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

### **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 Freiermuth.

**Caroline Elizabeth Freiermuth, MD**, Associate Professor, Department of Emergency Medicine

- Award: Centers for Disease Control and Prevention Award
- Project Title: Emergency Department Comprehensive Care (EC23)
- Project Period: 9/1/2022-8/31/2023
- Summary: This research will improve ED processes to identify people at risk of opioid use disorder (OUD) while minimizing false positives and ensure there is a process for further screening to determine if they have the disease. This work will leverage community partnerships and expand hours of linkage counselors and peer recovery specialists to improve pathways to longer-term care and supportive services, with means to identify populations of focus such as pregnant patients, those that reside in rural communities or are of Appalachian descent, and those that may be at risk for human trafficking. Also, this project will implement protocols to deliver medication for OUD and harm reduction services at Bethesda North Hospital and Bethesda Butler Hospital.

#### **Research Presentation**

Please join the Division of Adolescent and Transition Medicine at Cincinnati Children's Hospital Medical Center for a research presentation by faculty candidate



#### Lauren Arnold Bell, MD MPH FAAP

presenting:

### Denial and Self-Management: How Adolescents and Young Adults Initiate, Escalate, Problematize, and Contemplate Disclosure and Treatment of Opioid Use

### Thursday, October 27

12:05pm - 1:00pm

Limited in-person seating in Kasota 7N Conference Room or Microsoft Teams meeting. Join on your computer via the Teams link below.

Microsoft Teams meeting Join on your computer, mobile app or room device Click here to join the meeting Meeting ID: 228 220 351 922 Passcode: 6w6sxA Download Teams | Join on the web Join with a video conferencing device 268120865@t.plcm.vc Video Conference ID: 119 897 924 6 Alternate VTC instructions Or call in (audio only) +1 513-342-0731,,218187936# United States, Cincinnati Phone Conference ID: 218 187 936# Find a local number | Reset PIN

# A DATA-DRIVEN RESPONSE TO THE ADDICTION CRISIS (related publication below)

Since 1999, the United States has been experiencing an overdose epidemic that has claimed the lives of nearly 1 million people. The annual death rate has been on a continuous upward trend, reaching an all-time high and surpassing 100,000 deaths in 2021. In contrast to failed policies that criminalized substance use, there has been a slow but increasing shift over the last two decades to manage addiction at the community level and with a public health lens. Ohio has been severely impacted

by the opioid epidemic and has consistently ranked among the states with the highest drug overdose mortality rates. Hamilton...

#### Local officials vigilant as overdose death spike seen in Southwest Ohio

A recent spike in overdose deaths in Cincinnati from drugs laced in fentanyl has health officials and law enforcement here concerned about a similar outcome. It's not uncommon for a "bad batch" of drugs to hit multiple regions because the people who sell drugs often use the interstates for travel, said Sydney Sauer of the SOAR Initiative. A warning late last week was sent by Hamilton County officials that said they were seeing a spike in overdoses in the Greater Cincinnati area. There were 16 preliminary overdose deaths between Sept. 30 and Oct. 5, Hamilton County Public Health said. Fentanyl may be in the drug supply, officials said, and...

## IU researcher creates virtual reality experiences to aid substance use disorder recovery

Indiana University researchers are combining psychological principles with innovative virtual reality technology to create a new immersive therapy for people with substance use disorders. They've recently received over \$4.9 million from the National Institutes of Health and launched an IU-affiliated startup company to test and further develop the technology. Led by Brandon Oberlin, an assistant professor of psychiatry at the IU School of Medicine, IU researchers have built a virtual environment using "future-self avatars" to help people recover from substance use disorders. These avatars are life-sized, fully animated and nearly...

#### Hoosier Action targets addiction, overdose epidemic

Oct. 14—NEW ALBANY — The CDC reported 91,799 drug overdose deaths in 2020 with nearly 75% opioid-related. Hoosier Action has made it a mission to put an end to addiction and overdoses in Indiana. The group met with community members and officials Thursday at Park Christian Church in New Albany to discuss the overdose crisis, how to put an end to overdoses in the community and how to teach people to use Narcan, a treatment for opioid overdoses. State Rep. Ed Clere of New Albany, New Albany City Council President Jason Applegate and New Albany City Councilmember Adam Dickey attended. Hoosier Action wants to have...

