

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) 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

UC cocaine research disrupts traditional theory

For more than 50 years, the conventional wisdom in the field of research in cocaine use has been that people take cocaine based on the theory of the drug providing positive reinforcement to the user. New research out of the University of Cincinnati shows that a pharmacological equation disproves that concept and could spark a major shift in that field of research. The study was published in the journal *Scientific Reports*. Andrew Norman, PhD, professor in the Department of Pharmacology and Systems Physiology at the UC College of Medicine and corresponding author of the study, says that in 1968, the first paper on cocaine self-administration was published showing that it was an example... **(Dr. Norman, CAR Addiction Treatment Development and Testing Core Leader and CAR Member, see publication below in the newsletter)**

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 Population Health and Health Services Core Co-Leader and CAR Member, Dr. Caroline Friermuth.**

Caroline Friermuth, MD, Associate Professor, Department of Emergency Medicine

- Award: Substance Abuse & Mental Health Services Administration Award
- Project Title: Alternatives to Opioids for Pain in the Emergency Department: Implementing Integrative Health Approaches and Expanding Local Nerve Block Initiatives

- Project Period: 9/30/2023-9/29/2026
- Summary: This project will expand the use of available evidence-based options for pain management in the emergency department, focusing on pain relief and empowering people with tools to use for pain management while minimizing the risk of potential harms from opioid exposure. Researchers will expand utilization of ultrasound-guided local anesthesia for femoral fractures and shoulder dislocations. A full menu of integrative health and medicine techniques will be introduced and available for novel outpatient follow-up (acupuncture, yoga, etc), with patients receiving information on mindfulness and stress reduction techniques to use immediately.
- Collaborators include Richard J. Ryan, MD, Department of Emergency Medicine

27 Ohio counties have higher opioid usage than the national average

CLEVELAND, Ohio - While opioid dispensary rates have reached a record low in the country, according to data from the Centers for Disease Control and Prevention, more than two dozen Ohio counties still see usage of the addictive painkiller higher than the national average. This includes some of the larger counties, such as Cuyahoga and Franklin, and several smaller counties across the state. The full list of Ohio counties above the national average can be found at the bottom of this story. Using data from the CDC, Stacker and Ophelia broke down counties in every state with the highest opioid dispense rates. In Ohio, the opioid dispensing rate was 47.4 per 100 people, compared to 43.3 nationally, the lowest...

Study shows amount and days of opioids prescribed at discharge decreased after 2017 Ohio prescription opioid cap law

The Ohio Opioid Cap Law, enacted on August 31, 2017, limited the total dose and duration of opioids that could be prescribed for minors. The anticipated benefit of cap laws in preventing opioid overdose, death and addiction was counterbalanced by fears that decreased opioid prescribing could hurt patient satisfaction. Assessing the impact of state prescribing cap laws on opioids prescriptions is essential, given the large amount of opioids prescribed for postoperative pain management and the risk for addiction or overdose. In a new study, published in PLOS One, researchers at the Center for Injury Research and Policy, Center for Pediatric Trauma Research, Department of Pediatric Surgery...

Ohio county stands as model for opioid crisis recovery

FINDLAY, Ohio — Communities ravaged by America's opioid epidemic are starting to get their share of a \$50 billion pie from legal settlements. Most of that money comes with a requirement that it be used to address the overdose crisis and prevent more deaths. But how? It could mean that places look more like the area around Findlay. Here, conservative Hancock County has built a comprehensive system focused on both treatment and recovery. "People recover in a community,"

said Precia Stuby, the official who heads the county's addiction and mental health efforts. "We have to build recovery-oriented communities that support individuals." It was 2007 when Stuby began hearing...

‘Unpredictable’: Drug mixtures increasing across Ohio

DAYTON, Ohio (WDTN) — A public safety bulletin was released on Monday alerting Ohioans about an increase in dangerous drug mixtures. The Ohio Narcotics Intelligence Center (ONIC) says in Ohio, there is an increasing amount of illegal drugs that contain different dangerous drugs. Some of the drugs are described as being “unpredictable and potentially deadly,” like carfentanil. Across the state, ONIC confirmed a minimum of 17 samples that contain a carfentanil mixture. Carfentanil is around 100 more times as deadly than fentanyl. Different drugs can make life-saving efforts more difficult. The illicit drugs mostly found mixed include carfentanil, cocaine, fentanyl, medetomidine, methamphetamine...

