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Elizabeth Ferro, MD[1]; Judy Chertok, MD; Maggie Lowenstein, MD, MPhil, MSHP; M. Holliday Davis, MA (Hons); Julie Carney, MD; Rachael Truchil, MD, MPH - (1)University of Pennsylvania

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Erik S. Anderson, MD[1]; **Megan Heeney, MD**[1]; **Kay R. Lind, MD**[1]; Lauren R. Sirey, PharmD; Amy Liang, MD; Robert Benard, NP; Monish Ullal, MD; Kay Lind, MD; Andrew Herring, MD - (1)Highland Hospital - Alameda Health System

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Rachel Winograd, PhD; Maria Paschke, MPP; Elizabeth Connors, LCSW, MD; Gerard Carroll, FAAEM, FAEMS, FASAM, EMT-P; Saad Siddiqui, MPH; Josh Wilson, EMT-B; Greg Boal, MPA, EMT-P; Aila Al-Maliki, MPH; Brad Ray, PhD - University of Missouri, St. Louis

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Anthony Spadaro, MD, MPH[1], **Emily A Gordon, MD**[1]; Diane P. Calello, MD; Christopher Counts MD; Trevor Cerbini MD; Lewis S. Nelson MD MBA; Howard A. Greller MD - (1)Rutgers New Jersey Medical School

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Josh Luftig, PA-C[1,2], **Michelle Patregnani, MD**[3]; Lauren R Sirey PharmD; Monish Ullal, MD; Erik Anderson, MD; Andrew Herring, MD; Megan Heeney, MD - (1)Highland Hospital - Alameda Health System, (2)CA Bridge, (3)Highland Hospital-Alameda Health System

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Surmounting Stigma: Missouri First Responder Attitudes Towards People Who Use Drugs Improve Following Training

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Bryson O Gomez, Medical Student; Elyssa Y. Samoyoa, BA; Leslie W. Suen, MD, MAS; Susan L. Ivey, MD, MHSA; Phillip O. Coffin, MD, MIA; Alexander R. Bazazi, MD, PhD - University of California, San Francisco

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Lysa Samuel, PA[1], **Erik S Anderson, MD**[1]; Lauren R. Sirey, PharmD; Francesca Au, PharmD; Monish Ullal, MD; Andrew Herring, MD - (1)Highland Hospital - Alameda Health System

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Maggie Lowenstein, MD, MPhil, MSHP; Selena Suhail-Sindhu, MPH; M Holliday Davis, MA (Hons); Shoshana Aronowitz, PhD, MSHP, FNP-BC - Penn Center for Addiction Medicine and Policy; University of Pennsylvania Perelman School of Medicine

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Maggie Lowenstein, MD, MPhil, MSHP; Selena Suhail-Sindhu, MPH; M Holliday Davis, MA (Hons); Shoshana Aronowitz, PhD, MSHP, FNP-BC - Penn Center for Addiction Medicine and Policy; University of Pennsylvania Perelman School of Medicine

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Jayden Yu Henneman, BA; Colin Macleod, MA; Kyle Kumbier, MS; Jeremy Sussman, MD, MSc; Victoria Powell, MD; Mary Jarzebowski, MD; Amy Bohnert, PhD, MHS; Pooja Lagisetty, MD, MSc - University of Michigan

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Risk Factors for Chronic Pain Among People Who Inject Drugs in Denver, CO and Los Angeles, CA, 2021/22

Jimi Huh, PhD; Siddhi S. Ganesh, BS; Gilbert Orta Portillo, BS, MPH; Eric Kovalsky, MFA; Patricia Wilkins, BA; Karen Corsi, ScD, MPH; Ricky N. Bluthenthal, PhD - University of Southern California

Toward a Deeper Understanding of Suicides That Follow Prescription Opioid Reduction in Pain: Preliminary Results from 19 Psychological Autopsies

Stefan G Kertesz, MD, MSc; Allyson Varley, PhD; Megan McCullough, PhD; April E. Hoge, MPH; Aerin J DeRussy, MPH; Anne Fuqua, BSN; Kevin R. Riggs, MD; Adam J. Gordon, MD; Thomas E. Joiner, PhD - Birmingham Alabama Veterans Health Care System

Suicidal Ideation Among Non-Psychiatric Patients with Opioid Use Disorder in an Urban Emergency Department: Correlates and Future Overdose Events

Lauren K Whiteside, MD MS; Kayla Lovett MSW; Craig Field PhD; Canada Parrish PhD; Doug Zatzick MD - University of Washington

Pediatrics 1

Provider Experiences of Substance Use-Related Disorder Management in Pediatric Hospitals: A Qualitative Analysis of Key Informant Interviews

Adam Kronish, MD[1], **Zane MacFarlane, BA**[2]; Victoria A. Miller, PhD; Maria Christina Herrera, MD, MSHP – (1)Children's Hospital of Philadelphia, (2)University of Pennsylvania

Polysubstance-Involved Opioid Overdose Deaths Among US Youth, 2020 to 2023

Connor Buchholz, MS[1], **Scott E Hadland, MD, MPH, MS**[2], **Meredith Glass, MPH**[2]; Joseph Friedman, PhD, MPH; Arthur Robin Williams, MD, MBE - (1)Boston University School of Public Health, (2)Massachusetts General Hospital

Risk Perceptions, Parental Substance Use, and Peer Disapproval Predict Early Onset Substance in Adolescents with Comorbid Psychologic and Somatic Symptom Trajectories

Sarah A Stoddard, PhD, CNP, FAAN; Carol J Boyd, PhD, RN, FIAAN, FAAN; Terri Voepel-Lewis, PhD, RN - University of Michigan

Seeking Solutions: The Role of Behaviors and Personal and Social Beliefs in College Alcohol Help-Seeking Intent

Benjamin N Montemayor, PhD; Alee Lockman, PhD, MPH; Sara Flores, PhD Candidate - Texas A&M University School of Public Health

Expanding Access to Addiction Knowledge: Engaging High School Students with Addiction Medicine Content

Sophia Many Ly, MS[1], **Amanda Marie Fitzpatrick, MPH**[1]; Emily Elizabeth Hurstak, MD, MPH; Jules Canfield, MPH; Kaku So Armah, PhD - (1)Boston Medical Center

Pediatrics 2

The Role of Hospital Climate and Nurse Stigma on Implementation of Chestfeeding and Skin-to-Skin Care for Neonatal Opioid Withdrawal Syndrome

Clayton J Shuman, PhD, MSN, RN; Philip Veliz, PhD; Carol J. Boyd, PhD, RN, FIAAN, FAAN; Vanessa K. Dalton, MD, MPH - University of Michigan

Disparities in Patterns of Prescription Stimulant Use for ADHD in US Children

Jennie E Ryan, PhD, APRN, CPNP-AC; Alexander S. Weigard, PhD; Sean Esteban McCabe, PhD, MSW; Timothey Willens, MD; Philip Veliz, PhD - Thomas Jefferson University

Preparing Colorado Health Professionals in Primary Care and School-Based Health Centers (SBHCs) to Intervene Early for Adolescent Substance Use through Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Nora M Marino, MPH; Tracy McPherson, PhD; Giana Calabrese, MPH; Abby Mariani, MPH; Carolyn Swenson, MSPH, MSN, RN; Elizabeth Pace, MSM, RN, CEAP, FAAN; Annie Klein, CPS II; Hannah Nibauer, MSW - NORC at the University of Chicago

Curriculum for Pediatric Residents on SBIRT in Primary Care

Margaret Shang, MD; Nicholas Harris, MD, PhD; Elizabeth Miller, MD, PhD; Julie Childers, MD, MS - University of Pittsburgh Medical Center

Peer Support

Embedding and Sustaining Peers in Emergency Departments: Exploring Program Implementation and Outcomes

Jasmine S Barnes, MPH; Nicole O' Donnell, BA, CRS; Gilly Gehri, BA; Daniel Teixeira da Silva, MD, MSHP; Jeanmarie Perrone, MD; Austin Kilaru, MD, MSHP; Margaret Lowenstein, MD, MPhil, MSHP Samantha Huo, MD, MPH - University of Pennsylvania

Development and Training for Peer-Delivered Contingency Management for Stimulant Use Harm Reduction across Oregon

Linda Peng, MD[1], **Erin Stack, MSc**[2]; Christi Hildebran, MSW, CADC III; Bryan Hartzler, PhD; Alexis Cooke, PhD, MPH; Ryan Cook, PhD; Gillian Leichtling, BA; Judith Leahy, MPH; Kelsey Smith Payne, BA, CADC II, QMHA; Lynn Kunkel, MS; Kim Hoffman, PhD; P. Todd Korthuis, MD, MPH - (1)Oregon Health & Science University, (2)Comagine Health

Patient and Navigator Experiences with the Opioid Use Disorder Treatment System in Philadelphia, Pennsylvania

Megan K Reed, MPH, PhD; Tracy Esteves Camacho, MPH; Jeffrey Gillingham, MPH; Shané Gill PhD, LPC; Meghan Gannon PhD, MSPH; Diane Abatemarco PhD, MSW; Erin L. Kelly, PhD; Lara Carson Weinstein MD, MPH, DrPH - Thomas Jefferson University

Peer Recovery Coach (PRC) As an Intervention for Incarcerated Individuals with Opioid Use Disorder (OUD): Perceptions from Staff

Elizabeth Haberkorn, DNP, FNP-BC; Ken Lemons; Whitney Ludwig, MPH; Chin Hwa (Gina) Dahlem, PhD, FNP-C, FAANP - University of Michigan

Peer Led Substance Use Disorder Navigation to Support Reentry for Returning Citizens

Nicole O'Donnell, CRS; Jeanmarie Perrone, MD; Margaret Lowenstein, MD; Jasmine Barnes, MPH; Gilly Gehri, BS; Dorian Jacobs, MD; Elizabeth Ferro, MD; Julie Carney, MD - University of Pennsylvania

Policing and Incarceration

Creating Clinical Partnerships with Law Enforcement to Support for People Who Use Drugs Using a Harm Reduction Lens

Gilly Gehri, BA[1], **Nicole O'Donnell, CRS**[1]; Jasmine Barnes, MPH; Kurt August, MSW; Patrick Dooley, CRS; Jeanmarie Perrone, MD; Margaret Lowenstein, MD, MPhil, MSHP - (1)University of Pennsylvania

"You Need to Prove That What You Say Is True": Patient Experiences with Urine Drug Testing in Buprenorphine Treatment

Andrea U Jakubowski, MD, MS[1], **Isabel H Lamont, BA**[1], **Mariya Masyukova, MD, MS**[2]; Teresa Lopez-Castro, PhD; Shadi Nahvi, MD, MS - (1)Montefiore Medical Center/Albert Einstein College of Medicine, (2)Project Renewal, Inc.

Medications for Opioid Use Disorder (MOUD) in Massachusetts' County Houses of Correction: Preliminary Findings on Post-Release Moud Treatment, Overdose, Reincarceration and Mortality

Peter D Friedmann, MD, MPH; Donna Wilson, MA; Thomas J. Stopka, PhD; Ekaterina Pivovarova, PhD; Dana Bernson, MPH; Warren Ferguson, MD; Randall Hoskinson, Jr.; Rebecca E. Rottapel, MPH; Ben Bovell-Ammon, MD; Jake R. Morgan, PhD; Elizabeth A. Evans, PhD, MA - Baystate Health

Evaluating the Quality of Medication Assisted Treatment for Opioid Use Disorder in New Jersey County Jails: A Comprehensive Needs Assessment Approach

Pamela Valera, PhD[1], **Clement Chen, PharmD**[2]; Becky Cocito, LSW; Amesika Nyaku, MD; Egu Ernest, MD; Daina Potter, MPH - (1)Rutgers University School of Public Health, (2)Rutgers University New Jersey of Medical School, The CARE Center Northern NJ Medication-Assisted Treatment Center of Excellence (COE)

Buprenorphine in Jails: An Innovative Mixed-Methods Pilot Project in Rural Appalachia

Robert Lyle Cooper, PhD[1], **Loren Deborah Ginn, BSW**[1]; Ryan Edgerton, PhD; Sam MacMaster, PhD; Allison Wilhelm, MPH; Parul Patel, MSPH; Kristen Zak, MBA - (1)Meharry Medical College

Professional Education 1

US and Canadian Medical Student Attitudes Toward People Who Inject Drugs: An Online Survey

Andrew Nelson, Medical Student; Tucker Avra; Joseph Friedman, PhD; Amanda Cowan, MSc; Kyla Truman; Tamiko Nesley; Willow Limbach; Mary Sarkisian; Tiffany Chu; Chelsea Shover, PhD; David Goodman, MD, MAS; Elizabeth Samuels, MD, MPH, MHS - A.T. Still University School of Osteopathic Medicine

Centering a Harm Reduction Framework for Substance Use Disorder Counseling in Medical Student Education: A Pilot Curriculum

Ana Malfa, BA[1], **Katie Zechnich, BA**[1]; Frankie Pappalardo, BA; Meghna Tummala, BA; Joshua Gillen, BA; Emma Wilcox, BA; Dana Chofay, MD - (1)The Warren Alpert Medical School of Brown University

Preparing Healthcare Workers to Discuss Harm Reduction with Patients Who Use Drugs through a Brief Workshop

Patricia Moreno, BS; Sophie Zhai, BA; Maria Solorzano, BA; Marlene Martin, MD; Alexander Logan, MD - University of California, San Francisco

Pilot Evaluation of a Novel, Cooperative Opioid Use Disorder (OUD) Board Game

Molly A. Nichols, PharmD, MS, MATS; Carolanne C. Wartman, PharmD; Elizabeth G. Riley, PharmD; Alli N. Harrison, PharmD; Zachary A. Weber, PharmD - Purdue University College of Pharmacy

Implementation of a Substance Use Curriculum in an Academic Medical Center: Strategies to Expand Treatment of Substance Use Disorder

Gilly Gehri, BA; Judy Chertok, MD; Rachael Truchil, MD, MPH; Margaret Lowenstein, MD, MPhil, MSHP; Nicole O'Donnell, BA; Jasmine Barnes, MPH; Kyle Kampman, MD; Jeffrey Jaeger, MD; Jeanmarie Perrone, MD; Judy Shea, PhD - University of Pennsylvania

Professional Education 2

The Impact of Near-Peer Teaching on a Naloxone Training Workshop and Opioid Overdose Simulation

Jachua Polcyn, MD Candidate[1], **Nicole Rockich-Winston, PharmD, EdD**[1]; Natalie Zink, MD Candidate; Katherine Hatcher, MS; Aaron Johnson, PhD; Vahe Heboyan, PhD; Catherine Clary, JD - (1)Medical College of Georgia at Augusta University

Feasibility and Learner Experience in a Multidisciplinary Addiction Training Program

Joshua D Lee, MD[1], **Talia Rosen, BA**[1]; Shane Gallagher, DNP, Selena Gilles, DNP, Dale Maglalang, PhD, Diana Lee, MD, Katherine Mullins, MD, Kathleen Hanley, MD, James Grigg, MD - (1)New York University Grossman School of Medicine

Reimagining Recovery: A Health Justice-Oriented Training for Professionals By Michigan State University Extension

Lauren E Kennedy, PhD; Abigail Cudney, MS, LBSW; Tanner Derror, MPH; Elizabeth Williams, MEd - Michigan State University Extension

Hearing Hope: The Power of Narrative Storytelling in Addiction Medicine

Brittany L Carney, DNP, FNP-BC; Al Ortiz CARC; Nancy Regan-Brooks, FNP, CNM, CARN-AP; Alicia S. Ventura, MPH; Justin Alves RN, MSN, FNP-C, ACRN, CARN,

CNE - Boston University Chobanian & Avedisian School of Medicine, Boston Medical Center

An Interprofessional Case-Based Discussion on Opioid Use Disorder: Influencing Knowledge, Confidence and Stigma Among Future Prescribers

Katherine Grandinetti, MPH; Whitney Ludwig, MPH; Mary Dwan, BA; Colin Macleod, MA; Chasity Falls DMSc, PA-C; Christopher J. Frank, MD, PhD; Elizabeth K. Kuzma, DNP, FNP-BC; Pooja Lagisetty, MD, MSc; Gina Dahlem, PhD, FNP-C, FAANP. - University of Michigan Medical School

Special Topics 1

Improving Alcohol Use Disorder Diagnosis and Treatment in a Primary Care Setting Using a Clinical Decision Support System

Kevin Michael Pearlman, MD[1], **Mim Ari, MD**[1]; Rebecca Stern, MD; Andrew Moawad, MD; George Weyer, MD; Neda Laiteerapong, MD - (1)University of Chicago

Attitudes Toward Medications for Opioid Use Disorder Among Residents in Low-Threshold Harm Reduction Housing Sites in Boston

Avik Chatterjee, MD, MPH; Joseph Silcox, MA; Sofia Zaragoza, BA; Sabrina Rapisarda, MA, M.Ed; Charlie Summers, BA; Patricia Case, ScD, MPH; Clara To, MPH; Traci C. Green, PhD, MSc - Boston Medical Center, Boston University Chobanian & Avedisian School of Medicine

Barriers and Facilitators of Medication for Opioid Use Disorder (MOUD) in Skilled Nursing Facilities (SNFs)

Justina L Groeger, MD, MPH[1], **Kristine E. Torres-Lockhart, MD**[1]; Joseph Kim, MD; Chenshu Zhang, PhD; Joanna Starrels, MD; Allison Stark, MD - (1)Montefiore Medical Center/Albert Einstein College of Medicine

Would We, Could We? Measuring Attitudinal and Capacity Barriers to Supporting Residents on MOUD in Recovery Housing

Rachel Winograd, PhD; Rashmi Ghonasgi, BS; Brandon Park, BA; Maria Paschke, MPP; Lindsey Vondras, MSW; Desiree Smith; Micah Nellis; Amy Mericle, PhD - University of Missouri, St. Louis

Co-Developing and Implementing a Promotor Curriculum: Program for Education in Drugs and Alcohol for Latine (PEDAL)

Triveni DeFries, MD, MPH; Marlene Martin, MD; Madison Rodriguez; Lupita Ambriz; Cindia Diaz; Dairo Romero; Maria Rocha; Jaime Aragon; Andrea Figueroa; Tanagra Melgarejo; Alicia Fernandez, MD - (1)University of California, San Francisco

Special Topics 2

Demand and Supply of Telemedicine Services for Racial and Ethnic Minority High Schoolers Affected By Violence and Substance Use During the Pandemic

Chuka Nestor Emezue, PhD, MPH, MPA, CHES; Niranjan S. Karnik, MD, PhD, DFAPA, DFAACAP; Bushra Sabri, PhD, MSW; Adaobi Anakwe, PhD, MPH; Andrew Froilan, MSN, RN; Aaron Dunlap, MS; Jessica C. Bishop-Royse, PhD, MS; Dale Dan-Irabor, PhD; Qing Li, MD, DrPH; Wrenetha Julion, PhD, MPH, RN, FAAN, CNL - Rush University Medical Center

"Un Attracteur De Soins": Bringing People into Care. Qualitative Study of Interprofessional French Healthcare Clinicians' Attitudes Towards Opioid Agonist Therapy

Honora L. Englander, MD; Benjamin Rolland, MD; Marie Jauffret-Roustide, PhD - Service Universitaire d'Addictologie de Lyon, CH Le Vinatier, Hospices Civils de Lyon, Oregon Health & Science University

Evaluation of the Clinical Efficacy of an Application to Support Prescribing of Medication for Addiction Treatment

Andrea M Jodat, DNP, FNP-BC, CARN-AP; Samantha C Blakemore, MPH; Alicia S. Ventura, MPH; Tavita Hristova, BS; Victoria Rust, BS; Colleen LaBelle, MSN, RN-BC, CARN; Annie Potter, MSN, MPH, FNP-BC, CARN-AP - Boston Medical Center

Non-Abstinence Among US Adults in Recovery: Findings from the 2022 National Survey on Drug Use and Health

Emily Pasman, PhD, LMSW; Rebecca Evans-Polce, PhD; Ty Schepis, PhD; Curtiss W. Engstrom, MS; Vita V. McCabe, MD; Tess K. Drazdowski, PhD; Sean Esteban McCabe, PhD - University of Michigan

From Clinic to Consult Service: Navigating a Case of Ketamine Withdrawal

Jose Alejandro Castellanos, MD[1], **Cory Johnson, MD, MPH**[1], **Johanna Sluser, FNP-C, MSN**[1]; Paula Lum, MD, MPH - (1)University of California, San Francisco

Stigma

Silent Struggles: Unveiling Stigma in Healthcare with Perinatal Opioid Use Disorder

Rebecca Schapiro, MD[1], **Nia M Bhadra-Heintz, MD, MSc**[1]; Karampreet Kaur, MD - (1)Hospital of the University of Pennsylvania

Public Perceptions of Opioid Misuse Recovery and Related Resources in a Nationally Representative Sample of U.S. Adults

Olivia Golan, PhD; Alex Kresovich, PhD; Christina Drymon, PhD; Lori Ducharme, PhD; Elizabeth Flanagan Balawajder, MPH; Mateusz Borowiecki, BS; Phoebe Lamuda, SM; Bruce Taylor, PhD; Harold Pollack, PhD; John Schneider, MD - NORC at the University of Chicago

Effectiveness of the NO Stigma Simulation Suite in Reducing Stigma and Improving Attitudes and Empathy in Opioid Use Disorder Care: A Pilot Study

Mary K. McCurry, ACNP, ANP-BC, PhD, RN-BC; Jennifer Viveiros, CNE, PhD, RN; Mirinda B Tyo, PhD, RN; Monika Schuler, CNE, FNP-BC, PhD - University of Massachusetts Dartmouth

The Impact of Anti-Stigma Education in the Healthcare Field: A Program Design

Madison Walsh, MSc[1], **Cara Anne Poland, MD, MEd**[1]; Jamie K. Alan, RPh, PharmD, PhD; Robert Malinowski, PhD, DMV, MA; Mary Finedor; Brian Mcallister; Emily Beardsley - (1)Michigan State University

Stimulants 1

Combined Contingency Management for Stimulant Use Disorder and ART Adherence: An Implementation-Effectiveness Pilot in HIV Primary Care

Gabriela Milagro Steiner, Medical Student, MSc; Stefan Baral, MD; Elise Riley, PhD; Gabriel Chamie, MD, MPH; Steve Shoptaw, PhD; Monica Gandhi, MD, MPH; Phillip Coffin, MD, MIA; Ayesha Appa, MD - University of California, San Francisco

Implementation of Post-Overdose Outreach Program Strategies and Toolkit Modules for Overdose Survivors Who Use Cocaine and Methamphetamine

Sarah M. Bagley, MD; Allyson G. Cogan, MPH; Moriah Wiggins; Andrew Rolles, BA; Jiayi Wang, MS; C To, MSPH; Stephen P. Murray, MPH; Scott W. Formica, PhD; Sarah Kosakowski, MPH; Ziming Xuan, ScD, SM, MA; Justeen Hyde, PhD; Alexander Y. Walley, MD, MSc - Boston Medical Center, Boston University Chobanian & Avedisian School of Medicine

Harm Reduction in a Cocaine Research Study: A Case Report

Zachary Davis, BS[1], **Lily Margaret Caglianone, BS**[1], **Veronica M Bucci, BS**[1]; Shirley Stephenson APRN; Akilah Smith BA; Sarah Messmer MD; Dillon Thorpe BA; Niranjan S. Karnik MD, PhD - (1)University of Illinois Chicago

"You Want to Know the Person That's Lying There": Patient Experiences of Hospital-Based Care after a Stimulant-Related Overdose

Isabel H Lamont, BA; Shadi Nahvi, MD, MS; Mariya Masyukova, MD, MS; Teresa Lopez-Castro, PhD - Montefiore Medical Center/Albert Einstein College of Medicine

Supporting Hospitalized Adults with Stimulant Use Disorder Using a Mobile App Contingency Management Program

Linda Peng, MD; Hope Titus, BS; Kathleen Young, RN; Jon Peeples, MD; Rachel Lin, BS; Eugene Song, BA; Provo Roellich, BA; Robert Phillips, CADC; Honora Englander, MD - Oregon Health & Science University

Stimulants 2

Patient Characteristics Associated with Receipt of Contingency Management for Stimulant Use Disorder in the Veterans Health Administration

Madeline C Frost, PhD, MPH; Lara N. Coughlin, PhD; Lan Zhang, PhD; Devin C. Tomlinson, PhD; Lewei (Allison) Lin, MD, MS - Veterans Affairs Puget Sound Healthcare System

Rebuilding Hope: A Contingency Framework for Stimulant Use Among Unhoused

Anusha Chandrakanthan, FAAFP, MD - Valley Homeless Healthcare Program, Santa Clara Valley Medical Center

Understanding Resiliency in People Who Use Methamphetamine Demographically Matched to Acute Stimulant Toxicity Decedents

Nigel Anderson, BA; Grace Gundy; Vanessa M McMahan, PhD; Xochitl Luna Marti, MPH; Marley Antolin Muñiz; Yi-Shin Grace Chang, MPH; Sophia Tavasieff; Phillip Coffin, MD, MIA - San Francisco Department of Public Health

Harm Reduction Based Contingency Management for Stimulant Use Disorder

Surabhi Nirkhe, MD[1]; **Meredith Adamo, MD**[2] - (1)New York City Health + Hospitals/Bellevue, (2)San Francisco Department of Public Health

Tracking Methamphetamine-Involved Deaths in the US: What Are We Missing?

