

Ohio Society of Addiction Medicine Annual Meeting

Oct. 13, 2023

Scientific Poster Abstracts

#1

Leon Brodsky, BS

Research

MS2: The Ohio State University Wexner Medical Center

Years of Life Lost in the United States in 2020 due to Deaths of Despair and COVID-19: Patterns of Excess Mortality by Race, Gender, and Ethnicity

Purpose:

In 2020 COVID-19 was the third leading cause of death in the United States. Increases in suicides, overdoses, and alcohol related deaths were seen-which make up deaths of despair. How deaths of despair compare to COVID-19 across racial, ethnic, and gender subpopulations is relatively unknown. Preliminary studies showed inequalities in COVID-19 mortality for Black and Hispanic Americans in the pandemic's onset. This study analyzes the racial, ethnic and gender disparities in years of life lost due to COVID-19 and deaths of despair (suicide, overdose, and alcohol deaths) in 2020.

Methods:

This cross-sectional study calculated and compared years of life lost (YLL) due to Deaths of Despair and COVID-19 by gender, race, and ethnicity. YLL was calculated using the CDC WONDER database to pull death records based on ICD-10 codes and the Social Security Administration Period Life Table was used to get estimated life expectancy for each subpopulation.

Results:

In 2020, COVID-19 caused 350,831 deaths and 4,405,699 YLL. By contrast, deaths of despair contributed to 178,598 deaths and 6,045,819 YLL. Men had more deaths and YLL than women due to COVID-19 and deaths of despair. Among White Americans and more than one race identification both had greater burden of deaths of despair YLL than COVID-19 YLL. However, for all other racial categories (Native American/Alaskan Native, Asian, Black/African American, Native Hawaiian/Pacific Islander) COVID-19 caused more YLL than deaths of despair. Also, Hispanic or Latino persons had disproportionately higher mortality across all causes: COVID-19 and all deaths of despair causes.

Conclusions:

This study found greater deaths of despair, mortality burden and differences in burden across gender, race, and ethnicity in 2020. The results indicate the need to bolster behavioral health research, support mental health workforce development and education, increase access to evidence-based substance use treatment, and address systemic inequities and social determinants of deaths of despair and COVID-19.

#2

Sophia Toé, BA

Case Study

MS4: Cleveland Clinic Foundation

Betting on Love: A Case Report of Online Dating Addiction

Behavioral addiction, characterized by compulsive behaviors despite negative outcomes, has gained attention in recent years, with gambling disorder being the sole non-substance-related condition formally classified in the DSM-5. Problematic internet use, specifically problematic online dating, shares resemblances to addictive patterns but lacks formal recognition. Additionally, internet fraud victimization has been well-documented, and is gaining increasing attention in vulnerable populations with factors including cognitive function, personality, and social isolation. "Romance scamming," is of growing concern due to the number of victims and reported victim perceptions of the loss of a relationship being of greater concern than a financial loss.

This case report presents the intricate interplay of behavioral addiction and repeated, conscious instances of problematic online dating in a 70-year-old male with multiple medical and psychiatric comorbidities. The patient's engagement in multiple romance scams through online dating platforms resulted in significant financial losses, and despite being cognizant of the fraudulent nature of these relationships, he continued seeking new connections. Family concerns and the patient's awareness of his compromised financial judgment underscored the impact of problematic online dating on his personal life. The patient's cognitive assessment indicated relatively intact functioning.

This case underscores the need for further research into problematic online dating and its association with addictive behaviors, as well as the importance of tailored interventions addressing behavioral and emotional aspects in managing such cases. We shall propose and describe symptoms of Online Dating Addiction.

#3

Noah Treangen , BSc

Research

Research Assistant: The Ohio State University Wexner Medical Center

Treatment Access & Drug Overdose Comparison by US State for Adolescents and Young People from 2016-2021

Purpose:

There has been a 781% increase in preventable overdose deaths since 1999, with a 693% increase among individuals aged 15-24 (Injury Facts). More than half of the overdose rates were preceded by a recent diagnosis of a mental health disorder, and approximately one-quarter of overdose rates were related to substance use disorder for adolescents and young adults (AYAs) (Chua, 2020). To better understand the role that access to treatment has in reducing preventable drug and alcohol-related deaths, this study aims to examine overdose and access to care rates for AYAs from 2016 to 2021. By analyzing multiple databases, we hope to shed light on the need for more effective strategies to prevent OUD and increase access to care for AYAs.

Methods:

Using the data from CDC WONDER and the TEDS system, calculations were made to standardize the data across states, allowing for apt comparisons of treatment between states with varying populations. Additionally, we compared the admission numbers to the number of deaths per state as well as the rates of admissions and deaths per capita to better compare states.

Results:

The national average for TEDs admissions per overdose death is 40.04. States such as West Virginia or Pennsylvania have scores as low as 8.72 and 11.06 respectively. On the contrary, states like Iowa and South Dakota have comparatively high admissions per death rates of 208.28 and 224.63 respectively. Outliers like California, New York, and Florida all have overdose and admission numbers that do not accurately scale with population compared to other states, partly due to their high concentration of treatment facilities.

