

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**

#### **Kentucky drug overdose deaths fall for first time in 4 years, Beshear says**

KENTUCKY — After years of a steadily rising overdose mortality rate in Kentucky, Gov. Andy Beshear (D) on Thursday said the state's number of deaths from overdoses fell for the first time in four years. Drug overdose deaths declined by 5% in 2022 compared to the previous year, according to numbers from the Kentucky Injury Prevention and Research Center. In 2022, 2,127 Kentuckians died from a drug overdose compared to 2,257 in 2021, KIPRC found. During Thursday's Team Kentucky press conference, Beshear said while the decline brings hope, the state is still very much in crisis. "This remains a public health crisis that we must continue to work together to address," Beshear said. "We have..."

#### **Animal Tranquilizer in Fentanyl Found in 48 States, Including Kentucky**

Fentanyl in Kentucky may be now laced with an animal tranquilizer called Xylazine, what drug officials are calling the "third wave" of the opioid epidemic. According to the Drug Enforcement Administration, in the Commonwealth, Xylazine has so far shown up at DEA labs in the Florence/Covington area and in Louisville. Orville Greene, DEA Detroit Division Special Agent in Charge, explained Xylazine - also known as "tranq" is a powerful sedative and muscle relaxant that slows down the respiratory system and can cause severe, gaping wounds, and added Xylazine is worsening the drug crisis because it is not reversible by Naloxone, and because of the gruesome effects it has on users. "One..."

## **New addiction treatment center opens in Covington: 'We don't want to turn anyone away'**

"Just in a six-month time period, I lost everything," said Kim Smith, Carlisle resident and patient at the Paris branch of Brightview addiction treatment. Ten years ago, a car accident shattered Smith's right knee and hip. "Pretty much my right side got crushed," Smith said. Like many in her situation, she started taking painkillers. Then she became addicted. She sought treatment at several facilities, all of which dispensed buprenorphine, an opioid-based medication for treating narcotic dependence that's known more commonly by its brand name, Suboxone. Her first three to four years of treatment were characterized by a sort of languid stagnation, Smith said. Suboxone seemed to be the only...

## **National News**

### **How alcohol consumption contributes to chronic pain**

Chronic alcohol consumption may make people more sensitive to pain through two different molecular mechanisms -- one driven by alcohol intake and one by alcohol withdrawal. That is one new conclusion by scientists at Scripps Research on the complex links between alcohol and pain. The research, published in the British Journal of Pharmacology on April 12, 2023, also suggests potential new drug targets for treating alcohol-associated chronic pain and hypersensitivity. "There is an urgent need to better understand the two-way street between chronic pain and alcohol dependence," says senior...

### **Here's How to Start Treating Alcohol Use Disorder**

Addiction is highly prevalent. In whatever medical setting you treat patients, you will see patients with substance use disorder (SUD). To improve their health and well-being, you as their physician must recognize, embrace, and treat all your patients' diagnoses. This includes alcohol use disorder (AUD). Despite alcohol use being ranked as a leading risk factor for death and disease globally, AUD remains highly treatable, with the landscape of mental health interventions and treatment pharmacotherapies for AUD comparable to the landscape of treatment for many chronic medical diseases. Familiarizing...

### **Study finds alcohol-related liver disease soared in nearly all states during the pandemic**

Alcohol consumption increased substantially across the United States during the COVID-19 pandemic, but the impact was greatest among American Indian and Alaska Native (AIAN) populations, where deaths from alcohol-associated liver disease were six times those of white people, according to a study by Massachusetts General Hospital (MGH), a founding member of Mass General Brigham (MGB). The disproportionately high mortality rate reflects not just the pandemic, but a systemic failure of supportive health care and lack of critical resources for AIAN populations which demand urgent action by public policy leaders, the researchers reported in a study published in JAMA Health...