#### <u>National News</u>

#### **Even Low Doses of Alcohol Cause Changes in Brain Circuitry**

According to a recent rodent study, even tiny amounts of alcohol may cause epigenomic and transcriptomic changes in brain circuitry in a region that is essential for the development of addiction. The pathways that are involved in setting the brain up for addiction, according to researchers at the University of Illinois at Chicago, are also linked to the highs that come with drinking, such as euphoria and anxiolysis, a state of relaxed but awake sedation. "This suggests that when the brain experiences the anti-anxiety effects of alcohol and the mood lift the relaxation and the buzz — it is also being primed for alcohol use disorder," said the study's senior author Subhash Pandey, the Joseph A. Flaherty endowed professor of psychiatry and director of the Center for Alcohol Research in...

## A man who lost 80 pounds on a 'game changer' weight-loss drug also lost his desire to drink alcohol. Experts say the drug could be a treatment for addiction.

When Erin Bradley McAleer used to attend work-related sporting events and mixers, he'd throw back eight to 10 beers "almost religiously." "If I had one, I had eight," McAleer, a 43-year-old criminal-defense attorney in Washington state, told Insider. At 6 feet tall and 320 pounds, he could hold his liquor. But for roughly the past year, McAleer has stopped at two or three drinks — if he attends the gatherings at all. These days, going to the gym or spending time with his family is often more appealing. McAleer didn't outgrow the habit, or commit to reducing his intake, or suffer an embarrassing drinking-related incident. So what changed? McAleer said he now lacks a physical desire for alcohol — which he believes is an unintentional, though not unwelcome, side effect of the weight-loss drug semaglutide and...

## Surprising Findings – Could Smoking Cessation Drugs Reduce Alcohol Consumption?

A clinical trial to see whether three established smoking cessation treatments might also decrease alcohol use showed no differences between the medications, although rates of behavior change for both alcohol consumption and smoking were high in all treatment groups. According to the findings, these medications may be crucial in helping people quit smoking and drinking at the same time. Unexpectedly, both the prescription drugs cytisine and varenicline as well as nicotine replacement therapy worked. 400 Russians living with HIV participated in the study, which was conducted by researchers from the First Pavlov State Medical University of St. Petersburg, Russia, Boston University School of Medicine, Boston Medical Center, and Vanderbilt University Medical Center (VUMC). The study...

#### Menthols Make Up 40% of U.S. Cigarette Sales; Ban Could Have Huge Impact

FRIDAY, Oct. 14, 2022 (HealthDay News) -- A proposed ban on menthol cigarettes could have a significant impact on smoking rates, especially among minorities, new U.S. research suggests. Adult smokers who are younger, have mental health problems and are from racial/ethnic minority groups are more likely to use menthol cigarettes than other groups, according to a study from Columbia University Mailman School of Public Health and The City University of New York. About 2 of every 5 smokers use menthol cigarettes. In 2020, that included more than 80% of Black smokers. "That approximately 50% of smokers who were Hispanic, female, ages 18 to 25 and 26 to 34, lesbian/gay and adults with mental health problems used menthol [cigarettes] in 2020 is higher than previously reported and…

#### **Targeting the Youth Vaping Epidemic and Its Adverse Health Effects**

In the last few decades, the United States has made progress on smoking and lung cancer rates; however, this work is being undone by the rise of e-cigarettes among

today's youth, who are being targeted by big corporations who need new customers. During a panel at CHEST 2022, a group of experts outlined the current vaping epidemic, how pediatric populations are being affected, and the role of racial disparities. While the first patent for e-cigarettes dates back to 1965, the devices only started to hit the marketplace in the 2000s. It wasn't until 2015, when Juul was introduced and youth use really took off, explained Jacob Kaslow, MD, pediatric pulmonologist at Monroe Carell Jr. Children's Hospital at Vanderbilt and assistant professor of pediatrics specializing in allergy, immunology, and...

#### Study tests the impact of digital vaping prevention ads on US adolescents

A randomized, controlled study with over 1,500 US teen participants from across the nation tested the effectiveness of digital vaping prevention ads. Researchers from UNC Hussman School of Journalism and Media, UNC Gillings School of Global Public Health and UNC Lineberger Comprehensive Cancer Center discovered that Real Cost ads lowered the extent to which teens were open to vaping. The vaping prevention video ads, produced by the Food and Drug Administration (FDA), also lowered openness to cigarette smoking. Researchers determined similar effectiveness for "health harms" versus "addiction" themed ads. The former focused on the harmful chemicals emitted by vaping devices and the potential for lung damage caused by vapes. The latter focused on the highly addictive...

