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Exploring Cultural and Community Context for Substance Use Interventions in West Philadelphia, an Urban, Predominantly Black Neighborhood

Jasmine S Barnes, MPH; M Holliday Davis, MA (Hons); Kathryn Gallagher, MPH; Kathryn Morris, BA; Nicole O'Donnell, BA, CRS; Gilly Gehri, BA; Jeanmarie Perrone, MD; Margaret Lowenstein, MD, MPhil, MSHP - University of Pennsylvania School of Medicine

What Would Make Addiction Treatment More Appealing, Effective, and Equitable for Black Patients?

Miriam Komaromy, MD; Kaku So-Armah, PhD.; Daneiris Heredia-Perez, MA; Natrina L. Johnson, MSc.; Corinne Beaugard, MSW; Phillip Reason, MPH, MSW; Avik Chatterjee, MD; Amy Yule. MD; Christina S. Lee, PhD; Sheila Chapman, MD; Craig McClay; Michelle Durham, MD, MPH; Miriam Komaromy, MD - Boston University and Boston Medical Center

Healing Indigenous Hearts: Developing a Facilitators' Guidebook to Support Indigenous Peoples in Their Journeys with Grief and Loss

Mathew Fleury, PhD Candidate; Corrina M. Chase, MA, Cornelia (Nel) Wieman, MD, Leslie McBain - British Columbia Centre on Substance Use, Simon Fraser University, British Columbia Centre for Disease Control

Recovery Support and Community Engagement

Implementing and Evaluating Group Model Building as a Participatory Approach to Foster Community Dialogue and Systems Learning Around Connecticut's Good Samaritan Laws

Rachel L Thompson, MSc; Syed Shayan Ali, MD; Robert Heimer, PhD; Gail D'Onofrio, MD, MS; Pulwasha Iftikhar, MPH; Sebastian Romero; Rebekah Heckmann, MD, MPH, MPA; Nasim S Sabounchi, PhD - City University of New York Graduate School of Public Health & Health Policy, City University of New York Graduate School of Public Health, and Health Policy

A Community Peer Recovery Support Specialist Model for Engaging People Who Use Drugs in Rural Communities

Philip Todd Korthuis, MD, MPH[1], **Joanna Cooper, BS**[1]; Gillian Leichtling, BA; Andrew Seaman, MD; Judith Leahy, MPH; Ann Thomas, MD; Larry Howell, AA, Kelly Jones, AA; Ali Mirzazadeh-Javaheri, BS; Ryan Cook, PhD - (1)Oregon Health & Science University

Learning Collaboratives (LCs) in the HEALing Communities Study: A Community-Engaged Training and Technical Assistance (TTA) Approach in a Multi-Community Overdose Reduction Intervention

Maria Rudorf, MA; Alexander Walley, MD, MSc; Trevor Baker, MS; Jessica Taylor, MD; Curtis Walker, PhD; Lise Roemmele, MSN, RN, CNE; Nicholas Bove, MPH, CHES; Dawn Gruss, M.Ed.; April Young, PhD, MPH; Donna Beers, MSN, RN-BC, CARN; Gary Langis; Andrea Sahovey; Avik Chatterjee, MD, MPH; Rachel Sword Cruz, MSW, MPH; Carly Bridden, MA, MPH; Vanessa Loukas, MSN, FNP-C, CARN-AP - Boston Medical Center

How Do Peer Support Specialists Experience Transitions to Employment Following State Certification?

Elizabeth Siantz, PhD; Morgan Pelot BS; Laysha Ostrow, PhD, MPP - College of Social Work, University of Utah

Adding Online Access to a Sober-Active Community, The Phoenix, Supports Recovery from Substance Use

Bethany Collinson, PhD; Katie Heinrich, PhD - The Phoenix

Adapting an Evidence Supported Family-Oriented Treatment to Meet the Needs of Families with Caregiver Substance Misuse

Kalyn Holmes, PhD Candidate; Sean, Hatch, PhD; Sarah, Cleary, PhD; Maya, Carter; J. Christopher, Sheldon, PhD; Lucia, Walsh Pedersen, PhD - Denver Health Hospital Authority

Increasing Access and Quality of Recovery Support Services Through a Statewide Network in Texas

Richard F Hamner, LMSW; Mary Tolle, MA; Tammy Jones; Cameron Diehl, MPH; Briseida Courtois, MSSW; Jennifer S. Potter, PhD, MPH; Tara Karns-Wright PhD, MS; Paul Salinas, MA - Universtiy of Texas Health Science Center of San Antonio

Stimulants, Chronic Pain, Suicide, Spirituality, and Abstinence

Trends in Emergency Department Visits Associated with Stimulant Use Among Adults in California, 2016-2021

Wayne Kepner, MPH[1,2], **Benjamin H Han, MD**[1]; Jesse Brennan MA, Julia Larson MD, Edward Castillo PhD - (1)University of California San Diego, (2)San Diego State University

Prevalence and Correlates of Suicide Attempts in a Sample of Residential OUD Patients: Data from Electronic Health Records

Julia Marie Thomas, BS; Kevin Wenzel, PhD; Jennifer Carrano, PhD; Kathleen Anderson, BS; Sophia Solan, BA; Aline Rabalais, PhD; Marc Fishman, MD - Maryland Treatment Centers Inc

Baseline Substance Use Patterns of Zambian Adolescents Participating in a Spiritually Based Resilience Training Program for Substance Use Prevention/Intervention

Sion Kim Harris, PhD, RN; Wilbroad Mutale, MBChB, MPhil, PhD; Ntazana Sindano, MS; Mutale Sampa, MS; Mataanana Mulavu, MPH; Philip Chimponda, MS; Lameck Kasanga, BSW; Dana M. Seale, MAPP; J. Paul Seale, MD, FASAM, FAAFP - Center for Adolescent Behavioral Health Research, Boston Children's Hospital, Harvard Medical School

Abstinent and Non-Abstinent Substance Users Who Resolved an Addiction: A mixed Methods Analysis

Corinne A. Beaugard, MSW; Maryann Amodeo, Ph.D., LICSW - Boston University

Medical Cannabis and Opioid Use Among Adults with Chronic Pain: Preliminary Results From an 18-month Longitudinal Study

Deepika E Slawek, MD, MPH, MSc; Chenshu Zhang, PhD; Yuting Deng, PhD; Yuval Zolotov, PhD; Stephen Dahmer, MD; Joanna Starrels MD, MS; Haruka Minami, PhD; Frances Levin, MD; Nancy Sohler, PhD, MPH; Chinazo O. Cunningham, MD, MS; Julia H. Arnsten MD, MPH - Montefiore Medical Center/Albert Einstein College of Medicine

Patient Perspectives on Stimulant Use Disorder Treatment With Contingency Management and Community Reinforcement Approach in Permanent Supportive Housing

Sarah Leyde, MD[1], **Claire Simon, MD**[1], **Amy J. Kennedy, MD, MS**[2]; Fockele, Callan; Emily Nye, BA; Chelsea Wan, BS; Christina Harris, BA; Bryan Hartzler, PhD; Judith I. Tsui, FASAM, MD, MPH; Lauren Whiteside, MD, MS, FACEP; Carson Bell, MPH; Jeremy Hoog, BSN, MA, RN - (1)University of Washington, (2)VA Puget Sound Healthcare System

Treatment Access and Pharmacists

RAMP-UP: Pharmacist-Led Rapid Access to Methadone Maintenance for Patients with Opioid Use Disorder at Penn Pilot

Emily R Casey, PharmD - The Hospital of the University of Pennsylvania

Private Insurance Failure to Pay: A Major Barrier to Accessing Treatment for Substance Use Disorders

Kimber Richter, PhD, MPH - University of Kansas Medical Center

The Roles, Activities, and Opportunities of Clinical Pharmacists in a National Initiative to Improve Office-Based Buprenorphine Care

Adam J Gordon, MD; Spencer G. Calder, MPH; Marie Kenny, BA; Veldana Alliu, PharmD, BCPS; Terri L. Jorgenson, RPh, BCPS; Tera Moore, PharmD, BCACP; Hildi Hagedorn, PhD; Eric Hawkins, PhD; Adam J. Gordon, MD MPH - Program for Addiction Research, Clinical Care, Knowledge, and Advocacy; University of Utah School of Medicine

Developing an Interactive Pharmacy Map of Buprenorphine Access Across Philadelphia

Rachel French, PhD, RN; Shoshana V Aronowitz, CRNP, MSHP, PhD; Rachel French, PhD, BSN, RN; Nicole O'Donnell, CRS; Allison Schachter, BA; Emily Seeburger, MPH; Margaret Lowenstein, MD, MPhil, MSHP - University of Pennsylvania

Distance as a Barrier to Addiction, Mental Health, and Primary Care for Persons with Recent Homeless Experience

Stefan G Kertesz, MD, MSc; Aerin deRussy, MPH; Sally K. Holmes, MBA; Ann E. Montgomery, PhD; Kevin R. Riggs, MD; April E. Hoge, MPH; Audrey L. Jones, PhD; Lillian Gelberg, MD; Joshua S. Richman, MD; Erika L. Austin, PhD; Adam J. Gordon, MD, MPH - Heersink UAB School of Medicine

Telemedicine Treatment Retention Characteristics from REACH, a Low Barrier, Community-Based Buprenorphine Clinic in Upstate New York

Judith Griffin, MD; Czarina Behrends, PhD, MPH; Jasmine Myrick, BA; M. Arsalan Ali, MS; Cristina Chin, LMSW, MPH - The REACH Project, Inc.

Women's and Children's Health

The Influence of Targeted HIV Prevention Advertising on High-Risk Women Who Inject Drugs

Laura Starbird, MSN, PhD, RN; Caroline Darlington, MSN, WHNP-BC; Tara Teipel, BSN; Caroline Dillon; Mari Andrzejewski - University of Pennsylvania School of Nursing

A Qualitative Exploration of the Perspectives of School-Based Health Center Staff About Providing Opioid Overdose Prevention Education and Treatment of Opioid Use Disorder

Sarah M. Bagley, MD; Emma Weinberger, BA; Justin Alves, MSN, FNP-BC, ACRN, CARN, CNE; Annie Potter NP, MSN, MPH; Máireád Day Lopes, MSN, RN, NCSN; Alicia S. Ventura, MPH - Boston Medical Center and Chobanian & Avedisian School of Medicine

Associations Between Individual and Hospital-Level Determinants in the Medical Diagnosing of Prenatal Substance Use and Referrals to Child Protection Systems: Multi-level Modeling of a California Birth Cohort

Julia Reddy, MA - Gillings School of Global Public Health, University of North Carolina - Chapel Hill

Associations of Postpartum Opioid Use Disorder Medication Treatment Outcomes With Neighborhood-Level Social Determinants of Health and Prenatal Treatment Receipt

Caitlin E Martin, MD; Erin Britton, PhD; Hannah Shadowen, MPH; Jasmine Johnson, MD; Roy Sabo, PhD; Peter Cunningham, PhD - Virginia Commonwealth University

County-Level Neonatal Opioid Withdrawal Syndrome Rates and Real-World Access to Buprenorphine in Pregnancy: an Audit ("Secret Shopper") Study in Missouri

Kevin Y Xu, MD, MPH; Bronwyn S Bedrick, MD MSCI, Benson S Ku MD, Ebony B Carter MD MPH, Jeannie C Kelly MD MS - Washington University School of Medicine

The Pre-Dobbs Landscape of Contraception Access for Reproductive-Age People with Opioid Use Disorder in the United States

Kevin Y Xu, MD, MPH; Jennifer Bello-Kottenstette MD MS, Richard A Grucza PhD - Washington University School of Medicine in St. Louis

Women's and Children's Health

The Influence of Targeted HIV Prevention Advertising on High-Risk Women Who Inject Drugs

Laura Starbird, PhD, RN; Caroline Darlington, MSN, WHNP-BC; Tara Teipel, BSN; Caroline Dillon; Mari Andrzejewski - University of Pennsylvania

Background: Women who inject drugs (WWID) are at high risk of acquiring HIV due to behavioral, biological, and structural factors. However, uptake of PrEP for HIV prevention among WWID is low. Although awareness of PrEP among WWID is increasing, barriers to obtaining PrEP at the societal level remain.

Objective: The objective of this study was to explore the characteristics of WWID's positive and negative experiences engaging in healthcare and identify key areas to improve clinical care for WWID to increase uptake of PrEP.

Methods: Guided by the Health Disparities Framework, we conducted a mixed method study with individuals who identified as a woman [cis- or transgender] and injected drugs within the last 6 months. Participants completed the HIV Risk Assessment Battery (RAB) and an in-depth semi-structured qualitative interview. Two coders reviewed transcripts using both prefigured and emergent codes. We then deconstructed and classified the data into key themes that captured the experiences of WWID with healthcare and PrEP. Survey responses were analyzed using descriptive statistics and triangulated with qualitative findings to contextualize participant experiences and opinions.

Results: Among 25 participants interviewed, HIV risk was moderate with an average RAB score of 10.3/40 (range 1-31). Eighty-one percent used uncleaned needles in the past 6 months, 65% obtained needles from the street or a shooting gallery, and 31% exchanged sex for drugs. A key theme that emerged was unintended consequences of PrEP advertising in the context of HIV risk perception. WWID frequently described exposure to PrEP via commercials and internet advertisements that included only men. Despite high HIV risk, men-oriented PrEP advertisements led to a decrease in perceived risk of HIV and need for PrEP, and a feeling of embarrassment and judgment around asking for PrEP ("It seems like they market towards those types of people... then me as a woman asking, I might get just frowned upon").

Conclusions: Targeted PrEP advertising has unintended consequences for other vulnerable groups. PrEP outreach should include diverse populations who use drugs and are at risk of acquiring HIV. Providers should counsel WWID on HIV risk and offer PrEP where appropriate.

A Qualitative Exploration of the Perspectives of School-Based Health Center Staff About Providing Opioid Overdose Prevention Education and Treatment of Opioid Use Disorder

Sarah M. Bagley, MD; Emma Weinberger, BA; Justin Alves, MSN, FNP-BC, ACRN, CARN, CNE; Annie Potter NP, MSN, MPH; Máireád Day Lopes, MSN, RN, NCSN; Alicia S. Ventura, MPH - Boston Medical Center and Chobanian & Avedisian School of Medicine

Background: Rates of youth overdose have significantly increased in recent years, making it the third leading cause of death among adolescents in the United States. Fentanyl contamination of pressed pills and cocaine is the primary driver of escalating overdose deaths in this age group. Urgent action is needed to provide youth with overdose prevention education and treatment for

opioid use disorder. School-based health centers (SBHCs) are low-barrier healthcare access points that provide students regular contact to health care providers. SBHCs successfully provide comprehensive physical and behavioral health care, including but not limited to; sexual health services and support for students with substance use risks.

Objective: To explore SBHC perspectives about implementing opioid overdose prevention education and opioid use disorder treatment.

Methods: We conducted a qualitative study of SBHC direct care staff who had completed a two-day educational training about overdose prevention, harm reduction, and treatment of opioid use disorder. Semi-structured interviews were conducted to explore experiences and attitudes related to providing (1) opioid overdose prevention education, (2) opioid use disorder treatment, and (3) harm reduction. Interviews were transcribed, coded, and we conducted a thematic analysis using a hybrid deductive and inductive approach

Results: Thirteen staff participated: 11 identified as women, three were Black, and two were Latinx. The mean age of participants was 43 years. Half were behavioral health clinicians, and half were medical providers. Three themes emerged: (1) challenges using current strategies to identify youth at risk for overdose or who have opioid use disorder, (2) importance of integrating harm reduction for all substance use counseling given the wide range of substances that youth use, and (3) need for more prevention, treatment, and focused training about substance use, including overdose prevention in school settings

Conclusions: Opioid overdose among youth is increasing and is most often due to fentanyl contamination. SBHC staff are familiar with providing harm reduction education about other substances and could potentially provide overdose education to all youth and treatment for youth with opioid use disorder. SBHCs are well-positioned to develop, test and implement interventions that include overdose prevention and treatment for opioid use disorder.

Associations Between Individual and Hospital-Level Determinants in the Medical Diagnosing of Prenatal Substance Use and Referrals to Child Protection Systems: Multi-level Modeling of a California Birth Cohort

Julia Reddy, M.A. - UNC - Gillings School of Public Health

Background: Hospital providers are key personnel in the identification of and response to prenatal substance use (PSU). There is variability in documentation of diagnostic codes related to PSU on hospital discharge records, perhaps associated with hospital policies, case complexity, and institutional and individual biases. In jurisdictions where policy allows provider discretion regarding reporting PSU as an allegation of child maltreatment, these same biases and variabilities may also result in disproportionate reporting behaviors according to patient demographics. It is important to estimate the patterns and associations of variability in PSU documentation and maltreatment reporting across demographic characteristics to evidence inconsistencies in behavior and policy performance.

Objective: This study estimates associations between individual- and institutional-level variables in PSU documentation and child protection system (CPS) reporting, using linked administrative data from a 2018 California birth cohort.

Methods: We describe women with documented PSU and those reported postnatally to CPS using maternal and birth covariates such as maternal race and ethnicity and insurance type. We use multilevel logistic regression to examine associations among individual- and hospital-level characteristics and diagnostic and reporting outcomes.

Results: In 2018, 456,207 children were born in California; 8,527 births (1.87%) had ICD-10 codes related to PSU on the hospital discharge record. Among infants with documented prenatal substance exposure, 3,747 (43.94%) were the subject of a CPS maltreatment allegation within 14 days of birth. Individual-level demographics were associated with likelihood of PSU documentation and CPS reporting. Birth parents categorized as White had greater odds of PSU diagnosis and, among those with a PSU diagnosis, postnatal CPS reporting, compared to those categorized as other races. Birth parents who used public health insurance to pay for the delivery had increased odds of PSU documentation (OR=3.42, 95%CI: 3.19,3.68) and CPS reporting (OR=2.26, 95%CI: 1.93,2.65) compared to those who used private insurance. While delivery hospital did not contribute systematic variation to likelihood of PSU diagnosis, it was significantly associated with neonatal CPS reporting, among those with documented PSU.

Conclusions: Variations in patterns of PSU diagnosis and CPS reporting according to hospital and individual demographic categorizations help inform policies and standardized tools for identifying and responding to PSU-affected dyads.

Associations of Postpartum Opioid Use Disorder Medication Treatment Outcomes with Neighborhood-Level Social Determinants of Health and Prenatal Treatment Receipt

Caitlin E Martin, MD MPH; Erin Britton, PhD; Hannah Shadowen, MPH; Jasmine Johnson, MD; Roy Sabo, PhD; Peter Cunningham, PhD - Virginia Commonwealth University

Background: Opioid use disorder (OUD) is a leading cause of death through the year postpartum.

Objective: To identify the association of neighborhood-level social determinants of health (SDoH) and prenatal OUD treatment receipt with medication for OUD (MOUD) outcomes through the year postpartum among a cohort of birthing people.

Methods: For this population-based retrospective cohort study, Virginia Medicaid claims and enrollment data were utilized for individuals who delivered a live infant between July 1, 2016, to December 31, 2020 receiving MOUD at delivery. The primary exposure was the Virginia Health Opportunity Index (HOI), a composite measure of SDoH linked at the census-tract level. Secondary exposures included comprehensiveness of OUD treatment and MOUD duration received prenatally. Outcomes included postpartum MOUD duration and continuity, operationalized as time from delivery to MOUD discontinuation and percentage of days covered by MOUD within the 12 months after delivery, respectively.

Results: The study sample included 1,690 Medicaid-covered deliveries who were receiving MOUD, with 711 deliveries to birthing people living in the lowest HOI tercile (indicating high burden of negative SDoH), 647 in the middle HOI tercile, and 332 in the highest HOI tercile. Using stepwise multivariable regression (Cox proportional hazards and negative binomial models) guided by a socioecological framework, prenatal receipt of more comprehensive OUD treatment and/or longer prenatal MOUD duration was associated with improved 1-year postpartum OUD treatment outcomes (MOUD duration and continuity). When the HOI was added to the models, these significant associations remained stable, with the HOI not demonstrating an association with the outcomes (Duration HR 1.39, 95% CI 0.551, 3.512; Continuity HR 1.024, 95% CI 0.323, 3.247).

Conclusions: Targeted efforts at expanding access to and quality of evidence-based OUD treatments for reproductive-age people across the lifecourse should be prioritized within the spectrum of work aimed at eradicating disparities in pregnancy-related mortality.

County-Level Neonatal Opioid Withdrawal Syndrome Rates and Real-World Access to Buprenorphine in Pregnancy: An Audit ("Secret Shopper") Study in Missouri

Kevin Y. Xu, MD MPH; Bronwyn S Bedrick, MD MSCI, Benson S Ku MD, Ebony B Carter MD MPH, Jeannie C Kelly MD MS - Washington University

Background: Amid endemic opioid use disorder (OUD)-related poisonings in the U.S., neonatal opioid withdrawal syndrome (NOWS) rates have increased by >400% since the 2000s. County-level data on access to buprenorphine in pregnancy--and whether increased buprenorphine access is sufficient to mitigate NOWS rates--has not been thoroughly studied.

Objective: In this audit ("secret shopper") study, we computed county-level buprenorphine access rates for pregnant people. We then examined the association between buprenorphine access and NOWS rates in the state of Missouri, which has been strongly afflicted by drug-related poisonings.

Methods: Between February and April 2019, up to three phone calls were made to all buprenorphine prescribers and opioid treatment programs in Missouri via publicly available SAMHSA directories to determine if clinicians were accepting new pregnant patients, allowing us to calculate the number of practices accepting pregnant patients per county. County-level buprenorphine capacity was defined as the number of providers that accepted pregnant people divided by the number of births from 2014-2018. Multivariate negative binomial regression models estimated associations between buprenorphine access and county-level NOWS rates obtained from the state of Missouri. Analyses were stratified using overdose rates ("low-risk" in the lowest tertile and "high-risk" in the highest tertile) as a proxy for OUD burden.

Results: Of 115 counties in Missouri, 81 (70%) had no capacity for buprenorphine, 17 (15%) were low-capacity (<0.5 providers/1,000 births), and 17 (15%) were high-capacity (>0.5 providers/1,000 births). The mean NOWS rate was 6.5/1,000 births. Higher NOWS rates were associated with higher county-level overdose rates (ρ=0.64, $p<0.0001$) and surprisingly were also associated with increased county-level capacity for buprenorphine (ρ=0.34, $p<0.0001$). In

both high-risk and low-risk counties, higher buprenorphine capacity did not correspond to decreases in NOWS rates (IRR=1.23 [95% CI: 0.65-2.32] and IRR=1.57 [1.21-2.03] respectively).

Conclusions: This "secret shopper" study reveals that the vast majority of counties in Missouri have no capacity for buprenorphine prescribing in pregnancy. High county-level NOWS rates are strongly associated with elevated opioid overdose rates in Missouri. Even in counties with high buprenorphine access, increased capacity for buprenorphine appeared insufficient to overcome the OUD burden that is contributing to elevated NOWS rates.

The Pre-Dobbs Landscape of Contraception Access for Reproductive-Age People with Opioid Use Disorder in the United States

Kevin Y. Xu, MD MPH; Jennifer Bello-Kottenstette MD MS, Richard A Grucza PhD - Washington University

Background: The number of reproductive-age people with opioid use disorder (OUD) has surged in the U.S., coinciding with increased unintended pregnancy, greater sexually-transmitted infections, and heightened maternal mortality. Amid intensifying threats to contraception access in the aftermath of the Dobbs v. Jackson Women's Health Organization ruling, data is needed on the pre-Dobbs landscape of contraception use for people living with OUD in the U.S. as we work to understand the effects of the Dobbs decision.

Objective: We used administrative claims to describe baseline rates of contraception utilization in reproductive-age people initiating medication to treat OUD (MOUD=buprenorphine, methadone, naltrexone-ER or PO) in the U.S. We described clinical and psychosocial characteristics associated with contraception uptake, with a particular focus on whether MOUD initiation would positively impact contraception utilization.

Methods: In this retrospective cohort study, we analyzed ten years (1/2006-12/2016) of data from the Merative MarketScan Commercial and Multi-State Medicaid databases. Contraception claims among patients, identified as women, 18-45 years, initiating MOUD were obtained from procedure codes and pharmacy files, encompassing highly-effective methods (LARC=long-acting reversible contraception) and effective short-acting methods (oral contraceptive pills, injections, patches, and vaginal rings). We used multivariable Poisson regression models, adjusting for sociodemographic and clinical characteristics, to assess if MOUD use is associated with increased contraception uptake.

Results: Our sample consisted of 117,446 non-pregnant reproductive-age people (median age 30.0 years, 60.4% Medicaid, 86.5% White among Medicaid enrollees). Prior to MOUD initiation, 16,570(14.1%) were prescribed any contraception, of which 3.3% were highly-effective (LARC), with the remainder consisting of oral pills(9.8%), injections(0.01%), patches(0.3%), and vaginal rings(1.2%). MOUD receipt was associated with increased contraception use (adjusted odds ratio [aOR]=1.41[95% CI: 1.30-1.53). Lower contraception use was associated with age <30 years(aOR=0.50[0.47-0.52]), Medicaid enrollment(aOR=0.53[0.50-0.56]), and non-Hispanic Black race(aOR=0.52[0.42-0.64]).

Conclusions: Contraception use was extremely low in reproductive-age people with OUD, with <5% using highly-effective long-acting methods. MOUD use was associated with mild improvement in contraception uptake. Diminished contraception use was observed among people <30 years of age and Medicaid enrollees. The lower rates of contraception uptake among non-Hispanic Black people in our study raises concern about the impact of structural racism on reproductive health access, which urgently warrants further scholarship.

Welcome Reception and Poster Session

"I Can Stay on Buprenorphine after Detox?" - Implementation of a Hybrid, Low-threshold Buprenorphine Bridge Clinic Alongside a Busy Withdrawal Management Unit at a Safety Net Hospital.

Anthony J. Accurso, MD; Andreysis, Mosquea, MD - Bergen New Bridge Medical Center, Bergen New Bridge Medical Center, Paramus NJ

Options Exist: Methadone to Buprenorphine Transitions in Primary Care

Meredith Adamo, MD; Elizabeth Abbs, MD; Grace Lemke, BS - San Francisco Department of Public Health

First Responder Experiences with a Novel Leave-Behind Naloxone Program: Results of A Qualitative Pilot Survey

Emily Ager, MD, MPH; Ella Purington, MD; Megan Purdy; Alex Nickel; Jessica Baker; Graham C. Smith, MD; Nathaniel R. Hunt, MD; Eve D. Losman, MD, MHSA - Michigan Medicine School of Medicine

Fetal Alcohol Spectrum Disorders: Practice Gaps in Prevention and Identification

Daniel P. Alford, MD, MPH; Jacqueline S German, MPH; Candice Bangham, MPH; Jacey Greece, DSc, MPH; Kendra Gludt, MPH; Amy Harlowe, MPhil; Nicole Kitten, MPH; Ilana Hardesty, MA; Sara Messelt; Vincent C Smith, MD, MPH - Boston University Chobanian & Avedisian School of Medicine, Boston Medical Center

An Opioid Use Disorder Consult Service Elective for Internal Medicine Residents

Mim Ari, MD; John Murray, MD; Sarah Dickson, APN; George Weyer, MD - University of Chicago

Implementing An Evidence-Based, Harm Reduction-Focused, Medical Cannabis Program In An Academic Medical Center In Bronx, NY

Julia H Arnsten, MD, MPH[1], **Deepika E Slawek, MD, MPH, MSc**[1]; Jonathan Ross, MD, MS; Joanna Starrels, MD; Yuting Deng; Chenshu Zhang, PhD - (1)Montefiore Medical Center/Albert Einstein College of Medicine

Development of a Harm Reduction Advocacy Coalition in Healthcare

Tucker Avra, BS, DVM[1], **Amanda Cowan, MSc**[2,3]; Andrew Nelson, BA; Autumn Stevens, AB Candidate - (1)David Geffen School of Medicine at UCLA, (2)CLARE Matrix, (3)Community Health Project LA

Adapting Post-Overdose Programs to be Responsive to People who use Cocaine and Methamphetamine and Native, Black, Latino, Hispanic and Youth Populations in Massachusetts

Sarah M. Bagley, MD; Stephen P. Murray, MPH; Scott W. Formica, PhD; Moriah Wiggins; Sarah Kosakowski, MPH; Corey Hemingway; Kayla Guzovsky; Gabriel Quaglia; Ziming Xuan, ScD, SM, MA; C To, MSPH; Justeen Hyde, PhD; Jiayi Wang, MS; Alexander Y. Walley, MD, MSc - Boston Medical Center and Chobanian & Avedisian School of Medicine **Identifying Barriers and Facilitators to Harm Reduction, Substance Use Treatment, and Community Engagement in an Urban, Predominantly Black Neighborhood**

Jasmine S. Barnes, MPH; M Holliday Davis, MA (Hons); Kathryn Gallagher, MPH; Kathryn Morris, BA; Nicole O'Donnell, BA, CRS; Gilly Gehri, BA; Jeanmarie Perrone, MD; Margaret Lowenstein, MD, MPhil, MSHP - University of Pennsylvania School of Medicine

A Multi-level, Trauma-informed Approach to Ally with High-risk Patients with Injection-related Endocarditis

Emily E. Beahm, LCSW; Payel Roy, MD, MSc - University of Pittsburgh Medical Center - Presbyterian Hospital

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

Lauren Arnold Bell, MD, MPH[1], **Jayla French, BS**[1]; Laura Kirkpatrick, MD; Scott E. Hadland, MD, MPH, MS; Matthew C. Aalsma, PhD - (1)Indiana University School of Medicine

Pregnancy Rates among Women Treated with Medication for Opioid Use Disorder

Jennifer Bello Kottenstette, MD[1], **Kevin Y Xu, MD, MPH**[2]; Richard Grucza, PhD - (1)Saint Louis University, (2)Washington University School of Medicine in St. Louis

Residency Programs and County Drug Courts: a Symbiotic and Under-explored Partnership for Treatment of Opioid Use Disorder

Michael C Binder, MD, MPH; Joongyu Daniel Song, MD - University of Cincinnati College of Medicine

Peering into Integration: A Focus Group Study on Peer Support Workers in Substance Use Disorder Treatment and Recovery Organizations

Brittany A. Blanchard, MPH, RN; Bridget Coffey, MSW; Lindsey VonDras, MSW; Aaron Ruiz, BA; Katherine C. Brown, MPH, MSW, LCSW; Zachary Budesa, PhD; Rachel P. Winograd, PhD - University of Missouri St. Louis

Risk Factors for Infective Endocarditis and Untreated Infections among People who Inject Drugs (PWID) in Los Angeles, CA and Denver, CA 2021/22

Ricky N. Bluthenthal, BA, MA, PhD; Siddhi Ganesh, BS, AB; Patricia Wilkins, BA; Jesse Goldshear, PhD; Eric Kovalsky BA; Kelsey Simpson, PhD, MA; Cheyenne Page, BA; Joshua Barocas, MD; Karen Corsi, ScD - Keck School of Medicine, University of Southern California

Perceived a Need for Treatment Among Adults with Alcohol Use Disorder: Implications for Closing the Treatment Gap

Robert M. Bohler, MA, MPH, PhD; Sharon Reif, PhD; Kim Johnson, PhD; William Crown, PhD; Joanne Nicholson, PhD; Constance Horgan, ScD - The Heller School for Social Policy and Management

A Case of Consistent Fentanyl-induced Euphoria with Concurrent Buprenorphine Extended-release Injections

Rachel A. Branning, DO; Akhil Anand, MD; Stacy Roll, DO, Samuel Shin, MD, PhD - University Hospitals Cleveland Medical Center

Racial Differences in Medications for Opioid Use Disorder Initiation in a Correctional Setting

Jessica Brar, MD[1], **Justin Berk, MBA, MD, MPH**[1]; Rosemarie Martin, PhD; Francesco Pappalardo, MD-Candidate - (1)Brown University

Stimulant Use Among Patients in Opioid Treatment Settings: Provider Perspectives

Haley Breland, BA; Valerie Antonini, MPH; Thomas Freese, PhD; Mark McGovern, PhD; Julia Dunn, MSc; Richard Rawson, PhD; Sherry Larkins, PhD - UCLA Integrated Substance Abuse Programs

Substance Use Disorders Among Forced Migrant Populations in Humanitarian Settings: An Educational Initiative for International Humanitarian Practitioners

Jenna L Butner, MD; Kaveh Khoshnood, PhD, MPH - Yale School of Medicine, Yale University School of Medicine

Patient Reported Barriers and Facilitators to Accepting IM-Naltrexone in the Hospital for the Treatment of Severe Alcohol Use Disorder

Susan L. Calcaterra, MD, MPH, MSc; Sarah Mann, MA - University of Colorado Anschutz Medical Campus

Linkage to Care Outcomes Following Treatment in a Low-threshold Bridge Clinic for Substance Use Disorder

Sarah K. Casey, BA[1], **Sarah Wakeman, MD**[2]; Sydney McGovern, MPH; Susan Regan, PhD; Alison Romero, BS; Elizabeth A. Powell, MPH; Laura Kehoe, MD, MPH; Martha T. Kane, PhD - (1)Massachusetts General Hospital, (2)Massachusetts General Hospital, Mass General Brigham, Harvard Medical School

Opioid, Simulant and Sedative Overdose and Life-threatening Use among Canadian Youth: A Cross-sectional Survey of Pediatricians and Pediatric Subspecialists

Nicholas Chadi, MD, MPH; Matthew Carwana, MD, MPH; Eva Moore, MD, MSPH - University of Montreal

"This Tough Love Stuff is Just not Love": Exploring Harm Reduction in Massachusetts Homeless Shelters

Avik Chatterjee, MD, MPH[1], **Thomas M Regan, MPH**[2]; Philip Ribeiro; Joseph Shay; Kenneth Washington; Heather Bianchi, MPH - (1)Boston University School of Medicine/Boston Medical Center, (2)Boston University School of Public Health

Mobile Units Improve Access to Medications for Opioid Use Disorder: A Qualitative Implementation Study

Avik Chatterjee, MD, MPH; Trevor Baker MS; Maria Rudorf MA; Galya Walt, BA; Caroline L. Stotz, BA; Anna Martin, BS; Elizabeth N. Kinnard, MS; Ann Scheck McAlearney, ScD, MS; Julie Bosak, DrPH, CNM, MSN; Bethany Medley, MSW; Jeffrey H. Samet, MD, MA, MPH; Karsten Lunze, MD, MPH, DrPH - Boston University School of Medicine/Boston Medical Center

Naloxone Uptake and Changes in Opioid Use Behaviours : Evidence from Publicly Funded Take-Home Naloxone Programs in Canada

Hui-Yu Chiang, PhD Candidate; Peter Coyte, PhD - University of Toronto

White Coat Crime: Regulatory and Criminal Investigations of Prescription Drug Diversion by Healthcare Professionals

Elizabeth Chiarello, MEd, PhD - Saint Louis University

The Role of Family Functioning in Relation to Opioid Use and Recovery Outcomes among Women with Opioid Use Disorder (OUD)

Jessica L. Chou, PhD; David S. Bennett, PhD; Sharlene Irving, MBA; Barbara Schindler, MD - Drexel University

Drug Screening Programs in Colleges of Pharmacy

Patricia L Darbishire, PharmD - Purdue University

Child Custody Loss and Consequences for Mothers Who Use Drugs: A Systematic Synthesis

Caroline K. Darlington, MSN, WHNP-BC; Rebecca Clark, PhD, MSN, RN, CNM, WHNP-BC; Sara F. Jacoby, MPH, MSN, PhD; Mishka Terplan, MD, MPH, FACOG, DFASAM; Peggy Compton, PhD, RN, FAAN, FIAAN - University of Pennsylvania

The Moral Experiences of Obstetric Providers When Caring for Pregnant and Parenting Women with Substance Use Disorders: A Qualitative Systematic Review

Caroline K. Darlington, MSN, WHNP-BC; Peggy Compton, PhD, RN, FAAN, FIAAN - University of Pennsylvania

Early Learnings from Implementation of CareConnect Warmline: A Telehealth Buprenorphine Bridge Clinic

M Holliday Davis; Shoshana V Aronowitz, CRNP, MSHP, PhD; Rachel French, PhD, RN; M Holliday-Davis, BA; Nicole O'Donnell, CRS; Jeanmarie Perrone, MD; Margaret Lowenstein, MD, MPhil, MSHP - Sol Collective

Leveraging Population-Level Data to Promote Equity in Office-Based Opioid Treatment and Medication Access for Opioid Use Disorder among Underserved Populations in Texas

Carma Deem Bolton, PhD; Carma Deem Bolton, PhD, MS; Shaun Jones, MPH, CSPO; Tara Karns-Wright, PhD, MS; Matthew Perez; Jennifer Potter, PhD, MPH - The University of Texas Health Science Center at San Antonio

Unraveling the Relationship between Physical Activity and Unhealthy Alcohol Use in the General Population: A Cross-sectional Study

Marianthi Lousiana Deligianni, MD; Joseph Studer, PhD; Nicolas Bertholet, MD - Addiction Medicine

Incorporating Veterans with lived or Living Experience into Syringe Service Programs within Veterans Health Administration

Beth Dinges, PharmD[1], **Tessa Lynne Rife-Pennington, PharmD, BCGP**[2], **Nathan Nolan, FACP, MD, MPH**[3]; Justeen Hyde, PhD; Aleeya Barrolle, PharmD; Kenneth Boyd; Matthew

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State Laws Mandating Pain Management Contracts for Opioid Analgesic Treatment

Shriya Doranala; Barbara Andraka-Christou, JD, PhD; Shriya Doranala; Amy Krigsman, BBA; Brianna Heslin, JD - UCF

Pursuing Qualitative Insights from Patients with Persistently High Emergency Department Use to Inform Care Coordination Services in Co-Located Substance Use, Medical, and Psychiatric Care Setting

Kate Dunn, MSN, RN; Daniel B. Gingold MD, MPH; Aaron D Greenblatt, MD; Marik Moen, MPH, PhD, RN; Aditi Ringwala, MD; Stryckman, MA, Sanyukta Deshmukh, MD, Angela Smedley, MD, J. David Gatz MD, Anthony Amoroso MD, Massiel Garcia MBA, Eric Weintraub MD; Marik Moen, MPH, PhD, RN - University of Maryland School of Medicine

The Role of the OPRM1 Gene on Opioid Acute Effects: A Human Laboratory Genotype-phenotype Assessment

Kelly E. Dunn, MBA, PhD; Andrew S. Huhn, Ph.D., MBA; Patrick H. Finan, Ph.D.; Ami Mange, M.D.; Cecilia L Bergeria, Ph.D.; Brion S. Maher, Ph.D.; Jill A. Rabinowitz, Ph.D.; Eric C. Strain, M.D.; Denis Antoine, M.D. - Johns Hopkins University School of Medicine

The Association of Psychostimulant Use and Office Based Buprenorphine Treatment Retention

Ryan Edgerton, MPH, PhD Candidate[1], **Robert Lyle Cooper, PhD**[1], **Loren Deborah Ginn, BS**[1], **Khem Plata, BA**[1]; Deon Tolliver, MD; Mika Galiher MD Candidate - (1)Meharry Medical College

Providing Embedded Developmental Behavioral Pediatrics Care within a Pediatric Medical Home for Families in Recovery

Mei Elansary, MD; Jill Baker, LICSW; Alison Cohan, LICSW; Caitlyn Dusthimer, BA; Emma Prescott, BA; Sara Stulac, MD - Boston Medical Center

A Person-Centered Version of the Drug and Drug Problems Perception Questionnaire Using Exploratory and Confirmatory Factor Analyses

Deborah S. Finnell, CARN-AP, PhD, RN; Abdallah Abu Khait, PhD, CNS, MSN, RN; Dawn Lindsay, PhD; Khadejah F Mahmoud, MSN, PhD; Ann M. Mitchell, PhD, RN, AHN-BC, FIAAN, FAAN; Deborah S. Finnell, PhD, RN, CARN-AP, FAAN; J. Aaron Johnson, PhD - Johns Hopkins University

A Qualitative Study Exploring the Feasibility and Acceptability of Embedding an Overdose Prevention Sites in a US Hospital

Rachel French, PhD, RN; Rachel McFadden, BSN, RN, CEN; Margaret Lowenstein, MD, MPhill, MSHP; Nicole O'Donnell, Jeanmarie Perrone, MD; Shoshana Aronowitz, PhD, MSHP, FNP-BC; Ashish Thakrar, MD; Allison Schachter, BS; & Peggy Compton, RN, PhD - University of Pennsylvania

Implementation and Evaluation of Telehealth Opioid Use Disorder Treatment Training Program for Nurse Practitioner Students

Rachel French, PhD, RN; Erica Lyons, DNP, MS, APRN, FNP-BC; Allison Schachter, BS; June A. Treston, DNP, CRNP; Ami Marshall, EdD, MSN, APRN, ANP-C; Jennie Lattimer, MSN, CRNP, AOCN; Adam Bisaga, MD; Emily Behar, PhD, MS; & Shoshana Aronowitz, PhD, MSHP, FNP-BC - University of Pennsylvania

Overdose Risk and Response in Permanent Supportive Housing: Results from Focus Groups with Tenants, Staff, and Leaders

Marina Gaeta Gazzola, MD; Allison Torsiglieri, MPH, Stephanie Blaufarb, MPH, Emily Melnick, MPH, Lauren Velez, Patricia Hernandez, LCSW, Megan A. O'Grady, PhD, Donna Shelley, MD, MPH, Charles M. Cleland, PhD, Charles J. Neighbors, MBA, PhD, Kelly M. Doran, MD, MHS - NYU Grossman School of Medicine/Bellevue Hospital Center

The Impact of Drug Use and Treatment Stigma among Black Individuals: A Scoping Review

Rashmi Ghonasgi, BS - University of Missouri - St. Louis

How Well Does the Tobacco, Alcohol, Prescription Medication, and Other Substance Use (TAPS) Tool Perform as a Screener for Unhealthy Substance Use among Older Populations?

Benjamin H. Han, MD; Joseph J. Palamar, PhD; Alison A. Moore, MD; Robert Schwartz, MD; Li-Tzy Wu, ScD; Geetha Subramaniam, MD; Jennifer McNeely, MD - University of California San Diego

A Grand Milestone: Reflections and Findings Following 1,000+ Administrations of XR SC Buprenorphine in the Outpatient Clinic Setting

Charina R Hanley, CARN, RN; Jacelyn H Farmerie, CARN - Boston Healthcare for the Homeless Program

Outpatient Parenteral Antimicrobial Therapy in People who Inject Drugs

Armani Hawes, MD; Lisa Yanek, MD; Megan Buresh, MD; Alia Bodnar, MD; Sara Keller, MD, MPH - Johns Hopkins Hospital

Retention in Care in a Telehealth Enabled Low-Threshold Substance Use Disorder Program in at Safety Net Hospital

Bradley Heinz, MD Candidate[1], **Erik S Anderson, MD**[2]; Bradley Heinz, MS; Monish Ullal, MD; Lauren Sirey, PharmD; Braunz Courtney; Andrew Herring, MD - (1)University of California San Francisco, (2)Alameda Health System - Highland Hospital

Methadone for Opioid Use Disorder in Older Adults: Survey and Chart Review of Current Practices in New Mexico

Hannah E Herring, BS, MD Candidate[1], **Madalyn E Dankocsik, PharmD Candidate**[1]; Asma Qamruddin, MD; Catherine S. Smith, PharmD; Ellen W. Green, MD, PhD; Vanessa Jocobsohn, MD; Shreeti H Patel, BS, MD Candidate; Alexandria Viszolay, BS, MD Candidate - (1)University of New Mexico

Engaging People with Lived Experience in the Earliest Stages of Research

Beth Hribar, MPP; Jonathan Alpert, MD, PhD; Megan Ghiroli; Emma Kaywin, EdD; Richard Lipton, MD; Shadi Nahvi, MD, MS; Brianna Norton, DO; Caryn Rogers, PhD; Joanna Starrels, MD, MS; Julia Arnsten, MD, MPH - Albert Einstein College of Medicine/Montefiore Medical Center

A Survey-based Assessment of Barriers and Facilitators to Prescribing Medication for Opioid Use Disorder in Rural Settings

Michael Incze, MD, MEd; David Chen, MD; Nicola Lanier, BS; Sonia L. Sehgal, BS, Annika Hansen, MA; Nicholas Hanse, BA; Michael Incze, MD, MSEd - University of Utah

A Survey-based Assessment of Barriers and Facilitators to Resident-led Prescribing of Buprenorphine in the Inpatient Setting

Michael Incze, MD, MEd; David Chen, MD; Danielle Babbel, MD; Leah Stinson, MD; Carolyn Bell, MD - University of Utah

Evaluating the Effectiveness of Case-Based Learning in a Rural-Focused Substance Use Disorder Telementoring Program

Michael Incze, MD, MEd; Stormy Foster-Palmer, BS; Sarine T. Scott, BS; Izzy Marshall, MD - University of Utah

Patient Perceptions of Harm Reduction Kits in an Addiction Treatment Program

Raagini Jawa, FASAM, MD, MPH[1], **Margaret Shang, MD**[2]; Brent Thiel, MD; Ariana Freund - (1)University of Pittsburgh School of Medicine, (2)University of Pittsburgh Medical Center

Precipitated Withdrawal in Outpatient Buprenorphine Initiations among Patients Using Daily Fentanyl

Benjamin Laird Hutton Jones, Medical Student; Michelle Geier, PharmD, John Neuhaus, PhD, Phillip O. Coffin, MD, MIA, Hannah R. Snyder, MD, Christine S. Soran, MD, MPH, Leslie W. Suen, MD, MAS - University of California, San Francisco School of Medicine

Patient Feedback on the Patient Assessment of Provider Harm Reduction Scale (PAPHRS)

Emma Sophia Kay, MSW, PhD; Jessica Townsend, MA; Jessica Ward, BS; Stephanie Creasy, MPH; Mary Hawk, DrPH, LSW - Magic City Research Institute

The Rural Addiction Implementation Network (RAIN): A novel approach to address addiction prevention, treatment, and recovery in rural and frontier settings.

Alan Taylor Kelley, MD, MPH, MSc; Kody Hafen, BA; Cole Fordham, BA; Audrey L. Jones, PhD; Gerald Cochran, PhD MSW; Adam J. Gordon, MD MPH - University of Utah

Developing an Interdisciplinary Addiction Medicine Elective: A Model for Improving Medical Student Education

Timothy Kelly, MD; Rahee Madhav Nerurkar, MD - Icahn School of Medicine at Mount Sinai Hospital

Understanding Whether a Visual Tool Can Help Future Nurses Improve Care and Reduce Stigma Towards People Who Use Drugs

Meredith Kerr, CRNP, DNP, FNP-C; Kirah Aldinger-Gibson, MSN, RN; Marianne Fingerhood, DNP, ANP-BC, CNE - Johns Hopkins University, Baltimore City Health Department

A Call to Improve Medical Student Training: Implementation of A Novel Educational Modue on Substance Use in Pediatric Populations

Saira Khan, BS; Monica Shekher-Kapoor, MD; Melissa Pawelczak, MD; Stephen Butkus, MS; Laura Harrison, MPH; Sandeep Kapoor, MD, MS-HPPL; Mersema Abate MD, MPH - Donald and Barbara Zucker School of Medicine at Hofstra / Northwell

Using the 72hour Rule to Link Patients from Hospital Discharge to Methadone Intake

Jared Wilson Klein, MD, MPH; Norah Essali, MD, James Darnton, MD; Elenore B Bhatraju, MD, MPH - University of Washington; Harborview Medical Center

Exploring Patient-related Factors Behind Racial Inequities of Buprenorphine Treatment in Primary Care

Sunny Kung, MD; Sarah Casey, BA; Susan Regan, PhD; Sydney McGovern, MS; Samantha M. Sawyer, MPH; Sarah E. Wakeman, MD - Mass General Brigham Community Physicians

Impact of a Brief Educational Intervention on Individual Preferences for Medications for Opioid Use Disorder

Pooja Lagisetty, MD, MSc; Stephanie Slat,BS; Emaun Irani,BS; Adrianne Kehne, BS; Colin Macleod, BS; MS,Amy S.B. Bohnert, PhD - University of Michigan Medical School

Keeping the Door Open: Re-engaging Patients After Discontinuation of Extended-release Buprenorphine (XR-BUP) – A Case Study

Hung Le, APRN[1], **Rachel King, MD**[1]; Aimee Marchand, RN; Saima Sherman, RN - (1)EBNHC - South End Community Health Center **Overcoming Fear of Opioid Withdrawal: A Case Highlighting Challenges of Outpatient Buprenorphine Induction**

Sophia C. Levis, MD Candidate, PhD; Jaesu Han, MD - University of California Irvine School of Medicine

Screening for Substance Use Disorders in Primary Care Settings: A Systematic Review

Li Li, MD; Bianca Bryant, MS; Joseph D Wolfe, PhD; Davis Bardford, MD; Ishika Patel, BS - University of Alabama at Birmingham School of Medicine

Establishing and Evaluating a Portfolio of Addictions ECHO Programs to Address Statewide SUD Treatment Capacity Challenges

Adrienne C. Lindsey, MA, DBH; Carma Deem Bolton, PhD, MS; Erin Finley, PhD, MPH; Andrea Hebler; Tara Wright, PhD, MS; Jennifer Sharpe Potter, PhD, MPH - University of Texas Health San Antonio

Successful Emergent Surgery for Necrotic Reaction Following Administration of Long-acting Injectable Buprenorphine: A Case Report

Vanessa Loukas, CARN-AP, FNP-C, MSN; Joseph Boyle, MD; Jill Shaw, RN; Jasmine Muwonge, RN; Carly Taylor, MD, Colleen T. LaBelle, MSN, RN-BC, CARN; Alicia S. Ventura, MPH - Boston Medical Center and Boston University Chobanian & Avedisian School of Medicine

Peer-led Behavioral Activation – Examining Feasibility in Two Resource-limited Settings

Brian Lusby, Medical Student, MSc; Helen Jack, M.D.; James Darnton, M.D.; Mirriam Mkhize, MSW; Alexandra Rose, MSc; Mary Kleinman, MS, MPH; Tolulope M. Abidogun, MBBS, MPH; Morgan S. Anvari, BA; Jessica Madigson, PhD; - UWSOM Medical Student

The Development of an Opioid Misuse Training Program for Physical Therapists: A Learning Community Approach

John Magel, PT, DSc, PhD; Elizabeth Siantz, PhD, MSW; Priscilla Blosser, RN, BSN; Julie M. Fritz, PT, PhD; Adam J. Gordon, MD, MPH - University of Utah

The Promise and Limitations of the Youth Opioid Recovery Support (YORS) Intervention: Case Study of a Young Adult who Died from Overdose

Kamala Mallik-Kane, MPH, MSc; Kevin Wenzel, PhD; Marc Fishman, MD - Mountain Manor Treatment Center / Maryland Treatment Centers

Sex Differences in Perceived Stigma and Discrimination Based on Substance Use Among Syringe Services Program Clients

Stephanie L Maricic, BA, MSc[1], **Juan A Gatica Portillo, BA, MPH**[1]; Megan Ghiroli, BA; Teresa Lopez-Castro,BA, Phd; Aaron Fox,BS,MD,MS - (1)Albert Einstein College of Medicine

Opportunities to equip Colorado school health professionals with evidence-based practices to identify and address youth alcohol and substance use

Nora M. Marino, MPH; Nora M Marino, MPH; Tracy McPherson, PhD; Giana Calabrese, MPH; Abby Mariani, MPH; Carolyn Swenson, MSPH, MSN, RN; Adam Musielewicz, MPA, BA, CNM; Elizabeth Pace, MSM, RN, CEAP, FAAN; Ellen Velez, MSW, MPH, CHES - NORC at the University of Chicago

Participant Retention in Digitally Provided Buprenorphine Treatment for Opioid Use Disorder Compared with Treatment as Usual Office-Based Treatment: Results of an Observational Longitudinal Cohort Study

Stephen Alexander Martin, MD; Brian Chan, MD; Ryan Cook, PhD; Ximena Levander MD MCR; Katherine Wiest, PhD; Kim Hoffman, PhD, Kellie Pertl, MPH; Ritwika Petluri, BA; Dennis McCarty, PhD; P. Todd Korthuis, MD MPH - Boulder Care, UMass Chan Medical School

Evaluation of Injection Drug Use and Wound Care Practices among Participants of a Mobile Syringe Services Program

Hannah P. McCullough, PharmD Candidate[1], **Amber R. Tran, PharmD Candidate**[1], **Lindsey J Loera, PharmD**[1], **Lucas G. Hill, BCACP, PharmD**[2]; Berkin Kutluk, PharmDc; Dalaina Dreymala, PharmDc; Eric Lumanog, PharmDc; Leah Nealis, PharmDc; Lorie Kmetz,

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Understanding Psychedelic-Augmented 12-Step Recovery: A Mixed Methods Study

Nicky J. Mehtani, MD, MPH; Maha N. Mian, PhD; Gabrielle Agin-Liebes, PhD; Alison Coker, PhD; Jennifer Mitchell, PhD; Brian T. Anderson, MD MSc - University of California, San Francisco

An Evaluation of Statewide Perinatal ECHO Intervention for Multidisciplinary Healthcare Providers

Sarah Messmer, MD; Paige Pickerl, LCSW, MSW; Tanya R Sorrell, PhD; Kathy Wollner, MD; Kamaria Patterson, MHS - University of Chicago-Illinois

Determinants of Substance Use Treatment Completion and Substance Use Recurrence Among Criminal Justice Involved Adults with Comorbid Schizophrenia

John Moore, MSW; Tanya Renn, PhD; Christopher Veeh, PhD; Sara Beeler, PhD; Megan Vogt, MSW - University of Texas at Austin

Enhancing Peer-based Group Feedback to Improve Presentation Skills among Interprofessional Addiction Fellows

Kenneth L. Morford, MD; Ellen L. Edens, MD, MA, MPE; Srinivas B. Muvvala, MD, MPH; MacKenzie R. Peltier, PhD - Yale School of Medicine

Barriers to Post-Acute Care for Patients with Opioid Use Disorder: A Case Report

Megan Muller, Medical Student[1]; **Andrea J Landi, MD**[2] - (1)University of Chicago Pritzker School of Medicine, (2)University of Chicago Medicine

Caring for People Who Use Drugs – A Training that Introduces Harm Reduction to Pre-hospital Emergency Medical Service Providers

Stephen P. Murray, MPH; Alexander Walley, MD, MSc; Brittni Reilly, MSW - Boston Medical Center

Improving Knowledge and Attitudes towards Opioid Overdose Response: Pharmacy Student-led Training for Laypeople in a High-Risk Community

David Nguyen, PharmD Candidate; Wendy Xia, PharmD Candidate; Angela Yang, PharmD Candidate; April Zhou, PharmD Candidate, Rebecca Leon, PharmD, APh - University of California, San Francisco

A Complex Case of Clonidine

Surabhi Nirkhe, MD - San Francisco Department of Public Health

A 3-year Review of a Hospital-based Opioid Stewardship Program

Seonaid Nolan, MD; Arielle Beauchesne, PharmD, ACPR, ACPR2; Tamara Mihic PharmD; Felicia Yang, PharmD; Mike Legal, BSc (Pharm), ACPR, PharmD, FCSHP; Steve Shalansky, B.Sc. (Pharm), ACPR, Pharm.D., FCSHP; Lianping Ti, PhD - Assistant Professor, UBC

A Universal Training to Reduce Stigma when Conducting Research with People who Use Drugs

Brianna L. Norton, DO, MPH; Emma Kaywin, MS; Dinah Ortiz; Megan Ghiroli; Beth Hribar, MPP; Aaron D. Fox, MD, MS; Julia H. Arnsten MD, MPH; Shadi Nahvi, MD, MS; Joanna Starrels, MD, MS - Montefiore Medical Center/Albert Einstein College of Medicine

A Rare Case of Suspected Krokodil-related Skin and Soft Tissue Infections (SSTI)

Samuel O Nwaobi, MD, MPH; Amaka Ugoh, MD; Agatha Osadolor, MD; Courage Idahor, MD - Piedmont Columbus Regional

Improving Tolerability of Buprenorphine Taper Utilizing an Extended-Release Formulation

Haley Pals, PharmD; Claudia Epland, PharmD - Tomah VA Medical Center

Engaging Black and Latino Men in Recovery-Based Reentry Programming

Ranjani K. Paradise, PhD; Clarissa Dias, PhD; Benjamin Goldberg; Andres Hoyos-Cespedes, MPH, CPH; Sarah Jalbert, MA, PhD; Laura McElherne, MSW; Katie Zafft, PhD - Institute for Community Health

Exploring the Barriers and Facilitators of Medication-assisted Treatment For Cocaine Use Disorder among Men Who Have Sex with Men

Kishan K. Patel, MD; Elaine Hsiang, MD; Janet Ikeda, MA; Glenn-Milo Santos, PhD, MPH - University of California San Francisco

Factors Influencing Patient-Directed Discharge among People who Use Drugs

Kara J. Pavone, PhD, RN; Sofia Valentin; Jaclynn Elkind, PhD, RN; Hilary Gorgol, BSN, RN, CHPN; Peggy Compton, PhD, RN, FAAN - University of Rhode Island

Addressing the Interface of Pain and Addiction to Improve Opioid Prescribing Practices and to Provide Optimal Care for Inherited Pain PatientsDavid C. Perlman, MD; Amy Swift, MD; Jessica Robinson-Papp, MD; Dale Mandelman, RN; Vani George, MD; Sarah A Humphreys, MD - Icahn School of Medicine at Mount Sinai

Low Barrier Outpatient Alcohol Withdrawal Management

Alyssa Peterkin, MD; Jordana Laks, MD, MPH and Jessica L. Taylor MD - Boston University Chobanian & Avedisian School of Medicine, Boston Medical Center

One Year Analysis of Methadone for Acute Opioid Withdrawal in the Emergency Department

Kaitlin Pothier, PharmD; Natalija Farrell PharmD, BCPS, DABAT, FAACT - Boston Medical Center

Cannabidiol May Help to Reduce Risk by Attenuating Cue-Reactivity in Individuals with Opioid Use Disorder Receiving Buprenorphine or Methadone: A Pilot, Placebo-controlled, Double-blind, Cross-over trial

Sara Prostko, BA[1], **Veronica Szpak, MSc**[1]; Peter Chai, MD; Primavera Spagnolo, MD, PhD; Saeed Ahmed MD; Ruth Tenenbaum BA; Rodger D. Weiss MD; Joji Suzuki MD; Saeed Ahmed, MD - (1)Brigham and Women's Hospital

Response to Addiction Recovery (R2AR): Pilot and Feasibility of a Patient-Reported Outcome Measure of Recovery

Sharon Reif, PhD; Elisabeth Okrant, PhD, MPH; Constance M. Horgan, ScD; Genie Bailey, MD; Margaret T. Lee, PhD; Blaire Simas, BA; Karen Alfaro, MPH; Madeline Brown, MA; Grant A. Ritter, PhD; Lee Panas, MS - Brandeis University

Harm Reduction Services for Veterans in Supportive Housing: Comparing Outreach Approaches

Tessa Lynne Rife-Pennington, PharmD, BCGP; Sarah Burbank, MD; Wendy Furnas, LCSW; Patricia Montalvo, RN; Arthur Hunt, RN; Thao Vu, PharmD - San Francisco Veterans Affairs Health Care System, University of California, San Francisco, School of Pharmacy

Addiction Bootcamp Basics: Implementation of a 2 day, 4-hour Interprofessional, Inpatient-based Addiction Conference

Jessica Tyler Ristau, MD - University of California, San Francisco

HOPE after overdose: program description and early data from a rapid interdisciplinary post-overdose intervention by the Home Outreach Prevention and Engagement team in San Francisco

Jessica Rivera, JD; Alexander Bazazi, MD, PhD; Dominique McDowell; Christine Soran, MD, MPH; Andrew Tompkins, MD, MHS; Duyen Pham; Josette Rojo - University of California San Francisco

Effects of Housing Stability Among Men in Residential Treatment

Ryan Salerno, BS; Sarah E Cooper, MSW; Raymond Crowthers, BS; Jaimy Jabon, BS; Jamey Lister, PhD; Richard Jermyn, DO, Andrew Peterson, PhD; Kristen Powell, PhD - Rowan School of Osteopathic Medicine

Emergency Room Nursing Electronic Health Record-Facilitated Naloxone Prescribing and Overdose Education

Elizabeth Salisbury Afshar, MD, MPH; Collin Michels MD; Christian Hext, MD; Jenna Meier Payne BSN, RN, CCRN; Kayla Zubke MSN, RN - Wisconsin Department of Health Services, University of Wisconsin Madison

Alcohol Use Risk Levels and Reasons to Change Use among College Students who Completed a Web-Based Form of Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Jessica Samuolis, PhD; Annalise Baldi, Madeleine Pralea - Sacred Heart University

Pilot-Test of Web-Based Alcohol Use and Cannabis Use Screenings: College Students' Experience of the Screenings, Student Norms, and Campus Norms

Jessica Samuolis, PhD; Victoria Osborne-Leute, PhD, MSW - Sacred Heart University

Understanding and Bolstering the Peer Workforce: Findings from the 2023 FORE Survey of Peer Recovery Coaches

Karen Scott, MD, MPH[1], **Ken Shatzkes, PhD**[1]; Yuyan Huang, MPH - (1)Foundation for Opioid Response Efforts

Hospital Providers' Perspectives on Treatment of Patients with Co-occurring Substance Use Disorders

Riley D. Shearer, Medical Student, PhD Candidate; Edith Hernandez, BS; Nathan Shippee, PhD; Tyler Winkelman MD MSc; Angela Bazzi, PhD MPH - University of Minnesota

Project COMPS, Contingency Management Program for Stimulants: A Primary Care Pilot for Veterans

Amehed Shek, LCSW; Sarah Burbank, MD; Jenna Ferrara, LCSW - San Francisco VA Health Care System

Association of Perinatal Antidepressant Use with Neonatal Abstinence Syndrome and Maternal-delivered Care among Birthing Patients with Opioid Use Disorder

Clayton J. Shuman, MSN, PhD, RN; Rebecca Williams, BSN, RN; Carol Boyd, PhD, RN, FIAAN, FAAN - University of Michigan School of Nursing

What is La Mentoria? A Qualitative Case Study of Culturally Responsive Peer Support in Utah

Elizabeth Siantz, PhD; Adriana Nuncio Zuñiga, MSW; Jules Martinez, MSW, CPSS; Teresa Molina, PhD, MSW, MBA; Javier Allegre, BScB, CPSS - College of Social Work, University of Utah

The Effect of Overdose Response and Occupational Safety Training on Naloxone-related Risk Compensation Beliefs among Law Enforcement Officers who Did or Did Not Witness an Overdose Death

Saad T Siddiqui, MPH; Zach Budesa, PhD; Jeremiah Goulka, JD; Leo Beletsky, MPH, JD; Rachel P. Winograd, PhD - Missouri Institute of Mental Health

Opportunities for Racial/Ethnic Equity in Addiction Consult Teams

Sasha N. Skinner, MPH; Oanh K Nguyen, MD, MAS; Hannah R Snyder, MD; Marlene Martin, MD - Zuckerberg San Francisco General Hospital

Exploring the Role of Age Group in MOUD Treatment Preferences and Initiation among Patients with OUD

Sophia Solan, BA; Kevin Wenzel, PhD; Jennifer Carrano, PhD; Praveena Machineni, MBBS; Lauren Rudin, PsyD; Julia Thomas, BS; Marc Fishman, MD. - Maryland Treatment Centers

The Dreaded Red (high-risk) Drug-drug Interaction Warning: Methadone, Linezolid, and the Challenges of Providing Antibiotic Options in Imperfect Clinical/social Scenarios

Natalie Stahl, MD, MPH - Greater Lawrence Family Health Center

Using a Symptom-Focused Treatment Approach for Methamphetamine Use Disorder and Methamphetamine-Associated Pulmonary Hypertension

Laura A. Stolebarger, BSN; Jennalyn Mayeux, APRN; Katherine Clapham, MD; Michael Incze, MD, MSEd - University of Utah Clinics

Initial Outcomes of a Quality Improvement Initiative to Increase Intranasal Naloxone Dispensing at Discharge among Postpartum Patients at Increased Risk of Opioid Overdose

Hannah Stone, MD; Elise Dasinger, PharmD, MHA; Brian Brocato, DO; Samuel Gentle, MD - University of Alabama at Birmingham

The Role of Social Work in a Large-Scale Multi-Site Research Study

Rachel Sword Cruz, MPH, MSW, **Caroline Savitzky, MSW**; **Monica Nouvong, MPA, MSW** - Boston Medical Center

An Intensive Outpatient Program for Hospitalized Patients with Opioid Use Disorder and Injection-Related Infections: A Qualitative Study

Veronica Szpak, MSc[1], **Sara Prostko, BA**[1]; Roger Weiss, MD; Joji Suzuki, MD - (1)Brigham and Women's Hospital

Accessibility of Office-based Buprenorphine Treatment for Opioid Use Disorder in Texas

Grace I. Ukazim, PharmD Candidate[1], **Amber R. Tran, PharmD Candidate**[2]; Lindsey J. Loera, PharmD; Claire M. Zagorski, MSc, LP; Andres Temblador, MA; Carlos F. Tirado, MD, MPH; Lucas G. Hill, PharmD - (1)University of Texas at Austin College of Pharmacy, (2)The University of Texas at Austin College of Pharmacy

Tracking Naloxone Use in the Fentanyl Era: Missouri's Overdose Field Report (ODFR) as a Collaborative Tool for Monitoring Overdoses and Naloxone Administration

Christopher Kyle Vance, BA; Zach Budesa, PhD; Sarah Phillips, MA; Lauren Green, MSW; Xiao Zang, PhD; Brandon Marshall, PhD; Rachel Winograd, PhD - Missouri Institute of Mental Health

Implementing Community Reinforcement and Family Training for Caregivers (CRAFT-C) in Youth with Substance Use Disorders via a Group Telehealth Model: A Pilot Study

Siena Vendlinski, BS; Alison Giovanelli, PhD; Marianne Pugatch, PhD, LICSW; Steven Marsiglia, MA, MS; Elizabeth Ozer, PhD; Veronika Mesheriakova, MD - University of California, San Francisco

Engaging Affected Family Members in Substance Use Disorder Care: Knowledge, Attitudes, and Behaviors of Addiction Care Teams

Alicia S. Ventura, MPH; Jiang Wang, MS; Radhika Puppala, MPH; Moriah Wiggins; Cala Renehan; Sarah Bagley, MD, MS - Boston Medical Center

The Intersection of Peer Support and Substance Use Disorder in Nurses

Kristin M. Waite-Labott, BSN, RN, CARN, CPRC - Wisconsin Peer Alliance for Nurses (WisPAN)

The Impact of COVID-19 on Alcohol and Illicit Drug Use and Related Consequences among Patients with Opioid Use Disorder Recruited from an Office-based Addiction Treatment Setting

Zoe Weinstein, MD, MSc; Kara Magane, MS; Sara Lodi, PhD; Alicia Ventura, MPH; Angela Bazzi, PhD; Juliana Blodgett, BA; Sarah Fielman, BS; Melissa Davoust, MSc; Clara Chen MHS; Anna Cheng,BA; Jacqueline Theisen, BA; Samantha Blakemore, MPH; Colleen Labelle ,MSN, RN, CARN; Richard Saitz, MD, MPH - Boston University

Treatment Retention and MOUD Uptake among Adults with OUD in a Public-sector Inpatient Treatment Program

Kevin Wenzel, PhD; Kathleen Anderson, BS; Julia Thomas, BS; Aline Rabalais, PhD; Jennifer Carrano, PhD; Sophia Solan, BS; Praveena Machineni, MBBS;Marc Fishman, MD - Maryland Treatment Centers

Immediate Fentanyl to Extended-Release Buprenorphine Transition in Two Adolescents with OUD

Tirzah Wethern, MD; Susan L. Calcaterra, MD, MPH, MS; Kaylin Klie, MD, MA, FASAM; Christian Thurstone, MD - University of Colorado School of Medicine

Barriers and Facilitators to Accessing Harm Reduction Services and Adopting Harm Reduction Practices among Hospitalized People who Inject Drugs

J. Deanna Wilson, FASAM, MD, MPH; Rachel L. Weger, BA; Nate Weinstock, BA; Raagini Jawa, MD, MPH, FASAM - University of Pennsylvania Perelman School of Medicine

Diversity Matters: The State of DEI Efforts within Addiction Medicine Fellowship Programs

J. Deanna Wilson, FASAM, MD, MPH; Paula Lum, MD, MPH; Louis Baxter Sr, MD, DFASAM, DABAM, ACAAM Anti-racism DEI Committee - University of Pennsylvania Perelman School of Medicine

Actualizing Change: Empowering Peers and Enhancing Harm Reduction Services through Qualitative Research with Satellite Syringe Service Participants

Candace Winstead, PhD; Teresa Winstead, PhD; Lois Petty; Kristina Toma, BS - California Polytechnic State University, SLO Bangers Syringe Services Program

Pedagogical Considerations for Enhancing Peer Support Training in an Online University Environment

Tricia H Witte, PhD; Mercy N Mumba, PhD; Jessica Jaiswal, PhD, Teairra Evans, MA, George Mugoya, PhD - The University of Alabama

Tars over Texas: A Community-Driven Approach to Low-barrier GC-MS Drug Testing

Claire M Zagorski, LP, MSc; Nabarun Dasgupta, MPH, PhD - The University of Texas at Austin College of Pharmacy

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Abstract Award Winner Presentations

Utilizing the First Sanctioned Overdose Prevention Center to Provide Directly-Observed HCV Treatment Among People Who Inject Drugs in NYC

Brianna L Norton, DO, MPH; Gabrielle Ryan, MS; Joseph DeLuca, MD; Susan Spratt; Latonia Jacobus; Benjamin T. Hayes, MD, MSW, MPH; Julia H. Arnsten MD, MPH - Montefiore Medical Center

Background: People who inject drugs (PWID) make up the overwhelming majority of persons living with HCV in the United States, yet efforts to reach HCV elimination continue to fall short on targets to cure HCV in this population. To reach PWID effectively, HCV treatment must be implemented in community-based settings where PWID already access services. In November 2021, after the first two sanctioned Overdose Prevention Centers (OPCs) were opened as 'OnPoint NYC,' we created an innovative program for onsite, directly observed, HCV treatment (DOT).

