasP). Tenofovir disoproxil fumarate (TDF) and tenofovir alafenamide fumarate (TAF) are listed in ~75% of HIV regimens used for both PrEP and TasP. This research will evaluate the metabolism-based interactions of tenofovir drugs with alcohol +/- fentanyl using a combination of patient-based studies and ex vivo experiments to provide mechanistic details on how these contributing factors interplay, validate biomarkers for efficacy/safety and adherence monitoring, and build strong foundations for developing mitigation strategies.

### **Ohio Attorney General Announces Preliminary Agreement with Walmart on Opioid Addiction Liability**

Ohio Attorney General Dave Yost (R) announced on Tuesday that he and 15 other state attorneys general have negotiated a preliminary deal with the multinational retailer Walmart, from which Ohio would get \$114 million for opioid recovery programs. The \$3.1 billion national agreement comes after Yost and other prosecutors sought accountability for what they characterize as the superstore's failure to safely and securely dispense high-strength prescription pain relievers through its more than 5,100 pharmacies across America. Other state prosecutor's offices who worked alongside him include California, Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Louisiana, Massachusetts...

### **More than \$30M is coming to Louisville to fight opioids. How the city plans to use it**

More than \$30 million in settlement money is coming to Louisville to help fight opioid addiction, and more is on the way. Now, local officials have to figure out how to use it. Representatives from the Jefferson County Attorney's Office laid out a broad version of their plan at a city committee meeting last week, pushing for a brighter future for those suffering from addiction and offering a closer look at how they hope to help those most in need of treatment. The more than \$30 million coming to Louisville is part of a national settlement worth over \$26 billion dollars, the result of a lawsuit filed in 2017 against several pharmaceutical companies that were accused of contributing to the...

### **Opioid overdose deaths in Cuyahoga County continue to climb**

CLEVELAND — The Cuyahoga County Medical Examiner's office released updated numbers of people who died of drug overdose in October and a common link among most is fentanyl. A total of 35 people died in October, but that number may rise as they wait on lab results on 14 others. Of those 35 cases, 17 were city of Cleveland residents, 16 were from the suburbs and two cases were from out of the

county: one in Akron and one in Jefferson. The victims ranged in age from 23 to 76. Additional data shows 23 of the 35 people who died were male, 12 female and while most were white, the death toll included three LatinX and 13 African Americans. This public health crisis has now spread from the suburbs...

### **Start Talking teaches parents about the signs of drug and alcohol use**

Start Talking Grove City held a community information meeting for parents of students in the South-Western City Schools District on Nov. 15 at Amazing Grace Christian Church. The organization is a non-profit working to decrease the illegal use of tobacco, alcohol, and other drugs, and to cut down on crime in the city. Start Talking Grove City partnered with Health Awareness and Recovery Together (HART) and local first responders to give a compelling message about the warning signs of drug, alcohol, and tobacco misuse as well as how to identify and counteract an overdose. "If an addicted person is not ready then they are not ready. But it's important you get the information from tonight to guide..."

## **National News**

### **Drug study could bring new treatment for alcohol use disorder**

A University of Toledo neuroscientist who studies substance abuse and addiction is leading a new federally funded research project to further develop an experimental drug that could reduce cravings and lessen withdrawal symptoms when chronic drinkers attempt to get sober. Alcohol is widely available and very much a part of our culture, but it's also an extremely addictive substance," said Dr. Youssef Sari, a professor in the UToledo College of Pharmacy and Pharmaceutical Sciences. "Alcohol abuse and addiction are both serious problems in this country. Once you are addicted, it's really hard..."

### **Brain organoids reveal in detail the harms of prenatal alcohol exposure**

Alcohol consumption during pregnancy poses significant peril to the healthy development of the unborn child. There is no known safe amount of alcohol during pregnancy. The consequences of prenatal alcohol exposure (PAE) are reflected in the different diagnoses that emerge under the umbrella of fetal alcohol spectrum disorders. At one end of the spectrum, growth deficits and physical differences define fetal alcohol syndrome (FAS), but in most cases, irreversible brain damage leads to behavior and learning challenges even without a physical impact. Experts estimate that 1.1 to 5 percent of...