Rebecca Arden Harris, MD, MSc - University of Pennsylvania

Telehealth

Harm Reduction in Peer-Assisted Telemedicine for Hepatitis C: Secondary Outcomes of a Randomized Controlled Trial

Hunter C. Spencer, DO; Devin Gregoire, MS; Gillian Leichtling, BS; Megan Herink, PharmD; Andrew Seaman, MD; P. Todd Korthuis, MD, MPH; Ryan Cook, PhD - Oregon Health & Science University

Preliminary Findings on a Novel Buprenorphine Home Delivery Program and Retention in Telemedicine Treatment for Opioid Use Disorder in Texas

Marlene C Lira, MPH; Lauren E. Hendy, PhD; Alisha Liakas, ASW; Laura Turanchik, BA; Clare Pritchard, BSN, RN; Cynthia Jimes, PhD, M. Justin Coffey, MD - Workit Health

Telemedicine Hotline to Improve Access to Medications for Opioid Use Disorder — Illinois and MAR NOW

Nicole Gastala, MD[1], **Maria Bruni, PhD**[2]; Miao Jenny Hua, MD, MPH, PhD - (1)Substance Use Prevention and Recovery Division, (2)Family Guidance Centers, Inc.

Development and Implementation of a 24/7 State-Wide Telehealth Hotline for Initiation of Buprenorphine for People with OUD in Washington State

Olivia P Hood, MPH, CHES; Chris Buresh, MD, MPH, DTM&H; Lauren Whiteside, MD, MS; Callan Fockele, MD; Elizabeth Samuels, MD; Jessica Knuttel; Meg Flohr; Herbie Duber. MD, MPH, FACEP - University of Washington

Scaling a Virtual Buprenorphine Bridge Clinic: Outcomes and Lessons Learned

Patrick Joseph Dooley, CRS[1], **James S. Sherman, CRS**[1]; Jasmine S Barnes, MPH; Gilly Gehri, BA; Nicole O'Donnell, BA; Jon Pomeroy, DO; Emily Cubbage, BA; Susan McGinley, CRNP, MSN; Jeanmarie Perrone, MD; Margaret Lowenstein, MD, MPhil, MSHP - (1)University of Pennsylvania

Unhoused Populations

"Expedited Referrals" from SSP to OTP: Innovative Approaches to Reducing Barriers to Methadone Treatment for Patients Who Use Opioids and Experience Homelessness

Natalie Stahl, MD, MPH[1], **Avik Chatterjee, MD, MPH**[2], **Rebecca Weiner, MD**[1], **Amy Bositis, MSN**[1]; Carolyn Damato-MacPherson, MPH; Dianna Conole, MS; Sara Craney, Chrystie Towne - (1)Greater Lawrence Family Health Center, (2)Boston University Chobanian & Avedisian School of Medicine

A Qualitative Exploration of the Substance Use Impacts of a Large-Scale Hoteling Intervention for People Experiencing Homelessness in NYC during the COVID-19 Pandemic

Hannah Passmore, MPH; Stephanie Blaufarb, MPH; Robin Freeman; Carolyn Berry, PhD; Christiana Gozo, BA; Jocelyn Moran, BS; Fabienne Laraque, MD, MPH; Iris Rodriguez; Reesa Henderson; Kelly M. Doran, MD, MHS - New York University Grossman School of Medicine

Innovations at the Intersection of Homelessness and Substance Use during the COVID-19 Pandemic: A Scoping Review

Hannah Passmore, MPH; Stephanie Blaufarb, MPH; Rachel Krieger, MD; Sunny Tang, BA; Sofia Sacerdote, BA; Emily Lumbis, MPH; Kelly M. Doran, MD, MHS - New York University Grossman School of Medicine

What a Difference *This* Home Makes: Changes in Drug Use, HIV Risk and Prevention Behaviors Among Residents Relocated from Encampments to Low-Threshold Harm Reduction Housing Sites in Boston

Traci C Green, MSc, PhD; Joseph Silcox, MA; Sofia Zaragoza, BA; Sabrina Rapisarda, MA, M.Ed; Charlie Summers, BA; Patricia Case, ScD, MPH; Sarah Kosakowski, MPH; Clara To, MPH; Avik Chaterjee, MD - Brandeis University

A Qualitative Investigation of Methadone Treatment Experiences, Facilitators, and Barriers Among People Experiencing Homelessness with Opioid Use Disorder

Marina Gaeta Gazzola, MD; Emma Thompson, BS; Kim Hoffman, PhD; Gul Saeed, MD; Colin Baylen, MD, MSc; Lynn M. Madden, PhD; Kathryn F. Eggert, PhD, LCSW; Mark Beitel, PhD; Declan T. Barry PhD - The APT Foundation Inc., NYU Grossman School of Medicine and Bellevue Hospital Center

Viral Illness and Syringe Access 1

Stigma-Free Access to Harm Reduction Supplies: A Cross-Sector Approach

Shelby Arena; Joshua Lynch, DO, EMT-P, FACEP - MATTERS - UBMD Emergency Medicine

Long-Acting Injectable Antiretroviral Treatment Retention Among People with HIV Who Use Drugs

Nicky J Mehtani, MD, MPH; Sarah Strieff, RN; Alix Strough, RN; Kathleen O'Connor, BA; Sydney Yoon, BA; Barry Zevin, MD; Joanna Eveland, MD - University of California, San Francisco

Comparing Long-Acting Injectable Versus Oral HIV Antiretroviral Therapy for People Who Use Drugs

Kathleen O'Connor, Medical Student[1], **Nicky J Mehtani, MD, MPH**[2]; Sarah Strieff, RN; Alix Strough, RN; Sydney Yoon, Stephen Matzat, MD; Barry Zevin, MD; Joanna Eveland, MD - (1)SFDPH- Whole Person Integrated Care, (2)University of California, San Francisco

Associations between HIV Primary Care Provider Characteristics and Harm Reduction Acceptability: A Mixed-Methods Study

Mary Hawk, DrPH, LSW; Rabab Fathi Mohamed Ahmed, MD, MPH; Robert W.S. Coulter, PhD, MPH; Stephanie Lyn Creasy, MPH; James E. Egan, PhD, MPH; Mackey R. Friedman, PhD, MPH; Sarah Krier, PhD; Emma Sophia Kay, PhD, MSW - University of Pittsburgh

Forms of Intimate Partner Violence As Predictors of Substance Use Among Women Living with and without HIV

Shannon N Ogden, MPH; Paul Shafer, PhD; Melissa Dichter, PhD, MSW; Jack Clark, PhD; Mirjam-Colette Kempf, PhD, MPH; Deborah Jones Weiss, PhD; Gina Wingood, ScD, MPH; Aruna Chandran, MD; Mardge Cohen, MD; Jennifer Jain, PhD; Lakshmi Goparaju, PhD; Tracey Wilson, PhD; Adebola Adedimeji, PhD, MBA, MPH, MS; Danielle Haley, PhD, MPH - Boston University School of Public Health

Viral Illness and Syringe Access 2

Harm Reduction Supply Distribution Via Vending Machines: 8-Month Outcomes for a California Veterans Affairs Health Care System

Tessa Lynne Rife-Pennington, PharmD, BCGP; Michael Douglas, BS, MS - San Francisco Veterans Affairs Health Care System, University of California, San Francisco

Multi-Site Harm Reduction Kit Implementation and Distribution

Margaret Shang, MD[1], **Raagini Jawa, MD**[2]; Ariana Freund, BS; Gary McMurtrie, BA; Olivia Studnicki, BS; Natalie Leonard; Meghan GaNung, LCSW; Hannah Scears; Jane Liebschutz MD, MPH, FACP - (1)University of Pittsburgh Medical Center, (2)University of Pittsburgh

Lower the Barriers: Treatment of Hepatitis C in an Opiate Treatment Program

Laura Pugh, MD; Soraya Azari, MD - University of California, San Francisco

Increases in PrEP Awareness but Not PrEP Use Among People Who Inject Drugs

Hunter C. Spencer, DO - Oregon Health & Science University

Operationalization of Long-Acting Pre-Exposure Prophylaxis for Socially Vulnerable Populations

Sydney Yoon, BA; Kathleen O'Connor, BA; Alix Strough, RN; Sarah Strieff, RN; Barry Zevin, MD; Joanna Eveland, MD; Nicky Mehtani, MD, MPH - San Francisco Department of Public Health

Welcome Reception and Poster Session

Evaluation of an OUD Consult Service on Success of Post-Acute Care Discharge Recommendations for Hospitalized Patients with OUD

Anya Agrawal, MD[1], **Megan Muller, MD Candidate**[2]; Mim Ari, MD; Nikita Thomas, MSPH; George Weyer, MD - (1)University of Chicago Medicine, (2)University of Chicago Pritzker School of Medicine

Taking Contingency Management from Conceptualization to Clinical Practice

Justin Alves, NP, RN; Rachel Xue, BA; Huixiong Qin, PhDc; Jiarui Zhang, PharmD - Boston University Chobanian & Avedisian School of Medicine

"We Need More GPs Trained in Addiction": Patient Perspectives on Addiction Care in Primary Care Settings

Nikki Kalani Apana, BA; **Irina Kryzhanovskaya, MD** - University of California, San Francisco

Providing Family Centered Recovery Care in Pediatric Clinical Settings: A Social Work and Community Health Worker Framework

Jill Baker, LICSW[1], **Alison Cohan, LICSW**[1]; Mei Elansary, MD, MPhil; Sara Stulac, MD, MPH; Jill Kasper, MD; Emma Prescott, BA; Caitlyn Dusthimer, MSW - (1)Boston Medical Center

Integrating a Modified Contingency Management Intervention for Youth with Psychosis and Frequent Substance Use in a Community-Based Coordinated Specialty Care Program

Agata Bereznicka, MPH; Sarosh Khan, DO; Ellie Reagan, BS; Anne Berrigan LICSW; Christian Wulff, LCSW; Hannah E. Brown, MD; Amy M. Yule, MD - Boston Medical Center

A Low Cost, Low Technology Intervention for Hospitalized Patients Who Inject Drugs Is Feasible for Increasing Evidence-Based Addiction Care but HIV PrEP Uptake Remains Limited

Tanvi Bhadkamkar, BS; Kelly Gagnon, PhD; KeDarius Ingram, MPH; Marry Figgat, PhD; Mariel Parman, MPH; Sara Asgari, PhD; Stephen O'Rear, BS; William Bradford, MD; Ellen Eaton, MD - UAB Heersink School of Medicine

Changes in Opioid Use Disorder Treatment during COVID-19 and Their Impact on American Indian/Alaska Native Communities

Chyla Bingham-Hendricks, BSN, PhD Student; Teri Aronowitz, FAAN, FNP-BC, PhD; Shoshana V Aronowitz, PhD, MSHP, FNP-BC; Autaquay Peters-Mosquera, BSN, MBA; Cedric Woods, PhD - University of Massachusetts Chan Medical School

Does Knowledge of the Peer Support Worker Role in Substance Use Disorder Treatment and Recovery Organizations Differ across Role and Organization Type?

Brittany A Blanchard, MPH, RN; Bridget Coffey, MSW; Lindsey VonDras, MSW; Nico Ruiz, Katie Brown, MSW; Andrew Littlefield, PhD; Rachel Winograd, PhD - University of Missouri, St. Louis

Scurvy: An Unusual Complication of Alcohol Use Disorder

James Blumline, MD; Andrea Smith, DO - Henry Ford Health System

Does Illicitly Manufactured Fentanyl Use Impact the Experience of Opioid Withdrawal Among Community-Recruited People Who Inject Drugs?

Ricky N Bluthenthal, PhD; Kelsey Simpson, PhD; Jesse Goldshear, PhD; Gilbert Orta Portillo, MPH; Siddhi Ganesh, BS; Eric Kovalsky, BFA; Patricia Wilkins, BA; Karen Corsi, ScD; Jimi Huh, PhD. - University of Southern California

Eastern Missouri's Engaging Patients in Care Coordination (EPICC) 2016-2023: An Examination of Racial Differences in Intake Completion and Treatment Retention

Kanila L Brown, MA; Katherine Brown, MPA, MSW, LCSW; Saad Siddiqui, MPH; Maria Paschke, MPP; Devin Banks, PhD; Wendy Orson, MS, LPC; Rachel Winograd, PhD - University of Missouri, St. Louis

Leveraging Asynchronous Learning to Satiate Prescriber Compliance for the Medication Access and Training Expansion (MATE) Act

Stephen C Butkus, MS; Laura Harrison, MPH; Annabella Salvador, MD; Mary Strong, MA; Donna Puliafico; Beth Gary; Sandeep Kapoor, MD, MS-HPPL - Northwell Health, Hofstra University

Improving Tuberculosis (TB) Testing and Treatment of Latent Tuberculosis Infection (LTBI) in Patients with Substance Use Disorders (SUD) at a Community Health Center in Seattle, Washington

Nayeli Cabrera Sanchez; G Bond; A Khan; Y Sorri; M Narita; S Chansombath; LD Yerram; R Calderara, APRN - International Community Health Services

Use of Cessation Resources and Quit Attempts Among Parents and Adolescents Participating in a Pilot Randomized Control Pediatric Clinic Based Smoking and Vaping Cessation Intervention

Nicholas Chadi, MD, MPH; Crystal Namuhoranye, MSc; Emile Diamant; Tamara Perez, MSc; Olivier Drouin, MD, MSc, MPH - University of Montreal

A Machine Learning Risk Prediction Model for Predicting Treatment Retention in Medication for Opioid Use Disorder

Jin Cheng, MD; Karl Rexer, PhD; Vishwajit L Nimgaonkar, MD, PhD; Bharat Rao, PhD; Jon D. Walker, PhD; Joel Wood, BS; Andrew Russo, MBA; Cody Harrington, PA; Anoop Kalia, MD; Tae Woo Park, MD - Pittsburgh VA Medical Center

Utilizing Dyadic Perspectives to Address Family Stigma and Attitudes Towards Medication for Opioid Use Disorder (MOUD) Among Women

Jessica L. Chou, PhD, LMFT; David S. Bennett, PhD; Erika Feeney, MS; Sharlene Irving, MBA; Barbara Schinder, MD - Drexel University

Exploring the Role of Polysubstance Use Disorders on Depression and Suicidality Among Residential OUD Patients

Carolyn Clinton, BS; Kevin Wenzel, PhD; Jennifer Carrano, PhD; Sophia Solan, MPS; Julia Thomas, BS; Praveena Machineni, MD; Marc Fishman, MD - Maryland Treatment Centers

Pharmacist Involvement in Motivational Interviewing Intervention for Patients with Prescription Opioid Misuse Behaviors

Gerald Cochran, MSW, PhD; Katie Kinsey, LCSW; Grace Broussard, SSW; Yingjia Wei, MS; Craig Field, PhD; Nicholas Cox, PharmD; Ashley White, CMHC - University of Utah

What Is My Job, Anyway? A Textual Analysis of Peer Support Worker Job Postings

Bridget Coffey, MSW; Brittany Blanchard, MPH, RN; Lindsey Vondras, MSW; Katherine C. Brown, MPA, MSW, LCSW; Jameala Jones, BSP; Rachel P. Winograd, PhD - University of Missouri, St. Louis

Evaluation of Barriers and Interventions for Emergency Department-Initiated Naltrexone for the Treatment of Alcohol Use Disorder

Ivan Covarrubias, MD; Jeanmarie Perrone, MD, FACMT; Hannah Dart, MS; Laurel Adams, MBA; Kit Delgado, MD, MS - University of Pennsylvania

Culturally Tailored Treatment for Latines with a History of Adverse Childhood Experiences, Suicidality, and Current Substance Use Disorders

Melinda D'Ippolito, LICSW, MPH; Akeem Modeste-James, PhD Candidate; Therese Fitzgerald, PhD; Emily Stewart, BA; Diliana DeJesus, MA; Melisa Canuto, LCSW; Micaurys Guzman, BSW; Jessica Mateo, BA; Lena Lundgren, PhD - Casa Esperanza, Inc.

Inpatient Addiction Medicine Consult Rotation Improves Learning Outcomes

Luke Davis, MD[1]; **Dale Terasaki, MD, MPH**[2] - (1)University of Colorado Anschutz, (2)Denver Health

Traveling to the Bus: A Retrospective Study of Distance Traveled to Reach a Mobile Buprenorphine Unit

Zachary Davis, BS; Jennie Jarrett, PharmD, PhD; Albert Murphy, MPH; Antonio David Jimenez, PhD; Stockton Mayer, DO; Abigail Elmes, PharmD; Sarah Messmer, MD - University of Illinois Chicago

Integrating Addiction Medicine into a Liver Transplant Program

Triveni DeFries, MD, MPH; Laura Pugh, MD; Riley Tan, BS; Davina Martinez, LCSW, MSW, MPH; Mandana Khalili, MD; Courtney Sherman, MD - University of California, San Francisco

The Road to Recovery Initiative – Preliminary Results from Year 1 of a Novel Program of Substance Use Care in Vancouver, Canada

Brittany Dennis, MD; Travis de Wolfe, PhD; Erika Mundel, PhD; Harmony Johnson, MHA; Andrea Ryan, MD; Seonaid Nolan, MD - University of British Columbia

Medications for Opioid Use Disorder: Optimizing Withdrawal Management in the Treatment of Endocarditis

Melina Diaz Pellot, DO; Divya Venkat, MD; Hannah Cawoski, PharmD - Allegheny Health Network

Assessing and Addressing SUD Stigma Amongst Medical Students Using Interactive Modules

Cerelia Donald, BS, MS; Angela Caldwell, Medical Student; Gabrielle Simcoe, BS; Lillia Thumma, BS; Alison Patev, PhD; Kristina Hood, PhD; Caitlin E. Martin, MD, MPH, FACOG, FASAM - Virginia Commonwealth University School of Medicine

Methadone and QT Prolongation: Supporting Patient Autonomy

Anne B. Duckles, MD, MPH; Sean Schlossers, MD - Cooper University Hospital

The Black Hole: A Case of Persistent DXM-Induced Psychosis

Anne B. Duckles, MD, MPH; Ryan Schmidt, MD - Cooper University Hospital

Beyond Endocarditis: An Interprofessional Plan of Care Process to Address Substance Use Disorder (SUD) and Comorbid Infections

Philip Durney, MD; Aidan Rodgers, LCSW; Carolyn Kramer, MD; Rebecca Jaffe, MD; Matthew Mackley, CRS - Thomas Jefferson University Hospital

The Relationship between Maternal Adverse Childhood Experiences (ACEs) & Perinatal Substance Use (PSU): A Scoping Review

Bethany A Emery, MSN, RN; Clayton J. Shuman, PhD, MSN, RN - University of Michigan

Naloxone Vending Machines in Healthcare Settings

Elizabeth G English, BS; Christian Carlson, PharmD, MBA; Jillian DiClemente, PharmD; Beth Jones, MS; Mary Dwan, BS; Chin Hwa (Gina) Dahlem, PhD, FNP-C, FAANP - OPEN

The Syndemic of Substance Use, HIV Vulnerability, and Incarceration in Washington State

Winter Forsyth, MD Candidate; Skye Holme, MD Candidate; Emily Callen, PhD; Susan Graham, MD, MPH, PhD; Helen Jack, MD - University of Washington

PCPs Pass on Grass: A Pilot Survey of Opioid Treatment Agreements Enforcement By Primary Care Providers

Martin Clendenning Fried, MD, FACP; Shivam Joshi, MS, MBA; Larisa Svirsky, PhD; Nathan Richards, PhD; Nicole Thomas, PhD; Dana Howard, PhD - Ohio State University

One-Year Feasibility of Emergency Department Fentanyl Test Strip Distribution across a Large Urban Health System

Marina Gaeta Gazzola, MD; Chelsea Hayman, MD; Danielle Wright, MD; Jung G. Kim, PhD, MPH; Ian Wittman, MD; Nicholas Genes, MD, PhD; Kelly M. Doran, MD, MHS; Dowin H. Boatright MD, MBA, MHS - NYU Grossman School of Medicine and Bellevue Hospital Center, The APT Foundation Inc.