National News

New research points to dad's drinking as a significant factor in fetal alcohol syndrome

Men drink more, are more likely to binge drink and are almost four times more likely to develop alcohol use disorder than women, according to the Centers for Disease Control and Prevention. Yet when it comes to diagnosing babies born with birth defects associated with alcohol consumption, such as fetal alcohol syndrome, historically only the mother's drinking habits are taken into consideration. Research clearly shows that sperm carry a vast amount of epigenetic information—meaning heritable shifts in the way genes are expressed that don't result from changes in the DNA sequence—that strongly influences...

Creating mental space from alcohol triggers could help college students drink less frequently

If you've ever watched a movie set on a college campus, then you know that American college students are expected to drink. A lot and often. Usually out of plastic red cups. That expectation can be hard for real life students to ignore, despite its consequences on their health. New research from the Communication Neuroscience Lab at the Annenberg School for Communication at the University of Pennsylvania—in collaboration with researchers from McGill University, Temple University, Brigham Young University, Columbia University, Dartmouth College, and others within Penn—has found that...

AMA Delegates Take Action on Cannabis, Medical Aid-in-Dying Resolutions

NATIONAL HARBOR, Md. -- The American Medical Association (AMA) should work to educate physicians and the public on the health risks of cannabis to children as well as potential risks to people who are pregnant or breastfeeding, members of the AMA House of Delegates voted Monday. "My patients are often surprised to hear me say that cannabis should not be used during pregnancy," said Albert Hsu, MD, of

Columbia, Missouri, a delegate for the American Society of Reproductive Medicine who was speaking for himself. "My lonely voice is drowned out by TikTok, social media, and all the others advertising cannabis..."

States with legalized medical marijuana see decline in nonmedical opioid use

Medical cannabis legalization is associated with a decrease in the frequency of nonmedical prescription opioid use, according to a Rutgers study. The study, published in the *International Journal of Mental Health and Addiction*, examined data from a nationally representative survey of adults who reported nonmedical prescription opioid use—or using prescription medications without a prescription or in a manner other than prescribed. According to the study, when states implement medical cannabis laws, there is a 0.5 to 1.5 percentage point decrease in regular to frequent (up to or greater...

Cannabis users appear to be relying less on conventional sleep aids

Most people who reported using cannabis to get a good night's rest in a recent study have quit using over-the-counter, or prescription sleep aids altogether. More than 80% of the 1,255 cannabis users surveyed for the Washington State University-led analysis reported no longer using over-the-counter or prescription sleep aids such as melatonin and benzodiazepines. Instead, they had a strong preference for inhaling high-THC cannabis by smoking joints or vaporizing flower, two fast-acting methods that previous research has shown can help with difficulty falling asleep. Interestingly, around half of the people in...

Cannabis use during pregnancy associated with adverse birth outcomes

Infants prenatally exposed to cannabis are more likely to be born preterm, have a low birth weight, and require neonatal intensive care unit (NICU) care than infants without prenatal cannabis exposure, according to a study published today in *Addiction*. However, cannabis-exposed infants are not at greater risk of birth defects or death within one year, including sudden unexpected infant death. First author Ms. Maryam Sorkhou comments, "The global increase in cannabis use among women of reproductive age also extends to pregnant women. We know that THC, the main psychoactive constituent in..."

Study finds high school students no more likely to use marijuana after legalization

High schoolers who perceive that their parents, siblings or friends use marijuana were much more likely to use marijuana themselves—but no more so after cannabis was legalized in the commonwealth in 2016, according to University of Massachusetts Amherst research. "It's not news that youth are influenced by peers," says Faith English, a Ph.D. candidate in the School of Public Health and Health Sciences and lead author of a paper published in a special issue of *Clinical Therapeutics* that discusses critical opportunities of cannabis legalization. "But our paper was really the first to look at these three particular roles..."

Genomic study links cannabis abuse to multiple health problems

A Yale-led analysis of the genomes of more than 1 million people has shed light on the underlying biology of cannabis use disorder and its links to psychiatric disorders, abuse of other substances such as tobacco, and possibly even an elevated risk of developing lung cancer. For the study, researchers examined a genome-wide set of genetic variants in individuals from multiple ancestry groups enrolled in the U.S. Department of Veterans Affairs' Million Veteran Program, one of the world's largest genetic databases, and incorporated additional information from several other genomic databases. They...