### **Drinking during pregnancy changes baby's brain structure**

A new MRI study revealed that consumption of alcohol even in low to moderate amounts during pregnancy can change the baby's brain structure and delay brain development. Results of the study will be presented next week at the annual meeting of the Radiological Society of North America (RSNA). "Fetal MRI is a highly specialized and safe examination method that allows us to make accurate statements about brain maturation prenatally," said study senior author Gregor

Kasprian, M.D., associate professor of radiology from the Department of Biomedical Imaging and Image-guided...

### **What to know about mixing Wellbutrin and alcohol**

Doctors prescribe Wellbutrin to treat depression and to help quit smoking. However, mixing Wellbutrin with alcohol can increase a person's risk of side effects, including seizures. Drinking alcohol may also reduce the effectiveness of Wellbutrin. Wellbutrin contains an active ingredient called bupropion and belongs to a drug class known as aminoketone. While experts do not fully understand why Wellbutrin treats depression, they believe it inhibits the reuptake of the chemical messengers dopamine and norepinephrine. Wellbutrin is available under other brand names, such as Zyban, Aplenzin, and...

### **Laws allowing insurers to deny alcohol-related claims do not deter drinking, study suggests**

State laws designed to prevent dangerous drinking behaviors do not appear to have that effect, according to a study published in *Alcoholism: Clinical and Experimental Research*. Alcohol exclusion laws allow insurance companies to deny payment for injuries caused by alcohol consumption and were adopted more than seventy years ago to prevent problem drinking and related insurance costs. But a rigorous analysis of drinking behaviors found no evidence that repealing these laws increases alcohol consumption or binge drinking. Previous reports have found these laws to be a barrier to screening...

### **Can pharmacotherapies prevent alcohol use disorder in people with PTSD?**

Survivors of abuse and trauma are vastly more likely than other people to develop alcohol use disorder (AUD); according to some estimates, as many as three-quarters of people with post-traumatic stress disorder (PTSD) report drinking problems. Now, Scripps Research scientists have identified a class of drugs that might break this link. In animal models of PTSD, the drug decreased alcohol preference and intake as well as other behaviors associated with PTSD, including aggression, excessive fear and hyperarousal. The findings were published in *Neuropsychopharmacology* on November 18, 2022. "The overlap...

### **Legalizing marijuana in US states may lead to increases in alcohol consumption**

A trio of researchers, two with the University of Pittsburgh, the other with William Patterson University, has found evidence showing that alcohol consumption rises among young people in the United States when marijuana use is legalized. In their paper published in *JAMA Health Forum*, Vandana Macha, Coleman Drake and Rahi Abouk, describe studying data in the Behavioral Risk Factor Surveillance System database. Over the past decade, 20 states in the U.S. have reversed laws banning the recreational use of marijuana. Such reversals partly came about as proponents argued that making marijuana legal...

### **Smoking cannabis may be more harmful to lungs than tobacco: study**

Cannabis may do more harm to a smoker's lungs and airways than tobacco, according to a small Canadian study published Tuesday. Researchers from the University of Ottawa and The Ottawa Hospital looked at chest X-ray scans of 56 cannabis smokers, 57 non-smokers and 33 people who smoked only tobacco between 2005 and 2020. They found higher rates of airway inflammation and emphysema—a chronic lung disease—among regular cannabis smokers compared to regular tobacco-only smokers and non-smokers. "Marijuana smoking is on the rise and there's a public perception that marijuana is safe...