Objective: To increase HCV evaluation, treatment initiation, adherence, and cure for PWID by offering OPC-based care with directly observed therapy (DOT).

Methods: After meeting with institutional and community stakeholders, we established the Montefiore-OnPoint clinic to provide onsite primary care and substance use disorder treatment to PWID who use OnPoint's harm reduction services. HCV-infected participants are identified through HCV rapid testing and self-report. Labs and clinical evaluation are conducted onsite. Patients with a positive HCV viral load are offered direct-acting HCV antivirals through DOT at the OPC. HCV medications are safely locked in a storage cabinet, and OnPoint OPC staff deliver daily medications to patients, as many participants utilize the OPC daily for safe substance use.

Results: Since January 2023, seven OnPoint OPC clients initiated onsite HCV treatment; five opted for DOT. Of the five who chose DOT, two are still on treatment and engaged in care, two have completed treatment and achieved an undetectable HCV viral load, and one discontinued treatment due to competing priorities. Most participants attended daily, but take-homes were given for pre-planned non-attendance. Of the two patients who opted to take all HCV medication at home, one remains on treatment and one completed treatment with an undetectable HCV viral load (though two weeks of medication were lost and needed to be replaced through donation).

Conclusions: PWID remain the hardest to reach HCV-infected population in the US, with the highest likelihood to transmit the infection to others through drug use. Our initial experience demonstrates that onsite HCV treatment at OPCs (with the option for DOT) may reach PWID and achieve the goal of HCV elimination.

Xylazine in the Illicit Drug Supply- Need for Responsive Educational Models

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Background: Since 2020, the presence of xylazine in the illicit drug supply has increased, causing clinical harm. However, there is limited information on how to mitigate associated risks, highlighting the need for educational models responsive to changes in the drug supply.

Objective: Describe the impact of a novel virtual xylazine training targeting a diverse group of professionals working with people who use drugs (PWUD).

Methods: A one-hour virtual session on xylazine was developed within an addiction training and technical assistance (TTA) program. The training objectives were to: (i) introduce xylazine as a dangerous adulterant, (ii) review xylazine-associated harms (i.e., prolonged sedation, complex overdose, and wounds), and (iii) introduce harm reduction strategies related to xylazine use. An addiction medicine physician and a harm reduction specialist with lived experience led each session. Participants completed a post-training survey that asked, "How did this program affect professional development, clinical practice, or patient outcomes?" Demographic data from the registration system were analyzed to assess program reach, and post-training survey responses were coded and analyzed using inductive thematic analysis. Requests for TTA related to xylazine were summed.

Results: We conducted eight public, virtual trainings between October 2022 – March 2023, attended by 1449 individuals caring for PWUD in 48 states; 55% completed a post-training survey. Most participants were in clinical (44%) or community/peer support (19%) roles. Several themes emerged about the impact of the training: (i) intention to provide education about xylazine to patients, colleagues, and community, (ii) increased understanding and recognition of xylazine-associated harms, (iii) increased confidence managing sequelae of xylazine (e.g., appropriate wound care, overdose response, and withdrawal management). In this period, >50 requests for TTA about xylazine were submitted.

Conclusions: Professionals working with PWUD need timely education to mitigate the harms of a rapidly changing drug supply. A single training implemented within an existing virtual TTA platform can improve knowledge, inspire practice changes, and increase the confidence of a diverse group of professionals to respond to new threats as they emerge. Existing TTA programs employing an adaptive model can quickly disseminate emergent information, providing the tools to respond effectively to the changing drug landscape.

Bridging to Better Substance Use Treatment: Implementation and Effectiveness of Statewide Emergency Department Opioid Use Disorder Treatment Programs in California

Elizabeth A Samuels, MD, MPH, MHS; Allison Rosen, PhD; John Kaleekal, MPH, MBA; Melissa Speener, MPH; Arianna Campbell, PA-C; Aimee Moulin, MD; Andrew Herring, MD - UCLA Emergency Medicine

Background: Since 2019, CA Bridge has transformed emergency department (ED) opioid use disorder (OUD) treatment in California by providing coaching, resources, and technical assistance to California hospitals to implement low-threshold OUD care, including ED-initiated medication for opioid use disorder (MOUD), patient navigation, and take-home naloxone. After starting with an initial cohort of 52 hospitals, CA Bridge has worked with 278 hospitals across diverse practice settings to provide evidence-based addiction treatment and linkage to outpatient care.

Objective: Evaluate implementation and effectiveness of CA Bridge programs across 278 California hospitals.

Methods: We used retrospective programmatic data and a RE-AIM framework to examine the reach, effectiveness, adoption, and implementation of ED-initiated buprenorphine and substance use navigators (SUNs) at California hospitals participating in CA Bridge from April 2019 to February 2023. Data was evaluated descriptively in aggregate as proportions and counts. The number of patients seen by SUNs and administered and/or prescribed buprenorphine was calculated for each hospital at baseline and for the month with the highest reported value.

Results: From April 2019 to February 2023, 84.5% of California hospitals (278/329) received technical assistance to implement ED buprenorphine and SUN programs in rural, urban, academic, and community EDs. Of these, 90.3% (251/278) fully adopted and implemented the CA Bridge model: hiring SUNs, offering low-threshold MOUD in the ED, and dispensing naloxone. Since full implementation at 251 sites, SUNs were consulted during 234,446 ED visits. Among 183,304 encounters with patients with OUD, buprenorphine was administered and/or prescribed in 41.9% (76,800/183,304) of encounters. After implementation, the monthly average number of patients seen by SUNs at a participating EDs increased from 14 (95% CI: 5-24) to 102 (63-141), and the monthly average number of patients administered and/or prescribed buprenorphine increased from 5 (95% CI: 3-6) to 32 (95%CI: 24-40).

Conclusions: The CA Bridge model is a scalable intervention across diverse settings which can successfully identify patients with OUD and increase provision of MOUD and linkage to outpatient care using SUNs. Future work is needed to evaluate implementation strategies to implement and disseminate this model in other states as part of a national strategy to improve treatment access and address the overdose crisis.

Patient Navigation for Pregnant Persons with Opioid Use Disorder: Results of a Multisite Pilot Study

Gerald Cochran, MSW, PhD; Marcela Smid, MD; Elizabeth E. Krans, MD, MSc; Ziji Yu, PhD; Elizabeth Charron, PhD; Akiko Okifuji, PhD; Adam J. Gordon, MD, MPH; Brad Lundahl, PhD; John Silipigni, MSW, LCSW; Benjamin Haaland, PhD; Ralph Tarter, PhD - University of Utah

Background: Given poor rates of retention in opioid use disorder (OUD) treatment among pregnant persons, it is imperative to identify evidence-based approaches to support these patients

during pregnancy and their recovery. Patient navigation (PN) may benefit pregnant individuals with opioid use disorder (OUD) by improving treatment adherence.

Objective: This study aimed to demonstrate preliminary benefit of a PN intervention compared to standard care (SC) for facilitating linkage/retention in OUD treatment among pregnant persons.

Methods: *Design/Participants*. This pilot randomized trial recruited adult pregnant patients with OUD who were not established (≤6 weeks) on medication for OUD (MOUD) from 2 medical centers. *Intervention*. Up to 10 prenatal and 4 postnatal PN sessions focused on OUD treatment and physical/mental health care engagement. SC included brief case management. *Assessments*. Primary outcomes of MOUD utilization and counseling attendance, secondary outcomes of illicit opioid use, and exploratory overdose rates were assessed at baseline, PN completion (before delivery), and 2- and 6-months postnatally. *Analyses*. We calculated: (1) change scores and p-values for intent-to-treat (ITT) and per protocol (PP, received ≥6 sessions) populations for MOUD, treatment attendance, and illicit opioid use and (2) percentages of overdose for the ITT population.

Results: A total of 102 pregnant persons were enrolled/randomized to PN (n=52) or SC (n=50); with an average follow up rate of 83%. The ITT and PP PN populations showed superior descriptive changes for MOUD utilization, treatment attendance, illicit opioid use, and overdose. The most prominent differences included greater percent change in days of MOUD utilization for the PP PN population compared to SC from baseline to 2-months postpartum (PN=28%/SC= -10.9%, $p<0.01$) and from baseline to 6-months postpartum (PN=45.4%/SC=23.4%, $p=0.05$). Percent change in treatment attendance from baseline to the prenatal assessment was also greater for the PP PN compared to SC group (PN=10.9%/SC= -14.6%, $p=0.04$). PN compared to SC participants reported fewer overdoses at 2-months (PN=11.9%/SC=16.1%) and at 6-month postpartum (PN=3.8%/SC=6.2%).

Conclusions: Findings show provisional improvements in MOUD treatment engagement and overdose rates following the PN intervention and warrant further evaluation.

Alcohol

High Test-Retest Reliability of the Alcohol Use Disorder Identification Test-Consumption Version (AUDIT-C) Completed by Primary Care Patients in Routine Care

Claire Simon, MD; Connor J McCabe PhD; Malia Oliver BA; Katharine A Bradley MD, MPH; Kevin A Hallgren PhD - University of Washington

Background: Excessive alcohol use is the fourth-leading cause of preventable death. Many patients do not have unhealthy alcohol use identified in healthcare settings due to limited implementation of universal alcohol screening with standardized measures. The three item AUDIT-C is among the most widely used screening measures and has been shown to perform as well as the ten item AUDIT. Evidence suggests high test-retest reliability of the AUDIT-C in small research samples, but external validity of these findings is limited due to (1) a lack of

evaluating test-retest in routine primary care settings and (2) limited evaluations of test-retest reliability within demographic subgroups and across screening modalities (e.g., screening in-clinic vs. online patient portals).

Objective: This study evaluates the test-retest reliability of the AUDIT-C completed in routine care in a large primary care sample.

Methods: We performed a test-retest reliability study using electronic health record (EHR) data from primary care patients in 33 Kaiser Permanente Washington Primary clinics. The sample included 18,491 adult patients who completed two AUDIT-C screens 1-21 days apart during 2021. Test-retest reliability was evaluated for AUDIT-C total scores (0-12) using a one-way, single-measures, agreement intraclass correlations (ICC) and for a binary measure indicating unhealthy alcohol use (scores ≥3 women, ≥4 men) using Cohen's kappa.

Results: AUDIT-C screens completed in routine care and documented in EHRs had excellent test-retest reliability for total scores (ICC=0.87, 95% CI: 0.87-0.87) and the binary indicator of unhealthy alcohol use (kappa=0.79, 95% CI: 0.78-0.80). The range for total score test-retest reliability ranged from good to excellent across all demographic groups and modalities (i.e., screens completed in-clinic or through online patient portals). Slightly higher test-retest reliability was observed when both screens were completed through online patient portals (ICC=0.93, 95% CI: 0.93-0.93). Slightly lower test-retest reliability was observed in patients who were Native American/Alaska Native (ICC=0.82, 95% CI: 0.75-0.87) or reported more than once race (ICC=0.82, 95% 0.80-0.84).

Conclusions: In real-world routine care conditions, AUDIT-C screens have excellent test-retest reliably. More information is needed to understand why reliability may vary slightly across screening modalities and racial groups.

Facilitators and Barriers of Alcohol-related Goals for Latinx Individuals Hospitalized with Alcohol Use Disorder

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Background: Latinx individuals are disproportionately affected by alcohol use disorder (AUD). Understanding barriers and facilitators to reaching alcohol-related goals for Latinx individuals can aid in the design and implementation of culturally and linguistically concordant interventions pre-, during, and post-hospitalization.

Objective: The objective of this study was to uncover the barriers and facilitators to AUD-related goals pre-, during, and post-hospitalization for Latinx men with AUD that were hospitalized and seen by an addiction consult team (ACT).

Methods: We performed a qualitative study at an urban safety-net hospital in San Francisco, California. We conducted post-hospitalization, semi-structured qualitative interviews with Latinx

men with AUD hospitalized within the past 20 weeks and who were seen by an ACT member about the facilitators and barriers to AUD-related goals pre-, during, and post-hospitalization. Interviews were recorded and transcribed. Transcripts were deductively coded once thematic saturation was reached (N=10).

Results: We identified six major themes. Barriers to reaching AUD-related goals pre-, during, and post-hospitalization included unaddressed social determinants pre-, during, and post-hospitalization; inaccessible mental health and healthcare services post-discharge; and past dissatisfaction with peer support groups. Facilitators included empathetic, language-concordant interactions with ACT clinicians and the hospitalization itself, which served as a reachable moment for participants. Participants identified their social networks as both barriers and facilitators to achieving alcohol-related goals.

Conclusions: Offering AUD treatment and resources during hospitalization by bilingual healthcare workers may facilitate alcohol-related goals. Intervening on social determinants of health such as housing, employment and immigration status, as well as access to follow-up care, is critical to enacting changes in alcohol use.

Pandemic-Related Changes in Alcohol-Related Adverse Events: A Times Series Analysis of Commercial Claims Data

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Background: Alcohol-related deaths increased in the first year of the Covid-19 pandemic, including among those with alcohol use disorder. We have limited knowledge about how the Covid-19 pandemic affected people who sought acute care for alcohol-related adverse events (ARAEs), such as alcohol withdrawal, and for alcohol-related mental health and neurological disorders (ARMHNDs), such as alcohol-induced psychotic disorder.

Objective: Estimate pandemic-related changes in the rates of people presenting to the emergency department (ED) or inpatient setting with ARAE and ARMHND.

Methods: We used commercial claims data from Optum's Clinformatics® Data Mart Database to conduct a quasi-experimental longitudinal study of a rolling cohort of people aged 15 and older from the years March 2016 to September 2021. Our outcomes included monthly ARAE and ARMHND rates identified in the ED or inpatient setting. We used an autoregressive time series model to estimate level and trend changes in our outcomes beginning March 2020 (index date). We generated relative differences between observed and counterfactual outcomes immediately, 6 months, and 18 months after the index date.

Results: The median monthly denominator included 15,206,235 (IQR 14,866,299-15,420,508) persons. The mean ARAE rate before and after the index date was 1.98 and 2.19 per 10,000 persons, respectively, and the mean ARMHND rate was 0.026 and 0.029 per 10,000 persons, respectively. From February to March 2020, we observed an immediate -22.9% decline (95% -

27.5%, -18.3%; p=0) in the ARAE rate and an immediate -10.1% decline (95% CI -19.8%, 0.5%; p=0.04) in the ARMHND rate. There was no significant difference between the observed and counterfactual ARAE rate at 6 and 18 months after the index date. There was a 14.6% rise (95% 4.6%, 24.3%; p=0.003) in the ARMHND rate relative to the counterfactual rate 6 months after the index date but no significant difference by 18 months. There was a significant increase in the slopes of ARAE and ARMHND rates during the pandemic.

Conclusions: We observed immediate declines in ARAEs and ARMHNDs in March 2020 followed by a worrisome acceleration and sustained increase in ARMHND rates that did not return to expected levels until August 2021.Alcohol-Related Adverse Events and Alcohol-Related Mental Health & Neurologic Disorders (Emergency/Inpatient)

Latino-White Disparities in Screening and Receipt of Medications for Unhealthy Alcohol Use in the OCHIN Network of Community Health Centers

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Background: Unhealthy alcohol use and the sequelae of alcohol-related diseases continue to be an important health concern; there is evidence that the COVID-19 pandemic was associated with increased alcohol use and related mortality. The US Preventative Services Task Force (USPSTF) in 2018 updated its recommendation to screen for unhealthy alcohol use in primary care settings in adults. Given existing cardiovascular health disparities in Latino populations successful screening for unhealthy alcohol use and alcohol use disorders is important in community health settings which serve a high proportion of Latino patients.

Objective: We evaluated the odds of unhealthy alcohol screening in adults by ethnicity and language preference.

Methods: This was an observational cohort study using OCHIN data, a multi-state electronic health record (EHR) network of community health centers (CHCs). The population was adults seen in primary care between 2012-2020. We used logistic regression via generalized estimating equations to estimate the covariate-adjusted relative odds of receipt of alcohol screening and among those with alcohol use disorder (AUD), receipt of medications for alcohol use disorder (AUD). Our predictor of interest was ethnic-language preference groups (NHW, Latino-Spanish language preferred, Latino-English language preferred).

Results: There were 1,781,206 patients in the sample across 26 states with average age of 41.5 years (SD=15.3). Over half were female (57%); 22% were never insured, while 51% reported some public insurance. There were 57% NHW, 27% Latino-Spanish language preferred, and 16% Latino-English language preferred patients. Of the study sample, 41% had received SBIRT screening during this period. Both Latinos who preferred Spanish (aOR=2.14, 95% CI: 2.11, 2.17) and who preferred English (aOR=1.41, 95% CI 1.39, 1.42) had increased odds of alcohol screening compared to NHW. However, among those with an alcohol use disorder, both Latino

groups had lower odds of receipt of medications for AUD versus NHW (aOR=0.74, 95% CI: 0.64, 0.84; aOR=0.77, 95% CI 0.70, 0.85)

Conclusions: In a multi-state cohort of CHC patients seen in primary care, we found Latinos had higher rates of alcohol screening compared to NHW, but among those with AUD, had lower odds of receipt of medications for AUD, a mismatch in evidence based care.

Are Electronic Brief Interventions for Unhealthy Alcohol Use Based on Norms and Risk Perception Working as Hypothesized?

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Background: Many electronic interventions for unhealthy alcohol use are based on feedback on norms and risks for health. The hypothesis is that changing the perception of drinking norms and risks will result in changes in drinking.

Objective: We investigated whether the effect of a smartphone-based intervention on alcohol use was mediated through these mechanisms.

Methods: 1770 students from four higher education institutions in Switzerland (Mean [SD] age = 22.35 [3.07]) who screened positive for unhealthy alcohol use were randomized to receive access to a smartphone application or to a no-intervention control condition. The smartphone application provided normative feedback and personalized feedback on risks associated with drinking. Number of standard drinks per week (the outcome) was assessed at baseline and 6 months; perceptions of drinking norms and risks (the mediators) were measured at baseline and 3 months. A parallel mediation analysis was conducted to test whether the intervention effect was related to lower drinking (in standard drinks per week) at 6 months (adjusting for baseline values) through drinking norms and risk perceptions at 3 months (adjusting for baseline values).

Results: The total intervention effect was significant (b = -0.87 [95% bootstrap confidence interval -1.50; -0.26]), indicating lower drinking at 6 months in the intervention group. The direct effect (i.e. controlling for mediators) was significant but smaller (b = -0.75 [-1.34; -0.18]). The indirect effect was significant through drinking norms (b = -0.12 [-0.23; -0.02]): The intervention was associated with lower drinking norms at 3 months (b = -0.76 [-1.33; -0.16]), and norms at 3 months were associated with drinking at 6 months (b = 0.15 [0.08; 0.24]). The indirect effect through risk perception was not significant.

Conclusions: Drinking norms, but not risk perception, partially mediated the intervention effect on alcohol use, confirming one hypothesized mechanisms of action. These findings lend support for normative feedback interventions for unhealthy alcohol use.

ED-Based Care

Low Incidence of Precipitated Withdrawal During a Multi-site ED Buprenorphine Clinical Trial in the Era of Fentanyl

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Background: Buprenorphine is an essential medication to combat the opioid crisis. Yet, many clinicians, based on low quality evidence, have raised concerns over an increased incidence of precipitated withdrawal (PW) when buprenorphine is initiated in persons using fentanyl.

Objective: To determine the incidence of PW in a cohort of emergency department (ED) patients initiated on buprenorphine.

Methods: An observational cohort included in an ongoing ED multi-site randomized clinical trial (CTN-0099: ED INNOVATION) testing sublingual (SL-BUP) versus extended-released 7-day injectable CAM 2038 (XR-BUP) in 28 geographically diverse, academic and community EDs located throughout the U.S. Patients $\geq$ 18, with untreated opioid use disorder (OUD), with a urine toxicology test positive for opioids and a Clinical Opiate Withdrawal Scale (COWS) score $\geq$ 4. Patients who are pregnant, have a methadone-positive urine toxicology, or require admission are excluded. Patients randomized to SL-BUP received 8mg if COWS> 8 or unobserved induction if COWS 4-7 and discharged with 16mg per day until follow-up. Those randomized to XR-BUP received a subcutaneous injection of 24mg CAM2038 in the ED, equivalent to SL dosing of 16mg per day. PW, defined *a priori*, was considered when a marked escalation in COWS occurred, additional buprenorphine and/or ancillary medications were required, and was determined prospectively by the ED site investigator and adjudicated by expert consultants.

Results: 1494 patients enrolled from 28 sites resulted in 10 cases of PW (0.66%), 6 in SL-BUP and 4 in XR-BUP. All with PW had fentanyl positive urines, as did 76% of the total sample. There were no factors that suggest a specific phenotype for PW. The routes of use, and the time since last use varied (range 8-24+ hours). All patients who experienced PW were discharged from the ED, one left against medical advice.

Conclusions: The incidence of PW in a large, geographically diverse multi-site trial of ED-initiated buprenorphine was very low (<1%) despite fentanyl. This is the first examination of PW in a prospective trial of buprenorphine induction with a high prevalence of fentanyl using uniform surveillance and adjudicated outcomes. Findings should reassure clinicians that standard buprenorphine initiation in persons using fentanyl is safe and effective.

Developing a Computable Phenotype to Identify Opioid Use Disorder in Emergency Department Visits

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Background: Identification of emergency department (ED) visits for opioid use disorder (OUD) is a key component of research and quality improvement efforts in the opioid epidemic. Algorithms based on ICD10 codes or documentation of OUD-related terms vary in performance due to other substance use disorders, prevalence of OUD, and regional differences in billing and documentation.

Objective: Our goal was to develop a computable phenotype for OUD visits, while specifically including visits implicating confounding substance use disorders.

Methods: We conducted a retrospective, chart review-based study at a single academic medical center. Consecutive ED visits between 10/1/2020 - 9/30/2021 were included based on the presence of any F11 or T40 code as well as any occurrence of opioid, naloxone or overdose-related keywords in the chief concern or triage note. These keywords and ICD10 codes were also used as predictor variables. The outcome variable was presentation to the ED primarily for OUD or related complications. Two independent reviewers evaluated each visit to determine the outcome. A third reviewer resolved disagreements. Interrater reliability and descriptive statistics were calculated. A random forest model for classifying OUD visits was selected after screening multiple classification methods, optimizing for area under the receiver operating curve (AUC) and 10-fold cross validation.

Results: Out of 579 eligible ED visits, 319 (55%) were determined to be primarily OUD-related. Agreement between reviewers was 93% and Cohen's kappa was 0.85. Inclusion of non-opioid related T40 codes yielded only 1 additional OUD visit out of 30 additional visits reviewed. Identification of OUD visits using only F11 and opioid-related T40 codes (AUC 65.3, 95% CI 61.7 - 69) and opioid or naloxone keywords (72.5, 69.1 - 76) both performed poorly. Our random forest classifier outperformed (92.2, 90 - 94.3) other methods including logistic regression (88.4, 85.6 - 91.2). The strongest predictor of OUD visit was the presence of opioid keywords in the triage note.

Conclusions: Classifying OUD related visits from ICD10 codes or presence of keywords alone can result in miscounting of visits. Our random forest classifier yielded superior test characteristics when compared to other methods. External validation is needed for deployment in other health systems.

Prevalence of Fentanyl Analogues in Toxicology Profiles of Emergency Department Patients with Untreated Opioid Use Disorder

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Background: Opioid overdose deaths in 2022 were the highest ever, driven by fentanyl and polysubstance use. While fentanyl's increasing prevalence in the drug supply has been well documented, there is less data on the prevalence of Fentanyl analogs.

Objective: We sought to characterize the presence of Fentanyl analogs as assessed by urine drug screens (UDS) in patients with untreated opioid use disorder (OUD) presenting to 28 Emergency Departments (EDs) in the United States.

Methods: We analyzed UDS from patients enrolled in CTN0099 ED-INNOVATION (**E**mergency **D**epartment-**IN**itiated bupre**NO**rphine **VA**lida**TION**) between July 12, 2020 and November 1, 2022. Study participants were adult ED patients with OUD with a UDS positive for an opioid but negative for methadone. Lateral flow immunochromatographic assays were performed for Furanylfentanyl, Cyclopropylfentanyl, Acrylfentanyl, Butyrylfentanyl, Methoxyacetylfentanyl, Valerylfentanyl, 4fluoroisobutyrylfenyl, Parachlorofentanyl, Sufentanil and Remifentanil. Quantitative liquid chromatography mass spectrometry (LCMS) testing were performed for Fentanyl, Norfentanyl, Acetylfentanyl and Carfentanyl.

Results: Results were available for 1017(99%) of the 1018 enrolled participants. Fentanyl or a Fentanyl analog was present in 770(76%) specimens and 351(34%) respectively. There were 95(9%) specimens with two different and 15(1.4%) specimens with three or more different Fentanyl analogs. Uncommon analogs were, Furanylfentanyl 4/1013(0.4%), Cyclopropylfentanyl 4/1013(0.4%), Acrylfentanyl 1/1016(0.09%), Butyrylfentanyl 7/1010(0.7%), Methoxyacetylfentanyl 67/950(7.0%), Valerylfentanyl 2/1015(0.2%), 4fluoroisobutyrylfenyl 4/1013(0.4%), Parachlorofentanyl 39/978(4.0%), Sufentanil 21/996(2.1%) and Remifentanil 0/1017(0%). Common analogs were Acetylfentanyl 212/1017(21%) and Carfentanyl 116/1017(11.4%). There were 81(8%) specimens that were positive for a Fentanyl analog but negative Fentanyl or Norfentanyl. There were 210(20%) specimens positive for Fentanyl but negative for Norfentanyl and 30(3%) specimens that were positive for Norfentanyl but negative for Fentanyl. The detection of Fentanyl analogs was not geographically homogenous. Four sites accounted for 35% of all the participants with Fentanyl analogs.

Conclusions: In ED patients with untreated OUD, Fentanyl was present in 76% and Fentanyl analogs in 34% of UDS specimens. Given the variable potency of fentanyl analogs relative to fentanyl and their potential impact on buprenorphine induction, understanding the prevalence of these analogs and their geographic distribution is important for clinical and public health purposes.

Buprenorphine Induction in Emergency Department Patients Following Reversal of Nonfatal Opioid Overdose with Naloxone

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Background: Concern for risk of precipitated withdrawal following naloxone administration has been a barrier to (ED)-initiated buprenorphine initiation after nonfatal overdose.

Objective: To examine the safety and tolerability of buprenorphine initiation following reversal of nonfatal overdose with naloxone.

Methods: We conducted a retrospective cohort study of patients 18 years or older that were treated with sublingual buprenorphine-naloxone in a large, urban ED between March 1, 2020 and March 31, 2022. We reviewed cases of patients treated with buprenorphine after receiving naloxone, either pre-hospital or in the ED, and generated a matched cohort of patients that had not first received naloxone. Primary outcomes were (1) precipitated withdrawal and (2) other adverse events related to buprenorphine administration. Bivariate analyses (fisher tests) were conducted to compare demographics, encounter characteristics, and outcomes.

Results: Seventy-four records were reviewed. Patients were primarily Black (89.2%), male (74.3%), and median age was 56.7 (IQR 12.8).

Table 1 shows no significant differences between cases and controls in primary or secondary outcomes. First dose of buprenorphine was higher in the control group (mean 5.8, SD 2.1) compared to cases (mean 4.8, SD 1.6, p=0.01). Compared to controls, cases were less likely to be admitted to the hospital (13.5% vs. 40.5% for controls, p<0.01). Two of the five admissions for cases and one of the 15 admissions for controls were determined to be related to buprenorphine administration.

Table 1: Bivariate analysis by outcome between Cases and Controls

	Cases (n=37)	**Controls (n=37)**	**Total**	**p-value**
Precipitated Withdrawal	2 (5.4%)	4 (10.8%)	6 (8.1%)	0.67
Other Adverse Events	2 (5.4%)	1 (2.7%)	3 (4.1%)	1.00
Sedation	1 (2.7%)	1 (2.7%)	2 (2.7%)	1.00
Hypoxia	13 (35.1%)	6 (16.2%)	19 (25.7%)	0.11
Naloxone Rescue Administration After Buprenorphine	0 (0%)	0 (0%)	0 (0%)	1.00
Repeat ED Visit Within 7 Days	3 (8.1%)	2 (5.4%)	5 (6.8%)	1.00
Hospitalization Within 7 Days	0 (0%)	2 (5.4%)	2 (2.7%)	0.49

Conclusions: Buprenorphine induction following naloxone reversal of nonfatal opioid overdose led to no higher rate of precipitated withdrawal or other adverse outcomes related to buprenorphine administration when compared to induction of patients that did not receive naloxone.

Nationwide Capabilities Assessment of Emergency Department Care of Patients with Opioid Use Disorder: 2022 to 2023

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Background: To enhance dissemination of resources to improve care of emergency department (ED) patients with opioid use disorder (OUD) and assess practices related to OUD care, we developed the American College of Emergency Physicians (ACEP) Emergency Medicine Quality Network (E-QUAL) Opioid Initiative, a virtual platform-based national learning collaborative. This program includes a low-burden, quality improvement project, webinars, and resources designed to support EDs with limited administrative and research infrastructure.

Objective: To assess baseline ED OUD capabilities assessment from each ED enrolling in the 2022 and 2023 collaborative.

Methods: In the spring of 2022 and 2023, EDs indicated services provided including: provision of naloxone, warm transition to outpatient OUD treatment, clinical decision support tools for OUD treatment, departmental protocol for OUD treatment initiation with buprenorphine and presence of any ED clinician who prescribes buprenorphine for OUD. Descriptive statistics and Chi-Square tests are reported.

Results: Of the 227 EDs that completed the 2022 and 2023 capability assessment, 106 (46.7%) were rural and 44 (19.4%) were critical access hospitals. Annual visit volume was <20K in 125/227 (55.1%) EDs, 20-60K in 93/227 (41.0%), and >60K in 9/259 (4.0%) EDs. Naloxone provision to patients presenting with opioid overdose, either by prescription or dispensation, increased from 145/227 (63.9%) to 165/227 (72.7%) EDs between 2022 and 2023; p=0.044. Use of clinical decision support for OUD treatment was similar: 104/227 (45.8%) vs 115/227 (50.7%) EDs in 2022 vs 2023; p=0.302, as was warm transition of care: 24/227 (10.6%) to 35/227 (15.4%); p=0.125. The proportion of EDs with existing buprenorphine protocols was unchanged (21/227;9.3%) vs 22/227;9.7%); p=0.873, but the proportion of EDs with at least one clinician that prescribes buprenorphine increased from 43/227 (18.9%) to 61/227 (26.9%); p=0.044.

Conclusions: Among a nationwide sample of predominately small, with large percentage of rural EDs, most EDs report the provision of naloxone after opioid overdose, but only a small minority have protocols for the initiation of buprenorphine. Despite improvements in the proportion of EDs that provide naloxone and have clinicians that prescribe buprenorphine, opportunities improve the care of ED patients with OUD persist.

The Incidence of Buprenorphine Precipitated Withdrawal in ED and Hospitalized Patients with Opioid Use Disorder and Fentanyl Use in Philadelphia: A Retrospective Cohort Study

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Background: The incidence of precipitated withdrawal (PW) from a traditional buprenorphine induction is unclear for individuals with opioid use disorder (OUD) and fentanyl use. Patients report high rates of PW, whereas a recent secondary analysis of a multicenter clinical trial in Emergency Departments (EDs) estimated low incidence.

Objective: To estimate the incidence of PW overall and for different initial doses of buprenorphine in a cohort of ED and hospitalized patients.

Methods: We extracted electronic health record data for adults with OUD who started buprenorphine in the ED or while admitted to three hospitals in Philadelphia, PA from 1/1/2020-12/31/2021. We included only patients who received an initial sublingual dose of buprenorphine ≥2mg after a documented score of ≥8 on the Clinical Opiate Withdrawal Scale (COWS). We excluded patients who were missing documentation of COWS either before or after receiving buprenorphine. We defined PW as an increase in COWS ≥5 within two hours of the first dose of buprenorphine. We report PW incidence overall, by initial buprenorphine dose, by withdrawal severity, and for patients with urine drug testing (UDT) and fentanyl detected.

Results: Of 374 patients who received traditional buprenorphine induction, 160 met inclusion criteria (mean age 39.0 years, 31.9% female, 35.0% Black race). Overall, 22 patients (13.8%) had PW. The incidence of PW by initial dose was 2 of 29 patients (6.9%) for 2mg, 13 of 96 patients (13.5%) for 4mg, and 7 of 32 patients (21.9%) for 8mg, and 0 of 3 (0.0%) patients for ≥12mg. Thirteen of 102 patients (12.7%) with COWS 8-12 prior to buprenorphine had PW, compared to 9 of 58 patients (15.5%) with COWS ≥13 before buprenorphine. Among 89 patients with UDT and fentanyl detected, 17 (19.1%) had PW.

Conclusions: In this cohort of ED and hospitalized patients in Philadelphia, the incidence of PW was higher than in a recent clinical trial and PW was more common for higher initial doses of buprenorphine up to 8mg. Limitations include a high rate of missing documentation of withdrawal scores and a small sample size. New approaches are needed to quantify and respond to evolving experiences with PW.

Education 1

Emergency Medicine Resident Experiences, Perceptions, and Beliefs Regarding Medications for the Treatment of Alcohol Use Disorder

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Background: Alcohol use disorder (AUD) remains ubiquitous, undertreated and a significant cause of morbidity and mortality for emergency department (ED) patients. Despite the growing availability of evidence-based pharmacotherapy of AUD treatment, these interventions are not

yet integrated into ED care, and a paucity of data exists regarding Emergency Medicine (EM) resident knowledge and training of AUD treatment.

Objective: This study assessed current EM resident experiences, perceptions and beliefs surrounding the use of medications for the treatment of AUD within the ED.

Methods: We created an online survey that was distributed directly to EM residents through the Emergency Medicine Residents' Association research committee listserv and newsletter between January 2023 and April 2023. The survey was voluntary, anonymous, and included 22 questions pertaining to resident knowledge, beliefs and experiences using pharmacotherapy in the ED for AUD treatment. The majority of questions were multiple choice, however the final questions allowed for open-ended responses. Additionally, we collected respondent demographic information including level of training, location and gender.

Results: We received 78 responses from EM residents representing training programs from 24 different US states. The majority of residents responded that they either "strongly agree" or "agree" that it is important for EM residents to be trained in the use of medications for AUD 76/78 (97.4%). However, only 45/78 (57.7%) had similar responses when asked about their confidence in their ability to provide evidence-based treatment to ED patients with AUD, and an even fewer, 12/78 (15.4%), when asked specifically about feeling comfortable prescribing naltrexone for AUD. Only 24/78 (30.8%) of respondents reported receiving any formal training in residency regarding the use of treatments for AUD, with only 5/78 (6.4%) reporting they had ever prescribed naltrexone. The primary identified barriers to prescribing treatment included lack of follow up, lack of time, lack of teaching/knowledge regarding these medications and working in a culture/department where this practice is not common/encouraged.

Conclusions: While most EM residents believe it is important to be trained in the use of medications to treat AUD, numerous barriers including lack of teaching, follow up and knowledge are significant obstacles preventing the integration of these treatments.

Evaluation of a Curriculum on Medication for Opioid Use Disorder for Emergency Medicine Residents

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Background: Though buprenorphine is a safe, effective, and life-saving medication for opiate use disorder (MOUD), several barriers have slowed its widespread incorporation into emergency medicine (EM) practice. These include knowledge gaps about MOUD medications, outdated attitudes about substance use disorders (SUD), and absence of a standardized MOUD curriculum in EM residency programs.

Objective: Our program aimed to address barriers to implementing MOUD through the development and delivery of a multimodal curriculum for EM residents.

Methods: We developed and delivered targeted education on MOUD and harm reduction at a single, four-year, university based EM residency, assessing for changes in learner attitudes and knowledge transfer. After literature review and a needs assessment of EM residents around perceived barriers to MOUD initiation, we created a novel curriculum. Over one year, we delivered six MOUD-related education interventions: 3 lectures, a Grand Rounds, a Clinical Case Review, and a Journal Club. This curriculum included local logistics of MOUD prescribing, scripts to facilitate patient discussions, introduction to community treatment providers, and education on stigma reduction. Surveys derived from validated instruments measured knowledge gains and attitudes at the beginning, midpoint, and end of our curriculum. We used descriptive statistics to examine our results with regression models to evaluate changes over time.

Results: 87% of residents completed the needs assessment revealing discomfort with the legal, institutional, and logistical aspects of ED initiation of MOUD. Objective knowledge transfer on a 12 question survey was not statistically significant across the study period, however attitudes significantly changed, with learners reporting increased confidence across all domains of MOUD delivery. Residents in the pre and post surveys indicated increased comfort discussing MOUD with patients (24% pre; 41% post), initiating buprenorphine in the ED (32% pre; 53% post), and linking to a SUD provider (32% pre; 56% post).

Conclusions: Though objective knowledge transfer was not demonstrated, participants of this curriculum experienced increased confidence in several important domains of MOUD delivery. This intervention can be easily adapted to suit local needs.

Impact of a Medication for Opioid Use Disorder Curriculum for Emergency Medicine Residents

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Background: Emergency Department (ED) initiation of medication for opioid use disorder (MOUD) reduces mortality, decreases non-medical opioid use, and improves treatment adherence and retention. Yet emergency physicians have not uniformly adopted this practice nor is it a standard part of residency education.

Objective: Our goal was to assess the impact of a MOUD curriculum on initiation of buprenorphine and linkage to outpatient treatment. We hypothesized that initiation of MOUD increases after targeted educational intervention.

Methods: We delivered a novel MOUD curriculum based on learner-identified knowledge gaps into a 4-year emergency medicine residency. An interrupted time series analysis was performed for one year pre- and post-training. Data was collected via electronic health record query and manual chart abstraction of consecutive ED visits for OUD or OUD-related complications from

10/1/2020 to 9/30/2022. OUD-related ICD10 codes and keywords in triage documentation yielded the initial sample. Two-examiner review screened for eligibility, and 10% were assessed for interrater reliability. EM physicians and medical students performed chart reviews. Our primary outcome was initiating or offering MOUD for eligible patients. Secondary outcomes included rates of take-home naloxone prescribing and linkage to outpatient services. Interrater reliability and descriptive statistics were calculated on all variables. Bivariate association between the start of the intervention and outcomes was assessed using Fisher's exact test. A multivariable Bayesian structural time series (BSTS) model estimated the causal effect of the training on the rates of offering and initiating MOUD.

Results: 579 consecutive ED visits met criteria and were manually reviewed; 319 were determined to be eligible (55%). MOUD was offered during 109/189 (57.7%) of visits after the start of intervention compared to 46/130 (35.4%) prior. There was no statistically significant change in the rate of take-home naloxone distribution. Linkage to outpatient care was provided for 119/189 (63.3%) eligible patients compared to 60/130 (46.2%) before the intervention. The relative rate of initiation or offering MOUD was estimated to increase by 53% (95% CI, 23% - 95%) using the multivariable BSTS model.

Conclusions: Education of EM residents on MOUD is associated with increased offering of MOUD and linkage to outpatient treatment.

A Case-Based Curriculum to Enhance Attitude, Competency, and Knowledge of Buprenorphine for Treatment of Opioid Use Disorder Among Internal Medicine Residents

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Background: As the mandatory X-waiver training requirements for prescribing buprenorphine have recently been lifted, general practitioners are being relied upon to fill the treatment gap in prescribing medications for opioid use disorder (MOUD). However, insufficient clinician education remains a major barrier to prescribing MOUD in both inpatient and outpatient settings. Senior internal medicine (IM) residents and addiction medicine specialists at an urban, safety-net hospital developed a curriculum for IM residents to increase knowledge and comfort prescribing MOUD.

Objective: To evaluate the impact of a new MOUD curriculum on IM residents' attitudes, comfort, and knowledge of prescribing buprenorphine in the inpatient and outpatient settings.

Methods: All second-year IM residents (n=46) participated in a 90-minute curricular session between July and October 2022 during scheduled mandatory didactic blocks. The curriculum was structured as a small group, case-based session focused on how to initiate and prescribe sublingual buprenorphine, including a focus on novel induction strategies (e.g., low-dose) for patients using fentanyl. Residents were invited to complete identical and anonymous pre- and post-session surveys assessing knowledge, attitudes, and perceptions of buprenorphine prescribing. A Wilcoxon signed rank test was used to compare the pre- and post-session median scores of participants who completed both surveys.

Results: Overall, 39 (84.4%) second-year IM residents participated in the evaluation. After the curriculum, residents reported an increased perception of the importance of independently initiating buprenorphine for hospitalized patients with opioid withdrawal ($p<0.001$). Similarly, residents were significantly more likely to endorse confidence in discussing benefits of methadone vs. buprenorphine ($p<0.001$), initiating buprenorphine in inpatient and outpatient settings ($p<0.001$), and identifying patients who would benefit from low-dose buprenorphine ($p=0.002$). Finally, there was a significant increase in the number of correct knowledge-based answers after the session (before = 1.55 vs after = 3.33; p-value <0.001).

Conclusions: A 90-minute buprenorphine training improved residents' attitudes towards, perceptions of competency, and knowledge of buprenorphine delivery to patients with OUD in the inpatient and outpatient setting. Short, case-based sessions led by chief medical residents or senior internal medicine residents with specific interests/training in addiction medicine offer promise in addressing well-described gaps in addiction medicine training.

A Stigma-Disrupting Core Curriculum Influenced Internal Medicine Residents' Regard for Patients with Substance Use Disorders

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Background: Increased provider stigma is correlated with failure to provide or refer patients with substance use disorders (SUDs) for appropriate treatment, and resident physicians' attitudes toward patients with SUDs have been shown to deteriorate during training. Graduate medical education is an important setting in which to counteract these attitudinal changes and promote interest in treating SUD.

Objective: We designed, implemented and evaluated a comprehensive curriculum in SUD care with the aim of increasing internal medicine residents' positive regard for and preparedness to treat patients with SUD.

Methods: The curriculum consisted of 9 45-minute teaching sessions during one academic year and covered 11 recommended core competencies in SUD care for internal medicine residents. Content was presented using stigma-reducing messaging techniques from the public health sphere: consistent use of person-first language, sympathetic case narratives, emphasis on societal causes of SUD, and a focus on treatability. Residents completed an online survey pre- and post-curriculum that included Medical Condition Regard Scales (MCRS) for SUDs and perceived preparedness to diagnose and treat SUD.

Results: Mean MCRS increased among residents for opioid use disorder (pre=45.6, post=51.0, $p=0.04$) and alcohol use disorder (pre=45.9, post=50.9, $p=0.01$), indicating increased regard for patients with these conditions after attending the curriculum. Proportion of residents reporting preparedness to diagnose SUD increased from 57% to 100%, as did those reporting preparedness to treat (pre=43%, post=86%).

Conclusions: This curriculum builds on previous studies suggesting anti-stigma messaging can increase regard for people with SUD, while also increasing resident preparedness to diagnose and treat. Further study is needed to determine whether the results are generalizable and which of the messaging strategies was most effective.

Development of an Ambulatory Addiction Medicine Curricula for Internal Medicine (IM) Residencies at Two Veterans Affairs (VA) Facilities

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Background: Substance use disorders (SUD) are prevalent, have substantial morbidity and mortality, and complicate management of other illnesses. In 2022 the Accreditation Council for Graduate Medical Education (ACGME) updated IM residency requirements to include demonstration of expertise in addiction medicine.[1] Barriers to developing and implementing addiction training in IM residency programs include a lack of trained faculty and clinical sites.[2] The VA is the largest healthcare system in the United States and a major site of IM residency training. Veterans have higher rates of SUD than the general population.[3] Addiction-trained faculty at VA Connecticut and VA Puget Sound developed ambulatory curricula to address ACGME updates and understand the educational needs of IM residents.

Objective: We designed and implemented ambulatory addiction medicine curricula to provide IM residents competency-based education using an iterative process to understand the needs of our learners to inform curricular modification and dissemination.

Methods: A curriculum committee of IM, addiction psychiatry, addiction medicine, and pharmacy experts utilized Kern's Six-Step Approach to Curriculum Development to design the two-week experience. We identified learning objectives based on Association for Multidisciplinary Education and Research in Substance Use and Addiction (AMERSA) competencies including awareness of bias and knowledge of screening and treatment strategies for patients with SUD. A hybrid model of self-study using the online Yale-Coursera course, "Addiction Treatment: Clinical Skills for Healthcare Providers," and outpatient clinical experiences in community-based home visits, addiction recovery, pain, and homelessness were incorporated. Pre- and post-surveys and semi-structured qualitative interviews were administered to obtain resident feedback for real-time incorporation in altering experiences to meet learning objectives.

Results: Fifteen residents completed the curriculum. Feedback identified educational barriers including variable schedules and excessive shadowing; highlights included new perspectives on addiction and treatment options. Pre- to post-survey scoring revealed a 2-fold improvement in residents' perceived comfort of screening for general SUDs (38% to 62.5%), with greatest improvements in screening for alcohol and opioids.

Conclusions: We developed an addiction medicine curriculum for IM residents within two VA healthcare systems that evolved with resident feedback in year one. This has prompted further study of its effectiveness with implemented changes.

Education 2

A Novel Adaptation of the Project ECHO Model to Convene Leaders in SUD Care

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Background: Clinical SUD care is multidisciplinary, however few opportunities exist for SUD care leaders to collaborate for quality improvement or systems change. In Oregon, Project ECHO's educational tele-mentoring curriculum and case-based model was adapted to gather a multidisciplinary forum of leaders in the field to promote collaborative systems change and quality improvement.

Objective: To understand the unique impacts of the adapted ECHO model, determine if the SUD Leadership ECHO could promote systems change, and identify elements that enabled participant-leaders to make systems level changes.

Methods: Participants from the SUD Leadership ECHO's second cohort were recruited into focus groups in summer 2022, within 3 months of completion the ECHO. Focus group domains included the benefits and shortcomings of the adapted ECHO model, the ECHO's effectiveness towards systems change, and feedback for future cohorts. Inductive thematic analysis was used to identify key themes.

Results: 16 study participants represented all levels of leadership among the 53 overall ECHO participants. Participants reported strengths of the ECHO including 1) strong multidisciplinary emphasis, 2) mitigating leader isolation, and 3) addressing emerging problems by sharing innovative practices, often ahead of published guidance. Three participants reported specific changes they made following participation in the ECHO, but others described barriers of inadequate leadership jurisdiction, limited time, and inflexible policies. Regarding policy barriers, one participant highlighted Oregon's state health authority's participation in the ECHO, bringing hope for higher level system and policy changes. Constructive feedback included narrowing the ambitious scope for each session and for the ECHO faculty to facilitate more advocacy opportunities.

Conclusions: Adapting the ECHO model for this audience formed a community of SUD care leaders who supported each other through times of unprecedented change. Sharing challenges and solutions on the ECHO combatted feelings of isolation leaders are prone to and encouraged leaders to continue advocating for quality improvement. Evaluating the ECHO's ability to promote organizational or policy changes yielded mixed results, with the conclusion that the ECHO addressed some but not all barriers and could be refined in future iterations.

Harm Reduction Training for First Year Medical Students to Decrease Stigma Towards People Who Inject Drugs

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Background: Stigma in healthcare towards people who inject drugs (PWID) is a barrier to quality care, resulting in poorer health outcomes. Harm reduction offers a person-centered framework for addressing stigma and minimizing harm for people who use drugs. Medical students typically receive minimal training on harm reduction and the care of PWID.

Objective: We partnered with a community organizer and hosted a mandatory one-hour lecture and thirty-minute discussion introducing the principles of harm reduction within an overdose prevention, recognition, and response training as part of first-year medical school orientation.

Methods: We employed an anonymous online pre- and post-test survey to evaluate the effects of this training. The survey obtained demographic characteristics, assessed attitudes and stigma towards PWID, and was administered to all first-year medical students who attended the training. The survey contained nine statements about PWID and four case-based questions focused on PWID interactions within the healthcare system, measured on a 5-point Likert scale. The Likert scale was transformed to a numeric 5-point scale. Mean scores were calculated and compared for each student's responses in the pre- and post-test and for the overall mean to assess the impact of the training on medical student stigma.

Results: A total of 156 students completed the pre-test survey, and 107 students (68.5%) completed the pre- and post-test survey. The overall post-test mean was 1.8 (SD = 0.7) and was significantly lower than the pre-test mean of 2.2 (SD = 0.5) ($p<.0001$). There was statistically significant improvement in attitudes for seven of thirteen measures: four of nine statements and three of four case-based scenarios.

Conclusions: This analysis reveals that the employed intervention may reduce medical students' self-reported stigma towards PWID. Further research is required to evaluate the program's effectiveness through measuring and reporting outcomes for future cohorts of students, and to repeat this post-test with the same cohort of medical students to understand how attitudes may change throughout the course of medical school training. We are working with medical students nationwide to incorporate a similar training at their medical schools.

Experiences of Underrepresented Groups in Addiction Medicine Training Programs: a Qualitative Interview Study

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Background: A training environment that embraces diversity, equity, inclusion, and accessibility (DEIA) principles may encourage novel approaches to address racial and other disparities in addiction treatment and outcomes. Such environments may also improve the training experience for people from underrepresented groups (URGs) in medicine and research. Yet, little is known about how the training environment of addiction medicine (AM) programs impacts the experiences and career trajectories of trainees from URGs.

Objective: To describe the identities, experiences, and career trajectories of AM training program participants who self-identify as members of URGs at Boston Medical Center (BMC).

Methods: Using a semi-structured interview guide, we conducted video-based interviews with physicians who self-identified as members of URGs who had completed AM training in one of the following programs at BMC during the last five years: Grayken Addiction Medicine Fellowship, Chief Resident Immersion Training, Fellow Immersion Training, or Research in Addiction Medicine Scholars. Interviews were conducted from July to December 2022. We completed rapid thematic analysis to identify over-arching themes.

Results: We recorded and transcribed 20 interviews with physicians who identified as URGs. We identified themes around three topic areas: 1) Participants described aspects of their identity that contributed significantly to their choice of an addiction medicine career working with communities that experience disparities, and challenges and successes they experienced in training settings related to their identities; 2) Participants identified neutral or positive experiences regarding AM program inclusivity, and described areas for improvement including expanded diversity in program leadership, educators, participants, and educational content; 3) Participants reflected positively on AM program impact on short and long-term goals as addiction health professionals including achieving research goals, attaining leadership roles, and finding opportunities for networking and mentorship,

Conclusions: We identified themes related to the identities and experiences of URG participants in BMC AM programs that are informative for program development. Feedback reinforced program successes in creating welcoming educational environments, while also prioritizing areas for improvement. These insights can offer useful information regarding who comprises the AM workforce and how to effectively improve DEIA efforts within AM training programs.

Characterizing Addiction Medicine Training in Canada: A Mixed Methods Study of Fellowship Program Directors

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Background: The supply of physicians adequately trained in Addiction Medicine greatly lags the demand, creating a wide evidence-to-practice gap. While Addiction Medicine fellowship programs in Canada have evolved substantially over the last decade, little is known about the strengths and challenges of these programs. Understanding the training landscape will be critical to matching Addiction Medicine education to the needs of people who use substances.

Objective: We aim to richly characterize the current state of Addiction Medicine fellowship programs in Canada to inform future medical education efforts.

Methods: As the first phase of a sequential explanatory mixed methods study, we conducted an online survey of Program Directors of Addiction Medicine fellowship programs across Canada using the survey platform Qualtrics. Through descriptive statistics, we analyzed quantitative data related to applicants, trainees, faculty, accreditation, curriculum design, and program challenges (including funding). Here we present findings from the survey (quantitative phase) only, which will subsequently inform a semi-structured interview of Program Directors (qualitative phase).

Results: Twelve Addiction Medicine Program Directors completed our survey. Since 2019, the number of fellowship programs doubled from 6 to 12. These include 8 Enhanced Skills programs eligible only to Family Medicine trainees, 3 Area of Focused Competence programs eligible to specialties other than Family Medicine, and 2 Addiction Psychiatry programs. Programs were geographically concentrated in 5 of the 13 provinces and territories of Canada.

There was considerable variation in program sizes (1-11 fellowship positions annually). Collectively, programs considered 91 applications for 28 positions in 2021-22 and 111 applications for 32 positions in 2022-23 (28.8-30.8% acceptance rate). The majority of fellows (>60%) entered fellowship with a training background in Family Medicine.

Ninety percent of Program Directors perceived that demand for their graduates was very high. With high applicant interest and very high perceived demand for graduates, Program Directors rated funding for qualified applicants as the most important need.

Conclusions: Amid evolving training standards and an impressive growth of Addiction Medicine fellowship programs across Canada, Program Directors stressed both the difficulty and importance of acquiring sufficient funding for fellowship positions to meet the current and future needs of people who use substances.

Training Clinicians to Prescribe Buprenorphine for Opioid Use Disorder (OUD) in the Era of Changing Regulations

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Background: As opioid-related overdose deaths rise compounded by the COVID-19 pandemic, there is an urgent need to reduce barriers to life-saving medications like buprenorphine for individuals with OUD. While legislative decisions like removing the X-waiver requirement for prescribing buprenorphine help address treatment access, additional barriers such as lack of professional support and lack of confidence with buprenorphine initiation remain for frontline clinicians.

Objective: To describe the development of an abbreviated training at University of California, San Francisco that incorporates evidence-based buprenorphine prescribing practices for the

treatment of OUD. This training consists of a case-based, 90-minute, interactive didactic, developed for interprofessional learners and clinicians.

Methods: Building off of numerous 8-hour X-waiver training courses and the science of learning, we created an abbreviated 90-minute lesson focused on the most high-yield content. The curriculum included three learning objectives: 1) describe why buprenorphine is used to treat OUD, 2) distinguish various ways to initiate buprenorphine in the outpatient setting, and 3) review steps for monitoring buprenorphine treatment. Evidence-based learning strategies were used such as dual coding, retrieval practice, and case-based examples. Following each training, feedback from participants informed iterative improvement of the didactic.

Results: From April 2022 to March 2023, the didactic was delivered a total of 4 times: twice in-person to 30 internal medicine residents and twice virtually to 4 public psychiatry fellows and 10 pharmacists. Feedback included appreciation of the abbreviated re-orientation, desire for longer Q&A at the end of the session, and more opportunities to re-visit this content at a later date. Future iterations of the training will involve surveys to assess changes in participants' knowledge, gather curricular feedback, and modify the didactic as prescribing barriers evolve.

Conclusions: In light of the removal of the X-waiver training requirement, this innovative session arose to address the needs of practicing clinicians to review buprenorphine prescribing and monitoring. This curriculum can be scaled at other institutions for additional abbreviated training for both interprofessional learners and practicing clinicians on buprenorphine prescribing for OUD. This training can reduce barriers to buprenorphine prescribing and ensure clinicians have easy access to resources to help them prescribe life-saving medication.

Medical Students' Perceived Value of Buprenorphine Waiver Training After Removal of Training Requirement

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Background: To reduce barriers to prescribing buprenorphine for the treatment of opioid use disorder, recent legislation removed the requirement to obtain special certification (e.g., Drug Abuse Treatment Act or "DATA" waiver) to prescribe buprenorphine. Before that, regulatory changes had removed the requirement to complete 8-hour training to obtain a DATA waiver for prescribers who treat <30 concurrent patients. The extent to which these changes increase clinicians' willingness to prescribe buprenorphine remains unclear as studies suggest that even those who complete training underutilize buprenorphine.

Objective: We aimed to understand medical students' perceptions of the value of buprenorphine waiver training in the context of changing regulatory requirements.

Methods: Students who participated in optional waiver training shortly before graduation in 2021 and 2022 were surveyed about their willingness to take the training despite it no longer being required to obtain a DATA waiver. Students were also asked about the quality and

usefulness of the training. Questions were asked using a 5-point Likert scale. Descriptive statistics were calculated using MS Excel.

Results: A total of 122 students completed the survey (response rate 74%). The most common residency plans were emergency medicine (34%), internal medicine (17%) and family medicine (15%). An overwhelming majority of respondents agreed or strongly agreed that the training was a useful supplement to other training received during medical school (96%), increased their knowledge (97%) and they expected to use the information (87%). Most students were also very or somewhat satisfied with the overall quality of the training (92%), the materials (89%) and instruction (93%). Seventy-three percent of participants reported that they would have taken the course even if not required to prescribe buprenorphine.

Conclusions: Most medical students who completed DATA waiver training after the removal of a training requirement felt the training remained valuable and would still participate despite the regulatory changes. Limitations of this study include that it was conducted at a single site and only included students who chose to participate in this elective training program. Our results may inform educators who are seeking to respond to the shifting regulatory requirements around buprenorphine prescribing while also being responsive to learners' needs and preferences.

Harm Reduction

Emergency Physician Perspectives on Harm Reduction and Supporting Patients Who Use Drugs

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Background: People who use drugs (PWUD) frequently seek care in the emergency department (ED). EDs have increasingly been recognized as a critical setting for offering evidence-based interventions to reduce drug poisoning deaths. Little is known about ED physician perspectives and experiences integrating harm reduction approaches (interventions that reduce the health, social and legal consequences of drug use without requiring a reduction in drug use) into ED care.

Objective: The study aimed to describe the perspectives of Canadian emergency physicians on harm reduction as an approach to caring for PWUD in ED settings, including their experiences caring for PWUD, and facilitators and barriers to incorporating harm reduction practices.

Methods: This multi-site focused ethnography study was part of a larger research project led by the Canadian Research Initiative in Substance Misuse. Purposive sampling, using an existing national network, and snowball sampling techniques were used to recruit practicing emergency physicians. Semi-structured, one-on-one telephone interviews were conducted until theoretical data saturation was achieved. Interview recordings were transcribed and analyzed using inductive content analysis. Interviews took place between June 2019 and February 2020.

Results: 32 physician interviews were included in the analysis. Participants had a median of 10 years of experience (range 1-33) and most (29/32) worked in urban settings. Participants highlighted the complexities of caring for PWUD, in particular the relationship between structural vulnerability (e.g., lack of housing, unemployment) and substance use, and how these issues increased the time and resources required to care for patients. Hospital culture varied across Canada and could either facilitate or hinder the adoption of a harm reduction approach. Additional barriers included a lack of training and experience; availability of outpatient follow-up care; insufficient ED funding and staffing resources; and, beliefs about scope-of-practice for emergency medicine. Facilitators included tailored education and training; specialized multidisciplinary teams; ED harm reduction champions; and having standardized protocols.

Conclusions: Though variability existed in the routine application of comprehensive harm reduction interventions in Canadian EDs, most interviewed physicians supported this model of care. To facilitate widespread adoption, there is a need for standardized guidance, supplemental resources, facilitated culture change, and adequate community-based services.

Association Between Low-Barrier Access to Methadone in an Outpatient Clinic via the "72 Hour Rule" and Emergency Department Utilization

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Background: Methadone is effective treatment for opioid use disorder, but access is limited to federally licensed opioid treatment programs (OTPs) that have barriers to entry. A rarely used DEA regulation (the "72-hour rule") allows non-OTPs to administer methadone for opioid withdrawal for up to 72 hours and link patients to further care. In our low-barrier substance use clinic, we implemented a program to treat opioid withdrawal via this pathway, followed by admission to an OTP.

Objective: Evaluate if methadone treatment via the 72-hour rule was associated with changes in emergency department (ED) utilization.

Methods: For a retrospective cohort of patients treated with methadone in our clinic between March 2021 and March 2022, we used interrupted time series models to compare the rate of monthly ED visits per 100 patients in the 12 months before and 8 months after methadone treatment. We included regression terms for baseline trend, and change in level and trend in ED visit rates after receiving 72-hour-rule methadone. We excluded one month before and after methadone initiation due to spikes in ED visits that did not fit broader utilization trends.

Results: Between March 2021 and March 2022, 532 individuals were treated via the 72-hour rule pathway. Two patients died during follow up and were excluded from analyses. In the 12 months before initiating methadone, the mean monthly ED visit rate was 23.2 per 100 patients. Interrupted time series estimates showed an immediate increase of 4.0 ED visits per 100 patients (95% CI -2.7, 10.6) the month after methadone initiation, followed by a decrease in visit rates of

2.7 per 100 patients per month (95% CI -3.8, -1.7). By 8 months after methadone initiation, monthly ED visits decreased from a projected estimate of 35.8 per 100 patients to 15.1 per 100 patients.

Conclusions: Methadone opioid withdrawal management and linkage to care via the 72-hour rule was associated with an immediate, temporary increase in ED utilization followed by a sustained monthly decrease such that overall ED utilization was lower over 8 months of follow up. Our results suggest that lowering barriers to methadone treatment entry may decrease ED utilization, conferring individual and system-level benefits.

Development of Scales to Measure the Acceptance of Harm Reduction

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Background: Harm Reduction is a multifaceted approach to addressing and understanding drug use. There is little research on peoples' receptivity to harm reduction principles and strategies. Without accurate measurement, researchers and clinicians must speculate about the acceptance of harm reduction approaches.

Objective: To pilot two scales measuring (1) endorsement of harm reduction principles, and (2) support for individual and policy-level harm reduction strategies.

Methods: Staff members from Substance Use Disorder service organizations, and participants attending "Foundations of Harm Reduction" trainings, responded to both pilot scales: The Principles of Harm Reduction Scale (PHRS; 18 items focusing on costs, foundations, and effects of harm reduction principles); and the Harm Reduction Strategies Acceptance Scale (HR-Strat; 23 items focusing on individual and policy-level harm reduction strategies). Respondents used a 7-point Likert-type scale to respond to items, which asked about "belief" and "support", respectively. We used Exploratory Factor Analysis (EFA) and correlations to evaluate factor structure and scale relationships.

Results: Between November, 2022 and March, 2023, 243 respondents completed the survey. A two-factor solution provided the best fit for data collected on the PHRS: 1) Perceived benefits of Harm Reduction (9 items, α=.85), and 2) Perceived costs of Harm Reduction (7 items, α=.83). A four-factor solution provided the best fit for the HR-Strat scale: 1) Safer Drug Consumption Methods (5 items, α=.85), 2) Social and Drug Policies (5 items, α=.84), 3) Overdose Prevention and Moderation (4 items, α=.83), and 4) Beyond Illicit Drug Use (4 items, α=.75). All 6 subscales showed correlations ranging between .28 and .77, indicating they measure related, but separate constructs.

Conclusions: Measuring acceptance of harm reduction philosophy and support for harm reduction strategies is integral for developing and scaling harm reduction efforts. Without accurate measurements, it is difficult to investigate the limitations of harm reduction-based training or communities' acceptance of harm reduction approaches. These scales show promise

for investigating opinions about harm reduction across sectors and populations. Further psychometric research to expand, revise, and validate the content of these scales is needed.

Exploring Drug Checking Services for People Who Use Drugs and Harm Reduction Staff: Pre-Implementation Study

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Background: The growing proportion of adulterants in the street drug supply has increased overdose risk for people who used drugs (PWUD). Effective harm reduction strategies include distribution of naloxone and fentanyl test strips. However, these strategies are limited in their ability to detect different types of drugs. To examine the unregulated and unpredictable drug supply, drug checking services (DCS) have been adopted as an overdose prevention strategy. To date, no DCS have been implemented in Michigan.

Objective: To inform the implementation of Michigan's first DCS, we sought to understand facilitators and barriers to DCS among potential participants and staff at a local harm reduction agency.

Methods: Potential DCS participants were recruited (n=28) into four focus groups (n=7-10). Agency staff (n=13) were divided into three focus groups (n=3-5). Semi-structured interview guide based on the Consolidated Framework for Implementation Research (CFIR) was used to conduct the focus groups. Each focus group was audio-recorded and transcribed. Transcripts were thematically analyzed using rapid qualitative analyses. Themes were inductively developed to inform DCS implementation within the five CFIR domains, and most relevant constructs were displayed in summary matrices.

Results: Focus group participants' biggest concern was being targeted by police when utilizing DCS. Other potential barriers included: lack of transportation, testing wait time, DCS hours of operation, and community perceptions of DCS. Facilitators of participant trust included ensuring services were confidential and operated by familiar staff. Participants felt the DCS would be a valuable resource, providing information necessary for sourcing and using drugs safely, thus increasing autonomy and preventing overdose.

Staff members (n=15) held similar perspectives, including concerns of police interference with DCS. Other barriers included employee stress with increased workload, the need for additional training on using the DCS equipment, and the need for administrative policies to protect staff and participants. Staff felt the advantages of implementing DCS far outweighed the risks, and appreciated the potential to monitor the community drug supply, increase participant autonomy, and knowledge of safer drug practices.

Conclusions: Implementing DCS can inform community members of dangerous analogues in the drug supply, increase PWUD autonomy to make informed decisions, and prevent overdose.

Implementing Harm Reduction Vending Machines in a California Veterans Affairs Syringe Services Program

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Background: Syringe services programs are essential in reducing the devastating impact of drug use on overdose deaths and drug-related infections; however, those which operate during regular business hours or require staff interaction, like at one California Veterans Affairs syringe services program, limit access. Emerging evidence demonstrates vending machines, which dispense supplies such as sterile syringes, as a successful strategy to reduce access barriers.

Objective: To describe pharmacist-led implementation strategies for harm reduction vending machines in a California Veterans Affairs syringe services program.

Methods: In December 2021, a clinical pharmacist practitioner who serves as facility syringe services program lead joined a monthly community collaboration call to learn about harm reduction vending machine programs. The pharmacist 1) contacted key Veterans Affairs staff and housing facilities for Veterans who have experienced homelessness to identify potential placement locations; 2) contacted vending machine companies to compare features; and 3) submitted funding proposals. Funding was awarded through a national Department of Veterans Affairs program office. Pharmacy Service conducted meetings with stakeholder services (logistics, engineering, biomedical, environmental management, information security, and technology) to evaluate feasibility and acceptability.

Results: Contracts were awarded to VendNovation, LLC, for 15 harm reduction vending machines: 7 for community-based outpatient clinics, 6 for Veterans housing facilities, and 2 in the Veterans Affairs Medical Center. The pharmacist designed the vending machine exterior and internal layout. Harm reduction supplies were informed from Veteran feedback surveys and include wound care, hygiene, safer sex, safer use supplies, and fentanyl test strips. The pharmacist worked with multiple companies to register at SAM.gov, complete the facility vendorization process, and purchase supplies. Interested Veterans will be registered and provided with unique barcodes for machine access. Inventory will be tracked using machine software.

Conclusions: Implementation of harm reduction vending machines in Veterans Affairs facilities and Veterans supportive housing facilities has the potential to increase anonymity and low barrier access to a facility's syringe services program. The processes for approving, purchasing, delivering, and installing harm reduction vending machines in these locations was challenging, requiring over 1.5 years for planning and implementation. Creation of national contracts and standardized processes could aid other Veterans Affairs facilities interested in implementation.