Massive genetic study finds genes linked to cannabis addiction

By analyzing more than one million people's genomes, researchers have identified stretches of DNA that could be linked to cannabis addiction. They also found that some of the same regions in the genome are associated with other health conditions, such as lung cancer and schizophrenia. The findings are evidence that cannabis addiction "could have substantial public-health risks if the usage increases", says Daniel Levey, a medical neuroscientist at Yale University in New Haven, Connecticut, and a co-author of the study, published today in Nature Genetics¹. Taking cannabis recreationally is legal in at least...

Popular 'Nicotine Pouches' Won't Help Smokers Quit: Study

WEDNESDAY, Nov. 14, 2023 (HealthDay News) -- Oral nicotine pouches might be marketed as an alternative to cigarettes, but they do little to curb smokers' nicotine cravings, a new study finds. The pouches – which contain nicotine powder and other flavorings, but no tobacco leaf – take too long to provide the nicotine "spike" that eases cravings, researchers report in the Nov. 15 issue of journal Addiction. Current smokers still get a much greater nicotine spike and much sharper relief from craving symptoms when they take a puff than when they use either low- or high-dose nicotine pouches, the results showed. The spike of...

FDA moves against vape products that mimic toys, slushies and appeal to kids

The U.S. Food and Drug Administration is taking action against e-cigarettes disguised to look like everyday items that appeal to young people. The FDA sent warning letters Thursday to seven online retailers that were selling unauthorized vape devices that look like drink containers, toys and phones. The products' design could appeal to young people and help them conceal e-cigarettes from adults, FDA officials believe. They also might be confused with an everyday object by young children and accidentally ingested. "As we continue into the school year, it's critical that parents, teachers and other adults...

National survey indicates more young adults begin nicotine use with vaping, not cigarettes

Young adults are now more likely to vape than to use traditional cigarettes. After years of public health success in decreasing the numbers of people using cigarettes, researchers are seeing striking increases in the numbers of young people who use e-cigarettes regularly—so much so that, for the first time, there are more young people who begin to use nicotine through vaping rather than through cigarettes. "We now have a shift such that there are more 'never smokers' who vape than established smokers," said MUSC Hollings Cancer Center researcher Benjamin Toll, Ph.D., director of the MUSC Health...

Opioid Rx down, but overdoses and deaths up, AMA report shows

Opioid prescribing by physicians and other health professionals has decreased for the 13th consecutive year, down nearly 50% since 2012, while overdoses and deaths related to illicitly manufactured fentanyl, xylazine, and other synthetic substances continue to increase, according to the Overdose Epidemic Report 2023, released by the American Medical Association (AMA). In 2022, more than 107,000 people died from a drug-related overdose in the United States, with the epidemic increasingly impacting young people, Black and Brown people, and pregnant people. Since 2018, naloxone dispensing...

Study: Proposed law would expand methadone access, but gaps would remain

The federal Modernizing Opioid Treatment Act, or MOTA, would expand methadone access to an additional 14% of census tracts in the U.S., according to new research from the University of Pittsburgh published recently in Health Affairs Scholar. The proposed law would change not only who can prescribe methadone, but also where it can be dispensed. Currently, only clinicians at federally certified opioid treatment programs can prescribe and dispense the drug for opioid use disorder, which studies have shown is one of the most effective treatments for the condition. Often, a patient must visit a clinic each...

Physicians prescribing opioid use treatment influence others to follow suit, finds study

Emergency departments (EDs) are critical settings for treating opioid use disorder, but few ED physicians initiate treatments like administration of buprenorphine, a drug known to activate the brain's opioid receptors and help patients safely manage and treat opioid addiction. However, emergency department physicians are more likely to start prescribing buprenorphine if they see their colleagues prescribe it, a new Yale study reveals. The findings, published Nov. 10 in JAMA Network Open, highlight strategies for boosting opioid use treatment in EDs. The opioid crisis affects around 2 million people...

Opioid use after C-section reduced by nearly half with non-invasive pain management device, study finds

According to the Centers for Disease Control and Prevention, more than 1 million people deliver their infants by cesarean section (C-section) each year, making it the most common surgical procedure in the United States. After discharge, patients are typically prescribed opioids for pain management, but narcotics come with concern over side effects and the risk of addiction. In a recent study published in JAMA Network Open, a team at The Ohio State University Wexner Medical Center looked into a drug-free and non-invasive alternative to managing patients' pain after C-section. The research team studied...