COVID-19 Vaccination Rates and Hesitancy Among Postpartum Individuals with Substance Use Disorders

Bridget M Galati, DO; Shannon McGuire, MD; Michael Wenzinger, MD; Cynthia Rogers, MD; Jeannie Kelly, MD, MS - Washington University School of Medicine

A Survey of Opioid Overdose Preparedness in Texas School Districts

Sofia Alejandra Garcia, PharmD Candidate; Jessica Duncan Cance, MPH, PhD; Andres Temblador, MA; Erin Erickson; Heather Kane, PhD; Lindsey J. Loera, PharmD; Lucas G. Hill, PharmD - The University of Texas at Austin College of Pharmacy

Initiation of Medications for Alcohol Use Disorder in Hospitalized Patients

Christopher Garcia-Wilde, MD; Claire W Garpestad, MD; Linda Wang, MD - Icahn School of Medicine at Mount Sinai Hospital

Exploring Therapeutic Logics in Adult Drug Treatment Court

Michayla Gatsos, MA; Jennifer Carroll, MA, MPH, PhD; Bayla Ostrach, MA, PhD - North Carolina State University

Examining the Racial Disparities in Receipt of Medication for Opioid Use Disorder Among Pregnant Persons: A Meta-Analysis

Grace I Gerdts, BS, MPH; Katherine Sale, MPH; Nichole Nidey, PhD - University of Iowa College of Public Health

Characteristics of Ongoing Clinical Trials for Cocaine Use Disorder Registered on Global Clinical Trial Databases

Fernanda Gushken, MD; Vitor Tardeli, MD, PhD; Thiago Marques Fidalgo, MD, PhD - Johns Hopkins University School of Medicine

Utilizing Environmental Scans in Learning Collaboratives with African American Faith-Based Leaders to Address Substance Use and Social Determinants of Health

Holly N Hagle, PhD; Dawn Tyus, PhD; An-lin Cheng, PhD; Kaleea Lewis, PhD; Sarah Trompeter, MS; Quandra Blackeney, PO; Akshat Gandi, MS; Ashley Helle, PhD; Laurie Krom, EdD; Gavin Bart, MD, PhD - University of Missouri, Kansas City

A Multidisciplinary Approach to Increasing Treatment of Alcohol Use Disorder in an Urban Academic Emergency Department

Sierra A Hajdu, MD; **Richard J Ryan, MD** - University of Cincinnati College of Medicine

Differences in Harm Reduction Acceptability and Stigma across Health Professionals' Level of Harm Reduction Education

Rebekah S Halmo, LCSW, MSW, PhD; **Cali-Ryan Collin, LICSW, MSW, PhD** - Northeastern University

Addressing Substance Use-Related Stigmatizing Attitudes Among Prelicensure Nursing Students: A Pilot Study

Alyssa C. Hamel, DNP, PMHNP-BC, RN; Tamar Rodney, PhD, RN, PMHNP-BC, CNE, FAAN; Tammy Slater, DNP, MS, ACNP-BC; Khadejah F. Mahmoud, PhD, MSN; Deborah S. Finnell, PhD, RN, CARN-AP, FAAN - University at Buffalo

Enhancing the End-of-Life Care for a Patient with Substance Use Disorder: Exploring the Impact of Compassionate Advocacy in Addiction Medicine on Quality of Life and Systemwide Practices

Megan Heeney, MD[1], Elijah Lustig, DO[1]; Lauren R Sirey, PharmD; Kay Lind, MD; Erik Anderson, MD – (1)Highland Hospital - Alameda Health System

Increasing Buprenorphine and Naloxone Access in Texas Community Pharmacies through a Mailed Academic Detailing Intervention

Lucas G. Hill, PharmD; Sorina B. Torrez, PharmD, MSc; Kirk E. Evoy, PharmD; Lindsey J. Loera, PharmD; Kenneth A. Lawson, PhD; Kelly R. Reveles, PharmD, PhD - The University of Texas at Austin College of Pharmacy

Development and Evolution of a Tobacco Treatment Specialist Training for Healthcare Professionals in Kansas

Tresza D. Hutcheson, PhD; Caroline Rodriguez; MeLinda Lair; Kimber Richter, PhD, MPH; Babalola Faseru, MD, MPH - University of Kansas Medical Center

Priority Interventions for Improving Health Outcomes for People with Injection-Drug Related Infections: A Mixed Methods Study

Kayla Hutchings, MPH; Cristina Chin, LMSW, MPH; Giselle Appel, BA; Matthew Scherer, MD; Alexis Vien, MD; Jon Avery, MD; Shashi Kapadia, MD, MS - Weill Cornell Medicine

Flexible Approaches to Buprenorphine Initiation in the Era of Fentanyl - a Case Series

Zina Huxley-Reicher, MD[1,2], **Matthew Holm, MD**[3]; Kristine Torres-Lockhart, MD; Laila Khalid, MD - (1)NYC Health and Hospitals, (2)Woodhull Hospital, (3)Montefiore Medical Center/Albert Einstein College of Medicine

Meeting an Urgent Need: Addressing Alcohol Use through Virtual Education

Andrea M Jodat, DNP, FNP-BC, CARN-AP[1,2], **Victoria S Rust, MAS**[1]; Justin Alves, MSN, FNP-BC, CARN; Brittany Carney, DNP, FNP-BC; Colleen LaBelle, MSN, RN-BC, CARN; Alicia Ventura, MPH - (1)Boston Medical Center, (2)Boston University Chobanian & Avedisian School of Medicine

Opioid Antagonist Knowledge, Preferences, and Practices Among Substance Use Service Providers in Texas

Emily D Johnson, PharmD Candidate; Lucas G. Hill, PharmD; Andres Temblador, MA; Daniel S. Sledge, LP; Sorina B. Torrez, PharmD, MSc; Lindsey J. Loera, PharmD - The University of Texas at Austin College of Pharmacy

Anytime, Anywhere: Examining Low-Barrier Buprenorphine for Recently Incarcerated Individuals

Vivian N Kalu, MD; Thomas Robertson, FACP, MD; Divya Venkat, MD - Allegheny Health Network

Examining Treatment Engagement and Retention in Care at a Low-Barrier Mobile MOUD Clinic

Vivian N Kalu, MD[1], **Aaron Arnold, MPH**[2]; Leanna Bird, MPPM, MA; Elizabeth Cuevas, FACP, FASAM, MD; Divya Venkat, MD - (1)Allegheny Health Network, (2)Prevention Point Pittsburgh

A Pilot Evaluation of a Same-Day Addiction Consult Service for Rural Veterans

Amy J. Kennedy, MD, MS; Madeline C. Frost, PhD, MPH; Carol Malte, MSW; Jessica J. Wyse, PhD; Hildi Hagedorn, PhD; Eric Hawkins, PhD; Geetanjali Chander, MD, MPH - University of Washington

Strategies to Improve Uptake and Delivery of Evidence-Informed, Equitable Care Guidelines for Hospitalized Pregnant People with SUD: A Scoping Review

Carla King, MPH; Adetayo Fawole, MD, MPH; Gregory Laynor, PhD; Jennifer McNeely, MD, MS; Mishka Terplan, MD, MPH; Matthew Lee, DrPH, MPH; Sugy Choi, PhD - New York University Grossman School of Medicine

Developing Culturally Responsive TA Approaches for Tribal Opioid Response Grantees and Indigenous Communities

Michael Knabel, MSc; Brooke Fischer, MSc; Shelby Webb, MPH; Nathan Driskill, MA; Krystal Burghoff, MPH; Rory McKeown, MPH; Holly Hagle, PhD; Laurie Krom, MS; Kathryn Cates-Wessel; Frances Levin, MD; Aimee Campbell, PhD - University of Missouri - Kansas City

Asynchronous Online Training Increased Primary Care Clinicians' Knowledge, Confidence, and Intent to Provide Substance Use Disorder Prevention and Treatment

Alicia Kowalchuk, DO; Roger Zoorob, MD, MPH; Sung In Kim-Vences, MD, MPH; Jacqueline Hirth, PhD, MPH; Kylie Schaper, MPH, CHES; Larissa Grigoryan, MD, PhD; Sandra Gonzalez, PhD, LCSW - Baylor College of Medicine

An Evaluation of Destigmatizing Addiction Medicine Training Session in Primary Care Addiction Medicine Clinic

Irina Kryzhanovskaya, MD; Debora Ghosh, BA; Jessica Tyler Ristau, MD - University of California, San Francisco

Medical Students As First Responders: CPR and Naloxone Training in the Opioid Overdose Death Epidemic

Irina Kryzhanovskaya, MD; Ciaran Murphy, Medical Student; Uwaila Omokaro, BS; Eric Isaacs, MD - University of California, San Francisco

A Kratom Conundrum: A Case of Kratom Use Disorder

Sienna Kurland, MD MPH - University of California, San Francisco

A Synthetic Control Analysis of Marijuana Legalization's Effect on State Overdose Mortality Rates

Benjamin Lewis, MSc; David Rand, PhD - Massachusetts Institute of Technology

Utilizing Transdermal Fentanyl As a Bridge to Buprenorphine Therapy in an Inpatient Setting: Challenges and Opportunities

Li Li, MD;PhD[1], **Davis Bradford, MD**[2]; Gwendolyn Allen; Brad Bradley, PharmD - (1)University of Alabama at Birmingham Hospital, (2)University of Alabama at Birmingham

Bridge to Recovery: Linkage of Patients with Opioid Use Disorder to an Opioid Treatment Program for Methadone Continuation after Hospital Discharge

Alyssa A Lombardi, MD[1], **Jessica Heil, MSPH**[1]; Alice V Ely, PhD; Mary Carney, MD; Matthew Salzman, MD, MPH; Rachel Haroz, MD - (1)Cooper University Health Care, Center for Healing, Division of Addiction Medicine

An Ounce of Prevention Versus a Pound of Cure: A Case Report of Ketamine for Precipitated Withdrawal after Denial of Access to Methadone

Emily Loscalzo, PsyD, MAC, NCSE; Waleed Bashir, DO; Shannon Harrington, DO; James Baird, DO - Inspira Health, Rowan-Virtua School of Osteopathic Medicine

Assessment of a Michigan Overdose Fatality Review Team: Implementation and Feasibility

Whitney A Ludwig, MPH; Rachel Jantz, MPH; Rebecca Egbert, BS; Mary Dwan, BA; Eve Losman, MD, MHSA; Robert Ploutz-Snyder, PhD, PStat®; Carol Boyd, PhD, RN, FIAAN, FAAN; and Gina Dahlem, PhD, FNP-C, FAANP - University of Michigan

Impacts of Personal and Family Experiences of COVID-19 Infection on Health-Related Quality of Life Among Patients with Opioid Use Disorder: A Cohort Study

Kara M Magane, MS[1], **Zoe Weinstein, MD, MS**[2]; Sara Lodi, PhD; Margaret Shea, MS; Clara A. Chen MHS; Angela Bazzi, PhD; Melissa Davoust, PhD, MSc; Alicia S. Ventura, MPH; Samantha Blakemore, MPH; Richard Saitz, MD, MPH - (1)Boston University School of Public Health, (2)Boston University Chobanian & Avedisian School of Medicine

Challenges in Buprenorphine Initiation in Pregnant Patients: Optimizing Rapid Buprenorphine Induction Protocol on the Inpatient Antepartum Service

Genevra E Magliocco, MPH[1], **Cecily May Barber, MD, MPH**[2]; Erica Holland, MD; Alyssa Peterkin, MD; Emily Rosenthal, MD; Kelley Saia, MD; Zoe M Weinstein, MD; - (1)Boston University Chobanian & Avedisian School of Medicine, (2)Boston Medical Center

Comparing Multidisciplinary Service Utilization By Pregnant Individuals Receiving Care in an Integrated OB/Addiction Clinic Pre and Post Implementation of a Dedicated Clinical Social Worker

Caitlin E Martin, MD, MPH; Andrea-Kayle Andaya, BS; Anna Beth Parlier-Ahmad, MS; Michelle Eglovitch, MPH; Lillia Thumma, BS; Michelle Culbert; Kalie Owen, LCSW - Virginia Commonwealth University

Project Better: Outcomes at the Pregnancy-to-Postpartum Transition from a Pilot Clinical Trial of a Technology-Delivered Intervention for Birthing People Receiving Medication for Opioid Use Disorder

Caitlin E Martin, MD, MPH; Katherine Tyson, MD; Michelle Eglovitch, PhD Candidate; Sarah Martin, MD; Lillia Thumma, BS; Dace S. Svikis, PhD; Kyle Pearson, RN; Anna Beth Parlier-Ahmad, MS - Virginia Commonwealth University

Recovery-Oriented Patient Reported Outcomes Among Pregnant People Receiving Medication for Opioid Use Disorder

Caitlin E Martin, MD, MPH; Sarah Martin, MD; Michelle Eglovitch, MPH, MS; Lillia Thumma, BS; Dace S. Svikis, PhD; Marjorie Scheikl, RN; Anna Beth Parlier-Ahmad, MS - Virginia Commonwealth University

Patients, Colleagues, Systems, and Self: Exploring Layers of Physician Emotions in Caring for Pregnant People Who Use Substances and Their Newborns

Noelle Martinez, MD, MPH; Dominika L. Seidman, MD, MAS; Heather Briscoe, MD; Crystal M. Hayes, PhD, MSW; Ekene I. Ojukwu, MD, MSc; Dafna Paltin, BS; Sarah CM Roberts, DrPH - VA San Diego Healthcare System

High Dose Opioid Agonist Therapy for Patients with Opioid Use Disorder during Acute Hospitalizations

Jennifer Marx, BSN, MD Candidate, RN; Priya Nigam, BS; Omolara Olasimbo, BS; Vikranth Induru, MD; Ho-Man Yeung, MD - Lewis Katz School of Medicine at Temple University

Trends in Medical Use, Nonmedical Use, Diversion Sources, and Perceived Availability of Prescription Stimulants, Opioids, and Benzodiazepines Among US Adolescents, 2009-2022

Sean Esteban McCabe, PhD; Emily Pasman, PhD; Timothy E. Wilens, MD; Ty S. Schepis, PhD; Vita V. McCabe, MD; Jason Ford, PhD; Philip Veliz, PhD - Center for the Study of Drugs, Alcohol, Smoking and Health, School of Nursing, University of Michigan, Institute for Research on Women and Gender, University of Michigan, Institute for Social Research, University of Michigan

Inpatient Pharmacist Comfortability with Opioid Use Disorder Medication Orders

Andrew Merker, PharmD, BCPS, BCIDP; Katie Koss, PharmD; Jenna K. Nikolaides, MD; Tran Tran, PharmD - University of Chicago

Supporting Patients with Alcohol Use Disorder through Lifestyle Changes Using Design Thinking: A Model for Internal Medicine Residency Curricular Intervention

Cyrus Mirzazadeh, MD; Ilan Remler, MD; Ryan Berman PsyD; Somalee Banerjee, MD, MPH - Kaiser Permanente Oakland

Elevated Spirits: The Role of Campus Cultural Norms on Hazardous BAC and Audit Scores

Benjamin N Montemayor, PhD; Arham F Hassan; Sara Flores, MS - Texas A&M University School of Public Health

A Complex Case of Chronic Pain and Iatrogenic Opioid Use Disorder Successfully Treated By an Inpatient Addiction Medicine Service

Jenna K Nikolaides, MD; Emily (Cass) Casselbury, BA, MSN, FNP-BC - Rush University Medical Center

Women's Perspectives on the Influence of Their Experiences of Intimate Partner Violence on Their Substance Use Behaviors and Substance Use Disorder Recovery Journey

Shannon N Ogden, MPH; Melissa Dichter, PhD, MSW; Erin Major, BA; Danielle Haley, PhD, MPH; Paul Shafer, PhD; Jack Clark, PhD - Boston University School of Public Health

The Influence of Trauma on Emotional Regulation in Male Substance Treatment Residents

Nyanhial Pal; Alexa Barret, MA; Jaimie Elowsky, MA; Ellie Reznicek; Riah Engel; Dennis McChargue, PhD - University of Nebraska-Lincoln

Postoperative Pain Management While on Extended-Release Buprenorphine: A Case Report of Supplementing with Sublingual Buprenorphine

Haley Pals, PharmD, BCPP[1], **Wendy Yim, Physician**[1]; Tessa Burghardt, PharmD; Jonathan Henry, MD - (1)Tomah VA Medical Center

Inpatient Addiction Consult Services: Insights and Recommendations from Six Model Programs in Massachusetts

Ranjani K Paradise, PhD; Erin McPherson, MPH; Nithershini Narayanan, MPH, BDS - Institute for Community Health

An Anti-Stigma Curriculum for Medical Trainees Caring for Hospitalized People Who Use Drugs

Molly M Perri, MD, MEd[1,2]; **Mim Ari, MD**[1] - (1)University of Chicago, (2)Yale

Peer-to-Peer Opioid Overdose and Naloxone Training in Adolescents

Talia Puzantian, PharmD, BCPP[1], **Oliver Jack Atkinson**[2], **Jerry Liu**[2], **Joel Solomon**[2]; Elizabeth Parga, MS - (1)Keck Graduate Institute, (2)La Salle College Preparatory

Persistent Opioid Withdrawal Symptoms in a Patient with OUD and Chronic Pain on Buprenorphine with an Intrathecal Morphine Pump

Lily Rabinow, MD, MS; **Kristine E. Torres-Lockhart, MD** - Montefiore Medical Center/Albert Einstein College of Medicine

Buprenorphine for Pain in Sickle Cell Disease: A Case Series

Nadera Rahman, MD; Jennifer Afranie-Sakyi, MD; Gabriel Enciso, MD; Stephen Holt, MD, MS; Sami Hamdan, MD, MPH - Yale University School of Medicine

Sexual Dysfunction in Women Taking Medications for Opioid Use Disorder: A Review of the Literature

Mary A Reiber, BS, MD Candidate[1], **Kelsey N Lawrence, Medical Student**[1]; Eliza Burr, BA; Jonathan Stoltman, PhD - (1)Michigan State University College of Human Medicine

Exploring the Role of Racial and Ethnic Identity on Impersonal Sex Attitudes and Behaviors Among College Students with Early Trauma and High-Risk Alcohol Consumption

Ellie Reznicek; Jaimie Elowsky, MA; Nyanhial Pal; Riah Engel; Alexa Barrett, MA; Patrick Duryea, MA; Ashlin Ondrusek, BA; Therese Wang, MA; Anne Haines, MA; Alicia Earl, PhD; Mamauag BVL; Antover Tuliao, PhD; Dennis McChargue, PhD - University of Nebraska - Lincoln

The Use of Spirituality during the Recovery Process for Older African Americans

Joyce Roberson-Steele, LMSW, PhD - Medgar Evers College

Texas Community Pharmacists' Knowledge, Perceptions, and Practices Related to Dispensing Buprenorphine for Opioid Use Disorder: A Cross-Sectional Online Survey

Kristopher Rodriguez, PharmD Candidate; Lindsey J. Loera, PharmD; Sorina B. Torrez, PharmD, MSc; Andres Temblador, MA; Lucas G. Hill, PharmD - The University of Texas at Austin College of Pharmacy

Characterizing Utilization of Medications for Opioid Use Disorder (MOUD) By Formulation in a National VA Dataset, 2002-2020

Payel Jhoom Roy, MD; Katie Suda, PharmD, MS, FCCP; Yaming Li, MD, MS; Taylor Boyer, MPH; Michael Durkin, MD, MPH - University of Pittsburgh School of Medicine

Training Internal Medicine Residents to Treat Addiction: Building an Addiction Medicine Elective Curriculum

Kara M Ryan, MD; Alexis Vien, MD - New York Presbyterian - Weill Cornell Medical Center

“Don’t Take Me Off the Meds, Doc!” the Challenges of Providing Patient-Centered, Guideline-Driven Care for Patients with Chronic Pain in Primary Care

Kara M Ryan, MD - Weill Cornell Medicine

Examination of the Relationship between Anticipated Intersectional Discrimination and Receipt of Tobacco Cessation Services and Quit Attempts Among Individuals in Substance Use Treatment

Elyssa Y. Samayoa, BS; Nadra E. Lisha, Ph.D; Jennifer Le, BA; Caravella M. McCuistian, PhD - University of California, San Francisco

Using Structured Clinical Examinations to Teach Future Physicians Effective Communication Strategies Around Substance Use

Lokesh Shah, MD[1,2], **Jillian Zavodnick, MD**[2]; Lauren Kairys, MSc; Abigail Kay, MD; Robert Sterling; Lara Carson Weinstein, MD - (1)Cooper University Hospital, (2)Thomas Jefferson University

"I'm Still Finding My Way": A Longitudinal Analysis of Newly Certified Peer Specialist Employment Trajectories

Elizabeth Siantz, PhD, MSW; Morgan Pelot, PhD student; Laysha Ostrow, MPA, PhD - University of Utah

Analyzing Barriers and Facilitators to Harm Reduction Addiction Care Among Hospitalized Patients

Isabelle Sillo, MD Candidate; Sophia Chertock, Medical Student; Cameron K Ormiston, MD Candidate - Icahn School of Medicine at Mount Sinai Hospital

Opioid Use Disorder Community Outreach: Reducing Stigma and Building Community Access to Narcan

Tanya R Sorrell, PhD, PMHNP-BC, FAANP; Keisha House, DNP; Paige Pickerl, LCSW - Rush University Medical Center

Physical Therapy Onsite at Opioid Treatment Programs: Tailoring a Research Intervention for Individuals with OUD and Chronic Low Back Pain