### Nicotine May Block Estrogen in Women's Brains, Making It Harder to Quit Smoking

The sex and gender differences in smoking cessation have been explored in research studies, with some evidence showing that women may be less likely to stop smoking compared to men. Now, new research indicates that nicotine blocks estrogen production in the female brain, which could explain why it's more difficult for women to quit smoking. In fact, the findings show that the amount of nicotine found in just a single cigarette could be enough to block estrogen production. According to researchers, the results could explain several behavioral differences in women who smoke, including being less likely to quit smoking. These differences were observed in the thalamus, part of the brain's limbic system involved in behavioral and emotional responses. "Estrogen, through its widespread…

### Pregnancy May Have Women Cutting Back on Smoking Before They Know They've Conceived

MONDAY, Oct. 17, 2022 (HealthDay News) -- Pregnancy can be a big motivator for women to stop smoking. Now a new study suggests that at least some pregnant smokers start cutting back even before they know they've conceived. The findings, researchers say, suggest there may be biological mechanisms during pregnancy that can blunt the desire for nicotine. If true, understanding those processes could potentially lead to new ways to aid smoking cessation, according to the investigators. However, the findings do not imply that pregnancy makes quitting easy, said lead researcher Dr. Suena Huang Massey, a psychiatrist and associate professor at Northwestern University Feinberg School of Medicine, in Chicago. Instead, she said, the findings show that, on average, smokers cut down a bit...

# Vaping during pregnancy causes long-term pulmonary effects in mouse offspring

COLUMBUS, Ohio – Women who vape during pregnancy, including products without nicotine, may predispose their children to developing adulthood lung diseases such as asthma or chronic obstructive pulmonary disease (COPD), according to a new study by researchers in the Dorothy M. Davis Heart and Lung Research Institute in The Ohio State University College of Medicine. In the study, pregnant mice were exposed to e-cigarette vapor with nicotine, e-cigarette vapor without nicotine or filtered air. Researchers examined the offspring at five months of age and found reduced lung function and evidence of scaring in mice exposed to e-cigarette vapor with or without nicotine. They also found female mice had significantly higher body weight in adulthood but not at birth. The research...

#### **Genetic Testing for Opioid Use Disorder Heads to FDA Advisors**

On Thursday, members of the FDA's Clinical Chemistry and Clinical Toxicology Devices Advisory Committee will meet to discuss AvertD, a prescription genetic risk assessment tool for opioid use disorder (OUD). AvertD detects the presence or absence of 15 single nucleotide polymorphisms (SNPs) to help identify adults with an increased genetic risk of OUD. It's intended to be used in combination with clinical evaluations and patient assessments when oral prescription opioids are being considered to treat acute pain. The device currently is marketed to physicians and their patients and is paid for either by insurance or by the patient directly at \$199. Currently, no FDA-cleared or approved devices are indicated for identifying genetic risk for OUD. A version of AvertD with 11 of the 15 SNPs now included...

#### **Pain Relief Without Side Effects and Addiction**

New substances that activate adrenalin receptors instead of opioid receptors have a similar pain-relieving effect to opiates, but without the negative aspects such as respiratory depression and addiction. This is the result of research carried out by an international team of researchers led by the Chair of Pharmaceutical Chemistry at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU). Their findings, which have now been published in the renowned scientific journal Science, are a milestone in the development of non-opioid pain relief. They are a blessing for patients suffering from severe pain, but they also have serious side effects: Opioids, and above all morphine, can cause nausea, dizziness and constipation and can also often cause slowed breathing that can even result in respiratory failure. In...

#### Benefit of opioids prescribed in the emergency department remains unclear

A systematic review of 42 academic research articles has found that the risk-benefit balance of using opioids to treat musculoskeletal pain in the emergency department (ED) setting remains unclear. The review is published in Annals of Internal Medicine. Opioid analgesics are commonly administered in EDs to manage pain and may be prescribed upon discharge for short-term pain management, with a goal of rapid pain control and avoidance of hospitalizaiton. However, many patients who later experience opioid dependence, overdose, and death first interact with these medications in ED settings. There is debate about the appropriate use of opioids to treat pain outside of ED settings, but guidelines do not address the differences in expected benefits and harms of opioids versus...