Telemedicine treatment for HCV in people with opioid use disorder more than twice as successful as offsite referral

Telemedicine is widely perceived as an important tool for potentially improving health care access for the underserved. However, few randomized controlled trials have been conducted to determine its effectiveness in treating these populations. Individuals with opioid use disorder are a particularly challenging underserved population to treat in conventional health care settings, and they are at highest risk for hepatitis C virus (HCV) infection through needle sharing. University at Buffalo researchers explored the effectiveness of integrating telemedicine into opioid treatment programs for HCV...

Pain scores, age can help identify patients more likely to use few or no opioids after surgery

Patients who are younger or who haven't taken opioid pain medication before are more likely to not need any after many common surgeries, according to new research from the Perelman School of Medicine. Additionally, the study, published in Annals of Surgery Open, showed that simply understanding a patient's history with opioids and how they are feeling upon leaving the hospital could help clinicians tailor the amount of prescription pain medicines they may need as they transition home. "At face value, it seems quite simple that asking patients about their pain and use of pain medicine would help inform what we do..."

Researchers adapt health system COVID-19 collaboration to track near-real-time trends in visits for substance use

In a recently released study, researchers at Hennepin Healthcare and other Minnesota health systems describe how a COVID-19 collaboration across Minnesota health systems was adapted to monitor near-real-time trends in substance use-related hospital and emergency department (ED) visits. The Minnesota Electronic Health Record Consortium (MNEHRC), developed in response to the COVID-19 pandemic, repurposed its surveillance methods to identify health disparities and inform equity-driven approaches to the overdose epidemic. MNEHRC's study, "Minnesota Data Sharing May Be Model for..."

Addiction Societies Issue Guidance on Stimulant Use Disorder

In light of recent increases in overdose deaths involving stimulant drugs, two addiction medicine societies have jointly issued a clinical practice guideline on the management of stimulant use disorder (StUD). The guideline is meant to provide evidence-based strategies for the prevention and treatment of StUD, stimulant intoxication, and stimulant withdrawal, according to the American Society of Addiction Medicine (ASAM) and the American Academy of Addiction Psychiatry (AAAP). Overall, the recommendations focus on three key areas: treatment of StUDs, intoxication and withdrawal, and secondary...

Americans Struggling With Addiction, Mental Health, SAMHSA Survey Shows

The Substance Abuse and Mental Health Services Administration (SAMHSA) released the results of its 2022 National Survey on Drug Use and Health (NSDUH) on Tuesday, which showed that nearly one in five Americans ages 12 and older reported having a substance use disorder in the past year, and roughly one in four adults reported having a mental illness. While the nation has made "progress," there's still more work to be done, said Rahul Gupta, MD, MPH, MBA, director of the Office of National Drug Control Policy, during a call with reporters on Monday. "There...

Overdose prevention sites not associated with increase in crime, according to study

An analysis co-led by a Brown public health researcher has found that the nation's first two government-sanctioned overdose prevention centers were not associated with significant changes in crime. When the researchers compared syringe service programs in New York City with two programs that were recently sanctioned by city officials to offer supervised drug consumption, they found no significant increases in crimes recorded by the police or calls for emergency service in the surrounding neighborhoods. The findings, which were published in JAMA Network Open, come as plans to open overdose prevention...

Research shows mindfulness may improve substance use treatment

Patients receiving medication for opioid use disorder are more likely to complete their treatment programs and have a lower risk of relapse if they participate in mindfulness training, according to a West Virginia University study. The study—led by Johnathan Herczyk, assistant director of program management, risk management and quality assurance at the WVU Health Affairs Institute—was a secondary analysis of data focused on identifying the association between patients' mental health and retention in a Central Appalachia medication-assisted outpatient treatment program. An elevated...

Research aims to curb fatalities caused by illicit drugs

University of Technology Sydney (UTS) Center for Forensic Science Ph.D. candidate Harry Fursman is working on two fronts to prevent harm to people who use drugs:

He is testing a new handheld device for rapidly and accurately identifying drug specimens and conducting ongoing chemical analysis of used syringes. Drugs that are contaminated or substituted with an unexpected substance are a leading cause of death among people who use drugs. In Sydney last week one person died and two people were taken to the hospital due to heroin overdoses, after using what they thought was cocaine. Fursman...