Joanna Starrels, MD, MSc; Jamie Savitzky, PT, DPT; Donnie Chan, PT, DPT; Kelly Lockwood, PT, MHS, DPT; Matthew Bartels, MD, MPH; Stephanie Rand, DO; Megan Ghiroli; Mary Hribar, MPP; Leonard Gill; Melissa Stein, MD; Caryn R Rodgers, PhD; Dinah Ortiz; Emma Kaywin, EdD; Genevieve Bryant; Genesis Estremera; Jennifer Hidalgo, MS; Jennifer Rodriguez; Justina Groeger, MD; Hector Perez, MD; Shadi Nahvi, MD, MS - Montefiore Medical Center/Albert Einstein College of Medicine

Adverse Events with Using Short-Acting Full-Agonist Opioids to Treat Inpatient Opioid Withdrawal

Gabriela Milagro Steiner, Medical Student, MSc; Leslie Suen, MD; Marlene Martin, MD; Sasha Skinner, MPH; Pierre Crouch, PhD, NP; Oanh K Nguyen, MD; Kristen Slown, PharmD; Alexander Logan, MD - University of California, San Francisco

Reconsidering the Care Cascade for Opioid Use Disorder: A Retrospective Cohort Study of 12-Month Outcomes in HIV Primary Care with Embedded Addiction Services

Gabriela Milagro Steiner, Medical Student, MSc; Ayesha Appa, MD; Matt Hickey, MD; Elizabeth Imbert, MD; Caycee Cullen, MSN; John Friend, NP; Rodrigo Avila, MSW; Joi Jackson, MSW; Pierre-Cedric Crouch, PhD; Jon Oskarsson, MN; Francis Mayorga-Munoz, PhT; Janet Grochowski, PharmD; Monica Gandhi, MD, MPH - University of California, San Francisco

Patient Perception and Evaluation of a Shared-Decision Making Tool for Opioid Use Disorder

Alexis Stensby, MD Candidate; Brian Chan, MD; Tessalyn Morrison, MPH; Rachel David; Blair Duzois - Saint Louis University School of Medicine

Implementing Quality Improvement Initiative to Provide First-Year Medical Students with Harm Reduction Communication Skills

Natalie Swartz, BA; Ethan Lowder, BA; Sabina Iqbal, BA; Irving Barrera Lopez, BA; Shahin Saberi, BA; Beverly Woo, MD; David Krieger, MD; Hilary Connery, MD, PhD - Harvard Medical School

The Impact of Harm Reduction Education on Clinician Knowledge, Attitude, and Stigma of People Who Use Drugs

Kinna Thakarar, DO, MPH; Hannah Kazal, MD; Wendy Craig, PhD; Zoe Brokos; Marion Anderson; Kristen Silvia, MD; Shelley Konrad, PhD; Allison Walker-Elders, MPH, OMS-II - MaineHealth

Addiction Consult Service Substantially Improves Treatment Rate of Alcohol Use Disorder (AUD)

Matt Tierney, MS, NP; Bridget Foley, DO; Taylor Nichols, MD; Sujatha Sankaran, MD - University of California, San Francisco

A Crisis Unveiled: Confronting Overdose and Addiction

Marlene S Torres, MD, MPH; Marlene Martin, MD - University of California, San Francisco

Addressing Chronic Pain in Asian Individuals Using Integrative Modalities to Prevent Progression to Substance Misuse: A Qualitative Study

Karissa Catherine Tu, BS; Ashley Johnson, MPH; Sebastian Tong, MD, MPH - University of Washington

Issues in Access to Outpatient Antibiotic Treatment for Patients Admitted with an Infectious Complication of Intravenous Drug Use

Nicole Turturro, MD, MPH; Kristine Torres-Lockhart, MD; Neha Saini, DO - Montefiore Medical Center/Albert Einstein College of Medicine

“K Cramps,” Recurrent Abdominal Pain in a Patient with Chronic Ketamine Use: A Case Report

Felipe Vasudevan, MD, MSc; Tucker Avra; Jesus Torres, MD, MPH, MSc; Liz Samuels, MD, MPH, MHS - UCLA Ronald Reagan Hospital

Utilizing the SBIRT Program Matrix to Evaluate a Systems-Level Approach to Implement a Screening, Brief Intervention and Referral to Treatment Program

Janice Vendetti, MPH; Bonnie McRee, PhD, MPH; Karen Steinberg Gallucci, PhD - University of Connecticut, School of Medicine

A National Needs Assessment of Adolescent Opioid Overdose Prevention Content in Pediatrics Clerkships in 2024

Nitin Vidyasagar, BS; Elena Whitney, BA; Dima K. Halabi, BS; Manish Pathuri, BS; Lolita A. Alkureishi, MD; Mim Ari, MD - University of Chicago Pritzker School of Medicine

Integrating Community Input into Naloxone Vending Machine Implementation

Nicole Wagner, PhD; Meagan Bean, MPH; Amy Wineland, RN, MSN, ND, CPNP; Jude Solano, MS, RN, ADS; Danielle Harwell; Sheila Covarrubias; Joshua Blum, MD - University of Colorado Anschutz Medical Campus

Pain and Nutritional Management for Xylazine Wounds and Withdrawal Causing Frequent Patient Directed Discharge

TaReva Warrick-Stone, DO[1], **Elise Paquin, MD**[1]; Philip Durney, MD; Christopher Robert Martin, MD - (1)Thomas Jefferson University Hospital

Empowering Communities: Breaking Language Barriers to Reduce Youth Substance Use through Innovative Partnerships for Multilingual Prevention Resources in Missouri and Around the Globe

Sherrie L Watkins, LMSW[1]; **Lisa R Carter, LPC**[2] - (1)Opioid Response Network, (2)Mid-America Addiction Technology Transfer Center

Piloting a Screening, Brief Intervention, and Referral to Treatment Curriculum for Medical Students during Emergency Department Rotation

John Austin Weems-Embers, MD[1,2], **Samuel Burr, BA**[1]; Alanna Boulton, MSHS, MHA, PMP; Mary Velasquez, PhD; Lloyd Berg, PhD, ABPP; Jacki Hecht, RN, MSN; Kirk Von Sternberg, PhD; Andrew Coyne, MD – (1)The University of Texas at Austin Dell Medical School, (2)CommUnityCare Health Centers

Assessing Concurrent Opioid Misuse Among Hospitalized Patients with Chronic Noncancer Pain

Katherine Welter, MD; Sami Mohd-Mahdi Zaidi; Kevin O'Leary, MD, MS - Northwestern Memorial Hospital

Understanding Clinician Knowledge, Attitudes, and Practices Relating to Non-Pharmaceutical Fentanyl and Harm Reduction

Elena Whitney, Medical Student; George Weyer, MD; Molly Perri, MD; Sarah Dickson, APRN; Angela Kerins, PharmD; Andrea Justine Landi, MD;P. Quincy Moore, MD;John P. Murray, MD;Geoff Pucci, PharmD; Mim Ari, MD - University of Chicago Pritzker School of Medicine

"It's Within Your Own Power": Shared Decision-Making to Support Transitions to Buprenorphine

Beth E Williams, AGNP, MPH; Stephen A. Martin, MD; Kim Hoffman, PhD; Mason D. Andrus, MA; Elona Dellabough-Gormley, DNP; Bradley Buchheit, MD, MS - Oregon Health & Science University

Rapid Methadone Titrations for Pregnant People with Fentanyl Use Disorder in the 2nd & 3rd Trimester

Tricia Wright, MD, MS; Simone Vais, MD, MS; Kristin Harter, PharmD - University of California, San Francisco

Xylazine

Xylazine-Associated Wounds Among Hospitalized Patients in Philadelphia

Lydia Lutz, MD; Ashish P Thakrar, FASAM, MD, MSHP; Margaret Lowenstein, MD, MPhil, MSHP; Rachel Mcfadden, BSN, RN, CEN; Lin Xu, MS; Ranvir Bhatia, BA, MS; M Holiday Davis, MA; Natasa Rohacs, BA; Jenny Wei, MD; Jeanmarie Perrone, MD, FACMT - Johns Hopkins University School of Medicine

Providers' Knowledge and Perception of Xylazine in the Unregulated Drug Supply: A Sequential Explanatory Mixed-Methods Study

Katherine Hill, MPH; Rebecca Minahan-Rowley, MSW; Emma Biegacki, MPH; Robert Heimer, PhD; Kimberly Sue, MD, PhD - Yale School of Public Health

'Tranq Burn': Exploring the Etiology of Tranq-Related Soft Tissue Injuries

Dan Ciccarone, MD, MPH; George Karandinos, MD; Alex Krotulski, PhD; Jeff Ondocsin, MS; Nicole Holm, Fernando Montero, PhD; Sarah Mars, PhD - University of California, San Francisco

Healing the 'Non-Healing': A Holistic Approach to Treating Xylazine-Associated Wounds

Tehya Johnson, NP[1], **Christina Bailey, MSN-PH, RN, CARN, AACRN**[1]; Kianna Fonseca, CM; Peter Smith, MD; Samantha Walsh, NP, RN; Samantha Walsh, NP, RN - (1)Boston Health Care for the Homeless Program

Rethinking Harm Reduction Conversations: An Oronasal Fistula in a Woman Snorting Xylazine-Fentanyl

Elizabeth Ferro, MD; Ashish P Thakrar, FASAM, MD, MSHP - Allegheny Health Network

Award Winning Abstract Presentations

Implementation of a Hospital-Based Take-Home Methadone Process Is Feasible and Saves Healthcare Dollars

Susan L. Calcaterra, MD, MPH, MS[1]; Yevgeniya Scherbak, PharmD, BCPS[2] -
(1)University of Colorado, (2)UCHealth

Background: Methadone is commonly used to manage opioid withdrawal among hospitalized patients with opioid use disorder (OUD). When a patient prefers to continue methadone after hospital discharge, they must follow-up at an opioid treatment program (OTP), many of which are closed on weekends and holidays. A weekend hospital discharge means the patient will miss methadone doses and experience opioid withdrawal, increasing the risk of returning to illicit opioid use. To avoid this, a hospital team may delay hospital discharge until the weekday to facilitate a hospital to OTP linkage. While this is a patient-centered approach, it increases healthcare costs. In August 2023, the DEA amended its regulation to allow clinicians to dispense up to a three-day methadone supply for OUD which provided an opportunity for practice change.

Objective: To develop a federally compliant process to dispense take-home methadone doses to hospitalized patients with OUD to facilitate weekend hospital discharges to support OTP linkage.

Methods: We obtained pharmacy and nursing leadership support to develop and implement this process. An addiction consultation service director partnered with a pharmacist champion and an Epic analyst to create an orderset and workflow to facilitate a take-home methadone process which involves an inpatient Epic methadone orderset with in-hand methadone transfers between the pharmacist, the nurse, and the patient at hospital discharge. Our Hospital Medicine data analytics team created a dashboard to track take-home methadone doses, milligrams distributed, days' supply distributed, and the discharging hospital team.

Results: From May 2023 to March 2024, our team dispensed 131 take-home methadone doses to 71 patients, with an average methadone dose of 71mg. Most discharges occurred on a Friday (n=23) or Saturday (n=23). Most patients were hospitalized with a medical (n=43) or an obstetric condition (n=12). Based on previously published data estimating the average cost of a hospital stay per day, we estimate that our take-home methadone program has saved approximately $425,000 in healthcare costs.

Conclusions: Developing a take-home methadone program in a hospital setting is feasible when working with important key partners and saves healthcare resources by facilitating a safe and patient-centered hospital discharge.

Arts and Culture As Healing Methodologies for Navigating Trauma, Mental and Social-Emotional Health Challenges, and Use Disorders: The Existential Determinants of Health (E.D.O.H.) Initiative

David Olawuyi Fakunle, PhD - Johns Hopkins University Bloomberg School of Public Health, Morgan State University School of Community Health & Policy

Background: Substance Use Disorder (SUD), Alcohol Use Disorder (AUD) and Opioid Use Disorder (OUD) often stem from the cumulative and concurrent impacts of trauma, which can be personal, familial, social, structural, and/or generational. During and since COVID-19, there has been a notable rise in the acknowledgment and utilization of artistic and cultural expressions within public health, as part of a broader movement to uplift innovative ideas, perspectives, and approaches to prevailing problems such as SUD, AUD, and OUD.

Objective: The Existential Determinants of Health (E.D.O.H.) Initiative was a two-year project in Baltimore, Maryland, funded by the Johns Hopkins University Innovation Fund for Community Safety, with the goal of cultivating holistic spaces to augment healing for individuals navigating manifestations of trauma, notably mental, social-emotional and behavioral health challenges including loneliness and use disorders.

Methods: In Year 2 of the initiative (March-June 2023), 15 two-hour sessions were held that offered individual and collective storytelling, mindfulness practices such as yoga and journaling, expertise on financial and economic skill-building like banking, investment and entrepreneurship, communal reflections on psychosocial and emotional health through human-grounded qualities, and creative expressions including drumming, singing, dance and performance theater.

Results: There were 64 unique E.D.O.H. participants, of which 20 established a series-long cohort. The cohort was 100% Black, 25% male, 75% female, with a median age of 48 years old. Optional pre-and-post assessments demonstrated positive changes, particularly in psychosocial and emotional health domains, including increased acceptance of one's living experiences, enhanced comfort in sharing personal narratives, improved self-esteem, and strengthened connections within the E.D.O.H.'s cultivated community.

Conclusions: E.D.O.H. initiative has demonstrated the feasibility of intentionally incorporating creativity, culture, and collective wisdom through storytelling to facilitate improvements in multiple drivers of prevailing challenges within mental and social-emotional health, such as SUD, AUD, and OUD. Additionally, E.D.O.H. offers an adaptable evidence-based framework for catalyzing and consolidating holistic, human-centered support resources to address other relevant public health issues.

Stimulant-Involved Overdose Prevention: An Electronic Health Record Analyses of Clinical Touchpoints

Teresa López-Castro, PhD - The City College of New York, CUNY

Background: Since 2014, US stimulant-involved overdose deaths have surged, surpassing heroin and non-prescribed opioids by 2019, and currently ranking second only to fentanyl. Identifying opportunities for overdose prevention is crucial. Healthcare encounters serve as potential opportunities, or clinical touchpoints, to reduce overdose risk through evidence-based means like naloxone provision and harm reduction education.

Objective: To enhance targeted overdose prevention efforts, we quantified clinical touchpoints, i.e. healthcare encounters, in the 12-month periods before and after a stimulant-involved overdose, as well as naloxone prescriptions after an overdose.

Methods: We searched the de-identified health record database of a large, Northeastern medical center for adults who had an emergency department (ED) overdose encounter during a five-year period (2016-2021). Overdoses involving stimulants were operationalized through stimulant-specific diagnostic codes, toxicology results, and clinician notes. For persons with >1 overdose, the most recent overdose was used. Sociodemographic and healthcare encounter data were extracted. A touchpoint was defined as an encounter with an independent healthcare provider in an ambulatory, ED, or inpatient setting. We assessed clinical touchpoint frequency, naloxone prescriptions after an overdose, and relevant associations between clinical touchpoint frequency and sociodemographic and overdose characteristics.

Results: We identified 413 patients with a stimulant-involved overdose, one-third (n = 149, 36%) of which involved opioids. Ten (2.4%) overdoses were fatal. Patients were primarily men (n = 288, 70%) and middle-aged (Mdn = 43, SD = 13.4). In the 12 months before the ED overdose visit, 233 (55%) patients had at least one clinical touchpoint and patients averaged 4.4 (SD = 10.8) clinical touchpoints pre-overdose. Paired t-tests showed a significant increase in clinical touchpoints in the 12 months after the overdose ($M = 5.9$, $SD = 10.2$, $t(412) = 3.8$, $p < 0.001$). Very few patients (n = 20) were prescribed naloxone either in the ED or in the 12 month post-overdose period. Bivariate generalized linear model analyses revealed no association between clinical touchpoint frequency and socio-contextual variables (age, gender, race, ethnicity, and overdose type).

Conclusions: People experiencing stimulant-involved overdoses had multiple clinical encounters with healthcare providers before and after stimulant-involved overdoses. These clinical touchpoints appeared underutilized for overdose risk reduction.

Effectiveness of Washington State's Hub and Spoke Model to Improve Six-Month Opioid Use Disorder Outcomes Among Medicaid Beneficiaries

Sharon Reif, PhD - Brandeis University

Background: The urgency to mitigate opioid use disorders (OUD) and support states' needs spurred flexible implementation strategies using federal funds. Washington State chose, in part, to implement a Hub and Spoke (HS) model to address gaps in care. Since Vermont's successful implementation, HS is increasingly common, aiming to improve access to and retention on medications for OUD (MOUD). With few exceptions, the impact of HS models is relatively unknown.

Objective: To assess the effectiveness of Washington's HS model on six-month OUD outcomes.

Methods: We analyzed 25,368 non-dual eligible Medicaid beneficiaries aged 18-64 with a new MOUD episode in 2016-2019. We identified HS participants in the post-period (2017-2019); their MOUD facilities defined the HS pre-period group. Non-HS beneficiaries were comparisons in each period. We used common claims-based exclusion criteria (e.g., continuous enrollment). A cohort-based observational design and an intent-to-treat approach examined six-month measures of MOUD continuity, emergency department (ED) admission, inpatient hospital utilization, and intensive SUD treatment (detoxification, residential, inpatient). Multinomial propensity scores adjusted for potential confounding. Covariates included sociodemographics, comorbidities, regional characteristics, and outpatient service utilization. Difference-in-difference (DID) logistic estimation assessed changes within and between HS and comparison groups; post-hoc analyses stratified by MOUD type.

Results: Most of the sample were ages 18-29 (45%), male (54%), Non-Hispanic White (71%), and in urban areas (86%). Buprenorphine (58% pre vs. 69% post) was the most common MOUD. Overall, only 26% reached six-month MOUD continuity, 42% had an ED visit, 14% any hospitalization, and 13% entered intensive treatment. DID marginal effects suggest no significant changes between groups for all outcomes (range ME= 0.004 to 0.025, p= 0.17 to 0.72). Continuity decreased for both groups; other outcomes were consistent over time. HS participants who received methadone had a significant decrease (ME= -0.16, $p<0.01$) in MOUD continuity over time, versus non-HS.

Conclusions: Elsewhere, HS has demonstrated improved access to care, but retention findings are mixed. Our null findings likely reflect, in part, the increasing complexity of the OUD crisis. Findings highlight the need to improve the HS model's efforts around MOUD continuity to drive long-term recovery for people with OUD.

Addiction Consult Services

Opioid Agonist Treatment Initiation Practices By Hospital-Based Addiction Consult Services

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Background: As drug supply has shifted from heroin to high potency synthetic opioids (HPSO) such as fentanyl, addiction clinicians use innovative methods to initiate opioid agonist treatment (OAT) for hospitalized patients with opioid use disorder (OUD). However, there has been no systematic assessment of these practices.

Objective: To assess current practices of OAT initiation among academic hospital-based addiction consult services.

Methods: From 10/2023-4/2024, we identified directors of hospital-based consult services associated with Addiction Medicine and Addiction Psychiatry fellowships. Consult medical directors were invited to participate in an online survey about OAT initiation methods. Buprenorphine initiation methods assessed were low dose (gradually increasing buprenorphine doses while continuing opioids), high dose (8-16mg buprenorphine after withdrawal), traditional (2-4mg buprenorphine after withdrawal), and rescue (buprenorphine after intentional naloxone precipitated withdrawal). Standard methadone initiation was defined as 40mg maximum on day one with up-titration by 5-10mg every three days.

Results: Of 80 consult medical directors identified, 58 (72.5%) completed surveys. The consult services' specialties were addiction medicine (71%), addiction psychiatry (19%), general or consult liaison psychiatry (19%), or toxicology (2%) with 1 missing answer. Consult services saw a median of 12 (IQR 5-20) new consults for OUD weekly.

All services initiated buprenorphine, 81% initiated methadone, and 62% initiated naltrexone. Nearly all (98%) agreed fentanyl was common in the local drug supply; 93% agreed HPSO had changed their buprenorphine initiation practices; and, of those who offered methadone, 70% (33/47) agreed HPSO had changed their methadone initiation practices.

Regarding buprenorphine initiation, consult services offered low dose initiation (93%), traditional initiation (88%), high-dose initiation (75%) and rescue from precipitated withdrawal (35.1%), figure 1.

Of those who initiated methadone (47/58), 87% reported that their service up-titrated methadone more rapidly than the standard protocol with 65% using this for greater than half of their recent methadone initiations. Full agonist opioids, i.e. oxycodone, were used by 67% (31/46) of consult services to treat withdrawal during methadone initiation.

Conclusions: There is significant variation in the OAT initiation protocols used by hospital-based addiction consult services. This may represent an area where expert consensus can improve clinical care.

Figure 1: Buprenorphine Initiation Methods Stratified By Frequency Used

"Just be Relentless," Lessons Learned from in-Hospital Addiction Consult Service Implementation

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Background: Hospitalizations related to substance use disorders (SUD) are rising. Providing hospital-based SUD care can mitigate high rates of overdoses and death after hospitalization. Interprofessional addiction consult services (ACSs) have been shown to improve care for patients with SUD. However, the process of ACS implementation is not well described. Collecting and disseminating lessons learned during ACS implementation may help establish best practices and facilitate future implementation efforts.

Objective: Identify successful approaches, key challenges, and lessons learned during ACS implementation across the U.S.

Methods: We conducted semi-structured qualitative interviews with interprofessional key informants who were implementing ACSs in academic medical centers and community hospitals across the US. Interviews elicited information on the implementation process (e.g. obtaining buy-in, securing funding) and sustainability plan. We recorded and transcribed interviews, then performed a reflexive thematic analysis.

Results: We recruited 13 participants (10 physicians, 1 social worker, 1 nurse, and 1 hospital administrator) who were implementing ACSs in academic medical centers (4) and community hospitals (4) across the country. Three primary themes emerged: 1) "Financial stigma"- including the impression that ACSs are not revenue-generators- was a pervasive barrier to implementation. To overcome this, participants found ways to demonstrate both monetary and non-monetary outcomes to obtain hospital leadership buy-in. 2) ACS champions described needing to be persistent and communicate strategically with multiple stakeholders across the institution for initial implementation and expansion. This often meant pitching their case multiple times, and not being deterred by multiple "no's". 3) Leaders described ACSs as important drivers of cultural change in the face of significant stigma towards patients with SUD. ACSs drove cultural change with ongoing education across hospital systems. Nevertheless, change felt slow and incremental. 4) Tracking productivity and maximizing revenue can support sustainability, but hospitals were often "pretty bought-in to continuing" ACSs by seeing other positive outcomes, including staff and patient satisfaction.