"You Got to do it Right": Patient and Staff Perspectives on Best Practices for Hospital-Based Harm Reduction

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Background: Harm reduction strategies improve engagement, overdose, and infection outcomes among people who use drugs, yet their use, including the distribution of harm reduction supplies, remains limited in U.S. hospitals. Additionally, little is known about *how* to provide harm reduction services in hospital settings. Our addiction care team (ACT) collaborated with hospital partners and a local syringe service program to provide harm reduction supply distribution at hospital discharge (i.e. syringes, pipes, fentanyl test strips, etc.), and harm reduction education for both patients and staff at an urban, safety-net hospital.

Objective: We performed a qualitative evaluation to identify best practices and program challenges.

Methods: We conducted semi-structured interviews in English and Spanish with 20 patients who received harm reduction services and 20 staff (9 nurses, 9 clinicians, 2 patient navigators), including 8 ACT members. We used purposive sampling to interview patients with a variety of substance use disorders, and diverse racial and ethnic identities. Interviews explored program impacts, best practices, challenges, and opportunities. We transcribed, coded, and analyzed interviews to identify themes using modified grounded theory methodologies.

Results: We found that best practices and challenges focused on six major themes across participant interviews: partnership, relationship, equity, integrity, simplicity, and education. Notable best practices included ensuring efforts reach groups less exposed to harm reduction including Black and Latinx individuals and those who use stimulants; valuing relationships and education as much as supply provision; and proactively addressing staff stigma and hesitancy through education. Challenges and opportunities included simplifying the delivery workflow; the need and desire for staff substance use training broadly; reaching all eligible patients; and deeper involvement of people with lived experience of drug use.

Conclusions: As substance-related hospitalizations increase amidst an ongoing overdose crisis, incorporating harm reduction strategies in hospitals is critical. This single-site study expands on the limited research on effective strategies for providing hospital-based harm reduction services, as well as challenges that can arise. We found that harm reduction services can catalyze culture change among staff and expand access when accompanied by proactive efforts to address stigma through education. Policy makers should consider expanding training on substance use and harm reduction across healthcare professions.

Homelessness and Criminal Justice

Barriers and Facilitators to Outpatient-Based Opioid Treatment Retention among People Experiencing Homelessness

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Background: Retention in opioid use disorder treatment is suboptimal among people experiencing homelessness, with more than 50% attrition within 1 month. Though people

experiencing homelessness face unique challenges that may impact their ability to successfully remain in opioid use disorder treatment, the barriers to and facilitators of retention in this high-risk population remain unknown.

Objective: The objective of our study was to assess the barriers to and facilitators of outpatient-based opioid treatment retention among people experiencing homelessness.

Methods: We recruited 24 adults who newly enrolled in the outpatient-based opioid treatment (OBOT) program at the Boston Healthcare for the Homeless Program. We purposively sampled 12 individuals who were retained in the program at 1 month and 12 who were not. We completed semi-structured interviews in English or Spanish. Study staff read the transcripts and applied a deductive analytic framework based on the Behavioral Model for Vulnerable Populations domains. We identified commonalities and differences in the interviews by retention status and drew descriptive conclusions clustered around themes focusing on barriers to and facilitators of OBOT retention.

Results: Common facilitators to initially seeking care in both groups included motivation from personal overdose, a desire to mend fractured familial relationships, and a need to treat underlying medical and psychiatric comorbidities. A barrier to initially seeking treatment cited by both groups was prior health care victimization related to drug use. A positive social network facilitated retention among those retained and a negative social network was a barrier to retention among those not retained. Experiences with buprenorphine varied by retention status; those who were retained reported that buprenorphine reduced cravings, while those who were not retained reported that they experienced precipitated withdrawal, cravings, and relapse with buprenorphine. Although continued opioid use was common in both groups, it was endorsed as a barrier to retention specifically among those not retained.

Conclusions: Strategies that use personal overdose as a teachable moment, emphasize the importance of positive social networks, ensure optimized buprenorphine dosing, and teach resiliency after relapse may improve opioid use disorder treatment retention among people experiencing homelessness.

Increasing Buprenorphine Access for Homeless-Experienced Populations

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Background: Persons who experience homelessness (PEH) are disproportionately burdened by opioid use disorder (OUD) and there is limited information to guide health system interventions to improve PEH access to medication treatment for OUD (MOUD). In fiscal year (FY) 2019, the Department of Veteran Affairs (VA) initiated the Stepped Care for Opioid Use disorder Train the Trainer (SCOUTT) Initiative, a quality improvement intervention within 18 VA facilities to increase buprenorphine prescribing in primary care (PC), mental health (MH), and pain clinics through clinician education, mentoring, and coaching.

Objective: To examine the effect of the SCOUTT initiative on buprenorphine receipt among Veteran PEH.

Methods: We conducted a difference-in-difference analysis of buprenorphine treatment in FY2016-2020. We identified PEH and OUD from diagnostic codes and homeless program records in VA electronic health records. Outcomes included any buprenorphine receipt and incident buprenorphine receipt following ≥90 days without any MOUD per FY. Sensitivity analyses examined these outcomes from PC, MH, and pain clinics. We report adjusted difference-in-differences (aDD) in the probabilities of receiving buprenorphine following the SCOUTT intervention.

Results: The sample included 63,774 OUD person-years: 7,126 in SCOUTT and 56,648 in non-SCOUTT facilities. Any buprenorphine receipt increased among Veteran PEH post-SCOUTT implementation (Table), significantly increasing in SCOUTT facilities (aDD=4.29, 95%CI=1.29-7.30). Incident buprenorphine receipt also increased more in SCOUTT facilities, than in non-SCOUTT facilities (aDD=3.74, 95%CI=1.32-6.16). Sensitivity analyses found increases within PC, MH, and pain settings in SCOUTT facilities post-implementation, compared to non-SCOUTT PC, MH and pain settings (aDD=3.28, 95%CI=0.89-5.57 for any buprenorphine; aDD=2.93, 95%CI=0.82-5.03 for incident buprenorphine receipt).

Conclusions: Buprenorphine treatment increased among PEH from 2016 to 2020, especially in facilities receiving the SCOUTT intervention. Expansion of the SCOUTT Initiative to other VA facilities may be important for increasing buprenorphine receipt for OUD among homeless Veterans.

Table. Probability of buprenorphine treatment for OUD in FYs pre and post SCOUTT implementation, by facility

	SCOUTT Facility		Non-SCOUTT Facility	
	Pre	Post	Pre	Post
Any buprenorphine	30.1	40.4	28.3	34.2
New buprenorphine Initiation	10.6	17.1	9.0	12.2
Any buprenorphine in PC/Pain/MH Clinic	17.1	23.4	16.9	19.4
Buprenorphine initiation in PC/Pain/MH Clinic	4.2	8.5	2.6	4.0

"Holding Out" in a Holding Cell: Clinical Case Demonstrates a Gap in Access to Medications for Opioid Use Disorder (MOUD)

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Background: Untreated opioid use disorder (OUD) in carceral settings leads to high post-release mortality (Merrall et al. 2010). In 2018, Massachusetts passed the CARE Act, legislating provision of MOUD in certain county-based jails and state-based prisons. Today, most Massachusetts jails and prisons do provide MOUD. The CARE Act, however, does not explicitly cover municipal police departments.

Learning Objectives:

- Identify existing gaps in provision of MOUD in carceral settings
- Apply the Americans with Disabilities Act (ADA, 1990) to treatment of persons with OUD in carceral settings
- Create partnerships with local and federal officials to advocate for access to MOUD in carceral settings

Case Presentation: A 24-year-old male with OUD presented for readmission to our Opioid Treatment Program (OTP) after missing five consecutive days of methadone. Vital signs were normal; Clinical Opiate Withdrawal Score (COWS) was 15 (moderate withdrawal); urine toxicology was positive for cocaine, fentanyl, and methadone. Last methadone dose was 40mg, 6 days prior. He reported being "picked up" and spending five days in a holding cell at the police department, located 1.5 blocks from the OTP. He experienced significant withdrawal (nausea, vomiting, cold sweats, body aches) in the cell and then used fentanyl intranasally immediately post-release. The OTP team contacted the Massachusetts U.S. Attorney's Office (USAO) for guidance. The USAO, in turn, wrote a letter informing the police that the ADA requires them to address all their detainees' medical needs, including MOUD. The OTP physician met with the police chief, creating a plan for patients in police custody to be transported to the clinic to receive methadone through the police vehicle window. The plan has been successfully implemented; collaboration between the OTP and police department is ongoing.

Discussion: Based on precedents including Smith vs. Aroostook County (2018), the ADA mandates that persons taking MOUD must receive their medication while in carceral settings, including municipal facilities. Professionals advocating for patients with OUD may partner with both their states' U.S. Attorneys' Offices and local law enforcement to ensure access to MOUD.

Facing Mortality: Understanding Palliative and End-of-Life Care Needs for Patients with Medical Complexity and Substance Use Disorders

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Background: Patients with substance use disorders (SUDs) and housing instability are at high risk for early death. "Ambulatory Intensive Care Units" (A-ICUs) are multi-disciplinary teams that tailor care for medically and socially complex patients with the goal of reducing utilization. However, in a recent trial evaluating "SUMMIT", an A-ICU in an urban healthcare-for-the-homeless clinic with high rates of SUDs, we found high mortality and much of the care delivered was palliative/end-of-life.

Objective: We conducted a formative evaluation of participants who died during and after the trial to explore how the SUMMIT A-ICU evolved its approach to palliative/end-of-life care for patients with SUDs experiencing medical and social complexity.

Methods: Patients were eligible if they had 1+ hospitalizations in the prior 6-months and had 2 or more chronic medical, SUD, or mental health diagnoses, and had prognosis of 6 months or longer. We conducted descriptive analyses of patients who died. We interviewed team members to obtain contextual stories about palliative/end-of-life care for SUMMIT patients.

Results: The trial enrolled 159 patients (65.8% male, 76% White, mean age 55) and 21% of patients died (n=34/159). Of the SUMMIT patients that died, 89% (n=16/18) had at least one documented advanced care planning conversation -- 33% (n=6/18) experienced an unsupported death (e.g., found dead during welfare check). SUMMIT patients had improved self-reported health at 6 months compared to usual care. Since 2016, 62% (n=184/299) of all SUMMIT patients have died. We found 3 prototypical end-of-life clinical scenarios of patients with medical complexity and SUDs: 1) life limiting illness is not addiction; substance use contributes to complexity, 2) life limiting illness is addiction; harm reduction may be palliative and life-prolonging, 3) tension between self-determination and "systems of neglect".

Conclusions: Patients with medical complexity and SUDs have high mortality and experience barriers to palliative care. A-ICU teams may provide care that improves quality of life and end-of-life care for patients with substance use. SUMMIT team members identified three palliative care frameworks, highlighting important clinical needs for this patient population including relationship-building, housing-first, harm reduction, high-risk prescribing, advanced care planning, intensive case management, and bereavement support.

Medication for Opioid Use Disorders (MOUD) Providers' Perspectives on Working with Drug Courts

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Background:
Medication for Opioid Use Disorder (MOUD) providers must often engage with legal agencies, such as drug courts, when caring for individuals under community supervision. Drug courts, one of the largest national diversionary programs, refer individuals for addiction treatment and closely monitor compliance by communicating with providers. However, relationships between drug courts and providers have rarely been studied, with existing studies suggesting that inter-agency collaborations are inadequate. Collaboration between legal agencies and providers can be crucial to assuring appropriate access to treatment, increased retention in treatment, and avoiding incarceration.

Objective: Identify barriers and facilitators described by MOUD providers about their engagement with drug courts.

Methods: Staff (n=24) from 11 MOUD agencies participated in semi-structured hour-long interviews about their experience with and perceptions of drug courts. All interviews were transcribed, redacted, and double-coded by masters' level researchers. Analyses used deductive (Consolidated Framework for Implementation Research) and inductive (ground-up) approaches.

Results: Barriers specific to the individual and MOUD agency (i.e., inner setting) included limited availability of resources and time (e.g., staff shortages, no defined roles), negative perceptions and misconceptions (e.g., all legal agencies are the same), and concerns that collaboration may harm patients. External system barriers (i.e., outer setting) included beliefs that drug courts restricted the use of agonist medication, inadequate communication by drug court staff, and procedural rigidity by the courts. Inner-setting facilitators included prior history of working with drug courts, effective separation of roles, and direct line of communication. Outer-setting facilitators included drug courts that expressed interest in learning from providers, successful partnerships and connections, and mission alignment with providers (e.g., keeping patients out of jail, enhancing access to treatment). Providers were interested in learning about and collaborating with drug courts but had few opportunities.

Conclusions:MOUD providers reported agency-specific and externally based barriers and facilitators to working with drug courts. Providers sought to establish relationships with drug courts but lacked resources and opportunities. Implementation science techniques aimed at improving collaboration and communication can address the gap between providers and drug courts to ensure that individuals with legal involvement can access and remain in MOUD treatment.

Access to and Predictors of Substance Use Treatment Among People Who are Incarcerated

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Background: Substance use disorder (SUD) treatment can decrease mortality, and some forms, like medication for opioid use disorder (MOUD), have been shown to reduce recidivism, though limited research exists regarding overall treatment access in American prisons.

Objective: To identify factors associated with receiving SUD treatment while incarcerated.

Methods: We used nationally-representative 2016 Survey of Prison Inmates data to study adults admitted to prison within three years of survey completion who met DSM-5 criteria for SUD in the year prior to arrest. We examined descriptive statistics regarding treatment rates and sample characteristics. We used logistic regression to explore the relationship between receiving treatment and various socio-demographic variables.

Results: Of 12,586 respondents admitted to prison between 2014-2016, 5,327 (42.3%) met criteria for SUD. The sample with SUD was more White (43.94% vs. 28.24%), more likely to have two or more diagnosed mental health conditions (40.06% vs. 23.94%) and less likely to have been convicted of a violent offense (27.07% vs. 35.77%; $p < 0.001$ for all) than peers without SUD. Only 38.24% received SUD treatment during incarceration, the most common

form being with self-help groups (24.03%), and least common being a maintenance medication (MM) such as MOUD (1.06%). Among people who self-reported heroin use, only 2.91% reported receiving MM. In the logistic regression, prison-based SUD treatment was less likely among Blacks (aOR: 0.66, 95% CI: 0.55-0.80) and Hispanics (aOR: 0.61, CI: 0.51-0.73), as well as among people convicted of a violent offense (aOR: 0.69, CI: 0.58-0.83). Individuals incarcerated in facilities in the West South Central (aOR: 0.59, CI: 0.48-0.72), South Atlantic (aOR: 0.57, CI: 0.47-0.69) and Pacific (aOR: 0.73, CI: 0.57-0.92) regions were least likely to receive treatment.

Conclusions: Considerable heterogeneity exists in prison SUD treatment access across race and region, with very low overall prevalence of MOUD receipt. Policymakers should implement programs to expand treatment in carceral settings. Additionally, providers should note that many of their patients leaving prison or jail are unlikely to have received treatment during incarceration, indicating a need for stronger treatment linkages upon re-entry.

Hospital-Based Care

Patients' Experiences of New Addiction Consultation Service in New York City Public Hospitals

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Background: People who use drugs and have socioeconomic vulnerabilities have disproportionately high rates of overdose, morbidity, and mortality, and face increased rates of stigmatization in health care compared to the general population. In 2018, six public hospitals in New York City launched the 'Consult for Addiction Treatment and Care in Hospitals' (CATCH) service to provide interdisciplinary care for addiction to hospitalized patients.

Objective: To understand experiences of hospitalized patients with opioid use disorder (OUD) who were offered CATCH services.

Methods: Semi-structured qualitative interviews were conducted with 30 hospitalized patients with opioid use disorder (OUD) who were offered CATCH services between 10/2019-04/2021, 23 of whom accepted and 7 who refused services. Participants were recruited using purposive sampling. Interviews lasted an average of 37.6 minutes (SD: 17.7, Range: 13-94 minutes). Interviews were audio-recorded, transcribed, and coded for emergent themes using grounded theory techniques.

Results: Emergent themes included overwhelming structural vulnerability (exacerbated during the COVID-19 pandemic), receptivity to healthcare workers trained in addiction care, and persistent barriers to care continuity. Most participants had experienced overdose, homelessness, multiple hospitalizations, and multiple co-morbidities in addition to OUD. Participants welcomed medications for managing opioid withdrawal in the hospital, and appreciated the multidisciplinary CATCH team services. Some expressed that the CATCH team met a need they

were attempting to meet themselves by self-treating their withdrawal during hospitalization. Some patients still felt stigmatized and/or "punished" for their drug use by non-CATCH healthcare providers and refused CATCH services as a result. Some participants felt the intervention could not significantly alleviate overwhelming vulnerabilities they faced outside of the hospital, including lack of housing, transportation, and employment.

Conclusions: Addiction consultation services can meet an urgent need for humanistic care, medical management of opioid withdrawal, and stabilization on MOUD for vulnerable patients during hospitalization. Additional services and interventions, such as housing and employment, are urgently needed to meet the public health goal of preventing overdose and drug-related morbidity/mortality for this population.

START: A Program to Initiate Substance Use Treatment During Hospitalization for Patients in Texas

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Background: Approximately 12% of hospitalizations are related to substance use disorder (SUD), an estimated 20% of hospitalized patients may have SUD, and patients with SUDs are nearly twice as likely to be readmitted. Pharmacotherapies for SUD are underutilized in hospitals, especially in Texas, due to lack of training, structures, and organizational cultures to support evidence-based care.

Objective: Implement a multidisciplinary team to increase SUD screening and treatment rates during acute hospitalization at an academic safety-net hospital in Texas where no protocol for SUD treatment existed.

Methods: We started the Substance Use Treatment and Resources for Texas (START) Team, a multidisciplinary team of physicians, advanced practice providers, nurses, pharmacists, and social workers. The START Team provides education to care teams to assist them in starting treatment for SUDs in the hospital, and utilizes care navigators to implement SBIRT and coordinate ongoing care after discharge. The initial quality improvement project focuses on opioid use disorder (OUD) and the team recently expanded to unhealthy alcohol use. Core metrics are measured through chart review, and include number of patients screened, percent started on medications, and outpatient engagement at discharge.

Results: Over the first 3.5 years of the OUD project, 540 patients were screened for OUD, 362 (67%) were started on buprenorphine therapy, and 308 (85%) of those patients were discharged with coordinated outpatient care. In year three, the START team expanded the model to three other hospitals in Texas, who screened an additional 4831 patients for OUD, started 1802 (37.3%) of them on buprenorphine, and discharged 492 (27.3%) of those with coordinated care.

During the first 5 months of the alcohol use disorder project, 3,524 of 5,571 (63%) admitted patients were screened for unhealthy alcohol use and 6.2% of screened patients were positive. Of positively screened patients, 218 (79%) engaged in a behavioral intervention delivered by the START team and 74 (34%) of those patients were eligible for pharmacotherapy, with 64 patients started on pharmacotherapy prior to hospital discharge.

Conclusions: A multidisciplinary team can promote an increase in screening and treatment of SUD for hospitalized patients even in the absence of existing structural support.

"One of the Most Complex Medical Problems We Treat in the Hospital": Hospital Clinician Perspectives on an Inpatient Addiction Consultation Team

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Background: 1 in 9 hospitalized patients has a substance use disorders (SUD). Hospital clinicians receive limited SUD training and behavioral health staff lack the capacity to support SUD care for all hospitalized patients with SUD. To address addiction care gaps, we implemented an interprofessional Addiction Consult Team (ACT) comprising an addiction medicine physician, nurse practitioner, licensed vocational nurses and patient navigators at an urban safety-net hospital in San Francisco starting January 2019.

Objective: We performed a qualitative study to understand hospital clinician perspectives on: 1) hospital-based SUD care prior to ACT; 2) the role of ACT in addressing gaps in SUD care; and 3) remaining opportunities to improve hospital-based SUD care.

Methods: We conducted semi-structured one-on-one interviews via video conferencing from November 2020 to October 2021 and purposively recruited via e-mail across subspecialties, with subsequent snowball sampling until reaching thematic saturation. Interviews probed about clinicians' training and experience in treating SUD prior to ACT, perspectives on ACT's influence on current SUD care practices, and areas for improvement. We audio-recorded and transcribed interviews and conducted coding and thematic analysis using a mixed deductive-inductive analytic approach.

Results: We interviewed 33 hospital clinicians (14 internal/family medicine, 12 surgical subspecialties, 7 obstetrics/gynecology; median 12 years in practice (IQR 9-19)). Almost no clinicians had formal training in SUD treatment ("about zero [training]", Participant 315) and relied on a patchwork of informal resources to guide inpatient SUD treatment prior to ACT ("definitely like phone-a-friend", Participant 330). As a formal consult service, ACT addressed key knowledge gaps (" [the most helpful thing is] that I can call an expert...I [know] that I am not an expert", Participant 316). Clinicians found ACT most helpful with: 1) building trust with patients through motivational interviewing; 2) withdrawal management; 3) initiating medications for addiction treatment; and 4) linking patients to outpatient SUD treatment. Improvement areas included the need to treat SUDs "with the same degree and sophistication as...conventional medical problems" (Participant 311).

Conclusions: Formal inpatient addiction medicine consult services address key education and care gaps in inpatient SUD treatment, and are foundational for effective co-management and high-quality care of hospitalized patients with SUDs.

Trends in Against Medical Advice Discharge and Associations with Inpatient Utilization for Patients with Opioid Use Disorder: A Nation-Wide Cohort Study

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Background: Fentanyl and other synthetic opioids have spread in unregulated opioid markets since 2015, however little is known about the frequency of against medical advice (AMA) discharge or subsequent inpatient utilization for patients with opioid use disorder (OUD) in the fentanyl era.

Objective: To describe AMA discharge trends and the effects of AMA discharge on inpatient utilization for opioid-related admissions and for admissions with OUD and an injection-related infection (IRI).

Methods: We obtained nationally-representative data from the Nationwide Readmissions Database from 2016-2020. We used diagnosis codes to identify opioid-related admissions and OUD & IRI admissions. We compared AMA rates for these cohorts against rates for all admissions and mental health/substance use-related admissions. We used 2019 data and multivariate mixed effects modeling to estimate the effect of AMA discharge on 30-day readmissions and on total days hospitalized within 90 days of initial admission, controlling for patient demographics, chronic co-morbidities, illness severity, and hospital factors.

Results: Of 165 million total hospital admissions from 2016-2020, 1.7% were opioid- related and 0.3% involved OUD and an IRI. From Q1 2016 to Q4 2020, the AMA rate for opioid-related admissions increased from 6.7% (95% CI, 6.1-7.3%) to 11.4% (95% CI, 0.7-12.1%) and the AMA rate for OUD & IRI admissions increased from 7.6% (95% CI, 7.0-8.3%) to 17.3% (95% CI, 16.3-18.2%) (Figure). The AMA rate was lower and increased marginally for all admissions (from 1.2% [95% CI, 1.1-1.2%] to 1.7% [95% CI, 1.6-1.8%]) and for mental health/substance use-related admissions (from 3.5% [95% CI, 3.1-3.9%] to 3.8% [95% CI, 3.4-4.2%]). AMA discharge was associated with a 12.0% (95% CI, 11.2-12.8%) increased absolute risk of readmission but 1.99 fewer total days hospitalized (95% CI, -2.20 to -1.78) for patients with opioid-related admissions and with a 21.1% (95% CI, 19.6-22.6%) increased absolute risk of readmission but 1.94 fewer days hospitalized (95% CI, -2.42 to -1.46) for OUD & IRI admissions.

Conclusions: From 2016-2020, AMA discharges increased dramatically for patients with OUD and AMA discharge was associated with substantially increased risk of 30-day readmission but fewer total days hospitalized. AMA discharge is a growing public health concern in the fentanyl era.

Interprofessional Perspectives on Caring for Hospitalized Patients with Opioid Use Disorder

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Background: Hospitalization is a "reachable moment" to engage individuals with opioid use disorder (OUD), and there is strong evidence to support the utility of initiation of medications for OUD (MOUD) in hospitalized patients. However, adoption of MOUDs is variable, continuation of care following hospitalization is limited, and disproportionate numbers of patients with OUD leave the hospital prior to treatment completion.

Objective: To explore perspectives of interprofessional team members on improving care for patients with OUD during hospitalization and care transitions.

Methods: We conducted semi-structured interviews with physicians, nurses, social workers and case managers at a single urban, academic hospital in Philadelphia from 12/2022-3/2023. The interview guide focused on barriers and facilitators to care in the hospital and discharge planning. Interviews were analyzed using thematic content analysis. We report key themes.

Results: We interviewed 25 providers and staff: 7 attending physicians, 5 resident physicians, 1 advanced practice provider, 8 nurses, and 4 social workers/case managers. Mean age was 38; participants were 80% women; 56% White, 24% Asian, 20% Black, and 4% Hispanic/Latino. Participants identified barriers at the patient, clinician/staff and system levels. At the patient level, inpatient challenges included managing patient pain, withdrawal, and emotional discomfort whereas complex social needs such as lack of housing, transportation, and social support presented barriers to continuing care. Participants expressed a strong desire to improve care for patients with addiction but identified barriers in their own knowledge as well as significant gaps in the broader system, including lack of coordinated care and expert consultation in the hospital, limited options for discharge referrals, and challenges navigating care for complex patient needs after discharge. Cumulative consequences of the multiple barriers include poor patient outcomes in terms of patient-directed discharges and poor follow-up, as well as provider and staff outcomes related to moral injury and burnout.

Conclusions: Hospitalizations are an important touchpoint to engage people with OUD into treatment. Our findings can inform future efforts addressing in-hospital and transitional support for hospitalized patients with OUD as well as efforts to support interprofessional members of the care team.

Interprofessional Clinician Experiences Caring for Patients With Substance Use Disorders: A Needs Assessment

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Background: People who use drugs (PWUD) are increasingly hospitalized for complications of substance use but are often poorly served in this setting. Addiction consult services (ACSs) are a strategy to improve outcomes for hospitalized PWUD and support interprofessional care teams caring for PWUD.

Objective: Prior to the implementation of an ACS at our hospital, we conducted a needs assessment with inpatient clinicians, aiming to characterize attitudes, gaps in preparation and services, and perceived barriers to addiction care.

Methods: We conducted a web-based, cross-sectional survey of inpatient physicians, , and nurses at an academic hospital in Philadelphia during 03/2023. Questions focused on frequency of SUD care, attitudes towards PWUD, preparation for aspects of SUD care, and barriers to providing these services. We analyzed results using descriptive statistics.

Results: The 108 of 209 respondents (response rate 52%) were 81% female and 49% white. 46% were Bachelor's-prepared nurses, 33% were attending physicians, and 13% were APPs. Participants felt most prepared to assess for alcohol and opioid withdrawal (90%) and diagnose or recognize SUDs (85%). Participants felt least prepared to provide care linkage after hospitalization (34%), counsel on safer drug use (38%), and address in-hospital drug use (38%). 81% of surveyed nurses felt uncomfortable providing wound care to PWUD. The most cited barriers to providing care to hospitalized PWUD were patient social barriers (76%), availability of resources post-discharge (56%), and lack of expert consultation (54%). 84% of participants agreed that SUDs are treatable, but 71% felt they had witnessed compromised care due to lack of support. 62% felt distress when witnessing stigmatizing treatment of PWUD. 57% of participants felt caring for PWUD contributes to burnout and 47% felt caring for PWUD is one of the most difficult parts of their job.

Conclusions: Providers felt most comfortable with diagnosing and assessing SUDs and least comfortable with care linkage and harm reduction practices. Lack of support was a substantial barrier, and caring for PWUD was cited as a significant contributor to burnout and moral distress. Future work should examine whether ACSs address the perceived barriers to care for hospitalized PWUD while supporting clinicians in this work.

Exploring Patient Perspectives on Care for Hospitalized People Who Use Drugs

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Background: People who use drugs (PWUD) are increasingly hospitalized for complications of substance use but are often poorly served in this setting, with frequent patient-directed discharges and inferior quality of care. While various care models are emerging to address the needs of PWUD, less has been published about patients' perceived needs and priorities.

Objective: To explore patient experiences with and perspectives on hospital care among hospitalized PWUD to inform patient-centered interventions.

Methods: We conducted semi-structured interviews with hospitalized patients with opioid and other substance use disorders in three Philadelphia academic hospitals from 4/2022-8/2022. The interview guide focused on patients' experience of hospital care, barriers and facilitators to care goals, and transitional care planning. Interviews were analyzed using thematic content analysis, and we reported key themes.

Results: We interviewed 21 patients. Mean age was 45. Participants were 71% male, 24% Black, and67% White.19% identified as Hispanic/Latino. 43% of participants were hospitalized for infections and 24% had a primary diagnosis not directly related to drug use. 95% currently used opioids, with high rates of polysubstance use; most commonly stimulants, sedatives and alcohol. Several key themes emerged. Participants cited changes in the Philadelphia drug supply, including fentanyl and xylazine, as a driver of morbidity and medical complexity. They also reported challenges with unmanaged pain and withdrawal, as well as emotional distress while hospitalized, which was worsened by perceived stigma and discrimination from care teams and staff. While participants had varied treatment goals after hospitalization, many wanted housing support independent of their recovery goals. Those interested in treatment reported barriers to treatment access, particularly in finding settings that addressed concurrent medical complexity and substance use. Finally, participants desired knowledgeable and supportive interdisciplinary care teams for support during and after hospitalization.

Conclusions: Hospitalized PWUD in Philadelphia identified key challenges and supportive factors during their hospitalizations. Challenges included management of both medical and social-in the hospital and effective communication with care teams. These perspectives can inform patient-centered approaches to hospitalized PWUD, both to help patients complete hospital treatment and facilitate effective transitions after hospitalization.

Infectious Diseases

Exploring Sexualized Drug Use, Sexual Behaviors, and Substance Use Among Sexual and Gender Diverse People in California

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Background: Sexualized drug use (SDU), the use of recreational drugs to facilitate sexual activity, is a contributor to sexually transmitted and blood-borne infection diagnoses like HIV among predominantly gay and bisexual men and men who have sex with men. A specific type of SDU known as "chemsex" or "party and play" has been documented to be associated with sexual risk behaviors like nonsystematic use of condoms and negative health outcomes. However, such evidence tends to rely on the collection of individual health-related outcomes, leaving out the fuller context of lived experiences, desires, and social networks.

Objective: This study reconceptualizes SDU as an assemblage of variable and context-specific practices and a site of pleasure and experimentation among sexual and gender diverse (SGD) people. It investigates how STI-prevention and drug use harm reduction strategies are employed within sexual networks and with partners.

Methods: A purposive sample of adult SGD people residing in California who report having engaged in recent SDU (n=18) were recruited through online geospatial mobile dating applications/websites and snowball sampling. In-depth interviews were conducted using a semi-structured interview guide, and interview transcripts were analyzed using a modified grounded theory approach.

Results: The average participant age was 42 years ± 11 years. All but one participant identified as cisgender male, and nearly two-thirds identified as gay and residing in northern California within the Bay Area. In terms of HIV status, a little over half (56%) disclosed living with HIV while others as HIV negative. Results suggest two modes of harm reduction: routine and as needed or prompted. Evidence- or experienced-based practices were described, including biomedical HIV prevention like PrEP and ART and less commonly condom use. Methods mediated online include reviewing profile information and messaging, as well as discriminating one's cleanliness or hygiene as risk for STI and problematic drug use. Participants also recognized their body's limits concerning specific substances and being able to plan a form of aftercare or recovery post-SDU.

Conclusions: Findings practically inform more nuanced SDU interventions at the individual, community, and policy level that not only address overall health and sexual wellbeing but also mitigate substance-related harms.

HIV Pre- and Post-Exposure Prophylaxis Prescribing for Hospitalized People Who Inject Drugs Cared for by an Addiction Consult Service

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Background: HIV pre- and post-exposure prophylaxis (PrEP, PEP) prevent HIV transmission among people who inject drugs (PWID) but remain vastly underutilized. Inpatient Addiction Consult Services (ACS) are uniquely positioned to improve PrEP and PEP uptake among hospitalized PWID, but no research has evaluated PrEP and PEP delivery to patients cared for by these services.

Objective: To evaluate monthly rates of ACS involvement in PrEP and PEP prescribing at hospital discharge.

Methods: We evaluated monthly rates of PrEP and PEP prescribing at hospital discharge from 2020-2022 at an urban, safety-net hospital in a city with rising HIV incidence among PWID. To identify PrEP/PEP initiations, we abstracted the charts of patients discharged with new prescriptions containing tenofovir disoproxil fumarate (TDF) and excluded those on TDF for HIV or hepatitis B treatment. We calculated the average monthly number of PrEP/PEP prescriptions for patients seen by the ACS. We also calculated the monthly proportion of total hospital patients discharged with PrEP/PEP who were seen by the ACS, as well as the proportion of ACS patients with likely injection drug use that received PrEP/PEP.

Results: Between January 2020 and December 2022, the number of monthly PrEP/PEP prescriptions to ACS patients ranged from 1 to 11 per month. The average number of PrEP/PEP prescriptions for ACS patients increased from 3.7 prescriptions/month in 2020 to 6.6 prescriptions/month in 2022. Over time, the ACS was involved in the care of an increasing proportion of patients who received PrEP/PEP at discharge across the hospital, accounting for an average of 19.4%, 27.1%, and 21.8% of monthly prescriptions in 2020, 2021, and 2022, respectively. The average proportion of ACS patients with likely injection drug use who received PrEP/PEP increased steadily from 4.2% in 2020 to 7.8% in 2022.

Conclusions: At a large safety-net hospital in a city with a rising incidence of HIV among PWID, an Addiction Consult Service was involved in approximately 20% of all PrEP and PEP prescriptions on hospital discharge over a three-year period. Given ongoing HIV transmission among PWID, addiction consult services are well-positioned to advocate for and optimize HIV prevention for their patients, including encouraging PrEP and PEP utilization.

Endocarditis from Injection Drug Use: A Preliminary Review of the Impact of Multidisciplinary Collaboration

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Background: Patients who contract infective endocarditis from injection drug use (IDU-IE) are often precluded from necessary valve surgery due to provider concerns of reinfection. In 2017, Boston Medical Center (BMC) established the Endocarditis Working Group (EWG), a multidisciplinary team dedicated to evidence-based care for patients with infective endocarditis (IE). Comprised of clinicians from the specialties of addiction medicine, cardiology, cardiac surgery, infectious diseases, and neurology, the EWG sought to provide consensus opinions regarding management of IE cases, and sought to ensure that patients who met criteria for valve surgery received the necessary surgery.

Objective: To examine whether the EWG's formation increased the rate of valve surgeries performed in patients with IDU-IE.

Methods: We queried the BMC Clinical Data Warehouse for patients admitted to BMC from 2014 to 2021 who were given endocarditis-related ICD-10 codes. Cases which satisfied Duke criteria based on chart review were included in the cohort. Data collected included demographics, substance use history, and infection characteristics. Patients were stratified based on IE etiology, valve characteristics (native vs prosthetic), and surgery characteristics (elective vs urgent). The primary outcome was the proportion of patients who received surgery at BMC. Differences between the groups were examined via chi-square analysis and unpaired t-tests.

Results: From 2014 to 2021, we identified 517 hospitalizations for IE, of which 327 were due to IDU and 190 were due to other causes. Of the IDU-IE group, 111 patients were admitted before and 216 patients were admitted after the founding of the EWG. The proportion of patients with IDU-IE who received surgery increased by 47.7% after the founding of the EWG, from 8/111

(7.2%) to 23/216 (10.6%), though the absolute change was not statistically significant (p=0.315). The proportion of elective surgeries in patients with IDU-IE increased from 2/8 to 10/23 (25% vs 43.5%, p=0.355). The proportion of patients with prosthetic valve IDU-IE receiving surgery increased from 1/17 to 5/35 (5.9% vs 14.3%, p=0.374).

Conclusions: After the founding of the EWG, the surgical rates for patients with IDU-IE increased modestly, though this change was not statistically significant. Thus, multidisciplinary collaboration may potentially increase surgical rates for patients historically precluded from valve surgery.

Co-Delivery of HIV Pre-Exposure Prophylaxis (PrEP) and HIV testing Among Publicly Insured Adolescents and Young Adults (AYA) Receiving Medication for Opioid Use Disorder (MOUD)

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Background: Low rates of HIV pre-exposure prophylaxis (PrEP) prescribing contribute to the disproportionate burden of HIV in the United States. Among adolescent and young adults (AYA) with opioid use disorder, rates of HIV testing and PrEP co-prescription are poorly characterized.

Objective: (1) Identify the prevalence of co-prescription of PrEP and HIV testing among AYA receiving MOUD in the setting of behavioral health treatment.(2) Examine the patient demographic and clinical characteristics associated with the co-delivery of HIV prevention services.

Methods: We performed a retrospective analysis involving deidentified data from Philadelphia's Medicaid beneficiaries ages 16-29 years who had medication prescribed for opioid use disorder (MOUD) from 2015-2020 and were Medicaid-enrolled for 6 months prior to that prescription. After identifying the presence of a qualifying diagnosis signifying a PrEP indication, we examined the outcome of appropriate PrEP co-prescriptions and HIV testing using generalized estimating equations modeling.

Results: We identified 795 AYA Medicaid beneficiaries with 1,269 qualified treatment episodes. We calculated a PrEP prescribing rate of 29.47 per 1,000 person-years among individuals receiving MOUD. The HIV testing rate was 63.47 per 1,000 person-years among AYA individuals receiving MOUD. GEE modeling revealed that individuals receiving methadone were more likely (aOR=2.61, 95% CI=1.14-5.98) to receive HIV testing within 6 months after a PrEP-qualifying diagnosis compared to those receiving other MOUD medications. Those who only saw outpatient behavioral health providers were less likely (aOR=0.49, 95% CI=0.24-0.99) to have received an HIV test within 6 months after the PrEP-qualifying diagnosis compared to those receiving inpatient behavioral health services.

Conclusions: Co-prescriptions of PrEP and HIV testing among AYA receiving MOUD were rare events in this large urban publicly insured population. Interventions are needed to increase HIV prevention services for this key population of AYA at risk for HIV infection.

Peer-Facilitated Telemedicine Hepatitis C Treatment for Rural People Who Use Drugs: Results from a Randomized Controlled Trial

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Background: Treating people who use drugs (PWUD) for hepatitis C (HCV) is essential for achieving HCV elimination. Yet fewer than 10% of PWUD in the United States access HCV treatment due to limitations in healthcare system treatment capacity, particularly in rural communities. Pilot data from PWUD in rural Oregon suggested the need for new treatment strategies, such as telemedicine, and indicated peer recovery specialists (peers) as trusted support.

Objective: We designed a randomized controlled trial to assess whether peer-facilitated telemedicine in rural Oregon could increase HCV cure rates over facilitated referrals to local clinics.

Methods: Between July 17, 2020 and December 12, 2022, PWUD in 5 rural Oregon counties who had positive HCV RNA, past 90-day injection drug or recreational non-injection opioid use, and health insurance were randomized to peer-facilitated telemedicine HCV treatment (TeleHepC) versus peer-facilitated referral to local providers (enhanced usual care [EUC]). Those with decompensated cirrhosis or pregnancy/breastfeeding were excluded. TeleHepC clinicians developed standing orders for peer-facilitated pretreatment evaluation and medication protocols. Peers supported screening, telemedicine visits, medication delivery, and adherence. Chi-square tests compared group differences in sustained virologic response at 12 weeks (SVR12; primary outcome) and HCV treatment initiation at 6 months (secondary outcome).

Results: Of 775 individuals were screened, 226 were eligible, and 203 randomized (100 TeleHepC, 103 EUC). Of those randomized, the majority were male (62.1%) and white (88.2%), experienced houselessness in the previous 6 months (69.5%), and reported past 30-day use of methamphetamine (88.2%) and fentanyl/heroin (57.6%). Of participants assigned to peer-facilitated TeleHepC, 85 out of 100 participants (85.0%) initiated treatment versus 16 of 103 participants (15.5%) assigned to EUC ($p<0.001$). As of April 2023, 62 of 96 (64.6%) in the TeleHepC and 13 of 99 (13.1%) in the EUC groups achieved SVR12 ($p<0.001$), with data lock anticipated July 2023.

Conclusions: Peer-assisted TeleHCV substantially increased HCV treatment initiation and cure compared to EUC. This model could be replicated in rural and lower resource settings, furthering World Health Organization 2030 HCV elimination goals by expanding HCV treatment access directly to PWUD via trusted peers and telemedicine.

MOUD 1

Applying a Care Continuum Framework for Opioid Use Disorder in New York State: A Longitudinal Cohort Analysis

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Background: Despite effective medication for opioid use disorder (MOUD), there are substantial population-level gaps in MOUD access, initiation, and retention. Care continua are pragmatic frameworks that jurisdictions can use to monitor and evaluate population-level progress through sequential steps from screening and diagnosis outcomes for a given condition.

Objective: To develop an OUD care continuum from a longitudinal cohort of people with OUD.

Methods: Our cohort included New Yorkers 18-65 years old, with newly diagnosed OUD, and continuous Medicaid for ≥21 months during the 2016-2019 period. We constructed the following OUD care continuum: 1) engagement in substance use disorder (SUD) care ≤12-months of diagnosis, 2) MOUD initiation ≤12-months of diagnosis, and 3) MOUD receipt for ≥6 consecutive months ≤18 months of diagnosis. MOUD consisted of buprenorphine, methadone, or naltrexone. We evaluated continuum progression overall and by medication type; we assessed differences in proportions in progression using chi-square tests in R.

Results: Of the 163,430 Medicaid recipients with newly diagnosed OUD, 90,315 met eligibility criteria (55.2%) for inclusion (*n*, 66,419 (41%) had <21 months of continuous Medicaid). The OUD care continuum progression was as follows: 1) 64,540 (71.5%; 64,540/90,315) were engaged in SUD care following new OUD diagnosis; 2) 32,116 (49.8%; 32,116/64,540) initiated MOUD, and 3) 14,965 (46.6%; 14,965/32,116) received 6 consecutive months of MOUD. Of the 32,116 who initiated MOUD, 8,604 (26.8%), 19,784 (61.6%), and 3,821 (11.9%) initiated methadone, buprenorphine, and naltrexone, respectively. Proportions receiving 6 consecutive months of MOUD were significantly higher for methadone (75%; 6,487/8,604) and buprenorphine (41%; 8,187/19,784) compared to naltrexone (9%; 330/3,821) (p-values, <0.01).

Conclusions: We developed the first NYS-wide OUD care continuum using longitudinal data of a Medicaid population. Substantial drop-offs between each step highlights the need to engage people into needed care, initiate MOUD while in care, and support ongoing MOUD receipt. While buprenorphine initiation accounted for the majority of MOUD initiation, MOUD retention was higher with methadone. Further analysis of structural and other reasons for interrupted Medicaid, and the impact on continuum outcomes is needed. There is a significant opportunity to increase initiation of, and retention in, evidence-based treatment for OUD in a population with health insurance engaged-in-care.

The First Five Years of Missouri's Medication First Approach to Opioid Use Disorder Treatment: Plateaus, Regressions, and the Underbelly of Progress

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Background: Since 2017, Missouri's SAMHSA-funded State Targeted and State Opioid Response (STR/SOR) grants have supported the "low-barrier" Medication First (MedFirst) approach to Opioid Use Disorder (OUD) treatment. The MedFirst approach is analogous to the Housing First approach: both prioritizing rapid and permanent access to life-saving resources (medication for OUD [MOUD] and housing, respectively). Year one MedFirst results regarding MOUD utilization rates and treatment retention were promising, but examination of changes over time and differences by race are needed.

Objective: To examine outcomes of the first five years of MedFirst across Missouri's publicly-funded treatment programs.

Methods: We analyzed STR/SOR programming from fiscal year (FY) 2018 through 2022 to evaluate changes in STR/SOR over time, as well as in comparison to concurrent programming outside of STR/SOR. Outcome metrics included MOUD use, time-to-medication upon enrollment, and retention using state-managed claims data. We further analyzed utilization of STR/SOR services by race to investigate potential racial disparities in OUD treatment.

Results: Rates of MOUD in STR/SOR use were highest in FY18 (89%) and fell to their lowest by FY22 (69%). Median time-to-medication has remained at 0 days across all five years. One-month retention has decreased slightly since FY18 (80%) to FY22 (66%). When compared to clients in non-STR/SOR programming, clients in STR/SOR were more likely to receive MOUD, receive it faster, and be retained in treatment each year, through the gaps between programs decreased over time for each metric. Within STR/SOR, Black and White clients received MOUD at similar rates and in similar time frames, but White clients have been retained in STR/SOR treatment longer than Black clients across all grant years.

Conclusions: The first five years of MedFirst within STR/SOR demonstrate regressions and plateaus following early implementation, though services delivered *outside* STR/SOR have improved across metrics (MOUD use, time-to-medication, retention). Grant-fueled gains in retention have been limited to White individuals, introducing racial disparities in retention when they had not existed prior to the recent opioid-focused federal funding. Creative and dynamic efforts targeted at multiple levels (i.e., system, agency, provider, client) remain necessary to address both the plateaus and inequities in progress.

Mental Health Distress is Associated with Higher Pain Interference in Patients Treated with Medications for Opioid Use Disorder

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Background: The relationships between opioid use disorder (OUD), chronic pain (CP), and mental health distress are complex and bidirectional. The degree to which treatment with

medications for opioid use disorder (MOUD) might impact chronic pain and mental health distress is unclear.

Objective: The objectives of this study are to (1) Investigate the association between multiple types of mental health distress and chronic pain severity and interference in patients treated with MOUD enrolled in a NIH-funded study of a mind-body intervention as an adjunct to MOUD treatment, and (2) Examine whether there is an additive association between multiple types of mental health distress and chronic pain severity and interference.

Methods: Linear regression models were used to examine the relationship between pain (Brief Pain Inventory (BPI) severity and interference) and moderate-severe depression (PHQ-9 ≥10), moderate-severe anxiety (GAD-7 ≥10) and PTSD (PCL-5 ≥31). Pairwise comparisons using Tukey's Honestly Significant Difference test were used to evaluate whether multiple types of mental health distress were associated with pain severity and interference.

Results: Of 303 participants, 57% (n=172) had chronic pain. Mental health stressors were common with 49% (n=147) screening positive for moderate-severe depression, 40% (n=121) screening positive for moderate-severe anxiety, and 41% (n=124) screening positive for PTSD. Pain severity and interference were associated with moderate-severe depression (p= .01; <.001 respectively), moderate-severe anxiety (p= .01; p< .001), and PTSD (p=.07; p <.001). 25% of the sample had high symptom levels of all three mental health conditions. Those with no or mild mental health symptoms had a predicted mean BPI pain interference of 2.8. Those meeting criteria for anxiety, depression, and PTSD had a predicted mean BPI pain interference of 5.1 (mean difference of 2.3; 95% CI 1.6 to 2.9; p<.001). There was no significant difference in pain severity between these groups (mean difference of 0.8; 95% CI -0.11 to 1.7; p = 0.13).

Conclusions: Among patients treated with MOUD, highly symptomatic and comorbid mental health distress is common and is associated with increased pain interference. Attention to the adequate treatment of mental health conditions in patients with OUD and chronic pain is needed.

Racial and Ethnic Equity in the Receipt of Medications for Opioid Use Disorder Following Emergency Department Visits for Opioid Overdose in the Medicaid Population

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Background: A record 80,000 Americans died from opioid overdose in 2021. These deaths can be prevented with use of medications for opioid use disorder (MOUD), including buprenorphine, methadone, and extended release naltrexone. Despite this, MOUD is widely underused, especially among patients enrolled in Medicaid, a program covering 38% of non-elderly adults with opioid use disorder. Although opioid overdose deaths are rising rapidly in patients of color, recent national data assessing racial and ethnic disparities in the receipt of MOUD in the Medicaid population are limited.

Objective: To close this knowledge gap, we conducted a retrospective cohort study to quantify racial-ethnic disparities in initiation of medications for opioid use disorder following emergency department visits for opioid overdose.

Methods: The cohort included Medicaid patients aged 15-64 years who encountered an emergency department visit for opioid overdose, using a 100% sample of Medicaid enrollees in all 50 states and D.C. from the 2016-2018 Transformed Medicaid Statistical Information System Analytic Files. Analyses adjusted for patient demographic characteristics (age and sex), clinical characteristics (mental health disorders, non-opioid substance use disorders, Elixhauser co-morbidity score), year, and indicators for county (county fixed effects).

Results: The adjusted 30-day rate of MOUD initiation varied by racial-ethnic groups: 17.5% (nationwide), 18% (non-Hispanic White), 15.5% (non-Hispanic African Americans), 14.9% (Hispanic), and 12.5% (other minority groups).

Conclusions: While policy and clinical efforts to increase MOUD use are important in all Medicaid patients, findings suggest that efforts targeting patients of color specifically may be warranted.

Development of a Statewide Office-Based Treatment Provider Network Expanding Access to Buprenorphine using the Successful Healthcare Improvement from Translating Evidence in Complex Systems Framework (SHIFT-Evidence)

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Background: As opioid overdose deaths continue to rise nationally, access to medications for opioid use disorder (MOUD) continues to be a primary barrier to engagement in evidence-based treatment programs, despite the availability of lower-barrier medications like buprenorphine. In Texas, access to office-based treatment services (OBT) and buprenorphine is compounded by high numbers of uninsured, large rural populations, persisting stigma, and fewer MOUD providers.

Objective: We describe the utilization of Successful Healthcare Improvement from Translating Evidence in complex systems (SHIFT-Evidence) as a framework for planning and implementing a statewide OBT provider network as a model for OBT expansion supporting underserved individuals in Texas.

Methods: Using principles of intervention mapping, we conducted a qualitative needs assessment among healthcare providers to gain insight into barriers and facilitators faced when prescribing buprenorphine. Second, we developed a planning template using SHIFT-Evidence to gather information and brainstorm implementation strategies across the healthcare system: client, individual provider, and provider organization levels utilizing the framework's three primary strategies, engage and empower, embrace complexity, and act scientifically and pragmatically, and associated rules.

Results: Healthcare providers identified barriers, including the need for qualified mentors, resources for complex patient management, referral networks, billing support, and guidance in building a MOUD practice. Barrier reduction strategies were identified and mapped to each barrier, including workforce development, educational approaches, and provider support initiatives. The SHIFT-Evidence planning template was used to facilitate a mapping exercise resulting in the multi-level identification, operationalization, and prioritization of implementation strategies. Primary program components included training and technical assistance, Extension for Community Healthcare Outcomes (ECHO) program, comprehensive outreach, provider support, web-based wrap-around services, electronic resources, funding for buprenorphine, a substance use symposium, and continued DEA x-wavier training. Starting in the spring of the fiscal year (FY) 2020, 6 provider organizations with 10 treatment locations were contracted and served 52 clients; in FY21, 21 provider organizations with 33 treatment locations served 485 clients; and in FY22, 23 provider organizations with 48 treatment sites served 1,311 unique clients across Texas.

Conclusions: SHIFT-Evidence provided a valuable framework for multi-level program development. Initial data gathering and brainstorming with multiple rounds of pairing back and prioritizing were critical during planning.

Beneficial Effects of Buprenorphine/Naloxone on Opioid Craving and Mental Health in Patients with Opioid Use Disorder

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Background: Patients with opioid use disorder (OUD) often experience concurrent anxiety and/or depression. Craving is a major trigger often leading to relapse. Buprenorphine/naloxone is an effective treatment for OUD. However, understanding of its impact on cravings and psychiatric symptoms is limited.

Objective: We evaluated the effects of buprenorphine/naloxone therapy on opioid craving, anxiety, and depression in patients with OUD in a cross-sectional preliminary study.

Methods: Forty-five adults with OUD on buprenorphine/naloxone therapy were recruited from an urban medical center. A total of 41 participants completed the study. Among them, 27 patients had just begun buprenorphine/naloxone therapy for 1-2 days (baseline) and 14 patients had been taking the medication for at least 3 months. Opioid craving was measured using the Opioid Craving Scale. Anxiety and depression levels were measured using the Quick Inventory of Depressive Symptoms (QIDS) and Beck Anxiety Inventory (BAI), respectively.

Results: Average buprenorphine/naloxone dosages were 12-20 mg, sublingual, daily. Compared with patients at baseline, in patients with at least 3 months of treatment, the mean craving scale score was significantly reduced (7.6±2.8 vs. 2.3±2.3, $p<0.001$). The mean BAI score decreased from 35 to 20 (35±15.0 vs. 20±4.5, $p=0.007$), and the mean QIDS score decreased from 15 to 9 (14.6±5.9 vs. 8.6±4.6, $p=0.004$). Severity of cravings was correlated with severity of anxiety ($r=0.65$, $p<0.001$) and depression ($r=0.67$, $p<0.001$)

Conclusions: Buprenorphine/naloxone therapy improves cravings and psychiatric symptoms, which would be beneficial in treating patients with OUD. The limited sample size and the observational nature of this study highlight the need for the replication of the current findings in large-scale studies.

MOUD 2

Piloting a Hospital Rapid Methadone Induction Guideline in the Fentanyl Era

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Background: Managing acute opioid withdrawal and offering medication for opioid use disorder (OUD) during hospitalization is critically important, increasingly so in the era of fentanyl. In outpatient settings, methadone federal dosing guidelines mean that it can take weeks to reach therapeutic doses. This can reduce treatment retention and increase risk for ongoing use and overdose. Hospitalization offers an opportunity to closely monitor patients and shorten the methadone induction period, however little guidance exists.

Objective: Evaluate the feasibility of an inpatient Rapid Methadone Induction Guideline.

Methods: We conducted a retrospective study of hospitalized patients with OUD seen by the interprofessional addiction consult service (ACS) at an urban academic medical center. We included patients who initiated methadone using a newly-introduced Rapid Methadone Initiation Guideline. The guideline included methadone doses and strict inclusion and exclusion criteria. We used chart review to extract methadone and other full-agonist doses and to assess for adverse events.

Results: Between December 5, 2022 to April 20, 2023, our ACS saw 151 hospitalized patients who received medication for OUD. Of those, 13 underwent the inpatient Rapid Methadone Guideline. The average age was 55 and eight (61.5%) were women. All 13 reported active fentanyl use and 10 (76.9%) endorsed a history of remote methadone maintenance. Average total daily dose of methadone on days 1-5 were 44mg, 68mg, 75mg, 81mg and 83mg, respectively. All patients also received short-acting full opioid agonists, though amounts and duration varied widely (mean 163 morphine milligram equivalents (MME) per day, range 0-1475 MME) (table 1). There were no observed adverse events related to methadone.

Conclusions: A rapid methadone initiation guideline for OUD is feasible. Patients achieved therapeutic doses more quickly than with traditional dosing schedules. We did not observe any adverse events, and hypothesize that appropriate patient selection is important to avoiding harms. Future studies should include larger samples to assess safety, efficacy, and patient experience.

Table 1:

Day of Initiation	Average Initial Methadone dose (mg±SD)	Average TDD methadone (mg±SD)	Average MME of other full opioid agonists (mean±SD)
1	28±8	44±13	102±109
2	44±14	68±12	148±245
3	59±13	75±9	211±408
4	65±14	81±15	214±341
5	69±17	83±16	151±150

Clinicians' Perceptions and Practices of Urine Drug Testing in Buprenorphine Treatment

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Background: Urine drug testing (UDT) is common practice in buprenorphine treatment to monitor buprenorphine adherence, possible diversion, and substance use. However, UDT may incur substantial risks to patients, including patient distress and disengagement, treatment discontinuation, and legal harms based on UDT result disclosure. Clinicians' perceptions of UDT benefits versus risks and practices of UDT in buprenorphine care are poorly understood.

Objective: To evaluate clinicians' perceptions of benefits vs. risks of using UDT in buprenorphine care and to assess UDT practices.

Methods: We distributed an online survey to several networks of buprenorphine clinicians in a Northeastern state. Quantitative survey questions asked clinicians to identify: presence of institutional protocols guiding UDT practices, presence of legal risk factors (e.g. criminal-legal or family regulation system involvement) among respondents' patients, and UDT logistics (e.g., matrix, frequency, analytes, technique). Qualitative items asked how UDT was incorporated into clinical decision-making (e.g., changing medication dose, visit frequency, care intensity) and invited participants to reflect on UDT's benefits and drawbacks. We used thematic analysis for qualitative responses.

Results: We received 99 unique responses from buprenorphine clinicians across the State; the majority were cisgender women (52%), white (71%), and physicians (70%). Most had recently worked with patients at risk of experiencing legal harms of UDT: 67% clinicians treated one or more patients under correctional supervision, 61% had patient(s) who were arrested or incarcerated during treatment, and 57% treated patient(s) involved with family regulation systems. Only 57% were aware of any institutional protocol for UDT, and less than half (45%) had received guidance on pre-UDT consent processes. Qualitative analyses identified several themes, including: clinical, operational, and moral justifications for requiring UDT, including valuing "objective" results over subjective patient report; tension between patient autonomy and clinical judgment in treatment decisions; and, for some, aversion to "punitive and carceral" aspects of UDT.

Conclusions: Our study revealed conflicting clinician perceptions of UDT in buprenorphine care, and highlighted that the variety of individual UDT practices were often not supported by policies/procedures. Our results demonstrate the need for expanded clinical guidance to prevent and mitigate harms from UDT for vulnerable patients in buprenorphine treatment.

Low Dose IV Buprenorphine Inductions for Patients with Opioid Use Disorder and Concurrent Pain: A Retrospective Case Series

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Background: A barrier to buprenorphine induction is that patients must be in mild-moderate withdrawal prior to starting the medication to avoid precipitated opioid withdrawal (POW). This is especially challenging in the hospital setting where 51% of nonsurgical patients are treated with opioids during their stay.

"Low dose induction" entails administering very low doses of buprenorphine at fixed intervals such that the displacement of full agonist opioids is so gradual that POW symptoms are clinically attenuated. This removes the need for a withdrawal period and enables patients to continue taking full agonist opioids for pain.

Objective: Describe the results of a low dose induction protocol using IV buprenorphine for a cohort of hospitalized patients with opioid use disorder and concurrent pain control needs.

Methods: We present a retrospective chart review of patients with opioid use disorder receiving IV buprenorphine at a tertiary academic medical center. Inclusion criteria were receipt of full agonist opioids for pain within 24 hours of receiving IV buprenorphine for low dose induction; exclusion criteria were any other use of IV buprenorphine or not requiring opioids for pain. Researchers obtained clinical opiate withdrawal scale (COWS) and pain scores over a 6-day period starting the day prior to induction. Two researchers performed a review and compared data. 33 patients met inclusion criteria. Mean values were calculated.

Results: Thirty patients (90%) completed the low dose induction and were discharged from the hospital with buprenorphine.

COWS and pain scores downtrended for the majority of the 33 patients. Day 0 mean COWS was 2.6 (SD 2.8); Day 5 was 1.6 (SD 2.6). Day 0 mean pain score was 4.4 (SD 2.1); Day 5 mean was 3.5 (SD 2.1).

Conclusions: The use of IV buprenorphine for inpatient low dose induction was well-tolerated with regards to COWS and pain scores. 90% of all patients completed the induction, with only 1 self-directed discharge. COWS and pain scores down trended for most patients. Low dose induction enables patients to start buprenorphine while still taking full agonist opioids, opening the door to induction for a range of hospitalized patients who might not otherwise be considered candidates due to ongoing pain control needs.

Rurality and Non-Prescribing Clinicians' Treatment Orientations and Attitudes Toward Medications for Opioid Use Disorder

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Background: Increases in opioid use in the U.S. over the last two decades have impacted rural areas where overdoses have risen drastically during this time and more often involve prescription opioids than in urban areas (Centers for Disease Control, 2021; Spencer et al., 2022). Medications for opioid use disorder (MOUDs) are highly underutilized in rural settings due to lack of access, inadequate prescribing, and stigma (Lister et al., 2020; Wu et al., 2016). While attitudes towards treatments for OUD among prescribing professionals have been well-studied (e.g., Zuckerman et al., 2021), research on non-prescribing clinicians' (NPCs) attitudes is less common.

Objective: To examine whether rurality of practice location is associated with differences in treatment orientation and attitudes towards treatments of OUD among NPCs.

Methods: An online survey of NPCs involved in substance use disorder treatment in the U.S. was conducted in 2019. Multiple recruitment methods were used to obtain a purposive sample of NPCs from a variety of geographical contexts across the nation. The survey assessed demographic and practice characteristics, exposure and training related to MOUDs, treatment orientation, treatment preferences for OUD, and attitudes toward MOUDs.

Results: Among the 636 NPCs surveyed, respondents practicing in urban locations were most represented (44.3%), followed by suburban (34.4%) and rural settings (21.2%). Those practicing in rural settings were more oriented towards abstinence than those in urban settings ($p = .014$). Rural clinicians were less likely to perceive MOUDs as being effective ($p = .007$) or acceptable compared to those in urban settings ($p = .004$). Results of a mediation analysis indicated that practicing in a rural location compared to in an urban location directly ($\beta = .21$, $p = .032$) and indirectly ($\beta = .17$, 95% CI: .05, .29) influenced attitudes toward MOUDs through an effect on treatment orientation.

Conclusions: Results indicate that there is still a need for education and training about MOUDs among NPCs, particularly those who work in rural settings. More efforts are needed to educate rural clinicians about harm reduction principles and harm reduction strategies in general. In doing so, rural clinicians may be more receptive to contextualizing MOUDs an effective harm reduction strategy.

Outcomes of a Mobile Medical Unit for Low-Threshold Buprenorphine Access Targeting Opioid Overdose Hot Spots in Chicago

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Background: Opioid overdoses in Chicago are unevenly distributed, affecting medically underserved neighborhoods most acutely. Innovations in reaching patients perceived to be hard-to-reach (e.g., unstably housed, marginalized), especially in these underserved neighborhoods, are urgently needed to combat the overdose crisis.

Objective: This study characterizes the pilot year of a mobile medical unit partnership between a large urban academic center and a community-based harm reduction organization in Chicago.

Methods: This is a retrospective cohort study of all patients who were seen on a mobile medical unit focused on providing low-threshold buprenorphine and primary care in areas with high opioid overdose rates on Chicago's West Side. Treatment episodes were accrued between July 1, 2021, and June 30, 2022 in the first year of operation. The main outcomes were number of patients seen, demographic characteristics of patients, and reason(s) for visit over time.

Results: The study saw 587 unique patients on the mobile medical unit between July 1, 2021, and June 30, 2022. Approximately 64.6 % were African American, and more than half lacked active insurance or could not confirm insurance status at the time of visit. The most common reason for initial visit was COVID-19 vaccination (42.4 %), and the most common reason for follow-up visit was buprenorphine treatment (51.0 %). Eleven patients initially presented for other health concerns and later returned to initiate buprenorphine.

Conclusions: The mobile medical unit successfully reached nearly 600 patients in traditionally medically underserved Chicago neighborhoods with the highest overdose rates. The mobile unit's integrated approach met a variety of health needs, including buprenorphine initiation, with a unique opportunity for postoverdose initiation. Several patients initiated buprenorphine after presenting for different health concerns, showing the potential of an integrated approach to build on past mobile outreach programs and reach people with opioid use disorder who are not yet ready to initiate treatment.

Patient Perspectives on Transitioning from a Low-Threshold Buprenorphine Program to Clinic-Based Care

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Background: The Project Connections At Re-Entry (PCARE) Van is a low-threshold buprenorphine treatment program which has operated outside the Baltimore City Jail since 2017. It serves predominantly Black male patients with a history of criminal legal system involvement. Like other low-threshold programs, PCARE seeks to engage a vulnerable population in care for opioid use disorder, stabilize patients, then transition patients to longer-term treatment programs; however, of the patients who received treatment services at the van in 2022, just 6% transitioned to clinic-based buprenorphine treatment.

Objective: To understand patient perspectives of low-threshold buprenorphine care and transitions to clinic-based care.

Methods: From December 2022 to April 2023, 20 semi-structured in-depth interviews were conducted with a convenience sample of former and current patients of the PCARE Van. Interviews were recorded and transcribed verbatim. We used deductive and inductive coding followed by thematic content analysis to identify themes around treatment experiences and care preferences.

Results: Several themes emerged from the data that described preferences for low-threshold care. First, respondents valued specific qualities that define low-threshold care (same-day treatment entry, flexibility, convenient location, harm reduction approach). Other themes that emerged included both advantages to continuing care at the van (preference for familiarity, importance of feeling respected by providers) and disadvantages to transitioning to a clinic (harms associated with rigid or punitive care models, potential threats to recovery). Nearly all respondents, including those with primary care doctors, stated that if given the choice, they would stay at the van for as long as they were on buprenorphine *("When you got a good thing going why should you transfer to a place that'll take you off course?").* Nonetheless, many respondents noted that if the program was over capacity, they would transition to a clinic for altruistic reasons, stating that giving someone their spot could save that person's life.

Conclusions: While many low-threshold care settings are designed as transitional bridge models, this research highlights patient preference for long-term care at low-threshold programs. This research supports efforts to 1) adapt low-threshold models to be sustainable as longitudinal care and 2) expand harm reduction values and low-threshold program features across care settings.

Overdose

Overdose Detection Technologies for People Who Use Alone

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Background: Solitary drug use is a risk factor for overdose death, as bystanders are needed to administer naloxone and call for help. More than half of fatal overdoses in the United States occur in the absence of bystanders. Overdose detection technologies (ODTs), including buttons and motion sensors, could expedite response to drug overdoses and reduce the risk of overdose death.

Objective: The study assessed the feasibility and acceptability of ODTs in preventing solitary deaths in numerous settings including clinics, syringe services programs, housing facilities, and businesses in Rhode Island.

Methods: In the formative phase, we completed 6 focus group discussions with service providers (N=15) and patients (N=13), and 12 interviewer-administered surveys. Quantitative data were analyzed descriptively, and qualitative data were analyzed using inductive thematic analysis.

Results: We found substantial interest and need for a range of ODTs, to complement safety procedures (e.g., naloxone, door knocks). Survey data revealed high feasibility (100%), acceptability (75%) of motion sensors among managers/owners of bars, food services, and health facilities, lower rates regarding buttons and apps, and moderate willingness to train staff in overdose response and CPR (50%). Service providers discussed the stress and anxiety of checking bathrooms for overdoses, responding to overdoses, and the trauma of loss. Implementation considerations included the need to maintain universal naloxone/ODT training among staff/patients; purchasing responder phones that can be shared among staff; and maintaining devices. Patients had suggestions on where within a space ODTs should be located and messaging; they emphasized that ODTs could be useful in single-occupancy housing programs and publicly-accessible bathrooms. Barriers included concerns surrounding data confidentiality and privacy, particularly in the context of substance use criminalization and heightened surveillance of people who use drugs. Facilitators across both groups included the potential multiple uses of these devices (i.e., overdose and other emergencies) and their affordability.

Conclusions: Findings demonstrated high feasibility and acceptability of ODTs among providers and patients but revealed skepticism towards their adoption and implementation in certain contexts. If successful, ODT interventions will represent a major expansion in the field of overdose prevention.

Prescription Opioid Receipt and Dose Change Prior to Fatal Opioid-Involved Overdose

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Background: As heroin and then fentanyl use has risen, prescription opioids have been linked to a smaller proportion of opioid-involved overdose deaths. As such, concerns have been raised about the role that changes in opioid prescribing practices, especially dose reductions in people receiving long-term opioid therapy (LTOT), have in increasing risk of opioid overdose.

Objective: This study aimed to investigate prescription opioid receipt in the 12 months prior to opioid overdose death among decedents who were on LTOT and continued receiving opioids until month of death with a focus on the effect of patient characteristics such as age, gender, and race/ethnicity.

Methods: We used data linked between Connecticut's Prescription Drug Monitoring Program and opioid-involved deaths investigated by the Office of Chief Medical Examiner. Among 1580 opioid-involved overdose deaths in Connecticut from May 2016 to January 2018, we identified 179 individuals on LTOT in the year prior to death and prescribed opioids in the month prior to death. Using multilevel modeling, we estimated changes in mean morphine equivalent (MME) prescribed dose over 12 months prior to death. Our outcome of interest was the slope of change in MME over time. All models estimated the linear and quadratic effect of time with random

intercept and linear time slope. In individual models, we estimated the main effects of age, sex, race/ethnicity and their interactions with time.

Results: Of 179 decedents, the average age was 47.3 years (±11.5), 65.5% were male, 81% were White non-Hispanic, 9.5% were Black non-Hispanic, and 9.5% were Hispanic. In the time-only model, both linear (β=6.25, p<.001) and quadratic (β=0.49, p<.01) effects of time were positive, indicating that, on average, as decedents neared the month of death, MME increased exponentially. The effect of time varied significantly by decedent. The negative interaction effect between time and male sex (β=-4.89 p=.03), indicated that male decedents had significantly less positive MME slopes in the months preceding death compared to females. No other patient characteristics significantly predicted the MME slope.