### **Study finds positive media coverage of cannabis studies regardless of therapeutic effect**

In cannabis trials against pain, people who take placebos report feeling largely the same level of pain relief as those who consume the active cannabinoid substance. Still, these studies receive significant media coverage regardless of the clinical outcome, report researchers from Karolinska Institutet in Sweden in a study published in JAMA Network Open. "We see that cannabis studies are often described in positive terms in the media regardless of their results," says the study's first author Filip Gedin, postdoc researcher at the Department of Clinical Neuroscience, Karolinska Institutet. "This is problematic..."

### **Telephone-based smoking quitline can serve as a successful treatment option for Spanish-speaking patients**

Researchers conducted a study examining the differences in smoking treatment between Spanish- and English-preferring primary care patients linked with evidence-based tobacco treatment using Ask-Advise-Connect (AAC). Researchers compared enrollment, engagement and smoking cessation outcomes. Patients who received treatment in Spanish (vs. English) were twice as likely to be abstinent at six months. Receipt of nicotine replacement therapy (NRT) increased abstinence for all patients. Language was not a factor in predicting abstinence through the use of NRT. The authors assert...

### **Troubling trend: Move over cigarettes and vape pens, teens are reaching for a new form of nicotine**

BOSTON -- Last August, the Food and Drug Administration issued a Warning Letter to the manufacturer of KraveNic nicotine gummies and shortly thereafter those unauthorized tobacco products were pulled from the market. End of story for nicotine gummies. At least for now. But not for other oral nicotine formulations. From lozenges to gums to pouches meant to be jammed in the mouth like chaw, nicotine has found its way into a variety of discrete delivery systems -- and a new study finds kids gravitating towards these products. The study, which appears in the journal Pediatrics, surveyed some...

### **Millions of teens admit to using tobacco products, alarming health leaders**

SACRAMENTO — Tobacco use is the leading cause of preventable disease, disability, and death among U.S. adults, according to the CDC. Experts say a new generation of kids and teenagers are fighting nicotine addiction, a group that statistically never would have if it weren't for electronic cigarettes. A new 2022 study by the CDC and the FDA has alarmed public health officials. It found that more than 3 million middle and high school students admitted this year to using a tobacco product within the last 30 days, including vapes or e-cigarettes. "Tobacco products kill in the end. So they have..."

### **To gin up opposition to the proposed menthol ban, tobacco companies are turning to gas station ads**

GETTYSBURG, Pa. — At the Gateway mini mart here, you can buy menthol-flavored hemp cigarettes, an impressive 1-pound bag of pipe tobacco, or a Dragon Ball Z-themed bong — or, you can submit a formal comment to regulators at the Food and Drug Administration. A sign on the door warns consumers: "The FDA Is Trying To Ban Menthol Cigarettes and Flavored Cigars." Scan the QR code at the bottom of the poster and it'll take you to the website for a group called Citizens for Tobacco Rights. There, you can submit a comment opposing the FDA's April proposal to ban menthol and flavored cigarettes...

### **Extending pre-quit duration of leading smoking cessation medication doesn't help smokers quit, study finds**

Extending the duration that a leading smoking cessation medication is taken prior to stopping tobacco use does not significantly improve the likelihood of breaking the cigarette habit and staying smoke-free, according to the results of a study published in JAMA Network Open. Varenicline is the best medication available for helping people to quit smoking. It has been sold since 2006 under the brand names Chantix and Champix, and recently became available in generic form. But even with varenicline, most people return to smoking within six months of quitting, according to Larry Hawk, Ph.D...

### **Excessive television viewing in childhood may be a risk factor for later smoking and gambling disorders**

Excessive television viewing as a child can lead to a higher risk of tobacco use and gambling disorders in adulthood, a new University of Otago study shows. The research is published in the International Journal of Mental Health and Addiction. The researchers used unique, follow-up data from the Dunedin Multidisciplinary Health and Development Study (known as the Dunedin Study) to investigate how television viewing in childhood was related to the risk of having a substance use disorder or disordered gambling in adulthood. Study author Dr. Helena McAnally says that the study indicates that excessive...