Conclusions:

This study provides a review of varying treatment access among states in the country and how this can impact overdoses and deaths for AYAs. The hypothesis that TEDS admissions increased with death rates was supported. AYAs also face unique challenges when seeking care, including cost of treatment, stigma surrounding substance abuse, geographical location, and motivation for treatment. States that strayed below the average for admissions per death such as West Virginia, Ohio, and Pennsylvania have a dire need for increased access to care.

#4

Morgan Bair, BA

Research

MS1: The Ohio State University Wexner Medical Center

Pediatric and Adolescent Unintentional Drug Overdose Mortality in Years of Life Lost from 2019-2021 in the US

Purpose:

The goal of this cross-sectional retrospective study was to determine the burden of unintentional overdose on pediatric and adolescent populations between the years 2019-2021. This was a follow-up study to previous literature published in 2022, which reviewed adolescent unintentional overdose from 2015-2019.

Methods:

Both studies measure the burden of unintentional overdose in the form of years of life lost (YLL), calculated by subtracting ages at death from standard life expectancies. We used data from the CDC WONDER database mortality file to analyze YLL for groups aged 10-19, adding cross-sectional analyses for gender, race, and ethnicity.

Results:

Our findings revealed that during the review period, 3,595 adolescents succumbed to unintentional drug overdose. Among these cases, males predominated, with a YLL twice that of females. Overall, YLL experienced a stark increase of 136% from 2019 to 2021. A breakdown by race demonstrated that white adolescents accounted for 79.8% of the total YLL, while black adolescents represented 12.3%. The remaining three racial categories combined contributed to less than 10% of the total YLL. Notably, non-Hispanic/non-Latinx populations exhibited a YLL nearly three times higher than their Hispanic/Latinx counterparts.

Conclusions:

We concluded that there is a rising mortality burden on pediatric and patient populations in the United States, which may be partially attributed the COVID-19 pandemic and the rise of synthetic opioids. Although we see disparities in the YLL burden between different racial and ethnic groups, all groups saw a rise in YLL over the three-year period. The implications of this research extend to advocating for further investigation into the profound loss experienced by this vulnerable population, with a call for targeted interventions on both a public health and individual provider level. This mortality burden on the U.S. youth requires innovative healthcare policy and timely response in order to reduce this huge loss of life.

#5

Parker Entrup, BS

Research

MS1: The Ohio State University Wexner Medical Center

Nociplastic Pain in Alcohol Use Disorder: connections of pain, addiction, and health related quality of life

Purpose:

Nociplastic pain is an important mechanism underlying many chronic pain conditions; chronic pain which is highly comorbid with alcohol use disorder (AUD). Understanding the brain mechanisms linking chronic pain and AUD is difficult due to previous inability to assess nociplastic pain & AUD in a clinic setting. The present study is the employed a validated surrogate measure to describe nociplastic pain in a clinical sample with AUD.

Methods:

Participants with AUD (n = 99) were recruited from an academic addiction treatment center. The American College of Rheumatology Fibromyalgia Survey Criteria (ACRFMS) was administered, which is a surrogate measure of nociplastic pain. Participants also answered questions about quality of life (RAND-36), and AUD. Descriptive analyses and Spearman's rho correlations were performed.

Results:

Chronic pain and evidence of nociplastic pain were prevalent. Greater pain burden was associated with worse health-related quality of life. Participants with higher greater degree of nociplastic pain expressed more endorsement of pain as a reason for AUD onset, maintenance, escalation, treatment delay, and relapse.

Conclusion:

The present study supports prior literature that AUD and chronic pain may synergize via progressive sensitization of shared brain circuitry. These results will inform future mechanistic pain & addiction research. As well as precision AUD treatment tailored to patient's with an interdisciplinary addiction, social work, pain management team.

#6

Daniel Brook, PhD

Research

MS4: The Ohio State University Wexner Medical Center

The Relationship between Knowledge of the Mechanisms of Medications for Opioid Use Disorder and Belief in the Effectiveness of Harm Reduction Services in Ohio in 2022

Purpose:

Since the beginning of the opioid use disorder syndemic, laws in Ohio and the United States that regulate medications for opioid use disorder (MOUD) have changed dramatically, including the elimination of the X-waiver for buprenorphine and the introduction of medication units for methadone. Ohio has also experienced an expansion in access to over-the-counter naloxone and syringe service programs. Despite these changes, Ohio continues to see rising overdose deaths and infectious diseases related to opioid use disorder, possibly related to beliefs in the limited effectiveness of harm reduction services. We aimed to assess the relationship between knowledge of the mechanisms of MOUD and beliefs in the effectiveness of harm reduction services among Ohio healthcare professionals (HCPs) in 2022.

Methods:

We surveyed a sample of registered Ohio HCPs (physicians, nurse practitioners, and physicians' assistants) in 2022 via email about their knowledge of the mechanisms of MOUD (buprenorphine, methadone, naltrexone) and naloxone and their beliefs in the effectiveness of naloxone at preventing overdose and syringe service programs at preventing the spread of infectious diseases. HCPs were categorized as knowledgeable on the mechanisms of MOUD if they knew the mechanism of each MOUD and naloxone. Beliefs in the effectiveness of naloxone and syringe service programs were categorized on a five-item Likert scale (not effective at all, slightly effective, moderately effective, very effective, and extremely effective). We fit unadjusted and adjusted ordinal logistic regression models to assess the relationship between MOUD knowledge and harm reduction attitudes.