Conclusions: These findings may have implications for developing sex-specific strategies to mitigate the risks associated with LTOT, changes in opioid prescribing, and fatal overdoses.

Opioid Overdose Risk Behaviors of Black Compared to White Overdose Survivors in San Francisco and Boston

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Background: Opioid overdose mortality among Black individuals is worsening in the United States. Understanding overdose risk behaviors offers opportunities to develop tailored overdose prevention interventions. However, few studies have examined overdose risk behaviors among Black individuals.

Objective: To determine differences in opioid overdose risk behaviors between Black and White individuals who survived an opioid overdose.

Methods: We conducted a secondary cross-sectional analysis of participants from the NIDA-funded REBOOT (repeated dose behavioral intervention to reduce opioid overdose) 2.0 trial. REBOOT participants included adults from Boston or San Francisco who had an opioid use disorder and opioid overdose in the past five years. Participants self-identified their race as either Black/African American or White. Multivariable logistic regression was used to compare the odds by race of using opioids with someone else at the same time, using a smaller amount first or using slowly (tester dose or slow shot), and using opioids the same day as alcohol and/or benzodiazepines. The analysis was adjusted for age, gender, study site, homelessness, and receipt of medications for opioid use disorder.

Results: We analyzed data from 224 individuals of whom 22% (n=50) identified as African American or Black. Mean age was 42 years and 61% were male. Route of heroin and fentanyl use was significantly different by race (p<0.001 and p=0.02 respectively), with a higher proportion of Black participants using intranasally versus White participants who used more by injection. Black participants had significantly lower odds of using opioids with someone else at the same time (aOR 0.48, 95%CI 0.24-0.96, p=0.04) and higher odds of using a tester dose or slow shot compared to White participants (aOR 2.02, 95%CI 1.03-3.93, p=0.04). There was no

significant difference by race in using alcohol and/or benzodiazepines the same day as opioids (aOR 0.85, 95%CI 0.44-1.65, p=0.63).

Conclusions: Black participants had higher odds of engaging in the protective behavior of using a tester dose or slow shot, but lower odds of reducing risk by using with another person at the same time. Overdose prevention and harm reduction efforts to address rising opioid overdose among Black individuals should support drug testing, while also addressing barriers to using with others.

System Dynamics Modeling to Inform Effective implementation of Evidence Based Practices to Prevent Opioid Overdose and Overdose Fatalities in New York State

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Background: As part of the New York HEALing Communities Study (NY HCS) to address the opioid crisis, we have constructed a system dynamics (SD) model of the opioid epidemic that generalizes to the state and participating communities (N=16).

Objective: To understand the dynamic structures that explain historical trends in opioid morbidity and mortality and use the model to evaluate policies to improve opioid-related outcomes.

Methods: Using a variety of information sources, we calibrated and simulated a model which closely replicates historical trends in opioid-related time series data from NY for 2012-2019 and simulates future trends to 2032. To better align the simulation results with increased deaths during and after the COVID-19 pandemic, we applied an adjustment to overdose risk and drug potency parameters in 2020-2021. Using the model, we conducted comparative policy analyses to help stakeholders develop a deeper understanding of short- and long-term capacity-building needs and trade-offs in choosing the optimal mix of harm reduction, treatment, and safe prescribing strategies to their given communities' capacities and barriers.

Results: Our analysis shows: (1) a combination of evidence-based strategies has the most impact; (2) linkage strategies for medication treatment need to be combined with retention strategies; (3) naloxone distribution has limited impact if not combined with strategies to improve bystander availability; (4) strategies that promote prevention in opioid misusers should be prioritized; and (5) given the associated effects of the COVID-19 pandemic and fentanyl supply, reversing overdose death rates is challenging, even with expanded implementation of strategies.

Conclusions: We have applied SD modeling as a tool to support data-driven decision-making among NY HCS community stakeholders. Our model has revealed important insights about likely trajectories in opioid overdose fatality rates, comparative impacts of evidence-based

strategies to address the opioid crisis, and challenges associated with sustainment of these strategies.

Characterizing Opioid Overdose Hotspots for Place-Based Overdose Prevention and Treatment Interventions: A Geo-Spatial Study

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Background: Overdose incidence changes over space and time and examination of neighborhood-level factors associated with overdose can inform intervention development and resource deployment to prevent overdose deaths.

Objective: Examine differences in neighborhood characteristics and services availability between overdose hotspot and non-hotspot neighborhoods and identify neighborhood-level factors associated with fatal and non-fatal overdose incidence.

Methods: We conducted a retrospective study of fatal and non-fatal overdoses in Rhode Island from 2016 to 2020. We used Rhode Island Department of Health Emergency Medical Services and State Unintentional Drug Overdose Reporting System data to identify non-fatal and fatal overdoses. Data about neighborhood services were collected through an environmental scan and the American Community Survey. We used a spatial scan conducted via SaTScan to identify hotspots. Chi-square tests were used to compare services availability in hotspot and non-hotspot neighborhoods. We used a Besag-York-Mollié model to identify associations between census block group level social determinants of health and overdose incidence.

Results: From 2016 to 2020, there were 863 fatal overdoses and 2,852 nonfatal overdose incidents in Rhode Island. We identified 7 non-fatal overdose hotspots and 3 fatal overdose hotspots. Non-fatal and fatal hotspot neighborhoods had higher proportions of Black and Latinx residents, renter-occupied housing, vacant housing, unemployment, and residents living in poverty. A higher proportion of fatal hotspot neighborhoods had a religious organization (80.7% vs 65.9%, $p < 0.001$) or a federally qualified health center (7.7% vs 3.0%, $p = 0.008$). Relative risk of nonfatal overdose was higher in neighborhoods with crowded housing (RR 1.19 [95% CI 1.05, 1.34]) and increased in a dose responsive manner with increasing proportions of residents living in poverty. Relative risk of fatal overdose was higher in neighborhoods at the highest percentile of families receiving public assistance (RR 1.67 [95% CI 1.24, 2.27]) and in cost burdened neighborhoods at the 25^{th}-50^{th} percentile (RR 1.29 [95% CI 1.02, 1.63]).

Conclusions: Neighborhood geospatial analysis can help identify where resources should be allocated and inform intervention design. Our findings indicate that poverty alleviation is essential to address the overdose crisis. The availability of services in overdose hotspots presents an opportunity to work with existing infrastructure to prevent overdose deaths.

Unintentional Drug Overdose Deaths Following Termination of Substance Use Disorder Treatment, New York City, 2016-2019

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Background: The number and rate of opioid-involved unintentional drug overdose deaths ('fatal overdose') in the US and in New York City (NYC) continue to rise. Benefits of medication treatment for opioid use disorder (OUD) are indisputable, including a 50% reduction in fatal overdose; few studies have examined the risk of fatal overdoses following substance use disorder (SUD) treatment termination.

Objective: To examine fatal overdose risk in the 6-months following SUD treatment termination among patients with OUD in NYC.

Methods: Patients with OUD who had NYC-based SUD treatment terminated (for any reason) from 01/01/2016-06/30/2019 were linked with reports of fatal overdoses that occurred in NYC from 01/01/2016-12/31/2019 (data, NYC Office of the Chief Medical Examiner). We explored bivariate associations between fatal overdoses ≤6-months of SUD treatment termination and factors including sociodemographics and SUD treatment type (odds ratios (ORs) and 95% confidence intervals (CIs) presented). SUD treatment sites were programs certified and overseen by the NY State Office of Addiction Services and Supports.

Results: Among 51,171 patients who had SUD treatment terminated, 463 had fatal overdoses ≤6-months following termination—of these, 30.2% (*n*, 140) had fatal overdoses within ≤2-weeks, and 51.0% within ≤6-weeks (*n*, 236). Two-thirds of fatal overdoses involved fentanyl (*n*, 306; 66.1%). Those employed (*n*, 68) were significantly less likely than those unemployed (*n*, 395) to have had fatal overdoses (OR, 0.75; 95%CI, 0.58-0.97). Those with co-occurring mental health disorder (*n*, 225) were significantly more likely than those without (*n*, 117) to have had fatal overdoses (OR, 1.67; 95%CI, 1.33-2.09).

Conclusions: Of patients who had SUD treatment terminated and had subsequent fatal overdoses, 30.2% died ≤2 weeks and 51.0% died ≤6 weeks. The immediate post-SUD-treatment-termination period is a risk period for fatal overdose. Ensuring retention in SUD treatment, including despite ongoing use, can be an important harm reduction strategy. Active linkages to subsequent health and social services, and to evidence-based OUD medication, are time-sensitive, core components of overdose prevention. SUD treatment settings are uniquely positioned to be leveraged to reduce fatal overdoses by requiring that overdose prevention resources and training (e.g., naloxone) are received by all patients, particularly at treatment termination.

Post-Overdose

Post-Overdose Outreach Programs in Massachusetts Since the Onset of COVID-19

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Background*:* Community-level post-overdose outreach programs that partner public health and public safety staff have been expanding in response to persistently high numbers of opioid overdose deaths in Massachusetts. The impact of the COVID-19 pandemic on the expansion and evolution of this innovative public health overdose response is not known.

Objective*:* To identify post-overdose outreach program adaptations and practices during the COVID-19 pandemic

Methods*:* In 2022, we surveyed identified post-overdose programs via questionnaire about programming onset, funding, outreach encounters, program adaptations and practices during COVID-19. Questionnaires were completed using Qualtrics directly online, via telephone, or in-person with support from a research assistant. We analyzed questionnaire data with descriptive statistics.

Results: As of June 2022, 73% (255/351) of Massachusetts municipalities reported at least one active post-overdose outreach program: none newly started during the first year of the COVID pandemic (March 2020 – March 2021), 15% (39/255) newly started in 2021 and 22% (57/255) started in 2022. Of the 89% (227/255) of programs that relied on grant funding, 42% (95/227) reported police as the primary grantee, followed by sheriff's departments (14%), harm reduction organizations (10%), and municipal health departments (10%) 22/277. Initial contact with overdose survivors was attempted via phone (78% (200/255) and text (47% (119/255)), most commonly by a recovery coach (73% (164/224)). Adaptations and practices initiated and sustained since the pandemic included distributing fentanyl test strips (41% (91/221)), recommending virtual spotting (34% (76/221)), outreach for people using cocaine or methamphetamine (33% (73/221)), naloxone rescue kit delivery (32% (71/221)), distributing face masks (30% (66/221)), and referring to services customized for Black, Latinx, or Native people (25% (55/221)). Practices in response to the pandemic included referring to telehealth (55% (138/252)) and virtual support meetings (52% (132/252)), and phone and text connections (45% (114/252)).

Conclusions*:* Post-overdose outreach programs continued to expand in Massachusetts following an initial lull in 2020 after the COVID-19 pandemic onset. Adaptations and innovations since pandemic onset included COVID-specific practices (e.g., face masks, virtual contact interactions and referrals), resources to reduce harms from drug supply (e.g., fentanyl test strips) and more inclusive outreach (e.g., tailored for people using cocaine and methamphetamine, and Black, Latinx, Native people).

The Impact of SHIELD Training on First Responders' Harm Reduction Attitudes, Beliefs, and Knowledge

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Background: Law enforcement officers (LEOs) may be the first responders to overdoses, making them an initial contact for people who use drugs (PWUD). In Missouri, the Drug Overdose Trust and Safety (DOTS) Project aims to improve LEOs' overdose response practices training based on the Safety and Health Integration in the Enforcement of Laws on Drugs (SHIELD) model, which uses an occupational safety and resilience lens to improve LEOs' harm reduction practices and attitudes.

Objective: This study aimed to determine the impact of live and online occupational safety and harm reduction training on LEOs' occupational safety knowledge and negative attitudes and beliefs regarding harm reduction, overdose response, and PWUD.

Methods: We conducted SHIELD training live and via pre-recorded online training for Missouri LEOs between December 2020 and December 2023. Prior to and following the training, we measured beliefs regarding whether naloxone encourages risky drug use, negative attitudes toward PWUD, knowledge about Hepatitis and HIV transmission from needle-stick injury, and overdose risk from fentanyl exposure via touch and inhalation. We compared pre- and post-test scores using paired t-tests and the change in the proportion of correct responses.

Results: Participants (N=1,073; 60% from a live training) completed both the pre- and post-test. Participants' negative attitudes toward overdose and PWUD were lower at post-training among attendees of live training [$t(544)=-9.44$, $p<.01$] and online training [$t(408)=-2.58$, $p=.01$]. Participants reported improved naloxone-related beliefs following live [$t(544)=-13.23$, $p<.01$] and online training [$t(409)=-3.75$, $p<.01$]. Relative to pretest, participants at posttest were 1.2 to 2.8 times more likely to correctly answer Hepatitis and HIV transmission risk items, and 3.2 times more likely to correctly answer fentanyl exposure risk items.

Conclusions: SHIELD training for Missouri LEOs was associated with reduced negative attitudes and naloxone-related beliefs, and improved knowledge about occupational safety and the negligible risks of fentanyl exposure. Improvement in attitudes, knowledge, and beliefs is critical to reduce adverse outcomes of interactions between LEOs and PWUD. Broader dissemination of the SHIELD model is warranted.

Identifying Unintentional Fentanyl Exposure Among People Who Have Experienced an Opioid Overdose: A Quality Improvement Investigation from San Francisco Street Overdose Response Team

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Background: Fentanyl-mixed and substituted heroin is well-documented, but less is known about unintentional fentanyl use among people who use stimulants. Rising fentanyl and stimulant

co-involvement in overdose fatalities, frequent reports of unintentional opioid exposure from EMS teams, and disparities by race/ethnicity have raised concerns in San Francisco.

Objective: To determine the frequency of self-reported unintentional opioid use among people who experienced an overdose attended to by EMS' Street Overdose Response Team, a collaboration between San Francisco's Department of Public Health and Fire Department.

Methods: We conducted a case review of suspected non-fatal overdoses as part of a quality improvement initiative. EMS records from 6/25/2022-9/5/2022 were reviewed to determine the intended substances used prior to an opioid overdose. An opioid overdose was defined as unresponsiveness with improvement in mental status or respiratory rate after naloxone administration.

Results: There were 197 EMS responses for suspected overdoses. Of 137 responses classified as opioid overdoses, we determined the intended substance used for 83 (60.6%). Fifty (60.2%) reported intending to use opioids while 33 (39.8%) reported not intending to use opioids. Among those not intending to use opioids, 22 (66.7%) reported intending to use stimulants (16 methamphetamine, 6 crack cocaine, 2 powder cocaine), 7 (21.2%) cannabis, and 4 (12.1%) other substances; 26 (78.8%) had a clinical opioid withdrawal scale (COWS) score <=8 after receipt of naloxone. Black respondents constituted 16.0% (8/50) of those intending to use opioids prior to overdose and 36.4% (12/33) of those not intending to use opioids.

Conclusions: More than one-third of people experiencing EMS-attended opioid overdoses reported no intentional opioid use, with most reporting intended stimulant use. A greater proportion of Black individuals reported no intentional opioid use. Opioid overdose in individuals who identify intending to use stimulants may result from unintentional opioid exposure through the drug supply, shared supplies, or underreporting intentional opioid use. Reports of cannabis use suggest social desirability bias as cannabis contamination is less likely, though low COWS scores suggest many people may not use opioids daily. While fentanyl use may be underreported, the magnitude of unintentional opioid use observed merits further investigation and intervention.

Applying a Naloxone Saturation Model in Missouri: Comparing Predictions to Reality

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Background: Missouri-based overdose education and naloxone distribution (OEND) has expanded since 2017 through SAMHSA-funded grant programs. Based on 2017 data, Irvine et al's (2022) naloxone saturation model estimates 60,000 community naloxone kits are needed annually in Missouri to reach a 80% probability of naloxone use during a witnessed overdose. Missouri's grant teams have distributed naloxone across the state to reach this saturation threshold.

Objective: To describe Missouri's naloxone distribution efforts between 2017 and 2022, and compare distributed amounts to the saturation level indicated necessary by Irvine et al.'s model.

Methods: We used descriptive statistics to evaluate Missouri's grant-funded naloxone allocations across sector and location by year, using Irvine et al.'s model estimates as a saturation threshold.

Results: Almost 170,000 naloxone kits have been distributed in Missouri since 2017, with 84,640 kits distributed in 2022, representing the first time the number of naloxone kits distributed exceeded Irvine et al's estimated target, and a 71-fold increase over 6 years. During this timeframe, distribution efforts have reached 104 of Missouri's 115 counties, comprising 98.8% of the state's total population. Street outreach/harm reduction-related services did not receive any kits in 2017, but received the highest share of any sector (36%) in 2022. Eleven rural counties have not yet received naloxone through current distribution efforts, and 33 counties only received mail-based naloxone (representing 1.2% and 7.2% of Missouri's population, respectively).

Conclusions: In 2022, naloxone distribution in Missouri first matched and exceeded 60,000 kit thresholds from Irvine et al.'s model by increasing distribution and prioritizing harm reduction and street outreach organizations who put naloxone in the hands of people who use drugs. Despite these successes, overdose deaths in Missouri continue to occur at unprecedented rates and many areas remain underserved. Irvine et al.'s model does not include data after 2017, nor unwitnessed overdoses, two major factors in the current overdose crisis landscape. Future distribution efforts should prioritize people most likely to witness overdoses. Research and education should focus on novel overdose detection technologies, and nuanced safer use strategies for people who use drugs alone.

The Intersections of Mental Health with Substance Use and Related Barriers to Treatment Among Opioid Overdose Survivors in Boston, MA

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Background: There are significant gaps in receipt of treatment among people who experience opioid overdoses in Boston, MA. Co-occurring mental health (MH) and substance use disorders (SUD) are common, and there is a need for more research on how this affects the experiences and decisions of overdose survivors.

Objective: To understand how MH impacts access to treatment and service-seeking decisions among Boston residents who have recently survived an opioid overdose

Methods: The Boston Overdose Linkage to Treatment Study (BOLTS) is a qualitative examination of post-overdose treatment access in Boston. Between 2020-2021, we conducted semi-structured qualitative interviews with 59 Boston residents who had survived an opioid

overdose, and 28 key informants with relevant professional or community leadership roles. We used iterative team codebook development and Framework Analysis methods to organize data and synthesize themes related to MH.

Results: Among overdose survivor participants, 70% identified as Black or Hispanic/Latinx; 71% identified as male; 75% were experiencing homelessness at the time of the interview; and 75% reported their MH status as Poor or Fair. About one-third of participants talked about receiving MH care or having MH concerns or diagnoses, and some described strong emotional reactions following their overdose, including shame, depression, and anger. For some survivors, homelessness and/or COVID-19 caused or exacerbated mental distress, and participants described using drugs to cope. Participants also described how MH conditions presented a barrier to SUD treatment and vice versa, often in relation to medication access (e.g., *"If I could get my [mental health] medication [...] I'll be in the program so fast. In a sober house and working.")*. Key informants emphasized the importance of treating MH and SUD together, and described how current systems have limited capacity to effectively treat co-occurring disorders and how people with mental illness can be barred from or kicked out of SUD treatment programs.

Conclusions: Mental health and substance use disorders are intertwined, compound one another, and can create barriers to treatment and recovery. Findings suggest a need for MH/emotional support during overdose response, as well as more integrated programming that can provide comprehensive and coordinated MH and SUD treatment services.

Evaluating Oxygen Monitoring and Administration during Overdose Responses at a Sanctioned Overdose Prevention Site in San Francisco, California: A Mixed-Methods Study

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Background: Overdose prevention sites (OPSs) are spaces where individuals can use pre-obtained drugs in a monitored setting and trained staff can immediately intervene in the event of an overdose. While many OPS use a combination of naloxone and oxygen to reverse overdoses, little is known about oxygen as a complementary tool to naloxone administration in OPS settings.

Objective: We conducted a mixed methods study to assess the role of oxygen monitoring and provision during overdose responses at a locally sanctioned OPS in San Francisco, California.

Methods: We used descriptive statistics to quantify number and type of overdose interventions delivered in the 46 weeks of OPS operation. We used qualitative interview data from OPS staff interviews (with health workers and emergency medical technicians (EMTs)) to evaluate experiences using oxygen during overdose responses. Interviews were transcribed, coded, and analyzed using thematic analysis to identify themes related to oxygen impact on overdose response.

Results: OPS staff were successful in reversing 100% of overdoses (n=333) in its 46 weeks of operation. Oxygen became available 18 weeks after opening. Among the overdose responses post-oxygen availability (248), nearly all involved oxygen administration (227, 91.5%), with more than half involving both oxygen and naloxone (147, 59.3%). After oxygen became available, overdoses involving naloxone administration decreased from 98% (n=84) to 66% (n=149), though average number of overdoses concomitantly increased from 5 to 9 per week. Interviews revealed that oxygen availability improved overdose response experiences for OPS participants and staff. OPS staff EMTs were leaders of delivering and refining the overdose response protocol and training other staff. Ongoing challenges included strained relationships with city emergency response systems due to required 911 calls after every naloxone administration, inconsistent source of oxygen and harm reduction supplies, and lack of sufficient staffing causing people to have to work long shifts.

Conclusions: Although the OPS operated temporarily, it offered important insights into the impact of providing these services. Ensuring consistent oxygen supplies, staffing, as well as removing requirements for 911 calls after every naloxone administration could improve resource management. These recommendations may help enable success for future OPS in San Francisco and elsewhere.

Primary Care

"It's Like a Partnership": Exploring the Primary Care Experiences and Self-Defined Primary Care Goals of People Who Use Drugs

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Background: Primary care is an important yet underutilized resource in addressing the overdose crisis. Previous studies have identified important aspects of primary care for people who use drugs (PWUD) and have found patient involvement in care decisions and goal-setting to be especially key. However, there has been limited research describing the primary care goals of PWUD. In harm reduction settings, where it is imperative that PWUD set their own goals, this knowledge gap becomes especially relevant.

Objective: This study utilized qualitative methods to explore how PWUD navigate primary care with a focus on understanding participants' primary care goals. We sought to examine participants' experiences in primary care, understand their self-defined primary care goals, and identify strategies to support these goals.

Methods: Between June 2022 - August 2022, we conducted 17 semi-structured interviews with PWUD currently engaged in primary care at the REACH Program, an interdisciplinary harm reduction-based primary care program in New York City. Informed by phenomenology, transcripts were coded using both inductive and deductive codes and themes were developed using thematic analysis approaches.

Results: Phenomenological analysis identified four major themes that, together, created an experience that participants described as "a partnership" between patient and provider: 1) even-sided collaboration between patient and provider around patient-defined care goals; 2) support provided by harm reduction-based approaches to primary care anchored in incrementalism and flexibility; 3) care teams' ability to address fragmentation in the healthcare system; and 4) the creation of social connection through primary care. This partnership, in turn, fostered positive primary care experiences and supported participants' self-defined care goals.

Conclusions: To best meet the primary care goals of PWUD, these findings underscore the importance of primary care providers and programs facilitating such partnerships through organizational-level programs and support. Future research should explore how these experiences in primary care affect patient health outcomes, ultimately shaping best practices in the provision of high-quality primary care for PWUD.

Co-Location of Medical and Psychiatric Care in an Opioid Treatment Program Associated with a Dramatic Decrease in Acute Care Utilization

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Background: Individuals seeking substance use disorder (SUD) treatment often have medical and psychiatric comorbidities leading to high rates of emergency and inpatient care. Federal standards and decades of evidence support co-location of OUD treatment, medical, and psychiatric care services. Despite this, access to integrated primary and specialty care is limited in specialized SUD treatment, and individuals with SUDs face barriers to accessing outpatient care.

Objective: To demonstrate that

1. Patients enrolled in SUD treatment access co-located medical and psychiatric care.
2. Co-located nursing, medical, psychiatric, and social work services result in decreased utilization of acute care and increased social determinants of health (SDOH) screenings, deliverables of the Maryland Medicaid Upper Payment Limit Demonstration which subsidizes our service model.

Methods:

1. We analyzed clinic utilization data to describe the number and types of integrated care encounters for patients co-enrolled in our SUD treatment programs.
2. Our project consultant contracted with the Hilltop Institute to analyze Maryland Medicaid data. The Hilltop Institute established baseline population-normalized statistics for a) avoidable ED utilization, b) preventable admissions, c) SDoH screening for 2017, 2018, and 2019 for patients enrolled in addiction treatment services at our project site, prior to expansion of co-located services. These were then compared on an annualized basis to 2021-22 statistics.

Results:

1. Patients receiving addiction services at our site had 3483 medical encounters from 9/2021 to 9/2022, of which 1279 were same-day visits. 325 patients have an assigned PCP at our site, representing 57% of our current OTP census. 223 patients have engaged in subspecialty care (ID, psychiatry, and/or wound care).
2. Based on 2022 Maryland Medicaid claims data, avoidable ED visits decreased by 42% from baseline (to 63,326 from 109,340/100,000 members). Preventable admissions have decreased by 51% (to 3527 from 7239/100,000 members). SDoH screening increased from 4.5% to 52.6% of currently enrolled patients.

Conclusions: Early results demonstrate feasibility, acceptability to patients, dramatically decreased acute care utilization, and increased screening for SDoH. We believe that our program can serve as an example for other SUD treatment programs aspiring to enhance their patients' health and recovery.

15-Month Outcomes of a Primary Care-Based Transition Clinic for Patients Newly Initiating Buprenorphine for Opioid Use Disorder

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Background: Care transitions represent vulnerable times for patients newly initiated on medications for opioid use disorder (OUD) in short-stay settings such as hospitals and emergency departments (ED); dedicated transition clinics leveraging multidisciplinary supports may improve care linkage and retention in primary care OUD treatment.

Objective: The Supporting Patients through Access, Reach, and Continuity of care (SPARC) clinic is an interdisciplinary nurse-led clinic that aims to 1) facilitate linkage to primary-care substance use disorder (SUD) treatment, 2) provide comprehensive primary care and SUD treatment services, and 3) support and empower PCPs to adopt SUD treatment into their scope of practice.

Methods: Using internal tracking and electronic health record data, we assessed linkage to care, retention in care, and provision of guideline-directed SUD treatment for patients newly initiated on Buprenorphine for OUD from a single referral source – an ED-based buprenorphine initiation and short-term aftercare program – for SPARC clinic compared to referral to usual primary care within the same health system.

Results: From October 2021 through December 2022, we nearly tripled the capacity of University of Utah primary care (UUPC) to provide care for newly referred patients with opioid use disorder (SPARC N = 95, all other UUPC N = 38) and demonstrated improved linkage to care (66% vs 42%), retention in treatment (1m: 83% vs 62%, 3m: 73% vs 56%, 6m: 56% vs 46%), infectious screening (77% vs 46%) and naloxone provision (100% vs 81%). Among SPARC patients, 73% had more than 4 medical diagnoses, 68% had co-occurring mental health diagnoses, and 67% had Medicaid has primary insurance.

Conclusions: An interdisciplinary nurse-led primary care-based transition clinic was effective at facilitating linkage to care and continuity of care for patients newly initiated onto buprenorphine for OUD. As innovative SUD treatment initiation programs are developed in acute care environments such as the hospital and ED, partnering transition clinics play an important role in supporting ongoing care. Primary care may be the ideal venue for these clinics given the overall medical complexity of many patients requiring acute care services and the existing team-based chronic disease care models within primary care that may be adapted to SUD treatment.

Treatment Outcomes of Patients on Long-Acting Injectable Buprenorphine in an Office-Based Addiction Treatment Setting Utilizing the Nurse Care Manager Model: A Retrospective Chart Review

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Background: In 2017, a once-monthly long-acting injectable formulation of buprenorphine (LAIB) expanded treatment options for individuals with an opioid use disorder (OUD). LAIB has the potential to reduce barriers for persons with OUD such as: pharmacy visits, taste aversion of the tablet/film formulations, safe storage of buprenorphine, and daily medication adherence. There is limited data on patient cohorts utilizing LAIB.

Objective: Describe treatment outcomes of individuals started on LAIB in an office-based addiction treatment (OBAT) setting within a large urban safety net hospital.

Methods: Retrospective chart reviews were conducted for all patients who received one or more LAIB injections in an OBAT program. We assessed treatment outcomes for all patients started on LAIB over 47-months, April 2019 to March 2023, (i.e., continuation of LAIB, transition to transmucosal buprenorphine or methadone, lost to follow-up, self-discontinued use of buprenorphine). Discontinued use of buprenorphine was confirmed by medical record reviews and follow-up with patients when possible.

Results: A total of 315 patients received at least one injection of LAIB between April 2019 and March 2023. At the time of the chart review (i.e., month 47), 34% (107/315) were maintained on LAIB treatment, though the amount of time on LAIB varied by participant and start date. The average number of months patients were maintained on LAIB was 7.673. Of the total patients on LAIB, 30% (72/315) transitioned to transmucosal buprenorphine, and 5% (15/315) transitioned to methadone. Almost 1 in 5 patients (18%, 56/315) were lost to follow-up at the end of the time period examined. Sixteen percent (49/315) “self-tapered,” meaning they used LAIB to self-discontinue buprenorphine treatment. We found no evidence that those who self-discontinued had further buprenorphine treatment.

Conclusions: Over 47 months, the majority of patients were on buprenorphine treatment (LAIB or transmucosal). Of potential concern, 16% utilized LAIB to self-taper off buprenorphine treatment. This finding warrants further investigation and follow-up, as cessation of buprenorphine treatment is associated with increased risk of mortality. It may be necessary for

care teams to explicitly discuss patients' goals for LAIB, weighing patients' autonomy and desires with accurate information about the risk of discontinuation.

Improving Care for Persons with Homeless Experience and Opioid Use Disorder within an Interdisciplinary Primary Care Clinic

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Background: Opioid use disorder (OUD) and barriers to treatment (MOUD) are highly prevalent among persons with homeless experience (PHE). The Vulnerable Veteran Innovative Patient-Aligned Care Team (VIP) Initiative was established at the Veterans Affairs Salt Lake City (VASLC) Health Care System in 2018 to provide interdisciplinary primary care and addiction treatment for vulnerable Veterans, including PHE.

Objective: To describe MOUD provision in VIP and non-VIP settings.

Methods: The cohort included PHE with OUD who received care at VASLC in fiscal years 2018-2020 (Table). VIP care was defined by 2+ annual encounters. We used yearly days supply (0-365) from pharmacy records to identify MOUD treatment (buprenorphine, injectable naltrexone) and care settings. Multivariable logistic and linear regressions tested for differences between VIP and non-VIP patients in MOUD provision and days supply, respectively.

Results: Among 399 PHE with OUD, VIP patients were more likely to receive any MOUD (73.5% vs 43.7%; AOR=3.48, 95% CI=2.13-5.69). Most VIP patients were prescribed MOUD from primary care (63.4%), whereas non-VIP patients were prescribed MOUD from specialty addiction clinics (57.9%) or other settings (39.4%). VIP patients overall received more MOUD days supply (mean=150.9, sd=122.2) than non-VIP patients (mean=136.0, sd=128.0; adjusted difference=47.2 days, CI=8.16-86.3), with notable engagement among VIP patients whose MOUD was prescribed from primary care (mean days supply=190.3, sd=101.4).

Conclusions: VIP is a successful primary care model for engaging PHE in MOUD.

Table. Characteristics of Homeless-Experienced Veterans with Opioid Use Disorder Treated in VIP vs Non-VIP Settings

	VIP (n=136)	Non-VIP (n=263)	p-value
Age (mean, sd)	48.7 (13.8)	46.8 (13.6)	0.19
Female	2.9%	7.6%	0.06

Non-Latinx White	89.0%	87.8%	0.74
Nosos risk score	7.1 (5.5)	5.3 (4.0)	<0.001
3+ medical conditions	42.7%	27.7%	0.001
2+ mental health conditions	71.3%	60.8%	0.04
Chronic pain	52.9%	41.8%	0.04
Alcohol use disorder	48.5%	47.9%	0.91
Drug use disorder	67.7%	72.6%	0.30
Social stressors			
Transportation problems	2.2%	1.9%	0.84
Legal problems	78.7%	75.3%	0.45
Exposure to violence	66.9%	59.3%	0.14
Financial problems	80.2%	70.0%	0.03
Low social support	67.7%	62.4%	0.30
Other psychosocial needs	75.0%	63.1%	0.02

Qualitative Study of Early OUD Treatment Dropout in Primary Care

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Background: Primary care providers (PCPs) increasingly prescribe buprenorphine for OUD, but dropout rates are very high in the first 6 months. Half drop out in the first 30 days before trust with care team members and adaptive coping mechanisms are established. To maximize operational efficiency, primary care clinics may standardize workflow and optimize staffing levels, but the impact of these and other strategies on early dropout remains largely unexplored.

Objective: We investigated how academic primary care can better support patients with OUD during the first few weeks of treatment when discontinuation rates are highest.

Methods: We conducted semi-structured interviews with a purposive sample of primary care patients who had completed 4 weeks of OUD treatment or dropped out early, aiming to compare their perspectives. We also conducted interviews with PCPs and clinic administrators from Mid-Atlantic academic primary care clinics to provide complementary viewpoints. We analyzed the data using a multi-phase modified grounded theory approach.

Results: Our subject population included 6 patients who had completed 4 weeks of OUD treatment, 6 patients who had experienced early dropout, 6 PCPs who prescribe medications for OUD (MOUD), and 2 administrators of primary care clinics that provide MOUD. Analysis yielded 6 themes: (1) patients wanted more appointment and walk-in availability, while clinicians and administrators preferred restricted MOUD hours to conserve resources and regulate patient flow; (2) managing high-risk comorbidities (chronic pain, methamphetamine use disorder, and benzodiazepine use disorder) was difficult because treatment options were less effective and treatment goals between patients and providers were poorly aligned; (3) patients perceived that the PCP group coverage model fragmented care, slowed treatment progress, and lowered the quality of the patient-care team relationships; (4) insurance lapses and high copays

were major concerns for patients, clinicians, and administrators; (5) patients perceived telemedicine to decrease barriers to treatment, while clinicians emphasized the need for guardrails, and administrators emphasized reimbursement problems; and (6) transportation for clinic visits was a substantial hurdle, but clinic-provided assistance helped.

Conclusions: Effective integration of MOUD into primary care is a resource-intensive enterprise with multiple challenges. We identified potential solutions that may enhance OUD treatment delivery in academic primary care settings.

Race and Ethnicity

Attitudes Toward Methadone Treatment Among African Americans

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Background: Despite its ability to lower risk of opioid misuse, methadone is viewed by patients with a certain degree of ambivalence. Research has documented a variety of patient attitudes toward methadone, but the majority of these studies have relied on samples with little African American representation.

Objective: The primary objective of this study was to identify and explain the attitudes of African Americans toward methadone treatment.

Methods: Surveys were used to identify which attitudes were most prevalent, while interview data are presented to help explain and provide context to these attitudes. Data were drawn from the Florida Minority Health Survey, a mixed-methods project that included online surveys (n=403) and in-depth interviews (n=30). Only persons 18 years old or over who identified as African American and reported past 90-day opioid misuse were eligible to participate.

Results: Analyses revealed that negative attitudes largely revolved around methadone's perceived helpfulness and side effects. The most strongly held attitudes were: 1) methadone in a treatment program gets you high just like heroin, 2) the sooner a person stops taking methadone, the better, and 3) methadone is a "crutch."

Conclusions: This study is the first to examine methadone-related attitudes specifically among African Americans. Our results document the extent and type of African American's ambivalence toward methadone. Efforts are needed to address methadone-related stigma in African American communities and the policy regulations (e.g., supervised daily dosing) that strengthen this stigma. Providers and policymakers would do well to consider the data presented in this presentation when developing interventions to de-stigmatize methadone among African Americans.

Racism, Not Race: a Quantitative Analysis of the Use of Race and Racism in Addiction Articles from 1990-2022

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Background: Prior research shows that the published medical literature rarely mentions racism or its role in shaping health, potentially contributing to persistent health inequities in the United States. Although racial disparities in addiction treatment and outcomes are well-documented, no studies have quantified how frequently addiction researchers mention the role of racism in medical journals.

Objective: To determine how frequently "race" and "racism" are mentioned in articles focused on addiction treatment and outcomes in the five most highly rated addiction journals during the past 30 years.

Methods: We analyzed over 30,000 articles published between 1990 and 2022 in five top addiction medicine journals (*Addiction, Addictive Behaviors, International Journal of Drug Policy, Drug and Alcohol Dependence, and Journal of Substance Abuse Treatment)* to quantify the frequency of mentioning race and racism. We compared rates over time for each journal and across different article types, including original research articles and opinion articles. We also estimated interrupted time series models to quantify the effect of the racial justice movement after George Floyd's murder in 2020 on how frequently racism was mentioned in the addiction literature.

Results: Across all analyzed articles (n=30,347), 11,651 (38.4%) of articles mentioned race. The share of articles mentioning race has increased each year, from 76 (21.1%) in 1990 to 749 (54.0%) in 2022. Only 450 (1.5%) of all articles mentioned "racism" between 1990 and 2022. When examining all articles that mentioned race, opinion articles were significantly more likely than original research articles to also mention racism (OR=2.09 [1.54-2.82], $p<.001$). Compared to pre-2020, articles published in 2020-2022 were significantly more likely to mention racism in all articles (OR=1.09 [1.01-1.17], $p=.03$) and in articles also mentioning race (OR=3.21 [2.39-4.32], $p<.001$).

Conclusions: The addiction literature regularly reports on race, but rarely assesses the role of racism. This suggests that authors and publishers are failing to explore the impact of widespread systemic and institutional racism in explaining persistent racial disparities in addiction treatment and outcomes.

Exploring Cultural and Community Context for Substance Use Interventions in West Philadelphia, an Urban, Predominantly Black Neighborhood

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Background: Philadelphia is an urban epicenter of the opioid crisis in the US, with disproportionate increases in overdose deaths among Black Philadelphians. Broader uptake of treatment and harm reduction strategies are critical to addressing this trend, but little is known

about perceptions of harm reduction and substance use treatment efforts among Black Philadelphians.

Objective: To explore perceptions of drug use, people who use drugs (PWUD), and approaches to harm reduction and treatment in their community in an urban, predominantly Black neighborhood.

Methods: We conducted semi-structured interviews with a purposive sample of participants living or working in West Philadelphia. Interviews were recorded, transcribed, and analyzed in NVivo 12 using thematic content analysis.

Results: We completed 19 interviews. Mean age was 46, 78% were women; 83% were Black/AA. Most participants either worked with PWUD (50%) in health or social service roles and/or had lived experience personally or with a close friend/family member(83%).

Several factors influenced attitudes toward substance use and PWUD in the West Philadelphia community. Participants frequently referenced the impact of the "War on Drugs" and reported community apprehension about substance use and harm reduction services due to prior experience with the history of policing and racialized criminalization of drug use. Most participants described community disapproval of drug use and stigma towards PWUD, as well as a view of harm reduction an endorsement of drug use rather than a public health effort. Cultural norms were also deemed a deterrent to treatment access and engagement in harm reduction services, with shame and stigma strongly associated with negative attitudes towards substance use and care-seeking in general. Finally, participants referenced a long history of maltreatment and neglect as a conduit of mistrust and a hindrance to long-lasting partnership with surrounding healthcare institutions.

Conclusions: West Philadelphians highlighted the need for community-driven harm reduction and outreach initiatives and an expansion of culturally appropriate services to adequately address substance use in their community. The implications of our findings suggest the need for future research into the best practices to build relationships with communities most impacted by racialized approaches to substance use.

What Would Make Addiction Treatment More Appealing, Effective, and Equitable for Black Patients?

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Background: Black people in the US have similar rates of substance use as White people, but experience worse consequences (e.g., incarceration, family separation) and are less likely to engage in, and benefit from, addiction treatment.

Objective: We developed a working group of multidisciplinary professionals at Boston Medical Center to explore how to improve substance use disorder (SUD) treatment for Black people. The majority of the working group are Black people, and some members also have lived experience of SUD.

Methods: We conducted 6 focus groups with Black people who have lived experience of SUD and one with treatment providers. We completed 6 scoping literature reviews to understand what is known about SUD care for Black patients. Then, we convened four day-long conferences with groups of 15-17 participants including Black people with lived experience of SUD and multidisciplinary SUD treatment and research professionals. Conferences focused on integrating information from the focus groups and literature reviews. Products include recommendations for action-items that can improve care, and key unanswered questions.

Results: Action-items fell into 4 areas of needed change: 1) addiction treatment organizations (e.g, Require that leadership commit to anti-racism; Create a committee of Black patients who review concerns of Black patients and recommend organizational changes); 2) addiction treatment providers (e.g., Hire/support more BIPOC clinicians; Educate clinicians about the history of anti-Black discrimination in healthcare); 3) addiction treatment (e.g., Incorporate the option of faith-based treatment approaches; Address trauma, including racial trauma); and 4) systems that intersect with addiction and the treatment system (e.g., Child protection system should stop policing and surveilling families; Offer intensive SUD treatment in carceral settings). Examples of key unanswered questions include: What educational interventions can help providers gain and maintain Black patients' trust? What are best practices for incorporating art, music, and spoken word into SUD treatment?

Conclusions: Through a process of collaboration between Black people with lived experience of SUD and multidisciplinary SUD treatment and research professionals, we developed a set of action items endorsed by Black patients as important steps to improve SUD care for Black people. We also identified key unanswered questions that inform a research agenda.

Healing Indigenous Hearts: Developing a Facilitators' Guidebook to Support Indigenous Peoples in Their Journeys with Grief and Loss

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Background: In 2016, a public health emergency was declared in BC due to toxic-drug deaths. Historically, Indigenous Peoples are overrepresented in toxic-drug deaths. The overwhelming loss of life has been felt deeply in every community across the province.

Objective: Over the course of two years, the British Columbia Centre on Substance Use (BCCSU) and the First Nations Health Authority (FNHA) developed a guidebook titled, *Healing Indigenous Hearts,* to help train peer facilitators lead support groups and guide people through the pain they are experiencing after losing a loved one to the toxic drug crisis.

Methods: This resource tool provides education, guidance, and culturally safe, Indigenous-informed frameworks for facilitating support groups that will help people move from grief toward hope and healing. It aims to uphold the voices of Indigenous Peoples and shares various cultural and traditional practices, as well as evidenced-based healing modalities. Examples of topics include:

- Understanding grief (e.g., common grief reactions, factors affecting grief, etc.).
- Integrating models of care for wellness (e.g., culture and healing, moving through the grieving process, trauma-informed approaches, hope therapy, etc.).
- Getting started with facilitation (e.g., communicating over email and social media, promoting the group, meeting times, registration process, insurance, fundraising, etc.)
- Hosting a group (e.g., tips on sharing, activities for facilitating, opening and closing a, group discussion topics, facilitation techniques, managing disruptions, conflicts, and crises, hosting the group online, feedback and evaluation, etc.).
- Facilitator supports (e.g., maintaining healthy boundaries, self-care strategies, the healing hearts community of facilitators, etc.).

Results: The authors acknowledge the need for respecting the diversity of Indigenous communities and provides pathways for Indigenous peer facilitators to include their own unique combination of knowledge, skills, experiences, wisdom, traditions, cultures, and connections to language and land. It has and will continue to be utilized within many Indigenous communities in BC, in rural and urban settings.

Conclusions: The guidebook helps communities gather in a good way to hold each other up on their healing journeys. While it is not intended as a substitute for the medical recommendations of physicians or mental health professionals, it is intended to speak to the hearts, minds, and spirits of bereaved Indigenous Peoples.

Recovery Support and Community Engagement

Implementing and Evaluating Group Model Building as a Participatory Approach to Foster Community Dialogue and Systems Learning Around Connecticut's Good Samaritan Laws

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Background: The determinants of overdose bystander behavior are complex, dynamic, and locally specific, requiring a systems perspective to fully characterize. Group model building (GMB) is a participatory approach for creating system dynamics (SD) models where stakeholders work together with modeling facilitators to build a shared understanding of the forces and feedbacks that explain a complex problem.

Objective: To implement and evaluate GMB as a tool to build shared understanding of overdose bystander behavior in the context of Connecticut's (CT) Good Samaritan Laws (GSLs), foster systems thinking skills among a diverse set of stakeholders, and identify high-leverage policies for improving opioid-related outcomes and implementation of GSLs in CT.

Methods: We conducted six GMB workshops that engaged a diverse set of participants with medical and community expertise and lived bystander experience. Through an iterative, stakeholder-engaged process, we developed a qualitative SD model in the form of a causal loop diagram. After each workshop we administered a survey to evaluate participant perceptions of their own understanding of SD concepts and of the usefulness of SD to inform decision-making to address the opioid epidemic in CT.

Results: The resulting model captured our GMB participants' collective understanding of the feedback loop structure driving bystander behavior and other factors influencing the effectiveness of GSLs in CT. Using our model and model-building process, we facilitated systems thinking exercises centering the endogenous feedback perspective of SD, prompting stakeholder identification of potential leverage points in the system for improving opioid-related outcomes. Stakeholder-identified high-leverage policies included: 1) improving naloxone access and use; 2) scaling up community-based harm reduction services and teams; and 3) educating first responders and healthcare workers to reduce stigma. Evaluation survey results showed improved stakeholder understanding of SD procedures, applications, and interpretations in follow-up workshops compared to initial sessions.

Conclusions: Using participatory systems modeling, we co-built a qualitative SD model with community members and local experts in CT. The model revealed complex, non-linear interdependencies in the social, structural, and policy determinants of bystander responses to opioid overdose. Participants gained systems thinking skills and valued the potential of SD to facilitate opportunities for collaboration and building collective understanding of complex public health problems.

A Community Peer Recovery Support Specialist Model for Engaging People Who Use Drugs in Rural Communities

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Background: People who use drugs (PWUD) in rural communities experience limited access to harm reduction and treatment services. Peer recovery support specialists (peers) have been tested in urban addiction treatment settings, but not rural settings.

Objective: To examine the feasibility, acceptability, and correlates of a novel rural peer outreach intervention to engage PWUD.

Methods: Peers with at least 2 years of recovery were recruited from 5 rural Oregon counties and trained in community outreach, harm reduction techniques, and research ethics. Peers participated in monthly supervision, an online learning collaborative, and weekly team meetings. Peers recruited non-treatment-seeking PWUD with past-30-day injection drug use (IDU) or non-injection opioid use through direct community outreach. Peers offered naloxone kits and training, mobile syringe exchange, fentanyl test strips, and other supports. Peers surveyed participants about drug use and documented services provided in the subsequent 90 days. Logistic regression identified predictors of services received.

Results: Participants' (N = 605) mean age was 38 [SD 11] years; 64% were male, 82% white, 8% Hispanic and 72% unhoused. Most common drugs used in the past 30 days were methamphetamine (95%) and opioids (72%); 91% reported IDU and 12% reported overdosing in the past 6 months. 70% of PWUD engaged with any peer services within 90 days of first encounter, and 37% engaged in peer-delivered harm reduction services. Participants with past 180-day overdose were more likely to engage with peers (aOR 1.83, 95% CI 0.93, 3.54) and receive harm reduction services (aOR 1.83, 95% CI 1.06, 3.15). Receipt of harm reduction services was also associated with living >1 hour from a syringe service program (aOR 2.15, 95% CI 1.43, 3.25) but inversely associated with recent incarceration (aOR 0.57, 95% CI 0.37, 0.85). 13% of participants engaged in SUD treatment within 90 days of first encounter. SUD treatment engagement was associated with HCV positivity (aOR 1.81, 95% CI 1.08, 3.07).

Conclusions: Rural peer outreach achieved high levels of engagement among PWUD. Peer training can improve access to harm reduction and treatment services for rural non-treatment-seeking PWUD, particularly for those with hepatitis C. Recently incarcerated rural PWUD may require additional supports.

Learning Collaboratives (LCs) in the HEALing Communities Study: A Community-Engaged Training and Technical Assistance (TTA) Approach in a Multi-Community Overdose Reduction Intervention

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Background: Continued increase of fatal opioid overdose across the United States calls for novel ways to connect community partners to share information and collaborate to implement and sustain evidence-based strategies that reduce overdose deaths. In the NIH-funded HEALing Communities Study (HCS), a multi-community intervention to reduce opioid overdose deaths, four research sites (MA, NY, OH, KY) developed Learning Collaboratives (LCs) as a key Training and Technical Assistance (TTA) approach. LCs responded to community needs, leveraged engagement and local/interprofessional expertise, and encouraged multidirectional knowledge sharing within and across communities.

Objective: We described the design, implementation, and lessons learned from TTA delivery via LCs and analyzed administrative data across sites to identify the strengths and challenges of this approach.

Methods: Each site developed a unique LC delivery and evaluation approach. Site research staff convened to define LCs and compare data. We described the number of LC sessions and participant characteristics. We evaluated similarities and differences between state-specific processes, including session structure, cadence, topics, attendance, and lessons learned.

Results*:* In the study period of January 2020 – June 2022, 256 LC sessions occurred in total (MA: 113; NY: 110; OH: 17; KY: 16). LCs were typically 1-2 hours via Zoom, and included a diverse set of speakers, community case examples, and active, bidirectional discussion. LC topics focused on the intersection of opioid overdose reduction and housing, mental health, racial equity, harm reduction, the criminal legal system, and safer opioid prescribing and dispensing. Interprofessional participants included outreach workers, clinicians, and state-level partners. LC structures included individual or series, content- or community-specific, and one cross-site session.

Conclusions*:* LCs successfully convened interprofessional partners to explore opioid overdose prevention content and address shared community needs and opportunities. LCs established networks among participants and encouraged resource sharing within and across communities in order to enhance collaboration and improve service delivery.

How Do Peer Support Specialists Experience Transitions to Employment Following State Certification?

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Background: Peer specialists are often certified to deliver services under state training programs. The option of becoming a peer support specialist is critical because adults in recovery encounter barriers to employment such work-place discrimination. Challenges finding employment following certification are also likely for newly certified peer specialists (CPS). While previous research has explored CPS employment challenges, little is known about CPS transitions to the workforce upon certification.

Objective: This qualitative study explored recently certified peer specialist (CPS) experiences navigating the job market to find post-certification employment, experiences with employment once in the workforce, and reflections on CPS training.

Methods: Qualitative data were collected as part of a multi-state, three-year observational prospective cohort study of CPS graduate employment trajectories. We conducted semi-structured interviews with a subsample of recent CPS graduates who indicated a range of employment experiences in a survey as part of the parent study. Qualitative interviews focused on CPSs' experiences looking for work following certification, their current employment, and

their satisfaction with the position. Data were analyzed using constant comparative methods informed by grounded theory.

Results: We conducted 25 qualitative interviews. Participants described factors that supported or undermined securing employment, which included a shortage of CPS positions, their professional networking skills, financial considerations, and a position's alignment with CPS values. Once employed, participants described how relationships with supervisors and co-workers, which ranged from supportive to confused about the value of the peer specialist role and lived experience, impacted their work. In general, participants valued their CPS training and certification and held their membership in the peer support community in the highest regard.

Conclusions: Our findings highlight ways to strengthen CPS training while preparing organizations to work inclusively with CPSs. CPS training programs should include skill building opportunities related to networking with potential employers, and should address workplace challenges that CPSs are known to encounter (i.e. co-workers who do not understand peer support) and guidance on how to handle them. Organizations that employ CPSs should be educated about the CPS model, the value of lived experience, appropriate CPS roles, and the supervisory supports CPSs need to thrive.

Adding Online Access to a Sober-Active Community, The Phoenix, Supports Recovery from Substance Use

Bethany Collinson, PhD, MRes; Katie Heinrich, PhD - The Phoenix

Background: Access to free, online support during recovery is limited. The Phoenix is a non-profit sober-active community that offers free meaningful events (e.g., yoga, CrossFit, meditation, and music) for anyone with 48+ hours of sobriety. Since 2006, The Phoenix has served over 235,000 individuals in the US, Canada, and the UK. At the start of the COVID-19 pandemic, The Phoenix pivoted to run online programming. Its mobile app, developed at this time, enables individuals to access support from anywhere, at any time. Many Phoenix staff and volunteers are peers in recovery and sober peers, allies, and supporters are also engaged in the community. To increase recovery success, outcomes including changes in connectedness, hope, identity, meaning in life, and empowerment (CHIME), along with general, physical, and mental health status, as well as sobriety motivation are tracked.

Objective: To explore differences in member outcomes based on online vs. in-person engagement.

Methods: Via online survey, we collected data on mode of engagement (in-person only, online only, or both); sobriety motivation; general, physical and mental health status; and CHIME at baseline and 3 months. Due to positively skewed data, non-parametric Kruskal-Wallis H tests were used.

Results: Participants (N=1892) were 51.4% female, 78.3% heterosexual, 77.9% white, 41.2% at the poverty level, and averaged 1.8±1.3 problem substances; average age was 43±12 years. All three engagement methods similarly improved motivation to stay sober and general health.

Online members had significantly lower physical health ($X2 = 7.847$, $p = 0.020$) and mental health ($X2 = 10.564$, $p = 0.005$) at baseline, but not at 3 months ($p > .05$). CHIME improved the most for those attending both formats, while empowerment improved the most for those attending online. However, all three groups improved in each CHIME component (See Graph 1).

Conclusions: Program innovations within the substance use recovery field are necessary to ensure those who need support are able to access it, with online programs leading to similar improved recovery-related outcomes, with greater empowerment.

Adapting an Evidence Supported Family-Oriented Treatment to Meet the Needs of Families with Caregiver Substance Misuse

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Background: Families impacted by caregiver substance misuse face numerous systemic and individual barriers to accessing treatment, including balancing recovery and social services involvement (e.g., Peisch et al., 2018). Alternatives for Families – a Cognitive Behavioral Therapy (AF-CBT) is an established treatment designed to meet the needs of social services involved families, including decreasing requirements for multiple, separate services. However, limited work examines AF-CBT's applicability for families with caregiver substance use.

Objective: This study aimed to understand perspectives from individuals with lived-experience in order to tailor AF-CBT to the needs of these families (e.g., Chlebowski et al., 2020; Kaur et al., 2022).

Methods: We conducted semi-structured qualitative interviews using a purposeful sampling approach. This included five caregivers with substance misuse and 12 providers working with families affected by caregiver substance misuse. All participants were recruited from a safety-net hospital. Provider interviews explored facilitators and barriers to working with caregivers who use substances. Caregiver interviews explored their caregiving experience and children's behavioral health treatment history. All participants reviewed educational information detailing AF-CBT and discussed its applicability with this population. We used a grounded theory perspective for qualitative analysis. All codes demonstrated adequate to excellent interrater reliability.

Results: Providers were predominately cis-female, master's level, and served both adults and children. Caregivers were primarily mothers with past polysubstance misuse. Broadly, participants identified structural, systemic, and motivational facilitators and barriers to engagement. Specific barriers included societal stigma, knowledge gaps around reporting and discussing substance misuse and intimate partner violence with families, and lack of immediate reinforcers for attendance. Trust in the program and referring provider was indicated as a facilitator. Regarding AF-CBT, "whole family involvement" in treatment was an appealing aspect of the intervention. Caregivers indicated a need for guidance around taking accountability and educating children about substance misuse. Providers wanted information about safety planning.

Conclusions: Our results consistently underscore the need to improve access to destigmatizing education and training, resources, and safe and trustworthy environments where families can heal from substance use without fear of persecution. Providers and parents shared common enthusiasm for AF-CBT's applicability and feasibility. Implications for future research and clinical care will be discussed.

Increasing Access and Quality of Recovery Support Services Through a Statewide Network in Texas

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Title:

Increasing access and quality of recovery support services through a statewide network in Texas

Background: Substance use disorders and other behavioral health conditions lack the long-term support and treatment engagement required to achieve sustainable recovery. Be Well Texas (BWTX), a program at UT Health San Antonio, has expanded recovery support services (RSS) in Texas by providing infrastructure and technical support for existing providers creating a network of RSS providers across the state led by peer RSS experts with extensive community experience.

Objective: Develop and implement an RSS network to address gaps in RSS for individuals, families, youth, and supportive others living with substance use disorders.

Methods: BWTX utilized an open request for applications and targeted provider recruitment to increase recovery support for providers located within areas of high need across Texas (e.g., rural and border regions, those that engage with special populations such as those recently incarcerated, pregnant people, etc.). BWTX developed four primary RSS networks: 1) in-reach RSS for during and after incarceration to aid in a successful transition to clinically appropriate community-based care and other services; 2) recovery residence housing for emerging adults (ages 18-25); 3) expansion of peer RSS by implementing training and certification; and 4) enhancement and expansion of telerecovery through the implementation of technology infrastructure (e.g., funding or the purchase of new equipment, training on new equipment, etc.).

Results: Since 2020, the RSS network has grown from 11 providers and one BWTX RSS program manager to 56 network providers across all public health regions in Texas supported by four BWTX staff members with 60+ years of combined lived experience in recovery. Between April 2021 and April 2023, the RSS provider network has provided services to nearly 24,000 participants across all programs.

Conclusions: By leveraging the subject matter expertise of community RSS peers, BWTX successfully created a comprehensive network of RSS providers across a continuum of services:

in-reach for people incarcerated, recovery housing, expansion of peer RSS, and expansion of telerecovery. By providing a supportive infrastructure, training and telementoring, and technical assistance, BWTX has successfully created a statewide network of RSS providers.

Stimulants, Chronic Pain, Suicide, Spirituality, and Abstinence

Trends in Emergency Department Visits Associated With Stimulant Use Among Adults in California, 2016-2021

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Background: In the setting of a changing drug overdose crisis, stimulants, including cocaine and methamphetamine, have been recent significant drivers of overdose deaths. However, little is understood about how stimulant use impacts acute healthcare utilization.

Objective: This study examined trends in stimulant-related emergency department (ED) visits in California.

Methods: Using data from California's Department of Healthcare Access and Information, we conducted a trend analysis of stimulant-related ED visits from acute care hospitals in California from 2016 to 2021. For each calendar year, we determined the stimulant-related ED visit rate per 100,000 ED visits for adults aged ≥18 utilizing ICD-10 diagnosis codes. In addition, we estimated the percent changes in overall stimulant-related visit rates during the study period and by subgroup, including by age, race/ethnicity, sex, Charlson comorbidity index score (CCSI), stimulant-related diagnoses, and region.

Results: The number of stimulant-related ED visits increased from 223,749 (1,936.4 per 100,000 ED visits) in 2016 to 281,708 (2,586.1 per 100,000 ED visits) in 2021, a 33.6% increase. The rate for cocaine-related diagnoses was 381.3 per 100,000 ED visits in 2021 (a 3.7% increase from 2016), while the rate for other stimulant-related diagnoses was 2,312.2 per 100,000 ED visits in 2021 (with a 39.1% increase). By age group, adults aged 35-44 had the highest ED visit rate in 2021 (4,112.5 per 100,000 ED visits), but adults aged 65-74 had the sharpest increase of 94.9% from 2016. By race/ethnicity, people identifying as American Indian or Alaska Natives had the highest ED visit rate in 2021 (4,713.5 per 100,000 ED visits) and the largest increase of 84.7%. In addition, adults with a CCIS >0 had a higher stimulant-related ED visit rate in 2021 and a larger increase than those with a score of 0. By region, San Diego had the highest rate in 2021 (3,145.2 per 100,000 ED visits), while the North Cost had the sharpest increase of 51.9%.

Conclusions: Stimulant-related ED visits are increasing among adults in California, especially among older adults, non-white populations, and those with higher comorbidity. These results can inform prevention and harm reduction efforts aimed at decreasing harms related to stimulant use.

Prevalence and Correlates of Suicide Attempts in a Sample of Residential OUD Patients: Data from Electronic Health Records

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Background: Individuals with opioid use disorder (OUD) are at greatly increased risk for suicidal ideations, attempts, and death, with previous research reporting lifetime attempts ranging from 17% - 48%. Among individuals with OUD, however, less is known about other risk factors.

Objective: The purpose of this exploratory study was to examine suicide attempt frequency, risk factors, and correlates among individuals with OUD.

Methods: We extracted electronic health records (EHR) data from a public-sector regional SUD treatment provider in Maryland. All admissions to residential treatment programs for patients diagnosed with OUD from 12/01/2020– 11/30/2021 were examined. Patients self-reported lifetime suicide attempts and attempts in the month before inpatient. Data were tabulated and examined using binomial logistic regression models.

Results: Patients from 1528 admissions were diagnosed with OUD. 17.6% of patients reported a lifetime suicide attempt and 2.8% reported a suicide attempt in the month before inpatient. Younger, female, and LGB patients were significantly more likely to report a lifetime suicide attempt ($p=0.050$; $p=0.000$; $p=0.000$). Those with comorbid alcohol or another comorbid SUD (other than opioid, alcohol, stimulants, or cannabis) were significantly more likely to report a lifetime suicide attempt than those who only had OUD ($p=0.004$; $p=0.003$). Those who reported anxiety or depressive symptoms were more likely to report a lifetime suicide attempt ($p=0.000$).

Conclusions: Consistent with previous studies, our results suggest that individuals with OUD are at a high risk of suicidal behavior. The risk was even higher for women, LGB individuals, and individuals with comorbid AUD, which is consistent with research on suicide attempts among non-OUD samples. This study found that younger individuals were more likely to report a lifetime suicide attempt, which was somewhat against expectations because the probability of having had a lifetime suicide attempt increases with age. Overall, individuals with OUD are at great risk. Assessing for and treating suicidal behaviors is a necessity for the health and safety of those with OUD in a residential treatment setting.

Baseline Substance Use Patterns of Zambian Adolescents Participating in a Spiritually Based Resilience Training Program for Substance Use Prevention/Intervention

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Background: Early substance use increases risk for poor educational, social, and health outcomes. Thus, efforts to identify and prevent/reduce youth substance use are critical in countries such as Zambia where the majority of the population is <18 years old. “Hopes for Life-Schools” is a cluster-randomized controlled trial of a yearlong curriculum for Zambian adolescents designed to build character strengths, bolster psychological resilience, and prevent/decrease substance use through weekly 90-minute group sessions.

Objective: To describe baseline substance use patterns of study participants.

Methods: 8 Zambian secondary schools (4 urban/4 rural) were recruited and 8th grade students ages 13-17 from each school were invited to enroll. A total of 469 students across schools provided written assent/parental consent. Schools were randomly assigned 1:1 into initial-start and delayed-start groups. Student participants self-completed on tablet computers a confidential audio-assisted baseline questionnaire in English or Nyanje which included the Global School-based Student Health Survey alcohol measures and Zambian ASSIST.

Results: Participants (240 urban, 229 rural) had mean (SD) age of 15.0 (1.2) years; 52.5% were female; 66.5% lived with both parents; and 15.6% ate <3 meals/day. Among 98 adolescents (20.9% of sample) reporting lifetime alcohol use, 58.8% had initiated drinking by age 13, 28.1% drank to intoxication, 28.4% experienced problems due to their drinking, 18.4% had past-3-month drinking, 41.8% were ASSIST alcohol screen-positive (score 4+), and 18.4% scored 1+ on the AUDIT-C-Youth screen. In the overall sample, 45 (9.6%) reported lifetime use of any other substance; 5.8% reported tobacco use; 3.2% cannabis use; 2.8% inhalant use; and five participants (1.1%) reported previous injection drug use. Among those reporting any lifetime alcohol use, 24.5% reported lifetime use of another substance.

Conclusions: The large majority of Zambian 8th grade students enrolled in a spiritually-based resilience and substance use prevention/intervention program reported no substance use at baseline, providing an excellent opportunity for testing the primary prevention impact of the Hopes for Life-Schools curriculum. However, among those that had already initiated alcohol use, substantial proportions reported problematic use patterns including drinking to intoxication, experiencing problems in their lives related to their use, and use of multiple substances, necessitating intervention strategies.

Abstinent and Non-Abstinent Substance Users Who Resolved an Addiction: A mixed Methods Analysis

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Background: Historically, the addiction field used total abstinence as the primary marker of recovery. Although harm reduction is increasingly accepted, abstinence remains a primary treatment outcome and central goal of mutual aid groups. Recovery research often measures success primarily in terms of abstinence. This focus limits knowledge about recovery progress and outcomes for non-abstinent individuals and the field's ability to support this population.

Objective: (1) Recruit a diverse sample of abstinent and non-abstinent individuals; (2) Compare abstinent and non-abstinent participants on substance use patterns and treatment history; (3) Compare participants' narratives about resolving their addiction by abstinence status and primary substance.

Methods: Recruitment: online platforms (MTurk, Prolific Academic). Design: cross-sectional survey with closed and open-ended questions. Eligibility criteria: adults who self-identified as having "resolved an addiction" evidenced by 1) reduced use, OR 2) reduced negative

consequences, OR 3) improved social or occupational experiences. Analysis: text analyzed via content analysis; descriptive statistics computed in SAS.

Results: Sample- (N=267), 55% women, 56% white (n=150), 17% Black (n=44), 11% Asian (n=30), 10% Hispanic-white (n=27), and 6% other (n=16). The most common primary substances: alcohol (46%), opioids (23%), and stimulants (17%). Forty-five percent reported abstinence. Abstinent participants had more often been to treatment and mutual aid groups. DAST and AUDIT showed no differences in past use severity between the groups.

Surprisingly, abstinent and non-abstinent participants described resolving an addiction similarly. Both groups reported substantial improvements in spousal and family relationships and increased personal self-control. Within the non-abstinent subsample, participants reporting primary alcohol addictions were more likely to "cut back" and continue using their primary substance; participants reporting primary opioid or stimulant addictions were more likely to stop using the primary substance and continue other substance use. Limitations: self-reported data, cross sectional design.

Conclusions: Criteria for self-identification of resolving an addiction successfully enrolled abstinent and non-abstinent adults. Counter to common assumptions about non-abstainers, responses from both groups were more similar than different. Insight into how these groups perceive the process of resolving an addiction (1) enhances our understanding of recovery, including non-abstinent recovery, and (2) can facilitate engagement with individuals resolving addictions, even when abstinence is not an identified goal.

Medical Cannabis and Opioid Use Among Adults with Chronic Pain: Preliminary Results From an 18-month Longitudinal Study

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Background: Chronic pain is common and has led to over-prescribing of opioids. To determine whether medical cannabis (MC) is an alternative to opioids, we are conducting MEMO (Medical Marijuana and Opioids), an 18-month longitudinal study of MC among adults taking opioids for chronic pain.

Objective: To assess MC use, pain, and prescription opioid receipt among patients newly certified for MC.

Methods: MEMO recruited from Montefiore Medical Center (Bronx, NY) and 4 cannabis dispensaries (NY) (9/2018-12/2021). Participants were: adults with chronic pain; taking opioids within 30-days of enrollment (self-report); and recently certified for MC. Seven quarterly research visits and web-surveys every 2-weeks occurred over 18-months. We assessed MC use (THC/CBD content, days of use; web-survey), pain (Pain, Enjoyment, and General Activity Scale [PEG]; 0-10; continuous; web-survey) (Brief Pain Inventory [BPI]; 0-10; continuous;

quarterly visit), and active morphine milliequivalents (MME) on the date of web-surveys from the NY State prescription monitoring program. We used t-tests to assess change in PEG score, pain severity and interference (0- to 3-months).

Results: At enrollment (n=225), mean age was 54 years, 54% were female, 35% non-Hispanic White, 32% non-Hispanic Black, 26% Hispanic, and 78% unemployed. Pain was located in the neck or back (76%), limb (79%), or multi-site (79%). Baseline mean PEG score was 7.08 (standard deviation [SD] 1.9), mean BPI severity score was 6.61 (SD 1.82), and mean BPI interference score was 6.79 (SD 2.06). One-hundred-and-eighteen participants (52%) used opioids daily, 113 had active MME (mean MME=117) at baseline. Forty-nine participants (22%) used unregulated cannabis regularly at baseline. In first 3-month data (n=140; 1,377 web-surveys): 29% reported past 2-week predominantly high-THC use, 30% other MC use, and 41% no MC use. Over 3-months, we observed increases in high-THC use and any MC use (22% to 33%; 49% to 63%) and decreases in PEG score (7.1 to 6.6; p=0.003), BPI pain interference (6.8 to 6.2; p <0.001), and participants with active MMEs (113 to 86).

Conclusions: Patients newly certified for MC experienced reduction in pain and were prescribed fewer opioids over 3-months. Our findings support MC for pain and provide evidence that MC reduces opioid use.

Patient Perspectives on Stimulant Use Disorder Treatment With Contingency Management and Community Reinforcement Approach in Permanent Supportive Housing

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Background: Stimulant use is increasing and associated with significant morbidity and mortality. Contingency management (CM) and community reinforcement approach (CRA) are effective treatments for stimulant use disorder but have not been widely implemented in community settings, including permanent supportive housing (PSH).

Objective: The study objectives are to examine patient perspectives, assess barriers and facilitators to implementation, and explore adaptations to improve acceptability of CM and CRA in PSH.