Conclusions: Our findings can inform current and future ACS implementation efforts. Effective ACS leaders are skilled communicators that demonstrate resilience when obtaining buy-in. Non-monetary outcomes (e.g. staff satisfaction, reducing stigma) can be as important as maximizing revenue in supporting sustainability.

One Year in: The Impact of Addiction Consult Services in Improving Care for Hospitalized Patients with Substance Use Disorders

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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 caring for these patients. The recent implementation of an ACS at a large, Philadelphia hospital offered the opportunity to understand barriers and facilitators, and their value to the health system.

Objective: To explore staff perspectives on caring for patients with substance use disorders (SUDs) and to identify issues and opportunities for improvement one year into the implementation of an ACS.

Methods: We conducted semi-structured interviews with inpatient physicians, Advanced Practice Professionals (APPs), nurses, social workers, and peer specialists from 11/2023 to 1/2024. We asked about their experiences in caring for hospitalized PWUD, their perceptions of the impact of the ACS, and opportunities for improvement. Interviews were analyzed with thematic content analysis.

Results: We interviewed 29 clinicians. Mean age was 36 years; participants were 59% female, 69% white, 17% Black/African American, and 14% Asian. 48% were physicians, 24% were nurses, 10% were social workers, 7% were peer specialists, and 7% were APPs. 48% had >1 years' experience in their current role, 58% had 1-10 years' experience, and 7% had 10+ years' experience. Three key themes emerged. Participants felt the ACS significantly improved the management of withdrawal and pain in hospitalized patients with OUD. Clinicians expressed considerable burnout and emotional distress related to caring for patients with SUDs. While they reported that these stresses impact care, the specialized knowledge and additional support provided by the ACS significantly relieved distress and burnout. Finally, interviewees identified persistent systemic barriers to providing effective care, including a lack of availability of outpatient resources for discharge planning, inadequate general knowledge of evidence-based practices for treating SUD, and insufficient resource allocation.

Conclusions: Our research findings demonstrate that ACS can address some key obstacles, improving patient care and reducing provider burnout. However, gaps still exist and addressing systemic barriers by increasing resources for discharge planning and expanding addiction medicine education initiatives to non-specialized providers, will be critical to improving care for patients with OUD.

Effectiveness of Hospital Addiction Consult Services for Increasing Post-Discharge Medication for Opioid Use Disorder (MOUD) Treatment Initiation and Engagement: Findings from a Pragmatic Trial in 6 New York City Public Hospitals

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Background: The 'Consult for Addiction Treatment and Care in Hospitals (CATCH)' program was introduced by the New York City public hospital system to improve substance use disorder care. This study is the first prospective randomized trial in the U.S. examining the effectiveness of an interprofessional addiction consult service on post-discharge treatment with medication for opioid use disorder (MOUD).

Objective: Understand the effectiveness of interprofessional hospital addiction consult services for increasing MOUD treatment initiation and engagement (primary outcome).

Methods: A pragmatic stepped-wedge cluster randomized implementation and effectiveness (Hybrid Type 1) trial at six hospitals compared outcomes during CATCH vs. treatment as usual

(TAU) periods, spanning 2017-2021. Hospitals were randomized to an intervention start date, and outcomes compared during treatment as usual (TAU) and intervention conditions. Outcomes were assessed using Medicaid claims data. Eligible cases were adult patients with a discharge diagnosis of opioid use disorder or opioid poisoning and not currently receiving MOUD. Hospitalizations in detox/psychiatric units or <1 day were excluded. The dual primary outcome was MOUD treatment **initiation** (within 14 days of discharge) and **engagement** (30 days post-initiation) during CATCH vs. TAU. Bayesian hierarchical logistic regression models accounted for the clustering of patients within hospitals and the open-cohort nature of the study and adjusted for age, sex, and study period.

Results: There were 3,225 eligible hospitalizations among 2,315 patients. Patients had a mean age of 47 years and were 72.9% male, 35.0% White, 31.5% Black, and 9.1% other race (24.4% unknown). Most (67.7%) had 3+ chronic medical conditions, and 64.2% had serious mental illness. Median length of stay was 5 days. The rate of MOUD initiation was 11.0% during CATCH and 6.7% during TAU. Patients hospitalized during the CATCH period had 8.0 times higher odds of initiating MOUD (log-odds ratio 2.07, 95% CrI of 0.51-4.00). Odds of 30-day engagement in MOUD were 6.9 times higher in the CATCH period (log-odds ratio 1.93, 95% CrI 0.09-4.18).

Conclusions: CATCH addiction consult services were effective in increasing MOUD initiation and engagement among hospital patients with OUD. Further efforts are still needed to improve hospital- and community-based services for OUD treatment.

Attributes of Higher- and Lower-Performing Hospitals in the Consult for Addiction Treatment and Care in Hospitals (CATCH) Program Implementation: A Multiple-Case Study

Carla King, MPH; Elizabeth R. Stevens, PhD, MPH; Carla King, MPH; Adetayo Fawole, MD, MPH; Yasna Rostam-Abadi, MD, MPH; Jasmine Fernando, MPharm; Noa Appleton, MPH; Medha Mazumdar, MS; Donna Shelley, MD, MPH; Charles Barron, MD; Samira Siddiqui, MPH; Daniel Schatz, MD, MS; Jennifer McNeely, MD, MS - New York University Grossman School of Medicine

Background: The Consult for Addiction Treatment and Care in Hospitals (CATCH) program, an interprofessional addiction consult service, was implemented in the New York City public hospital system beginning in 2018. A Hybrid Type 1 pragmatic implementation-effectiveness trial tested the effectiveness of CATCH for increasing initiation and engagement in post-discharge medication for opioid use disorder (MOUD) treatment among hospital patients with opioid use disorder (OUD), while studying the process of implementing the program.

Objective: This presentation focuses on the trial's implementation outcomes, with a goal of identifying facility characteristics associated with stronger performance of CATCH.

Methods: Implementation outcomes were tracked at each of the 6 participating hospitals for the first 12 months following the launch of CATCH (October 2018-January 2021). A mixed methods multiple-case study design was used to analyze implementation performance. Hospitals were

assigned a case rating according to intervention 'reach'; defined as the number of eligible patients with at least one MOUD order placed during hospitalization, divided by the total number of patients with OUD who were eligible for a CATCH consult - regardless of whether a consult was actually ordered. Reach was considered high if ≥60% of hospitalized OUD patients received an MOUD order. Cross-case rating comparison was used to identify attributes of high-performing hospitals and inductive and deductive approaches were used to identify themes.

Results: Four of the six hospitals met the cutoff for high performance. High-performing hospitals exhibited the following attributes that were generally absent in lower-performing hospitals, including (1) teams fully staffed with medical providers; (2) designated office space and resources for CATCH; (3) existing integrated OUD treatment resources, including having buprenorphine available in primary care; and (4) limited overlap between the implementation period and the COVID-19 pandemic. No notable patterns were identified between reach performance and patient demographics.

Conclusions: Hospitals with attributes indicating greater awareness and integration of OUD services into general care were higher performing than hospitals that had siloed OUD treatment programs. Future implementation of addiction consult service models may benefit from building a broad base of hospital-level support and building on existing efforts to integrate MOUD treatment into general care.

Alcohol

An Interprofessional Model for Treating Alcohol Use Disorder in a Public Hospital

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Background: Rates of prescribing medication for alcohol use disorder (MAUD) remain low (<2%). Hospitalization offers an opportunity to detect and treat alcohol use disorder (AUD), and addiction consult teams (ACT) can increase MAUD prescribing. However, ACT do not have capacity to see all patients with AUD, nor do all hospitals have ACT. Interprofessional models can augment the reach of interventions to increase AUD treatment.

Objective: Licensed vocational nurses (LVN) joined the inpatient ACT in 2019 in order to see hospitalized patients with unhealthy alcohol use by AUDIT-C, elevated blood alcohol level, ICD-10 alcohol-related diagnosis, or alcohol withdrawal orders. Under the supervision of an addiction medicine clinician, LVN perform motivational interviewing and the AUD symptom checklist, assess interest in behavioral and medication treatment, and refer primary teams to our MAUD protocol. They administer naltrexone injections and refer patients to ACT clinicians or navigators when indicated.

Methods: We describe hospitalization characteristics and MAUD rates of patients seen versus not seen by ACT LVN among adult hospitalizations with AUD by ICD-10 primary or secondary diagnosis at an urban, public hospital between August 2019 – December 2023.

Results: Of 9,625 hospitalizations with AUD, LVN saw 1,095 (11.4%). Demographics were similar across groups: majority male, white, and Latine. LVN patients had higher rates of a primary AUD diagnosis (32.7% vs 12.2%), cirrhosis (17.4% vs 13.9%), admission to a medical service (88.8% vs 69.9%), longer median length of stay (5 vs. 4 days), and higher rates of co-occurring mental health, stimulant, and opioid use disorders.

569 (52.0%) seen by LVN had MAUD prescribed during admission, compared with 1,557 (18.3%) not seen by an LVN. Hospitalizations seen by LVN had significantly higher rates of in-hospital MAUD initiation ($X^2 = 640.8$ (1, N = 9,625), $p < 0.001$): 401 (36.6%) were prescribed oral naltrexone, 223 (20.4%) XR-naltrexone during admission, 151 (13.8%) gabapentin ≥1800mg/day, 43 (3.9%) topiramate, and 26 (2.4%) acamprosate.

Conclusions: In a hospital with above-average MAUD rates and an ACT, an LVN model can bolster MAUD initiation. Engaging nursing can increase the impact of addiction medicine interventions.

Patients Perceptions of Physical Therapists Addressing Hazardous Drinking: A Cross-Sectional Study

John Magel, PT, PhD, DSc; Paul Hartman, DPT; Adam J Gordon, MD, FACP, DFASAM - University of Utah

Background: Up to 25% of patients seeking treatment for pain report hazardous-drinking. Physical therapists (PTs) treat patients in pain and some of these patients may engage in hazardous-drinking. PTs may be well-positioned to screen and assess patients for hazardous-drinking. The patients' perceptions about PTs' role in addressing patients with hazardous-drinking is unknown.

Objective: To understand patients' perceptions of PTs addressing hazardous-drinking.

Methods: Patients who attended a physical therapy evaluation for a musculoskeletal condition at 1 of 8 university outpatient clinics were eligible to participate. Participants were recruited via email invitation containing a link to a 9-item online survey. Patients were asked if they engaged in hazardous-drinking during the past year. For males, hazardous-drinking was defined as consuming more than 4 alcoholic drinks during an episode or consuming 14 or more drinks in a week. For females, hazardous-drinking was defined as consuming more than 3 alcoholic drinks during an episode or 7 drinks in a week. The survey assessed patients' agreement with statements such as "It is OK for PTs to ask their patients questions about whether they are engaged in hazardous-drinking" (1=completely disagree to 7=completely agree). Linear regression evaluated the associations between hazardous-drinking and each perception question after controlling for age, sex and race.

Results: The analysis included 585 respondents with a mean age of 56.8 (SD=16.6) with 372 (63.7%) females and 81 (13.8%) who met the criteria for hazardous-drinking. The highest mean perception score was 6.1 (SD=1.6) for "If the PT asked me about hazardous-drinking, regardless of whether I was engaging in hazardous-drinking, I would answer truthfully." The lowest mean

perception score was 4.6 (SD=2.2) for "It is OK for PTs to ask their patients why they engage in hazardous-drinking." Compared to those without hazardous-drinking, patients with hazardous-drinking in the last year had lower levels of agreement for all the perception questions, except for "If the PT asked me about hazardous-drinking, regardless of whether I was engaging in hazardous-drinking, I would answer truthfully."

Conclusions: Outpatient physical therapy patients report favorable perceptions of PTs addressing hazardous-drinking. The perceptions of patients with a current history of hazardous-drinking may be less favorable.

Medications for Alcohol Use Disorder and Withdrawal: A National Sample of Patients Discharged from the Emergency Department

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Background: Emergency Departments (EDs) are well positioned to treat ambulatory alcohol withdrawal and initiate medications for alcohol use disorder (MAUD) but infrequently do so. To enhance dissemination of best practices in the care of ED patients with AUD and assess practices related to AUD care in U.S. EDs, we expanded the ACEP Emergency Medicine Quality Network (E-QUAL) Opioid Initiative to include AUD quality improvement through a curated toolkit with webinars and resources and chart review to assess and benchmark ED care.

Objective: To evaluate AUD QI data across a national sample of EDs.

Methods: In March of 2023, EDs were requested to complete a structured chart review of 30 randomly selected ED visits who were discharged between September 2022-February 2023 (baseline) with ICD-10 codes for alcohol intoxication or withdrawal, and to report on the following measures: AUD treatment referral, benzodiazepine, phenobarbital, or MAUD (gabapentin, naltrexone, acamprosate, disulfiram, carbamazepine, or valproic acid) administration in the ED or prescription at discharge. In November 2023, EDs were requested to review and submit metrics from an additional 30 charts for visits between July 2023- October 2023 (follow-up). Descriptive statistics were used to evaluate combined data.

Results: Among 153 EDs who provided data for at least 10 charts during both time periods, 73 (48%) reported <20K annual visits, 75 (49%) reported 20K-60K annual visits and 3(2%) reported >60K annual visits. 71 EDs (47%) were rural and 17(11%) were critical access EDs. Among 5,822 ED visits reported in both periods, 4,941(84.9%) included a referral to AUD treatment. MAUD was administered in 1,348 of 5,994(22.5%) of ED visits, with benzodiazepines being most commonly administered (1,294/1,348;96%) followed by phenobarbital (43/1,348;3.2%). Upon discharge, MAUD was prescribed in 599 of 5,965 (10%) visits. Of those visits that resulted in a prescribed medication, benzodiazepines were the most commonly prescribed medication (568/599;94.8%) followed by gabapentin (18/599;3.0%) and naltrexone (13/599;2.2%)

Conclusions: EDs participating in a national practice-based learning network report a high level of AUD treatment referrals and most often utilize benzodiazepines in the treatment of ED patients with alcohol-related presentations. Opportunities to increase the provision of evidence-based MAUD medications, including naltrexone and gabapentin, are significant.

Self-Reported Readiness to Change Alcohol Use in Emergency Department Patients with Alcohol Use Disorder Predicts Successful Linkage to Treatment

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Background: Project ASSERT is a long-standing ED-based screening, brief intervention, and referral to treatment program for unhealthy alcohol and other drug use in this tertiary academic hospital.

Objective: To guide an educational intervention focused on enhancing patient readiness to change among Emergency Department (ED) clinicians, we sought to identify the relationship between ED patient self-reported readiness to change alcohol use and treatment engagement within 30 days among ED patients receiving a Brief Intervention.

Methods: We conducted a retrospective cross-sectional study evaluating all ED patients evaluated by Project ASSERT for moderate or severe alcohol use disorder (AUD) during 2022-2023. Descriptive statistics and ANOVA were used to evaluate readiness to change alcohol use (1 to 10 scale), direct (same day) versus indirect (treatment program information) referral for formal addiction treatment and treatment engagement within 30 days. Binary logistic regression adjusting for age, gender, race, ethnicity and insurance was used to evaluate the relationship between self-reported readiness to change and successful linkage to treatment linkage within 30 days.

Results: During 2022-2023, a total of 2,648 ED patient visits included a Brief Intervention by Project ASSERT, with 2,389 (90.2%) receiving either a direct (1,103; 42.4%) or indirect (1,376; 57.6%) referral. The mean readiness to change alcohol use score was highest among those who received a direct (M=8.32, SD=2.03) versus indirect referral (M=6.50, SD=3.17) and lowest among those who refused referral (M=5.14, SD=2.73; $p<0.001$). The odds of successful treatment linkage within 30 days increased by 15.7% for every single point increase on the readiness to change scale (AOR 1.157, 95% CI 1.093-1.22) when controlling for demographics and insurance status.

Conclusions: In this sample of ED patients with moderate/severe alcohol use disorder, self-reported readiness to change alcohol use is a strong predictor of successful linkage to treatment within 30 days. Given the large morbidity and mortality associated with AUD and recognized gaps in treatment, strategies to increase ED patient readiness to change alcohol use should be widely disseminated.

Cannabis and Vaping

Adaptation, Implementation and Evaluation of Telementoring Echo Series to Address E-Cigarette Use Among Middle and High School Students in Kansas

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Background: E-cigarette use among youth in the United States has escalated, posing a significant public health concern. The surge in usage, particularly among high school students in Kansas (10.6% in 2017 to 22% in 2019), prompted the multi-agency development of a telementoring program aimed at combating this epidemic.

Objective: Leveraging the Project ECHO® model, the program aimed to equip multidisciplinary school teams with the necessary skills and knowledge to address e-cigarette use in schools.

Methods: The quasi-experimental pretest-posttest mixed-method study was conducted from August 2022 to April 2023. Thirteen school teams, consisting of 53 members in various urban and rural settings, participated in the program. Each team (up to five members), comprising teachers, nurses, counselors, social workers, athletic directors, coaches, principals, superintendents, school board members, and law enforcement officers/student resource officers, engaged in an orientation, a kickoff summit, and five biweekly ECHO sessions (introduction to addiction and cessation, putting cessation into practice, policy best practices and legal issues, restorative justice: a student-centered approach, engaging community partners). Each team developed and implemented action plans collaboratively. Program evaluation surveys were administered with quantitative data analyzed using descriptive statistics and thematic analysis applied to qualitative responses.

Results: High participation rates were observed, with all teams attending four out of five ECHO sessions, 12 of 13 attended the 5th ECHO and 10 of 13 teams completed action plans. Of the 53 registered participants, 96.2% completed the baseline assessment, and 69.8% completed the follow-up survey. Trainees reported increases in knowledge (86.5%), ability to apply knowledge (75.7%), and strategic implementation skills (64.9%). Notably, 40.5% reported increased student quitline referrals and 37.8% reported increased referrals to cessation counselors. Over half (59.5%) expressed increased confidence in addressing vaping with students. The program received high satisfaction ratings, with 81% of participants indicating willingness to recommend it to others.

Conclusions: The adapted ECHO model effectively empowered multidisciplinary school teams to combat e-cigarette use among high and middle school students. The findings demonstrate substantial improvements in knowledge, skills, confidence, and referral rates to cessation resources. This highlights the program's efficacy in addressing the urgent public health issue of e-cigarette use among youth.

Systematically Testing the Evidence on Marijuana

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Background: Cannabis is increasingly accessible and used in the United States, and evidence about the benefits and harms of cannabis is evolving. However, clinicians receive little formal training about the health effects of cannabis, and there are few evidence-based educational resources available on this topic.

Objective: The Systematically Testing the Evidence on Marijuana (STEM) project aims to empower clinicians to hold evidence-informed discussions about cannabis with patients by providing a web-based resource (www.cannabisevidence.org) consisting of living systematic reviews, translational materials designed for front-line clinicians, policy information, and a searchable database of ongoing studies.

Methods: The STEM project uses contemporary methodologic standards and a large multidisciplinary expert panel to guide its development of a suite of living systematic reviews and a series of short, targeted, evidence-based "clinician briefs". All materials are peer-reviewed and updated annually. We track user numbers and geography through Google Analytics combined with census data. We have examined user experience through a survey of front-line clinicians in the Pacific Northwest, and through a novel cannabis Extension for Community Healthcare Outcomes (ECHO) series.

Results: From its launch in January 2022 through March 2024, the STEM website has attracted 12,853 unique users and 44,838 page views. Website users have come from all 50 states (regardless of the legal status of cannabis), and 5% are from rural areas. In a survey of 247 front-line clinicians (of 456 contacted for a 54% response rate) 96% of respondents found the website easy-to-use, and the majority reported being likely to recommend the website to another clinician (73% responded 6 or more on a 1 to 10 scale). In a survey of the 54 ECHO participants, 70% planned to change their practice based on information learned during the series.

Conclusions: The STEM project is an innovative, web-based, educational and evidence resource designed for front-line clinicians to understand what is known and what is left to learn about the health effects of cannabis. Initial dissemination efforts and user surveys suggest it is broadly accessed across the United States, is user-friendly, and may contribute to changes in clinical practice.

It's Complicated: A Peer-Taught Cannabis Prevention Education Program

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Background: Initiation of cannabis use often begins during the high school years. High school students are at risk of experiencing various consequences from cannabis use. School-based interventions and programming have the potential to reduce risky cannabis use. Most of the existing programming did not reflect changes in the legal status of cannabis in many states across the U.S. PreventEd developed and implemented a peer-taught cannabis prevention education program, it was externally evaluated by Friends Research Institute.

Objective: To examine youth cannabis use trends following medicinal and/or recreational legalization; to understand the benefits of implementing peer education programs among high school youth and how to better utilize youth in prevention work.

Methods: Cluster-randomized, delayed intervention trial; The study took place in a rural high school located about 40 miles outside of downtown St. Louis. Upperclassmen (11th and 12th graders) taught underclassmen (9th and 10th graders) three, 45-minute, lessons. Lesson 1 teaches the science of cannabis (THC vs. CBD), and adult use vs medical use. Lesson 2 teaches the reality behind industry marketing strategies and the effects of cannabis on the teen brain. Lesson 3 teaches the mental health implications, how to navigate risks (build appropriate coping skills), and how to express concern about friends. The analysis included generalized linear mixed models.

Results: 195 students in primarily 9th or 10th grades had a significant increase in the composite of seven cannabis knowledge measures ($p < 0.001$). Students reported greater risk perception with infrequent (monthly) use ($p = 0.027$) after the curriculum.

Conclusions: The evaluation of It's Complicated found significant curriculum effects using a methodologically strong random assignment design. Significant curriculum effects for self-rated cannabis knowledge (overall and across multiple knowledge items) and perceived risks of infrequent cannabis use. No effects on behavioral intentions regarding cannabis use or expressing concern to a friend, perceived risk of frequent cannabis use, or perceived health risks.

Cannabis Use and Retention in Telemedicine Treatment for Opioid Use Disorder in US Adults

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Background: Cannabis use can be a barrier to treatment for opioid use disorder. Telemedicine represents an important opportunity to expand treatment access. While there is conflicting evidence on the impact of cannabis use on retention to treatment for opioid use disorder in in-person settings, this relationship has not been evaluated in telemedicine care.

Objective: To assess the association between self-reported cannabis use at baseline and 6-month retention in telemedicine opioid use disorder treatment.

Methods: We analyzed a retrospective cohort of US adults entering telemedicine treatment for opioid use disorder between April 1, 2020 and August 31, 2022 who completed a questionnaire on their substance use in the previous week. We estimated the likelihood of having a visit 6 months after treatment initiation as a function of cannabis use, other substance use, age, sex, geographic location, insurance type, and stable housing access using logistic regression.