### **First-time experiences with alcohol and cannabis appear to predict future substance abuse**

A recent study provides evidence that the initial subjective effects of alcohol and cannabis can vary greatly among individuals and may be indicative of future substance abuse problems. The new findings have been published in *Experimental and Clinical Psychopharmacology*. The study aimed to determine whether the experiences people have with substances at the time of their first use differ across individuals, and if those experiences are associated with problematic use. "As the lead author of this manuscript, I was interested in this topic because initial drug experiences can have a...

### **Doobie No Harm: Doctors and the War on Drugs**

There's a taboo on medical doctors using cannabis, or at least discussing their use publicly, because, in my opinion, the medical boards are antiquated, undereducated, and reflexively punitive on this issue. Even using medical cannabis can get you into hot water. One can only wonder about the origins of a double standard where doctors are allowed to consume (in their free time) alcohol, sleeping pills, muscle relaxants, antihistamines -- whatever intoxicating and debilitating "legal" substances they want, as long as it isn't the "evil weed." As cannabis becomes legal in more and more U.S. states...

### **US adult cigarette smoking rate hits new all-time low**

U.S. cigarette smoking dropped to another all-time low last year, with 1 in 9 adults saying they were current smokers, according to government survey data released Thursday. Meanwhile, electronic cigarette use rose, to about 1 in 17 adults. The preliminary findings from the Centers for Disease Control and Prevention are based on survey responses from more than 27,000 adults. Cigarette smoking is a risk factor for lung cancer, heart disease and stroke, and it's long been considered the leading cause of preventable death. In the mid-1960s, 42% of U.S. adults were smokers. The rate has been...

### **RJR uses California as test market for skirting upcoming national menthol cigarette ban**

Sales of cigarettes that mimic menthol are soaring in California after the state outlawed most flavored tobacco — a sign that the industry is undermining the new law and raising doubts about the Biden administration's plans to ban menthol cigarettes later this year. R.J. Reynolds launched its "California compliant" cigarettes, which contain an artificial, flavorless cooling chemical, when the state's ban went into effect in December. By March, sales of the new cigarettes were on pace to replace nearly half of menthol sales compared with last year, according to an expert who tracks cigarette sale trends. The...

### **What Does Vaping Do? New Research Shows Damage and Addiction**

April 26, 2023 – Jake Warn calls vaping “a toxic artificial love.” Jake, of Winslow, ME, was 16 years old when he began vaping. Unlike cigarettes, vaping can be odorless, and its smoke leaves no trace – allowing him and his friends to use the devices in school bathrooms without fear of being caught. He would use an entire cartridge containing the vape liquid, the equivalent to smoking one pack of tobacco cigarettes, within one school day. By fall semester of his first year in college, Jake said he had increased his use even more. “It got pricey, so that’s when I really started to notice” the extent of his...

### **Treatment for opioid addiction lags despite policies designed to increase it, say researchers**

Treating opioid addiction should be much easier now than it was a few years ago, thanks to pandemic-era rule changes that aim to improve access to buprenorphine, a medicine proven to help in recovery. But a new study shows the rate of people starting on buprenorphine remained flat from 2019 through 2022, while the percentage of patients who stayed on buprenorphine for at least six months hovered at just over 20% from 2016 through 2022. Until more health care providers start offering buprenorphine treatment—and to take advantage of opportunities like emergency visits and hospitalizations...

### **FDA Panelists Slam Agency's Proposed Opioid Trial Design**

FDA advisors recommended that the agency reconsider its planned postmarketing trial design to evaluate the long-term efficacy and tolerability of opioids in chronic pain patients. Without holding a vote on Wednesday, the Anesthetic and Analgesic Drug Products Advisory Committee shared concerns about using an enriched enrollment randomized withdrawal (EERW) design as a required phase IV study for certain opioids currently available on the market. "I don't think this really tells us anything about the most clinically meaningful question for this population, whether opioids are a...

### **Narcan at music festivals? The life-saving drug naloxone is coming to a concert near you**

It's festival season, meaning fabulous flower crowns, loud live music and Narcan. Yes, the overdose-reversing drug Narcan (naloxone) will be available at music festivals near you this year – and with good reason, experts say. Drugs and alcohol are staple at music festivals and many often overdo it. Combine that with the overwhelming presence of fentanyl in the drug supply in recent years and the risk has become deadly. "It's just that now, rather than kind of overdoing it, you just die," says Dr. David Deyhimy of MYMATCLINIC. "And that's why we need to have this medication." You've probably heard of the...