Methods: Semi-structured interviews were conducted in 2022 with adult residents of three PSH buildings in Seattle, Washington, who used stimulants in the last 30 days. Financial compensation of $50 was provided. Data collection and analysis were informed by the Consolidated Framework for Implementation Research. Transcribed interviews were analyzed using an integrated deductive and inductive thematic analysis.

Results: The sample was comprised of 24 PSH residents. Emerging themes included:

1. Tailoring to individual goals: CM should be tailored to reward a variety of healthy behaviors instead of focusing solely on abstinence/urine toxicology results.
2. Cultivating community: CM alone does not address common root causes of substance use (isolation, boredom, trauma, etc.). CRA could help residents address some of these underlying issues and improve other aspects of living in PSH.
3. Putting the "supportive" back in PSH: Residents experienced a significant decrease in support during the COVID-19 pandemic (staff burnout, turnover, and competing demands) and witnessed a devastating increase in overdose deaths. Basic needs of residents should be prioritized, and any new programs should be evaluated for sustainability prior to implementation.

Conclusions: In this qualitative study of residents in PSH, key issues appear to be in flexible design of CM/CRA programming so that, once implemented, they may address the diverse needs and recovery goals of PSH residents. Future research should assess housing and clinical staff perspectives to assure issues of feasibility and sustainability are considered, and this may inform the creation of an implementation support toolkit for PSH settings.

Treatment Access and Pharmacists

RAMP-UP: Pharmacist-Led Rapid Access to Methadone Maintenance for Patients With Opioid Use Disorder at Penn Pilot

Emily R. Casey, PharmD - Hospital Of The University Of Pennsylvania

Background: Little guidance exists for initiating methadone in hospitalized patients with opioid use disorder (OUD) in the fentanyl era. Some inpatient addiction consult services initiate methadone with higher starting doses and faster titration than is allowed in outpatient settings (starting doses 20-30 mg; increases of 10 mg every 3-5 days). Pharmacists can be leveraged to guide methadone dosing independently or as part of Addiction Medicine Consult Services.

Objective: To describe safety and clinical outcomes from the pharmacist-led Rapid Access to Methadone Maintenance for Patients with opioid Use disorder at Penn (RAMP-UP) pilot.

Methods: We embedded a pharmacist within psychiatry consult-liaison (C/L) services at an academic, quaternary-care hospital in Philadelphia during October 2022. The pharmacist implemented the RAMP-UP protocol: methadone 40mg on day 1, 50mg on day 2, and 60mg on day 3, along with monitoring for sedation and daily EKGs. We extracted electronic health data to evaluate safety (defined as naloxone administration, documentation of oversedation, or QT interval prolongation), and clinical outcomes, including discharge methadone dose, frequency of patient-directed discharge (PDD), and length-of-stay (LOS).

Results: Eleven patients started methadone with RAMP-UP during the pilot (mean age 41.2, 27.8% female, and 18.2% Black). There were no instances of naloxone administration, over-sedation, or clinically significant QT prolongation. Nine patients (81.8%) completed the protocol while two (18.2%) were discharged as PDDs prior to completion. Mean methadone dose on discharge for patients who completed titration was 72.8 mg (SD 7.9). Median LOS was 9 days

(IQR 5 - 22) across all patients. After the pilot month, this hospital's psychiatry C/L services adopted the RAMP-UP protocol as their standard methadone initiation. Future analyses will compare outcomes for the 29 patients who started methadone maintenance over the four months before RAMP-UP to the 49 patients who started methadone maintenance over the four months after RAMP-UP using an interrupted time-series analysis approach.

Conclusions: In this pharmacist-led pilot, a protocol for rapidly initiating and titrating methadone was safe and adopted as the standard of care at an academic hospital without an addiction consult service. Pharmacists are uniquely well-suited to guide implementation of new approaches to dosing methadone.

Private Insurance Failure to Pay: A Major Barrier to Accessing Treatment for Substance Use Disorders

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Background: Two federal laws (MHPAEA, 2008; ACA, 2010) require insurance plans to cover services for substance use disorders (SUD) as 1 of 10 essential health benefits and provide no less restrictive coverage than coverage for physical health insurance. Despite this, access to services has dropped and the unmet need for treatment has risen. Among people with diagnosed substance use disorders (SUD), 90% do not receive treatment.

Learning Objectives:

1. Describe recent federal legislation and lawsuits to increase access to treatment for substance use disorders.
2. Describe gaps in coverage through national data and a real-world case study
3. Describe strategies used by insurance to avoid payment and future directions for advocacy, practice, and policy.

Case Presentation: The patient was diagnosed with F10.20 (Alcohol dependence, uncomplicated) and F15.150 (Other stimulant abuse with stimulant-induced psychotic disorder with delusions). The patient's family paid in advance for 4 1/2 months of care; the treatment facility submitted claims for 100,000 to the patient's insurance company. The company denied claims, citing ""the service was not in the medical records." Upon appeal, the insurance company sent the claims for "external review" and again denied coverage based on three new rationales. The family retained a lawyer who made a second appeal to the insurance company which again was denied. The family filed a complaint with the State Insurance Commission which sent the claims and medical records out for a second independent review. Based on the second review, the insurance company overturned their denials. Due to limits on allowed daily charges and 60% co-insurance for out-of-network providers, insurance reimbursed the family 20,000, one-fifth the cost of care. The time from end of treatment to reimbursement was 15 months and the process included $3,600 in legal fees.

Discussion: Insurers avoid paying for SUD treatment with impunity using limited provider networks, high denial rates, long processing times, and low reimbursement rates. Until insurers

are forced to provide coverage, millions of Americans will lack access to treatment. Solutions include supporting patients/families through the claims/appeals process, technical assistance to facilities in treatment documentation, enforcement of existing laws, federal policy, and lawsuits.

The Roles, Activities, and Opportunities of Clinical Pharmacists in a National Initiative to Improve Office-Based Buprenorphine Care

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Background: Despite the recent repeal of the X-waiver, there exists many barriers for treating opioid use disorder (OUD) particularly in the provision of medication treatment for OUD (MOUD, primarily formulations of buprenorphine). Clinical pharmacist practitioners (CPPs) may and do provide important activities in the provision of MOUD, but are largely an untapped resource, especially in office-based practices. The Veterans Health Administration's (VHA) Stepped Care for Opioid Use Disorder Train the Trainer (SCOUTT) Initiative is implementing MOUD in at least 74 primary care, mental health, and pain clinics in 37 VHA facilities nationwide. MOUD provision in SCOUTT often involves the CPP but what activities they provide have not been fully described.

Objective: We sought to examine CPPs' roles, typical activities, and opportunities to provide MOUD in SCOUTT.

Methods: In March 2023, a REDCap survey was sent to 21 known CPPs in SCOUTT clinics and to local SCOUTT leaders asking them to forward to CPPs. The survey asked about their clinic setting and their role in 25 tasks related to the provision of MOUD (e.g., patient intake, risk assessment, initiation, follow-up activities). Questions also inquired about state licensure and whether they have or desired to obtain controlled substance prescriptive authority for prescribing MOUD.

Results: Twenty-two CPPs responded to the survey. CPPs worked in pain (40.9%), primary care (27.3%), mental health (22.7%), and primary care mental health integrated (22.7%) settings. Nearly all (95.5%) CPPs indicated involvement in naloxone education and distribution and patient management after MOUD initiation. Further, CPPs reported reviewing and interpreting urine drug screens results (90.9%), conducting MOUD follow-up (assessing for side effects or treatment outcomes) (90.9%), and assisting in MOUD initiation (72.7%). CPPs indicated they work in a team-based environment often acting the medication expert (95.5%) and either prescribing buprenorphine-MOUD or desiring to (86.4%).

Conclusions: In a sample of CPPs in the VHA's SCOUTT Initiative, CPPs play a significant role in leading and collaboratively facilitating MOUD in non-addiction specialty office-based clinics. The VHA's CPP management and prescribing MOUD efforts may be a model to emulate in other clinics and health systems to improve access to MOUD care.

Developing an Interactive Pharmacy Map of Buprenorphine Access Across Philadelphia

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Background: Despite being a first-line medication for opioid use disorder, buprenorphine is not reliably stocked in many pharmacies, even in areas with high overdose rates. Pharmacists unfamiliar with the safety profile of the medication may be uncomfortable dispensing it to new patients and some pharmacies may not carry it. Pharmacy-level barriers may deter patients from continuing care.

Objective: To describe variation in pharmacy buprenorphine access in Philadelphia and aid clinicians in sending prescriptions to pharmacies where patients can easily access the medication.

Methods: Using a dataset from the Bureau of Professional and Occupational Affairs containing the names, addresses, and phone numbers of all outpatient pharmacies in Philadelphia (n=428), we conducted a telephone survey of each pharmacy (asking to speak with a pharmacist or pharmacy tech) about their buprenorphine stocking and dispensing practices. These phone calls took place between 2/7/2023-3/23/2023. We queried whether the pharmacy stocks the medication; whether it will dispense to new patients; dosages stocked; and requirements such a buprenorphine tapering plan and/or phone verification from the prescriber. We used descriptive analyses and geographical information system (GIS) mapping to describe and visualize pharmacy buprenorphine access across the city. We created an interactive map to support clinicians in finding pharmacies that reliably stock the medication.

Results: We called all 428 outpatient pharmacies and were able to reach and collect data from 357. 229 (64%) pharmacies indicated that they regularly stock buprenorphine; 6 (2%) indicated they would order it on an as-needed basis if a script is sent. 92 (26%) pharmacies said they do not stock buprenorphine, and 30 (8%) were unsure. We identified 168 (47%) pharmacies that regularly stock buprenorphine and dispense to new patients; we labelled these pharmacies “low barrier”. Notably, the zip code (19143) that experienced the greatest increase in fatal overdoses between 2020 and 2021 – a zip code with predominately Black residents -- also has the fewest low-barrier (1) pharmacies.

Conclusions: This map provides prescribers with information about pharmacies across Philadelphia that stock buprenorphine and supports them in sending prescriptions to appropriate pharmacies. Our findings also highlight the need to increase pharmacy-level access to buprenorphine in areas where overdoses are rising.

Distance as a Barrier to Addiction, Mental Health, and Primary Care for Persons with Recent Homeless Experience

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Background: Formerly homeless (FH) individuals are often rehoused in areas remote from city centers, but they still need health care. The impact of geographic distance on their access to care has not been studied.

Objective: We hypothesized that (a) geographic distance would be associated with reporting a distance-to-care barrier, and (b) a distance-to-care barrier was associated with fewer substance use disorder (SUD), mental health (MH) and primary care (PC) services.

Methods: We surveyed 4654 FH Veterans from 26 VA Medical Centers (VAMCs). Dependent variables: A reported distance-to-care barrier was based on a yes/no survey question. Geographic distance was "as the crow flies" from mailing address to VAMC. Twelve-month SUD, MH & PC visit counts came from VA records.

Covariates included demographics, difficulty paying for needs, employment, social support, criminal justice experience, emotional distress, chronic pain, self-reported health, drug or alcohol problem, chronic homelessness, and record-derived medical diagnoses. Multivariable logistic regressions modeled a reported distance-to-care barrier in relation to geographic distance, controlling for covariates. Then, 3 generalized linear mixed regressions modeled SUD, MH and PC visit counts in relation to a distance-to-care barrier, with SUD and MH models restricted to those with SUD or MH diagnoses.

Results: Among FH respondents, 40% resided <5 miles, 29% >5 to <10 miles, 19% >10 to <20 miles and 12% >20 miles from their VAMC. Affirming a distance-to-care barrier (28% overall) rose with geographic distance (14%, 27%, 39% & 57% across 4 categories, Mantel-Haenszel X2 $p<0.001$). Multivariable-adjusted predicted probabilities rose similarly. Respondents reporting distance-to-care barriers had 42% fewer SUD (3.7 vs 6.4), 30% fewer MH (7.0 vs 10.1) and 17% fewer PC (2.9 vs 3.5) visits over 12 months, versus those without, in models adjusted for all covariates ($p=0.02$ for SUD, 0.001 for MH and PC).

Conclusions: Distance-to-care barriers are common among FH Veterans, and result in fewer SUD, MH and PC visits, even for those living 5 or more miles away, which applied to 60% of respondents. When communities house formerly-homeless individuals, they should address distance-to-care challenges through enhanced transportation (e.g. rideshares), mobile health services or telehealth.

Telemedicine Treatment Retention Characteristics from REACH, a Low Barrier, Community-Based Buprenorphine Clinic in Upstate New York

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Background: Regulatory changes allowed for the initiation and continuation of buprenorphine via telemedicine during the COVID-19 pandemic. The REACH Project, Inc., a non-profit,

community-based medical practice in Ithaca, NY, has provided low barrier access to buprenorphine since opening in 2018. In response to the pandemic, REACH (an acronym for Respectful, Equitable Access to Compassionate Healthcare), transitioned care to a primarily telemedicine model in March 2020. REACH implemented a hybrid care model (in-person and telemedicine) during the course of the pandemic, which remains in place to date.

Objective: As part of a comprehensive program evaluation, REACH and its partners implemented an extensive baseline assessment for all patients initiating buprenorphine treatment. The purpose of this analysis was to measure treatment retention and identify patient characteristics that were associated with retention in care at 3 and 6 months.

Methods: We collected data from 1,958 new enrollees of the buprenorphine treatment program at REACH from September 1, 2019 to December 31, 2022. We examined the association between sociodemographics (i.e., working status, race/ethnicity, sexual orientation, age, sex, and housing), telemedicine utilization, and experiencing an overdose in the past 6 months with 3 and 6 month retention outcomes using univariate and multivariate logistic regression analysis.

Results: After buprenorphine treatment initiation, 90% were retained on treatment at 3 months and 89% were retained at 6 months. Of the total number of people who had been on treatment, 99% had at least one telemedicine encounter. There were no significant associations between sociodemographics and telemedicine experience with retention. However, experiencing an overdose in the past 6 months was related to a 55% decrease in 3 month retention (AOR=0.45, 95% CI:0.28-0.73) and 60% decrease in 6 month retention (AOR=0.40, 95% CI: 0.26-0.61).

Conclusions: Treatment retention was very high at 3 and 6 months at this low barrier buprenorphine clinic with near universal telemedicine utilization. However, recent overdose experience was associated with a significant decrease in retention. Future programming and research should explore the impact of interventions, such as peer services or case management to address this disparity. Additionally, provision of harm reduction services in conjunction with medication access, is likely warranted.

Welcome Reception and Poster Session

1. "I can stay on buprenorphine after Detox?" - Implementation of a hybrid, low-threshold buprenorphine bridge clinic alongside a busy withdrawal management unit at a safety net hospital.

Anthony J Accurso, MD; Andreysis, Mosquea, MD - Bergen New Bridge Medical Center

Background: Bergen New Bridge Medical Center (BNBMC) is a safety net hospital responsible for 37% of inpatient withdrawal management admissions in the state of NJ. Prior to our intervention, 0% of discharged patients were being prescribed buprenorphine at the time of discharge.

Objective: To create and assess the effectiveness of a new hybrid telemedicine/in-person bridge clinic associated with the withdrawal management unit.

Methods: In March 2022 we opened our first hybrid OBAT/Telemedicine bridge clinic session on Wednesdays. Opioid-dependent patients on the inpatient unit began to be offered the choice of opioid-taper-as-usual or stabilization on buprenorphine maintenance and referral to "bridge clinic."

- Prescription at the time of discharge to get to the following Wednesday.

Pathway 1: "OBAT" - in person.

Pathway 2: "Bridge clinic" - Weekly telemedicine visits. 1 week buprenorphine prescriptions. Maximum duration of 4 weeks without in-person visit.

Study period: 3/1/2022-12/31/2022. The relationship between receipt of buprenorphine prescription and rate of follow up was assessed.

Results: The withdrawal management unit had 3095 visits, of which 1785 visits involved opioid dependence. A total of 1386 unique opioid-dependent patients were admitted, of which 298 (21.5%) accepted buprenorphine induction and prescription.

The outpatient bridge clinic had 671 visits from 192 patients. Buprenorphine prescriptions were written at 295 of the visits for 109 unique patients. Buprenorphine-maintained patients had an average of 4.5 clinic visits, versus 2.1 clinic visits for non-buprenorphine patients.

Buprenorphine prescription at the time of discharge from the inpatient withdrawal management unit was significantly associated with follow up in the bridge clinic (66% vs. 15%, $p < 0.0001$).

Conclusions: Here we demonstrate feasibility and early success of a low-barrier bridge clinic in association with a busy safety net withdrawal management unit. This model can likely be generalized to other withdrawal management units nationwide. Our intervention provided a mechanism through which our unit providers began to feel comfortable providing bridging buprenorphine prescriptions, an innovation that has led to a marked cultural shift on our unit.

The outpatient bridge clinic has also developed into a sustainable service line and has had a growing number of visits over each month of its existence.

2. Options Exist: Methadone to Buprenorphine Transitions in Primary Care

Meredith Adamo, MD; Elizabeth Abbs, MD; Grace Lemke, BS - San Francisco Department of Public Health

Background: The rigid structure of methadone maintenance treatment programs can be a stabilizing force for patients; however it can also be less desirable for patients' independence and quality of life. Buprenorphine offers an alternative treatment option from ambulatory settings that fosters increased flexibility. Transitioning to buprenorphine can be difficult and is not offered by all methadone clinics. Methadone to buprenorphine transitions led by primary care

can be successful and empowering. We share lessons from primary care-based transitions using a 14+-day buprenorphine micro-dose protocol among patients in the Tenderloin of San Francisco.

Learning Objectives:

1. Describe ideal patient population and provider support for primary-care based methadone to buprenorphine transitions.
2. Highlight the effective 14+-day buprenorphine patch-based transition protocol.
3. Discuss struggles and successes of implementation and stabilization when transitioning from methadone to buprenorphine in primary care.

Case Presentation: We utilized the 14+-day buprenorphine patch micro-dose protocol on five patients in our primary care clinic. The average age was 60 years (range 49-70), 80% were male, and average methadone dose was 67 mg (range 53-100mg). Of the five, 80% had take-homes at time of initiation. Transition duration ranged from 14 to 28 days with a median of 14 days. All five patients that initiated the protocol completed it. At 30 days, four remained on buprenorphine (three on sublingual doses of 24-32 mg per day, and one on long-acting injectable). During or after the transition, one patient returned to extra-medical opioid use and one transitioned back to methadone.

Discussion: Methadone to buprenorphine transitions are feasible in primary care by addiction medicine providers. Adequate patient support and screening are critical to determine motivation for switching medications and medical literacy. Close communication with methadone clinic prescribers is ideal, as is flexibility to prolong transition duration, when indicated. Limitations include complex dosing protocol, provider capacity for close follow-up, and comfort adapting the protocol when indicated. Expanding access to buprenorphine for patients stabilized on methadone can offer improved independence and quality of life for people with opioid use disorder.

3. First Responder Experiences with a Novel Leave-Behind Naloxone Program: Results of A Qualitative Pilot Survey

Emily Ager, MD, MPH; Ella Purington, MD; Megan Purdy; Alex Nickel; Jessica Baker; Graham C. Smith, MD; Nathaniel R. Hunt, MD; Eve D. Losman, MD, MHSA - University of Michigan

Background: Opioid overdoses lead injury-related death in the U.S.. Leave-Behind Naloxone (LBN) programs are a feasible strategy for first responders (FRs) to distribute this critical harm reduction tool at the scene of an opioid overdose. FRs' direct experiences with such programs are unknown.

Objective: The objective of this study was to describe the facilitators and barriers to naloxone distribution, as well as interest in related education, among FRs.

Methods: An online survey was distributed to FRs at 10 EMS agencies with recently implemented LBN protocols in southeast Michigan. The survey was developed using the

Consolidated Framework for Implementation Research and included free-text and multiple-choice questions (MCQs). It was piloted by 2 board-certified EMS physicians to ensure clarity. Participants were not compensated. IRB approval was obtained. An inductive coding approach was used to analyze qualitative data. Four reviewers independently reviewed the responses to identify codes and common patterns. A fifth reviewer reconciled discrepancies. Summary statistics were used to analyze demographic and MCQ data.

Results: The survey was distributed via email to 708 FRs. Of the 56 respondents, 70% identified as male, the median age was 35.5, the median work years was 10 (IQR 5-24), and 73% were trained in Advanced Life Support. Thirty-seven (73%) correctly described why LBN was implemented and 42 (79%) received related training. Only twelve (23%) had distributed an LBN kit. Facilitating factors included easily available kits, patients requesting a kit, and someone available to leave the kit with. Patient-related barriers included kit refusal, concern for legal consequences, and medical acuity. Provider-related barriers included forgetting, not knowing kits were available, and not having someone to leave a kit with. Respondents expressed interest in learning more about addiction (46%), harm reduction (48%), and the health needs of people who use drugs (PWUD) (40%).

Conclusions: This novel data showed a strong understanding of the LBN program among surveyed FRs, though few had actually distributed a kit. Several modifiable barriers, such as forgetting to leave a kit, were cited. Future interventions to increase kit distribution could include reminders to leave a kit, possibly through documentation system alerts, and continuing education on harm reduction strategies.

4. Fetal Alcohol Spectrum Disorders: Practice Gaps in Prevention and Identification

Daniel P. Alford, MD, MPH; Jacqueline S German, MPH; Candice Bangham, MPH; Jacey Greece, DSc, MPH; Kendra Gludt, MPH; Amy Harlowe, MPhil; Nicole Kitten, MPH; Ilana Hardesty, MA; Sara Messelt; Vincent C Smith, MD, MPH - Boston University Chobanian & Avedisian School of Medicine, Boston Medical Center

Background: Fetal alcohol spectrum disorders (FASDs) are caused by prenatal alcohol exposure (PAE) and are the most common preventable cause of permanent intellectual and developmental disabilities in the U.S. According to the CDC, from 2018-2020 nearly 14% of pregnant people drank alcohol in past 30 days, an increase from prior years. Healthcare teams play a critical role in preventing and identifying FASDs.

Objective: Baseline data was collected from health professionals enrolled in a virtual learning collaborative on FASDs to assess their clinical practices which included screening and documentation.

Methods: In March 2021 and March 2022 participants enrolled in two training cohorts of a year-long, 10-session Project ECHO® for prenatal and pediatric healthcare teams on the topic of FASD prevention, identification and care. All participants were surveyed prior to the training regarding baseline PAE and FASD-related practices. Data was collected through online surveys

in Qualtrics and surveys were analyzed using SAS to compute descriptive statistics and examine frequencies for categorical data.

Results: There were 91 prenatal and 81 pediatric participants from 44 clinics across 9 states. Participants included 24% nurse, 23% physician, 20% nurse practitioner and 15% behavioral health. Sixty percent of pediatric participants reported not having any regular PAE screening practices and 73% reported not *always* documenting PAE in the chart. While 77% of prenatal participants reported screening for PAE at a standard interval, 76% reported not *always* sharing the results with pediatricians.

Conclusions: Despite alcohol use during pregnancy being prevalent, participants in this study reported inconsistent screening and documentation of PAE in both prenatal and pediatric populations. This highlights the need to educate about the importance of these practices to prevent, identify and care for those with FASDs.

5. An Opioid Use Disorder Consult Service Elective for Internal Medicine Residents

Mim Ari, MD; John Murray, MD; Sarah Dickson, APN; George Weyer, MD - University of Chicago

Background: The Accreditation Council on Graduate Medical Education (ACGME) now requires all IM training programs to provide educational experiences in addiction medicine However, a 2019 survey from the Association of Program Directors in Internal Medicine showed that while most IM programs required didactics in the treatment of OUD (72%), less than 20% offered clinical experiences.

Objective: The objective of this elective was to integrate IM residents into an existing OUD consult service with residents being able to 1) take a SUD history, 2) choose appropriate medications for withdrawal and maintenance therapy for OUD, 3) demonstrate comfort with in-hospital MOUD induction protocols, and 4) use non-stigmatizing language.

Methods: A 2-week inpatient Opioid Use Disorder (OUD) consult elective was developed for IM residents. Eleven residents participated during the 2021-2022 academic year. Residents work in an apprentice model with an attending. An anonymous post-elective evaluation was created and distributed through REDCap at the end of the academic year.

Results: Nine of eleven (82% response rate) IM residents completed the evaluation. While all residents felt that they had received none or too little instruction in OUD prior to completing the elective, post-elective 78% (n=7) felt the level of instruction was just right and 89% (n=8) felt somewhat or very prepared to diagnose and treat OUD. All (n=9) residents agreed or strongly agreed they could take a SUD history, describe and use pharmacologic treatments for opioid withdrawal, describe harm reduction, and distinguish between stigmatizing and non-stigmatizing terms to discuss drug use. Almost all residents (n=8) felt comfortable using medications for OUD and distinguishing substance use from a SUD. Level of exposure to common clinical scenarios was deemed just right for evaluating and starting patients on MOUD (buprenorphine-100%, n=9; methadone-78%, n=7; buprenorphine through low dose induction-89%, n=8).

Conclusions: Developing effective clinical experiences for IM trainees is paramount to improve care for patients with SUDs. Aligned with the new ACGME requirement requiring all IM training programs to provide educational experiences in addiction medicine, this two-week elective experience on an OUD consult service was successful in meeting the elective's learning objectives and providing clinical exposure to inpatient management of OUD.

6. Implementing an Evidence-Based, Harm Reduction-Focused, Medical Cannabis Program In An Academic Medical Center In Bronx, NY

Deepika E. Slawek, MD, MS; Jonathan Ross, MD, MS; Joanna Starrels, MD; Yuting Deng; Chenshu Zhang, PhD; Julia H Arnsten, MD, MPH - Albert Einstein College of Medicine/Montefiore Medical Center

Background: We established the Montefiore Medical Cannabis Program (MMCP) to provide safe access to medical cannabis (MC) to a population disproportionately impacted by the criminal justice system.

Objective: To understand the rationale and processes for implementing MC certification in primary care settings.

Methods: Montefiore is a large academic medical center in Bronx, NY, which is a county with high rates of poverty, opioid overdose deaths, and chronic disease including diabetes, cardiovascular disease and HIV. In 2016, we developed a program to provide evidence-based, non-judgmental MC care in primary care settings. After meeting with key institutional stakeholders, we launched the MMCP in 3 primary care medicine practices. We created best practices to ensure rigorous evaluation, safe certification, and harm reduction, including: eliciting motivation for MC, determining relative risks and benefits, providing recommendations on MC formulation and dosing, and counseling patients on adverse effects and how to use MC within the scope of state/federal regulations. At regular meetings we review patient cases, create standardized tools to guide MC care, and review changes in federal and local laws that impact cannabis use.

Results: Over 6 years, the MMCP has expanded from 5 providers in 3 primary care practices to 14 providers in 6 practices (plus telemedicine). As of 3/23, 1805 unique patients had been certified, most for chronic pain. Among patients with available data, 1142 (63%) are women, 679 (38%) Black and 852 (47%) Hispanic, median age is 57 years, 765 (42%) are enrolled in Medicaid, 286 (16%) have OUD, 261 (14%) are living with HIV and 81 (4%) with sickle cell disease. Despite successful scale-up, we have encountered barriers impacting patients' ability to obtain medical cannabis, including long wait times for MC certification appointments, limited resources to help patients navigate on-line self-registration processes, and high out-of-pocket (unreimbursed) MC cost.

Conclusions: Implementing an academic medical center-based medical cannabis program has been a complex and iterative effort. Nonetheless, our experience indicates that such programs can play a leading role in delivering rigorous, evidence-based, and equitable treatment for

patients seeking medical cannabis, and in expanding the medical cannabis evidence base through standardized data collection.

7. Development of a Harm Reduction Advocacy Coalition in Healthcare

Tucker Avra, DVM[1], **Amanda Cowan, MSc**[2]; Andrew Nelson, BA; Autumn Stevens, AB Candidate - (1)HR REACH, (2)Community Health Project Los Angeles

Background: Stigma in healthcare environments remains a barrier to comprehensive care for people who use drugs (PWUD), resulting in medication restriction and patients leaving without care, poorer health outcomes ensuing. Harm reduction (HR) offers a person-centered framework that emphasizes the exigencies of PWUD, minimizing harm and promoting integrated care. Our recent initiative and coalition, Harm Reduction Research, Education, and Advocacy for Community Health (HR REACH), seeks to offset inadequacies in healthcare by offering future and current practitioners training and experience in HR.

Objective: We aim to develop a coalition of medical students and providers committed to the employment of HR principles in their respective fields by compiling current HR research, conducting further studies, collaborating with community organizations and the community of PWUD, and holding space for members to conceptualize future HR implementations.

Methods: In October 2021, medical students from two separate schools collectively strategized around the perpetuation of violent War on Drugs language and rhetoric taught in medical education. The lack of HR principles in medical education became the catalyst for developing lived and living experience led trainings at these two schools, along with the creation of a national coalition.

Results: Our coalition consists of twenty medical students from nine osteopathic and allopathic medical schools, five undergraduate students, four graduate students, and one community organizer. Within this consolidation are curriculum and research teams. The curriculum team has embarked upon building a free library of HR resources for medical education. Students and faculty from all medical schools will have access to this database to broaden their knowledge of HR principles and incorporate HR training into their curricula. Our research committee has designed a survey to assess the current state of HR education at medical schools in the US and Canada. We anticipate that our data will demonstrate the need for universal and standardized HR education in medical training.

Conclusions: By organizing space for HR centered healthcare trainees to collaborate, HR REACH has developed a growing national coalition dedicated to incorporating the principles of HR into healthcare. Continued advocacy presents an opportunity to transform healthcare spaces for PWUD.

8. Adapting post-overdose programs to be responsive to people who use cocaine and methamphetamine and Native, Black, Latino, Hispanic and youth populations in Massachusetts

Sarah M. Bagley, MD; Stephen P. Murray, MPH; Scott W. Formica, PhD; Moriah Wiggins; Sarah Kosakowski, MPH; Corey Hemingway; Kayla Guzovsky; Gabriel Quaglia; Ziming Xuan, ScD, SM, MA; C To, MSPH; Justeen Hyde, PhD; Jiayi Wang, MS; Alexander Y. Walley, MD, MSc - Boston Medical Center and Chobanian & Avedisian School of Medicine

Background:
Post-overdose outreach programs, partnerships between public health and public safety personnel, have increased in recent years as a response to the worsening overdose crisis. These programs have been historically focused on opioid overdoses. As cocaine and methamphetamine-involved overdose deaths surge among Native, Black, Latino, Hispanic and youth populations, post-overdose programs must be more responsive to people in these groups who are inequitably dying.

Objective: To develop a community-engaged toolkit for post-overdose programs to better respond to cocaine and methamphetamine use – particularly among Native, Black, Latino, Hispanic and young people

Methods: We convened frontline post-overdose workers from Massachusetts Department of Public Health funded Post Overdose Support Team (POST) programs in late 2022 to develop a toolkit of adaptations. The toolkit group represented individuals with varying racial/ethnic backgrounds and lived experience of substance use. We pre-specified topic domains including training, risk reduction, working with police, supporting families, and linkage to treatment. Questions related to improving services for Native, Black, Latino, Hispanic and young people were integrated into each session. Meetings were recorded and transcripts reviewed for existing practices, innovations, and themes to inform toolkit development. An advisory board with expertise in overdose, including lived experience, guided the process and provided feedback.

Results: We hosted 11 toolkit development meetings with participation from 9 of 11 POST programs. The resulting toolkit has 21 items including infographics, trainings, community planning exercises, and educational videos, developed from existing practices, innovations, and themes which emerged during the meetings. Toolkit item topics included cultural responsiveness training and awareness, materials promoting fentanyl contamination testing of cocaine and methamphetamine, guidance for engaging faith-based communities, keeping conversations private, accessing grief support, program planning with public safety, and opportunities for programs to incentivize engagement. The toolkit was launched at an in-person convening of the programs in March 2023.

Conclusions: In partnership with frontline post-overdose outreach workers, we developed a toolkit of infographics, trainings, a community planning exercise, and educational videos for people who use cocaine and methamphetamine, particularly Native, Black, Latino, Hispanic, and youth. We will evaluate the implementation and effectiveness of the toolkit items as next steps in this research.

9. Identifying Barriers and Facilitators to Harm Reduction, Substance Use Treatment, and Community Engagement in an Urban, Predominantly Black Neighborhood

Jasmine S Barnes, MPH; M Holliday Davis, MA (Hons); Kathryn Gallagher, MPH; Kathryn Morris, BA; Nicole O'Donnell, BA, CRS; Gilly Gehri, BA; Jeanmarie Perrone, MD; Margaret Lowenstein, MD, MPhil, MSHP - University of Pennsylvania

Background: The overdose crisis in the US has reached staggering levels, with overdose deaths rising to unprecedented level since 2020 in West Philadelphia, a predominantly black neighborhood. Less is known about specific factors contributing to growing disparities or culturally appropriate strategies to mitigate the impact of substance use and overdose in this community.

Objective: Our aim was to explore barriers and facilitators of harm reduction initiatives and culturally appropriate substance use disorder (SUD) care among West Philadelphia stakeholders.

Methods: We conducted semi-structured interviews with a purposive sample of community stakeholders who live or work in West Philadelphia. Interviews were analyzed in NVivo 12 using thematic content analysis.

Results: We completed 19 interviews with community members in West Philadelphia. Mean age of participants was 46; 78% were women; 83% were Black/African American. Participants came from a variety of professional background, and the majority either worked with PWUD (50%) or had lived experience personally or with a close friend/family member (83%). All participants discussed key barriers and proposed solutions to address substance use and overdose in West Philadelphia. Participants identified limited availability of treatment services and limited awareness about the risk of fentanyl and other changes in the local drug supply, as major challenges. Additional barriers included mistrust between community members and surrounding healthcare institutions and inequitable resource distribution in West Philadelphia compared to other areas of the city, both of which reduced engagement with harm reduction and treatment services.

Participants called for increased access to quality, culturally appropriate addiction services. These included educational campaigns to create awareness, accessible, in-person services located within the community and service quality improvements to include a person-centered approach to care for West Philadelphians with SUDs.

Conclusions: Healthcare professionals should be aware of the factors impacting care for populations at increased risk of overdose. Enhancing community engagement could increase awareness of the overdose crisis, including the risks of fentanyl use and harm reduction strategies. Our results suggest the need for continued efforts that ensure equitable distribution of resources for the provision of substance use and harm reduction services.

10. A multi-level, trauma-informed approach to ally with high-risk patients with injection-related endocarditis

Emily E Beahm, LCSW; Payel Roy, MD, MSc - UPMC

Background: GM is a 32-year-old female with hospitalizations for injection-related tricuspid valve endocarditis with multiple sequelae including stroke and septic pulmonary emboli. Hospitalizations have been complicated by opioid withdrawal and significant trauma incidences including insecure housing, sex work, and violence. As a result, GM has a history of physical and verbal outbursts and non-adherence to recommended medical care, which has led to both administrative and patient directed discharges (PDD).

Learning Objectives:

1. Manage opioid withdrawal and acute pain aggressively with short acting opioids.
2. Develop tools to practice trauma-informed care (TIC) to gain patient allyship.
3. Balance psychosocial circumstances with needs for high-risk surgical intervention.

Case Presentation: GM presented to the hospital with opioid withdrawal and requesting intravenous antibiotics, citing that her purse (containing oral antibiotics) was stolen. Upon discussion with the multidisciplinary Endocarditis Team, the plan was to continue medical management; tricuspid valve replacement (TVR) was deferred due to cleared blood cultures and high risk of return to injection drug use. During hospitalization, GM was guarded, had limited insight into disease, routinely declined medical care, and had intermittent outbursts towards staff. GM subsequently developed fungemia with new onset delirium, making TVR critical. Following further decompensation, GM underwent a TVR.

Discussion: To decrease the risk of PDD due to uncontrolled withdrawal and pain, we aggressively treated symptoms with oxycodone 30mgs every four hours. Upon resolution of opioid withdrawal symptoms, GM was amendable to discussing and initiating methadone maintenance for opioid use disorder. Due to behavioral concerns, medical teams prioritized practicing TIC. Based on the Five Principles of TIC by the Institute on Trauma and TIC, changes included minimizing the number of expectations for GM (Collaboration), avoiding physical examination when GM declines (Choice), and involving positive family supports in decision-making (Empowerment). GM's lack of insight into link between injection and endocarditis, lack of relapse prevention plan, and limited access to clean supplies via needle exchange programs complicated the decision for TVR, as GM was not optimized to prevent recurrence of disease or reoperation. However, surgical intervention became critical upon development of GM's life-threatening fungal endocarditis, as medical needs superseded concerns regarding social circumstances.

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

Lauren Arnold Bell, MD, MPH[1], **Jayla French, BS**[2]; Laura Kirkpatrick, MD; Scott E. Hadland, MD, MPH, MS; Matthew C. Aalsma, PhD - (1)IUSOM, (2)Indiana University School of Medicine

Background: Adolescents and young adults (AYAs) who use opioids in Indiana rarely receive treatment early in their use trajectories.

Objective: We aimed to develop a framework describing the way in which AYAs in Indiana progress from first use to treatment to better understand intercurrent steps.

Methods: We recruited Indiana AYAs with past-12-month non-prescribed opioid use through a university-based research registry, community referrals, and respondent-driven sampling. We recruited community key informants with professional exposure to AYAs with opioid use through community referrals, networking, and site visits. We conducted video-recorded in-depth semi-structured interviews of participants using Zoom and performed analysis on NVivo using constructivist grounded theory qualitative methodology.

Results: 64 AYA experiences were described during 27 interviews of 11 AYAs and 16 key informants.

We formulated a common sequential 6-point trajectory of AYA opioid use:

Initiation. AYA initiate use secondary to peer influence in situations of curiosity and impulsivity, to treat emotional distress, and after injury/prescription.

Escalation. Intermittent use escalates in the setting of unstructured time, denial of use as a problem, and invincibility.

Problematic Use with Inertia. When use feels problematic due to chasing withdrawals, using excessive finances, or losing relationships, AYA still experience inertia without motivation to change.

Doing It On My Own. Even when AYA decide to change, they imagine treatment for opioid use as 'not a good fit': inpatient, restrictive, disruptive, and isolating. This vision of treatment is perceived as unnecessary and stigmatizing for their minimized use, leading to secret self-management, avoiding disclosure due to fear of stigma, disappointing adults, and school/legal consequences.

Decision to Disclose. Trust to voluntarily disclose is facilitated by authenticity, non-judgment, and caring nature of the listener, as well as normalization, self-disclosure, and vulnerability.

Movement Toward Formal Treatment. Progress toward treatment after disclosure is curtailed by the absence of caregiver/provider/agency knowledge of treatment paradigms, material resources, and care availability.

Conclusions: Public awareness and AYA-directed educational campaigns around non-residential treatment paradigms and pathways to care may enhance uptake and access to treatment among AYAs with opioid use. AYA-interfacing adults should establish themselves as trustworthy listeners, facilitating productive discussions with AYA even at early stages in opioid use trajectories.

12. Pregnancy Rates among Women Treated with Medication for Opioid Use Disorder

Jennifer Bello Kottenstette, MD, MSCP, FASAM[1], **Kevin Y Xu, MD MPH**[2]; Richard Grucza, PhD - (1)Saint Louis University, (2)Washington University

Background: Chronic opioid use is thought to reduce fertility by suppressing the hypothalamic pituitary axis. Many women with OUD may be unsure if they can conceive at the time they enter treatment due to periods of infertility and irregular menstrual cycles. The effect of medication to treat opioid use disorder (MOUD) on women's fertility is understudied.

Objective: Using national administrative claims, we aim to identify the impact of MOUD on odds of conception in treatment-seeking women with OUD.

Methods: We conducted a retrospective case-crossover study using Merative™ MarketScan® Commercial and Multi-State Medicaid Databases from 2006 – 2016. Dates of conception were derived from delivery codes and used as "case" days compared to all other ("control") days of insurance enrollment. We examined 8,105 births among 6,936 women with OUD to model odds of conception on a given day as a function of MOUD exposure (buprenorphine, methadone, extended-release depot naltrexone, or oral naltrexone) using conditional logistic regression. Hormonal contraception was used as an active comparator group.

Results: In the sample, 2,391 women received buprenorphine, 783 methadone, 208 extended-release depot naltrexone and 320 oral naltrexone. Mean age is 26.1 years (range: 13-45) with 60.5% having Medicaid and 39.5% commercial insurance. Days on which women used methadone (OR 0.56, 95% CI 0.47-0.68) or oral contraceptives (OR 0.42, 95% CI 0.35-0.50) compared to no medication were associated with lower odds of conception. Treatment with extended-release depot naltrexone compared to no medication was associated with higher odds of conception (OR 1.87, 95% CI 1.23-2.83). There was no difference in conception with buprenorphine (OR 0.99, 95% CI 0.89-1.11) or oral naltrexone (OR 0.85, 95% CI 0.55-1.31).

Conclusions: The majority of treatment-seeking people with OUD who experienced pregnancy during the observation period did not receive MOUD. Those who received extended-release depot naltrexone had higher odds of conceiving compared to no treatment. Treatment with methadone was associated with lower odds of conception, whereas buprenorphine and oral naltrexone had no association. Treatment-seeking people with OUD who are capable of pregnancy need accurate information about the effects of MOUD on fertility to make informed choices about treatment that are consistent with their reproductive wishes.

13. Residency Programs and County Drug Courts: a symbiotic and under-explored partnership for treatment of opioid use disorder

Michael C Binder, MD, MPH; Joongyu Daniel Song, MD - University of Cincinnati College of Medicine

Background: Drug courts offer treatment services in place of conviction for drug-related charges. A shortage of prescribers can limit patients' access to medication for opioid use disorder (MOUD) in drug courts. Meanwhile, deficits persist in access to addiction-related education in internal medicine residency programs throughout the United States. Partnerships between

academic health centers/residency programs and drug courts have not previously been described in the literature.

Objective: In 2022, faculty at the University of Cincinnati Department of Internal Medicine (IM) partnered with Alternative Interventions for Women (AIW), a court-supervised drug treatment program in Hamilton County, Ohio, to establish a teaching clinic for the treatment of substance use disorders. We report the pilot year experience of this academic-judicial collaborative and propose it as a model to increase access to MOUD prescribers for patients in drug courts in the United States, while providing addiction-related teaching to IM resident physicians.

Methods: A series of semi-structured interviews were conducted with program administrators of AIW, faculty members at the University of Cincinnati (UC), and the participating resident physician to characterize the following: 1) the formation of the partnership, 2) clinic logistics, 3) the creation of an addiction medicine curriculum, and 4) potential obstacles to generalizability.

Results: AIW referred participants to receive MOUD at the teaching clinic. Patient encounters were supervised by an IM faculty member knowledgeable about addiction medicine. The resident physician attended the clinic longitudinally during elective rotation blocks over the course of the academic year and completed a structured addiction medicine curriculum. The clinic addressed a prior lack of affiliated MOUD prescribers, while trainees demonstrated increased competency in addiction treatment. An identified limit to expansion and generalizability was the exclusion by some programs of drug court participants receiving MOUD.

Conclusions: A collaborative clinic between drug courts and academic health centers is a potentially effective way to both increase access to MOUD for patients in drug courts while providing future primary care physicians with training in addiction medicine.

14. Peering into Integration: A Focus Group Study on Peer Support Workers in Substance Use Disorder Treatment and Recovery Organizations

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Background: Peer Support Workers (PSWs) play an important role within Substance Use Disorder (SUD) treatment and recovery organizations, yet they face ongoing challenges in effectively integrating into these workplaces. Though previous research has identified barriers to PSW integration from peer and supervisory perspectives, a more comprehensive understanding of how organizations address these barriers and what PSWs require to be successful is needed.

Objective: To gather insights and perspectives from PSWs and PSW supervisors about the integration of PSWs in SUD treatment and recovery organizations and to identify challenges, strategies, and opportunities for improvement.

Methods: Researchers conducted a 90-minute focus group with PSWs and PSW supervisors (N=6) from across Missouri about barriers and facilitators to PSW integration, as well as aspects affecting PSW job satisfaction. Focus group transcripts were coded and grouped using thematic analysis. Researchers used member checking to validate themes and elicit additional information.

Results: PSWs and PSW supervisors discussed the following barriers to PSW integration: supervision by people without lived experience; lack of understanding of the peer role by non-peer staff; lack of mentorship; insufficient peer-focused training; low pay; limited career growth potential; stigma toward peers; lack of organizational tools addressing burnout; and a lack of racial diversity in the peer workforce. Practices facilitating peer integration included: increased collaboration with supervisors, other peers, and non-peer staff; supervisor open-door policies; supervisors championing the peer role; and education about the peer role to all staff including leadership.

Conclusions: Focus group participants highlighted the importance of two main factors: 1) knowledge of the peer role, and 2) quality, peer-focused supervision. When present, both factors have a positive impact on peers' sense of belonging and engagement with treatment teams and clients. However, the absence or lack of these factors impedes peers' ability to integrate successfully into the workplace. Notably, PSWs and supervisors overwhelmingly agreed on the content and importance of these factors. Implementing practices to disseminate knowledge of the peer role at all organizational levels, and establishing consistent, peer-focused supervision processes will be critical for enhancing PSW integration and job satisfaction in SUD treatment and recovery organizations.

15. Risk Factors for Infective Endocarditis and Untreated Infections among People who Inject Drugs (PWID) in Los Angeles, CA and Denver, CA 2021/22

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Background: Little is known about demographic, health, and drug-related risk factors for injection drug use-related infective endocarditis (IDU-IE) and bacterial infections in community samples of people who inject drugs (PWID).

Objective: We sought to examine whether demographic, drug use, measures of subsistence (Gelberg et al., 1997), and injection-related risk behaviors were associated with a history of IDU-IE, untreated infection symptoms, and IE specific symptoms among community-recruited PWID.

Methods: In 2021/2022, PWID were recruited from community settings in Los Angeles, CA and Denver, CO. Participants completed baseline interviews that assessed if they had ever had IDU-IE, if they experienced symptoms associated with a non-specific, un (n=429)treated infection, and for those responding yes, did they have symptoms commonly associated with IE. We used multivariate logistic regression to determine if demographic (gender, race, age, income), drug use patterns, past medical history of co-morbid conditions, subsistence measures, and chronic

pain levels were associated with participants reports of ever having IDU-IE, IE specific symptoms, and non-specific infection symptoms.

Results: In the sample 7% reported ever having IE, 13% IE symptoms, and 19% non-specific infection symptoms in the last 3 months. Ever having IDU-IE was associated with HCV positivity (Adjusted odds ratio [AOR]=13.31; 95% confidence interval [95% CI]=2.92, 60.62), ever having MRSA (AOR=6.53; 95% CI=2.74, 15,54), and daily fentanyl injection (AOR=3.04; 95% CI=1.12, 8.23). IE specific symptoms were associated with always injecting in public (AOR=3.79; 95% CI=1.60, 8.96); always having difficulty finding clothing (AOR=2.33; 95% CI=1.10, 4.90), any mental health diagnosis (AOR=2.38; 95% CI=1.14, 5.00), and any fentanyl use (2.24; 95% CI=1.02, 4.89). Factors associated with untreated infection symptoms in the last 3 months were having an abscess (AOR=4.75; 95% CI=2.78, 8.12), any mental health diagnosis (AOR=2.57; 95% CI=1.35, 4.89), any chronic pain (AOR=1.80; 95% CI=1.03, 3.14), and very good sleep quality (AOR=0.37; 95% CI=0.15, 0.94).

Conclusions: Co-morbid infectious diseases (HCV) and mental illness was associated both IDU-IE and non-specific infectious symptoms. Addressing subsistence issues including good quality sleeping conditions might prevent some infections, but improving access to substance use treatment and primary care for this population is urgently needed to address the growing epidemic of bacterial infections.

16. Perceived a Need for Treatment Among Adults with Alcohol Use Disorder: Implications for Closing the Treatment Gap

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Background: Alcohol use disorder (AUD) is the most prevalent type of substance use disorder in the United States. Although effective treatments for AUD exist, they remain vastly underutilized. AUD is a spectrum disorder with different levels of severity, and most people not accessing treatment are likely to have milder disorders. According to national surveys, the most salient reason for the AUD treatment gap is that individuals do not perceive a need for treatment. However, this treatment gap has not been examined by severity with a focus on perceiving a need for treatment.

Objective: Examine the AUD treatment gap with a focus on AUD severity and perceiving a need for treatment

Methods: We pooled together nationally representative data for adults from 2015 to 2019 using the National Survey on Drug Use and Health. We used weighted logistic regression to examine predictors of perceiving a need for treatment among adults with AUD who did not receive treatment. We used latent class analysis (LCA) to explore subtypes of adults with AUD who did not receive treatment and who do not perceive a need for treatment.

Results: Most adults with AUD have a mild disorder (67.1%). The strongest predictors of perceiving a need for treatment were clinical characteristics such as co-occurring disorders, but especially severity (odds ratio (OR) for moderate AUD (ref= mild AUD) = 4.7; OR for severe AUD = 20.4). Adults with no children and who were married were less likely to perceive a need for treatment. Having a provider ask to cut down alcohol use was independently associated with increase perceived need for treatment. LCA revealed four distinct classes: a group that likely did not need treatment, an older group with more severe AUD but low co-occurring depression, a mostly young adult group with higher co-occurring depression, and a severe and complex group who would benefit from treatment.

Conclusions: Clinical characteristics, especially AUD severity, are important determinants of perceiving a need for treatment. There are actionable findings for the healthcare system to increase perceived need among adults with AUD. The AUD treatment gap may need to be redefined to include only those with more severe disorders.

17. A Case of Consistent Fentanyl-induced Euphoria with Concurrent Buprenorphine Extended-release Injections

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Background: Background: Buprenorphine historically has been successful at blocking the subjective effects caused by misusing full opioid agonists such as morphine or heroin (Haight 2019). However, with the increase in the misuse of highly potent synthetic opioids (HPSOs) such as fentanyl, it is unclear whether buprenorphine provides sufficient blockade of subjective effects of HSPOs (Mariani 2021). In this report, we present a case of a young male with history of severe polysubstance use disorder initiated on three months of buprenorphine XR (BXR) injections who was able to achieve fentanyl-induced euphoria.

Learning Objectives:

1. Pharmacokinetics and pharmacodynamics of BXR
2. Treatment of treatment-resistant opioid use disorder with BXR

Case Presentation: A 32-year-old male with history of severe polysubstance use disorder, including psychostimulants, benzodiazepines, and several forms of opioids (morphine, heroin, and fentanyl), was started on BXR following standard initiation protocols. After receiving his first two 300 mg injections of BXR, he began re-experimenting with fentanyl with specific intentions to overcome the BXR blockade. He was initially unsuccessful in reaching euphoria with fentanyl in the first two weeks after the injection but was able to consistently reach euphoria with continued daily binge use of fentanyl during weeks three and four without overt overdose. He received his third BXR 100 mg maintenance injection which dampened his fentanyl-induced euphoria while he continued using fentanyl, however without precipitated withdrawal. Serum levels of buprenorphine and metabolites were drawn following three consecutive months on BXR which resulted at 4.7 ng/mL for buprenorphine and 6.3 ng/mL for norbuprenorphine.

Discussion: Discussion: Our patient was able to achieve fentanyl-induced euphoria without precipitated withdrawal despite receiving regular BXR administrations. Providers should be aware that patients are overcoming the BXR blockade. Additional research is needed to assess the concurrent use of HSPOs with BXR.

References:

1. PMID: 30792007
2. PMID: 34223681
3. PMID: 34816821

18. Racial Differences in Medications for Opioid Use Disorder Initiation in a Correctional Setting

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Background: Partial and full opioid agonists, including buprenorphine and methadone, are effective medications for opioid use disorder (MOUD). Data demonstrate that individuals who have interactions with the criminal legal system have substantially higher rates of opioid use disorder than those who do not. Prior research studies have successfully illustrated the effectiveness of provision of MOUD within correctional settings. To date, no research has further explored racial differences in MOUD treatment preferences amongst incarcerated individuals.

Objective: The objective of this research was to further explore the differences in MOUD uptake by racial group amongst incarcerated individuals.

Methods: This retrospective cohort study explored MOUD uptake in individuals incarcerated at a correctional institution in New England, which offers access to all FDA-approved MOUD based on patient preference during the time period of 2016 to 2018. MOUD treatment rates were categorized as community continuation or new initiation while incarcerated. Individuals were classified as race though institutional protocol as White, Black, Hispanic, Asian, or Native American. For the purposes of this research, Black and Hispanic were included and were grouped into Non-White.

Results: A total of 1600 individuals received treatment between 2016 and 2018. Among individuals identified as White continuing their community-started medication, 61.0% continued methadone treatment upon incarceration and 39.0% continued buprenorphine. Among White individuals starting MOUD while incarcerated, 49.8% started on buprenorphine, and 50.2% started on methadone. Among individuals identified as non-White continuing their community-started medication, 70.5% continued methadone treatment upon incarceration and 29.5% continued buprenorphine. Among non-White individuals starting medication, 61.6% got inducted on buprenorphine, and 38.4% started on methadone.

Conclusions: This study identifies that in a correctional setting, when having access to all FDA approved medications, there is a strong preference for initiating buprenorphine amongst non-White patients. This warrants further discussion and exploration as it may suggest a lack of access to buprenorphine amongst individuals of color within the community. Further studies should explore findings with other racial groups as well.

19. Stimulant Use Among Patients in Opioid Treatment Settings: Provider Perspectives

Haley Breland, BA; Valerie Antonini, MPH; Thomas Freese, PhD; Mark McGovern, PhD; Julia Dunn, MSc; Richard Rawson, PhD; Sherry Larkins, PhD - UCLA ISAP

Background: Methadone maintenance therapy (MMT) has been a pillar of opioid addiction treatment. Recently however, Opioid Treatment Programs (OTPs) have been faced with an escalating threat of stimulant use and related overdose deaths among their patient populations. Little is known about what procedures OTP providers currently use to address stimulant use while maintaining treatment for opioid use disorder.

Objective: The present study aims to address this gap by exploring experiences of MMT providers treating patients who use both opioids and stimulants.

Methods: Five virtual focus groups were conducted with providers working in OTP settings, including prescribing clinicians (n=11) and behavioral health staff (n=25). Additionally, an online survey was given to 46 program staff who registered for the final two focus groups, including prescribers and medical staff (n=7), administrators (n=12), and behavioral health therapists and counselors (n=27). Questions focused on provider perceptions of patient stimulant use and interventions. Inductive analysis was applied to identify themes relevant to identification of stimulant use, use trends, intervention approaches, and perceived needs to improve care.

Results: OTP providers generally indicated a trend of rising stimulant use among their patients, especially those experiencing homelessness or comorbid health conditions. Providers reported a range of approaches to patient screening and intervention. However, there was less agreement as to which, if any, of these interventions were effective, and though providers saw stimulant use as a common and severe problem, they reported very little problem recognition and interest in treatment from their patients. The prevalence and danger of synthetic opioids such as fentanyl was also identified as of particular concern. Providers overwhelmingly sought more resources to address these issues, as well as more research into effective interventions and medications. Also notable was an interest in contingency management (CM) and use of reinforcements/rewards, such as take-home privileges, to encourage stimulant use reduction.

Conclusions: OTP providers face challenges in treating patients who use both opioids and stimulants. Existing research indicates strong support for contingency management for use in OTPS, but participants report regulatory and financial issues that pose barriers to implementation. Further research is needed to develop effective interventions that are accessible to providers in OTP settings.

20. Substance Use Disorders Among Forced Migrant Populations in Humanitarian Settings: An Educational Initiative for International Humanitarian Practitioners

Jenna L Butner, MD, FASAM; Kaveh Khoshnood, PhD, MPH - Yale University School of Medicine

Background: Forced migrant populations experience extreme mental and physical stress, trauma, and abuses, and subsequently have high prevalence of post-traumatic stress disorder and depression. These situations can worsen or trigger pre-existing mental health disorders, and substance use disorder (SUD). Refugee populations in humanitarian settings remain vulnerable to SUD, yet they go unaddressed by larger issues including psychosocial distress, availability of substances, duration of displacement, competing priorities within the political realm, and stigmatization. Provision of treatment, and even prevention by humanitarian practitioners (medical personnel, volunteers, and others) is crucial yet no universal guidance is available. The United Nations Office on Drugs & Crime (UNODC), United Nations High Commissioner on Refugees (UNHCR and WHO have identified challenges and opportunities for delivery of SUD treatment interventions in addition to providing guidelines to enhance delivery of treatment in humanitarian settings. Despite substance use prevention and recovery taking precedence for national and global public health policymaking, little progress has been made to address the issue of substance use among conflict-displaced populations.

Objective: The main aim of curriculum development is to ultimately create a SUD educational curriculum for frontline practitioners in humanitarian settings, both medical and non-medical.

Methods: The first part will consist of teaching screening and prevention tools. The second half will consist of education on both pharmacologic and non-pharmacologic treatment modalities, with the latter encompassing behavioral health treatment interventions such as cognitive behavioral therapy and motivational interviewing. To assess the efficacy of this intervention, participants will take part in IRB approved, pre- and post- Likert scale surveys, where ease of implementation and value among other items will be assessed.

Results: Outcomes will be collected after implementation of the curriculum and will be collected in an on-going fashion.

Conclusions: Critical gaps in SUD identification, knowledge, prevention, and treatment exist in refugee populations in humanitarian settings. Implementation of novel prevention, screening and treatment interventions is vital in these settings. Socio-culturally sensitive approaches to SUD in forced migrants offers unique opportunities to address these gaps and lessen stigma.

21. Patient Reported Barriers and Facilitators to Accepting IM-Naltrexone in the Hospital for the Treatment of Severe Alcohol Use Disorder

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Background: Alcohol consumption substantially increased during the COVID-19 pandemic and, subsequently, hospitalizations related to the consequences of alcohol use disorder (AUD)

dramatically increased. In January 2023, we began offering intramuscular (IM) naltrexone to hospitalized patients with severe AUD at our University Hospital setting.

Objective: We examined barriers and facilitators to in-hospital receipt of IM naltrexone from the perspective of patients hospitalized with the sequela of severe AUD. Thirty days following hospital discharge, we called our patients over the telephone to inquire about any changes in their alcohol use behaviors.

Methods: We generated qualitative data by conducting 30 key informant interviews with patients who accepted either oral or intramuscular naltrexone for the treatment of AUD. Interviews were recorded, transcribed, and entered into ATLAS.ti data management software. We employed both a deductive and inductive approach, based on a directed content analysis, to analyze our data. We used the Health Belief Model as an explanatory framework to inform our *a priori* code development. We used an inductive approach to identify codes and categories which included new ideas relevant to our research question.

Results: Emergent themes related to accepting in-hospital IM naltrexone included: receiving a new diagnosis of advanced liver disease or a serious medical condition; a desire to make a significant life change; a desire to gain the support or approval of a loved one; and past, unsuccessful attempts at sustained recovery and diminished optimism. Reasons for declining IM-naltrexone included: a perception that their alcohol use was not particularly problematic; a belief that they could stop drinking independently, wariness of taking a medication; and a preference to take a daily pill (oral naltrexone) over a monthly injection. After 30-days, patients who received naltrexone self-reported a significant decrease in alcohol consumption compared to patients who received oral naltrexone.

Conclusions: Hospitalization is a critical time to engage out of treatment, medically unwell, adults into AUD treatment with long-acting injectable naltrexone. Future work should study if hospitalized patients who receive IM-naltrexone are more likely to engage in sustained AUD treatment, have fewer subsequent hospitalizations, and lower mortality compared to patients who decline IM-naltrexone during hospitalization.

22. Linkage to Care Outcomes Following Treatment in a Low-threshold Bridge Clinic for Substance Use Disorder

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Background: As overdose deaths in the United States continue to rise, there is a continued need to provide low-barrier care and access to medication for substance use disorders (SUD).

Objective: Our goal was to explore the experiences of patients who had been discharged from Massachusetts General Hospital's (MGH) low-barrier bridge clinic in order to better understand how transferring care impacted continued SUD treatment.

Methods: We conducted a retrospective cohort study of post-treatment outcomes of patients who were seen at MGH Bridge Clinic at least twice and discharged formally December 2017 through June 2020. Survey topics included questions regarding successful transfer to new SUD clinic, current care status, current medication for SUD and current use of alcohol and other drugs. We examined engagement with specific services in the Bridge Clinic and association with being in care anywhere at the time of the survey, using chi-squared tests. We assessed the association between successful transfer, defined as completion of a visit at the transfer clinic, with being in care and taking medication at the time of the survey using chi-squared tests.

Results: We completed surveys with 32% of eligible participants (63/195). At the time of the survey, which was a median of 22 months since transition out of Bridge Clinic, 84% of participants reported being in treatment and 68% reported taking medication for SUD. 78% of participants reported connecting to ongoing treatment directly from Bridge Clinic, however only 37% were still in treatment at the same location. Among those no longer in any treatment, transportation (18%) and no longer needing treatment (18%) were the most common reasons Most participants (74%) reported no current alcohol use, no current drug use (68%), or both (56%). Few participants (10%) had been to the emergency department in the past 30 days. Participants reported high levels of improvement with their substance use and life compared to before their care at the Bridge Clinic, with both measures having median ratings of 5 on scale of 1-5.

Conclusions: Low-threshold clinical service models like bridge clinics seem to successfully transition patients onto long term, community-based SUD care.

23. Opioid, Simulant and Sedative Overdose and Life-threatening Use among Canadian Youth: A Cross-sectional Survey of Pediatricians and Pediatric Subspecialists

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Background: Illicit drug overdose is a public health emergency in Canada. Even though opioid use disorder is predominantly viewed as an issue affecting adults, an increasing number of youths in Canada suffer from life-threatening overdose; it is now the leading cause of death in youth ages 10-18 years in Western Canada. Yet, epidemiologic data related to this population remains limited.

Objective: To determine the minimum incidence of children and adolescents presenting with opioid, stimulant and sedative overdose and life-threatening use among youth presenting to Canadian pediatricians and pediatric subspecialists**.**

Methods: A one-time cross-sectional survey of Canadian pediatricians and pediatric subspecialists using the Canadian Paediatric Surveillance Program (CPSP) was conducted in the Spring of 2022. Survey questions included the number of children and adolescents ages 10-18 seen for overdoses or life-threatening use of opioids, stimulants, or sedatives in the prior 24 months as well as awareness of availability of different substance use treatment resources for

youth. A denominator of 3,707,591 was selected based on Statistics Canada census data for children and adolescents 10-18 years in 2021. Data were analyzed using Stata v15.1.

Results: 1027 respondents from all 10 Canadian provinces out of 2791 participants in the CPSP completed the survey (response rate: 37.8%). 128 (12.5%) respondents indicated managing at least one youth with overdose or life-threatening substance use in the prior 24 months. Most providers reporting cases operated in urban settings (84.4%), but also in suburban (9.4%) and rural/remote (5.5%) environments. Calculated minimum cumulative incidence rates per 100,000/year were: stimulant toxicity 2.52, sedative toxicity 2.43, opioid overdose 2.31 and opioid use requiring pharmacotherapy 1.32. Respondent awareness of availability of substance use-related services was high for outpatient mental health services (85.4% for 12-15-year-olds, 86.1% for 16-18-year-olds), but poor to moderate (25.3%-53.1%) for all other surveyed services including inpatient stabilization and intensive outpatient management.

Conclusions: Pediatric providers interface significantly with youth with severe substance use and overdose. Although likely an underestimate given the methodology used, calculated minimum incidence rates provided are significant and concerning at a population level. Pediatric providers have limited awareness of service availability for youth that use substances. Further studies and knowledge translation are needed.

24. "This Tough Love Stuff is Just Not Love": Exploring Harm Reduction in Massachusetts Homeless Shelters

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Background: Overdose disproportionately affects people experiencing homelessness. Harm reduction practices, including distribution of naloxone and use of new syringes, can decrease negative consequences of drug use. While harm reduction practices have been adopted into most addiction care settings, access to these practices in shelters is uneven.

Objective: To understand knowledge and implementation of harm reduction practices among shelter staff, leadership, and guests.

Methods: We conducted 26 semi-structured interviews with staff, leadership, and guests at two homeless shelters in Massachusetts. Two authors conducted thematic analysis rooted in the ecosocial theory of disease distribution. Paid peer-consultants reviewed study procedures and results to ensure content represented community attitudes accurately.

Results: Shelter harm reduction practices encompassed more than distributing supplies (*we have harm reduction beds... which is extra beds for the cold months*). Shelter programs had naloxone available for distribution to guests, as well as syringes.

Staff and leadership attitudes toward these practices were both supportive (*the main thing is that ...they're using safely*), and conflicted (*[harm reduction]'s good in some way. In some way, it's not*). Some believed that harm reduction would be "enabling," (*it's kind of an invitation for risky*

behavior). Staff and leaders had positive attitudes toward supervised consumption sites but were doubtful they'd be adopted soon (*it sounds like a huge liability...it goes to legality*).

Guests were aware of some of these practices, but not others (*I just know about the Narcan...*). Guests said policies prohibiting drug use do not deter everyone from using drugs inside (*You can bring drugs wherever you like*).

Guests had ideas for improving harm reduction services including safe consumption sites either in shelters or nearby, (*I can get [my needles] right in there, do my shot, and go to bed*). Guests argued that these would benefit sober shelter stayers, by allowing them to stay away from other people using substances (*all you're thinking about is the other person all messed up and you're trying to [stay sober]*)

Conclusions: Shelters offer important resources to promote drug user health. Shelter guests would like more options, such as safe consumption sites, to support both safer drug use and recovery.

25. Mobile Units Improve Access to Medications for Opioid Use Disorder: A Qualitative Implementation Study

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Background: Medications for Opioid Use Disorder (MOUD) are lifesaving, but <20% of individuals in the US who could benefit receive them. As part of the NIH-supported HEALing Communities Study (HCS), coalitions in several communities in Massachusetts and Ohio implemented mobile MOUD programs to overcome barriers to MOUD receipt. We defined mobile MOUD programs as units that provide same-day access to MOUD at remote sites.

Objective: We aimed to (1) document the design and organizational structure of mobile programs providing same-day or next-day MOUD, and (2) explore the barriers and facilitators to implementation as well as the successes and challenges of ongoing operation.

Methods: Program staff from five programs in two states (n=11) participated in semi-structured interviews. Two authors conducted thematic analysis of the transcripts based on the domains of the social-ecological model and the semi-structured interview guide.

Results: Mobile MOUD units sought to improve immediate access to MOUD ("Our answer is pretty much always, 'Yes, we'll get you started right here, right now,'"), advance equity ("making sure that we have staff who speak other languages, who are on the unit and have some resources that are in different languages,"), and decrease opioid overdose deaths.

Salient program characteristics included diverse staff, including staff with lived experience of substance use ("She just had that personal knowledge of where we should be going). Mobile

units offered harm reduction services, broad medical services (in particular, wound care), and connection to transportation programs and incorporated consistency in service provision and telemedicine access.

Implementation facilitators included trusting relationships with partner organizations (particularly pharmacies and correctional facilities), nuanced understanding of local politics, advertising, protocol flexibility, and on-unit prescriber hours.

Barriers included unclear licensing requirements, staffing shortages and competing priorities for staff, funding challenges due to inconsistency in grant funding and low reimbursement ("It's not really possible that billing in and of itself is going to be able to sustain it"), and community stigma toward addiction services generally.

Conclusions: Despite organizational, community, and policy barriers, mobile MOUD units are an innovative and feasible way to expand access to life-saving medications, promote equity in MOUD treatment, and overcome stigma.

26. Naloxone Uptake and Changes in Opioid Use Behaviours : Evidence from Publicly Funded Take-Home Naloxone Programs in Canada

Hui-Yu Chiang, driving license; Peter Coyte , PhD - University of Toronto

Background: In Canada, provinces and territories have implemented strategies to increase the accessibility of naloxone to individuals who may be at risk of an opioid overdose in response to the opioid crisis. One such strategy is the establishment of publicly funded Take-Home Naloxone (THN) programs, where naloxone kits are provided free of charge by pharmacies, clinics, and other community organizations. However, concerns have been raised that increasing naloxone availability may reduce an individual's motivation to quit using opioids or lead to more reckless drug use.

Objective: Despite these concerns, there is a lack of individual-level studies examining the impact of THN programs on opioid use behavior. The purpose of this research is to investigate whether naloxone uptake reduces opioid use and abuse.

Methods: One of the challenges in determining the impact of naloxone uptake on opioid use behavior is that the decision to obtain naloxone may be influenced by unobserved factors, which may result in omitted variable bias. To address this issue, this study employed instrumental variable regression to isolate the effect of naloxone uptake. Using nationally representative data from the 2019 Canadian Alcohol and Drugs Survey conducted by Statistics Canada, this study utilized province-level publicly funded THN programs as an instrumental variable to evaluate the effect of naloxone uptake on opioid use behavior.