### **Positive reinforcement can spur physicians and health practitioners to promote tobacco cessation**

University of Maryland Medical System researchers studied the effects of positive reinforcement to encourage physicians and health practitioners to promote referral to tobacco Quitline resources. The researchers observed an uptick in referrals after physicians and health practitioners received letters and certificates acknowledging their referral efforts in January 2022, indicating that positive feedback and acknowledgment may improve tobacco cessation e-referral rates. The authors assert that providing physicians and health care providers with access to accurate EHR data can also...

### **Top U.S. addiction researcher calls for broad deregulation of methadone**

BOSTON — The U.S. government's top addiction researcher is calling for broad deregulation of methadone, a key drug used to treat opioid use disorder. American doctors should "absolutely" be allowed to prescribe methadone directly to patients, Nora Volkow, the director of the National Institute on Drug Abuse, said Wednesday. "There's absolutely no reason why not," Volkow said. "There are countries where physicians are providing methadone, and the outcomes are actually as good as those they get [at] methadone clinics." Volkow's comments, which came at the annual STAT...

### **CDC's Updated Opioid Guidelines Are Necessary, but Not Sufficient**

Before the CDC suffered a loss of trust over its handling of the COVID-19 pandemic, the agency had fumbled its response to the overdose crisis. Under its leadership, overdose deaths have continued to spiral, as people living with pain have lost access to vital medications. One of its key missteps was the formulation and implementation of its 2016 prescribing guideline for chronic pain. On November 3 this year, the agency took partial corrective action, revising its approach that contributed to so many harms to people with pain. Before the CDC suffered a loss of trust over its handling of the COVID-19 pandemic, the agency...

### **Opioid crisis update: What's changed and where are we?**

Opioid addiction has gone from a relic of bygone eras to an epidemic raging in American homes and communities. No spot on the US map is untouched by the addiction crisis, and it's common to know someone who has been struck by this tragedy. But much has changed in the fight against opioid addiction. New diagnostic approaches and treatments, as well as shifting attitudes, are hopefully poised to lay this problem to rest. Chart out the pattern of opioid overdose deaths in the US, beginning in 1999, and you get a hockey-stick graph.[1]  
Between 1999 and 2020, an estimated 546,000 people died...

## **Fentanyl isn't just causing overdoses. It's making it harder to start addiction treatment**

Doctors are reporting a troubling trend when it comes to fentanyl. The powerful drug, they say, isn't just causing overdoses — it's also making it more difficult to begin addiction treatment. In particular, fentanyl appears more likely to cause severe withdrawal symptoms for patients put on buprenorphine, a key medication used to treat opioid use disorder. The development adds yet another layer of crisis to the country's drug epidemic, which killed nearly 108,000 Americans last year. Even as fentanyl sends overdose deaths soaring, it threatens to make the world's most-prescribed addiction...

## **AI helps Stanford researchers show link between first opioid Rx and dependency**

The U.S. is being ravaged by an opioid epidemic that costs tens of thousands of lives and billions of dollars each year. Dr. Tina Hernandez-Boussard, associate professor at the Stanford University School of Medicine, and her fellow researchers said they could not let this continue. "Our goal was to use big data and advanced technologies to identify the causes of opioid addiction and recommend strategies to stem this chronic use," she stated. Medicaid covers a vulnerable population with a particularly high risk of opioid misuse. The Stanford team's problem was that there currently are no large...

## **Gabapentin, Opioid Prescriptions More Likely to Overlap in Recent Years**

Overlapping prescriptions of gabapentin and opioids grew over a 12-year period, pharmacy claims data showed. Concurrent prescriptions increased from 1.9% in 2006 to 7.6% in 2018, a relative increase of 344%, reported Evan Peet, PhD, of the RAND Corporation in Washington, D.C., and co-authors, in a research letter published in JAMA Internal Medicine. "As the opioid crisis continues throughout the country, clinicians are facing increasing restrictions on prescribing opioids," Peet told MedPage Today. "This study examines one way in which prescribers may be responding to these restrictions: prescribing..."