### **Narcan's over-the-counter price will still put it out of reach for many, experts say**

The life-saving drug "Narcan" is expected to be available over-the-counter later this year, but its price tag is expected to put it out of reach for many below the poverty line. Emergent BioSolutions announced Thursday that it plans to sell the medication, which can reverse the deadly affects of opioid overdoses, for an average of less than \$50 for two doses. "In my own clinical practice, there have been times when families have needed to pay \$30 for a copay for Narcan, and this has been too expensive for them," Dr. Scott Hadland, an addiction specialist at Mass General for Children in Boston, told NBC News. "In...

### **More sanctions for deadly fentanyl if bill becomes law**

Over the past year, the U.S. Treasury Department has used its sanctions powers to impose wide-ranging financial penalties on Russia in response to its invasion of Ukraine—turning Russia into the most sanctioned country in the world. Now, the federal agency is facing increasing pressure, including from legislation introduced Tuesday in the Senate, to use those tools with similar vigor against the people, financial institutions and companies that have participated in the explosion of fentanyl use and distribution in the U.S. "As a matter of policy we are dealing with drug cartels who have tremendous...

### **People with cerebral palsy could be in the crosshairs of the opioid crisis**

People with cerebral palsy are more likely to be prescribed opioids to manage pain, making them vulnerable to the ongoing opioid crisis in the United States, according to a new study. While pain is common among patients with cerebral palsy, opioids may not be as helpful for them because their pain is complex, researchers say. Yet, recent research from the University of Michigan suggests that these patients are more likely to be prescribed opioids and at a higher volume for a longer time. "There is little research on the mechanisms of pain as individuals with cerebral palsy age throughout their...

### **Gov. Newsom sends National Guard and CHP to tackle San Francisco's fentanyl crisis**

California Gov. Gavin Newsom is directing the California Highway Patrol and National Guard to assist San Francisco authorities in combating the fentanyl crisis in the city. The two agencies will be partnering with the local police department and the district attorney's office to attempt to stem trafficking of the deadly synthetic opioid. "Two truths can co-exist at the same time: San Francisco's violent crime rate is below comparably sized cities like Jacksonville and Fort Worth — and there is also more we must do to address public safety concerns, especially the fentanyl crisis," Newsom said in...

## **What Is Meth Mouth? Causes, Symptoms & Treatments**

WEDNESDAY, April 26, 2023 (HealthDay News) -- Methamphetamine is a highly addictive stimulant that has been around for a long time, creating multiple health issues for users. But there is another downside to this drug: It can ravage the dental health of users. Meth was first used during World War II by both sides, to increase the focus and energy of soldiers. However, in the Controlled Substances Act of 1970, amphetamines were classified as Schedule II drugs, meaning they could only be used for medical reasons, since they have such a high risk of abuse and addiction. In the past few decades, there has been an explosion in the abuse of this man-made substance. According to the Pew Trust, "The use...

## **Why involuntary treatment for addiction is a dangerous idea**

As the overdose crisis rages on and the pandemic-fatigued public runs low on empathy, there have been increasing calls for expanded involuntary commitment for people with substance use disorder. Some of the advocacy for more coercive treatment seems rooted in a disdain for people who use drugs, most especially when their drug use occurs visibly and in close geographic proximity to affluence, for example in San Francisco or in the Massachusetts Avenue and Melnea Cass area of Boston which borders the wealthy South End neighborhood. However, many others' support for involuntary treatment...

## **A new treatment for those struggling with substance misuse? Better sleep**

In a new study, an assistant professor in The University of Texas at Arlington's School of Social Work reports that behavioral health practitioners should more carefully consider sleep health when treating clients struggling with substance misuse. Christine Spadola, lead author of the study, said she saw numerous examples of sleep-deprived clients in her private practice and identified a link to their substance misuse. "I could tell from my clients when they could or could not sleep and how that negatively impacted their mental health," she said. "I remember thinking, 'Wow, this was never a...