Results: The study found that there is no association between the uptake of naloxone and changes in opioid use. However, receiving a naloxone kit is associated with a 0.6 percentage point increase ($p<.10$) in opioid abuse, particularly among individuals with poor mental health conditions who have a 0.02 percentage point increase in opioid abuse ($p<.05$).

Conclusions: Our study shows that receiving a naloxone kit increases the likelihood of reporting opioid abuse. However, the study does not recommend limiting naloxone availability to those at risk of overdose. Instead, it emphasizes the need to find ways to mitigate any unintended consequences of broadening access to naloxone.

27. White Coat Crime: Regulatory and Criminal Investigations of Prescription Drug Diversion by Healthcare Professionals

Elizabeth Chiarello, Ph.D. - Saint Louis University

Background: Prescription Drug Monitoring Programs (PDMPs) have been implemented nationwide to combat the overdose crisis. PDMPs are two-tiered, big data surveillance technologies that permit healthcare providers to monitor patients and enable law enforcement to monitor providers. Several studies examine how providers' PDMP use impacts patients, but few consider how enforcement agents use PDMPs to target providers. This information is critical because cases against healthcare providers are becoming more common and these cases can impact professional practice and patient care.

Objective: The purpose of this study is to examine how enforcement agents use PDMPs to investigate, prosecute, and discipline healthcare providers.

Methods: This study uses a nested maximum variation sampling strategy that relies on original, semi-structured, qualitative interviews the author conducted from 2011-2019. The purpose of a maximum variation sample is to collect the widest possible range of experiences. The sample includes three states—California, Florida, and Missouri—where different agencies run the PDMP (Departments of Justice, Health, and Public Health). Within each state, organizations that investigate providers were selected: narcotics task forces, fraud units, the Drug Enforcement Administration, state boards of medicine and pharmacy, US Attorneys' Offices, and private defense firms. The final sample includes a total of 73 interviews that ranged from 30 minutes to 5 hours.

Results: Results show how enforcement agencies have responded to the overdose crisis with three strategies: organizing task forces, educating investigators, and using PDMPs. Together, these strategies have dramatically transformed the ways that investigators conduct cases against providers. They have more information at their fingertips and can more easily assess prescribing and dispensing patterns. They combine PDMP data with other data sources to identify targets of investigations. And PDMP data helps them locate former patients to use as witnesses. Prosecutors, who were once hesitant to pursue doctors for over-prescribing opioids, have become more willing to take these cases.

Conclusions: This study demonstrates how a changing legal and technological landscape has made enforcement work easier and faster. It shows how enforcement agents use PDMP data to target providers via criminal and administrative law and how PDMP use dovetails with other changes in the enforcement environment.

28. The Role of Family Functioning in relation to Opioid Use and Recovery Outcomes among Women with Opioid Use Disorder (OUD)

Jessica L. Chou, PhD, LMFT; David S. Bennett, PhD; Sharlene Irving, MBA; Barbara Schindler, MD - Drexel University

Background: As opioid use and fatal overdoses increase among women,[1,2] there is an urgent need to understand how to better support women's recovery. For women with OUD, family relationships can impact substance use patterns and outcomes,[3] possibly including initiation and adherence to medication for OUD (MOUD). However, little research focuses on the potential role of family functioning in relation to OUD, and MOUD engagement.

Objective: Our objective was to utilize a longitudinal design to examine the relationship between family functioning and mental health with opioid use patterns, MOUD use, and treatment engagement for women with OUD.

Methods: 151 women were recruited from a gender-specific substance use outpatient treatment center located in the Northeastern region of the United States. Inclusion criteria were: 1) Age 18 or older, 2) Met DSM-V criteria for OUD, 3) Initiated MOUD at treatment intake. Assessments were administered at baseline and 6-months examining opioid use, mental health (PHQ-9; GAD-7; PCL-5), and family functioning (FAD).

Results: 78% of women were no longer using opioids other than MOUD at 6-month follow-up. Oxycodone/acetaminophen (16%), oxycodone (9%), and heroin (4%) were the most commonly used opioids at follow-up. Better family communication and general family functioning were associated with fewer depressive, anxiety, and PTSD symptoms at intake. Greater family affective involvement at intake was associated with abstinence from opioid use at 6-month follow-up ($t=1.77$, $p=.04$, one-tailed); other family functioning measures at intake did not predict opioid use at follow-up. In addition, affective involvement interacted with depressive symptoms at intake ($p=.02$) as high affective involvement was associated with lower risk of opioid use at follow-up (0%) than was low affective involvement (27%) among women above the median for depressive symptoms. Coding is currently underway to examine family functioning as a predictor of MOUD engagement and overall treatment engagement and will be reported.

Conclusions: While the inclusion of family in treatment remains a priority,[4] the specific mechanisms by which family functioning may be related to OUD, MOUD and treatment engagement among women remains unclear. The present research highlights the potential importance of focusing on family's affective involvement as well as family communication and support for women using MOUD.

29. Drug Screening Programs in Colleges of Pharmacy

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Background: Students in healthcare disciplines are at risk of inappropriate substance use due to a rigorous curriculum, knowledge of and easy access to drugs, and social and extracurricular pressures.

Objective: To explore drug screening policies and procedures in U.S. colleges/schools of pharmacy, frequency of drug-related incidents, and types of substances most frequently abused among pharmacy students.

Methods: An IRB-approved, web-based questionnaire consisting of 4-26 questions (utilizing skip-logic) plus demographic questions was sent to 135 pharmacy administrators. A paper copy was sent to non-responding schools. Responses to questions were held confidential and not linked to any individual or school, but combined and analyzed collectively to provide a national perspective.

Results: The survey resulted in a 73% response rate, with 61% of respondents having a drug screen program. Private institutions were almost twice as likely to require screening as public schools. Motivation(s) for implementation included experiential site requirement (90.4%), admissions requirement (37.0%), profession protection (27.4%), drug abuse/addiction deterrence (20.5%), and/or specific drug-related incident(s) (8.2%). Incidents most commonly involved alcohol (79.5%) and marijuana (61.1%). On average, schools that screen students are aware of 0.79 (SD=1.03) drug-related and 1.07 (SD=1.32) alcohol-related incidents per year, compared to 1.00 (SD=1.24) drug-related and 3.00 (SD=2.75) alcohol-related incidents at those that do not. Approximately 75% of administrators believe random drug screening deters pharmacy students from substance abuse.

Conclusions: These results are one consideration when evaluating the need to institute/enhance a drug screening program. A screening program can assist in safeguarding students' welfare while in the school's charge, ensure compliance with federal/state laws/regulations, promote optimal patient care, and protect the integrity of the school and the profession of pharmacy.

30. Child Custody Loss and Consequences for Mothers Who Use Drugs: A Systematic Synthesis

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Background: Mothers who use drugs are involved with child welfare services and lose child custody at disproportionately high rates. While only a minority of pregnant women report illicit drug use (5.8%) or alcohol use (9.5%), half of infants placed in the United States (US) foster system in 2019 were removed due to parental drug or alcohol use. The negative impact of removal on children has been well characterized in current literature, yet less is known about the impact of custody loss on mothers who use drugs.

Objective: The purpose of this mixed studies systematic review is to 1) describe the state of science on maternal outcomes and experiences after child custody loss among mothers who use drugs and 2) present a visual synthesis of the findings.

Methods: PubMed, PsycINFO, CINAHL, and Social Work Abstract databases were systematically searched between June 2022 to January 2023. Article eligibility criteria centered on the outcomes and experiences after child custody loss among mothers who use drugs. Studies were analyzed using results-based convergent synthesis methodology for mixed studies reviews. Study quality was assessed using the Mixed Methods Appraisal Tool (MMAT). A visual model was derived through the synthesis of results and contextualization of findings within maternal identity and stigma frameworks.

Results: Of 2,350 articles screened, 22 relevant scientific articles were selected for inclusion. Longitudinal, cohort studies (n=5) identified associations between custody loss and poorer mental health, increased drug use and overdose risk, less treatment engagement, and worsened social factors. Qualitative studies (n=17) identified themes that described re-traumatization after child custody loss and the development of survival mechanisms through identity negotiation. Most strikingly, the impact of child custody loss was both quantitatively described and qualitatively characterized as worse than the death of a child.

Conclusions: Our findings indicate that child custody loss associated with drug use exacerbates trauma and worsens maternal health. The few but powerful examples of mothers who found hope despite custody loss are ripe with unplumbed implications for interventions supporting other mothers coping with such loss. Immediate implications for policy and practice in healthcare, child welfare, and legal professions are discussed.

31. The Moral Experiences of Obstetric Providers When Caring for Pregnant and Parenting Women with Substance Use Disorders: A Qualitative Systematic Review

Caroline K. Darlington, MSN, WHNP-BC; Peggy Compton, PhD, RN, FAAN, FIAAN - University of Pennsylvania

Background: Addressing substance use disorders (SUD) among pregnant and parenting women is complicated by the social, ethical, and legal interplay between maternal and child needs. Much research has focused on stigma among obstetric providers caring for women with SUDs. However, the broader moral experiences of obstetric providers as they care for this population are poorly understood.

Objective: The purpose of this review was to synthesize the qualitative literature on the moral experiences of prescribing obstetric providers (e.g., physicians, midwives, nurse practitioners, physician assistants) managing the care of pregnant and parenting women with SUDs.

Methods: We used Hunt and Carnevale's (2011) framework to define moral experience as “a person’s sense that values that he or she deem important are being realized or thwarted in everyday life.” A systematic search of PubMed, PsycINFO, and CINAHL resulted in 16 eligible qualitative articles. Study quality was assessed using the Critical Appraisal Checklist for

Qualitative Research from the Joanna Briggs Institute. Thematic narrative analysis was used to synthesize results and identify themes.

Results: Overall themes revealed moral tension within the domains of *judgements*, *beliefs*, *rights*, and *policies*. Providers struggled to differentiate between moral versus clinical judgments when caring for pregnant and parenting women with SUDs. Even when personally holding normative beliefs about motherhood and substance use, providers believed that allowing women to define "problematic" substance use for themselves would encourage treatment engagement and sustained recovery. Though many recognized a woman's legal right to pregnancy termination, no providers were comfortable endorsing continuation of maternal substance use that put the fetus or child at significant risk. Yet, many reported distress when punitive drug testing and mandatory child abuse reporting policies placed their relationship with their patients in opposition to their legal and ethical responsibility to report child maltreatment.

Conclusions: Obstetric providers are key players in delivering high-quality, non-stigmatizing care to pregnant and postpartum women with SUD. Understanding the breadth of their moral experiences as they care for pregnant and parenting women who use substances is essential to better support providers in delivering non-judgmental and compassionate care to this population.

32. Early learnings from implementation of CareConnect Warmline: A telehealth buprenorphine bridge clinic

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Background: Rates of fatal overdose continue to rise in the U.S, and most people with opioid use disorder (OUD) are not engaged in evidence-based treatment with medications. In Philadelphia, a city with one of the highest fatal overdose rates in the country, many residents face significant care access barriers. The COVID-19 pandemic -- which destabilized the street drug supply and forced many clinics to limit services – worsened this crisis, but also led to regulatory changes that allowed for telehealth inductions of buprenorphine. To increase access to buprenorphine across the city and reach individuals who struggle to access care, Penn Medicine developed the CareConnect Warmline in October 2021. CareConnect is embedded in an existing virtual urgent care practice. Staffed by advanced practice providers and substance use navigators (SUNs), CareConnect provides same-day buprenorphine bridge prescriptions and linkage to longitudinal OUD care.

Objective: To examine barriers and facilitators to implementing CareConnect from the perspective of key stakeholders, including CareConnect leadership, clinicians, and staff, and attitudes and beliefs about providing care for patients with OUD via this model.

Methods: In this qualitative descriptive study, we interviewed 14 participants and used thematic analysis to analyze the data. The sample included a mix of prescribing generalist clinicians, SUNs, and administrative staff.

Results: Our analysis yielded four themes: 1/ CareConnect is a unique program that fills an important care gap; 2/ Benefits of leveraging existing infrastructure; 3/ Importance of an interdisciplinary team; and 4/ Necessity of relationships with outside stakeholders. Prescribing clinicians and administrative staff – most of whom had little experience with OUD care before CareConnect – stressed how embedding the model within an existing virtual clinic and involving experienced substance use navigators increased their comfort prescribing buprenorphine. However, all participants highlighted that the program's effectiveness is contingent upon buy-in from outside stakeholders, like pharmacists who fill the bridge prescriptions and longitudinal care providers in the community.

Conclusions: Innovative delivery models can help expand OUD care access to individuals who are not served by traditional treatment infrastructure. Our findings provide valuable insight to improve and sustain CareConnect and can guide the development and implementation of future programs nationally.

33. Leveraging Population-Level Data to Promote Equity in Office-Based Opioid Treatment and Medication Access for Opioid Use Disorder among Underserved Populations in Texas

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Background: As opioid overdose death rates continue to rise nationally, equitable access to medications for opioid use disorder (MOUD) remains a primary barrier to engagement in evidence-based treatment programs. Inequitable access to substance use treatment services is shown to be dependent on race, income, geography, and insurance status.

Objective: Our goal was to develop a health equity scoring tool and dashboard to identify areas at higher risk for poor health outcomes that also demonstrate increased need for office-based opioid treatment (OBOT) to support the equitable deployment of an OBOT provider network designed to reach underserved populations across Texas.

Methods: A health equity scoring tool was conceptualized and developed based off the Center for Disease Control's Social Vulnerability Index (SVI) leveraging United States Census data. Data points reflecting socioeconomic status, household composition, and race and language spoken identified in the SVI were combined to generate a composite score reflecting social vulnerability per county. Quartiles were calculated to develop three risk level tiers: low, medium, and high. Higher risk levels indicated that the population was at increased risk of experiencing inequitable access to health care services. Additional information on Opioid burden was gathered from the Texas Department of State Health Services/Vital Statistics and the Texas Health Care Information Collection/Hospital Discharge Database

Results: An interactive health equity dashboard was designed to include the health equity score, total population, number of opioid overdose deaths, number of opioid-related ER visits, and number of pharmacies with buprenorphine at the county level. Geo-mapping of health equity

scores in the dashboard provided a visual of equity risk by county, with darker colors reflecting higher risk. Detailed information about scoring and additional population-level factors are displayed when hovering or selecting a county.

Conclusions: The development of a health equity scoring system and health equity dashboard successfully identified 44 high-risk, 134 medium-risk, and 76 low-risk counties. Initial target recruitment areas were selected based on high-risk equity scores and the increased impact of opioids on the community. This innovative approach enabled BWTX to make data-informed decisions on OBOT provider network contracting to expand access to OBOT and MOUD to underserved high-risk communities across Texas.

34. Unraveling the relationship between physical activity and unhealthy alcohol use in the general population: A cross-sectional study

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Background: Numerous studies have documented an unexpected association between physical activity (PA) and alcohol use suggesting that higher rates of PA may be linked to increased alcohol use. Yet, factors explaining this relation have not been sufficiently studied.

Objective: To investigate the cross-sectional associations between time devoted to different domains of PA (i.e. sport and exercise, leisure, commuting) and unhealthy alcohol use and to test whether these associations differ by age and sex.

Methods: Data were drawn from the 2017 Swiss Health Survey. Participants (N=17,062) constitute a representative sample of the Swiss population who provided information on PA (i.e. mean hours per day spent on sport and exercise, leisure, commuting), and unhealthy alcohol use (i.e. daily risky drinking [≥20g ethanol per day for women, ≥40g for men], heavy episodic drinking [≥40g ethanol for women / 50g for men on one occasion at least once a month]). Logistic regression models were used to estimate the associations between mean hours per day spent on the 3 PA-domains and unhealthy alcohol use, and to test the interactions between PA-domains and sex and between PA-domains and age. All models were adjusted for tobacco use, BMI and demographics.

Results: Mean hours per day spent on leisure was positively associated with daily risky drinking (OR=1.06, p=.024). Mean hours per day spent on sport and exercise was positively associated with heavy episodic drinking (OR=1.10, p=.024). No significant association was found for commuting. There was a significant interaction between time spent on sports and exercise and age on heavy episodic drinking (Wald=21.57, df=6, p=.001). Age-stratified analyses revealed positive associations for participants aged 18->25 (OR=1.36, p=.002), 25-<35 (OR=1.23, p=.019), and >75 (OR=1.74, p=.003), negative for participants aged 35-<45 (OR=0.73, p=.019), and no associations for participants aged 45-<55 (OR=0.96, p=.720), 55-<65 (OR=0.99, p=.909), and 65-<75 (OR=1.05, p=.713).

Conclusions: Our results highlight the importance to account for PA-domains and alcohol use patterns when studying the PA-alcohol relationship. Furthermore, the association between sports and exercise and heavy episodic drinking differed by age, possibly reflecting the impact of the socio-environmental context across the lifespan. These findings may have implications for alcohol screening and interventions among physically active people.

35. Incorporating Veterans with Lived or Living Experience into Syringe Service Programs within Veterans Health Administration

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Background: The Veterans Health Administration has embarked on providing expanded harm reduction services, including sterile syringes and fentanyl test strips. Since 2017, three early adopter Veterans Affairs facilities programs have collectively engaged over 500 Veterans with syringes, fentanyl test strips, wound and/or safer sex kits; however, perspective and representation of Veterans has been largely absent, particularly among those Veterans who are using the services.

Objective: To gain perspective of Veterans with lived or living experience around harm reduction integration into Veterans Health Administration and to inform efforts towards creation of a Veterans Engagement Board around harm reduction.

Methods: Qualitative interviews were conducted with approximately ten Veterans who were asked about awareness of programming; stigma/discrimination in healthcare; and how healthcare workers should engage patients who use drugs. We also consulted with a Substance Addiction and Recovery-Veteran Engagement Board, consisting of Veterans in long-term abstinence-based recovery, on steps towards creating a Veteran Engagement Board around harm reduction.

Results: Personal stories of stigma and discrimination and little or no representation of living experience were present throughout interviews . There was potential “survival bias” from those in recovery towards those with living experience with divided opinions regarding representation and involvement of those with living experience. Challenges discussed with Veterans centered around patient identification and representation, Veteran compensation, provider-patient hierarchy, and mitigating potential medico-legal consequences. The risk mitigation piece is especially pertinent for Veterans with living experience.

Conclusions: This work has helped inform next steps towards creating a Veterans Engagement Board, including member selection, ideally involving Veterans with living/living experience who help operate community harm reduction programing. Next steps also include partnering with a national program office both as a platform and for funding. It is the authors perspective that Veterans with living experience should be represented, but with adequate protections in place to protect against potential medico-legal consequences, including the option of relative anonymity.

36. State Laws Mandating Pain Management Contracts for Opioid Analgesic Treatment

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Background: In response to the opioid overdose crisis, some states now mandate the use of pain management contracts between patients and clinicians when clinicians prescribe opioid analgesics for chronic pain. To our knowledge, no study has examined the content of laws regulating pain management contracts, including the prevalence of such laws and elements of such laws.

Objective: To identify the prevalence and elements of state laws mandating pain management contracts between patients and clinicians when prescribing opioid analgesics.

Methods: We conducted a systematic review of state statutes and regulations present in 2022 using NexisUni legal database with search terms related to opioid analgesics, pain management, and contracts/agreements. We then used template analysis in Dedoose software to categorize the laws based on provider applicability, payer applicability, and requirements in the law. Two researchers independently coded each law and then met to negotiate discrepancies in coding until a final code was decided, with the codebook iteratively revised to reflect emerging themes.

Results: 159 laws met our inclusion criteria across 31 jurisdictions (30 states and the District of Colombia). States varied in elements pain management contracts must cover. Mandated elements of pain management contracts included the following: frequency of refills; drug testing; reasons for involuntary treatment termination; treatment goals; non-opioid treatment options; prohibitions on sharing/misusing medications; required single provider/pharmacy; health benefits/risks; recording of the contract in the medical record; and frequency of contract review. Depending on the state, laws might apply to a wide range of clinicians, including physicians, nurse practitioners, physician assistants, dentists, and podiatrists.

Conclusions: It is relatively common for states to require pain management contracts for opioid analgesic treatment. It is unknown, however, whether pain management contracts between patients and clinicians decrease opioid misuse or how these laws affect the patient-clinician relationship - both critical areas for future research. Research examining health outcomes associated with state laws mandating pain management contracts must account for state variation in contract requirements.

37. Pursuing Qualitative Insights From Patients with Persistently High Emergency Department Use to Inform Care Coordination Services in Co-Located Substance Use, Medical, and Psychiatric Care Setting

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Background: Individuals who frequently visit emergency departments (ED) often have substance use disorders (SUD), medical problems, and co-occurring psychiatric disorders. In one ED, of patients with >19 visits/year (n=43), 70% had SUD. Some patients had persistently high use (10+ visits) in consecutive years. Little is known about the care needs of these patients. In our outpatient setting, we provide co-located SUD treatment, psychiatric and medical care. We seek to expand and improve care coordination services for patients with SUD and persistently high ED use.

Objective:

- identify and describe patients with persistently high ED use
- qualitatively explore patients' experiences and considerations in seeking healthcare
- gain patient insights to inform a quality improvement care coordination intervention to optimize ED utilization
- solicit patient-prioritized outcomes of care coordination interventions

Methods: We propose quantitative and qualitative methods to inform a qualitive improvement care coordination project. We will perform categorization and quantitative analysis of healthcare utilization among participants over 12 months. We will conduct semi-structured interviews of 20 patients with high ED use to elucidate factors that led to them to choose ED care vs. primary care and their experience of care in both settings.

Results: In preliminary analysis of available records, 418 (92%) patients had an ED visit. Most patients (62%) had fewer than 4 ED visits, while 98 (23%) had high use (=>10 visits) in one year but not the other, and 59 (14%) had high use in both years. High users had lower outpatient utilization than non-high users. *We will attempt to engage 20 patients with persistently high ED use in a qualitative study to pursue objectives above (to date, we have enrolled 3 patients).*

Conclusions: A small but significant portion of people with SUD also have persistently high ED utilization. By directly engaging the affected patient population, we can inform care coordination interventions to better serve medically and socially complex patients in our unique co-located SUD, primary, and psychiatry care setting. Outcomes of this QI project include reduced tertiary care utilization, increased primary care utilization, and addressing patient-prioritized care outcomes.

38. The Role of the OPRM1 Gene on Opioid Acute Effects: A Human Laboratory Genotype-phenotype Assessment

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Background: Variations in the gene that codes for the mu opioid receptor (OPRM1) lead to differential opioid signaling patterns and have been associated with differential response to opioids in retrospective or correlative designs but have not yet been examined prospectively in an empirical manner.

Objective: This human behavioral pharmacological study sensitivity assessed the contribution of allelic variations in the OPRM1 gene on opioid effects at the time of opioid initiation.

Methods: Healthy, primarily opioid-naive individuals (N=100 [50M, 50F]) completed a 5-day residential, within-subject double-blinded, placebo-controlled, randomized examination of the prototypical opioid hydromorphone (0mg, 2mg, 4mg, 8mg, PO) on standardized subjective and observed acute effect ratings and physiological endpoints. Results were analyzed as a function of peak/nadir effects and time course by genotype.

Results: Data suggested that variations in the A118G SNP of the OPRM1 gene were associated with significantly different patterns of effects, such persons with the minor allele experienced more positive effects (talkative, drive, friendly, coasting) and fewer negative effects (itchy skin, nausea, sleepiness) relative to persons with the major allele. Persons with the minor allele were also less responsive to hydromorphone on physiological effects such as diastolic blood pressure and heart rate and overall did not demonstrate strong prototypical opioid agonist effects until the highest dose (8mg PO) was administered, in contrast to persons who had the major allele.

Conclusions: These data provide empirical evidence that persons with the minor allele of the A118G SNP on the OPRM1 gene may experience opioids differently as compared to persons who have the major allele at the time of initiation to opioids. The differences observed here are consistent with a prominent phenotype that has been identified at the time of alcohol initiation, which has been found to robustly predict development of different opioid use behaviors. Thus, these results may elucidate a mechanism by which the OPRM1 gene may cause different opioid use patterns and also adds to understanding of how low response phenotypes may influence future use.

39. The Association of Psychostimulant Use and Office Based Buprenorphine Treatment Retention

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Background: Between 1999-2019 nearly 500,000 individuals died from opioid overdoses. Pharmacological treatments are proven to not only reduce the incidence of opioid use disorder (OUD), but also opioid overdose fatality. Previous studies have demonstrated that primary care delivered medication for opioid use disorder (MOUD) can be equally as effective as treatment through a specialty care provider in terms of retention in care and drug use reduction, however a comparison between people that also use psychostimulants and those who do not has yet to be conducted.

Objective: The objective of this study was to compare a group of patients receiving MOUD in a primary care setting that also use psychostimulants to those who do not.

Methods: We conducted an analysis of a cohort of 143 individuals with opioid use disorder that initiated treatment in an urban office based opioid treatment (OBOT) clinic. Retention was

measured at 1, 3, and 6-months. Logistic regression was used to identify differences between groups. Two models were developed, one measured psychostimulant use as a positive urine drug screen (UDS) between retention points and a second measured psychostimulant use as any positive UDS prior to the retention point.

Results: When using the first model, testing positive for cocaine was significantly associated with a decreased odds of being retained at one month (OR: .7397, p-value .0001), testing positive for methamphetamine or testing positive for either substance were also associated with decreased retention at one month (OR .7031 p-value .001, and OR .6198 p-value .000). In the second model, testing positive for methamphetamine was associated with decreased odds of retention at 3-months (OR .4555 p-value .010) and testing positive for either substance was associated with decreased retention at 3 and 6-months (OR .4888 p-value .001; OR.6148 p-value .020).

Conclusions: Use of psychostimulants was significantly associated with decreased odds of retention in buprenorphine care at 1, 3, and 6-months. This reduction in retention suggests that further services may need to be provided to patients who use both opioids and stimulants and continue to use stimulants while receiving MOUD.

40. Providing Embedded Developmental Behavioral Pediatrics Care within a Pediatric Medical Home for Families in Recovery

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Background: Nationwide, 8.7 million children have a parent with substance use disorder (SUD). Primary care pediatricians are caring for children born to parents with SUDs without programmatic supports necessary to fully address developmental and behavioral needs in the clinic setting.

Objective: We describe a program innovation for substance-impacted children from birth to 18 years of age at an urban, safety-net hospital. We report iterative updates since inception in 2017 of a family-centered model of comprehensive care with embedded developmental behavioral pediatrics clinical services.

Methods: We analyzed data from the electronic health record including date of birth, date of program enrollment, and visits to the program.

Results: The clinic is staffed by 2 general pediatricians, a developmental and behavioral pediatrician, 2 social workers, and 2 family navigators. 304 pediatric patients are enrolled: 24% Black, 12% Latina, 15% Mixed Race, 49% White. 29% of patients are 0-24 months, 28% 3-6 years, 36% 7-12 years, and 7% 13-18 years old. The majority (97%) have Medicaid. 52% of patients have active DCF involvement. 221 patients (72%) are in their biological parent's custody, among whom 113 (51%) identify as single parents (83% mother only, 17% father only). The majority of children receive an initial developmental evaluation at 2 years, and any child with a developmental, behavioral, and/or learning concern is also offered evaluation and longitudinal care. Fifteen (5%) of patients have been diagnosed with an Autism Spectrum

Disorder. As the panel of children has grown, a clear need to provide longitudinal comprehensive developmental and behavioral pediatrics supports has emerged. Concerns include dysregulated sleep and behavior, anxiety, ADHD, mood disorders, learning disabilities, and post-traumatic stress disorder. Clinic-based services now include parent consultation, psychotherapy, parent-child interaction therapy, and medication management when applicable with continued family support to promote parents' ongoing recovery.

Conclusions: In its first six years, a safety-net hospital-based pediatric medical home for children impacted by parental SUD has expanded its model of developmental and behavioral pediatrics care to meet the needs of patients from birth to 18 years. Future work should examine whether the program model impacts the health and well-being of children, including prevention of future substance use disorder.

41. A Person-Centered Version of the Drug and Drug Problems Perception Questionnaire Using Exploratory and Confirmatory Factor Analyses

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Background: The Drug and Drug Problems Perception Questionnaire (DDPPQ) was developed two decades ago to examine healthcare professionals' attitudes toward working with patients who use drugs. Since language frames what people think about drug use and people who are affected by it, a person-centered measure was indicated.

Objective: This study aimed to examine a person-centered version of the DDPPQ using an exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

Methods: An EFA and CFA were used to examine the factor structure of a Person-Centered DDPPQ (PC-DDPPQ) version using a cross-sectional design. A sample of 400 students from three academic settings in the northeastern area of the United States completed the PC-DDPPQ at the beginning of their nursing curriculum. The total sample was randomly divided into two equal datasets for EFA (n=200) and CFA (n=200).

Results: The EFA provided evidence for a five-factor solution, based on principal axis factoring (PAF) with oblique (Promax) rotation. The CFA indicated that the adjusted PC-DDPPQ was found to be a better fit (CFI = .959, TLI = .951, and RMSEA = .058). Thus, CFA supports a 19-item, five factor model.

Conclusions: The five factors, apart from one item, were consistent with the original version. The study represents one of the many recent efforts to promote the use of a more appropriate less stigmatizing language when working with this patient population.

42. A Qualitative Study Exploring the Feasibility and Acceptability of Embedding an Overdose Prevention Sites in a US Hospital

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Background: Community-based overdose preventions sites (OPS) substantially reduce overdose deaths, as well as incidence of HIV and hepatitis C. Hospitals in Europe and Canada have embedded OPS in hospitals with promising results. Embedding OPS in hospitals is an untapped lever that holds promise for US hospitals, though the feasibility and acceptability of this approach is unclear.

Objective: We examined the feasibility and acceptability of implementing an OPS at the Hospital of the University of Pennsylvania (HUP) for people who use drugs (PWUD).

Methods: We conducted 24 semi-structured interviews, including a clinical vignette, with clinicians (e.g., social workers, nurses, physicians), leadership, and security at HUP, as well as potential end users of the OPS. We used thematic analysis to analyze qualitative interview data.

Results: Participants noted the benefits of embedding an OPS at HUP while also acknowledging that many challenges exist for implementation to occur. A notable benefit included ensuring that withdrawal was managed for PWUD, which would facilitate the completion of needed hospital care. Feasibility concerns were raised (e.g., determining patient eligibility, where the drug supply would come from, patient confidentiality, how pain management would be affected by drug use, legality, staffing, location). In terms of acceptability, hesitancy and apprehension were related to anticipated resistance from hospital staff and leadership, as well as the Philadelphia community. Other acceptability concerns were related to the safety of PWUD and staff, earning trust from potential users of the OPS, and facilitating continued drug use. Participants provided suggestions on ways to garner support for a hospital-based OPS, such as clinical education, stigma training, and community-based planning for implementation.

Conclusions: Participants reported that implementing an OPS at HUP would provide a safe space for PWUD during hospitalization. Participants simultaneously raised concerns that must be addressed for such implementation to be feasible and acceptable to interested parties. Allowing PWUD to safely use drugs while hospitalized would likely decrease rates of patient-directed discharges and increase completion of necessary medical regimens, thereby preventing worsening morbidity and decreasing rates of readmission. Findings from this study should inform implementation and operations of embedding an OPS at HUP and other hospitals.

43. Implementation and Evaluation of Telehealth Opioid Use Disorder Treatment Training Program for Nurse Practitioner Students

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Background: Treatment for opioid use disorder (OUD) with medications (e.g., buprenorphine) is effective yet under-accessed. A major barrier to expanding access to OUD treatment with buprenorphine is the scarcity of trained clinicians. While COVID-19-era changes allowed for expanded delivery of buprenorphine via telehealth, a shortage of clinicians equipped to provide this care remains. Accordingly, Ophelia, a virtual telemedicine clinic for OUD, launched a training program for nurse practitioner (NP) students. Students were paired with an Ophelia clinician for an immersive observational experience and completed 40 hours in the clinical rotation. Students were also offered mentorship, weekly live-virtual case reviews, and didactic training modules.

Objective: The aims of this study were to: (1) to identify students' knowledge related to providing care to patients with OUD before and after their clinical rotation with Ophelia and (2) characterize students' attitudes about providing OUD care following their clinical rotation with Ophelia.

Methods: Online pre- and post-surveys and with post-rotation semi-structured interviews were conducted. All students were invited to participate in both surveys and the interview. We used quantitative descriptive analysis to analyze pre- and post-survey results, and thematic analysis to analyze qualitative interview data.

Results: Fifty-seven out of 69 NP students participated in the pre-survey (82.6% response rate) and 29 out of 69 completed the post-survey (42.0% response rate) following their clinical rotation with Ophelia. Based on interviews with 19 participants, we identified three themes, including the continuum of learning opportunities, comfort providing OUD treatment following participants' rotation, and the relevance of a substance use disorder clinical rotation for all NP students. We found that this model is promising and that even minimal (e.g., 40 hours) training improved NP students' interest in and ability to treat OUD. The survey results also supported these findings.

Conclusions: Using a telehealth clinical rotation for NP students to learn about OUD treatment represents an important step in increasing the number of clinicians who can prescribe buprenorphine. This study explored one intervention to address this workforce challenge and shed light on the benefits of using telehealth to train students. These findings can be used to inform interventions and policies that target clinician training barriers.

44. Overdose Risk and Response in Permanent Supportive Housing: Results from Focus Groups with Tenants, Staff, and Leaders

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Background: Permanent supportive housing (PSH) is an evidence-based intervention for ending chronic homelessness which integrates permanent housing with voluntary support services. PSH

tenants are at high risk for overdose death, yet very little research to date examines overdose in PSH.

Objective: To examine overdose experiences, existing responses, and opportunities for future preventive efforts in PSH.

Methods: We conducted web/phone focus groups with PSH tenants, staff, and leaders in New York City and New York's Capital Region. Facilitators followed a semi-structured guide exploring EPIS (Exploration, Preparation, Implementation, Sustainment) Implementation framework constructs of inner context, outer context, and bridging factors related to overdose experience and response in PSH. Focus groups were recorded and professionally transcribed. Two investigators independently completed a rapid turnaround qualitative analysis, completing focus group template summaries and compiling key content in an analysis matrix, which a third reviewed; discrepancies were resolved by consensus.

Results: We held 2 sessions of 8 focus groups grouped by role and region with PSH tenants (=3 groups), staff (n=3), and leaders (n=2) from October–December 2022. Participants (N=40) were diverse in age (23–67 years), gender (21 women, 18 men, 1 transgender), race (15 Black, 14 White, 5 multiracial, 3 Asian, 3 other), ethnicity (5 Latinx, 35 not Latinx), and role (14 tenants, 15 staff, 11 leaders). Key themes were: 1) overdose is a large concern in PSH and creates significant trauma for tenants and staff; 2) specific environmental factors (i.e., using alone) contribute to overdose risk; 3) PSH buildings' current overdose prevention efforts are heterogeneous with demonstration both of innovation and actionable gaps; 4) knowledge of evidence-based substance use treatment and overdose prevention strategies within PSH varies; and, 5) potential challenges to overdose prevention efforts include resource limitations and tensions around tenant autonomy and privacy.

Conclusions: Overdose is a major concern for PSH tenants, staff and leaders and current efforts reveal both innovation and opportunities. Our findings shed new light on overdose in PSH settings, providing insight into the occurrence, context, risk factors, existing responses, and barriers and facilitators to future overdose prevention efforts and may inform future overdose prevention interventions within PSH.

45. The Impact of Drug Use and Treatment Stigma among Black Individuals: A Scoping Review

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Background: Drug-related stigma is a barrier to treatment seeking and recovery whether experienced at the individual (e.g., internalized), interpersonal (e.g., discrimination), or structural (e.g., policy) level. Despite increasing attention to racial inequities in drug-related treatment and outcomes affecting Black Americans, it is unknown how drug-related stigma impacts or interacts with racial stigma.

Objective: This systematic review examined drug-related stigma among and toward Black individuals.

Methods: We systematically searched PsychInfo and PubMed databases. Eligible studies were: conducted in the U.S.; examined a Black American sample, subsample, or experimental condition (i.e., in a vignette); and measured stigma related to drug use or treatment (excluding alcohol or nicotine). Qualitative studies describing a theme related to stigma that otherwise met criteria were also included.

Results: Of 1431 unique results, 28 articles met inclusion criteria with 39% published in the last five years (2018-2022). Most articles were quantitative investigations (N = 19). The most commonly measured stigma type was interpersonal (i.e., perceived or enacted). Quantitative findings demonstrated public interpersonal stigma toward drug use was rated similar across races or was greater toward White than Black individuals. Conversely, Black raters endorsed lower drug-related stigma than other races. Racial prejudice & conservative attitudes were associated with intervention stigma regardless of race. Most qualitative investigations identified perceived provider stigma as a barrier to treatment and other health services among Black patients.

Conclusions: The interaction between drug-related stigma and race is complex and varies by in-group and out-group raters as a function of both racial identity and identity as one who uses drugs. More studies examining the relationship between racial and drug-related discrimination are needed among Black treatment-seeking people. Given the lack of recent studies, current findings are not applicable in the context of emerging trends in drug-related outcomes and treatment (e.g., harm reduction, fentanyl use, racial inequities).

46. How well does the Tobacco, Alcohol, Prescription Medication, and Other Substance Use (TAPS) Tool Perform as a Screener for Unhealthy Substance Use among Older Populations?

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Background: Substance use is increasing among older adults, yet this population is frequently overlooked in terms of screening for unhealthy substance use. Currently, screening tools developed specifically for older adults focus only on alcohol use, and are too lengthy to fit easily into clinical workflows.

Objective: The Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS) tool is a brief screening and assessment instrument that includes all commonly used substances and is validated for adults in primary care settings. The goal of this study was to assess the performance of the TAPS tool specifically for older patients.

Methods: We performed a subgroup analysis of adults aged ≥65 (n=184) from the TAPS tool validation study, conducted in 5 primary care clinics (total n=2,000). We compared both the interviewer and self-administered versions of the TAPS tool at a cutoff of 1+ for identifying problem use with a reference standard measure, the modified World Mental Health Composite International Diagnostic Interview (CIDI).

Results: Participants had a mean age of 70.5 years (sd=5.9), and were 52.7% female and 49.5% non-Hispanic Black. For identifying problem use among older adults the self-administered TAPS tool had sensitivity of 0.91 (95% CI 0.75-0.98) and specificity of 0.91 (95% CI 0.85-0.95) for tobacco; sensitivity 0.68 (95% CI 0.45-0.86) and specificity 0.88 (95% CI 0.82-0.93) for alcohol; and sensitivity 0.86 (95% CI 0.42-1.00) and specificity 0.94 (95% CI 0.90-0.97) for cannabis. The interview-administered TAPS tool had similar results. While TAPS screens for individual drug types, we were unable to evaluate its performance for identifying problem use of drugs other than cannabis in this population, due to small sample sizes.

Conclusions: While the TAPS Tool had good sensitivity and specificity for identifying some problem substance use for older adults, results for sensitivity lack precision in this relatively small sample. Furthermore, the small sample sizes for prescription medications and illicit drugs prohibited evaluation of the tool's performance for these substances. Further work is needed to understand the potential for using the TAPS Tool to screen for drug use among older populations, who have unique risks with respect to substance use.

47. A Grand Milestone: Reflections and Findings Following 1,000+ Administrations of XR SC Buprenorphine in the Outpatient Clinic Setting

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Background: Extended-release Subcutaneous Buprenorphine (XR BUP) is a relatively new resource for addiction providers, introduced after FDA approval in late 2017 (PT. 2018). Outpatient use of XR BUP is growing, but many providers find barriers to implementation (Mullen 2018). Since beginning XR BUP in March 2020, our program administered over 1,000 injections of XR BUP to over 200 patients in a healthcare for the homeless clinic.

Objective: We share data on a harm reduction-oriented program in a XR BUP program in a high-risk population, including data on patient initiation, retention, and discontinuation; and logistical and program planning lessons.

Methods: We tracked administration dates, insurance status, specialty pharmacy orders, and active/inactive status, and produced a visual "heat map" to demonstrate patterns of XR BUP treatment for all patients over a three-year period.

Results: 1,425 injections have been administered since the program began. Between two clinics, we have served 225 individual clients. Nearly 80% of clients stayed on 300 mg even after loading doses, based on collaborative dosing decisions and need for supplemental dosing. Most of our clients report benefit from supplemental sublingual buprenorphine. Our preliminary data suggests that XR BUP may improve retention outcomes. Previous studies in this clinic have demonstrated that participation in our program significantly decreases risk of overdose (Fine et al.).

REMS certification, ongoing insurance verifications, and wide variation in insurance requirements for ordering or billing medication, were the greatest challenges faced by staff implementing and maintaining the program.

Conclusions: XR BUP requires considerable energy and staff time for logistical reasons, but this is programmatically justifiable on the basis of likely overdose prevention effects; as well as positive revenue streams in some models. Ethically, it is important that an injectable medication be chosen and not coerced; therefore, the finding that many of our clinic patients stay on this medication is reassuring. XR BUP is feasible, appreciated by patients, and has a high likelihood of reducing mortality when used in a high-risk population.

48. Outpatient Parenteral Antimicrobial Therapy in People who Inject Drugs

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Background: People with opioid use disorder (OUD) make up a significant and increasing proportion patients requiring outpatient parenteral antimicrobial therapy (OPAT). Many of these patients do not receive OUD treatment during their index hospitalization, leading to missed opportunities for treatment, recurrent hospitalizations, worse outcomes, and increased healthcare costs.

Objective: We aimed to describe predictors of addiction medicine consultation among people with OUD requiring OPAT, and the impact of addiction medicine consultation on receipt of medications for opioid use disorder (MOUD) after discharge.

Methods: We reviewed records from 172 patients with OUD who were discharged on OPAT from Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center 4/2020-9/2022. We described differences between those who received and did not receive inpatient addiction medicine consults by demographics, service (medicine vs surgical), type of insurance, type of infection, disposition, and addiction treatment.

Results: The addiction medicine team was consulted for 120 patients and was not consulted for 46 patients. Addiction medicine was more likely to be consulted on younger patients (43.3 years vs 48.3 years, $p=0.01$), for patients with endovascular infections (23.3% vs 2.3%, $p<0.01$) or bloodstream infections (31.9% vs 13.6%, $p=0.02$), and when the infectious organism was methicillin-resistant *Staphylococcus aureus* (40.7% vs 20.9%, $p=0.02$). When the addiction medicine team was consulted, patients were more likely to be discharged on MOUD, specifically buprenorphine (32.5% vs 17.4%, $p<0.01$) or methadone (57.5% vs 39.1%, $p<0.01$). Overall, most patients were discharged to a skilled nursing facility (SNF), but patients who received addiction medicine team consult were more likely to be discharged to SNF than home (92.9% vs 7.0%, $p<0.01$). Patients discharged to SNF were less likely to have a 30 day readmission compared to patients discharged home (14.4% vs 32.0%, $p=0.03$).

Conclusions: Addiction medicine consultations were associated with an increased likelihood of evidence-based MOUD among patients with OUD requiring OPAT. By maximizing the

resources of the addiction medicine team, we hope to improve outcomes for patients with opioid use disorder who require OPAT.

49. Retention in Care in a Telehealth Enabled Low-Threshold Substance Use Disorder Program in at Safety Net Hospital

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Background: Harm-reduction approaches, low-threshold clinics, and telehealth are emerging strategies to drive increased engagement and retention in treatment among people using drugs. We describe a low-threshold clinic and embedded syringe services program at a safety-net hospital, with universal telehealth access via phone and text messaging. Clinical teams included on-site harm reductionists from a community based organization, and clinicians who provide longitudinal ambulatory care and acute care consults.

Objective: We describe retention in care among participants with opioid use disorder (OUD) in the hospital-based harm-reduction and addiction treatment program.

Methods: This is a retrospective cohort study of adult patients with OUD engaging with a telehealth-enabled, low-threshold program with a harm reduction approach. Patients were defined as retained in care at 60 days if they had at least one visit between 45-75 days after their index visit. We used multivariable logistic regression to assess for factors associated with retention.

Results: The harm reduction telehealth warm line received approximately 350 calls and 550 text messages each week. There were 1,005 patients analyzed; the mean age was 39.7 (standard deviation 12.7). 409 (40.7%) were Black, 302 (30.1%) were White, 117 (11.6%) were Latinx, and 30 (3.0%) were Asian; 177 (17.6%) received LAI buprenorphine. Overall, 37.3% (95% confidence interval [CI]: 34.3-40.4%) were retained in care at 60 days. Factors associated with higher odds of retention included: Asian ethnicity (adjusted odds ratio [aOR] 2.6, 95% CI: 1.2-5.6), co-occurring alcohol use disorder (aOR 2.1, 95% CI: 1.2-3.8), LAI buprenorphine (aOR 2.0 95% CI: 1.4-2.8); homelessness was associated decreased odds of retention (aOR 0.7, 95% CI: 0.5-0.9).

Conclusions: Among patients with OUD presenting to a low-threshold, telehealth enabled clinic with a harm reduction approach, retention in care was 37% at 60 days. Receipt of LAI buprenorphine was associated with higher odds of retention in care. Low-threshold models of care that combine telehealth interventions and partner with harm reduction organizations may be a promising model for longitudinal addiction treatment for safety-net populations.

50. Methadone for Opioid Use Disorder in Older Adults: Survey and Chart Review of Current Practices in New Mexico

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Background: Methadone (MTD) is a highly effective medication for high-tolerance opioid use disorder (OUD as can be seen with fentanyl use. There is an unprecedented increase in older adults (OAs, ≥65 years) needing MTD care. OAs are at elevated risk of medication adverse events (mAEs) which can compound known risks of MTD.

Objective: In this study, we aim to determine the current practice of MTD treatment of OAs in New Mexico to evaluate care gaps towards increased safety and health equity.

Methods: To determine current Opioid Treatment Program (OTP) practice, phone calls were made to the certified centers in New Mexico to query monitoring of OAs in addition to standard requirements. A retrospective chart review at the University of New Mexico (UNM) OTP was performed focusing on chart elements implicated in the risk of polypharmacy and mAEs, comparing primary care electronic medical record (PC-EMR) and that of the OTP.

Results: Of 21 certified OTPs in New Mexico, 9 responded to the survey, in which less than half of respondents (44%, n=4) had any protocol for additional evaluation of OAs on MTD. Most (88%, n=8) communicated with patients' primary care providers (PCPs) regularly. Analysis of the 335 UNM OTP patients on MTD revealed 13% (n=44) were ³65 with a maximum dose of 200 mg, 75% of whom qualified for ³2 weeks of take-home doses (versus 45% of <65). Less than 1% had had any cognitive evaluation in the past two years. Risk evaluation of mAEs showed PC-EMR charts listed MTD as a current medication for 95.5% (100% for ≥65), but only 68% included a dose. Only 42.1% listed a PCP (40.9% for <65 and 50% for ≥65). 37 patients (11% of the total OTP on MTD) were on selected QTc prolonging agents (QTcP, 19% ≥65 years and 10% of adults <65) in addition to MTD.

Conclusions: Though OAs face unique risk factors with MTD treatment for OUD, few OTPs in NM have protocols for additional monitoring despite high doses and long take-home durations. Given low rates of assigned PCPs and concurrent use of QTcP agents intentional monitoring of OAs is warranted. Further research is imperative.

51. Engaging People with Lived Experience in the Earliest Stages of Research

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Background: To optimize the impact of clinical research, studies must be meaningful for the people who will be affected. However, people with lived experience (PWLE) are rarely included in research development.

Objective: The Integrative Management of Chronic Pain and OUD for Whole Recovery (IMPOWR) Research Center at Montefiore-Einstein (IMPOWR-ME) pilot grant program created a process for engaging PWLE in research development and selection.

Methods: The IMPOWR-ME Community Leadership Board includes PWLE with chronic pain and opioid use disorder who were engaged at several stages of the pilot grant program. First, in a virtual meeting, the Board identified research topics of interest and import to them, which became research priorities in the request for applications. After applications were received, lay summaries were presented to the Board, who shared their perspectives on the strengths and weakness of each application. After compiling the Board review with internal and external faculty reviews, a selection committee including PWLE voted on proposals to select for funding.

Results: Five priority areas were identified by the Board and included in the request for applications: engaging PWLE, stigma, whole person health, novel models of care, and innovative therapies such as cannabinoids, psychedelics, acupuncture, and art and music therapies. Standard NIH review criteria were expanded to include "diversity, equity, and inclusion." The standard criteria of "investigators" was revised to "research team" and the criteria "environment" was changed to "community engagement in research." The review process resulted in selection of two innovative projects led by early-stage investigators, which will examine: (1) virtual reality and (2) acceptance and commitment therapy for people with OUD and chronic pain in opioid treatment programs.

Conclusions: By meaningfully engaging PWLE in the development and selection of pilot projects, we created a process and selected studies that reflect the needs of the community. This process also engages PWLE as partners in conducting research, instead of as subjects of research, which leverages the in-depth and invaluable expertise of PWLE and helps ensure that research is relevant and reflects the priorities of the community. Our process could be a model for other pilot programs in other communities.

52. A Survey-based Assessment of Barriers and Facilitators to Prescribing Medication for Opioid Use Disorder in Rural Settings

Michael Incze, MD, MSEd; David Chen, MD; Nicola Lanier, BS; Sonia L. Sehgal, BS, Annika Hansen, MA; Nicholas Hanse, BA; Michael Incze, MD, MSEd - University of Utah

Background: The effectiveness of medications for opioid use disorder (MOUD) is well-established. Despite increasing rates of opioid overdose, prescribing remains low amongst rural physicians. In 2017, 60% of rural counties nationally lacked a single provider licensed to prescribe buprenorphine. The University of Utah partners with several rural health systems in our state and region where MOUD access is severely limited.

Objective: This study aims to elucidate the reasons behind low rates of MOUD prescribing in rural communities in Utah and the surrounding region, as well as to identify factors that facilitate the prescription of MOUD, with the intent of finding solutions to address these issues.

Methods: We designed a survey asking healthcare providers in partnering rural health systems to complete a survey ranking a list of barriers and facilitators to prescribing MOUD. The survey questions were created by the authors based on their clinical experience and a review of the literature. Our sample frame consisted of a convenience sample of healthcare professionals at partnering health systems in Utah, Wyoming, and South Dakota. Participants were asked to rank 6 pre-specified barriers to prescribing MOUD in terms of their significance, and were asked to do the same for 6 pre-specified facilitators. Participants were also able to leave free-text comments identifying additional barriers and facilitators. The mean ranking of each barrier and facilitator was used to determine an aggregate rank list.

Results: 31 physicians located in Utah, Wyoming, and South Dakota participated in our survey (response rate = 67%).

The top 3 barriers were lack of mental health resources, poor social support for patients, and insufficient time. Concerns about patient population or diversion, buprenorphine training requirements, and concerns about financial reimbursement were ranked as less significant barriers.

The top 3 most significant facilitators were extra support staff, positive social support for patients, and access to specialist consultation. Participants also commented on the need for pharmacy support, mentorship, and stigma training.

Conclusions: There is an opportunity for academic health centers to address key barriers to rural MOUD provision through sustained engagement via telehealth interventions, multidisciplinary educational initiatives (e.g., project ECHO), and training local champions (clinical, peer support services, etc).

53. A Survey-based Assessment of Barriers and Facilitators to Resident-led Prescribing of Buprenorphine in the Inpatient Setting

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Background: Buprenorphine is an important treatment for opioid use disorder (OUD). However, it is underutilized in the inpatient setting.

Objective: This study was part of a quality improvement initiative to increase resident-led prescribing of buprenorphine. Our objective was to determine the most significant barriers to as well as facilitators of inpatient buprenorphine prescribing, and to assess the potential impact of a buprenorphine order set.

Methods: Internal Medicine residents were invited to complete a Qualtrics-based survey. Residents were asked to gauge their comfort level (on a 0-5 Likert scale) with various aspects of prescribing buprenorphine. Residents were then asked to rank seven pre-specified barriers as well as eight facilitators in terms of their impact on prescribing buprenorphine in the inpatient setting. The mean ranking of each barrier and facilitator was used to determine an aggregate rank

list. Finally, residents were asked to gauge (on a 0-5 Likert scale) how a proposed inpatient buprenorphine order set (including standardized dosing, nursing orders, ancillary medications, and screening lab) would impact their attitudes toward buprenorphine prescribing.

Results: 32 residents participated. No resident (0/30, 0%) reported regularly prescribing buprenorphine. Although almost all (21/23, 91%) residents somewhat or strongly agreed that buprenorphine is effective in reducing mortality from OUD, most felt uncomfortable dosing buprenorphine (17/23, 74%) or counseling patients on buprenorphine (19/23, 83%). Most residents (16/20, 80%) ranked lack of training and knowledge as the most significant barrier to prescribing buprenorphine, followed by insufficient time and concerns about transitions of care. Special training was ranked as the highest facilitator, followed by previous experience prescribing buprenorphine and pharmacy assistance. All participants (19/19, 100%) agreed the proposed buprenorphine order set would increase their comfort level at least a moderate amount, and almost all (19/20, 95%) agreed it would increase their likelihood of prescribing buprenorphine at least a moderate amount.

Conclusions: Our data suggest that, despite recognition for the lifesaving role of buprenorphine in OUD, there is a gap in resident training that needs to be addressed. It also suggests that a buprenorphine order set would be beneficial in increasing comfort levels and the likelihood of prescribing buprenorphine in the inpatient setting.

54. Evaluating the Effectiveness of Case-Based Learning in a Rural-Focused Substance Use Disorder Telementoring Program

Michael Incze, MD, MSEd; Stormy Foster-Palmer, BS; Sarine T. Scott, BS; Izzy Marshall, MD - University of Utah

Background: Rural areas in the United States face specific and formidable impediments to providing access to SUD treatment, including geographic barriers, limited specialty knowledge, and inadequate treatment infrastructure. Finding effective ways to provide remote mentorship and education to rural general medical providers is instrumental in expanding the reach of SUD treatment into these underserved area.

Objective: We sought to evaluate the effectiveness of rural-focused case conference presentations as a tool to increase learning compared to standard didactic presentations.

Methods: The Utah Substance Use Disorder (SUD) Project ECHO aims to empower rural clinicians to provide SUD treatment by providing remote longitudinal mentorship and education. In addition to weekly didactic presentations delivered both remotely and on-site by visiting experts, monthly case conferences were held during which addiction experts facilitated interactive discussions about tenets of SUD care centered around de-identified patient cases solicited from participants. After each case conference, summary sheets are given to attendees outlining key takeaways and resources. We analyzed data from pre- and post-presentation content quizzes from five didactic presentations (N=58 pre-test and 66 post-test scores), as well as four case conferences (N= 48 pre-test and 49 post-test scores). We compared the average magnitude of improvement between the two types of session.

Results: The average number of attendees was 32.1 for didactic sessions and 27.5 for case conferences. During the standard didactic sessions, participants answered an average of 58% of pre-test questions and 72% of post-test questions correctly. The magnitude of improvement was 14%. In comparison, during the case conference presentations, 49% of respondents answered the pre-test correctly, and 72% answered the post-test questions correctly for a magnitude of improvement of 23%.

Conclusions: Preliminary data suggests that case-based learning may be an especially effective way to teach core tenets of SUD care to rural healthcare professionals. This may be because case-based learning is more engaging, particularly when case content is relevant to rural providers. Future work could involve qualitative interviews with participants about how the case conferences and didactics affected their practice patterns and confidence in providing SUD care, respectively.

55. Patient Perceptions of Harm Reduction Kits in an Addiction Treatment Program

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Background: People who use drugs (PWUD) frequently encounter barriers to accessing the full spectrum of evidence-based harm reduction services traditionally offered at community-based syringe service programs. Office-based addiction treatment (OBAT) clinics serve as an opportune venue for the co-location of addiction treatment and harm reduction, however, are frequently limited to counseling about safer use and naloxone prescriptions. To address this issue, we designed a quality improvement initiative to provide harm reduction kits (HRK) at an urban OBAT.

Objective: We assessed HRK uptake and patient perceptions of our initiative.

Methods: We coupled HRK (injection, smoking, sniffing, boofing, fentanyl test strips, wound care) with patient-facing educational material, delivered staff and provider trainings, and constructed a clinical workflow using staff input to distribute HRK using a patient-directed menu system. The initiative began February 2023, and we assessed the following outcomes: (1) HRK uptake with kit number and types distributed; (2) patient perceptions on receiving HRK using deidentified Qualtrics surveys. Participants were compensated with a $5 gift card.

Results: Two months post-implementation, 79/256 (31%) patients requested at least one HRK, and a total of 243 HRK were distributed (17 injection, 40 smoking, 26 sniffing, 13 boofing, 53 fentanyl test strips, 94 wound care kits). 30 patients participated in the post-implementation survey, of which 53% identified as female, 73% as white, and 43% as having been in treatment for less than a year. Most found our educational material useful and reported positive perceptions of our initiative, feeling “good” or “safer” after receiving HRK. One participant stated, “it made me feel that others were considering positive and alternative ways to help myself and others”, and another said, “it made me feel safe and accepted. I think too many times former heavy drug users are looked down on and their quality of life is not valued.”

Conclusions: Incorporating HRK in an OBAT setting is an important step toward increasing patient access and utilization of life-saving harm reduction services. Our program was well-received by patients and uncovered a significant unmet need even among individuals engaged in addiction treatment. This suggests that HRK integration within addiction treatment should be considered a standard of care.

56. Precipitated Withdrawal in Outpatient Buprenorphine Initiations among Patients Using Daily Fentanyl

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Background: Buprenorphine is a life-saving treatment for opioid use disorder (OUD). However, there are limited data regarding the incidence of precipitated withdrawal, a significant barrier to treatment, across buprenorphine initiation strategies in the setting of widespread fentanyl use.

Objective: To characterize precipitated withdrawal in outpatient buprenorphine initiations among patients using fentanyl on a daily basis.

Methods: We conducted a retrospective chart review of patients using daily fentanyl who received prescriptions for buprenorphine initiation for OUD at two San Francisco buprenorphine clinics between May 2021 and November 2022. Patients received a traditional protocol requiring prerequisite withdrawal, a 7-day standard low-dose protocol, or a 4-day rapid low-dose protocol. Two addiction medicine experts blinded to protocol type assessed extracted chart documentation for evidence of precipitated withdrawal. Inter-rater reliability was calculated using Cohen's kappa, and disagreements were adjudicated by a third expert. The sample was characterized using descriptive statistics.

Results: There were 186 initiations across 132 patients. Twenty-seven (20.5%) patients identified as Black, 18 (13.6%) Latinx, 57 (43.2%) white, and 13 (9.9%) another race. The majority were unstably housed (n=79, 59.8%). Most reported stimulant co-use (n=112, 84.8%). Seventy-four (56.1%) had a history of mood disorder and 27 (20.5%) had a history of psychosis.

Eleven (5.9%) initiations were traditional, 103 (55.4%) were standard 7-day low-dose, and 72 (38.9%) were rapid 4-day low-dose initiations. There was known deviation from prescribed protocol instructions in 50 (26.9%) initiations.

Expert agreement regarding precipitated withdrawal was 84.4% (kappa=0.72). Precipitated withdrawal occurred in 10 (5.4%) cases, 4 of which were 7-day low-dose initiations and 6 were 4-day rapid low-dose initiations. There was not enough information to assess for precipitated withdrawal in 80 (43.0%) attempts, meaning patients did not return for follow-up (n=64) or symptoms were not sufficiently described (n=16). Using Chi square testing, there was no association between protocol and precipitated withdrawal (p=0.07).

Conclusions: Precipitated withdrawal was relatively rare in this large sample of outpatients using daily fentanyl. Prospective studies are needed to assess the incidence and severity of precipitated withdrawal in the outpatient setting.

57. Patient Feedback on the Patient Assessment of Provider Harm Reduction Scale (PAPHRS)

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Background: People with HIV who use drugs frequently experience stigma in healthcare settings. Harm reduction, which aims to reduce the negative consequences of health behaviors without attempting to eliminate them, presents a possible solution. However, no scale exists that assesses the extent to which PWH who use drugs feel their providers offer harm reduction-aligned care. We developed the 26-item Patient Assessment of Provider Harm Reduction Scale (PAPHRS), which reflects six harm reduction principles of autonomy, individualism, accountability without termination, pragmatism, humanism, and incrementalism.

Objective: To obtain patient feedback on PAPHRS scale items to assess face validity, an important first step in assessing psychometric properties.

Methods: We conducted online focus groups using HIPAA-compliant Zoom. Patients were eligible if they were: (1) ≥ 18 years old and (2) living with HIV and/or currently or have previously used drugs, defined as either illicit substances (with the exception of marijuana) or use of prescription drugs in a way other than was prescribed. We used Knafl and colleagues' method for analyzing cognitive interview data for scale development, which included creating a matrix that summarized participants' feedback on each of the items, then reviewed the matrix to guide retention and revision of items.

Results: Of the 26 items in the scale, 14 were retained with minimal changes. For these 14 items, the only change was to clarify that the questions asked about one's "HIV primary care provider" rather than "provider" to clarify that we were asking about HIV care only, not specialty care. The remaining items were revised to provide more clarity, accessibility, and a proper perspective or reference, such as changing "substance use" to "drug use" to capture use of both illicit and prescription drugs.

Conclusions: We established patient face validity of our novel PAPHRS through cognitive interviewing, ensuring each question is understandable, relevant, to increase likelihood of capturing the principles of harm reduction. Next steps in this process include pilot testing, deployment, and assessment of psychometric properties. This novel scale will help HIV providers and clinics assess whether they are engaging with their patients according to the principles of harm reduction.

58. The Rural Addiction Implementation Network (RAIN): A Novel Approach to Address Addiction Prevention, Treatment, and Recovery in Rural and Frontier Settings

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Background: Rural and frontier communities face high rates of substance use-related morbidity and mortality. In 2021, the Rural Addiction Implementation Network (RAIN) at the University of Utah was established to facilitate successful implementation of evidence-based addiction-related prevention, treatment, and recovery (PRT) activities and services to reduce the morbidity and mortality of substance use disorder—particularly opioid use disorder—in rural communities in four US states—Idaho, Montana, Utah, and Wyoming—over a three-year period.

Objective: To describe the PRT activities of RAIN at 18 months.

Methods: RAIN created teams of external and internal facilitators at four rural hospitals/clinic-systems to collectively achieve at least 15 PTR activities. RAIN utilized an implementation-facilitation approach, where faculty assessed and provided interventions to overcome barriers to implementation. Other methods to improve implementation included site visits, on-site training, community of learning calls, licensure/certification preparation courses, e-newsletters, and website communication. Each month, RAIN assessed and recorded facilitators and barriers, milestone attainment, and outcomes of each PRT activity established. At 18 months, we queried faculty about overall fidelity of the RAIN initiative.

Results: Across all sites, RAIN established 20 activities (7 in prevention, 9 in treatment, 3 in recovery; range 3-7 per site). For example, a prevention activity at one site coordinated a pharmacy, emergency department, and addiction clinic collaboration to distribute naloxone kits for patients as a "Naloxone To-Go" program. An exemplar treatment activity is that one site supported paramedic training, including opioid overdose and treatment training, for nine emergency medical technicians who will exclusively cover a 2,600 square-mile area. One exemplar recovery activity at one site established a community group to address post-partum mental health and substance use. Barriers to implementation of RAIN included competing clinical demands of COVID, dedicated project effort for staff at RAIN sites, and stigma of addiction and its treatment. Facilitators of implementation included the use of trained expert facilitators and constant communication with the sites.

Conclusions: RAIN successfully implemented 20 addiction-related PRT activities among four rural hospitals/clinic-networks in a four-state area. The RAIN model to address addiction-related PRT could be replicated elsewhere to address addiction in rural and frontier areas.

59. Developing an Interdisciplinary Addiction Medicine Elective: A Model for Improving Medical Student Education

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Background: Substance use disorders (SUDs) represent a major public health crisis in the United States, yet physicians continue to receive inadequate training on how to screen for, diagnose, and treat SUDs. Studies have shown that this lack of training begins in medical school,

where a majority of graduating medical students report feeling underprepared to work with patients with SUDs.

Objective: A group of medical students at the University of Washington (UW) created an addiction medicine elective course to address this gap in training. The goal was to provide pre-clinical students in graduate health programs (i.e., doctors of medicine and nursing practice) with the skills and knowledge necessary to become compassionate and effective providers for patients with SUDs.

Methods: The 10-week course was offered to 1st and 2nd year students from the schools of medicine and nursing at UW. The curriculum was created through an iterative process in collaboration with a team of multidisciplinary SUDs experts and each session was taught by a different one of these experts (e.g., social worker, psychologist, harm reduction worker). At the end of each class, students were administered a brief, two-question survey. A 20-question mixed qualitative and quantitative course evaluation survey was administered at the end of the 10-week course.

Results: The weekly surveys were overwhelmingly positive and indicated that students particularly enjoyed sessions that were interactive and sessions that included patient perspectives. All respondents of the post-course survey agreed that the class filled an unmet need, that they would recommend the course to a friend, and that they benefited from learning alongside students from another profession.

Conclusions: An interdisciplinary, student-created addiction medicine elective can be well received and begin to successfully fill the current gap in addiction medicine education during medical training.

60. Understanding Whether a Visual Tool Can Help Future Nurses Improve Care and Reduce Stigma Towards People Who Use Drugs

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Background: People who use drugs (PWUD) experience poorer health outcomes due to healthcare provider bias and inadequate training in evidence-based, non-stigmatizing care for patients with substance use disorder. A review of past literature emphasizes the finding that healthcare professionals' attitudes towards PWUD is substantially worse than towards other patient groups. While educational institutions are working to remedy this, it is a cumbersome process to fit more didactic content into already dense healthcare curricular requirements. In the context of a continuing global overdose crisis, there is an urgent need for more immediate solutions to teach these concepts to healthcare students.

Objective: The aim of this descriptive cross-sectional study was to expeditiously improve nursing students' confidence and ability to provide non-stigmatizing, evidence-based care to PWUD – by a) increasing knowledge of non-stigmatizing language and opioid overdose reversal and b) increasing immediate access to harm reduction resources – by providing a novel Harm

Reduction Quick-Reference Badge (The Badge) that was designed in collaboration with community-based harm reduction organizations.

Methods: Participants of this study consisted of pre-licensure graduate nursing students at a high-ranking University in the Mid-Atlantic United States that were given The Badge prior to their final semester and offered the opportunity to complete an evaluative survey at graduation (n=44) and 6-months post-graduation (n=18).

Results: Of students that received the badge and responded to the initial survey, 70% chose to wear or use The Badge; and of those, 88% reported that The Badge helped them remember to use non-stigmatizing language during client care, 80% said it gave them confidence in their ability to respond to an opioid overdose, and 96% felt that future nursing students should be given The Badge. At 6-month follow-up, over 77% of respondents had continued to wear or use The Badge, 72% felt The Badge increased their ability to provide non-stigmatizing, evidence-based, effective and compassionate patient care to PWUD, and over 16% indicated they were first responders to an opioid overdose since receiving The Badge.

Conclusions: Despite smaller sample sizes preventing robust statistical analysis, the data showed promising results and demonstrated the potential for the immediate and lasting effectiveness of this novel educational intervention.

61. A Call to Improve Medical Student Training: Implementation of A Novel Educational Module on Substance Use in Pediatric Populations

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Background: With the rise of the Opioid Epidemic, medical schools have made efforts to educate students on Substance Use Disorders (SUD). However, there has been a continued absence of sessions focused on evidence-based practices for pediatric populations (ages 12-18), leaving medical students ill-equipped to screen and educate children and adolescents at risk for SUD. To fill this gap, a fourth-year medical student partnered with an interprofessional team to create and disseminate an educational module focused on pediatrics within an existing "Addressing Substance Use Curriculum".

Objective: To evaluate the effectiveness of a novel educational module in improving the knowledge, attitude, skill, and comfort levels of medical students with screening and risk prevention of substance use disorders in pediatric populations.

Methods: An asynchronous educational module was created using REDCap by a fourth-year medical student, with content reviewed and approved by a team representing Cohen Children's Medical Center, Zucker School of Medicine at Hofstra/Northwell (ZSOM), and Northwell Health Emergency Medicine Addiction Services. The module was incorporated into the existing Opioid Epidemic-Themed Inter-Clerkship week for third-year students at ZSOM. Content includes risk factors for development of SUD in pediatric populations based on recent literature, screening methods which emphasize normalizing and destigmatizing SUD discussions, and

interactive case scenarios allowing students to practice patient-centered communication skills. Pre-module and post-module surveys with Likert Scale questions assessed knowledge of pediatric SUD risk factors, attitudes regarding importance of discussions with pediatric patients, communication skills, and comfort educating a patient or parent on substance use.