Results: A total of 8,373 patients initiated telemedicine treatment for opioid use disorder in the cohort. Approximately 40% of patients reported cannabis use and 22.3% of patients reported amphetamine use in the previous week. The mean age of patients was 38.3 years old and 52.4%

of the cohort identified as female. Overall, 50.1% of patients were retained in telemedicine treatment for opioid use disorder at 6 months. In the logistic regression, the odds of remaining in treatment among patients reporting concurrent cannabis use were 1.12 times the odds of treatment retention in patients not reporting cannabis use after adjusting for other substance use and patient characteristics (95% confidence interval: 1.02 - 1.24.)

Conclusions: Cannabis use was statistically significantly associated with greater odds of 6-month retention in low-barrier, telemedicine treatment for opioid use disorder. This finding suggests that cannabis is not an impediment to retention in telemedicine treatment for opioid use disorder in some populations and supports the adoption of low-barrier care models to expand access to treatment.

Exploring Cannabis Use Among Individuals Treated with Medication for Opioid Use Disorder: Correlates, Patterns, and Motivations for Use

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Background: Cannabis use is highly prevalent among individuals treated with medication for opioid use disorder (MOUD). However, little is known about factors associated with frequent cannabis use, or why and how individuals treated with MOUD use cannabis.

Objective: Describe correlates, patterns and motivations for cannabis use among individuals treated with MOUD.

Methods: Participants from a randomized trial (n=303) investigating a mind-body intervention adjunct to MOUD treatment who reported frequent cannabis use (≥three days per week) were compared with participants who use cannabis less frequently or not at all. Demographic information, mental health symptoms, physical symptoms, substance use, chronic pain severity and interference, interoceptive awareness, and emotional regulation were measured using validated scales, and compared using t-tests and chi-squared tests. Individuals with frequent cannabis use who were retained in the trial for twelve months were invited to participate in a telephone survey. The survey included reasons for cannabis use (i.e., recreational or medicinal), symptoms/conditions cannabis was used to treat, route, THC/CBD content, and The Cannabis Use Disorder Identification Test Short-Form.

Results: 27% of participants (n=81) used cannabis frequently (≥three days per week.) Frequent cannabis use was significantly associated with lower employment (p=0.03), anxiety (p=0.04), and nausea/vomiting (p<0.001). 65% of participants who were eligible for the telephone survey participated (n=28). Over half of participants (57%) used cannabis for both recreation and symptom management. Fewer participants used cannabis to manage symptoms only (29%) or for recreation only (14%). Participants who reported medicinal use of cannabis used it to manage a variety of symptoms and conditions, most commonly: stress (100%), anxiety (83%), insomnia (79%), pain (75%), depression (75%), PTSD (n=67%), nausea/vomiting (67%), opioid use disorder (50%), and low appetite (50%). All participants obtained cannabis from a dispensary

and the most common route was smoking. 64% of participants purchased cannabis with higher THC than CBD content. 43% screened positive for cannabis use disorder, and approximately half of participants (54%) wanted to cut down on their use.

Conclusions: Most individuals treated with MOUD use cannabis, in part, to treat stress, pain, and mental health conditions. More attention to screening and treatment of these conditions is warranted.

Comprehensive Care

Barriers to Delivering Evidence-Based Opioid Use Disorder and Chronic Pain Treatment in Medical Subspecialty Settings

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Background: Shortages of clinicians providing high-quality opioid use disorder (OUD) management contribute to its undertreatment. OUD is highly comorbid with chronic pain, especially among individuals with chronic diseases often encountered in medical subspeciality settings, such as cirrhosis, inflammatory arthritis, and inflammatory bowel disease.

Objective: To understand potential factors that could influence implementation of evidence-based OUD and pain management in subspeciality settings.

Methods: Physicians from four subspecialties (infectious disease, hepatology, gastroenterology, rheumatology) were invited to complete a web-based survey focused on evidence-based, non-pharmacologic chronic pain interventions and office-based medication treatments for OUD (buprenorphine, naltrexone). Participants were asked about their clinical experiences and barriers to and facilitators of OUD and pain management in specialty clinics. Surveys were followed by semi-structured interviews with a subset of participants to expand on survey responses.

Results: Respondents (n=30) reported an average of 11 years in their respective subspecialties and spent an average of 24 hours/week working directly with patients. Two-thirds (66%) reported asking about pain always or most of the time. However, of these, only 47% felt confident about treating pain and only 11% had ever prescribed medications for OUD. The most common barriers towards treating comorbid OUD and pain included challenges discussing both with patients, OUD and pain-related stigma, low confidence in OUD prescribing, clinic-specific barriers (e.g., lack of time) and patient-specific barriers (e.g., unreliable transportation, medication nonadherence). Follow-up qualitative interviews (n=6) elaborated on barriers and agreed that patient- and clinic-level barriers to OUD and pain care are prominent problems. Respondents also discussed provider-level barriers including the assumption that pain and OUD care should be provided by pain or SUD clinics. Suggestions for improving care included adopting a multidisciplinary approach, additional training in OUD medication treatment and effective therapies for pain, and access to a pain/OUD specialist, although none of these addressed patient-level barriers.

Conclusions: Meeting growing demands for OUD and chronic pain management may require different models of care, including models that address patient-level barriers. Implementation-focused surveys can inform our understanding of how clinicians in specialty medical settings, who likely treat numerous patients with OUD and chronic pain, may help bridge the treatment gap.

Hospital-Based Navigation: A Tool for Linking Patients to Residential Addiction Treatment

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Background: Mortality associated with substance use disorders (SUD) is at an all-time high, yet few people receive addiction treatment. Residential treatment is a widely utilized behavioral health intervention for individuals with SUD meeting ASAM criteria for level 3.5. Recently, some hospitals have implemented interprofessional addiction consult teams (ACT) that include patient navigators to improve access to addiction treatment. However, we know little about the impact of hospital-based navigation on linkage to residential treatment.

Objective: To evaluate linkage to residential treatment with hospital-based navigation.

Methods: We performed a retrospective chart review of 206 hospital encounters in which patients aged ≥ 18 with SUD were evaluated by ACT navigators for residential treatment while admitted to an urban, safety-net hospital between April and December 2023. We extracted demographic data and linkage outcomes for residential treatment, including reason for non-linkage (if applicable). We used chi-squared tests to compare linked and unlinked patients.

Results: Overall, 65.5% of patients in our sample were experiencing homelessness, 54.4% identified as Black or Latine, and 10.7% had limited English proficiency. Prior to initiating a residential treatment referral, 31 patients changed their minds about pursuing treatment. Of the 175 patients who were referred, 76 (43.4%) linked directly following hospitalization. We found no significant differences in linkage rates by age, race/ethnicity, housing status, or primary language. Among patients who were referred and did not link, 46.5% were denied due to acuity of medical issues or comorbid mental illness (Table 1).

Table 1. Reasons for non-linkage

Reason	**Referrals (N=99)**
Acute and/or chronic medical problem	31 (31.3%)

No treatment beds available	24 (24.2%)
High acuity of mental illness	15 (15.2%)
Patient self-directed discharge	15 (15.2%)
Insurance issue	9 (9.1%)
Administrative problem	5 (5.1%)

Conclusions: Our results suggest that hospital-based navigation can effectively link patients to residential treatment when implemented as part of a multidisciplinary addiction consult service, even among a population with high biopsychosocial complexity. Our findings identify several systemic barriers to successful linkage, including limited treatment bed availability and absence of a higher level of care for those with co-occurring medical and/or mental health diagnoses.

The OSU System-Wide Addiction Services Program – Bolstering a Tertiary Care Center's Addiction Safety Net

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Background: The barriers to accessing comprehensive addiction treatment for patients with substance use disorders (SUDs) are well documented. In 2019 The Ohio State Medical Center had siloed burgeoning addiction-specific programs in the emergency department (ED), hospitals and ambulatory settings. Patients with SUDs were handed off between addiction providers using ad hoc communication streams, and unfortunately many were lost to follow-up without a centralized care navigation system or organizational transition processes. In 2020 we created the System-Wide Medications for Opioid Use Disorder Program, later re-named System-Wide Addiction Services (SWAS), to coordinate addiction care across the institution.

Objective: Develop, implement, and sustain a multidisciplinary addiction services program across multiple care settings in a large midwestern academic medical center to meet the comprehensive care needs of individuals with SUDs.

Methods: We designed, implemented and refined SWAS in three separate phases: Phase 1 - Program Preparation, Phase 2 – Program Rollout, Phase 3 – Program Sustainability. Some addiction-specific services were created de novo (e.g. the Primary Care Addiction Medicine clinic and the addition of Peer Recovery Supporters (PRSs) and Care Coordinators (CCs)), and others were fortified (e.g. Inpatient and ED Addiction Consult Services (ACS)). We measured

several key performance indices including consults to addiction services, referrals and contacts by care CCs and PRSs), system-wide encounters and unique patients seen where SUD is addressed.

Results: The SWAS program now spans four clinical venues – primary care, ED, inpatient and the institutional specialized addiction treatment center - and employs 19 staff including nurse practitioners, social workers, pharmacists, CCs, PRS, evaluation team and program administrator. In 2023 we received 3,421 inpatient consults for ACS across two hospital campuses, our CCs received 980 referrals and reached 481 patients, and PRS saw 1,828 patients representing a 196%, 288%, 68% and 271% increase, respectively, above 2021 (except CC contacts, which we started tracking in 2022). In 2023 our providers cared for 4,435 patients in 4,837 visits, representing increases of 415% and 324%, respectively, above 2020 volumes.

Conclusions: The OSU SWAS program has demonstrated the impact of creating, supporting and expanding a large interdisciplinary and interdepartmental patient-centered addiction-specific collaboration within a quaternary health system.

Towards a Consensus on Strategies to Support Opioid Use Disorder Care Transitions Following Hospitalization: A Modified Delphi Process

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Background: Despite the proliferation of acute care interventions to address opioid use disorder (OUD), including initiation of medications for opioid use disorder (MOUD), significant challenges remain to care continuity once patients leave the hospital. More work is needed to inform effective hospital strategies to support patient transitions to ongoing MOUD in the community.

Objective: We conducted a Modified Delphi expert panel to inform a taxonomy of care transition strategies to support MOUD continuity from hospital to community-based settings, and assess their perceived impact and feasibility to implement across general hospital medical settings.

Methods: Experts in hospital-based OUD treatment, care transitions, and frontline addiction hospital treatment were recruited to participate in a modified Delphi panel. Panelists were presented with fourteen OUD care transition strategy “items” derived from a review of the care transitions literature, and asked to rate strategies based on perceived impact and feasibility using a 9-point Likert scale. Panelists were invited to suggest additional care transition strategies. Item agreement level was considered based on proportion of panel rating strategies within a 3-point range of the median. Strategies were assessed as either high, medium, or low impact and feasibility based on median ratings and agreement across three survey rounds.

Results: 45 of 71 invited panelists participated in the Delphi survey. All original 14 items and 8 additional items proposed by panelists were considered to have medium/high impact, and were incorporated into the final taxonomy of 22 items. All items had strong/moderate agreement

among panelists, with the exception of four for which there was poor agreement on feasibility. Strategies with the highest ratings on both impact and feasibility included initiation of MOUD in hospital, and provision of buprenorphine prescriptions and medications prior to discharge.

Conclusions**:** Our Delphi study established expert consensus on impactful and feasible hospital strategies to support MOUD care transitions from the hospital to community-based treatment, a clinical area for which there has been little empirical research thus far. It is the hope that this taxonomy serves as a stepping stone for future evaluations and clinical practice implementation towards improving MOUD continuity and subsequent health outcomes.

A Qualitative Assessment of the Care Transition Experience of Patients with Substance Use Disorders after Hospital Discharge

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Background**:** Medical hospitalization is common among individuals with substance use disorders (SUD). While an increasing number of hospitals offer treatment for various SUD, there are few established models for supporting care transitions after discharge. The period of time immediately following hospital discharge has been associated with an elevated risk of overdose, death, and re-hospitalization.

Objective**:** To understand perspectives on post-hospitalization care transitions from recently-hospitalized people with SUD.

Methods**:** We conducted semi-structured interviews with 10 patients with SUD who recently experienced a medical hospitalization. Participants were recruited in the hospital and interviewed 1-3 weeks after discharge. Interviews focused on in-hospital care, experiences around hospital discharge, and experiences managing medical and SUD care after discharge. A rapid qualitative analysis was conducted to inductively extract key themes from transcripts.

Results**:** Participants had an average length of stay of 6.5 days. Average age was 47 years. The sample was 50% male. Eighty-percent had Medicaid, 10% were uninsured.

We extracted 6 themes:

- Unpredictability around the time of discharge**:** Timing of discharge and key elements of the discharge plan (e.g., new medications) often changed right before leaving the hospital.
- Communication by the hospital medical team**:** Bidirectional communication, mutually agreeing upon a discharge plan, and written discharge instructions were identified as important but happened inconsistently.
- SUD treatment: SUD treatment was addressed with all participants. Most were offered medication and/or community treatment resources. Participants frequently wished for ‘a place to go’ after discharge to recover from medical illness and focus on SUD care.

- Challenges after discharge: These included managing new medications and their side effects, returning to unsafe environments in a debilitated state, facing triggers for substance use, and coping with an inability to attend to basic daily needs.
- Facilitators of care**:** Family and friends were key in providing basic support after discharge. Case managers were effective at facilitating post-hospitalization care.
- Ideal discharge**:** Elements included outreach/check-ins from care team, supportive housing, and provision of basic needs like food and transportation. Solutions must be individualized.

Conclusions**:** People with SUD face numerous barriers to engaging with care after medical hospitalization. Better communication in the hospital and broader availability of community supports may improve care transitions.

Diverse Populations

From Conception to Dissemination: Utilizing a Black-Led Community Advisory Board to Advance Racial Equity in Substance Use Research

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Background: Black people in the U.S. face persistent disparities in addiction treatment access and drug overdose death. Incorporating the lived experiences of people from this community—for example, through a Black-led Community Advisory Board (CAB)—may aid researchers in identifying drivers and reducing such disparities. However, there is little existing guidance for the application and effective use of a CAB with lived experience with drug use throughout the research process.

Objective: The Community ENgagement, Trauma, Equity, and Renewal (CENTER) Initiative is an academic-community partnership with the long-term goal to reduce overdose among Black people who use drugs in St. Louis, Missouri. We aim to describe the feasibility of using a Black-led CAB across each step of the research process aiming to better identify the challenges, needs, and priorities for Black people who use drugs.

Methods: The CAB comprised 10 Black individuals (70% men) with lived experiences with drug use, recruited through word of mouth and local community organizations. Through training and the assistance of project investigators and staff, the CAB completed tasks in research design (e.g., qualitative interview guide revisions), recruitment (e.g., flyer development and participant referrals), data collection (e.g., conducting qualitative interviews), analysis (e.g., qualitative coding), and dissemination (e.g., creating community-facing materials and conference presentations).

Results: With the assistance of the CAB, 40 Black people who use drugs were recruited and enrolled in CENTER research interviews. Staff collaborated with two nonprofit community organizations, one selected by the CAB, to recruit participants and conduct on-site interviews

using the CAB-revised qualitative interview guide. 28% of interviews included a CAB interviewer. Study participants were given harm reduction and referral resources, hand-selected by the CAB. Following data collection, 30% of CAB members helped interpret transcripts, and all participated in dissemination of findings.

Conclusions: Employing a CAB in all aspects of the research process (i.e., from conception to dissemination) is a promising strategy for engaging with populations that have been systemically excluded. Promising practices such as equitable compensation, hands-on practice opportunities, establishing clear expectations, and offering professional training should be replicated to most effectively harness CAB contributions in research focused on marginalized populations.

The Problem Posed By the Lack of Racial Diversity in Co-Occurring Substance Use and Posttraumatic Stress Disorder Research

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Background: There is conflicting research into the racial prevalence of co-occurring posttraumatic stress disorder and substance use disorder (PTSD/SUD). Some research suggests White people make up ~40% of PTSD/SUD cases (Simpson et al., 2019), whereas other research finds Black and Latino populations have the highest odds of experiencing PTSD/SUD (Blanco et al., 2013). Other research suggests Indigenous people have over double the PTSD/SUD prevalence rates than White people (Emerson et al., 2017). Additionally, and importantly, people of color endure unique circumstances like racial discrimination, which causes and exacerbates PTSD and SUD (Sibrava et al., 2019), and these groups have unique, culturally specific treatment needs (Lê Cook et al., 2019). Given this, these populations should be reasonably well included in PTSD/SUD research, and this field should be adapting treatments to address their unique issues.

Objective: This study examined PTSD/SUD research racial diversity and explored the extent these studies culturally adapted and designed specific treatments for race-related issues.

Methods: We conducted an umbrella review, searching PubMed and PsycINFO for systematic reviews and meta-analyses of PTSD/SUD clinical interventions. We imported literature into Covidence and conducted a title, abstract, and full-text inspection of reviews. We included eight reviews and examined the 76 primary, US-based studies within them.

Results: The racial composition was ~56% White, ~25% Black, ~9% Latino, 4% multiracial, ~2% Indigenous, and 1% Asian. Zero studies investigated treatments for people of color's unique issues nor discussed how existing treatments may address them. One study designed and tested a culturally adapted, cognitive processing treatment for Pacific Northwest Indigenous people.

Conclusions: PTSD/SUD behavioral treatment knowledge may not be generalizable to people of color. White people make up more of the participant pool than they do the prevalence pool. Black people are somewhat well included, but Latino and Indigenous groups are significantly

under-included in PTSD/SUD research. Further, the significant lack of culturally adapted studies and the absence of inspection into unique racial issues indicates this field insufficiently prioritizes people of color's needs. Future research must prioritize racial diversity, develop more culturally adapted interventions, and address people of color's unique clinical needs to promote generalizability.

"Nothing about Us without Us, Is for Us": Creating a Harm Reduction Veteran Engagement Board to Inform Program Development

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Background: According to Centers for Disease Control, "public policies should not be written or put into place without the direction and input of the people who will be affected by that policy". The most effective evidence-based harm reduction interventions, such as syringe service programs and peer-delivered naloxone, were created by people who use drugs (PWUD). Harm reduction is increasingly being integrated into the Veterans Health Administration (VHA), but there is a concerning lack of involvement of PWUD in programming.

Objective: To create a Harm Reduction-Veteran Engagement Board (HR-VEB) to inform harm reduction efforts within VHA and advocate for the rights of PWUD.

Methods: From January 2023 to February 2024, Harm Reduction leads at three VHA facilities developed partnerships with Veterans with personal past or present substance use and who professionally function in the harm reduction space. Members were identified through direct Veteran care, mutual external contacts and through Veteran-to-Veteran recruitment.

Results: Our HR-VEB includes 10 Veteran members, and 3 VA staff convened in March 2024. Members have diverse experience around military service, VA utilization, homelessness, and substance use. Some members are leadership for harm reduction organizations, including drug user unions, perform street outreach, and/or hold relevant graduate degrees. Productive conversations have been had around challenges of treatment access, the intersection between overdose, suicide and homelessness, and the need for harm reduction in both the military and healthcare.

Challenges have included paying members and a lack of precedent for our board. Other existing VHA VEBs typically play a passive "informative" role and member's lack professional expertise. Our board seeks to play an empowered or collaborative role, including having members as co-investigators on research, facilitating community events, in addition to informing local VA facilities who are developing their own syringe programs.

Conclusions: The VHA is broadening its harm reduction services, with many facilities now offering syringe service programs; however, its hierarchal structure and relative inexperience with harm reduction may overlook meaningful inclusion of Veterans who use drugs. Creating

our HR-VEB is a first step towards equitable inclusion of Veterans with lived/living experience of substance use in harm reduction services at the VHA.

Leveraging Community Advisory Boards (CABs) to Enhance the Uptake of Harm Reduction Initiatives in West Philadelphia

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Background: BIPOC communities face disproportionate overdose rates and often have lower access to treatment and harm reduction services. To address these gaps in West Philadelphia, a predominantly Black community, our team at the Penn Center for Addiction Medicine and Policy (CAMP) formed a Community Advisory Board (CAB) to inform dissemination of culturally appropriate treatment and harm reduction services.

Objective: Describe our process of CAB building to bolster community collaboration, enhance outreach, and implement appropriate substance use interventions in West Philadelphia.

Methods: We began with a qualitative needs assessment to gather community members' input on strategies to strengthen collaboration between CAMP and the community. We then recruited interested study participants to join our CAB to drive CAMP's community engagement.

Results: Our 10-member CAB formed in August 2022 and meets bimonthly. Most members identify as BIPOC (83%), have lived or living experience with substance use disorder (83%), and all live or work in West Philadelphia. During introductory meetings, we presented CAMP's mission and promoted dialogue among members to build solidarity. Subsequently, we collaboratively developed goals and identified priorities, resulting in enhanced outreach initiatives tailored to BIPOC individuals who use drugs in West Philadelphia.

CAB input has fostered partnerships with 35 community-based organizations, the local transportation authority, and other community leaders and informed outreach at transportation hubs, libraries, and food distribution sites. Additionally, we hosted 62 Narcan trainings and attended 28 community meetings to provide harm reduction education and socialize our services based on CAB recommendations. CAB input also informed the creation of low-barrier, walk-in services focusing on addressing social needs.

Lessons learned include the importance of consulting community members throughout program design and implementation and the importance of including community members in meaningful ways, including hiring them to join and lead this work. Finally, our CAB identified the need for academic teams to create space for community members to drive the community engagement process and create practical solutions to mitigate consequences of substance use.

Conclusions: CABs can bolster acceptability of harm reduction education and services in BIPOC communities. Early outcomes of our community engagement initiative showcase the success of community-driven program design and implementation.

Clinician and Patient Perspectives on Reasons for Gender and Racialized Disparities in Medication Treatment for Opioid Use Disorder

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Background: Despite recent efforts in the Veterans Health Administration (VA) to increase medication treatment for Opioid Use Disorder (OUD), treatment disparities exist for Black relative to White veterans, with disparities particularly pronounced for Black women.

Objective: The current study sought to better understand factors that contribute to observed racial and gender disparities in access to and retention on medication treatment for OUD (MOUD).