## **Virtual overdose monitoring may help reduce opioid deaths**

Virtual overdose monitoring has the potential to reduce the risk of death from opioids and other substances by offering timely and anonymous access to emergency care. An article reviewing the latest evidence is published in CMAJ (Canadian Medical Association Journal). Isolation and solitary use of opioids and other substances are the main driver of overdose deaths, as people are unable to seek help. Virtual overdose monitoring using phone lines or smartphone apps can connect people anonymously with people who can develop personalized emergency response plans and supervise...



### **Researchers find 2.8% of pregnancies were exposed to opioids**

Opioid use during pregnancy may lead to adverse long-term infant and child outcomes. Targeted public health strategies have been employed to reduce opioid use in reproductive-aged persons, but there has been a lack of research that adequately describes the individuals in the United States who actually use opioids during pregnancy. The first nationwide, geographically diverse study of pregnant people to describe the epidemiology of opioid use, including the demographic and medical characteristics of these people, helps to fill this gap. The study, led by University of Minnesota School of Public...

### **Resistance to FDA's opioid-disposal plan raises concerns about CADCA, a powerful advocacy group**

At its surface, it seems like a simple problem with a simple solution. Across the country, medicine cabinets are littered with unused, potentially addictive opioids. So the federal government wants to distribute prepaid envelopes alongside new painkiller prescriptions, allowing Americans to mail back their leftovers. But the seemingly innocuous proposal has generated opposition from a surprising source: the Community Anti-Drug Coalitions of America, a powerful nonprofit organization that has dominated drug policy advocacy in Washington for decades. CADCA has argued that the plan is...

### **45 State AGs Demand SAMHSA Action on Virtual Addiction Treatment**

Forty-five state attorneys general have signed a letter asking the federal government to preserve COVID-era regulations for virtual addiction treatment. The letter, which was organized by the National Association of Attorneys General (NAAG), was sent to the Drug Enforcement Administration (DEA) and Substance Abuse and Mental Health Services Administration (SAMHSA). The letter specifically calls on SAMHSA and DEA to make good on an announcement it made in June. SAMHSA said it would allow opioid treatment programs (OTPs) to prescribe buprenorphine via telehealth after...

### **Is Substance Abuse Among Physicians on the Rise Since COVID?**

You might not think COVID and substance abuse go hand in hand but you'd be mistaken. It seems substance abuse, and particularly opioid usage, is on the rise among physicians since the COVID pandemic hit in March 2020. Medscape's Substance and Opioid Abuse Report 2022 found that 51% of physicians think the problem has "increased" in their profession since the onset of COVID-19. But another 48% report it at the same level as in pre-pandemic years. Which perception matches reality? Data is still anecdotal and somewhat mixed from physician health programs, where statistics on substance use...

### **Effective Treatment for Meth Addiction: Paid to Stay Sober**

On Nov. 30, 2021, JC was admitted to Zuckerberg San Francisco General Hospital for symptoms of heart failure. His legs were swollen, which can be a sign that the heart

isn't pumping properly, and he was having trouble breathing. He ended up spending seven days in the hospital with no one to talk to but the hospital staff. That's when he decided it was time to turn his life around. "Spending a week in a hospital room by yourself will do that to you. I had a lot of time for self-examination and introspection," said JC, whose full name is being withheld to preserve his privacy. His conclusion: it was time...

### **HHS Proposes Rule to Ensure Better Care Coordination for Patients With SUD**

In an effort to enhance care coordination for patients with substance use disorder (SUD), HHS, acting through its Office for Civil Rights and in collaboration with the Substance Abuse and Mental Health Services Administration, proposed changes to "Part 2" rules to better align privacy measures with those of HIPAA on Monday. If implemented, the proposed rule would allow Part 2 programs to use and share patients' records following a single signed consent by the patient "for all future uses and disclosures for treatment, payment, and healthcare operations." The proposal also aims to strengthen protections...