Results:

409 HCPs completed the survey. In unadjusted models, providers who were knowledgeable of the mechanisms of MOUD and naloxone were marginally more likely to believe in the effectiveness of naloxone (OR: 1.3 [95% CI: 0.90, 1.9]) and syringe service programs (OR: 1.4 [95% CI: 0.98, 2.0]). However, these relationships were attenuated in adjusted models of both naloxone (OR: 1.2 [95% CI: 0.80, 1.7]) and syringe service programs (OR: 1.2 [95% CI: 0.76, 1.8]) after controlling for the provider's history of having an X-waiver, credentials, years of practice, and rural status.

Conclusion:

Current training on the mechanisms of MOUD and naloxone may inadequately address the evidence behind non-prescribed forms of harm reduction.

#7

Johnathan Rausch, BSc

Research

Clinical Researcher (Premed gap year): The Ohio State University Wexner Medical Center

Pain and its Perceived Relatedness to the Onset, Maintenance and Relapse of Opioid Use Disorder: A Descriptive Study of Non-treatment-seeking Individuals

Background/ Purpose:

Previous research has found chronic pain to be prevalent among individuals with opioid use disorder (OUD). Additionally, the perception that pain is related to OUD onset, maintenance, relapse, and treatment delay has been noted in this population. However, such work primarily involved treatment-engaged populations. Scant research describes such perceptions among non-treatment-seeking individuals.

Methods:

This cross-sectional study surveyed syringe exchange program participants (n = 141) with active untreated OUD to assess pain burden and perceptions about the role of pain in OUD onset, maintenance, relapse, and addiction treatment delay. Participants responded to a survey including DSM-5 OUD criteria, pain survey scales, demographics, and questions about pain and its extent of perceived relatedness to aspects of OUD.

Results:

Most participants (127, 91.4%) reported pain within the past 4 weeks. Data also displayed a skew towards more intense pain ratings, with 120 (86.3%) reporting their pain as greater than mild. A majority of participants agreed or strongly agreed that pain was predominantly responsible for their OUD onset (79, 56.4%), maintenance (76, 54.3%), a past relapse experience (82, 57.9%), and treatment delay (81, 57.9%). Correlative analyses revealed that self-reported pain severity and pain interference displayed moderate and statistically significant associations with the extent of perceived relatedness of pain to these aspects of OUD.

Conclusions:

Among this sample of individuals with untreated OUD, pain and pain interference were prevalent - and pain was perceived to be related to OUD onset, maintenance, relapse, and treatment delay within a sample of individuals with untreated OUD.

#8

Caitlin McCann, PsyD, MS

Research

Fellow: MetroHealth Medical Center

Group MOUD Offers Behavioral Health and Peer Support

Purpose:

Buprenorphine for Opioid Use Disorder (OUD) is highly effective at improving patient treatment outcomes (Cunningham et al., 2020). At MetroHealth Medical Center's Recovery Services (MHRS), poor retention and poor engagement with non-pharmacological interventions (e.g. behavioral health support, peer support) are common concerns for buprenorphine prescribers. Group Based Opioid Treatment (GBOT) is proposed as a novel treatment approach within MHRS to improve patient engagement in behavioral health care, and create opportunities for patients to support each other (Sokol et al., 2019). GBOT is a shared medical appointment approach where participants' buprenorphine prescribing and group counseling occur concurrently (Horvath & Yeterian, 2016). Specific goals of GBOT include improving patient adherence to medication, reducing illicit drug use, and increasing patient access to and engagement in psychotherapy and peer support.

Methods:

Since January 2023, MHRS has offered GBOT to patients seeking buprenorphine for OUD. Group facilitators include a psychologist, psychology resident, addiction medicine physician, addiction medicine fellow/s, and a certified peer supporter. The group is held in-person for 1.5 hours. Detailed information of the group format, workflow, and content will be provided in this section for others who want to replicate this model.

Results:

Data includes both quantitative data and qualitative information gathered from patients, staff, and learners (residents and fellows) from the first six months of GBOT. The results include descriptive statistics and narrative descriptions of patient, staff, and learner experiences.

Conclusions:

Our findings for the group treatment of OUD are discussed, as well as information on workflow challenges and adjustments made throughout the first six months of GBOT implementation. We hope to provide a model for similar projects to improve the psychosocial support of patients on MOUD and share recommendations for outpatient addiction clinics considering GBOT.

#9

Jude Nkwelle, MD

Research

PGY2: MetroHealth Medical Center

Utilizing electronic medical record (EMR) integrated proforma to enhance prescription of smoking cessation interventions in hospitalised patients: A quality improvement initiative at Metro Health Medical Center (MHMC), Case Western Reserve University (CWRU)

Background:

Tobacco smoking remains a neglected issue within general psychiatry despite high rates of associated morbidity and mortality. While there has been a coordinated community effort to reduce tobacco smoking within the general population, mental health facilities have been reluctant to adopt such measures, and rarely target smoking prevention or treatment. An inpatient psychiatry admission presents a unique opportunity for initiation of nicotine pharmacotherapy, as most facilities are smoke free, however uptake has been inconsistent. Previous studies indicate the necessity of systematic targeted interventions during hospitalization for effective smoking cessation.