Methods: In partnership with VA's Office of Mental Health and Suicide Prevention, we recruited VA frontline clinicians (N=18) and Black patients with OUD (N=19) from seven VA medical centers (three sites with relatively small disparities and four with larger disparities) to participate in semi-structured, qualitative interviews. Interviews assessed possible reasons for disparities as well as recommendations for improvements. Rapid qualitative analysis was used to generate themes, barriers, and facilitators of equitable care.

Results: Overall, clinicians from all sites stated they lacked awareness of barriers unique to race. Clinicians instead shared about generic MOUD access barriers unrelated to race or racism and endorsed a "color-blind" approach to practice wherein all veterans, regardless of identity, were offered MOUD. Additionally, clinicians did not consider the intersectional nature of racialized and gender disparities and instead viewed barriers for women as including the need for childcare, women's minority status in VA, and biased mental health diagnosing. Small disparity sites endorsed more flexible views related to prescribing MOUD whereas larger disparity sites discussed more requirements of patients to be on and maintain MOUD (e.g., three strikes policy). Veterans at larger disparity sites were more likely to discuss bias in pain treatment, racism, and lack of patient-centered care which may contribute to disparities in MOUD.

Conclusions: Based on observed differences in patient and provider report at small and large disparity sites, recommendations for reducing disparities include dissemination of guidelines for low-barrier MOUD prescribing, dissemination of clinical data dashboards to track and improve equity metrics, and offering ongoing anti-racism trainings/seminars.

Drug Checking

Pairing Xylazine Education and Home Testing As a Harm Reduction Strategy for Pregnant and Postpartum Persons Who Use Illicit Opioids

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Background: The increasing prevalence of illicit opioid use during pregnancy and related morbidity and mortality are of significant concern. Exposure to xylazine, a common adulterant in the illicit opioid supply, is linked to prolonged sedation and severe skin ulcers. Animal studies raise concern for additional maternal and fetal complications of exposure during pregnancy. Xylazine immunoassay test strips (XTS) are a harm reduction tool that can inform safer use practices but their use in pregnant and postpartum populations have not been studied.

Objective: We conducted a pilot observational study to evaluate the impact of a paired intervention for pregnant and postpartum persons which included: 1) education about xylazine and proper XTS use and 2) distribution of five XTS kits for home use.

Methods: We recruited pregnant and postpartum individuals with past-three-month illicit opioid use from a single hospital in Pittsburgh, PA between January-April 2024. Participants received a pre-intervention survey assessing general knowledge about xylazine and XTS and perceived risks of xylazine exposure in pregnancy. Participants then completed a brief, structured education session consisting of two videos and two pamphlets on xylazine, XTS use, overdose prevention and xylazine-related harm reduction strategies. Participants were asked to complete a short real-time survey with each XTS kit use which asked about test results and use behaviors.

Results: Of 30 participants, the majority were extremely concerned that xylazine could impact fetal development (86%), exacerbate neonatal withdrawal symptoms (82%) or cause problems in pregnancy (72%) or labor and delivery (72%). 12 of 30 participants submitted at least one real-time survey after using a XTS kit and detected xylazine 54% of the time. Among those who found xylazine in their drug sample, many reported that they planned not to use that supply or to use less than they would have otherwise.

Conclusions: We found that pregnant and postpartum individuals who use illicit opioids are worried about the impacts of xylazine exposure on pregnancy and fetal outcomes. Many are willing to incorporate use of XTS and make behavioral changes based on XTS results. More efforts are needed to increase XTS accessibility and develop other harm reduction strategies tailored to this population.

Rural Community Pharmacist Knowledge of Drug Checking Test Strips and Willingness to Engage with Test Strip Activities

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Background: Fentanyl was present in over 73,000 drug overdose deaths in the US in 2022, and xylazine causes infected wounds that are difficult and expensive to treat. Fentanyl test strips (FTS) and xylazine test strips (XTS) can determine the presence of fentanyl and xylazine in

nonprescribed drugs prior to their consumption, which can lead to safer drug use behaviors. Access to drug testing strips is currently limited in rural areas, and community pharmacists have previously indicated willingness to sell FTS.

Objective: To assess rural community pharmacist knowledge of and willingness to engage in various test strip behaviors.

Methods: This observational cross-sectional survey study recruited practicing rural community pharmacists from seven southeastern states who were members of the Rural Research Alliance of Community Pharmacies (RURAL-CP) practice-based research network. Online survey data were collected from July 2023 to October 2023. The survey assessed pharmacists' awareness of FTS and XTS, willingness to engage in five FTS and XTS-related activities, and barriers to selling or distributing FTS at their pharmacies.

Results: A total of 61 pharmacists responded (response rate: 50.4%). Overall, pharmacist knowledge that FTS (n=21, 34.4%) could detect the presence of fentanyl in drugs and XTS (n=7, 11.5%) could detect the presence of xylazine in drugs was limited. Overall, 67.2% (n=41) and 50.8% (n=31) of pharmacists were very willing to sell FTS, and XTS, respectively. Pharmacists were very willing to distribute FTS (62.3%, n=38) and XTS instructions (47.5%, n=29) and counsel on how to use FTS (67.2%, n=41) and XTS (50.8%, n=31). Pharmacists were very willing to refer patients to harm reduction organizations for FTS (73.8%, n=45) and XTS (57.4%, n=35). Pharmacists were least willing to advertise FTS and XTS for sale at their pharmacy (44.3%, n=27; 31.1% n=19). The most commonly perceived barriers to selling FTS were not knowing where to order FTS (n=45, 70.6%), and not knowing how to identify patients who would benefit from FTS (n=27,29.5%).

Conclusions: Even though community pharmacist awareness of FTS and XTS is limited, most are willing to sell FTS and XTS. Targeted training for community pharmacy staff to overcome dispensing barriers is needed.

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

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Background: Potent and unregulated street drugs have led to an increasing number of overdoses. Drug checking services (DCS) using Fourier-transform infrared spectroscopy (FTIR) offer comprehensive analyses by identifying multiple drug components within a sample, and immediate feedback to users. Additionally, this technology can be feasibly integrated into community-based settings. To date, there have been no studies examining post-implementation barriers and facilitators to DCS programs in Michigan.

Objective: Evaluate facilitators and barriers to DCS implementation among participants and staff at a local harm reduction agency.

Methods: Semi-structured interviews were developed using the Consolidated Framework for Implementation Research (CFIR). Focus group and 1:1 interviews were conducted 6-months post DCS program implementation. Interviews were audio-recorded and transcribed. Rapid and thematic qualitative analysis was conducted with themes inductively developed. Applicable CFIR domains, constructs and associated sub-themes were displayed in summary matrices. Demographic and drug preference survey data was collected prior to each interview.

Results: DCS participants (n=10) were recruited into several 1:1 interviews and focus groups (n=1-2), and agency staff (n=8) into three focus groups (n=2-4). Staff-identified facilitators to implementation included: 1) offering DCS in an established syringe service program to foster a natural referral system within the agency, 2) receiving positive community feedback, and 3) observing DCS participant behavior shifts towards safer drug use practices. Conversely, barriers noted were delayed complementary testing results, difficulties hiring DCS staff, and inconsistent DCS utilization by participants. Nonetheless, participants reported feeling comfortable and safe using DCS, noting it empowered them to make more informed decisions regarding drug consumption based on FTIR results. The participants also highlighted the potential for wider community impact of the program should the agency report on emergent adulterant trends detected through DCS.

Conclusions: DCS using FTIR was cohesively integrated into a syringe service program and prompted participants to consider safer drug use behaviors. The findings advocate for further investigation into overcoming participant accessibility barriers, with the aim of enhancing program adoption and maximizing its impact on public health.

We Have the Right to Know: Building a Drug User-Owned Drug Checking Network in Texas

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Background:Texas has experienced a dramatic surge in overdose deaths since 2020. A large gap in the overdose prevention strategy for the state is the poor awareness of the makeup of the drug supply.

Objective: This study explores the impact of a mail-based drug checking program built for and directed by drug users, a departure from more traditional models of law enforcement drug checking. We seek to appreciate how the tool is used, the qualitative impacts felt by participants, and the participants' goals for the program.

Methods: The authors utilized an existing drug checking program at the University of North Carolina. Participants from the five largest metro areas in Texas were provided with testing kits and $1000 per site as payment to those submitting samples. After an initial sampling round of black tar heroin, the chemical data were considered, and interviews were conducted with representatives from each site to better elucidate barriers, facilitators, and participant goals for future program development.

Results: 34 drug samples were analyzed, demonstrating a relative predominance of heroin in south and central Texas, and a relative predominance of fentanyl elsewhere. Qualitative interviews revealed thematic clusters reflecting 1. A desire to contribute to community well-being and cohesion, 2. Bodily autonomy, 3. Isolation and vulnerability, and 4. The desire for greater knowledge and awareness, both about the drug supply and drug checking technologies.

Conclusions: This study revealed interesting and public health-relevant insights into the drug supply, as well as motivating factors driving program participation. We found that PWUD are chiefly motivated by the needs of their community, and that this dovetails with a desire for knowledge, communication, and bodily autonomy. We found that varying legal contexts across the state had an outsized impact on the participant experience. That this program is implemented in close concert with drug users, and is not an externally-conceived program designed by academics, was shown to be critical for attaining buy-in and trust. Interviews revealed fruitful and novel avenues of building participation in and support of this program as it continues to grow, and potential pitfalls at both state and local levels which can be anticipated and accounted for.

Test Your Drugs, Not Your Limits: Advanced Drug Checking As an Enhancement to Harm Reduction and Medical Services at a Community Health Center

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Background: Advanced drug checking services promote the health of people who use drugs (PWUD) by providing accurate information about drug samples to both PWUD and harm reduction and health care providers (HCPs).

Objective: This project aimed to assess the opinions of people accessing advanced drug checking services and HCPs involved in harm reduction work about perceived usefulness of drug checking, its potential relationship to clinical practice, and ethical considerations.

Methods: An expansion of advanced drug checking services was implemented by Brockton Neighborhood Health Center with Brandeis University's Community Drug Checking team to increase access to FTIR and GC-MS. Participants engaged in drug checking services were recruited for surveys and semi-structured interviews alongside a sample of harm reduction-focused HCPs. Quantitative analysis of surveys and qualitative thematic analysis of interviews were performed.

Results: Expansion of services allowed for n=234 samples to be checked with FTIR, including n=45 in real-time, and n=119 for confirmatory GC-MS testing. Results of concern included xylazine (6.7%), levamisole (2.5%), and concomitant cocaine and fentanyl present (18.5%).

Twenty-six PWUD responded to surveys and n=5 completed interviews. Among survey respondents, 73% answered they would be "very likely" to seek medical care and 69% to change behaviors based on drug checking results. Most (85%) were comfortable with HCPs having

access to results. Qualitative results revealed that participants viewed drug checking as highly desirable and protective to health. Drug checking and medical care were viewed as bidirectional facilitators and hesitancy existed around drug checking and medical records.

Thirty-seven HCPs (n=37) responded to surveys and n=6 completed interviews. Most (84%) reported they were "extremely likely" to advise patients on safer use practices based on results and 70% answered that results had informed their clinical practice. Qualitative results showed that greater access to advanced drug checking is important to providers, and it is viewed as a tool to inform clinical care. Themes around training and support arose from provider interviews.

Conclusions: Advanced drug checking is a valuable tool to promote the health of PWUD. There appears to be a place for results within clinical practice, however more research is needed to determine scope, best practices, and ethical standards.

Extended-Release Buprenorphine

Reduced Emergency Department Use Among Insured Individuals Receiving Extended-Release Buprenorphine in a Health System Setting

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Background: Opioid use disorder and opioid overdoses continue to be a public health concern in the United States. Extended-release buprenorphine (XR-Bup), a once-a-month subcutaneous injectable, has been associated with reduced opioid use and opioid negative urine drug screens.

Objective: Document the use of XR-Bup in health system-based addiction care and measure health service utilization outcomes.

Methods: In this observational study, individuals prescribed XR-Bup were identified from electronic health records (EHR). Chart abstraction was conducted for all individuals receiving an XR-Bup pharmacy order. The primary outcome was all-cause emergency department (ED) use. Secondary outcomes included ED use for mental health or substance use issues, ED use for all other causes (both derived from EHR), reasons for discontinuation, and drug substitution during XR-Bup treatment (both derived from chart review). Statistical comparisons used nonparametric tests from related samples to account for autocorrelation (McNemar's test for categorical data, Wilcoxon matched pair tests for continuous data).

Results: 152 individuals had an XR-Bup order; chart review confirmed 126 received ≥1 injection. The majority were male, white, and had multiple comorbid psychiatric and substance use disorder diagnoses. Among those consistently insured during the 6 months prior to and 6 months following XR-Bup initiation (n=99), mean number of injections following initiation was 3.95; one-third received 6 doses in the 6 months. The proportion of individuals using ED services for all causes declined following XR-Bup initiation (41% prior vs. 28% after, $p<.05$); similar results were found for ED use related to mental health or substance use and ED use associated with all other reasons. The proportion of individuals requiring inpatient treatment for

mental health or substance use-related reasons also declined following XR-Bup initiation (46% prior vs. 16% after, p<.01). Common reasons for discontinuing XR-Bup included losing insurance (21%) or cost (11%). The most common non-prescribed substances identified in notes or urine drug screens during treatment were opioids (n=31) and THC (n=20).

Conclusions: In this non-randomized retrospective observational study, use of XR-Bup in a health system setting was associated with reduced ED use 6 months following initiation. XR-Bup may help health systems reduce use of costly ED services.

Drug Use Patterns in the Week Following Emergency Department Initiated Long Acting Injectable Buprenorphine: A Secondary Analysis

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Background: The interval following an Emergency Department (ED) visit for opioid use disorder (OUD) represents a high-risk period for morbidity and mortality. Little is known about drug use patterns in the days following an ED visit for OUD and or following ED initiated buprenorphine.

Learning Objectives: We sought to characterize drug use patterns as measured by interval urine drug screens and daily self-report in patients with untreated OUD being initiated on a 7-day extend-release injectable buprenorphine (XR-BUP) formulation in 4 EDs in the United States.

Case Presentation: This is a secondary analysis of patients enrolled in the CTN0099 ED-INNOVATION ancillary study. Participants were adult ED patients with OUD and a urine drug screen (UDS) positive for an opioid but negative for methadone. UDS and timeline follow back (TLFB) were performed at baseline. Participants completed daily web-based surveys of self-reported drug use and returned at day-7 to provide a UDS. Drug use patterns among study participants who completed at least 4 daily surveys (1 within last 3 days) were described and correlated with 7-day UDS.

Discussion: All participants provided a baseline UDS and 97 completed baseline TLFB, of which 99% (96/97) reported past week opioid use. All participants had a baseline UDS with opioids (70% fentanyl). Most 81% (81/100) participants completed at least 4 daily surveys of which 98% (79/81) reported at least one day with no opioid use and 63% (51/81) reported no days of opioid use following treatment initiation. Sixty-two participants provided a follow-up UDS within the 7-day time window of which 60 completed a daily survey within three days of their follow-up UDS. Among these 60 participants 70% (42/60) reported no opioid use of which 29% (12/60) had a UDS with an opioid and 45% (19/60) reported opioid use, all (100%) of which had an opioid in their UDS.

In the week following XR-BUP initiation in the ED over 60% of patients report no opioid use. Self-reported opioid use has good-moderate correlation with UDS suggesting that a UDS may not be necessary especially in patients who self-report opioid use.

Outpatient Induction Using a 7-Day Extended-Release Injectable Buprenorphine for Patients with Opioid Use Disorder: Clinical Cases

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Background: Outpatient sublingual buprenorphine inductions can be challenging for patients using fentanyl. Extended-release buprenorphine (XR-BUP), including a newer 7-day subcutaneous injection (CAM2038), offers an additional option for treatment initiation for opioid use disorder (OUD), but the manufacturer recommends a "test dose" with sublingual buprenorphine prior to XR-BUP administration. We describe the experiences of four patients initiated directly with 7-day XR BUP without premedication with sublingual buprenorphine.

Learning Objectives:

-Describe challenges with outpatient buprenorphine inductions in the fentanyl era

-Understand how 7-Day XR-BUP can be used as a novel induction strategy

Case Presentation: Patient 1: 65-year-old man using ~5 bags of intranasal fentanyl every 2-3 days and a history of >5outpatient buprenorphine induction attempts. Last used 36 hours prior to first dose of XR-BUP 24 mg and tolerated without significant side effects.

Patient 2: 39-year-old woman using 8-10 bags of IV and intranasal fentanyl daily who was unable to tolerate low dose induction due to precipitated withdrawal. She last used fentanyl 12 hours prior to receiving XR-BUP 24 mg. She received standard 'comfort medications and experienced no withdrawal symptoms.

Patient 3: 51-year-old female using 5 bags intranasal fentanyl daily and unable to tolerate low dose induction, Last used fentanyl 12 hours prior to receiving XR BUP 24 mg. She received comfort medications and additional SL films and reported mild withdrawal symptoms the following day that resolved within 24 hours.

Patient 4: 54-year-old male using 4-5 bags intranasal fentanyl daily and unable to tolerate low dose induction past 1 mg SL buprenorphine daily. Last fentanyl use 19 hours before receiving XR BUP 24 mg. He took comfort medications and additional SL films and reported mild withdrawal symptoms for 12 hours later that day.

Discussion: These cases suggest that 7-day XR-BUP may be a feasible and tolerable induction option in outpatient settings without pre-administration of test dose of sublingual buprenorphine, especially for patients struggling with traditional or low-dose outpatient buprenorphine induction. The slower onset to peak plasma concentrations with 7-day XR-BUP compared to sublingual formulation may explain the experience of fewer side effects and no reported precipitated withdrawal.

From Evidence to Action: A Retrospective Chart Review of Prescribing Factors Associated with Extended-Release Buprenorphine Retention in an Integrated Clinic Setting

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Background: Extended-release buprenorphine (XR-bup) has demonstrated protection against non-fatal overdose and increased opioid abstinence for patients with opioid use disorder (OUD) compared to sublingual buprenorphine. Factors including dose selection, dose frequency, and use of supplemental buprenorphine remain evolving questions to optimize treatment retention.

Objective: To explore prescribing factors associated with treatment retention with XR-bup.

Methods: Charts were reviewed for patients started on XR-bup from March 2021- November 2023 at an integrated primary care and opioid treatment program in New Haven, CT. Chart extraction included demographics, duration of prescription of sublingual buprenorphine preceding XR-bup, use of supplemental sublingual buprenorphine during XR-bup, XR-bup dose, ongoing substance use, and treatment retention measured by number of monthly doses of XR-bup received.

Results: Of 56 patients initiated on XR-bup since 2021, 35 (63%) remained actively enrolled at study endpoint: Eighteen (51%) were female patients, median age 39 years old. Ten (29%) received 6-12 monthly injections of XR-bup and 9 (26%) received 13-25 injections. Of actively enrolled patients, the average sublingual buprenorphine dose preceding XR-bup was 16 mg/day; eleven patients (31%) were on sublingual buprenorphine for >12 months. The majority (n=22, 63%) were maintained on a high dose regimen (300 mg monthly) or transitioned from a conventional regimen (two 300 mg monthly loading doses followed by 100 mg monthly dose) to a high dose regimen. Twenty-one patients discontinued XR-bup: ten returned to sublingual buprenorphine, one transitioned to methadone, 10 transitioned off MOUD. Sixteen patients (45%) had a fentanyl positive urine drug screen, and 13 patients (37%) had a cocaine positive urine drug screen. Twenty-eight patients (80%) received supplemental sublingual buprenorphine: median dose of 8 mg/day, median of 4 weeks supplemental buprenorphine but with considerable variation in duration.

Conclusions: Patients receiving XR-bup at an integrated primary care and opioid treatment program had retention rates similar to studies for sublingual buprenorphine or methadone, especially when combined with supplemental sublingual buprenorphine. Incorporating patient-centered prescribing factors likely facilitates retention, including offering supplemental sublingual buprenorphine and continuing XR-bup despite ongoing substance use. Providing XR-bup in an integrated program allows for transition to other forms of medication as needed.

Evaluation of Outcomes of Extended-Release Buprenorphine Administered during Emergency Department and Inpatient Visits

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Background: Extended-release buprenorphine (XR-Bup) is a monthly injectable medication for patients with opioid use disorder (OUD), and may be particularly useful during transitions between various care settings. XR-Bup, however, is not typically covered by insurance when given in the acute care setting.

Objective: We aim to evaluate the implementation of XR-BUP as a treatment modality for hospitalized and emergency department (ED) patients with OUD, and assess engagement in outpatient addiction treatment within 30 days of discharge.

Methods: This is a retrospective cohort study of patients who received XR-Bup in the ED or inpatient setting over a 6 month period from September 2023 through March 2024. The primary outcome was defined as attendance at an outpatient appointment for OUD within 30 days of discharge. Baseline rates of follow-up for patients with OUD were collected from our institutional Healthcare Effectiveness Data and Information Sets (HEDIS) dataset.

Results: There were 41 total encounters where XR-Bup was administered, 7 during an ED visit and 34 inpatient. The mean age was 46.6 (standard deviation 12.3); 31 (75.6%) patients were Black, 8 (19.5%) were White, 2 (4.9%) were Latinx; 39 (95.1%) were publicly insured; and 13 (31.7%) were unhoused.

Of the 41 patients, 26 (63.4%) initiated buprenorphine with a full opioid agonist overlap with low-dose buprenorphine protocol in the ED or hospital, 8 (19.5%) had XR-Bup administered on the same day that they first tolerated sublingual buprenorphine, and 5 (12.2%) patients had XR-Bup after buprenorphine precipitated withdrawal was treated in the ED.

Within 30 days of ED or hospital discharge, 29 (70.7%) patients attended an outpatient appointment for OUD; baseline follow-up rates for patients with OUD within 30 days of an ED or hospital stay at our institution are 39% and 38%, respectively.

Conclusions: Receipt of XR-Bup during an ED or hospital stay was associated with high rates of follow up in outpatient addiction treatment after discharge. Future work should assess effectiveness compared to sublingual buprenorphine and evaluate ideal strategies to initiate XR-Bup for medically complicated patients in acute care settings.

Family and Women's Health 1

Feasibility of an Inpatient Split-Dose Rapid Methadone Induction Protocol for Pregnant Individuals

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Background: Opioid use disorder (OUD) is associated with adverse perinatal outcomes, and stabilization of pregnant patients on medication for opioid use disorder (MOUD) is critical. Limited data exists on rapid methadone induction for pregnant patients. Additionally, pregnant people may benefit from split dosing of methadone due to physiologic changes in metabolism.