### **New AI method for public health analysis shows trends in substance use among high schoolers**

High school students who have a large weekly allowance, friends who smoke and low levels of physical activity are more likely to use multiple substances over time. Conversely, being older, being Black and eating breakfast daily were factors associated with a smaller chance of transitioning to multiple use. These conclusions were reached by a team of researchers at the University of Waterloo who used artificial intelligence to analyze a large, complex public health dataset—a novel way to approach public health analysis. The study used machine learning instead of traditional statistical methods, allowing...

### **How Anti-Poverty Policies Can Help Address Addiction**

Americans are often so focused on individual aspects of substance use, addiction, and recovery that we overlook ways that public policies could harness social and environmental initiatives to reduce addiction risk and improve recovery success. The Biden-Harris Administration National Strategy on Hunger, Nutrition, and Health proposes viewing food as medicine, with a focus on bettering people's diets and reducing diet-related health problems. Numerous medical associations and healthcare centers have committed funding to this initiative—but I argue that there was a significant missed...

### **Why housing alone is not enough for some homeless moms**

Giving some homeless mothers with young children a place to live may do little to help them if it is not combined with support services, a first-of-its-kind study showed. Researchers found that young moms with a substance use disorder showed less improvement if they were given only housing when compared with similar moms who were given housing and supportive services, or even mothers

who were only given a list of community services available to them. That's an important finding for organizations and policymakers who have advocated a "housing first" policy that aims to get the homeless into...

### **Words Matter: Addiction and Stigmatizing Language**

Words matter. Our society's beliefs about substance use and compulsive behavior problems—and the potential for change—are built into the words we use to speak about these issues. Why does our word choice matter when talking about substance use problems? Because when we use words like "addict," "abuser," and "alcoholic," we lump together an incredibly diverse group as if they were all the same. You also don't have to dig very deep to hear the negative connotations of these words in many people's minds (e.g., lazy, weak-willed, failing moral compass, diseased). The easiest way to...

### **Primary Care Moves Patients With Addiction to Self-Advocacy**

Samuel Werner, DO, a family medicine physician in West Hartford, Connecticut, vividly remembers one patient who was struggling with a drug addiction. The man was having trouble holding down a steady job because of his dependence, but with Werner's guidance, he started on buprenorphine. Werner also connected him with a social worker to address housing insecurity. "Working together, not only was he no longer using his street drugs, but also he was able to actually develop some financial stability, to support his family," Werner, the medical director of private practice Family Osteopathy...

### **Novel Strategy Improves Provision of Addiction Treatment Medications in HIV Clinics**

A multicomponent implementation strategy may increase access to medications for addiction treatment in HIV clinics, particularly those for the treatment of alcohol use disorder (AUD) and tobacco use disorder (TUD). These study findings were published in JAMA Network Open. Between July 2016 and July 2020, researchers at Yale School of Medicine in Connecticut conducted a randomized clinical trial using a hybrid type-3 effectiveness-implementation design with a stepped wedge approach. The researchers assessed whether facilitation, defined as a multicomponent implementation strategy...

## Funding Opportunities



### GRANTS & FUNDING

NIH Central Resource for Grants and Funding Information

[NOT-AI-23-011](#)

[Notice of Intent to Publish a Funding Opportunity Announcement for NIH Medical Scientist Partnership Program \(FM1 Clinical Trial Not Allowed\)](#)

[NOT-DA-22-064](#)

[Notice of Intent to Publish a Funding Opportunity Announcement for NIH Brain Development Cohorts Biospecimen Access \(X01 Clinical Trial Not Allowed\)](#)

[NOT-OD-23-018](#)

[Notice of Special Interest \(NOSI\): Administrative Supplement for Research and Capacity Building Efforts Related to Bioethical Issues \(Admin Supp Clinical Trial Optional\)](#)

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