Methods:

An EMR integrated link for all inpatient psychiatric history and physicals, and discharge summaries was implemented on February 23, 2023, that promoted provider to document smoking status during admission and discharge. In addition, for smokers, cessation pharmacotherapy including bupropion, varenicline, nicotine patches and nicotine gum were incorporated into the admission and discharge order sets. The number of prescriptions for each of the interventions as well as total number of patients receiving nicotine replacement therapy (NRT) were collected for period of 2/23/22 – 2/23/23 (baseline) and 2/23/23 – 7/21/23 (post intervention). Total rate of patients receiving NRT before and after the EMR implementation were compared using two-proportion z-test.

Results:

There was a significant increase in patients receiving NRT during inpatient psychiatric admission after implementation of EMR integrated link (35% between 2/23/22 and 2/23/23 compared to 41% between 2/23/23 – 7/21/23, $p < .05$) Notably prescriptions for nicotine gum nearly doubled increasing from 104 to 208 within the stipulated duration of study. Similar trends were observed across other smoking cessation products except for varenicline which was not prescribed before or after implementation.

Conclusion:

The introduction of a dedicated proforma within the EMR system significantly boosts the proactive management of smoking habits among patients. The marked rise in the prescription of situation aids underscores the potential for systematic interventions in augmenting prescription of smoking cessation during hospital stay. Although one in three people with mental illness smoke tobacco¹, smoking cessation is often neglected in psychiatric practice⁵. Psychiatrists have a duty of care to identify the smoking status of their patients and to provide evidence-based support to quit. Despite current guidelines, mental health professionals rarely address nicotine use among their patients particularly during inpatient stay. Nevertheless, programs such as this that assist with prescription of smoking cessation during an inpatient stay have been shown to be both efficacious and cost-effective. Prescription of smoking cessation should be a key component of inpatient treatment and discharge planning because this setting provides a safe and timely opportunity to help patients quit. Further studies might explore the long-term impacts on patient health and sedition success rates post discharge and why there was less uptake in prescription of varenicline.

#10

Kate Kelley, MD, MPH

Research

PGY4: MetroHealth Medical Center

Data Analysis of Hepatitis C Treatment Before and After Elimination of Sobriety Requirement

Purpose:

The CDC estimates 2.4 million people are living with hepatitis C in the United States. Only 55.6% of infected people are aware of their hepatitis C infection. Furthermore, there has been a surge in cases since 2010, affecting mostly young adults between the ages of 20-29, which is likely related to the ongoing opioid epidemic. It is a national and global goal to treat hepatitis C and prevent chronic liver damage and death. The World Health Organization's global hepatitis strategy is to reduce new hepatitis C infections by 90% by 2030, which starts with identifying and treating those with current infection to decrease transmission.

Method:

Using our EMR (Epic) slicer-dicer data analysis tool, we looked at hepatitis C screening and treatment for all patients within our safety-net county hospital system MetroHealth in Cleveland, OH for the period of 2016 to 2023.

Results:

Between 2016 and 2023, 126,298 patients received a screening test for hepatitis C antibody, and 6,002 unique patients had an active infection. Yet, only 2,842 patients who were positive for active hepatitis C infection received treatment, which remained at a consistent rate across the time range. Even with the loosening of restrictions allowing for treatment for patients with active substance use disorders, we are not meeting universal screening and treatment.

Conclusion:

We had hypothesized that with loosening of prescribing restrictions to allow for patients with active substance use disorders to receive treatment would increase the percentage of those treated. However, we did not see an increase in percentage of patients treated after 2019 (the year sobriety requirements were lifted in Ohio) or 2020 (the year prescriber restrictions were eliminated in Ohio). This poster will look at the data within our hospital system on hepatitis C screening and treatment, examine barriers patients face in accessing treatment, and explore ways to increase outreach and treatment for those with concurrent substance use disorders.

#11

Ali Salameh, MD

Research

PGY4: MetroHealth Medical Center

Improving Addiction Provider Peer-Support with Balint Groups

Purpose:

Physician burnout has escalated dramatically since the onset of the Covid-19 pandemic, increasing from 38% in 2020 to 63% in 2021, according to the American Medical Association. Characterized by fatigue, cynicism, and diminished enthusiasm, burnout adversely affects patients, healthcare providers, and medical institutions alike. The prevalence of burnout is comparably high among faculty and trainees, including medical students and residents (Maslach et al, 2001). Balint groups, initially devised by Michael Balint for general practitioners in the 1950s, aim to foster peer social connection, provider empathy, and self-awareness. These groups facilitate regular, small-group discussions among providers about challenging patient interactions. Although empirical evidence does not conclusively show improvements in empathy or burnout, Balint groups have been found to enhance emotional intelligence, efficacy, and hopefulness as well as decrease isolation (Antoun et al., 2020) Existing literature corroborates the role of social support in mitigating burnout and fostering resilience and wellness among healthcare providers (Willard-Grace et al., 2018). Of note, the benefits of Balint require a period of adjustment for learners new to the process (Nalan & Manning, 2022). Compared to Family Medicine and Psychiatry residency programs, research on Balint group use in Addiction Medicine fellowships is scant. Incorporating Balint groups into Addiction Medicine fellowships can satisfy ACGME requirements for trainee wellness initiatives to prevent burnout.