#### **Opioid addiction doctors want telehealth rules to stay relaxed**

Doctors treating patients with opioid-use disorder want pandemic-era telehealth rules to stay relaxed, according to a new survey. Tens of thousands of people in the United States die each year from opioid overdoses, and telehealth makes it easier to connect people who are at risk of overdose with treatments. "Continued flexibility would allow more individuals to access life-saving treatment," study author Tamara Beetham, who studies health policy and management at the Yale School of Public Health, said in a statement. Before 2020, doctors could only prescribe controlled substances after an in-person visit with a patient. Controlled substances include medications like Xanax and Adderall, but they also include buprenorphine and methadone, which are used to treat opioid-use...

# Biden-Harris Administration Announces Millions of Dollars in New Funds for States to Tackle Mental Health Crisis

Today, the U.S. Department of Health and Human Services (HHS), through the Substance Abuse and Mental Health Services Administration (SAMHSA), is announcing a new funding opportunity, authorized by the Bipartisan Safer Communities Act (BSCA), for states to develop and transform Certified Community Behavioral Health Clinics (CCBHCs) to address the country's mental health crisis. CCBHCs provide crisis services that are available 24 hours a day, 7 days a week and serve anyone who requests care for mental health or substance use, regardless of their ability to pay. In addition to the nearly \$300 million awarded in September for new and existing CCBHCs, \$15 million in additional funding is now being announced for CCBHC planning. This additional round of planning grants...

## **Funding Opportunities**

NIH Central Resource for Grants and Funding Information

<u>RFA-OD-22-028</u> <u>The Intersection of Sex and Gender Influences on Health and Disease (R01 Clinical Trial Optional)</u> NOT-DA-22-081

Notice of Intent to Publish a Funding Opportunity Announcement for NIDA Core "Center of Excellence" Grant Program (P30 Clinical Trial Optional)

### **CAR Member New Publications**

A Data-Driven Response to the Addiction Crisis in Hamilton County, Ohio Manchak, Sarah M. PhD; Gosney, Meagan E. MA; Haberman, Cory PhD; Firesheets, Kelly C. PsyD

Journal of Public Health Management and Practice DOI: <u>https://doi.org/10.1097/phh.0000000000001566</u>

#### ABSTRACT

**Context:** For more than a decade, the state of Ohio has been an epicenter of the opioid crisis. Multiple interventions have been deployed to address this crisis and reduce opioid overdoses and overdose deaths in the state. The Hamilton County Addiction Response Coalition (HC ARC) and its strategic, countywide prearrest diversion (LEAD) and deflection (QRT) programs have been at the forefront of this effort in Cincinnati, Ohio. Operating since April 2018, these programs have continued to grow and improve and have been successful in connecting hundreds of citizens to needed treatment and other social services.

**Program:** HC ARC combats overdoses and overdose deaths by utilizing cross-sector planning and collaboration to operate 2 countywide programs: Quick Response Team (QRT) and Law Enforcement Assisted Diversion (LEAD).

**Implementation:** The QRT and LEAD programs leverage partnerships with law enforcement, public health, addiction and mental health services, reentry services, and trained peer supporters. The QRT emphasizes triage, assessment, and connection to appropriate services for people with recent nonfatal drug overdoses and provides outreach and education in hot spot communities. LEAD provides diversion from the criminal justice system into long-term case management for nonviolent individuals with low-level offenses who also struggle with substance use disorder, mental health, homelessness, and/or poverty.

**Evaluation:** QRT and LEAD team members routinely track and record client contacts and outcomes using a centralized electronic case management platform. Data are extracted and analyzed by the evaluation team to examine indices of program success and provide ongoing feedback to the QRT and LEAD teams.

**Discussion:** HC ARC has implemented, tested, expanded, and now standardized its prearrest diversion programming. It has built a sustainable model to improve health and health equity for marginalized individuals whose needs intersect across health care, public health, community-based social services, and the criminal-legal system. Collectively, this work offers a guide for implementation and best practices for the following: detailed

planning, policy, and procedure development; identification of key leaders and community partners; and methods to evaluate program operations to make data-driven decisions and real-time program adjustments.

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