## **Connect, unplug and do good: Wellness tips for substance use and mental health recovery**

"Journey to Wellness" is a new 20-page prescription for well-being created in part by a Rutgers wellness expert. Wellness is big business, and every year millions of people commit to living happier, healthier lives. But for people with substance use and mental health disorders, the concept of wellness isn't a typical part of recovery. Margaret Swarbrick, professor and associate director of the Rutgers Center of Alcohol and Substance Use Studies, is working to change that. Her latest contribution, "Journey to Wellness," is an easy-to-use 20-page guide co-created with people in recovery. "Typically, people with...

## Funding Opportunities



### GRANTS & FUNDING

NIH Central Resource for Grants and Funding Information

[RFA-CA-23-035](#)

[Small Business Transition Grant For Early Career Scientists \(R42 Clinical Trial Not Allowed\)](#)

[RFA-DA-24-039](#)

[NIH Blueprint for Neuroscience Research: Tools and Technologies to Explore Nervous System Biomolecular Condensates \(R21 Clinical Trial Not Allowed\)](#)

[RFA-NS-23-025](#)

[BRAIN Initiative: Exploratory Team-Research BRAIN Circuit Programs - eTeamBCP \(U01 Clinical Trials Optional\)](#)

#### **UC Foundation Funding Opportunities**

Please contact Carol Russell at (513) 556-6169 or [carol.russell@uc.edu](mailto:carol.russell@uc.edu) **at least 5 business days before the deadline**, prior to applying to the below opportunity, to ensure coordination and to facilitate assistance with approaches.

#### **Helping Hands Grants Support Mental Health and Substance Use Disorder Projects**

**Deadline: May 31, 2023**

The American Psychiatric Association Foundation invites applications for its Helping Hands Grants Program. The program aims to encourage medical students to participate in community service activities, raise awareness of mental illness and the importance of early recognition of illness, and build interest among medical students in the psychiatric field and working in underserved communities. Grants of up to \$5,000 will be awarded to medical schools supporting mental health and substance use disorder projects, particularly in underserved minority communities. Medical students should create and manage projects that may be conducted in partnership with community agencies or conjunction with ongoing medical school outreach activities. Projects must be supervised by at least one psychiatrist.

## CAR Member New Publications

#### **The Synthetic Opioid Fentanyl Increases HIV Replication and Chemokine Co-Receptor Expression in Lymphocyte Cell Lines**

Janani Madhuravasal Krishnan, Ling Kong, Rebekah Karns, Mario Medvedovic, Kenneth E. Sherman, and Jason T. Blackard

## ABSTRACT

**Introduction:** Background: In the United States, the illicit use of synthetic opioids such as fentanyl has led to a serious public health crisis. Synthetic opioids are known to enhance viral replication and to suppress immunologic responses, but their effects on HIV pathogenesis remain unclear. Thus, we examined the impact of fentanyl on HIV-susceptible and HIV-infected cell types. Methods: TZM-bl and HIV-infected lymphocyte cells were incubated with fentanyl at varying concentrations. Expression levels of the CXCR4 and CCR5 chemokine receptors and HIV p24 antigen were quantified with ELISA. HIV proviral DNA was quantified using SYBR RT-PCR. Cell viability was detected with the MTT assay. RNAseq was performed to characterize cellular gene regulation in the presence of fentanyl. Results: Fentanyl enhanced expression of both chemokine receptor levels in a dose-dependent manner in HIV-susceptible and infected cell lines. Similarly, fentanyl induced viral expression in HIV-exposed TZM-bl cells and in HIV-infected lymphocyte cell lines. Multiple genes associated with apoptosis, antiviral/interferon response, chemokine signaling, and NF $\kappa$ B signaling were differentially regulated. Conclusions: Synthetic opioid fentanyl impacts HIV replication and chemokine co-receptor expression. Increased virus levels suggest that opioid use may increase the likelihood of transmission and accelerate disease progression.

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