Methods:

Since November 2020, faculty and fellows from MetroHealth's Addiction Medicine program have been engaging in monthly Balint sessions via Webex. In 2023, the sessions were expanded to include Addiction Psychiatry faculty and fellows. Co-led by a Family Medicine physician trained in Balint and an Integrated Behavioral Health Psychologist, these one-hour sessions are hosted by MetroHealth, a large urban safety-net hospital in Cleveland, OH. During each session, a provider volunteers to share a challenging patient interaction. After presenting the case, the provider "steps back" to allow colleagues to discuss their feelings about the situation from both the patient's and the provider's perspectives. The presenting provider then rejoins the conversation for a concluding discussion, which centers on the patient-provider relationship rather than medical treatment specifics. The overarching aim is to enhance empathy and self-awareness among providers while fostering social connections within the group.

Results:

Data will be anonymously collected to assess peer connection and patient compassion among faculty and fellows from both Addiction Medicine and Addiction Psychiatry. Proposed Survey Questions: 1. Number of Balint sessions attended (small, med, large) 2. Balint helped me build empathy for patients (Yes/No) 3. Balint made me feel more connected to colleagues (Yes/No) 4. What aspects of Balint were beneficial? 5. What aspects of Balint were NOT beneficial?

Conclusions:

Balint peer-support groups can improve peer connection and social engagement in providers which may protect from burnout and promote resilience and wellness. It is being successfully incorporated into a combined Addiction Medicine and Addiction Psychiatry fellowship and offers a model to develop trainee empathy and self-awareness while also meeting ACGME Wellness Initiative requirements. Because faculty and trainees are vulnerable to burnout and work dissatisfaction, finding ways to protect against these outcomes is critical for wellness, sustainability, and productivity.

#12

Kristi Cowsar, DO

Research

PGY3: Wright State University

Cognitive Predictors of Substance Use Disorder Treatment Retention: A Systematic Review

Purpose:

Cognitive functioning has been investigated as a predictor of substance use disorder (SUD) treatment outcomes, and cognitive remediation is a promising method to improve SUD treatment. Identification of cognitive domains impaired in individuals who drop-out of treatment may further drive targeted remediation strategies to increase treatment engagement and improve outcomes.

Methods:

We sought to identify prospective studies in populations with any substance use disorder using a validated cognitive or affective assessment with outcome of treatment retention or dropout, with study duration of at least 3 months. We selected treatment retention and dropout as outcome measures of interest, as they reflect the degree of treatment engagement, or lack thereof. We conducted a primary search of MEDLINE, Web of Science, PsycINFO and EMBASE from inception, and searched the grey literature of conference abstracts and references from high quality systematic reviews. Our protocol was registered in PROSPERO (CRD42022341346) before initiating our review.

Results:

After deduplication, we screened 4059 citations, and 123 full-text articles, to include 10 studies using Covidence. Study methodology varied considerably. The cognitive measures most used were the Wisconsin Card Sorting Test, Stroop Color Word Test, and Iowa Gambling Task; each of these measures was used in four studies. No measures were consistently predictive of treatment adherence, retention, or dropout, although the Wisconsin Card Sorting Test, MicroCog, and Self-Regulation - Revised Strategy Application Test were each found to be significant predictors of treatment retention in one study. There was insufficient data to complete a meta-analysis. The risk of bias was low to moderate for each of the studies.

Conclusion:

There is little published literature on cognitive measures that are predictive of treatment retention, and more study is needed to determine if pre-treatment cognitive measures would be useful for further development of cognitive remediation strategies to improve SUD treatment outcomes.

#13

Simaran Chandawarkar, BS

Research

MS1: Northeast Ohio Medical University

Ambiguous Definitions of Neonatal Abstinence Syndrome and Subsequent Misdiagnoses

Purpose:

Opioid withdrawal is the most prevalent cause of Neonatal Abstinence Syndrome (NAS). The Finnegan Neonatal Abstinence Scoring System (FNASS) and its modified versions was originally developed for neonatal opioid withdrawal, but also been long considered the gold standard for NAS assessment. However, the non-opioid etiologies of NAS, either by themselves or in combination with opioids, are frequent enough to present challenges in diagnosis, assessment, and treatment. Thus, varying substance withdrawals and etiologies of NAS patients calls for multidisciplinary approaches and requires stricter definitions/diagnoses criteria to ensure safe clinical care and prevention of adverse events.

Methods:

An extensive literature search was conducted to collect and organize diverse clinical definitions of NAS and its related terms, determine their use for non-opioid neonatal withdrawals, and compare them to ICD-10 diagnostic entities. Furthermore, literature on non-opioid withdrawals such as from SSRIs, ADHD medications, antipsychotic drugs, and benzodiazepines were also collected and studied for differences in clinical presentation and treatment regimens.

Results:

Most notably, primary results showed that NAS has no defined meaning as it relates to opioid withdrawal in neonates, or simply substance withdrawal. Furthermore, ICD-10 holds multiple etiology-based codes for addiction and withdrawal in adults, but just a single code for neonates. In multiple publications, "NAS" described opioid withdrawal only: in others, it described patients whose mothers were experiencing polysubstance use or were prescribed medications with withdrawal symptom potential. Additionally, the guidelines for assessment and treatment vary vastly with etiology: wrongly treating non-opioid NAS for opioid withdrawal can cause major adverse consequences to the neonate's health and subsequent development.