Biden-Harris Administration Announces \$74.4 Million in Funding Opportunities to Improve Behavioral Health

The U.S. Department of Health and Human Services (HHS), through the Substance Abuse and Mental Health Services Administration (SAMHSA), announced notices of funding opportunities this week for grant programs that address behavioral health challenges in local communities by preventing substance use initiation, reducing the progression of substance use, and addressing other related concerns. The grant opportunities total about \$74.4 million and are part of the Biden-Harris Administration's priorities to beat the overdose epidemic and tackle the mental health crisis – two key pillars of the President's...

Colleges face gambling addiction among students as sports betting spreads

Three out of four college students have gambled in the past year, whether legally or illegally, according to the National Council on Problem Gambling. An estimated 2% to 3% of U.S. adults have a gambling problem. The portion of college students with a problem, however, is potentially twice that number—up to 6%. As an educational psychologist who follows gambling in America, I foresee the potential for gambling on campus to become an even bigger problem. Sports betting continues to expand, including on college campuses, since a 2018 Supreme Court ruling allowing states to make it legal. As a...

Gambling addiction may increase the risk of long-term sick leave

Gambling addiction can increase the risk of long-term sick leave for several years, according to a new study published in Psychological Medicine, titled "The risk and development of work disability among individuals with gambling disorder: a longitudinal case-cohort study in Sweden." Researchers, from Karolinska Institutet, point to the need to detect people with gambling addiction in time to avoid financial and health problems. Gambling addiction is a psychiatric condition characterized by prolonged and problematic gambling that leads to negative financial, health and social consequences. Some 1.3% of...

Funding Opportunities



GRANTS & FUNDING

NIH Central Resource for Grants and Funding Information

[PAR-23-270](#)

[Screening, Brief Intervention and Referral to Treatment or Prevention \(SBIRT/P\) for alcohol, tobacco, and other drugs \(ATOD\) use and misuse in adult populations that experience health disparities \(R01, Clinical Trial Required\)](#)

[RFA-DA-25-030](#)

[Adolescent Overdose Prevention and SUD Treatment Initiative \(R21 - Clinical Trial Not Allowed\)](#)

[RFA-DA-25-031](#)

[Adolescent Overdose Prevention and SUD Treatment Initiative \(R34 - Clinical Trial Optional\)](#)

[NOT-DA-23-045](#)

[Notice of Informational Webinar: Intervention Research to Improve Native American Health: Whats New with PAR-23-298, PAR-23-285, PAR-23-299"](#)

CAR Member New Publications

The ascending limb of the cocaine unit dose–response function in rats as an experimental artifact

Jhanvi N. Desai, Luis E. Tron Esqueda & Andrew B. Norman

Nature

DOI: <https://doi.org/10.1038/s41598-023-43506-y>

ABSTRACT

The cocaine unit dose–response function is an inverted U with the ascending and descending limbs representing the positive and rate limiting cocaine effects, respectively. Higher fixed ratio (FR) schedules and/or time-out periods make the ascending limb more prominent. Alternatively, a pharmacokinetic/pharmacodynamic interaction theory demonstrates that cocaine-induced lever pressing occurs only when cocaine levels are within a range termed the compulsion zone. The inter-injection intervals of self-administration increase with cocaine unit dose because of the longer time required to eliminate higher doses. However, this theory has not been applied to high FR schedules. Rats acquired cocaine self-administration on a FR1 schedule and then were changed to sessions that started with both FR1 and then FR50 over a range of unit doses with a set number of self-administrations allowed for each dose. On FR1, rats completed the

maximum number of injections at all but the lowest unit dose. In contrast, on FR50 the proportion of the permitted injections increased as a function of unit dose. However, this ascending limb was the result of averaging data from sessions where rats completed or failed to complete the allowed number of injections. Rats completed all injections when cocaine levels were maintained in the compulsion zone. The FR50 schedule and low unit doses decreased this probability of maintaining cocaine levels in the compulsion zone when the rate of cocaine elimination exceeded the rate of cocaine input during the time required to complete the 50 presses. It is concluded that the ascending limb is an experimental artifact and that the entire dose–response function and the FR50-induced increase in inter-injection intervals are explained in terms of the compulsion zone theory of cocaine self-administration behavior.

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