Results: The module and surveys were completed by 97 students and analyzed using IBM SPSS Statistics v. 26. Results showed an overall improvement of 43.8% in knowledge (x=2.37 to 4.22), 44.7% in perceived skill (x=2.24 to 4.05), 7.9% in attitude (x=4.29 to 4.66), 23.8% in comfort speaking with children (x=3.15 to 4.13) and 22.9% in comfort forming brief action plans with adolescents (x=3.09 to 4.01) with $p<0.001$ for all indicators.

Conclusions: Findings suggest that implementation of an educational module on Substance Use Disorders in Pediatric populations would significantly benefit the knowledge, perceived skill, attitude, and comfort level of medical students, addressing gaps in substance use and addiction medicine curricular content.

62. Using the 72hour Rule to Link Patients from Hospital Discharge to Methadone Intake

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Background: Methadone is one of only 3 FDA approved medications to treat opioid use disorder. Its efficacy is clear, but timely access remains a barrier. In January 2022 the DEA began allowing providers and medical centers to apply for a waiver to dispense up to 3 days of methadone to bridge patients with opioid use disorder to an opioid treatment program (OTP). Harborview Medical Center in Seattle, WA applied for, and was granted, this waiver. In Nov 2022 we started offering the option to dispense up to 3 doses of methadone at hospital discharge.

Objective: Describe the frequency with which the new option was utilized, in what circumstances, as well as the clinical outcome of successful linkage to OTP.

Methods: This is a retrospective review of patients who were discharged with dispensed methadone doses as a bridge to an opioid treatment program. Ongoing quality improvement work is tracking linkage status. Chart review was conducted by the authors to determine the name and location of the planned OTP. Descriptive analysis was completed with excel.

Results: 50 patients received take home methadone doses between November 2022 and March 2023. 39 were patients who had newly initiated methadone during the hospitalization and required a bridge to their initial intake appointment, while 11 were already established but needed bridge dosing due to the timing of their discharge (e.g., weekend or holiday). 27 patients were referred to a single OTP in Seattle, with whom Harborview has a close clinical connection. We were able to confirm linkage status for all of these 27 patients, and 15 of these (56%) did connect within 3 days. Of the 23 patients referred to other OTPs, we were able to confirm linkage status for 11, and only 2 of those 11 (18%) did connect as planned.

Conclusions: Utilization of the 72-hour exemption has been implemented and appears to be feasible. Our data suggests that referrals to a local OTP with whom there is good communication may increase successful linkage. Future work will explore associations between demographic and clinical factors and successful linkage.

63. Exploring Patient-related Factors Behind Racial Inequities of Buprenorphine Treatment in Primary Care

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Background: From 2019 to 2020, overdose death rates increased 39% among Black Americans nationally. A recent study done in Massachusetts showed that Black patients with opioid use disorder (OUD) were less likely to receive buprenorphine compared to white patients in 2020.

Objective: To understand patient-related etiologies behind racial inequities in buprenorphine treatment for OUD in primary care patients

Methods: We surveyed adults with Massachusetts General Hospital (MGH) primary care providers (PCPs) in practices where buprenorphine was prescribed. Inclusion criteria: ICD-10 diagnosis of OUD plus had a primary care visit April 2020 to April 2021. We sampled randomly with the goal of reaching equal numbers of Black, Latinx, and white patients. The survey was conducted over the phone.

Results: 428 patients were sampled, 278 confirmed to have OUD via chart review, and 33 patients completed the survey. 36.4% (n=12) identified as LatinX, 33.3% (n=11) identified as Black, 27.3% (n=9) as white. 82% (n=27) reported having ever been prescribed buprenorphine for OUD [100% (n=9) of white respondents, 75% (n=9) of Latinx respondents, 73% (n=8) of Black respondents]. 48% had discussed buprenorphine with their MGH PCP. 24% had never discussed buprenorphine with any MGH provider. 70% preferred to get their OUD treatment at their PCP's office. Black and Latinx respondents found culturally appropriate care to be more important compared to white respondents. None of the respondents reported that having their PCP share or understand their racial/ethnic background would improve buprenorphine access. Suggestions for improving buprenorphine treatment: more PCP knowledge and less stigma about addiction. Suggestions for better meeting the needs of BIPOC patients: hiring more staff and clinicians who are Black and/or Latinx.

Conclusions: Most patients preferred to have OUD treatment at their PCP's office, demonstrating the importance of having a primary care workforce with the training and comfort to provide buprenorphine treatment. Black and LatinX patients place more importance on having healthcare staff who are from and know about different racial/ethnic backgrounds compared to white patients. Respondents did not think that having a racially concordant PCP impacted their ability to access buprenorphine but did think that having PCPs with more knowledge and less stigma would improve access.

64. Impact of a Brief Educational Intervention on Individual Preferences for Medications for Opioid Use Disorder

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Background: There is limited data around whether people of different racial/ethnic groups have different knowledge and preferences for medications for opioid use disorder (MOUD) versus non-medication treatment options. Brief educational interventions may improve general public preferences for MOUD and thereby increase positive support for evidence-based treatments for those with opioid use disorder (OUD).

Objective: This study aimed to assess baseline preferences for different OUD treatments across three racial/ethnic groups (non-Hispanic White, non-Hispanic Black, and Hispanic/Latinx) and assess whether a brief educational intervention could shift preferences for evidence-based medications.

Methods: A racially stratified adult sample recruited from a national web-based survey platform were presented with a brief vignette about an individual with OUD followed by a brief educational intervention consisting of four one-minute videos on methadone, buprenorphine, naltrexone, and non-medication treatment. Respondents indicated their top treatment choice before and after the intervention. Descriptive statistics were calculated for preferences and respondent characteristics. Pre vs. post differences were analyzed using Bhapkar's test and post hoc McNemar's tests, and binary logistic generalized estimating equation (GEE) was used to identify predictors of treatment preferences.

Results: 530 respondents (194 White, 173 Black, and 163 Latinx; 52% female) completed the intervention. Pre-intervention, methadone was the overall most preferred treatment (40%), followed by non-medication treatment (26%) and buprenorphine (23%). Black and Latinx participants were less likely to pick MOUD than White participants (Black: OR=0.74, p=0.18, Latinx: OR=0.62, p=0.05). In a binary test of changes in preferences between any MOUD vs. non-medication treatment, respondents were more likely (OR 4.95; p<0.001) to switch from non-medication to MOUD treatments than to make the opposite switch following the intervention. Respondents who changed their preferences disproportionately changed to selecting buprenorphine (OR=2.38; p<.001) and away from non-medication treatment (OR=0.20; p<.001). Personal or social exposure to MOUD (OR 3.99; p<.001) and nonmedical use of opioids (OR 3.02; p=.04) were associated with an increased likelihood of selecting MOUD.

Conclusions: These results indicate that brief educational videos can increase preference for MOUD, particularly among individuals without prior opioid familiarity. Future studies should assess whether such interventions can improve public perceptions of MOUD and positively influence MOUD uptake in people with OUD.

65. Keeping the Door Open: Re-engaging Patients After Discontinuation of Extended-release Buprenorphine (XR-BUP) – A Case Study

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Background:

- Medications for opioid use disorder (MOUD) are associated with higher retention rates, improved social functioning, and reduced risk of opioid overdose.
- Extended-release buprenorphine (XR-BUP) is a once-monthly injectable MOUD option that provides sustained buprenorphine levels.
- Given the long half life of XR-BUP, patients may not experience withdrawal symptoms as quickly as patients taking sublingual buprenorphine formulations.
- Patients may seek out XR-BUP with plan to taper off MOUD.

Learning Objectives:

- Review a case study of a patient who chose to re-initiate XR-BUP

Case Presentation: RM is a 29 y.o. male with PMH of severe OUD and GAD who presented as a same-day appointment in November 2022

RM had previously been a long-term patient at the clinic on XR-BUP. From his intake in July 2020 through December 2021, RM received 16 consecutive treatments of XR-BUP with coverage of opioid cravings, no withdrawal symptoms, no sublingual BUP supplementation, and unremarkable urine drug screens.

In December 2021, RM verbalized his wish to discontinue future XR-BUP injections. He felt like his OUD was in stable remission and he was experiencing no cravings. He met with nursing staff who explored his desires to come off MOUD and reviewed a return to use prevention plan. He was encouraged to contact the clinic in the future if he experienced any withdrawal symptoms, opioid cravings, or recurrence of use.

When RM returned to the clinic in November 2022, he reported that he had used intranasal fentanyl over the weekend. That day, he was restarted on SL buprenorphine in preparation to reinitiate XR-BUP. He restarted XR-BUP 8 days later and has been attending clinic monthly

Discussion:

- Buprenorphine is associated with improved treatment outcomes, better retention in health care, and reduced all-cause mortality. Yet, patients on XR-BUP may desire to “come off” MOUD due to perception of less severe withdrawal symptoms.
- Given that opioid use disorder is a chronic disease,clinicians should actively engage patients in developing a return to use prevention plan if discontinuing XR-BUP. This should include: providing education to patients, rolling with resistance, engaging patients on safety planning, providing naloxone education, and streamlining channels by which patients can re-enter treatment and restart MOUD.

66. Overcoming Fear of Opioid Withdrawal: A Case Highlighting Challenges of Outpatient Buprenorphine Induction

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Background: Buprenorphine prescribing in primary care has grown since the lifting of X-waiver restrictions, with more patients undergoing at-home inductions. A common barrier to the success of this model with the recent rise of fentanyl use is fear of experiencing withdrawal symptoms or precipitated withdrawal. One solution involves a "micro-induction" protocol, whereby buprenorphine is cross-titrated with the recreational opioid, thus avoiding significant withdrawal symptoms. However, many patients with prior experience of opioid withdrawal remain reluctant to attempt micro-induction. Here we present one such case, highlight barriers patients face when attempting to initiate buprenorphine, and discuss challenges of micro-induction protocols in outpatient settings.

Learning Objectives:

1. Understand how anticipation of withdrawal is a barrier to successful treatment of OUD.
2. Examine the role of micro-induction protocols in mitigating adverse reactions during buprenorphine induction.
3. Assess limitations and areas for improvement of outpatient buprenorphine initiation.

Case Presentation: A 23-year-old unhoused pregnant woman with a one-year history of fentanyl use disorder presented to our clinic to initiate treatment with buprenorphine. She reported a history of debilitating panic attacks with prior attempts to quit. Given her apprehension about withdrawal, she was placed on a home micro-induction protocol. She successfully up-titrated her buprenorphine from 0.5mg daily to 2mg daily, simultaneously reducing her daily fentanyl intake. However, she remained anxious about increasing the dose further for fear of withdrawal and halted her titration. Although she did not complete her full induction, reducing her daily fentanyl use decreased her risk for overdose and unwanted exposure to drug contaminants, a positive outcome.

Discussion: This case highlights the importance of buprenorphine induction protocols that circumvent the undesirable and unnecessary experience of withdrawal. Although recent reports have demonstrated success in using "micro-induction" protocols to this end, prior experience with opioid withdrawal remains a barrier. Withdrawal symptoms, if they do occur, are difficult to manage in an outpatient setting without close medical observation. Patients may also be hindered by their access to the resources needed to follow up regularly. Careful consideration of these factors will be important for improving success rates of buprenorphine initiation, and when counseling patients regarding options for outpatient management of opioid use disorder.

67. Screening for Substance Use Disorders in Primary Care Settings: A Systematic Review

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Background: Population-based screenings for substance use are highly recommended, but little is known about the screening status for substances in primary care settings (PCSs), including potential barriers and the specific tools.

Objective: This systematic review aims to understand what screening tools are used, potential barriers that impact screenings, and opportunities to improve screenings.

Methods: Articles focusing on the utilization of screening tools for substance use disorders (SUDs) within PCSs were considered for inclusion in this review. Other inclusion criteria include original research, case studies, and clinical trials that were peer-reviewed and originally published in English from January 2000 through July 2022. Articles were excluded if they met one or more of the following criteria: written in non-English language, studies including populations younger than 18 years of age, studies in non-PCSs, studies on substance misuse without explicit mention of PCSs, and studies focusing only on substance misuse without relating to screening tools. Searches on PubMed and Embase databases were conducted from April 25, 2022, through July 22, 2022, which yielded 487 results; only 32 articles meeting the inclusion and exclusion criteria were included in this study.

Results: Among all substances, alcohol is the most screened for at PCSs, with 20 studies included in this article. This was followed by opioids (n=11), other illicit drugs (n=8), cannabis (n=6), and nicotine (n=2). The Alcohol Use Disorders Identification Test was the screening tool most used. Additionally, most studies utilized different screening tools to screen for the same substances. Several barriers were also identified in some studies, including no referral to treatment upon receiving a positive screening result for substances, lack of training in providing intervention, and no recognition of the effectiveness of intervention services.

Conclusions: Our search resulted in only 32 studies focusing on substance screening at PCSs, indicating that substance screening may not be conducted as recommended or formally. Integrating patients-centered SUDs screening in PCSs is challenging but could be feasible via implementation strategies to address barriers. Thus, future studies focusing on the feasibility, acceptability, and effectiveness of screening tools in PCSs may increase the screening rates for early identification and intervention for SUDs.

68. Establishing and Evaluating a Portfolio of Addictions ECHO Programs to Address Statewide SUD Treatment Capacity Challenges

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Background: Drug overdoses and alcohol consumption rose during the pandemic (CDC, 2022; Rodriguez, 2021). However, uptake of evidence-based practices which reduce mortality (e.g., medications for opioid use disorder, harm reduction practices) remains insufficient (Des Jarlais, 2017; Mauro, Gutkind, & Annunziato, 2022; Sharma et al., 2017). Widescale provider training and telementoring is needed to ensure sufficient capacity for intervening for substance use

disorders (SUD). However, time-limited workshops devoid of coaching and implementation support, are inconsistent with implementation science and fail to result in widescale uptake.

Objective: The Project ECHO (Extension for Community Healthcare Outcomes) model involves the use of web technologies to deliver didactic and case-based learning through a panel of experts to build capacity in a community of learners. We leveraged Project ECHO to implement a statewide telementoring center of addictions-focused ECHO programs, including programming in prescribing, harm reduction, recovery support services, collaborations with first responders, and systems-level challenges.

Methods: Participants represented health and behavioral health disciplines practicing across Texas in metropolitan and rural areas. Learners were recruited via a website, email list serves, 'word of mouth,' and community events. For the purposes of evaluating the program, participants completed: 1) an online registration form that inquired about basic demographics, 2) a post-session survey at the conclusion of each session capturing satisfaction and likelihood to implement, and 3) biannual surveys measuring changes in knowledge and self-efficacy. Attendance and other learner data were stored and extracted from the partner relationship management (PRM) database: iECHO.

Results: Training programs were well-attended, with a total of 915 learners. Geographic reach included 43 Texas cities. Post-training survey results indicated high rates of learner satisfaction, with the majority of participants (73%) reporting they were 'very satisfied.' Biannual surveys indicated significant improvements in provider knowledge and self-confidence in the areas of discussing SUD with patients, patient-centered care, and identifying the proper treatment.

Conclusions: Early results indicate robust uptake, wide geographic reach, high learner satisfaction, and significant knowledge and confidence gains. This preliminary evidence supports the ECHO model as a useful tool for scaling comprehensive SUD telementoring centers to meet significant workforce development needs over large geographic areas.

69. Successful Emergent Surgery for Necrotic Reaction Following Administration of Long-acting Injectable Buprenorphine: A Case Report

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Background: Buprenorphine is an effective treatment for opioid use disorder (OUD) and decreases risk of death from opioid overdose. However, rates of adherence to transmucosal formulations remain low. Long-acting injectable buprenorphine (LAIB) is a newer formulation with potential to improve treatment retention. LAIB is administered subcutaneously into the abdomen monthly. There is a dearth of information about adverse effects of LAIB; rare cases of skin necrosis have been reported. This case demonstrates an effective surgical intervention after the onset of skin necrosis at the injection site.

Learning Objectives:

1. Identify features of adverse skin reactions to LAIB, specifically skin necrosis.
2. Describe how to manage skin necrosis promptly while providing ongoing treatment with buprenorphine.

Case Presentation: A 34-year-old white male with OUD presented to an office based addiction treatment (OBAT) clinic for a routine appointment with an addictions nurse to receive his 12th monthly LAIB injection. LAIB was administered by the addictions nurse into the left upper quadrant of the abdomen and documented as well tolerated. The patient returned to the clinic one hour after LAIB administration complaining of pain and skin changes at the injection site. The patient reported the depot appeared "more superficial" than his prior injections. Skin changes consistent with early signs of subcutaneous fat necrosis were noted, including tenting and ecchymosis overlaying the depot. Care was immediately coordinated with general surgery. The depot was surgically excised in the emergency department within six hours of LAIB administration. Prompt surgical intervention was critical in limiting patient harm. To eliminate any disruption in OUD care, the patient was continued on 8-2mg transmucosal buprenorphine/naloxone for 12 days. On day 12, LAIB was administered in the alternate quadrant of the abdomen without injection reaction. The patient continues to receive monthly LAIB 10 months following the event.

Discussion: LAIB has the potential to improve care for OUD. Addiction care teams must be prepared to identify and promptly respond to adverse reactions to LAIB, such as skin necrosis from accidental superficial placement of buprenorphine depot. Educating patients and healthcare professionals about rare complications of LAIB injections is important to ensure early identification of adverse events and timely response.

70. Peer-led Behavioral Activation – Examining Feasibility in Two Resource-limited Settings

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Background: Despite advances in evidence-based treatments for substance use disorders (SUDs), too few people who need treatment access it, in part due to limited human resources. There is a need for low-cost, effective treatments, such as peer-delivered interventions, that can be delivered at scale and adapted to various settings. Comparing engagement across diverse settings allows us to elucidate factors that may otherwise be tacit and, therefore, often overlooked.

Objective: Evaluate barriers and facilitators to those with SUD engaging in a peer-led behavioral activation intervention across diverse settings.

Methods: This is a sub-analysis of a study combining qualitative interviews with patients with SUD from Baltimore, Maryland, and Cape Town, South Africa; all received a similar multisession, peer-delivered behavioral activation intervention. The intervention took place at an opioid treatment program and community center in Baltimore, and a health facility delivering

HIV care in Cape Town. Patients with SUD and, in most cases, challenges with adherence to methadone or antiretroviral therapy were included. Semi-structured qualitative interviews (n=38) were coded inductively, using principles of thematic analysis; for this sub-analysis, codes relevant to engagement were specifically sub-coded.

Results: The first barrier and facilitator to engagement was 1) housing which, when present, helped to create community, reliable transportation routes, and time alone. Depending on the community environment, housing or lack thereof could also lead to interpersonal stressors and lack of privacy. 2) Transportation in Cape Town allowed participants to walk to the clinic without difficulty. In Baltimore, participants had complex relationships with public transportation due to financial barriers, substance use triggers, lack of reliability, and violence. 3) Patients had competing financial and social obligations, and attending the intervention was not always a priority. Adaptability in both intervention medium and scheduling increased engagement through flexibility.

Conclusions: These findings illustrate that engagement is heavily tied to the socioeconomic realities of participants. Moving forward, peer-delivered behavioral interventions for SUD should incorporate flexibility to participants' social contexts, changing schedules, and specific sociocultural capital to reduce barriers to engagement. The relatively greater flexibility of the peer role, as compared to other provider roles, may lend itself to such an approach.

71. The Development of an Opioid Misuse Training Program for Physical Therapists: A Learning Community Approach

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Background: Chronic musculoskeletal pain and opioid misuse frequently co-occur. Nearly a third of patients in outpatient physical therapy for musculoskeletal pain take prescription opioids. Physical therapists likely encounter patients misusing prescription opioids. We had previously found that physical therapists believe addressing opioid misuse is within their scope but reported lack of training regarding opioid misuse.

Objective: The objective of this study was to develop and implement a training program to improve physical therapists' knowledge and skills to address patient opioid misuse.

Methods: Thirteen practicing physical therapists were invited to participate in a collaborative learning project which was used to develop an opioid misuse training program and training manual for physical therapists. Four virtual training sessions were provided; 1 session every 2 weeks. Topics included an introduction to the opioid crisis, screening, assessing and communicating with patients and with the health care team about opioid misuse. Each didactic session (30 minutes) was followed by a participant feedback session (30 minutes) where participants provided recommendations on improving the training content and their impressions on the barriers and facilitators to incorporating the training into practice. After completion of the virtual trainings, a training manual—iteratively developed during the trainings—was sent to

participants for feedback. Participants were asked over email to describe whether and how they incorporated training materials into clinical practice during the training curriculum.

Results: All participants attended sessions 1-3; 12 attended the 4th session. During the participant feedback sessions, participants regarded the training as important. Some participants expressed barriers to discussing opioids with patients; for example, there was concern about discussing opioids in an open gym setting. Other participants expressed concerns whether the training was within physical therapists' scope of practice; one participant commented that they were "unaware that such conversations" about opioid misuse were appropriate for physical therapists to initiate.

Immediately after the training, 9 (69.2%) participants reported using what they learned in the training in practice.

Conclusions: We found that an iteratively developed training program for physical therapists to address opioid misuse was welcomed, feasible, and provided immediate practice change.

72. The Promise and Limitations of the Youth Opioid Recovery Support (YORS) Intervention: Case Study of a Young Adult who Died from Overdose

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Background: Youth with opioid use disorder (OUD) have poorer treatment outcomes than older individuals. Reasons include greater impulsivity, feelings of invulnerability, and ambivalence toward treatment. Family-involved approaches have been effective, but uptake is challenging and requires balancing ethical principles of autonomy, beneficence, and confidentiality.

Learning Objectives: 1) Describe the challenges of engaging young adults with OUD in treatment and maintaining adherence to relapse prevention medications. 2) Identify elements of the YORS intervention, a developmentally-informed, family-involved, assertive intervention designed to lower barriers to OUD care, 3) Recognize limitations of the YORS intervention in preventing relapse and overdose.

Case Presentation: Patient is a 28-year-old male with history of depression, suicidality, and fentanyl use disorder. He reported a family history of unspecified mood disorder, possibly bipolar disorder, but he did not present with symptoms of mania. Patient sought inpatient treatment and was inducted onto extended-release naltrexone (XR-NTX). This was his third inpatient admission and he had prior treatment experience with methadone and sublingual buprenorphine. Patient was randomized to the YORS study intervention, which provides home delivery of monthly XR-NTX injections, contingency management for doses received, family coaching to support treatment adherence, and frequent assertive outreach (e.g., group texts with patients and their parents). Patient consistently received 5 doses of XR-NTX and reported his longest abstinence from opiates. He maintained employment, his own residence, and participated in psychotherapy. However, patient impulsively announced a decision to terminate treatment when his sixth dose was due. Despite repeated outreach, attempts to engage the family, and

offers to home-deliver his XR-NTX, he repeatedly declined treatment and died from overdose within 3 weeks of the missed dose.

Discussion: This case initially represented a treatment success, marked by 5 months of opiate abstinence, medication adherence, and engagement in therapy. Yet, this case highlights how quickly motivation can shift, with tragic consequences. Challenges included patient's increasing dissatisfaction with family involvement, worsening mood symptoms, and the family's diminished capacity to engage with the patient's care. Providers of family-involved services must attend to both the patient and family's motivation and capacity to remain engaged with treatment over time.

73. Sex Differences in Perceived Stigma and Discrimination Based on Substance Use Among Syringe Services Program Clients

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Background: During the current opioid epidemic, historic sex differences in the prevalence of opioid-related problems have begun to narrow with more women experiencing opioid misuse, opioid use disorder (OUD), and opioid overdose. People with OUD experience high levels of stigma and discrimination due to their substance use, and these experiences may be greater for women than men. Syringe services programs (SSPs) combat stigma in serving people who use drugs; however, SSP clients are disproportionately men. Using baseline data from an SSP-based clinical trial, we hypothesized that women (vs. men) with OUD would report more prior stigma and discrimination.

Objective: To better understand how women experience stigma and discrimination based on substance use in comparison to men.

Methods: We recruited adults with OUD from 3 SSPs in New York City between 2019 and 2023. Assessments included Ahern's Stigma and Discrimination of Substance Use Scale. The scale has 4 domains: discrimination, alienation, perceived devaluation, and coping responses. Each domain has 3-5 items scored on a 5-point Likert scale. Within each domain, we calculated a mean score for items and compared differences in mean score between male and female participants using a two-sample T test.

Results: Of 89 participants, 67 were men, 18 were women, and 2 did not identify with these options. Women (M=2.60, SD=1.18) reported greater perceived discrimination than men (M=2.18, SD=0.94), but differences were not statistically significant. Women reported significantly greater alienation than men (M=3.67, SD=1.27 vs. M= 2.84, SD=1.17, p=0.02). Differences in perceived devaluation and coping responses between women and men were negligible.

Conclusions: Findings suggest potentially meaningful differences in perceptions of substance use stigma and discrimination between women and men with feelings of alienation appearing to

be greatest. SSPs provide social support and non-judgmental services, which could counteract feelings of alienation, but in our SSP-based study, women's participation was low. Previous research suggests that women use more positive coping mechanisms than men, but we did not find this difference. Our study was likely limited by the modest sample size, but additional research into ways to address substance use stigma among women is warranted.

74. Opportunities to Equip Colorado School Health Professionals with Evidence-based Practices to Identify and Address Youth Alcohol and Substance Use

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Background: One in 10 Colorado youth consumed alcohol or other substances in the past month, the fifth highest prevalence nationwide. Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based model and public health approach that can identify, reduce, and prevent alcohol and other substance use among youth. Schools serve as a setting to identify and address substance use early, particularly for youth with abrupt declines in school engagement or who infrequently visit their primary care provider. NORC at the University of Chicago and Peer Assistance Services, Inc. examined how Colorado health professionals in K-12 schools address substance use and identified opportunities for SBIRT training and education.

Objective: To understand opportunities to advance the adoption and implementation of SBIRT in Colorado schools through innovative trainings, technical assistance, and resources.

Methods: Colorado practitioners serving youth aged 11 – 25 (N=205) were recruited from multiple settings, including schools, primary care, emergency departments, and hospitals, to complete an online survey. Approximately 41% of respondents (n=84) provide services to youth in schools. Of these, 31% were behavioral health professionals and 67% were medical professionals, such as nurses. Key informant interviews were conducted, allowing for discussions about barriers and facilitators to implementing SBIRT in schools and needs for training and technical assistance. Quantitative and qualitative data collection occurred from October 2022 – April 2023.

Results: Among the 26% of school health professionals who screened youth for alcohol and other substance use, none implemented all core components of SBIRT (i.e., screening, brief intervention/motivational interviewing, hand off/arrange referrals, schedule/provide follow-up). Compared with other settings, school health professionals reported the lowest confidence and knowledge in delivering SBIRT. Over half (58%) never received formal SBIRT training. The type of training and resources most requested by school health professionals included in-person SBIRT training, educational resources for health professionals, and youth-friendly resources to address substance use.

Conclusions: Substance use is a critical issue among Colorado youth; alcohol, marijuana, and prescription pain medication use significantly increased over the past decade. This study

highlights the urgency, challenges, and opportunities to equip school health professionals with training and resources to identify and address substance use among youth.

75. Participant Retention in Digitally Provided Buprenorphine Treatment for Opioid Use Disorder Compared With Treatment as Usual Office-Based Treatment: Results of an Observational Longitudinal Cohort Study

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Background: During the COVID-19 pandemic, federal agencies permitted telehealth initiation of buprenorphine treatment for opioid use disorder (OUD) without an in-person assessment. It remains unclear how digitally-provided buprenorphine treatment impacts treatment retention when compared with treatment as usual office-based treatment.

Objective: Assess whether a digitally only provided buprenorphine treatment model had improved retention over time compared to treatment as usual office-based treatment.

Methods: We report results from a recently completed observational longitudinal cohort study. Participants with OUD initiating buprenorphine were recruited from a digital-only treatment provider ("Boulder Care") or treatment as usual (TAU) via a brick-and-mortar setting employing selective telehealth. Eligible participants were early in OUD treatment (<= 45 days) and had internet and phone access. The primary outcome was self-reported buprenorphine retention at 4, 12, 24, and 36 weeks. Logistic generalized linear model equations assessed retention over time. We calculated adjusted odds ratios (OR) to compare odds of retention at each timepoint between digital-only vs. TAU, after controlling for covariates.

Results: Participants (n=100 digital-only group; n=58 TAU) had a mean age of 37.1 years (SD=9.8 years) and included 51.9% women, 83.5% with Medicaid coverage, 80% identified as White, 65.2% unemployed/student, and 19% unhoused. Groups (digital-only vs TAU) differed on gender (56.0% vs 44.8% women, p=.04), employment (61.0% vs 72.45% unemployed/student, p=.09), and housing (14.0% vs 27.6% homeless, p=.06). Overall, there were no differences in retention across timepoints (interaction p=.97). At all follow-up timepoints, TAU had decreased odds of retention compared to digital-only arm, though estimates did not reach statistical significance (week 4 aOR=0.42, 95% CI[0.08, 2.18]; week 12 aOR=0.51, 95% CI[0.11, 2.36]; week 24 aOR=0.36, 95% CI[0.08, 1.63]; week 36 aOR=0.32, 95% CI[0.09, 1.18]).

Conclusions: There were no statistically significant differences in retention between digital-only and TAU delivered treatment. There was signal that participants receiving digital-only treatment had higher odds of retention at weeks 24 and 36. Longer follow-up periods may be required to evaluate the impact of telehealth interventions and improved treatment retention.

76. Evaluation of Injection Drug Use and Wound Care Practices among Participants of a Mobile Syringe Services Program

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Background: People who inject drugs (PWID) have an increased risk of developing skin and soft tissue infections due to injection technique, routes of injection, and sterility of injection supplies. Syringe services programs (SSPs) are a touch point in care for PWID with potential to improve wound triage and treatment.

Objective: To assess wound care experiences, knowledge, and practices among SSP participants and inform enhanced SSP service provision for PWID.

Methods: Participants of a mobile SSP in Austin, Texas were engaged in a multi-phase mixed methods survey. Phase 1 was a 23-item quantitative survey assessing injection practices, injection-related complications, wound care practices, reasons for self-treating wounds, and likelihood of utilizing wound care services. Participants were screened for eligibility, which required injection drug use in the last 30 days. Phase 2 was a series of brief semi-structured interviews to explore wound care practices in greater detail. Data was collected from 39 participants, and each participant received a $20 grocery store gift card. Qualitative data were analyzed using a deductive and inductive hybrid approach to identify overarching themes.

Results: Survey participants identified as male (n=24), female (n=14), and intersex (n=1) with a mean age of 43.6 years. Reported substances injected included methamphetamine, heroin, and fentanyl, with 53.8% (21/39) injecting more than one substance. More than half did not have a primary care provider (21/39, 53.8%) and had at least one injection-related wound in the past 6 months (21/39, 53.8%). A proportion had at least one ED visit or hospitalization due to wounds in the past 6 months (9/39, 23.1%) and reported always self-treating injection-related wounds (15/39, 38.5%). Reasons for self-treating wounds included confidence in self-treating, lack of perceived wound severity, and past experienced stigma in healthcare settings. A majority would utilize wound care services at the SSP if offered (27/39, 69.2%), and 74.4% (29/39) would prefer SSP staff to deliver these services.

Conclusions: There is an unmet need for wound care treatment and pertinent education among PWID in Austin, Texas. Implementation of wound care services directly in a SSP is preferred among PWID due to past negative healthcare experiences.

77. Understanding Psychedelic-Augmented 12-Step Recovery: A Mixed Methods Study

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Background: In the context of increasing clinical trial evidence suggesting a potential role for psychedelics in the treatment of substance use disorders (SUDs) and the limited scope of existing

allopathic treatment modalities, a novel addiction treatment paradigm has emerged in community-based settings involving the augmentation of 12-Step Recovery with the therapeutic use of psychedelics.

Objective: To examine how the use of psychedelics has been combined with 12-Step Recovery, and to elucidate motivations, potential harms, and perceived benefits among people with SUDs.

Methods: A community partner with lived experience utilizing this approach facilitated the recruitment of people with alcohol, opioid, and/or stimulant use disorders who have engaged in psychedelic-augmented 12-Step Recovery and close peers of such individuals. Participants completed an online survey followed by a semi-structured interview. Questions focused on how participants used 12-Step activities to prepare for and integrate psychedelic experiences as well as motivations, harms, and benefits of engaging in this practice. Interviews were recorded, transcribed, and thematically analyzed.

Results: Between November 2022-February 2023, pilot data were collected on (n=8) patients in SUD recovery who have augmented their 12-Step engagement with ayahuasca, ibogaine, 5-MeO-DMT, psilocybin, and/or mescaline. Participants reported varying degrees of 12-Step involvement prior to using psychedelics in this context. Motivations included continued psychological distress (often despite sobriety), accessibility, and dissatisfaction with existing SUD treatments. Many reported their psychedelic experiences to be particularly instrumental in facilitating Steps 2, 3, 11 and 12—describing psycho-spiritual mechanisms of behavior change that included surrender, letting go of resentments, and acceptance of grief. While several participants expressed concerns regarding a potential misalignment of psychedelic use with 12-Step-related abstinence, only one reported having experienced an adverse event, which involved a transient state of confusion after consuming an exceptionally high dose of ayahuasca. All participants perceived psychedelic augmentation to enhance 12-Step outcomes related to sobriety, interpersonal functioning, and psychosocial wellbeing.

Conclusions: Psychedelic augmentation was perceived as a powerful means of both deepening actionable step work among existing 12-Step participants and facilitating 12-Step initiation among those with minimal prior involvement. These qualitative findings suggest mechanisms of behavior change that echo those expressed in 12-Step literature and by psychedelic clinical trial participants.

78. An Evaluation of Statewide Perinatal ECHO Intervention for Multidisciplinary Healthcare Providers

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Background: We have identified the need for continued learning opportunities about OUD treatment for Illinois healthcare professionals in a non-fellowship OUD ECHO®. In particular, graduated fellows have indicated that they would like to engage in additional learning opportunities for not only themselves, but also the support teams that work alongside them. To address this need, we developed the Perinatal OUD ECHO® Program. In addition to our goal of

training professionals to effectively treat patients living with OUD, our secondary goal is to build a pathway to expertise for "non-providers" on OUD treatment teams for individuals who provide services for individuals receiving services for pre and post natal care.

Objective: The objectives of building the Perinatal OUD ECHO program were to (1) assess if the Perinatal OUD ECHO® Program had an impact on increasing prescribing capacity for pregnant individuals with OUD; (2) assess if the Maternal OUD ECHO® Program had an impact on increasing additional clinical care for pregnant individuals and; (3) Assess quality of Maternal OUD ECHO® Program experience.

Methods: Providers in perinatal healthcare, including pre and post natal care in the state of Illinois submitted an application to the Maternal OUD ECHO® Program. Participation included completing a pre and post survey on efficacy of the program, confidence in treating patients, and completing short case study questions. The intervention included 13 sessions taking place biweekly which included short didactic sessions from expert Subject Matter Experts as well as a case presentation and discussion from each participant over the course of the sessions.

Results: From the survey results, we found that scales of self-efficacy drastically rose. This included self perception of ability to identify patients that should be treated for OUD, ability to treat pregnant patients with OUD, ability to assess and manage co-occurring OUD and pre/post natal care, and several other points of success.

Conclusions: Based on these results, we are able to expand and implement specialty ECHO educational trainings, particularly for patients seeking both natal care and OUD treatment. This both will empower healthcare providers with providing competent and successful healthcare plans, as well as create more successful outcomes for perinatal patients with OUD.

80. Determinants of Substance Use Treatment Completion And Substance Use Recurrence Among Criminal Justice Involved Adults with Comorbid Schizophrenia

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Background: Individuals with schizophrenia are overrepresented in the criminal justice system and are at high risk of experiencing substance misuse. Among justice-involved adults with comorbidity, substance use recurrence is linked with criminal justice system recidivism as well as poor health and behavioral health outcomes. Interventions targeting substance use behavior change have demonstrated limited efficacy among this population. Thus, it is important that determinants of substance use treatment completion and substance use cessation be investigated among justice-involved adults with comorbidity.

Objective: Investigate clinical and sociodemographic determinants of 1) substance use treatment completion and 2) substance use cessation among justice-involved adults diagnosed with co-occurring schizophrenia.

Methods: Study data came from the Treatment Episode Data Set-Discharges (TEDS-D), which contains annual data on substance use treatment utilization in the U.S. The analytic sample included 995 justice-involved adults with schizophrenia who received outpatient substance use treatment services. Outcome variables were 1) treatment completion and 2) substance use cessation during treatment. Sociodemographic predictors included sex, age, race/ethnicity, education, and employment. Clinical predictors included self-help group attendance and prior treatment history. Multivariable logistic regression models were fit to examine sociodemographic and clinical associations with treatment completion (Model 1) and substance use cessation (Model 2).

Results: Women had lower odds of completing treatment compared to men (AOR=0.38, 95% CI=0.22-0.67). Those who attended a substance use self-help group had higher odds of treatment completion compared to those who did not attend a self-help group (AO =2.54, 95% CI=1.64-3.93). Additionally, self-help group attendance was associated with higher odds of substance use cessation (AOR=2.05, 95% CI=1.42-2.96). Age was significantly and positively associated with substance use cessation while in treatment.

Conclusions: A key takeaway is that self-help group attendance is a protective factor of treatment completion and substance use cessation, which aligns with theoretical frameworks that emphasize the relevance of positive social and environmental reinforcement in reducing substance use behaviors. Treatment services that prioritize positive social connectivity may be especially beneficial for justice-involved individuals with comorbid schizophrenia. Further research is needed to identify mechanisms that can improve treatment outcomes for women and young adults with comorbidity.

81. Enhancing Peer-based Group Feedback to Improve Presentation Skills among Interprofessional Addiction Fellows

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Background: Peer feedback represents an important aspect of health professions education. However, many trainees lack formal training in providing feedback, which can have harmful effects on performance. The ADAPT (Ask, Discuss, Ask, Plan Together) framework is an effective, evidence-based approach for delivering structured feedback within medical education settings (Fainstad et al., 2018), but it does not offer specific strategies to guide communication.

Objective: To create a novel educational approach for providing supportive and collaborative peer feedback using a modified ADAPT framework integrating motivational interviewing (MI) strategies to improve presentation skills among interprofessional addiction fellows.

Methods: From 2020-2022, all interprofessional addiction fellows received training in the modified ADAPT framework. Each fellow was then assigned to deliver a 60-minute presentation on an addiction-related topic followed by a 60-minute peer-led feedback session. Feedback sessions were moderated by two faculty members and led by a peer facilitator who used MI strategies to inquire about the presentation process and explore strategies to strengthen the

presentation. At the end of each session, the cohort identified “take-home” messages that can be broadly applied by all participants to improve future presentations. At the first and last feedback sessions each year, fellows were invited to complete an 11-item survey utilizing 5-point Likert scales (1=strongly disagree to 5=strongly agree) assessing confidence in providing feedback and delivering presentations. Analyses utilized Welch's t-test to account for uneven sample sizes.

Results: Preliminary data include 39 fellows who completed the survey (pre, n=29; post, n=10), representing Addiction Psychiatry (69.2%), Addiction Medicine (15.4%), Psychology (7.7%), and other disciplines (7.7%), such as chaplaincy. We observed significant ($p<0.05$) increases across all areas surveyed, including in confidence providing feedback (pre-mean[M]=2.24, post-M=3.10), implementing MI in non-clinical settings (pre-M=1.14, post-M=3.30), and delivering formal presentations (pre-M=2.45, post-M=3.50).

Conclusions: Integrating MI strategies with the ADAPT framework allowed learners to 1) improve presentation skills in a reflective and supportive environment, 2) increase confidence in providing feedback to peers, and 3) identify common themes to broadly improve presentation skills across a cohort of peer learners.

82. Barriers to Post-Acute Care for Patients with Opioid Use Disorder: A Case Report

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Background: Skilled nursing facilities (SNFs) frequently deny admission based on the presence of opioid use disorder (OUD) or medications for OUD (MOUD). This report describes a patient who was denied SNF admission.

Learning Objectives:

1. Explore ethical and legal issues with denying SNF admission based on OUD or MOUD use.
2. Identify strategies for overcoming barriers to SNF discharge for patients with OUD.

Case Presentation: A 54-year-old woman with past medical history of peripheral artery disease, left below-the-knee amputation, type II diabetes with right foot ulcers, and OUD presented with abdominal pain. An appendectomy was performed on hospital day (HD) #1 without complications. The patient wished to restart methadone, which she had been prescribed over a year ago. OUD consult service assisted in restarting methadone on HD#1. Her wounds were evaluated and required daily dressing changes and 6 weeks of non-weight bearing. On HD#4, she was ready for discharge to a SNF. However, all 24 SNF referrals were rejected due to the patient’s OUD and/or MOUD. Despite efforts to mitigate barriers to SNF admission, which included requesting a switch to buprenorphine-naloxone, relaxing weight-bearing restrictions, and involving hospital administration, the patient received final denials from all SNFs. On HD#11, she was accepted to a long-term acute care hospital.

Discussion: Patients with OUD are at risk for inequitable care. This case demonstrates the practice of denying patients with OUD admission to SNFs, and the associated exposure to increased hospital lengths-of-stay and the risk of unnecessary MOUD changes. A SNF's refusal to admit patients receiving MOUD is a violation of the Americans with Disabilities Act and the guiding ethical principles for treating patients with OUD. An addiction consult service, such as our OUD consult service, can play a role in facilitating safe transitions for patients with OUD through education, collaboration, and care coordination. Our consult service has developed relationships with opioid treatment programs to perform virtual intake appointments, so patients discharged to SNFs can receive methadone after hospital discharge uninterrupted. We intend to further research the impact of an OUD consult service on discharge location concordance with care team recommendations and develop clinical pathways that support equitable healthcare delivery.

83. Caring for People Who Use Drugs – A Training that Introduces Harm Reduction to Pre-hospital Emergency Medical Service Providers

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Background: People who use drugs (PWUD) face stigmatizing treatment while accessing healthcare, including in the prehospital setting by Emergency Medical Service (EMS) providers. Drawing on professional and lived experience, we implemented a training for Emergency Medical Technicians (EMTs) and Paramedics in Massachusetts. The training was delivered via an online platform and consisted of a video presentation and accompanying materials.

Objective: To improve the harm reduction knowledge and attitudes of EMS providers interacting with people who use drugs (PWUD) and to teach EMS providers tools and best practices for improving overdose response, pain management, documentation, and person-centered language.

Methods: At the end of the training, participants completed a questionnaire to receive continuing education credits and a post-training survey was administered. The questionnaire included "Post/Pre" questions for which participants rated knowledge and attitudes BEFORE the training and immediately after using a 5-point Likert scale. Change in knowledge and attitude was assessed using paired t-tests.

	YES (%)	*NO (%)*
Witnessed fatal overdose	67%	33%
Family/friend with SUD	68%	32%
Family/friend died from overdose	37%	63%
EMT-Basic	53%	
Paramedic	36%	

Results: Of the 175 providers who took the training between August 2022 and March 2023, 87 completed the survey. Participants were mostly white (92%), male (68%), average age 41.75 years old, with 14.73 years of EMS experience. Participants reported significant improvement in attitudes toward PWUD across all questions. Of the 26 total questions, 23 had a p-value<0.05. Examples included: improved agreement from 60% prior to the training to 83% after the training with the statement, "I want to use more inclusive language (person who uses drugs vs. addict) when talking to or describing my patients" and improved agreement from 20% prior to the training to 59% after the training with the statement, "I will ask law enforcement not to confiscate syringes at overdose scenes."

Conclusions: A one-hour, online stigma training improved self-reported attitudes and knowledge among EMS providers toward people who use drugs.

84. Improving Knowledge and Attitudes towards Opioid Overdose Response: Pharmacy Student-led Training for Laypeople in a High-Risk Community

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Background: San Francisco has one of the nation's highest opioid overdose death rates, with a majority occurring in the Tenderloin district. Increasing access to naloxone and training laypeople improves overdose response and reduces mortality. Thus, pharmacy students from the University of California, San Francisco, provided hands-on overdose prevention training to laypeople in the Tenderloin district. The training covered harm reduction strategies, recognizing signs of an opioid overdose, and administering intranasal naloxone (Narcan).

Objective: We aimed to evaluate the training's impact on knowledge and attitudes toward responding to opioid overdose.

Methods: A quantitative, pre and post-approach was implemented, with the target population being members within the at-risk, underserved community. Laypeople who completed the 2-hour training voluntarily participated in pre- and post-surveys. Survey questions were adapted from the Opioid Overdose Knowledge Scale (OOKS) and Opioid Overdose Attitudes Scale (OOAS). OOKS questions covered overdose signs and naloxone use, while OOAS questions covered concerns, competence, and readiness toward responding to opioid overdose.

The Shapiro-Wilk Test was performed to determine if the data were normally distributed. The Wilcoxon Signed-Rank Test and Paired Sample T-test were used to test for statistical significance, defined as $p < 0.05$.

Results: Of the 34 laypersons who participated in the training, results from 27 participants were paired and analyzed. Significant differences were found between pre- and post-total OOKS scores and total OOAS scores ($p < 0.01$). Participants' knowledge increased about signs of opioid overdose (median 67% to 78%, $p < 0.01$) and naloxone use (median 67% to 100%, $p < 0.05$). Participants also had improved attitudes of competency in responding to opioid overdose (median 51% to 78%, $p < 0.001$).

Conclusions: This training significantly improved participants' knowledge and attitudes toward opioid overdose mitigation and demonstrated the potential for pharmacists to make a significant impact through community-based collaborations. Ongoing efforts are being made to build on these results by applying this training model to other at-risk populations and collaborating with additional organizations. Through these continuing efforts, we aim to meaningfully contribute to San Francisco's public health response to the opioid epidemic and advance the larger goal of saving lives and promoting health equity in vulnerable communities.

85. A Complex Case of Clonidine

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Background: Clonidine and other alpha-2 agonists are common adjunct medications used for opioid withdrawal. They activate central alpha-2 adrenergic receptors that inhibit norepinephrine release and blunt symptoms of withdrawal. Clonidine also lowers blood pressure, and sudden discontinuation after chronic use can cause rebound hypertension and other unpleasant adrenergic symptoms.

Learning Objectives:

1. Describe the mechanism of alpha-2 agonists and their evidence in withdrawal management
2. Discuss the potential harms of chronic clonidine use in patients with multiple substance use disorders and trauma

Case Presentation: A 33-year-old woman with opioid and benzodiazepine use disorders, chronic pain, PTSD, and anxiety disorder presented to a primary care-based addiction medicine clinic to taper off clonidine. 11 years prior, she was given clonidine to help discontinue high dose opioids initially prescribed for pain. The opioid taper was unsuccessful. She began purchasing opioids and benzodiazepines and continued to take clonidine. When she presented to our clinic, she was taking 0.3 mg TID of clonidine and had recently enrolled in a methadone clinic. A very slow clonidine taper was initiated. However, she took higher doses than prescribed due to cravings, withdrawals and anxiety related to both benzodiazepines and opioids, resulting in multiple emergency department visits. We prescribed sertraline to help treat anxiety disorder, and we dispensed clonidine as a daily observed medication at the methadone clinic. She reached a therapeutic dose of methadone and started working. At present, almost 3 years since her initial presentation, she is taking 0.1 mg of clonidine and the taper is ongoing.

Discussion: Though clonidine use disorder is not recognized by the DSM-5, this case illustrates a patient who meets at least eight criteria for this substance use disorder (SUD). Several case reports have suggested that clonidine may potentiate the effects of opioids and benzodiazepines. Our patient did not identify euphoria associated with clonidine use, but the short term anxiolytic effect was likely very reinforcing. This case suggests that patients with co-occurring anxiety disorders may be at increased risk of harm from clonidine taken chronically. Given the high prevalence of trauma and anxiety among patients with SUD, clonidine is best prescribed for the shortest duration needed.

86. A 3-year Review of a Hospital-based Opioid Stewardship Program

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Background: An Opioid Stewardship Program (OSP) was implemented at an urban hospital in January 2020 given the contribution made by hospital-based prescribing to the opioid crisis. Consisting of a clinical pharmacist and addiction medicine physician, the program provides recommendations to improve safety of opioid prescribing using an audit and feedback approach.

Learning Objectives: To compare the OSP's annual clinical activities during its initial three years of implementation (Year 1 [Y1]= Jan 2020 – Dec 2020; Year 2 [Y2] = Jan 2021 – Dec 2021; Year 3 [Y3]= Jan 2022 – Dec 2022) at St. Paul's Hospital in Vancouver, Canada.

Case Presentation: Hospitalized patients with an active opioid order who were not admitted to a critical care unit or followed by a consulting service specializing in opioid prescribing (e.g. acute/chronic pain, addiction medicine, palliative care) were initially screened. The OSP pharmacist then triaged patients based on risk factors indicating inappropriate opioid prescribing (as generated by a computer algorithm) and completed audit and feedback accordingly. Recommendations were considered accepted if changes were implemented in the electronic medical record. Results of the audit and feedback were examined using descriptive statistics and compared annually using R version 4.2.2.

Between Jan 2020 and Dec 2022, 9330 unique patient encounters were screened (3059, 2991 and 3280 for Y1, Y2 and Y3 respectively). Among the 3,920 patient encounters that were triaged by the OSP pharmacist for review (1084, 1032 and 1804 for Y1, Y2 and Y3 respectively), approximately 6,013 interventions were recommended among 1,946 unique patient encounters (576, 645 and 725 for Y1, Y2 and Y3 respectively). Furthermore, Year 3 observed a 50% increase in the number of recommended interventions compared to Year 1 (2400 versus 1599 respectively). Patient education, stopping as needed (PRN) opioid prescriptions, adjusting opioid dosage, and adding/increasing non-opioid analgesics were the most common interventions annually. Recommendation acceptance rate was ≥93% across all 3 years.

Discussion: The OSP provides ongoing support to improve the safety of opioid prescribing in-hospital and has resulted in an increased number of interventions recommended. Acceptance of these recommendations are high among hospital prescribers. Accordingly, OSPs should be considered for implementation in other acute care settings.

87. A Universal Training to Reduce Stigma when Conducting Research with People who Use Drugs

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Background: It is important to approach people who use drugs (PWUD) who are potential research participants in a non-stigmatizing, empowering, and collaborative manner. However, insufficient training and stigma among the research team toward PWUD can lead to low participation in research or poor intervention outcomes. Formal training for health professionals improves addiction-related knowledge while reducing addiction stigma.

Objective: We developed and evaluated a universal training for research staff to increase knowledge on drug user health and harm reduction, reduce stigma towards PWUD, and promote trauma-informed interactions with participants.

Methods: The training was developed by multiple stakeholders including an investigator, two people with lived experience (PWLE), and a physician on our community leadership board. We developed three distinct 20-minute sessions, two of which were led by PWLE, each followed by 10 minutes of discussion, for a total training time of 1.5 hours. The sessions emphasized knowledge, stigma, and a trauma-informed approach. We administered a multidisciplinary addiction educational survey which asked questions on a likert scale (1-5, strongly disagree to strongly agree). We used a retrospective pre-post evaluation method where participants completed the questionnaire at the end of the training, self-assessing what they knew before and after participating. Responses were compared using paired t-tests.

Results: There were post-training improvements in all outcome categories (knowledge, stigma, trauma-informed approach). For example, there was decreased agreement with the knowledge item, "Methadone and buprenorphine are not helpful to people who continue to use heroin or cocaine" (0.63 change, $p<.01$). There were improvements for the stigma items "I can distinguish between stigmatizing versus patient-centered terms used to talk about drug use" (1.0 change, $p<0.01$), and "I can recognize my own biases towards people with substance use disorders" (0.83 change, $p<0.01$). The largest improvement was in the item, "I am familiar with the principles of Trauma-Informed Care" (1.06 change, $p<0.01$).

Conclusions: Our universal training for all research staff members improved knowledge of drug user health, the understanding of stigma affecting PWUD, and knowledge of trauma informed approach to care and research. We will disseminate this training locally and nationally for other research teams to reduce stigma when collaborating with PWUD.

88. A Rare Case of Suspected Krokodil-related Skin and Soft Tissue Infections (SSTI)

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Background: Skin and Soft Tissue Infections (SSTI) are common in people with injection drug use (IDU). IDU may cause damage to skin and underlying structures and in some severe cases can lead to amputations or death. Krokodil is the street name for a cheap homemade injectable semi-synthetic opioid analog of desomorphine that has been used in parts of Europe where it is known as flesh-eating heroin because of the soft tissue damage at the point of injection. There has been no laboratory confirmed case in the United States.

Learning Objectives:

1. Increase awareness of krokodil which may cause SSTI similar to xylazine
2. To educate clinicians of the limitations of routine drug screen panels in identifying novel drugs
3. To increase surveillance within interdisciplinary teams for novel drugs like krokodil in the drug supply

Case Presentation: A 48-year-old female presented to the emergency department with complaints of non-healing bilateral upper extremity wounds since she was injected with krokodil a few months prior. She has a medical history of opioid use disorder (heroin), alcohol use disorder, and stimulant use (cocaine and amphetamine). Her preferred routes of drug use are intravenous, rectal, and smoking. She was noted to have erythematous ulcerating lesions with purulent discharge and necrotic edges located on the bilateral dorsal forearm and discrete blisters on the right 4th and 5th digit. Laboratory workup showed signs of severe sepsis due to the necrotic wounds growing Methicillin-resistant Staphylococcus aureus and Streptococcus pyogenes. Urine drug screen was positive for cocaine and amphetamines. She was treated with IV antibiotics and discharged on a 10 day course of oral antibiotics. She indicated interest in residential treatment facility for her substance use.

Discussion: Krokodil use has mostly been laboratory confirmed in parts of Europe. In the US it has been based on anecdotal evidence with an absence of laboratory confirmed cases. Unfortunately, routine drug screen panels are unable to identify desomorphine making confirmation difficult. Despite lack of confirmatory testing in this case, we hope to increase awareness of novel drugs that may elude drug screens. With the recent spike in xylazine related SSTI it is important to identify possible mimickers like krokodil.

89. Improving Tolerability of Buprenorphine Taper Utilizing an Extended Release Formulation

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Background: In recent years there has been an emphasis on expanding treatment goals for opioid use disorder (OUD) beyond abstinence. Tapering off sublingual buprenorphine (SL-BUP) has been identified by patients as a potential outcome of success, however can be a challenging and lengthy process due to withdrawal. More patient-centered approaches would be helpful to minimize the discomfort of withdrawal and risk of relapse. A MEDLINE search revealed one published case series on the successful use of a single 100mg extended-release subcutaneous buprenorphine (ER-BUP) injection to aid the discontinuation of SL-BUP in three patients. This method may improve tolerability of discontinuation over traditional SL-BUP taper as the increased half-life eliminates the fluctuation in daily concentration and decreases in a self-tapered manner.

Learning Objectives: There is a gap in our understanding of the widespread utility of ER-BUP for tapering as well as long-term outcomes such as duration of a single ER-BUP injection and withdrawal monitoring beyond this timeframe.

Case Presentation: The patient is a 59-year-old white male with significant past medical history of post-traumatic stress disorder and OUD in remission treated with SL-BUP since 2009. He was slowly tapered over five years to 3mg SL-BUP daily. Any less than 3mg SL-BUP precipitated flu like symptoms, abdominal cramps, and restless legs which the patient found intolerable and did not respond to clonidine. In March 2022 he received a single 100mg ER-BUP injection with the simultaneous discontinuation of SL-BUP. The patient reported feeling lethargic after the injection which resolved in 2 days. Five months post-injection the patient reported worsened restlessness and nightmares with sleep which responded to clonidine. At seven months post-injection, toxicology revealed only trace amounts of buprenorphine in urine. By nine months post-injection the patient endorsed no withdrawal symptoms, cravings for or return to use, and SL-BUP was not resumed.

Discussion: A single 100mg ER-BUP injection took just over seven months to completely self-taper. Outpatient experienced minimal withdrawal symptoms during this time and only minor sedation at the injection's peak dose. This method improved our patient's tolerability of discontinuing buprenorphine and employing it widely could be a more patient-centered approach that minimizes risk of discomfort and relapse.

90. Engaging Black and Latino Men in Recovery-Based Reentry Programming

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Background: In Massachusetts, the opioid overdose death rate is significantly higher for formerly-incarcerated people than for non-incarcerated people. Furthermore, overdose death rates in MA increased in recent years for Black and Hispanic/Latino men, surpassing the rate for White men.

Objective: The Recovery-Based Reentry Services for Black and Latino Men (BLM) pilot program aims to provide culturally-responsive, person-centered support to improve the health and wellbeing of people who have high risk of opioid overdose and death.

Methods: The focus population is Black and Latino men with substance use history who are re-entering/have re-entered the community from a MA House of Corrections (HOC). The program has five community-based pilot sites ("providers"). All providers employ care coordinators who share lived experiences and/or identities with the clients served. Providers recruit and engage clients pre- and post- release, develop individual service plans, provide care coordination and supported referrals, and organize community-building activities.

An external evaluation team co-developed a mixed methods evaluation in collaboration with providers and clients, which includes analysis of intake, enrollment, and service-tracking data; and semi-structured qualitative interviews with providers and clients. Quantitative data were analyzed using descriptive statistics, and qualitative themes were identified using Framework Analysis.

Results: In Year 1, providers enrolled 248 clients, of whom 28% identified as non-Hispanic Black and 70% identified as Hispanic/Latino. Clients had an average of 9 contacts with providers over the year. Providers encountered challenges working with HOCs to do pre-release recruitment; utilizing staff with HOC experience or connections, prioritizing communication, and developing streamlined processes helped overcome challenges. Community outreach and partnership development facilitated post-release recruitment. Staff with lived experience who are from the communities served were critical for effective engagement; however, providers described challenges with staff recruitment and retention. Providers' emphasis on community, relationships, individualized services, client choice, flexibility, accessibility, accountability, patience, and non-judgment helped build trust and facilitate engagement.

Conclusions: The BLM pilot program has been able to recruit and engage Black and Latino men in recovery-based reentry services. This program's successes and challenges can inform the development of programs in other settings that seek to engage a similar population.

91. Exploring the Barriers and Facilitators of Medication-assisted Treatment For Cocaine Use Disorder among Men Who Have Sex with Men

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Background: Cocaine use disorder (CUD) is on the rise among men who have sex with men (MSM). The use of cocaine among MSM is associated with HIV-related sexual behaviors, poorer HIV treatment outcomes, and other negative health outcomes. There are no FDA-approved medications for CUD, and psychosocial interventions for CUD are limited in their effectiveness. Despite numerous pharmacotherapy trials, there are limited qualitative studies that have examined the barriers, facilitators and experiences of MSM with CUD on medication assisted treatment (MAT)

Objective: The purpose of our study was to examine the barriers and facilitators to medication adherence that emerged during a randomized control trial of a pharmacotherapy candidate for CUD.

Methods: Semi-structured interviews were conducted with 16 participants enrolled in a phase II randomized control trial evaluating extended-release lorcaserin among MSM with CUD. Participants were asked about their attitudes towards taking a medication for CUD, as well as barriers and facilitators of medication adherence, and their general study experience. Interviews were analyzed using thematic analysis.

Results: Participants found MAT to be a viable and often preferable option due to access and compliance barriers to available psychosocial therapies. Factors that facilitated MAT engagement included a personal motivation to reduce use and pre-existing knowledge about CUD and substance use disorder consequences and treatment options. Moreover, MAT adherence was facilitated by the availability of multiple medication reminders and organization methods. Reported challenges to medication adherence included side effects and difficulty remembering medication while traveling or using substances. Additionally, participants reported

a reluctance to disclose MAT participation to social circles, a structural barrier that reflects ongoing stigmatization of substance use and substance use treatment. Participants also discussed harm reduction, effective counseling, and continued motivation to reduce substance use as facilitators.

Conclusions: Drawing from participant perspectives, our study highlights important barriers and facilitators that affect the feasibility of medication-assisted treatment for CUD. These findings can help guide the development and implementation of future pharmacotherapy options for CUD and other substance use disorders among MSM.

92. Factors Influencing Patient-Directed Discharge among People who Use Drugs

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Background: An effective hospital discharge optimizes patients' ongoing care as they transition from the hospital. Discharge against medical advice (or patient-directed discharge) occurs when a patient chooses to leave the hospital before the treatment team recommends discharge. Estimates suggest that upwards of 40% of admissions among persons who use drugs (PWUD) result in a patient-directed discharge, compared to approximately 2-3% in patients without a history of drug use. Patient-directed discharges may expose the patient to the risk of an insufficiently treated medical problem and result in the need for readmission, a major source of avoidable morbidity and mortality.

Objective: The overall objective of this systematic review was to identify factors related to patient-directed discharge in PWUD.

Methods: Literature indexed in PubMed from January 2018 to December 2022 relating to the following search terms were reviewed: discharge against medical advice, patient-directed discharge and self-directed discharge. The search was further refined by keywords substance use disorder, injection drug use, opioid use disorder. The authors screened 470 titles and abstracts and reviewed 72 full text articles. Twenty-two articles met inclusion criteria. Extracted were study characteristics and outcomes.

Results: Seventeen of the 22 included studies were retrospective cohort/chart review studies, three were mixed-methods/qualitative and one study was quasi-experimental. For 18 studies, patient directed discharge was the primary outcome measure. Rates of patient directed discharges among PWUD ranged from 11% to 40%. The studies retained for review were categorized by four overarching themes of factors resulting in patient directed discharge: (1) patient characteristics (gender, age, race, social issues, insurance status); (2) symptom management (inadequate pain management, withdrawal); (3) environmental factors (staff conflict, lack of privacy, increased surveillance); and (4) protective features (use of specialized interventions, medications for opioid use disorder).

Conclusions: Given the high prevalence of patient-directed discharge among PWUD, there is a need for interventions to keep them hospitalized until discharge as medically indicated. For

example, targeted interventions to manage pain and withdrawal were associated with fewer patient-directed discharges. Training or education for staff about the unique needs of PWUD may improve patient-directed discharges as well as staff/patient relationships.

93. Addressing the Interface of Pain and Addiction to Improve Opioid Prescribing Practices and to Provide Optimal Care for Inherited Pain Patients

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Background: Historically, pain was undertreated, yet the over-marketing of prescription opioids for pain contributed to the first wave of the current opioid epidemic. Newer evidence and regulatory changes have led some pain practices to close creating challenges for patients, for providers inheriting these patients, and for programs and systems in which pain and opioid use disorder (OUD) treatment may be sub-optimally integrated.

Objective: We describe an initiative to address the reassessment and management of a cohort of patients previously maintained on opioids for chronic pain by a pain practice co-located in an HIV primary care clinic, who were subsequently inherited by HIV primary care providers (PCPs) after the departure of the pain practice.

Methods: We identified fifty-eight patients who met the criteria for long-term opioid therapy (LTOT) defined as opioid use > 90 days. We implemented a multidisciplinary approach involving HIV PCPs, pain specialists, and addiction psychiatry with collaboration by nursing and social work. We used urine toxicology, maximum daily morphine milligram equivalents (MME), and history of OUD to tailor individualized plans for ongoing opioid prescribing, consensual tapering, or transition to buprenorphine/naloxone.

Results: The median maximum daily MME prescribed was 105 (mean 415.4; range 15.0-3360.0). Five patients (8.8%) had been prescribed opioids for pain while simultaneously enrolled in a methadone maintenance treatment program. To date, twenty of the 58 patients with LTOT (34.5%) were deemed stable on their current regimen and three (5.2%) were transitioned to buprenorphine/naloxone. Two patients (3.4%) on low MME self-elected to stop opioids and eleven (18.9%) were consensually initiated on a slow opioid taper. Two patients (3.4%) elected to transition pain management to other healthcare settings, five (8.6%) were lost to follow-up, seven (12.1%) are currently undergoing evaluation, and eight patients (13.8%) are no longer prescribed opioids by our clinic due to evidence of diversion.

Conclusions: An integrated multispecialty approach to the reassessment of patients on long-term, including high dose, opioids for chronic pain can be operationalized, and may be an effective strategy to help programs and providers address the needs of patients at the interface of pain and addiction.

94. Low Barrier Outpatient Alcohol Withdrawal Management

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Background: In 2020, 28.3 million people in the United Stated were diagnosed with alcohol use disorder (AUD). Nearly half of people with physiologic dependence to alcohol who stop drinking abruptly or reduce consumption will experience alcohol withdrawal symptoms 6- 24 hours after their last drink. Most will experience mild to moderate alcohol withdrawal symptoms. Ambulatory alcohol withdrawal management is considered safe, particularly for those who have lower risk of experiencing severe withdrawal. Minoritized populations with AUD are less likely to receive AUD treatment but more likely to experience negative consequences of drinking. Substance use disorder bridge clinics are well-equipped to offer outpatient alcohol withdrawal management.

Objective: To describe the implementation of outpatient alcohol withdrawal management in a low-barrier bridge clinic and evaluate early uptake.

Methods: We conducted a retrospective chart review of all patients who received pharmacologic outpatient alcohol withdrawal management, defined as one or more administered or prescribed doses of a benzodiazepine, between April 2021 and January 2023. Patients were eligible if they did not have risk factors for complicated withdrawal and were interested in outpatient treatment as an alternative to inpatient medically managed withdrawal. Descriptive statistics were used to characterize the population.

Results: In total, 47 patients received withdrawal management during the observation period. The majority identified as male (77%) and spoke English as their preferred language (74%), with an average age of 44 years old. Approximately 30% were Black/African American and 21% Hispanic/Latinx. One third of this cohort had visited the emergency department at least once in the last 30 days. Most presented to the clinic daily in person, particularly on treatment days 1-3; however, virtual visits were offered for those who had barriers to in-person assessment. Visits included withdrawal symptom severity assessment, administered and/or prescribed benzodiazepine to treat withdrawal, discussion about medications for AUD, referral to recovery coaches and screening for infections. Diazepam was often administered from a secure medication dispensing cabinet to ensure symptom capture and safety to continue outpatient management.
Conclusions: Outpatient alcohol withdrawal management in a low-barrier bridge clinic is feasible and offers promise engaging marginalized groups who may be less likely to engage in inpatient withdrawal treatment.

95. One Year Analysis of Methadone for Acute Opioid Withdrawal in the Emergency Department

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Background: Patients with opioid use disorder (OUD) frequently utilize the emergency department (ED), which makes it a high-impact touchpoint for treatment and harm reduction

services. Federal regulations permit administration of methadone for up to 72 hours outside of an outpatient treatment program (OTP), with the purpose of alleviating emergency withdrawal symptoms while awaiting enrollment into an OTP. To our knowledge, there are no previous published studies describing application of the 72 hours within the ED setting.

Objective: The aim of this study is to describe the use of methadone in the ED in accordance with the 72-hour rule.

Methods: Our study included patients aged 18 years and older who received methadone for OUD in the ED between September 1, 2021, and August 31, 2022. We compared patients who had confirmed OTP enrollment to those who were not previously enrolled. We assessed demographics and outcomes including initial dose (mg), number of doses administered within 24 hours, total dose within 24 hours, length of stay, disposition, rescue naloxone administration, and discharge naloxone prescription.

Results: Over one year, there were 443 and 753 methadone administration encounters in the OTP and non-OTP cohorts. Patients in the OTP group received significantly higher doses of methadone than those not enrolled in an OTP program (53.83 ± 41.39 mg vs 30.34 ± 13.77 mg, $p<0.0001$). Repeat doses of methadone within the 1st 24 hours were uncommon. Significantly more black patients were in the non-OTP group compared to the OTP group (16.47% vs 9.26%, $p<0.0001$). Following methadone administrations, there were no cases that received rescue naloxone for an opioid overdose. There were significantly more ED discharges in the non-OTP group compared to the OTP group (77.8% vs 63.7%, $p=0.013$). Naloxone prescriptions at discharge were significantly greater in the non-OTP group (27.6% vs 21.4%, $p=0.017$).

Conclusions: Our study demonstrates that implementation of the methadone 72-hour rule in the ED is feasible and safe. Furthermore, application of the methadone 72-hour rule to the ED may help to reduce racial disparities in access to and receipt of methadone. Further studies are needed to assess ED to OTP retention.

96. Cannabidiol May Help to Reduce Risk by Attenuating Cue-Reactivity in Individuals with Opioid Use Disorder Receiving Buprenorphine or Methadone: A pilot, placebo-controlled, double-blind, cross-over trial

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Background: Opioid use disorder (OUD) continues to be a significant public health concern. Medications for OUD (MOUD) such as buprenorphine reduce overdose mortality, but relapses occur often, leading to adverse outcomes. Preliminary data suggest that cannabidiol (CBD) may be a potential adjunctive treatment to MOUD by attenuating cue-reactivity.

Objective: This pilot study sought to evaluate the impact of a single dose of CBD on reward- and stress-related neurocognitive processes implicated in relapse among those with OUD.