Conclusion:

NAS is a broad term that is often used incorrectly to describe a multitude of withdrawal disorders. Strict guidelines need to be devised that define the terms of diagnoses in literature, clinical usage, and ICD-10. The lack of such guidelines can lead clinical complications due to diagnostic and medication errors.

#14

Niousha Navid Ehsani, MD

Research

PGY4: MetroHealth Medical Center

Improving Hepatitis C Screening Rates at Two Outpatient MAT Clinics

Introduction:

Hepatitis C virus (HCV) screening is crucial for preventing and treating liver disease, particularly among high-risk populations. This study focuses on enhancing HCV screening rates at two outpatient Medication-Assisted Treatment (MAT) clinics in Cuyahoga County, Cleveland, Ohio, with a primary focus on individuals at an increased risk of HCV infection due to factors such as intravenous drug use (IVDU). In 2022, Cuyahoga County reported an 89.2 per 100,000 persons, with approximately 1% of the US population estimated to be infected, and IVDU the most common mode of transmission. Ohio is 9th in the US for acute HCV and 8th for chronic HCV. The national guidelines for Simplified HCV Treatment promote treatment as a means to prevent transmission. Patients with SUD have the same rates of HCV cure with DAA medication as non-SUD patients. Treating patients on MAT for HCV is more successful than trying to treat patients with SUD who are not on MAT. Methadone, Buprenorphine and Naltrexone MAT do not have drug interactions with the DAA medications used to treat HCV, and taking MAT decreases the risk of HCV reinfection.

Purpose:

This QI project aimed to evaluate and improve HCV screening rates among populations at risk of HCV infection, particularly those engaged in high-risk behaviors such as IVDU.

Methods:

Over 12 months (Summer 2022 - Spring 2023), we reviewed all patient records at MetroHealth Parma and Broadway MAT clinics, assessing data every three months.

Results:

HCV screening was not conducted for 27%, 27%, 23%, and 23% of patients at the Parma clinic and 10%, 12%, 10%, and 10% at the Broadway clinic. Among newly established patients during the same period, HCV positivity rates were 14%, 12%, 13.6%, and 13% at Parma and 19%, 22%, 20%, and 17% at Broadway. These findings stress the need for effective screening in high-risk populations. Interestingly, Broadway had lower unscreened rates than Parma, prompting exploration of factors contributing to the failure to implement HCV screening for every patient during their initial visit. We are implementing a new QI where our initial PDSA cycle focuses on making sure that all new patients have had HCV screening within the past 3 months.

Conclusion:

Comparative analysis identified several barriers, including issues related to telemedicine visits, laboratory proximity, provider knowledge of proper order sets, absence of standardized order sets, constraints imposed by 42 CFR regulations, limitations in the visibility of MHRS orders by labs, lab capacity constraints, and patient overload during initial visits, resulting in deferred lab draws. Addressing these obstacles can pave the way for developing more precise, efficient, and accessible screening protocols for all patients, particularly those in high-risk cohorts. Increased HCV screening for patients with SUD who are on MAT provides opportunity for quick treatment, enhanced patient care and improved public health.

#15

Maria Alamir, BA

Case Study

OMS2: Ohio University Heritage College of Osteopathic Medicine - Cleveland

Administration of Intravenous Thiamine in Wernicke's Encephalopathy: A Case Report and Brief Literature Review

Purpose:

Wernicke's encephalopathy (WE) is a serious neurological disorder often undiagnosed. Intravenous (IV) thiamine is often underutilized in its treatment.

Methods:

We present a case of a 40-year-old male with severe alcohol use disorder and chronic malnourishment who developed WE and responded promptly with IV thiamine. We conducted a systematic review using Medline (Ovid), Embase (Ovid), and CENTRAL databases to capture studies published between database inception and May 18, 2023 to summarize the literature on IV thiamine treatment in WE. All studies that studied WE patients that received ≥ 100 mg of thiamine IV were included. A wide net of adult human studies were reviewed, including randomized controlled trials, cross-sectional studies, surveys, case series and case reports. The Mixed Methods Appraisal Tool (MMAT) was used to critically appraise all included studies.

Results:

A total of 27 studies were included: 20 case reports, five retrospective studies, one prospective study and one randomized control trial. The mean MMAT score was 3.4 out of 5. Of the case reports, 11 (55%) cases were female, and the average age of all cases was 45 years (SD = 15). The other seven studies included 688 patients; the average age was 52 years (SD = 9), and 266 (38.7%) were female. Among the case reports, 16 (80%) used neurological and clinical findings to diagnose WE. MRI was utilized to diagnose 15 (75%) cases. 500 mg IV thiamine TID was reported in 12 case reports (60%). 18 (90%) of case reports had partial or complete resolution of symptoms following IV thiamine.

Conclusion:

IV thiamine can alleviate neurological symptoms, cognitive dysfunction, and brain imaging lesions associated with WE.

#16

Ian Dorney

Research

MS4: Case Western Reserve University School of Medicine

Nationwide incidence of newly diagnosed alcoholic hepatitis before and after COVID-19 pandemic

Purpose:

The COVID-19 pandemic caused profound changes in the lives of Americans including increased emotional stress, increased time in social isolation, and disruptions in employment. Alcohol use increased significantly during the pandemic due to increased stress, easier alcohol availability, and increased downtime. Alcoholic liver disease is a natural sequelae of alcohol use, and numerous large studies have shown increased hospital admissions for alcoholic liver disease after January 31, 2020, the day a national emergency was declared. However, no prior study has focused on newly diagnosed alcoholic hepatitis in individuals with and without a history of alcohol use disorder (AUD).

Methods:

The TriNetX Analytics research network, an aggregate EHR database containing ICD-10 diagnostic data on over 100 million patients, was queried for this retrospective cohort analysis. The database was queried for patients without a history of alcoholic hepatitis in one-year time windows before and after the COVID-19 pandemic was declared a national emergency (January 31, 2020) between 2017-2022. Numbers of patients with newly diagnosed alcoholic hepatitis each year were recorded and reported. As a secondary outcome, patients with newly diagnosed alcoholic hepatitis each year were separated based on the presence of previously diagnosed alcohol use disorder.

Result:

Among over 100 million patients, 56,724 had a new diagnosis of alcoholic hepatitis between 2017 and 2022. Between 2017 and 2019, there were between 8552-9151 patients each year with a new alcoholic hepatitis diagnosis. In 2020 and 2021, there were 10,408 and 10,476 patients with newly diagnosed alcoholic hepatitis respectively. In 2022, there were 9,297 patients with newly diagnosed alcoholic hepatitis. From 2019 to 2020, there was a 13.7% ($p < 0.001$) increase in patients with newly diagnosed alcoholic hepatitis. When separated based on a history of diagnosed AUD, patients without diagnosed AUD had a 9.5% ($p < 0.001$) increase in newly diagnosed alcoholic hepatitis from 2019 to 2020 while patients with prior AUD had an 18.9% ($p < 0.001$) increase.

Conclusion:

Newly diagnosed alcoholic hepatitis increased significantly with the COVID-19 pandemic, particularly among individuals with a previous alcohol use disorder. These results provide insight into the gravity and consequences of increased alcohol intake during the COVID-19 pandemic.

#17

Jyothika Yermal, BS, BA

Research

MS2: Case Western Reserve University School of Medicine

Gender Differences in National Institute of Health Grant Awardees During the Opioid Epidemic

Given the severity and persistence of the opioid crisis, as well as how substantial National Institute of Health (NIH) funding is to research pursuits, we aimed to examine gender disparities among the recipients of NIH grants awarded for opioid addiction during the opioid epidemic. We thoroughly analyzed all intramural and extramural clinical research projects related to opioid addiction funded by the NIH since 1996.

Our search used the ClinicalTrials.gov trial registry and the NIH Research Portfolio Online Reporting Tool databases. The following data was extracted from each research project: amount of funding per grant, primary principal investigator (PI) full name, primary PI's academic rank, primary PI's highest degrees and primary PI's gender (determined by pronouns in PI bio). 197 research projects were funded by the NIH. A total of 1,646,512,558 USD was awarded. 85.9% of these projects started during the third wave of the opioid epidemic.

Of the 90 projects, 45.7% had female PIs, who received 708,000,413 USD (43%) of the total grant money awarded. On average, female PIs received 1,470,493 USD per year, which was 178,659 USD higher than male PIs. Forty males were awarded multiple grant projects, compared to 32 females. Sixty-seven males were also awarded single grants, compared to 58 females. Female single grant awardees received \$368,319/year more than their male counterparts. Female PIs made up 57.3% of PhDs (n=55), 34.1% (n=30) of MDs, 66.7% (n=4) of MD/PhDs and 20% (n=1) of Master's. Female PIs also made up 36.4% (n=8) of non-ranked positions, 47.4% (n=18) of assistant professors, 53.1% (n=17) of associate professors, and 44.8% (n=37) were professors. Female professors and assistant professors received more than their male counterparts (\$418,736/year and \$361,053/year more, respectively), but female associate professors and non-ranked PIs received less (\$100,464/year and \$596,734/year less, respectively).

While our results did not reach statistical significance, this study sheds light on possible gender disparities in NIH funding for clinical trials involving the opioid epidemic.

#18

Jasmine King, MA

Research

MS2: The Ohio State University Wexner Medical Center

An Ethical Analysis of the Application of Psychiatric Advance Directives in Treating Substance Use Disorder

Purpose:

Psychiatric advance directives (PADs), also known as declarations for mental health treatment (DMHTs), offer those suffering from a mental health condition the ability to indicate their medical preferences in periods of incapacitating psychiatric crises. In doing so, these declarations anchor justifications for future treatment in the development of self-directed safeguards from one's current incapacitating medical condition. Converging on the intersections of autonomy, capacity, and beneficence-oriented considerations, PADs highlight fundamental concerns in navigating substance use disorder (SUD) treatment. As such, this piece aims to examine the underpinnings of these directives and investigate their ethical application to treating addiction.

Methods:

This research piece employed a rigorous analysis of the contemporary approaches and ethical concerns in treating SUD and traditional mental health conditions. Furthermore, through an investigation into literature and legislation, this work established the fundamental moral considerations in the justification of PADs. Finally, through evaluating the ethically relevant concerns in treatment addressed by PADs in traditional mental health conditions and SUD, this work identified the potential application of these documents in treating addiction.