Methods: The study was a pilot, double-blind, placebo-controlled, randomized cross-over trial aimed at assessing the effects of a single dose of CBD (Epidiolex®) 600mg or matching placebo administered to participants with OUD receiving either buprenorphine or methadone. Vital signs, mood states, pain, opioid withdrawal, cue-induced craving, attentional bias, decision making, delayed discount, distress tolerance, and stress-reactivity were examined at each testing session on two separate testing days at least one week apart.

Results: Ten participants completed all study procedures. Receipt of CBD was associated with a significant decrease in cue-induced craving (0.2 vs 1.3, p=0.040), as well as reduced attentional bias toward drug-related cues as measured by the visual probe task (-80.4 vs 100.3, p=0.041). No differences were found among all the other outcomes examined.

Conclusions: CBD may have promise as an adjunct to MOUD treatment by attenuating the brain response to drug-related cues, which in turn may reduce the risk of relapse and overdoses. Further research is warranted to evaluate the potential for CBD as an adjunctive therapy for individuals in treatment for OUD.

97. Response to Addiction Recovery (R2AR): Pilot and Feasibility of a Patient-Reported Outcome Measure of Recovery

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Background: Recovery goes beyond abstinence and is multidimensional but is a difficult concept to measure. Patient-reported outcome measures (PROMs) capture nuance across domains.

Objective: We pilot-tested an innovative recovery PROM, "Response to Addiction Recovery" (R2AR), and assessed its feasibility for use in a clinical setting. We further assessed the transition to a fully digital intervention in the context of the pandemic and telehealth clinical visits.

Methods: We recruited 100 FQHC patients maintained on buprenorphine at least 6 weeks and no more than 3 years, to complete the R2AR at baseline, 3 months, and 6 months, collected via an online survey tool with links texted or emailed to patients upon enrollment. We shared R2AR results were shared with the buprenorphine nurse care managers (NCM), who were asked to review and briefly discuss the R2AR responses with the patients. Pilot study outcomes were self-reported health-related quality of life (HRQOL), self-efficacy, and substance use. Feasibility outcomes included clinician-reported usability and usefulness, and clinical uptake. We conducted bivariate analyses of the R2AR with patient characteristics and study outcome measures and summarized feasibility themes. We will assess the R2AR at baseline vs 3 month, and conduct regression models to assess for concurrent and predictive validity.

Results: Patients were comfortable responding online and were comfortable with the R2AR items. NCM engagement with the R2AR varied. Preliminary results indicate variability of R2AR

responses within and between subjects, and agreement with most items as important to recovery and important to work on now. Bivariate results suggest that patients with better HRQOL ($p<.05$), more self-efficacy ($p<.01$), and fewer days bothered by drug use ($p<.05$) were more likely to agree that the R2AR items were important to recovery, suggesting concurrent validity. Goal-setting items were less aligned with the outcome measures.

Conclusions: The R2AR tool demonstrated acceptability and usability from the patient and NCM perspectives, but in the context of short visits, were less likely to be used in a clinical interaction than we expected. The study was able to pivot to fully digital during the pandemic, yet there were downsides to this approach.

98. Harm Reduction Services for Veterans in Supportive Housing: Comparing Outreach Approaches

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Background: Rates of drug-related morbidity and mortality are high in California, among people experiencing homelessness, and among Veterans. Syringe services programs are an evidence-based harm reduction strategy to reduce drug-related infections and overdose deaths; however, services have not been available on-site in San Francisco, California, housing facilities for veterans who have experienced homelessness.

Objective: To compare outcomes of mail- and telephone-based versus on-site, interdisciplinary outreach offering harm reduction and syringe services program resources to Veterans residing in one supportive housing facility in San Francisco, California.

Methods: This project was completed in 3 phases. During phase 1 (August to September 2022), an informational packet was mailed to Veteran residents. During phase 2 (October to January 2022), pharmacists called residents to offer harm reduction resources. During phase 3 (December to April 2023), an interdisciplinary team (pharmacists, physicians, registered nurses, social workers) completed 4 site visits to offer in-person education and resources.

Results: Educational packets were mailed, and pharmacists called 72 Veterans. Most (n=49, 68.1%) were unable to be reached, primarily due to no working phone. Among the remaining, 16 (22.2%) declined and 7 (9.7%) accepted ≥1 resource. During site visits, team members met with 27/73 (37.0%) Veterans to offer resources, and among those, 21 (77.8%) accepted ≥1 resource. Overall, common supplies accepted included naloxone (n=20, 27.4%), antibiotic ointment (n=11, 15.1%), alcohol swabs and bandages (both n=10, 13.7%), and fentanyl test strips (n=8, 11.0%). A total of 5 (6.8%) accepted mental health/substance use referral(s) and 4 (5.5%) accepted infectious disease referral(s).

Conclusions: Telephone-based outreach to Veterans in supportive housing is challenging, as many do not have a working phone. In-person visits increased Veteran acceptance of harm reduction services from 10% to 29%, demonstrating the value of direct outreach. Naloxone was

the most common harm reduction resource accepted. During site visits, many Veterans reported mistrust of the healthcare system and were not engaged in care. Ultimately, the focus of outreach visits shifted from resource offering to rapport building, tailored discussions on individual needs, and linkage to services, including a new on-site primary care/infectious disease provider. More on-site efforts are needed to continue engaging Veteran residents for individualized care.

99. Addiction Bootcamp Basics*:* Implementation of a 2 day, 4-hour Interprofessional, Inpatient-based Addiction Conference

Jessica Tyler Ristau, MD - UCSF

Background: Up to 25% of hospitalized patients have substance use disorders (SUD). Patients with SUD have longer lengths of stay, higher costs, and greater readmission rates, yet there is limited education and experience in managing SUD amongst interprofessional teams in the hospital setting.

Objective: To develop, implement and evaluate a 2 day, 4-hour Interprofessional, Inpatient-based Addiction Confernece that aims to improve the quality of care for patients with substance use disorders by (1) describing diagnostic and screening tools, as well as identifying evidence-based treatments for substance use disorders, (2) defining roles of interprofessional team members in caring for patients with SUD, and (3) applying interprofessional collaboration skills in managing patients with SUD.

Methods: We created a novel interprofessional training targeting SUD management for general clinicians, social workers and nurses at an academic hospital without an addiction consult service. We delivered the curriculum in 2021 through two 4-hour sessions using live and recorded PowerPoint presentations and case discussions in a synchronous on-line format. Interprofessional addiction specialists were on the conference planning committee, taught didactic sessions and facilitated case discussions. We collected data using pre-, immediate-post, and 3-month post-session self-assessment questionnaires. We calculated mean differences in scores and obtained qualitative data from learner comments.

Results: The conference was well-received by learners (100% reported they would recommend to a colleague). Seventy-four learners attended (36% for both sessions, 54% day 1 only), and were interprofessional (44% physicians) and in practice for more than 6 years (68%). The response rate was 95% (n=70) for pre-survey and 16% (n=12) for all 3 surveys. At baseline, 63% of learners did not address SUD in their patients, citing limited experience (34%, n=24), missing content knowledge (20%, n=14), and lack of confidence (14%, n=10). Confidence in SUD management trended towards improvement immediately post-conference but returned to baseline at 3 months.

Conclusions: Implementing a two 4-hour interprofessional SUD training is feasible and has a potential for impact. Brief educational interventions might aid in bridging the gap between the need and access to SUD treatment particularly in medical centers without formalized addiction specialty services. Ongoing training is likely needed to bolster brief interventions.

100. HOPE After Overdose: Program Description and Early Data from a Rapid Interdisciplinary Post-overdose Intervention by the Home Outreach Prevention and Engagement Team in San Francisco

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Background: People who experience non-fatal opioid overdose face elevated risk of subsequent fatal overdose. In 2022, the Home Outreach Prevention and Engagement (HOPE) team was launched to outreach housed individuals experiencing an overdose.

Objective: To rapidly engage people who have experienced an overdose, target client-identified modifiable risk factors for subsequent overdose, and promote health and wellbeing.

Methods: We developed a post-overdose outreach approach focused on relationship building, debriefing the overdose experience, client-centered goal setting across health and social domains, harm reduction education and supply distribution, rapid linkage to medications for opioid use disorder, and care coordination. Staff with training in social work, patient navigation, and psychiatry were represented. Here we present programmatic data and implementation barriers and facilitators.

Results: From 7/7/2022 to 1/31/2023, we received referrals for 103 individuals reported to have experienced an opioid overdose. We contacted 51 (49.5%) people, 37 in person and 14 over telephone only. Clients were predominantly men (70.6%) with median age of 45.9 (IQR 37.7, 54.0). Race/ethnicity data were available for 29 clients (15 White, 9 Black, 4 Latinx). The median time post-overdose that clients were contacted was 4 days, with 26 (51.0%) reached within 3 days. Of 51 individuals contacted, 9 (17.6%) were linked to buprenorphine treatment, 18 (35.3%) were offered and 11 (20.8%) accepted harm reduction supplies.

Staff-identified barriers to overdose prevention engagement included lack of accurate contact information and undertreated medical and psychiatric needs. Facilitators included utilization of client-directed goal setting; receptivity of existing providers to care coordination; development of rapid referral pathway for low-barrier buprenorphine; team composition including people with lived experience and expertise in health, social, and navigation interventions; and lack of involvement of law enforcement.

Conclusions: Lack of contact information limited outreach to half of referrals, though the majority with contact information were receptive to outreach, suggesting rapid engagement is acceptable after overdose and can result in linkage to treatment for interested clients. Flexible post-overdose response teams should continue to be expanded and adapted to local contexts. Future program development should include incorporating participant feedback into program design in addition to addressing barriers to contacting individuals post-overdose.

101. Effects of Housing Stability Among Men in Residential Treatment

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Background: Housing stability and substance use have been shown to have a bi-directional influence on each other, while also being independently associated with health, economic status, and social support. Among people in addiction treatment, however, housing needs are often left unaddressed. In this study, we conducted an exploratory analysis to examine whether housing stability (at treatment intake) predicted outcomes relevant to substance use, mental health, and socioeconomics.

Objective: Our aim was to examine the potential protective role of housing on future outcomes among a sample of men in residential addiction treatment in New Jersey.

Methods: A standardized tool was used to collect data at treatment intake and six-month follow up. As of this date, 96 men have completed data at both time points. For the purposes of this analysis, we focused only on the sub-sample (n = 58) of men who completed their intake interviews within two weeks of treatment intake. Our primary predictor variable of interest was housing stability (i.e., stably housed vs. not stably housed) at intake. Our dependent variables of interest were six-month follow-up outcomes, including: housing stability; quality of life; whether one had enough energy for everyday life, health status, social support, employment status, and past 30-day substance use.

Results: Chi-square and independent samples t-tests were conducted. Due to limited sample size, Cramer's V was used to calculate effect size for categorical and binary outcomes, and Cohen's *d* was calculated for continuous outcomes. Housing was found to have a strong effect on life quality and whether one had enough energy for everyday life, as well as a moderate effect on health status and employment status, and it had no effect on social support. Housing stability was found to have a small effect size on 30-day substance use.

Conclusions: Being stably housed at intake was found to have an effect on various aspects of recovery capital, highlighting the importance of housing in the treatment of substance use disorders. While housing only had a small effect on past 30-day substance use, housing has the potential to influence other aspects of a person's environment to help facilitate positive outcomes.

102. Emergency Room Nursing Electronic Health Record-Facilitated Naloxone Prescribing and Overdose Education

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Background: Overdose education and naloxone distribution (OEND) programs from the ED have been shown to have positive impact on patients and their social network. We surveyed local ED staff and found that clinical decision support and electronic health record (EHR) tools were

identified as key facilitators for effective OEND programs in the ED. We created an EHR-based tool allowing nurses to initiate a naloxone prescription for patients who self-identified as wanting naloxone during the screening process.

Objective: Utilize clinical decision support in an EHR to facilitate overdose education and naloxone distribution in an academic and community hospital affiliate ED.

Methods: We reviewed daily naloxone prescriptions from the EDs at a large Midwest quaternary medical center and community hospital affiliate. We compared daily prescriptions pre- and post-implementation of a nursing-driven EHR tool for OEND. The prescription of naloxone was measured during two discrete time periods: pre-naloxone protocol from 4/1/22 to 9/30/22, when only ED medical providers were able to prescribe naloxone and post-implementation of nursing protocol from 10/1/22 to 1/31/23. A paired t-test was done and a value of <0.05 was considered significant.

Results: At the quaternary hospital, the mean naloxone prescription per day was 1.01 prior to nursing protocol implementation and 1.10 prescriptions per day post-implementation. While there was a trend toward increased number of prescriptions, it was not significant ($p=0.266$). At the community-based hospital, there also was a trend toward increased number of prescriptions with 0.6 average prescriptions per day before and 0.77 prescriptions per day after nursing protocol implementation, but again was not statically significant ($p=0.52$).

Conclusions: ED staff identified EHR-based tools and decision support as a key facilitator for OEND in the ED. These tools were implemented and there was a trend toward an increase in daily naloxone prescriptions after implementing a nursing-driven EHR tool for OEND, but the increase was not statistically significant. Future steps will include education related to the efficacy of naloxone distribution and further analysis of barriers to delivery.

103. Alcohol Use Risk Levels and Reasons to Change Use among College Students who Completed a Web-Based Form of Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Jessica Samuolis, Ph.D.; Annalise Baldi, Madeleine Pralea - Sacred Heart University

Background: Alcohol use among college students is an ongoing public health issue. Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a prevention approach that is used to assess risk and provide brief intervention and referral to treatment as needed. Web-based versions of SBIRT enable more widespread use of this approach on college campuses and may also inform prevention and intervention efforts on campus. Specifically, students' quantitative scores regarding readiness to change and qualitative responses to decisional balance questions within a screening can inform these efforts.

Objective: The focus of the current study was to examine college students' alcohol use risk levels as assessed in a web-based SBIRT program. Additionally, we examined students' reasons to change alcohol use, readiness to change, importance to change, and confidence in success among students who reported high-risk alcohol use within the web-based, SBIRT screening.

Methods: Undergraduate students (N=310) were recruited via a psychology department research management system and campus-wide emails. Students consented to complete the brief, anonymous, web-based alcohol use screening program by clicking a link on the informed consent.

Results: Thirty-four percent (N=105) of students scored in the high-risk range. Qualitative responses to the decisional balance question regarding reasons to change alcohol use were coded using a systematic process to yield final themes. Sixteen final themes were identified that ranged from short-term physical health symptoms (most common) to concerns about heritability (least common). Some themes identified, such as weight management, self-respect/self-image, and concerns for short-term and long-term mental health reflect factors that warrant more research as motivators to change use. Although 75% rated a low level of importance to change 73% indicated high confidence in success to change. Students' ratings on readiness to change were mixed.

Conclusions: Use of web-based SBIRT is valuable to provide alcohol use screening on college campuses. In light of the variety of reasons to change provided by students, prevention and intervention efforts should be multi-faceted and incorporate motivating factors that students identify as important. More research is needed to better understand students' importance, confidence, and readiness to change.

104. Pilot-Test of Web-Based Alcohol Use and Cannabis Use Screenings: College Students' Experience of the Screenings, Student Norms, and Campus Norms

Jessica Samuolis, Ph.D.; Victoria Osborne-Leute, PhD, MSW - Sacred Heart University

Background: Alcohol and cannabis use are prevalent among college students. Web-based versions of Screening, Brief Intervention, and Referral to Treatment (SBIRT) to prevent substance misuse among college students enable wide-spread dissemination to students. However, limited information exists on students' experience of web-based screening programs, perceived norms surrounding use of these on campus, and whether level of substance use is a factor.

Objective: The objectives were to examine students' experience of a web-based screening program (either alcohol or cannabis) in terms of understandability, believability, comfortability, and usefulness by use risk level. Additionally, perceived student and campus norms regarding the use of screening on campus were assessed.

Methods: Undergraduate students were recruited through campus-wide emails and the psychology department research management system to complete an anonymous SBIRT-based screening (either alcohol or cannabis) and an anonymous post screening survey. After excluding data from students over the age of 26 (N=2), in recovery (N=1), or reporting no use (N=290), the final sample included 143 students who completed the alcohol screening and survey and 80 students who completed the cannabis screening and survey.

Results: Regardless of risk level or which screening was completed, the majority of students found the screenings understandable, comfortable, and useful. Students reporting moderate/high risk alcohol use were less likely to endorse believing the information in the screening (X^2 (1, N = 143) = 16.334, $p < .001$) compared to students reporting low risk use. No significant differences existed on screening experience between low risk and moderate/high risk cannabis users. Although no significant differences existed based on alcohol risk level on perceived student and campus norms, moderate/high risk cannabis users were less likely to agree with the student norm that students on campus would be open to taking the screening compared to low risk cannabis users (X^2 (1, N = 80) = 7.680, p = .006).

Conclusions: Overall, college students reported positive screening experiences. Understanding students' screening experience and perceived norms can inform efforts to utilize web-based screening as part of campus prevention efforts, which may benefit from strategies to increase students' belief in the information and openness to take a screening.

105. Understanding and Bolstering the Peer Workforce: Findings from the 2023 FORE Survey of Peer Recovery Coaches

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Background: Peer recovery coaches (PRCs) are often the lynchpin to engaging people in opioid use disorder (OUD) treatment and helping them rebuild their lives, particularly for very high risk or marginalized populations. Despite this,, little is known about this workforce, the scope of their assignments, and challenges they face in launching and maintaining their careers.

Objective: The key objective of this research is to identify policies needed at national, state, and organizational levels to support and develop this workforce, informed by the experiences of those currently working as peers. A secondary objective was to understand effects of the COVID-19 pandemic on how they perform their job.

Methods: This is a multi-method design, including a qualitative study and a quantitative survey. Qualitative research was conducted in Spring 2021. Data were collected for the survey between October 2022- January 2023. The two-phased qualitative study consisted of a moderated online bulletin board followed by in-depth interviews. Findings from qualitative research informed development of the survey. All research materials, including the screener and discussion guides for the qualitative research and the survey instrument for the quantitative research, were reviewed an Advisory Group consisting of academic researchers, people with lived experience, those directly involved in supporting PRCs

Results: 1174 PRCs across 11 states completed the survey. 67% of the respondents are female, 55% ages 30 to 49, 69% earn less than $50,000/year. Over half of respondents worked in recovery organizations, far fewer in acute care settings. PRCs felts most satisfied (80%) in their job when supervised by someone who was also a peer. Majority of respondents became a peer to help others, though 33% found aspects of certification difficult and 25% reported not expecting to still be in this role in 5 years' time.

Conclusions: While PRCs serve a critical role in addressing the overdose crisis and contributing to improving equitable access to treatment and recovery, their role remains unsecure within the healthcare delivery system. This unique national database allows the voice of PRCs to inform efforts to expand and support this workforce.

106. Hospital Providers' Perspectives on Treatment of Patients with Co-occurring Substance Use Disorders

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Background: The overdose crisis is increasingly driven by the co-use of multiple substances. To reduce substance use-related morbidity and mortality it is important to engage people in treatment. Hospitalizations are an opportunity to initiate substance use treatment, yet little is known about the challenges and opportunities of improving care for patients with multiple substance use disorders (SUDs) in the hospital setting.

Objective: To explore healthcare providers perspectives on treating patients with multiple SUDs in the hospital setting.

Methods: From January-April 2023, we conducted qualitative interviews with physicians, nurses, and social workers with experience caring for patients with SUDs throughout the United States. Semi-structured interviews and directed content analysis explored current approaches and additional services to better serve patients with multiple SUDs in the hospital setting.

Results: Twenty healthcare providers explained the challenges and opportunities to treating hospitalized patients with multiple SUDs. They expressed lower expectations for treatment success and how some providers viewed patterns of co-occurring substance use as "hardcore" or part of a patient's identity. Participants described multiple challenges to treating patients' substance use in the hospital. Many reported difficulties in disentangling symptoms and developing a treatment plan when a patient was withdrawing from multiple substances concurrently. Additionally, SUDs that were not the primary reason for hospital admission, and which lacked effective treatments, were often ignored by hospital staff. Participants also identified multiple approaches to improve the treatment of hospitalized patients with multiple SUDs. They described how electronic medical record order sets can encourage providers to offer standardized treatment to address SUDs. Most participants also described how developing a dedicated team (e.g., addiction consult service) could help address the nuances of complex patterns of substance use and engage patients in treatment at their hospital.

Conclusions: Hospital providers emphasized the importance of improving treatment for patients with multiple SUDs. They described a need for continued development of validated tools and effective treatment for some substance use disorders. They also identified hospital-level changes to help standardize and improve substance use treatment.

107. Project COMPS, Contingency Management Program for Stimulants: A Primary Care Pilot for Veterans

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Background: Contingency management (CM) is a first-line treatment for stimulant use disorder. However, access to CM is lacking, especially for veterans. The San Francisco Downtown Clinic serves approximately 1,000 veterans with high rates of homelessness and substance use, where veterans receive comprehensive Primary Care, Mental Health, and Social Work services.

Objective: The primary objective of this project is to provide low barrier, abstinence-based CM for patients with stimulant use within a primary care clinic. Additional aims include to build community amongst veterans, provide de-stigmatizing care for veterans who use substances, and share harm reduction and overdose prevention resources.

Methods: CM providers (including 2 social workers, 1 primary care physician) met biweekly starting in August 2022 to design and implement this pilot. The 12-week program includes twice weekly sessions with point-of-care urine drug screens and brief, in-person encounters with a CM provider. Positive reinforcement for urine samples negative for cocaine and methamphetamine is provided utilizing the fishbowl method, with prizes including Veteran Canteen Store coupons and an on-site prize cabinet. For samples non-negative for other substances, brief intervention, referral for treatment, and overdose prevention education (including fentanyl test strips, naloxone prescription) is provided.

Results: Recruitment began in November 2022, with 14 veterans referred. Since January 2023, 5 veterans enrolled in the program; 1 has completed the program, 3 dropped out, and 1 is currently enrolled. For the veteran who has completed the program, 14 urine samples were provided, with 5 samples negative for stimulants. Barriers to veteran enrollment include difficulty reaching veterans by phone to schedule the initial session. Barriers to program completion include veteran hesitancy regarding abstinence, difficulty arranging transportation and high time commitment.

Conclusions: This is the first VA primary care clinic nationally to pilot an abstinence-based CM program. There is high demand for abstinence-based CM with high number of initial referrals, although enrollment and retention in the program are a challenge. Next steps include increasing the size of the fishbowl incentives, offering an attendance-based option for substance use groups for those ambivalent about abstinence, and partnering with veteran supportive housing site to offer access to on-site CM to reduce transportation barriers.

108. Association of Perinatal Antidepressant Use with Neonatal Abstinence Syndrome and Maternal-delivered Care among Birthing Patients with Opioid Use Disorder

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Background: Depression frequently presents with opioid use disorder (OUD) in pregnancy. Antidepressants effectively treat depression but may also influence maternal-delivered infant care practices (e.g., chestfeeding and skin-to-skin) and infant outcomes (neonatal abstinence syndrome (NAS) diagnosis and treatment). Maternally-delivered nonpharmacologic NAS

treatment practices decrease NAS withdrawal symptoms and the need for pharmacologic treatment.

Objective: To examine associations between antidepressant use during pregnancy with maternal-delivered care and infant outcomes for birthing patients with OUD.

Methods: Our study was a secondary analysis of data collected from 254 linked maternal-infant medical records of birthing women with OUD from four Midwest United States hospitals between 2016-2019. Perinatal antidepressant use, maternal characteristics, infant characteristics, and infant outcomes were abstracted for analysis. Binomial logistic regression models examined associations between perinatal antidepressant use, maternal delivered care, and infant outcomes while controlling for selected maternal and infant characteristics. Adjusted odds ratios were calculated for variables with a p-value less than .05.

Results: Of the 254 pregnant women with OUD, 59 (23%) were taking a prescribed antidepressant during pregnancy and at delivery. Those taking an antidepressant were 43% more likely to provide nonpharmacologic care to their infants (i.e., chestfeeding and/or skin-to-skin care; aOR=1.43; p=.01). No association was found between antidepressant use and NAS diagnosis; however, antidepressant use increased the risk of an infant requiring pharmacologic treatment for NAS by 172% (aOR=2.72; p<.001). Engaging in chestfeeding and/or skin to skin care reduced the infant risk of needing pharmacologic treatment for NAS withdrawal symptoms by 56% (aOR=0.44; p<.001).

Conclusions: Although antidepressant use among birthing patients with OUD may increase an infant's risk for requiring pharmacological treatment for NAS withdrawal symptoms, the initiation and use of maternal-delivered care may, in turn, reduce an infant's overall risk for pharmacological treatment. Thus, clinicians should encourage and support maternal delivery of chestfeeding and skin-to-skin care to decrease infants' risks, promote maternal agency and infant bonding, and support maternal mental health.

109. What is La Mentoria? A Qualitative Case Study of Culturally Responsive Peer Support in Utah

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Background: Culturally responsive services delivered by certified peer specialists (CPS) capitalize on commonalities between CPSs and consumers who share a cultural and linguistic background and similar recovery experiences. Previous work has explored the delivery and positive impact of peer support on recovery outcomes, but little is known about the implementation of peer support delivered by Latinx CPSs to Latinx community members in recovery and the organizational supports that facilitate this work.

Objective: This community-partnered qualitative study explored the implementation of '*La Mentoria,'* which is a model of culturally responsive peer support developed by one Latinx

serving peer-run behavioral health organization in Utah from the perspectives of multiple stakeholders.

Methods: Organizational leadership**,** CPSs, CPS supervisors, and consumers were recruited to participate in a qualitative interview that focused on the key ingredients of *La Mentoria*, its intended outcomes, and how the organization supports program delivery. Qualitative interviews were audio-recorded, professionally transcribed, and analyzed with Dedoose Software using constant comparative methods.

Results: Nineteen stakeholders participated in a semi-structured interview, including N = 9 CPSs; N = 3 CPS Supervisors; N = 3 organizational leadership; and N = 5 consumers. Fifteen of these interviews were conducted in Spanish.

Stakeholders described a model of peer support in which clients are matched with CPSs in recovery from similar challenges. CPSs and supervisors often started as clients, and became volunteers before completing CPS certification. Cultural elements commonly addressed included immigration-related trauma, acculturation-related familial tensions, and stigma.

In terms of organizational supports, stakeholders described a rich model of supervision, which consists of weekly individual and group clinical supervision sessions, along with regular CPS meetings designed to promote mutual support and self-care. The organization recently developed a Spanish-language CPS certification training.

Stakeholders described intended patient-level outcomes which included meeting goals related to community integration, familial relationships, and connection to a range of resources. Intended CPS-level outcomes pertained to job satisfaction and performance and worker-wellbeing (i.e. safeguarding of CPSs' personal recovery progress and protection against professional burnout.)

Conclusions: While this study documented the key ingredients, organizational supports, and intended outcomes of *La Mentoria,* future research must formally evaluate program effectiveness.

110. The Effect of Overdose Response and Occupational Safety Training on Naloxone-related Risk Compensation Beliefs among Law Enforcement Officers who Did or Did Not Witness an Overdose Death

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Background: Law enforcement officers (LEOs) who are frequent responders to overdoses and have witnessed overdose deaths may experience compassion fatigue. Compassion fatigue may contribute to naloxone-related risk compensation beliefs, or the inaccurate belief that naloxone enables risky drug use among people who use drugs (PWUD). Such beliefs can limit access to an essential life-saving tool for PWUD, and hinder LEO overdose response. The Drug Overdose Trust and Safety (DOTS) program trains LEOs in Missouri about mental health, risk

compensation, and occupational safety, with the goal of improving interactions between LEO and PWUD.

Objective: To compare naloxone-related risk compensation beliefs among LEOs who did and did not witness an overdose death, prior to and following a DOTS training.

Methods: Pre- and posttest surveys collected between December 2020 and December 2023 recorded whether LEOs had ever witnessed overdose deaths, and their endorsement of relevant risk compensation beliefs using the Naloxone-Related Risk Compensation Beliefs (NaRRC-B) scale. We compared baseline NaRRC-B scores of participants who had witnessed overdose deaths with those who had not, and tested the difference using Welch's t-test. We then estimated the association between posttest NaRRC-B and witnessing overdose death using linear regression.

Results: Over the study period, 955 LEOs completed both pre- and posttest surveys. Nearly half (n=451; 47%) reported witnessing an overdose death. At baseline, risk compensation beliefs were higher for participants who had witnessed an overdose (M=2.51, SD=0.61) compared to those who had not (M=2.34, SD=0.54; t(900.52)=-4.53, p<.001). After training, participants who had witnessed an overdose death had lower risk compensation beliefs (β=-0.12, *95% CI*: -0.19, -0.04) than those who had not. The adjusted R2 for the linear model was 0.34.

Conclusions: Naloxone-related risk compensation beliefs among first responders are an important target for intervention because they drive stigmatizing and punitive practices. Shifts observed in this study suggest the adverse effects of witnessing an overdose death on mental health and naloxone-related risk compensation beliefs can be overcome through tailored first responder training.

111. Opportunities for Racial/Ethnic Equity in Addiction Consult Teams

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Background: Hospitals are implementing interprofessional addiction consult teams (ACT) to provide expert care to inpatients with substance use disorders (SUD). Clinicians consult ACT for diagnoses, treatment, and linkage to addiction care. We describe ACT consultations stratified by SUD, ACT role, and patient race/ethnicity.

Objective: Describe ACT consults by SUD diagnosis, ACT role, and patient's race/ethnicity.

Methods: We reviewed ACT consults between January 2021 and December 2022 with electronic health record (EHR) notes by an ACT clinician or patient navigator (PN) in an urban, safety-net hospital. We extracted SUD codes from the discharge diagnosis and race/ethnicity and ACT members staffing consult from the EHR. We used chi-square tests to compare race/ethnicity and ACT role across SUD categories and one-way ANOVA tests to compare the hospitalization length and number of ACT visits across SUD categories.

Results: We were most frequently consulted for opioid use disorder (OUD) and stimulant use disorder (SD) (24.6%), alcohol use disorder (AUD) (20.6%), OUD (17.6%), and SD (16.8%). Patient race/ethnicity was significantly different within SUD category ($p<0.001$) (Black SD 39.6% or AUD + SD 31.8%, White OUD (53.7%) or OUD + SD (50.0%), Latinx AUD (44.5%); and Asian and Pacific Islander (AAPI) SD (14.3%)). Length of stay was similar across SUDs ($p=0.22$), though those with OUD and OUD combinations had the longest median LOS in days (5, IQR 8-3). Within SUD categories, PNs were more likely to see patients with AUD and SD (78.2% and 75.2%), MD/DO/NP were more likely to see patients with OUD and combined team visits (PN and MD/DO/NP) were more likely for those with any OUD diagnosis ($p<0.001$ for comparison).

Conclusions: Individuals with non-OUD disorders received fewer ACT visits overall and fewer clinician visits. Due to substance use patterns, Black, Latinx, and AAPI individuals were less likely to receive clinician consultations.

These patterns may be due to the perception that OUD consultations are more complex but may also be influenced by structural inequities prioritizing OUD. This data may help enhance triage guidelines to ensure more equitable access to ACT services.

112. Exploring the Role of Age Group in MOUD Treatment Preferences and Initiation among Patients with OUD

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Background: Medications for opioid use disorder (MOUD) are effective in reducing opioid use and relapse. Previous research suggests that young adults (18-25) have lower MOUD retention rates and higher opioid relapse rates than older adults. However, less is known about age differences in MOUD initiation.

Objective: This study examined MOUD preferences and initiation rates among young adults (YAs) compared to older adults.

Methods: We analyzed electronic health records (EHR) among OUD patients admitted to a inpatient SUD treatment provider in Maryland during 12/01/2020 - 11/30/2021. Variables of interest included age group (18-25 vs. 26+), MOUD preference at admission, and MOUD initiation at discharge. Logistic regression models were used to examine associations.

Results: Out of 1,550 admissions with OUD, 1,445 individuals were retained for the MOUD initiation analysis, and 1,145 individuals were retained for the moderation analysis. A majority of the sample were adults 26+ (88.17%), while 11.83% were YAs aged 18-25. MOUD preference at intake varied: 38.1% preferred buprenorphine, 24.7% preferred methadone, 22% preferred naltrexone, and 15.2% were uninterested in MOUD. Compared with older adults, YAs were less likely to prefer methadone over other MOUD choices. Of the patients analyzed, 53.4% did not receive MOUD at discharge, while 46.6% did. Age did not significantly predict odds of MOUD initiation (OR=1.06, SE=0.17; $p=0.700$). Patients who expressed a preference for buprenorphine

(OR=4.90; SE=1.06; p=.000), naltrexone (OR=2.92; SE=0.68; p=.000), or methadone (OR=4.40; SE=0.99; p=.000) had higher odds of MOUD initiation than those who were uninterested. Age group did not moderate the relationship between MOUD preference at assessment and initiation at discharge (p> .05).

Conclusions: Although previous research shows that YAs have poorer MOUD retention, results from this study found that they are as likely as older adults to initiate MOUD. Our results emphasize the importance of considering MOUD preference at assessment, as patients who expressed a preference had a higher likelihood of initiation. Age did not moderate this relationship, indicating that the relationship between preference and initiation does not differ between age groups. This finding suggests that patients of all ages who are uninterested in MOUD may need additional motivational enhancement to increase MOUD initiation likelihood by discharge.

113. The Dreaded Red (high-risk) Drug-drug Interaction Warning: Methadone, Linezolid, and the Challenges of Providing Antibiotic Options in Imperfect Clinical/social Scenarios

Natalie Stahl, MD, MPH - Greater Lawrence Family Health Center

Background: Methadone is an essential medication that prevents morbidity and mortality in individuals with opioid use disorder [OUD]. However, since it is a substrate for many cytochrome p450 enzymes, and it is associated with risk of prolonged QTc as well as risk of serotonin toxicity, methadone is often "flagged" for potentially dangerous drug-drug interactions [DDIs].

Learning Objectives:

1. Describe three primary mechanisms by which methadone can have drug-drug interactions (cyctochrome p450 DDIs, QTc prolongation, serotonin toxicity).
2. Review notable drug-drug interactions between methadone and po antibiotics that might be used to treat injection-related infections.
3. Analyze ways in which unstable housing or unsheltered homelessness can influence therapeutic options and priorities, and brainstorm creative options to support medication adherence and safety.

Case Presentation: A 39-year-old patient with severe OUD, prior MRSA skin/soft-tissue infections related to injection drug use, and unsheltered homelessness presented with swelling and pain in the middle digit of her left hand. On admission she was started on methadone, hydromorphone, and TMP/SMX (she reported critical allergies to vancomycin, penicillin, and doxycycline). A washout revealed a large abscess that did not reach the tendon sheath. Cultures were notable for MRSA resistant to TMP/SMX, and sensitive to linezolid and daptomycin. Since the patient was not willing to remain hospitalized for treatment with IV daptomycin, she was discharged with plan to continue methadone and take two weeks of po linezolid to treat finger abscess, despite concerns for potential methadone-linezolid DDI of serotonin toxicity. She was able to complete course of antibiotics without noted adverse effects, but finger infection later recurred.

Discussion: DDI warnings associated with methadone are often based upon case series or limited data. Particularly when patients are unhoused and/or unwilling or unable to remain in a hospital or skilled nursing facility for IV antibiotics, clinicians must choose between "less than ideal" treatment options with limited information about relative risks. In these situations, it's important that medications for opioid use disorder are prioritized, that patients have opportunity to discuss options and give informed consent, and that creative methods be utilized to monitor patient adherence and progress.

114. Using a Symptom-Focused Treatment Approach for Methamphetamine Use Disorder and Methamphetamine-Associated Pulmonary Hypertension

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Background: Methamphetamine use disorder (MUD) is rapidly increasing in prevalence in the US, and with-it health complications such as overdose and methamphetamine-associated cardiopulmonary disease. There are no FDA-approved pharmacotherapy options for MUD and barriers exist to implementing evidence-based behavioral therapies in many health systems.

Learning Objectives: Describe a framework for a symptom-focused treatment approach for methamphetamine use disorder and co-occurring chronic health conditions.

Case Presentation: 42F with pulmonary hypertension (PH) secondary to chronic thromboembolic disease and methamphetamine use was referred by her pulmonary hypertension team to a primary care-based addiction treatment program for MUD treatment. The patient will be considered a candidate for surgical management of her chronic thromboembolic disease when she demonstrates abstinence from methamphetamine use. Primary drivers of methamphetamine use were identified as fatigue and shortness of breath from her PH and asthma. She also experienced strong social triggers. She took buprenorphine for opioid use disorder, which precluded emerging MUD treatments utilizing naltrexone. We decided on a symptom-focused approach to treatment. She was given an albuterol nebulizer along with controller inhalers for management of asthma. Laboratory testing revealed iron deficiency and borderline B12 without anemia that may contribute to low energy levels and supplemented. A nurse care manager provided intensive care management including harm reduction services and weekly telephone check-ins where motivational interviewing and support were provided. She was also connected to peer recovery services to promote positive social connections. Over 5 months of treatment, she reported improved shortness of breath, increased energy, increased social support, and less frequent use of methamphetamine including one 6-week period of complete abstinence.

Discussion: As the prevalence of MUD increases, strategies are needed to care for patients with co-occurring chronic health conditions related to methamphetamine use. In the absence of FDA-approved pharmacotherapies, a symptom-focused approach paired with interdisciplinary supports represents a promising treatment strategy in select patients.

115. Initial Outcomes of a Quality Improvement Initiative to Increase Intranasal Naloxone Dispensing at Discharge among Postpartum Patients at Increased Risk of Opioid Overdose

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Background: Substance use disorders (SUDs) contribute to 47% of pregnancy-associated deaths in Alabama. Drug overdose deaths among pregnant and postpartum women more than doubled between 2017 and 2020. Although naloxone, an opioid receptor antagonist, can reverse the effects of opioids, only 12.7% of University of Alabama at Birmingham postpartum patients at increased risk of opioid overdose received naloxone at discharge during our baseline period.

Objective: To increase the proportion of postpartum patients at increased risk for opioid overdose who receive intranasal naloxone at discharge from 12.7% to 30%

Methods: This intervention targeted postpartum patients on the obstetrics service who were at increased risk of opioid overdose and had not previously received naloxone. Increased risk was defined as either: ongoing substance use determined by self-report or urine toxicology screen; prescribed methadone or buprenorphine for opioid use disorder or chronic pain; or concurrent use of opioids and benzodiazepines. Patients were excluded if they had previously received naloxone while antepartum or at a prenatal visit, were incarcerated, or were not discharged from the obstetrics service. The log of take-home naloxone dispensed at the prenatal clinic for patients with SUD was reviewed to determine if patients had received naloxone at prenatal appointments. Interventions included: (1) stocking naloxone kits in the postpartum unit in November 2022, (2) adding take-home naloxone order to postpartum order sets in January 2023, and (3) faculty and resident education in February 2023. The outcome measure for this initiative was receipt of intranasal naloxone at discharge with the process measure of postpartum order set utilization. All measures were analyzed using control charts to establish special cause variation.

Results: The initiative analyzed data from 66 birthing people at increased risk for opioid overdose. After naloxone kits were added to the postpartum order set, the proportion of postpartum patients who had naloxone ordered at discharge increased from 12.7% to 57.1%.

Conclusions: Rates of intranasal naloxone provided at discharge increased in postpartum patients at increased risk of opioid overdose. These interventions can be expanded to other units that frequently care for patients with SUD.

116. The Role of Social Work in a Large-Scale Multi-Site Research Study

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Background: The HEALing Communities Study (HCS) is a community engaged study working to reduce opioid overdose fatalities across 67 communities in Massachusetts, New York, Kentucky, and Ohio. The field of social work seeks to advance social justice and address both unintended and intended harms to individuals, groups, and communities caused by social systems and policies. Social work training uses a competency-based educational framework employing a person-in-environment lens. Social work emphasizes a systems level approach and

practitioners employ change strategies across sectors, in multiple practice settings as well as in the community.

Objective: We explored the role of social workers in HCS. Given the study's community engaged framework, we hypothesize that social workers play a critical role in both implementation of interventions and the research process; operating at multiple levels and attempting to advance social justice through their roles.

Methods: Each site provided the names of social workers on their study team, resulting in a convenience sample of 22 social workers. Social worker was defined as a person holding a BSW, MSW, or PhD in social work. Social workers were contacted by email and asked to submit a write up of their role within the HCS and to include as many examples as they could.

Results: Sixteen social workers returned descriptions of their work. Social workers reported working across the social work practice spectrum. They played multiple roles on the study from associate director to managers, and caseworkers. Roles ranged from clinical work to involvement in communications efforts, implementation of interventions, and participation in policy development and community reporting. Many social workers identified the importance of integrating community engagement and a racial equity and social justice lens as a part of their everyday work.

Conclusions: This study demonstrates how social workers are well poised to contribute to and lead community-engaged research. As more public health, medical, and academic research institutions incorporate community engaged methods, it is critical to consider the involvement and benefit social workers can provide in achieving a community-driven approach. Prioritizing the inclusion of social workers in health research and beyond can move the needle towards more effective and equitable work.

117. An Intensive Outpatient Program for Hospitalized Patients with Opioid Use Disorder and Injection-Related Infections: A Qualitative Study

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Background: Individuals with opioid use disorder (OUD) who inject drugs have a high risk of experiencing injection-related infections, requiring prolonged admissions for intravenous antibiotics. Unfortunately, these patients have particularly poor outcomes despite linkage to ongoing addiction treatment after completion of their medical treatment. Instead of waiting to be discharged, such patients may benefit from a structured treatment during the hospitalization.

Objective: A potential solution is to utilize an existing intensive outpatient program (IOP) called SmartIOP, consisting largely of asynchronous video content viewed on the patient's own device, that may be suitable for hospitalized patients who would otherwise be unable to attend an IOP in-person. Our aim was to conduct a qualitative study to receive feedback through semi-structured interviews from those with lived experience of injection-related infections.

Methods: Individuals from the community were recruited to complete an interview in-person or remotely. Interviews were transcribed and coded to conduct a thematic analysis. Recruitment continued until thematic saturation.

Results: 17 outpatients with OUD and previous hospitalization for a serious injection-related infection participated. The mean age was 40.8 years and 70.5% were men. The themes that emerged regarding the SmartIOP program consisted of the importance of medications for OUD (MOUD), creating a recovery plan, engaging with a recovery coach, providing one-on-one or group therapy, and treatment linkage after being discharged from the hospital. Other themes included the recognition of the severity of one's illness and emotional experiences related to the hospitalization.

Conclusions: This study provides insights into what is needed to support this patient population while they are hospitalized and will be the basis for a tailored treatment program that will undergo a pilot feasibility trial.

118. Accessibility of Office-based Buprenorphine Treatment for Opioid Use Disorder in Texas

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Background: Texas has observed a dramatic increase in opioid-related overdose deaths since 2020. Timely access to buprenorphine for opioid use disorder (OUD) treatment is critical to reverse this trend. However, little is known about the availability of appointments with buprenorphine prescribers for OUD treatment initiation.

Objective: To assess availability of outpatient buprenorphine initiation for OUD in Texas, and to compare availability by insurance coverage status.

Methods: The protocol for a 2018 audit of buprenorphine prescribers in six other U.S. jurisdictions conducted by Beetham et al. was adapted for use in this study. A random sample of 700 publicly listed buprenorphine prescribers in Texas was generated. Each prescriber was contacted twice by trained auditors posing as identical patients reporting active heroin use, seeking buprenorphine treatment; one with Medicaid coverage and one without insurance. Outcomes included appointments offered, wait times, and telehealth availability. A Wilcoxon signed rank test was used to evaluate differences between scenarios.

Results: Responses were obtained from 348 (49.7%) publicly listed buprenorphine prescribers. Among these respondents, appointments were offered for uninsured more frequently than for Medicaid (35.1% vs 27.0%, $p = 0.025$). Appointments with the potential of buprenorphine initiation were also offered for uninsured more frequently than for Medicaid (28.9% vs 8.0%, $p = 0.019$). The median wait times for an appointment were 5 days for uninsured and 6 days for Medicaid, and this difference was not statistically significant. Of the 122 prescribers that offered

an appointment for uninsured, 63.9% reported offering telehealth services and 32.1% of those reported telehealth was an option for the initial visit. Of the 94 prescribers that offered an appointment for Medicaid, 20.2% reported offering telehealth services and 36.8% of those reported telehealth was an option for the initial visit.

Conclusions: Less than half of audited prescribers were reachable, with a majority of reachable prescribers not offering appointments for both scenario types. Many reported offering telehealth appointments, but these were rarely offered for initial visits. Limited availability of appointments with buprenorphine prescribers is a major barrier to addressing the crisis of opioid-related overdose deaths in Texas.

119. Tracking Naloxone Use in the Fentanyl Era: Missouri's Overdose Field Report (ODFR) as a Collaborative Tool for Monitoring Overdoses and Naloxone Administration

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Background: Detailed information about non-fatal overdose events, including the amount of naloxone administered to reverse an overdose, is often sparse. Fentanyl's potency has caused concern about the number of naloxone doses needed to reverse an opioid overdose. Missouri's Overdose Field Report (ODFR) collects information from entities around the state (e.g. EMS, police, bystanders, friends, firefighters), via post-overdose survey, about fatal and non-fatal overdose events with the aim of heightening the quantity and quality of reporting on such incidents, especially those that do not involve medical services and may not otherwise be captured through official health records.

Objective: We examined trends in predominantly non-fatal overdoses in Missouri, including any changes in the number of naloxone doses administered per overdose event.

Methods: We conducted a retrospective analysis of data from Missouri's ODFR. We used descriptive statistics and counts to describe non-fatal overdoses, types of people administering naloxone, and the average number of naloxone doses per overdose event administered in Missouri between Jan 1, 2018 and December 31, 2022.

Results: During the study period, 12,262 overdoses were reported through the ODFR, each year having greater than 90% survival. The most common people administering naloxone were friends of the individual who overdosed (39.1%), followed by police officers (18.6%). On average, 1.7 doses of naloxone were administered during overdose events, decreasing from 1.81 in 2018 to 1.66 in 2022. Respondents indicate that fentanyl was involved in 56% of overdose events across years, with a high of 65.5% (in 2022) and a low of 47.5% (in 2021).

Conclusions: Reports submitted to the ODFR provide previously difficult-to-access information about non-fatal overdoses. Given that friends of the individual who overdosed were the most common responders, naloxone distribution efforts should prioritize networks of people who use drugs and their associates. These findings run counter to claims that more naloxone is needed to

reverse fentanyl-involved overdoses, or that naloxone products need higher doses. Future research should focus on more accessible, non-internet-based data collection tools, factors associated with overdose survival, and the effects emerging drugs, like xylazine, on opioid overdose reversals.

120. Implementing Community Reinforcement and Family Training for Caregivers (CRAFT-C) in Youth with Substance Use Disorders via a Group Telehealth Model: A Pilot Study

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Background: Youth substance use (SU) is common and is associated with negative developmental and mental health outcomes. CRAFT is a motivational contingency-management intervention for concerned significant others of treatment-resistant individuals with Substance Use Disorders (SUDs) and has demonstrated effectiveness for reducing SU and increasing treatment engagement. This study builds on promising findings of investigations delivering CRAFT to caregivers (CRAFT-C) of youth in an individual format through adaptation to a telehealth group format.

Objective: To assess feasibility, acceptability, and caregiver and youth well-being in group CRAFT-C.

Methods: Recruitment was conducted through the University of California, San Francisco's Youth Outpatient Substance Use Program. Participants were caregivers of youth aged 13-24 with a current SUD (N=18 across two cohorts). A psychologist delivered nine group sessions through a secure telehealth platform. Feasibility was measured by recruitment, attendance, and attrition; acceptability was measured by session satisfaction; and both were assessed through qualitative feedback. Caregivers also reported on their self-efficacy, stress, and family functioning, as well as post-intervention reduction/cessation of youth SU. Outcomes were analyzed through descriptive statistics and Wilcoxon signed-rank tests.

Results: Caregivers were primarily female (72%), mean age 53.6 (6.4) and highly educated (78% with graduate degree). Caregivers reported that their children were primarily male (71%), mean age 17.3 (2.4) with Cannabis Use Disorder (93%). Recruitment targets of 7-10 caregiver participants per cohort were reached within the planned timeframe. Attendance was high across both cohorts (7.4 and 7.6 of 9 sessions) with low attrition (11%). Surveys showed moderate to high satisfaction across cohorts. Caregivers in Cohort 2 reported increased self-efficacy ($z = -2.68$, $p < .01$), and decreased stress ($z = 2.62$, $p < .01$) and family conflict ($z = 2.04$, $p < .05$). Youth of caregivers in both Cohort 1 (43%) and Cohort 2 (85%) started or increased treatment engagement, and 71% reduced or ceased SU.

Conclusions: This study suggests that telehealth group CRAFT-C is feasible and acceptable as indicated by adequate recruitment, high attendance, moderate satisfaction scores, and positive qualitative feedback. Outcome data indicated increased youth treatment engagement, reduced

SU, and improved caregiver well-being. Further exploration of group CRAFT-C in a larger and more diverse population is warranted.

121. Engaging Affected Family Members in Substance Use Disorder Care: Knowledge, Attitudes, and Behaviors of Addiction Care Teams

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Background: People with substance use disorder (SUD) require social support to achieve optimal outcomes, yet current SUD care models often overlook the social and family context that impacts health. Supporting and educating affected family members (AFMs) of persons with SUD can improve family health and patients' SUD health outcomes (e.g., improve treatment retention). The SUD workforce is well-positioned to engage AFMs to improve patients' treatment, recovery, and well-being.

Objective: To understand SUD care team members' attitudes and behaviors regarding engaging AFMs in SUD care.

Methods: We conducted a cross-sectional study of interdisciplinary SUD care team members within a large safety-net hospital. An electronic survey assessed respondents' knowledge of AFMs' impact on health, practices, and attitudes about including AFMs in SUD care. Data were aggregated and summarized.

Results: The response rate was 56% (n=78/139). Most respondents were female (74%) and under 45 (71%). Over half were prescribers (53%, 35 MDs, and 6 NPs); 20% identified as a race other than white. While all participants recognized social support as critical to SUD recovery, only 30% regularly included AFMs or other supports in SUD care. Fewer than 10% frequently recommended that patients provide authorization to involve AFMs in care. When interactions with AFMs did occur, they mainly included providing education about SUD (73%) and SUD treatment (71%), and involvement in patient visits (66%). Most respondents (73%) had never received training or education about including AFMs or other social supports in care. The top three barriers identified to including AFMs in patient care were patient preference, consent, and confidentiality. The top three types of support recognized as necessary to engage AFMs were staff dedicated to family work, handouts with community resources, and training.

Conclusions: Although SUD care team members recognize the benefit of including AFMs and social support, this recognition has not resulted in practice changes that promote routine AFM involvement. SUD care team members would benefit from education on overcoming common barriers to including AFMs (e.g., maintaining confidentiality while promoting involvement). Institutions can support SUD care team members at a structural level by providing training and tangible resources (e.g., medication guides for families) to improve AFM involvement.

122. The Intersection of Peer Support and Substance Use Disorder in Nurses

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Background: The American Nurses Association estimates 6-8% of nurses use substances to an extent that impairs performance. The US has over 4,000,000 nurses which means that about 240,000 to 320,000 nurses are working impaired. The COVID-19 pandemic resulted in unprecedented stress and some nurses turned to substances to cope. Many of those nurses need help, but they do not know where to turn.

Education on substance use disorder (SUD) in nursing is critical to combat the problem. Education for nurses and nursing leadership must include why it happens, how to recognize it, and where to go for help when it is discovered.

Learning Objectives:

- Gain an understanding of SUD in nursing.
- Learn to recognize the signs of SUD in nurses.
- Identify the resources for nurses with SUD.

Case Presentation: Kristin has been an RN since 1991. She worked as a pediatric transport nurse clinician at the height of her career. In 2004 she was discovered diverting from the hospital. She was fired, lost her nursing license, and ended up spending 4 months incarcerated after a re-offense. She found recovery after her release. She petitioned the board of nursing for reinstatement of her nursing license in 2007 and joined their 5-year monitoring program. She completed it successfully with the return of full licensure. The process was difficult and there was little support. Learning there were programs in other states that offer peer support to nurses with SUD, she started one in her state. Now, nurses have the support they need as they navigate the ups and downs of recovery and the journey of reclaiming their nursing career.

Discussion: SUD in nursing is a current issue affecting all fields of nursing but knowledge on the topic is insufficient. Knowledge is needed to understand the scope of the problem and to offer solutions to those affected. Most states have programs where nurses can get help, oftentimes confidentially, however, most nurses and nurse leaders do not know these programs exist. Many states offer peer support for nurses, but again, not many know they exist. We must educate all nurses and give them the tools they need to practice safely.

123. The Impact of COVID-19 on Alcohol and Illicit Drug Use and Related Consequences among Patients with Opioid Use Disorder Recruited from an Office-based Addiction Treatment Setting

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Background: The COVID-19 pandemic has impacted all aspects of modern life, including an increase in substance use and substance-related morbidity and mortality. The COVID-19 pandemic also transformed care for opioid use disorder (OUD), including changes in delivery of office-based addiction treatment (OBAT).

Objective: The aims of this study were to assess the impact of COVID-19, including across six negative domains: 1) Personal or Family COVID-19 Infection 2) Healthcare/Medication Access 3) Economic Stressors 4) Emotional, Physical, and Mental Health 5) Social Isolation and 6) Conflicts and Disruptions in the Home, on self-reported substance use and consequences of substance use among a cohort of patients engaged in OBAT.

Methods: This is a prospective cohort study of 149 adult patients with OUD who received buprenorphine from July 2021 to July 2022 and completed a telephone interview including impacts of the COVID-19 pandemic, alcohol and other substance use (via timeline follow back) and related consequences (Short Inventory of Problems-Revised, self-reported substance-related acute healthcare utilization and non-fatal overdose) at baseline and at 6-month follow-up. Adjusted logistic regression models quantified the association between an increasing unit in domain score and the odds of the outcome. We used generalized estimating equations to account for repeated outcomes on the same individuals.

Results: Negative impacts of COVID-19 were highly prevalent, with >65% of participants reporting some impact on any given domain. Only higher scores on the domain of Emotional, Physical, and Mental Health were associated with increased odds of any alcohol or drug use in past 30 days (aOR 1.06, 95% CI: 1.01-1.11). Increased scores in the domains of Economic Stress (aOR 1.11 95% CI: 1.01, 1.23), Healthcare/Medication Access (aOR 1.2 95% CI: 1.06, 1.36), Emotional, Physical, and Mental Health (aOR 1.13 95% CI: 1.06, 1.2) and Social Isolation (aOR 1.03 95% CI 1.0, 1.06) were all associated with increased odds of the composite outcome of any substance-related consequences.

Conclusions: Among patients with OUD, stressors from COVID-19 were common, but rarely associated with increased substance use. However, substance-related consequences were associated with a larger number of COVID-19 impact domains, highlighting potential areas for OBAT teams to increase support.

124. Treatment Retention and MOUD Uptake among Adults with OUD in a Public-sector Inpatient Treatment Program

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Background: Medications for opioid use disorder (MOUD) are the standard of care for treating OUD. Inpatient treatment is an ideal opportunity to initiate MOUD, but there are significant barriers, and previous research has indicated low uptake (<20%) among OUD patients in public-sector inpatient treatment settings.

Objective: The purpose of this study was to examine MOUD uptake and related treatment outcomes in this setting.

Methods: We extracted electronic health records (EHR) data from a public-sector regional SUD treatment provider in Maryland. All admissions to inpatient treatment programs from

12/01/2020–11/30/2021 were examined. Patients with OUD were considered MOUD-treated if they: 1) Continued any MOUD from before the inpatient admission; 2) Started daily sublingual buprenorphine or oral naltrexone and received a prescription upon discharge (patients receiving buprenorphine for detoxification only were not considered MOUD-treated); or 3) Received an injection of extended-release naltrexone or extended-release buprenorphine prior to discharge.

Results: 2,475 admissions were identified across 2,088 unique patients. Patients from 1,550 admissions (62.6%) were diagnosed with OUD. Of the 1,550 admissions with OUD, the average age was 38.23 years, 96.65% had public insurance, and 63.61% of patients reported previous trials of MOUD. During the inpatient admission, 43.94% were treated with MOUD (23.61% on sublingual buprenorphine; 11.29% on methadone; 6.97% on extended-release naltrexone; 1.23% on extended-release buprenorphine; and 0.39% on oral naltrexone). Length of stay (LOS) was shorter (M = 14.76 days) for individuals with OUD compared to those without OUD (M = 16.74; $p < .001$) and 35.03% of OUD patients left treatment prematurely against medical advice. Of those with OUD, LOS was 18.52 days for those who received MOUD compared to 11.79 those who didn't ($p <.001$).

Conclusions: Despite the advantages of initiating MOUD during an inpatient treatment episode, including improved treatment retention, our results show that fewer than half of those with OUD were treated with MOUD. This finding is even more striking considering that most patients had previous experience with MOUD and had public insurance that would cover the cost of MOUD. These findings highlight the need for improved approaches to overcome barriers to MOUD initiation in inpatient addiction treatment settings.

125. Immediate Fentanyl to Extended-Release Buprenorphine Transition in Two Adolescents with OUD

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Background: Overdose deaths in U.S. adolescents (aged 14-18) with fentanyl involvement increased almost 4-fold from 2019 to 2021. Sublingual buprenorphine (SL-BUP) effectively treats opioid use disorder in adolescents, but medication non-adherence impacts treatment initiation. New SL-BUP initiations have emerged in the era of fentanyl to prevent precipitating withdrawal and include low and high-dose options. Whether these strategies could work in adolescent patients is unclear. The extended-release formulation of buprenorphine (XR-BUP) could improve medication adherence with monthly dosing. Unfortunately, XR-BUP initiation requires stabilization on SL-BUP before the injection, leaving medication non-adherence to SL-BUP a barrier to treatment in adolescent patients.

Learning Objectives: Learners will assess the feasibility of extended-release buprenorphine in treatment for adolescents with OUD using illicit fentanyl.

Case Presentation: A 15-year-old male with severe OUD presented outpatient for SL-BUP initiation. He tolerated SL-BUP with doses ranging from 2-12mg daily, but he struggled with adherence and eventually returned to daily fentanyl use. He failed to transition back to SL-BUP

using a low-dose protocol, so he received XR-BUP without stabilization on SL-BUP before the injection. XR-BUP was well tolerated without precipitating withdrawal despite daily fentanyl use before the injection.

A 16-year-old male with severe OUD presented outpatient for SL-BUP initiation. He previously took SL-BUP 12mg daily but returned to daily fentanyl use three weeks after completing a residential program. He failed to transition back to SL-BUP using a low-dose protocol. He presented outpatient with mild opioid withdrawal, and his last fentanyl use was at 0100 that day. He received XR-BUP at 1200 without stabilization on SL-BUP before the injection and did not experience precipitated withdrawal.

Discussion: These cases demonstrate success using XR-BUP in adolescents and propose an alternative buprenorphine initiation process when patients use fentanyl. XR-BUP results in a quick rise in serum buprenorphine levels leading to mu-opioid receptor occupancy of greater than seventy percent, which has been shown to mitigate withdrawal and provide adequate opioid blockade to decrease the reinforcing effects of opioids. There is an urgent need for further investigation into expedited buprenorphine initiation protocols that utilize XR-BUP, especially in adolescent patients where medication non-adherence remains a persistent barrier to sustained recovery.

126. Barriers and Facilitators to Accessing Harm Reduction Services and Adopting Harm Reduction Practices among Hospitalized People who Inject Drugs

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Background: In response to increasing overdose deaths, there has been a growing focus on expanding harm reduction services (HRS). Although typically offered in community settings, integrating HRS into clinical settings takes advantage of the frequent contact people who inject drugs (PWID) have with the healthcare system and targets a population at elevated risk for poor outcomes.

Objective: To address the critical gap on how to implement HRS in the health system, we examined knowledge, attitudes, behaviors, and experiences with HRS in hospitalized PWID.

Methods: We recruited PWID admitted from an academic hospital with urban, rural, and suburban catchment areas. The interview guide uses the Capacity-Opportunity-Motivation Behavior Model (COM-B) and Theoretical Domains framework (TDF). We recruited participants until we reached thematic saturation, which occurred at 16 participants. We applied the codebook using NVivo and analyzed the data iteratively using content and thematic analysis.

Results: Knowledge of HRS and where to access harm reduction resources varied. If participants knew about and perceived a strategy to be helpful, they were more willing to adopt it, although this was reduced in those who believed their individual risk of a poor outcome was low. Although hospitalization was associated with increased motivation for and focus on substance use cessation, this was a barrier to increasing harm reduction knowledge during the hospital stay

as participants were less open to receiving education and skills on how to use drugs more safely. Physical distance and lack of transportation were key barriers to access. Experienced and anticipated stigma (from encounters with health care, peers and family, and the police) facilitated distrust, contributed to internal stigma, and reduced willingness to access services or adopt behaviors, like carry naloxone.

Conclusions: Our study identified several barriers and facilitators across the COM-B and TDF domains. Offering comprehensive harm reduction education and supplies during hospitalization may increase adoption of harm reduction tools. Framing HRS as part of, and not opposed to, treatment approaches may increase engagement among those motivated for abstinence. Systems-based interventions focused on reducing stigma, towards HRS specifically and drug use in general, are critical to increasing engagement in and support for HRS among PWID.

127. Diversity Matters: The State of DEI Efforts within Addiction Medicine Fellowship Programs

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Background: A diverse healthcare workforce increases equitable care, improves health outcomes, and reduces mortality amongst minoritized populations. The growth of Addiction Medicine programs offers an opportunity to build a diverse and inclusive addiction medicine workforce to practice evidence-based care. These efforts are more urgent than ever considering a worsening overdose crisis and widening racial and ethnic disparities.

Objective: Examine the current state of diversity, equity, inclusion (DEI) efforts within addiction medicine fellowships, including diversity of faculty and fellows across multiple domains. Examine institutional climate, experiences with discrimination, and the training landscape and DEI efforts within the institution.

Methods: Current faculty and current/former fellows (graduating from 2020 onwards) were emailed an electronic link to a 35-item, multi-part Qualtrics survey in June 2022. The survey used validated instruments with multiple choice, Likert scale, and fill-in-the-blank items.

Results: There were 27 fellow (22% LGBTQIA+, 52% female, 50% White, 15.4% Black and 2.8% Latinx) and 64 faculty respondents (60.4% female, 72.9% White, 4.2% Black; and 4.2% Latinx).

Faculty were more likely to describe campuses as being racist (19.5%) or neutral to racism (26.8%) and sexist (38.5%) or neutral to sexism (17.5%) compared to fellows, although more fellows than faculty described climates as homophobic (12.0% homophobic and 36.0% neutral to homophobia).

While 14.6% of faculty and 16.0% of fellows reported being discriminated against, a greater number of respondents endorsed experiencing discriminatory events. The most common reasons were sex followed by race. These were often minimized. For example, “[W]hen I came with a

concern about discrimination and verbal abuse at a rotation site, [program director] was dismissive, judgmental, and disparaging."

The DEI topic most taught was addiction-related health disparities with only half offering skill-based training, like managing microaggressions. While the majority of faculty believed diversity was important, 17.5% thought "recruiting diverse trainees or faculty" was "somewhat" or "very unimportant" to the field.

Conclusions: Challenges with diverse representation in addiction medicine represent challenges with diversity across the academic pipeline. Discriminatory experiences were common across multiple domains. We need structural interventions to not only increase recruitment of diverse applicants, but also to build more inclusive and supportive environments.

128. Actualizing Change: Empowering Peers and Enhancing Harm Reduction Services through Qualitative Research with Satellite Syringe Service Participants

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Background: SLO Bangers runs the only syringe services and overdose prevention program in a large county. Over half of our participants extend the program's reach by providing peer-to-peer or satellite distribution of harm reduction supplies to hard to reach areas and people unable to come to our fixed sites.

Objective: To increase understanding about the motivations and difficulties of people serving as peer satellites and reveal barriers preventing people from coming to our exchange. This project highlights areas of need, prioritizes participant voices, and informs how to bridge service gaps.

Methods: Using semi-structured interviews, we explore perspectives from program participants' peer-peer distribution efforts. Recruitment occurred during our regular exchange hours, and was focused on inviting participants who identify as "someone who exchanges for others" and interviewees were compensated with a gift card.Transcribed interviews were analyzed using a combination of inductive and deductive coding to reveal themes in responses.

Results: Themes from participants can be grouped into three major areas; 1. barriers to on site access for communities receiving satellite services, 2. motivation and reasons why they satellite, 3. impact on themselves, including difficulties encountered in their outreach work. Themes related to a participant's motivation to be a satellite include promoting individual agency and autonomy and wanting to increase wellness around substance use and uplift emotional well-being in their community. When participants discussed the impact satelliting has had on themselves, almost all responses expressed positive feelings, and many expressed humility about their roles in keeping their communities safe. Importantly, our interviewees shared ideas for changes that can be made at the programmatic and local level to make syringe services more effective and/or to support them in their peer-to-peer outreach.

Conclusions: Centering participants as stakeholders helps identify creative strategies to decrease barriers, increase access to services, and inform outreach to find solutions to the needs of people who use drugs. Results from this research will be used to improve our program and advocate for our participants in the community and for funding to extend services and fairly compensate people consistently doing peer-to-peer outreach for their work.

129. Pedagogical Considerations for Enhancing Peer Support Training in an Online University Environment

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Background: Training programs for Peer Support Specialists in the substance use treatment sector vary in format and need to be evaluated for quality improvement. *The Minds and Mentors Program (MiMP)* is a new PSS training program in Alabama that is delivered in a university setting and includes one semester of coursework (six credit hours) offered online through the university's distance learning platform and one semester of experiential field placement (120 clock hours).

Objective: The goal of the present study was to gain initial feedback from PSS trainees on course delivery and instruction in the first semester of the MiMP training.

Methods: Focus groups were conducted with 15 PSS trainees after they completed the university coursework in the first semester of the MiMP training. There were four men and 11 women. Four were Black, 10 were White, and one was Hispanic/Latine. Participants ranged in age from 20 to 70. Two were married and two identified as LGBTQ+. Most (14) reported an income of 30 thousand dollars or less and 10 identified as economically disadvantaged. Six reported having a two- or four-year college degree and 10 were employed full time.

Results: Focus group content was transcribed and then content analysis was used to categorize focus group data into themes relevant to course delivery and instruction. Four themes emerged: 1) desire for an orientation to university-level education, 2) course structure considerations (e.g., pros and cons of online versus face-to-face instruction), 3) issues with online navigation of coursework, and 4) feedback on favorable instructor qualities (e.g., approachability, availability).

Conclusions: This study is the first to evaluate the course delivery component of a new statewide PSS training program in Alabama delivered in a university setting. Findings help inform future PSS training programs and assist in the development of best practices in PSS training.

130. Tars Over Texas: A Community-driven Approach to Low-barrier GC-MS Drug Testing

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Background: Texas has observed a dramatic increase in overdose deaths since 2020, and legal restrictions prevent widespread use of drug checking (both strip and "higher tech" GC-MS and FTIR) to identify potential overdose risk. We discuss the development of a mail-in program to allow access to GC-MS drug checking.

Objective: To pilot a mail-in, anonymous drug checking service initially established in North Carolina for Texas, examining feasibility, barriers, and expansion potential.

Methods: A small pilot study was launched at The University of Texas at Austin in partnership with the Texas Drug User Health Alliance and the University of North Carolina Gillings School of Public Health. Testing "kits" containing simple instructions and a vial for collecting a small sample of black tar heroin (BTH) were sent from UNC, distributed to the community by TDUHA, and then mailed back to UNC directly for analysis. Results were collected, and qualitative interviews will be underway soon to understand barriers, opportunities, and goals for future implementation and expansion.

Results: There is considerable heterogeneity in the Texas BTH supply, which regularly includes fentanyl, methamphetamine, and urea in addition to heroin. There are also consistent geographic differences, with the BTH supply in Houston (a port city) showing greater heterogeneity than that of San Antonio (south-central, landlocked). Additionally, the pilot has generated significant excitement and support from Texas drug users and advocacy organizations. The mail-in component, while ostensibly an inconvenience, has been praised for its ability to insulate participants from police detection while also better meeting the needs of a very large state. Future work will focus on moving the project to a true community-driven and owned model, centered with the TDUHA as it expands and builds capacity.

Conclusions: Despite common assumptions to the contrary, the BTH supply in Texas is very commonly adulterated with fentanyl, and is heterogeneous to an extent missed by point-of-use immunoassay tests. This project has been met with excitement by the community, and with relatively minor funding should become a truly community-driven initiative to empower and aid people who use drugs in Texas.