Results:

Addiction, a condition characterized by impaired control and physiological effects that result in strong compulsions to engage in sustained use at great personal cost, involves threats to the two underpinnings of autonomy: authenticity and sovereignty. Similar to traditional mental health conditions, concerns over the ability to rule oneself according to fundamental beliefs and values remain a hallmark of the condition. With PADs serving as a tool to specify treatment preferences during periods of incapacity, these documents seek to promote authenticity and sovereignty in directing future medical care. Ultimately, with similar ethical considerations at the forefront of SUD, PADs find application in the treatment of addiction.

Conclusion:

With the justification of PADs rooted in concerns over respect for autonomy through safeguarding sovereignty and authenticity, we have identified ethically relevant similarities between addiction and traditional psychiatric conditions that establish the fundamental application of these documents in treating SUD. Essentially, understanding PADs as an acceptable tool in the treatment of traditional mental health conditions, the utilization of these documents represents an ethically justifiable option in treating SUD.

#19

Veronica Olaker, BS

Research

MS3: Case Western Reserve University School of Medicine

Increased risk for new prescriptions of naltrexone, disulfiram, or acamprosate in patients with alcohol use disorder during the COVID-19 pandemic

Purpose:

Alcohol use disorder (AUD) is a disease that affects millions of people in the United States. Alcohol-related deaths are the 4th leading cause of preventable death, according to data from the CDC. This impact on public health has become even more concerning in the context of the COVID-19 pandemic, as alcohol sales skyrocketed in the early months, drinking behavior increased for certain groups, and alcohol related deaths increased by 20%. Our study aimed to address whether these changes translated to increases in pharmacologic treatment for patients with AUD.

Methods:

This retrospective cohort study was performed in the TriNetX Analytics Platform using the Research USA Minimal Date Shift network, which contains data from more than 65 million patients from 36 different healthcare organizations. Our experimental group was patients with an AUD encounter diagnosis anytime from 3/11/2020-3/11/2023. Our control group was patients with an AUD encounter diagnosis anytime from 3/11/2016-3/11/2019. The outcome of interest was a new prescription of naltrexone, disulfiram, or acamprosate. Opioid use disorder, cocaine use disorder, OCD, non-suicidal self-harm, and long covid were excluded from both cohorts since naltrexone can also be used to treat these disorders. Our follow up window from index event (AUD encounter) to the outcome was 6 months, which ensured no outcomes from the pre-pandemic group would overlap with the pandemic group. We matched for age at index, sex, race, and ethnicity.

Results:

This study comprised 534,569 patients for the pandemic period (61.3% male, 73.1% white, mean age at index, 49.5 [18.2] years). There were 441,430 patients for the pre-pandemic period (62.2% male, 71.4% white, mean age at index, 48.2 [18.1] years). After matching, there were 439,465 patients in each cohort (62% male, 72% white. mean age at index, 48.3 [18.1]) The hazard ratio (CI) for a new prescription was 1.827 (1.778,1.878).

Conclusions:

Risk for a new prescription of naltrexone, disulfiram, or acamprosate was increased for patients with an AUD encounter diagnosis during the COVID-19 pandemic compared to patients in 2016-2019. Increased prescriptions may indicate an increase in hazardous drinking behavior in the population during the COVID-19 pandemic.

#20

Nicole Nova, MD

Case Study

PGY2: University Hospitals Cleveland Medical Center

Armodafinil Induced Psychosis: A Case Report

Purpose:

Armodafinil is a central nervous system stimulant that has been FDA approved for the treatment of sleep work shift disorder, narcolepsy, and obstructive sleep apnea. There have been increasing reports of this and similar substances inducing psychosis in a wide range of patients, including those without existing psychiatric diagnosis. While prior reports have described substance induced psychosis symptoms of a relatively short duration, here we present a case of a patient who developed persistent and treatment resistant psychosis following misuse of this substance.

Report of case:

Patient is a 36 year old male with a past medical history of opioid use disorder, major depressive disorder, attention deficit hyperactivity disorder, and unspecified anxiety disorder, who presented for psychiatric admission following one week of psychosis symptoms. On the psychiatric unit he was noted to be actively responding to internal stimuli, and was paranoid and guarded with hospital staff. It was revealed that prior to admission he had been purchasing armodafinil online and taking 150-450 mg daily for several months. He also endorsed daily Kratom use for years. The patient was hospitalized for 23 days, and ultimately required the use of Clozaril to relieve psychotic symptoms. After hospitalization, he experienced multiple subsequent hospitalizations over the following year for psychosis symptoms, despite not returning to use of armodafinil or Kratom. The patient was eventually diagnosed as having converted to schizoaffective disorder.

Conclusion:

Armodafinil is the R-isomer of the racemic drug modafinil. Although the mechanism of action remains unclear, there is strong evidence that the medication increases dopamine and has indirect effects on norepinephrine and serotonin levels in the brain. It is through these neurotransmitter effects that the risk of inducing psychosis symptoms is thought to arise. Conversion rates from substance induced psychosis to a primary schizophrenia spectrum illness, as was seen in our patient, have been reported to be between 30-50%, depending on the substance used. Clinicians should be aware of the risk of substance induced psychosis, as well as the spectrum of severity and possibility of conversation to a schizophrenia spectrum illness, when prescribing this medication.