Objective: We describe the experience of a split-dose, rapid methadone induction protocol among hospitalized pregnant patients with OUD at one tertiary care center.

Methods: We conducted a retrospective chart review of hospitalized pregnant patients with OUD with active fentanyl use who desired methadone initiation by the interprofessional addiction consult service (ACS) at an urban academic center between June 2023 and April 2024. Patients were identified as having received the protocol if they were dosed greater than 50 mg of methadone on day 1 of ACS consult. Dose was split 1:1 approximately 12 hours apart. Protocol exclusion criteria included organ failure, concurrent alcohol or benzodiazepine use, QTc >500, or inability to connect with an Opioid Treatment Program (OTP). Up to 30-day post-hospital discharge data was obtained from patients' community OTPs.

Results: Thirteen patients received the rapid, split dose methadone protocol for hospitalized pregnant patients. Average total daily doses of methadone on days 1-5 after ACS consult were 62 mg, 80 mg, 86 mg, 94 mg, 105 mg, respectively. One patient had their titration slowed for symptomatic bradycardia. There were no other adverse events. Most patients were in the third trimester at the time of admission (n=9, 69%). Seven patients (53%) attended an intake appointment at an OTP after discharge, and 5 (38%) of these patients remained on methadone at 30 days. Of the 10 patients who delivered during the study period, 9 were on methadone at the time of delivery.

Conclusions: A split dose, rapid methadone induction protocol for pregnant individuals admitted to the hospital is well-tolerated and feasible. However, despite quick up-titration of methadone, a minority of patients remained on methadone at 30-days post-discharge, suggesting that barriers to treatment and retention besides pharmacologic stabilization remain.

Changes in Buprenorphine Prescribing Among Pregnant and Postpartum Individuals Following Postpartum Medicaid Expansion in South Carolina

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Background: Buprenorphine is safe and effective in treating opioid use disorder (OUD) in the peripartum period. In pregnancy, many individuals will qualify for insurance for the first time. Typically, Medicaid-related pregnancy coverage ends at 60-days postpartum, and most birthing individuals will be churned into another coverage plan or lose insurance coverage. During the COVID-19 pandemic, congress passed the Family First Coronavirus Act (FFCRA) which allowed pregnant individuals to remain enrolled in Medicaid for 12 months postpartum.

Objective: We aim to describe how receipt of buprenorphine changed among Medicaid enrolled birthing individuals following postpartum Medicaid expansion in South Carolina through the FFCRA.

Methods: We conducted a retrospective cohort study using linked Medicaid and birth certificate data from 2015 to 2022. Individuals with OUD were identified using CPT codes and divided into two groups: pre- and post-FFCRA implementation. We used standard bivariate tests to compare demographic and buprenorphine use among policy groups. Postpartum buprenorphine use was assessed during three timepoints: 0-60 days postpartum, 2-6 months postpartum, 6-12 months postpartum. We conducted an interrupted time series (ITS) to compare the proportion of individuals accessing buprenorphine within each time period.

Results: Our final cohort included 2,633 individuals with OUD. Of these, 39.1% (N=1,1039) received at least one buprenorphine prescription during pregnancy or postpartum. Following FFCRA implementation, the proportion of individuals receiving a buprenorphine prescription increased from 8.36% to 10.14% (p=0.009) between 2 and 6 months postpartum. There was no significant change at 0-2 months postpartum or 6-12 months. Our ITS analysis showed a 0.5% monthly increase (95% CI 0.02-0.94) between 2 and 6 months postpartum following policy implementation but no significant change during other peripartum time periods. However, there was no post-policy difference in the average number of days of coverage prescribed per month in the postpartum period (17.9 days per month pre-policy (SD 10.24) vs 18.2 days per month post-policy (SD 9.82, p=0.12)

Conclusions: There was minimal change in Buprenorphine use following FFCRA implementation among Medicaid enrolled pregnant individuals in South Carolina. As more U.S. states are looking to expand Medicaid to 1-year postpartum, it’s important we understand the limitations of policy on tangible access to MOUD.

Collocated Care: A Peripartum Clinic at the Heart of the Opioid Epidemic

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Background: Opioid use disorders (OUD) significantly impact pregnant and postpartum populations in Philadelphia. Pregnancy associated deaths due to accidental drug overdose has increased from 25% in 2016 to 41% in 2020, and 66% of accidental drug overdose deaths occurred after the 6-week postpartum period. When examining pregnancy associated deaths, significant rates of mental health and negative social determinants have been identified. Finally, in 2020, greater than double that national average of Neonatal Abstinence Syndrome (NAS) was noted in the Philadelphia metropolitan region.

Objective: In response to these challenges and the need for clinical training, the University of Pennsylvania established the Perinatal Resources for Opiate Use Disorder (PROUD) clinic in July 2021, co-directed by Family Medicine and Ob/Gyn, as an interdisciplinary cross-practice clinic providing comprehensive care to expectant and postpartum patients (up to two years) with OUD and their newborns. A grant through the Department of Drug and Alcohol Programs

provides support for direct patient services. An early program evaluation was conducted to assess if these services impact care.

Methods: A mixed methods framework utilizing both qualitative and quantitative elements were used to track implementation and outcomes.

Results: The PROUD program has contributed to the care and delivery of greater than 90 new birthing patients with OUD in Philadelphia. The services most utilized to successfully engage patients in care have been certified recovery specialist outreach, transportation support for appointments, and social work. With this multidisciplinary approach we have been able to link patients to inpatient treatment services, ongoing behavioral health, and social services- most commonly, housing, food, and job training support. The retention rate of patients in the PROUD clinic, defined as 3 or more visits, increased from 46.8% in Year 1 to 76.7% in Year 2, and consistent medications for opioid use disorder (MOUD) use increased from 76.3% to 84.8%. We demonstrate with geo-tagging that patients that travel to PROUD clinic are from the Philadelphia overdose "hot-spots."

Conclusions: Our program evaluation shows by combating negative social determinants of health, having low barriers for clinic entry, addressing mental health, and with peer support services, we increase engagement in care and MOUD uptake.

Perspectives of Mothers with Substance Use Disorder on Naloxone Education: "I'm Ready to Have Those Conversations about Who I Was, Because That's Not Who I Am"

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Background: Youth opioid overdose deaths have risen dramatically since 2020; overdose and poisoning are now the third leading cause of death among American children and adolescents. Overdose prevention strategies for all families are needed, and parents with substance use disorder (SUD) may offer unique perspectives on how to best facilitate these conversations and potential barriers.

Objective**:** The aim of this work was to assess attitudes of mothers with a history of substance use disorder (SUD) about discussing overdose prevention, particularly naloxone administration, with their children.

Methods: Mothers with a history of SUD were recruited from three programs caring for pregnant and parenting women with SUD through flyers, electronic medical record outreach, social media, and a research study website. Peer recovery coaches co-led five semi-structured virtual focus groups with 23 participants exploring the experience of parenting with a history of SUD. We used an inductive thematic analysis approach to assess participants' approaches to naloxone conversations with their children. Transcripts were double-coded with an overall kappa coefficient of 0.84.

Results: Four themes emerged: First, most mothers had not discussed naloxone use with their children, yet felt it was important to prepare youth to respond to a potential overdose in their home, school, or community. Second, normalizing naloxone education through comparisons to other emergency responses (e.g., fire safety) may reduce stigma and open opportunities for children to learn a life-saving skill. Third, overdose response involves multiple skills – overdose recognition, naloxone administration, and emotional response management – requiring different stages of child development. Fourth, mothers felt that naloxone discussions often require disclosing their own SUD, which was identified as a challenging conversation that parents were variably ready to navigate.

Conclusions: Mothers with a history of SUD feel their children would benefit from knowing about naloxone, but some expressed concerns about child readiness and navigating their own SUD disclosure. Identifying developmentally appropriate language and tools to discuss naloxone and parental SUD may support parental readiness to have these conversations with their children. While this study identified the specific concerns of parents in treatment for SUD, such strategies may support naloxone discussions with all families.

Buprenorphine Induction As a Support for Families with Child Protective Services (CPS) Involvement

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Background: Medication for opioid use disorder (MOUD) treatment is poorly accessed during pregnancy and in the post-partum period, despite rapidly rising overdose rates of birthing people[1,2] Family policing involvement and child removal can be major barriers to treatment engagement for parents with OUD.[3] Furthermore, mandatory reporting laws correlate with a lack of treatment engagement for pregnant individuals.[4] Due to these concerns, partnerships between medical and legal teams may support family access to OUD treatment.

Learning Objectives:

- Review MOUD access in birthing people and disparities in family policing involvement
- Discuss utility of peri-partum low dose buprenorphine initiation
- Identify opportunities for medical legal partnerships for families affected by substance use

Case Presentation: Our patient had been denied MOUD early in pregnancy due to a lack of insurance coverage and presented to the hospital in labor with opioid withdrawal. Withdrawal symptoms were initially controlled with methadone and the child was born without complication. The patient elected to transition to sublingual (SL) buprenorphine via low dose buprenorphine initiation for treatment of OUD as a part of the “plan of safe care” for their child required by the Child Abuse Prevention and Treatment Act (CAPTA). With the advocacy of a public defense firm and the clinical care team, the child remained in the care of their parent in the post-partum period to treat withdrawal symptoms via an Eat, Sleep, and Console (ESC) protocol. The patient

later transitioned to long acting injectable (LAI) buprenorphine and remains in care at our FQHC where they also receive OB and pediatric care.

Discussion: It is imperative that care teams address barriers in receiving MOUD for birthing people, including CPS involvement. This case features two important strategies that can improve patient outcomes: (1) family centered approach to opioid withdrawal treatment and OUD treatment, by addressing withdrawal symptoms of both the birthing person and the child as well as providing all potential treatment options and and (2) medical-legal partnerships to center family unity in the treatment plan. This approach may be ideal for supporting birthing people who are fearful of child removal in the setting of substance use, which also contributes to racial inequities in treatment engagement.

Family and Women's Health 2

Female Veterans: 20-Year Trends of Access and Episodes of Buprenorphine for Opioid Use Disorder within the Veterans Health Administration

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Background: Buprenorphine medication treatment for opioid use disorder (B-MOUD) saves lives, but access may differ based on patient characteristics. Women Veterans with opioid use disorder (OUD) constitute a particularly vulnerable group. The Veterans Health Administration (VHA) uses rates of access of MOUD as a quality metric, and identifying disparities by racial/ethnic characteristics within the female cohort will help improve clinical care.

Objective: We sought to examine annual trends in receipt of B-MOUD prescriptions, stratified by all prescriptions (Any-B-MOUD) and at least 30-day continuous prescriptions (30-Day-B-MOUD), amongst female Veterans with OUD overall, and compare trends based on race and ethnicity.

Methods: We established a retrospective cohort of female Veteran patients of known race and ethnicity between 2006-2023 with an OUD diagnosis (select ICD-9/10 codes), and identified receipt of Any-B-MOUD or 30-Day-B-MOUD from the VHA's Corporate Data Warehouse. Linear regression, weighted by time dependent cohort size, was used to model the B-MOUD annual prescription rates across time and racial or ethnic variables, starting in 2007 to account for lead in time.

Results: We identified 21,376 female Veterans with OUD, of whom 4,614 (21.6%) received any-B-MOUD and 3,690 (17.3%) received 30-Day-B-MOUD at least once over the study period. Between 2007 and 2023, the proportion of those receiving Any-B-MOUD increased from 8.66% to 11.07% (β=0.18; $p<0.001$), while the proportion of those receiving 30-Day-B-MOUD increased from 3.67% to 8.34% (β=0.31; $p<0.001$). The proportion of non-White patients receiving B-MOUD was less than the White patients (Any-B-MOUD: 804/5299 [15.2%] vs 3810/16077 [23.7%], $p<0.001$; 30-Day-B-MOUD: 602/5,299 [11.4%] vs 3088/16077 [19.2%],

p<0.001), with the growth of 30-day-B-MOUD rates faster in White compared to non-White patients (+0.33/year vs +0.24/year, p=0.0418). B-MOUD rates varied over time amongst the 930 (4.4%) Hispanic/Latina patients, with a decreasing trend overall (Any-B-MOUD: -0.1/year, p<0.001; 30-day-B-MOUD: -0.09/year, p=0.029).

Conclusions: We found that the proportion receiving B-MOUD increased linearly over time in female Veterans of White and non-White race, with a higher proportion of White patients receiving both types of B-MOUD than non-White patients. B-MOUD annual prescription rates decreased amongst the Hispanic/Latina population, but increased in the non-Hispanic/Latina population.

Rural Pregnant Women with Substance Use Disorder: A Grounded Theory Study

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Background: Rural pregnant women with substance use disorder (SUD) are an understudied vulnerable population that often experience poor pregnancy outcomes. Despite the high prevalence and high burden associated with SUD, rural women are less likely than non-pregnant women to seek addiction treatment and complete an outpatient treatment program during pregnancy. The addiction treatment needs of pregnant women are unique compared to the needs of non-pregnant women

Objective: This study aimed to give voice to rural Missouri women with SUD. Healthcare professionals and others working with these women will develop an enhanced understanding about the importance and significant impact they have working with this vulnerable population.

Methods: The research questions explored the life experiences and motivations for seeking treatment using a qualitative, descriptive, research design with grounded theory methods for data analysis. Seventeen participants from rural Missouri agreed to semi-structured Zoom interviews.

Results: Four analytic categories were developed from the interview data: (1) “onset of use,” (2) “dynamics of addiction,” (3) “moods of addiction,” and (4) “motivating factors.” The participants described experiences with SUD from the first time they began using substances through the treatment and recovery process. This group of women began using substances during their teenage years as a way to cope with life-changing events such as death, trauma, abuse, and family problems. The pattern of substance abuse continued as a way to cope with daily life and family problems. Participants described negative thoughts, emotions, and behaviors and the neglect they perceived from healthcare providers during pregnancy. A discussion about their experiences with incarceration, drug court, and Division of Family Service (DFS) was described. The findings suggest these women have unique healthcare needs, but there is a sense of disengagement from healthcare providers. This interaction perpetuates the negative views of self and loss of control that women with addiction may experience.

Conclusions: When rural pregnant women with SUD are engaged in recovery, they exhibit a desire to regain their health, fulfill roles as mothers, restore family functioning, and live manageable, meaningful, and satisfying lives. By comparing the study findings to previous

research and self-determination theory, new research questions, policy and practice recommendations were generated.

Opioid-Induced Amenorrhea – Exploring the Impact of Chronic Opioid Use on Reproductive Health

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Background: Chronic opioid use including medications for opioid use disorder (MOUD) can have significant effects on the hypothalamic-pituitary axes endocrine system. Chronic opioid exposure suppresses gonadotropin and corticotropin releasing hormones (GnRH, CRH), thus inhibiting the release of sex hormones necessary for menstruation and fertility. Studies suggest 87% of pre-menopausal women on long-term opioids have menstrual cycle disorders, however sexual reproductive health issues are not systematically addressed in substance use care. Here we review a case of hypothalamic amenorrhea secondary to MOUD to highlight the effects of MOUD on menstruation and fertility.

Learning Objectives:

- Discuss history-taking for secondary amenorrhea/oligomenorrhea in patients with chronic opioid use.
- Explain the role of chronic opioids in the hypothalamic pituitary axes and recall diagnostic investigations for evaluating secondary amenorrhea.
- Discuss the management of secondary amenorrhea in patients with chronic opioid use.

Case Presentation: A 42-year-old Black woman with OUD presented to an office-based addiction treatment clinic with complaints of irregular menstrual cycles for 6 months since starting buprenorphine-naloxone 24mg daily. She had stopped both fentanyl and cocaine use prior to MOUD initiation. She denied significant changes to her diet, lifestyle, and any symptoms consistent with polycystic ovary syndrome (PCOS). She denied perimenopausal symptoms though did endorse intermittent abdominal cramping. She also had three historical therapeutic abortions. Until starting buprenorphine, she had regular menstrual cycles. On assessment, vital signs, BMI, and physical exam were normal. Diagnostic evaluation including TSH, prolactin, and a transvaginal ultrasound were normal. Evaluation of her reproductive hormone function (LH, FSH, estradiol, and testosterone) showed no indication of menopause or PCOS. She was ultimately diagnosed with functional hypothalamic amenorrhea secondary to chronic opioid therapy.

Discussion: Hypothalamic-pituitary axes side effects amongst women on MOUD are common, therefore substance use care providers should counsel patients about these possible side effects. In addition to counselling, providers must be prepared to address oligo/amenorrhea and other reproductive issues via appropriate diagnostic work-up and/or referral to sexual and reproductive health services. Identifying and addressing the endocrine side effects of MOUD presents an opportunity to reduce reproductive health inequities experienced by women who use drugs, particularly for women of colour.

Enhancing Family Engagement in Substance Use Disorder Treatment: A Training Intervention for Addiction Professionals

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Background: Social support, particularly from biological and chosen family, is crucial for improving health outcomes in individuals with substance use disorder (SUD). Many SUD professionals lack the training to engage families effectively, which is compounded by stigma and misconceptions about family involvement in SUD. Consequently, family members often receive inadequate attention and information from SUD care teams, undermining their ability and desire to improve SUD health outcomes.

Objective: To assess the impact of a one-hour virtual training session for SUD professionals focused on integrating family members into SUD care.

Methods: The training was developed within an existing training and technical assistance (TTA) program. Training objectives included emphasizing the influence of family members on individuals with SUD, dispelling myths related to family members and SUD (e.g., codependency, enabling), illustrating the impact of information provided to family members on SUD outcomes, and introducing strategies to engage families in SUD care. Content challenged the idea that family members are disenfranchised bystanders, reframing them as empowered agents of change. Post-training surveys gauged participants' perceptions of the program's impact on professional development, clinical practice, and patient outcomes. Demographic data were analyzed to assess program reach, and post-training survey responses were analyzed using inductive and deductive thematic analysis.

Results: Between May 2022 and April 2024, 31 virtual training sessions were conducted, attended by 2,135 SUD professionals from 48 states; 70% completed a post-training survey. Most participants were in clinical (29%), behavioral health (27%), or community/peer support (26%) roles. Several themes emerged from the post-surveys, including increased (i) intention to educate clients and colleagues, (ii) understanding of the importance of family and social support, (iii) awareness of stigma and bias toward family members, and (iv) intention to integrate family and social support into current SUD services.

Conclusions: Addiction professionals need education to recognize the importance of family and social support, understand the impact of pervasive stigmatizing views about family members and SUD, and engage supports in meaningful ways. A single training session within an existing virtual TTA platform can enhance knowledge, challenge stigma, inspire practice changes, and boost the confidence of SUD professionals to incorporate family and social support into SUD care.

Caring for Individuals with Substance Use Disorder during Childbirth: Experiences of Rural Healthcare Providers

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Background: Evidence-based practices exist to support pregnant individuals in having safe and respectful childbirths, including those with substance use disorder (SUD). In the Intermountain West, rural hospitals are disproportionately caring for maternal-infant dyads affected by opioid and methamphetamine use. However, the unique challenges facing rural obstetric care providers in applying evidence-based practices to intrapartum and immediate postpartum care for maternal-infant dyads affected by SUD are not well described.

Objective: We sought to understand the experiences of rural healthcare teams who provide intrapartum and immediate postpartum care to dyads affected by SUD.

Methods: We conducted in-person focus groups at six hospitals in rural Utah. A semi-structured guide used case studies and open-ended questions to explore how teams manage and support dyads affected by SUD. Discussions were audio recorded and transcribed. Two research team members thematically analyzed the transcripts using the Template Analysis method, which involved a team-based approach to generating and iteratively revising a final template of themes.

Results: Focus group participants included 18 nurses, 2 physicians, and 1 social worker. Participants expressed apprehension regarding their clinical skills and capacity to provide comprehensive intrapartum, immediate postpartum and neonatal care for the maternal-infant dyad. The primary sources of concern in caring for those with SUD was lack of clinical training and mental health and substance use treatment referral resources in rural settings. Participants did not identify bias about substance use as a significant barrier. In addressing barriers to resources, participants identified the Department of Child and Family Services (DCFS) as a potential source of support but were uncertain about when and how to involve DCFS to best support patients. Participants found resilience through pride in their work, camaraderie among their team, and a deep commitment to their community. There was unanimous agreement on the need for training programs and interventions tailored to rural locations that consider the resource constraints of rural hospitals.

Conclusions: Our findings highlight distinct challenges of delivering peripartum care to maternal-infant dyads with SUD in rural settings in the Intermountain West, and highlight the need for rural-specific, innovative, and real-time solutions to meet those needs.

Harm Reduction

Student Led Harm Reduction Outreach: Educational and Community Impact

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Background: Naloxone and syringe service programs (SSPs) are often difficult to access, especially for people experiencing homelessness (PEH) and other underserved communities. PEH experience high rates of overdose mortality, yet many services remain inaccessible. Even if services are available locally at fixed sites, individuals with limited mobility or who are at risk for loss of personal possessions may have difficulty reaching them. Innovative approaches are required to reach this population.

Objective: To describe the creation and potential impact of a student-run SSP, including naloxone distribution, to close access gaps for PEH in San Diego.

Methods: In December 2019, a group of medical and graduate students applied to the Naloxone Distribution Program within the California Department of Public Health (CDPH), and began mobile delivery of naloxone in the zip code with the highest overdose death rates, prioritizing PEH. With support from a nonprofit already providing clinical and health education services, we applied for SSP status through CDPH, which was granted in 2023. Through collaboration with various academic departments, including the School of Medicine, Public Health, and others, we recruited volunteers to conduct outreach and manage the organization and obtained a storage space on campus. Operations are supported largely through CDPH provision of harm reduction supplies, small foundation funding, and volunteer efforts. Program data, collected as required by CDPH, is summarized and presented below.

Results: Teams of 6-10 students conduct weekly outreach in downtown San Diego, building trust and rapport, and distributing naloxone, sterile syringes, clean pipes, sports drinks, wound care supplies, emergency blankets, menstrual products, and other essential supplies, referring to substance use disorder treatment and medical care when desired. Between 8/13/22-4/20/24, we distributed nearly 10,000 doses of naloxone, with participants reporting 1,475 overdose responses, 1,432 (97%) of which were successful. Since July 2023, we distributed >22,000 syringes, >2,700 pipes and >1,500 fentanyl and >1,500 xylazine test strips.

Conclusions: High uptake of naloxone and harm reduction supplies, and frequent reports of overdose reversals underscore the importance of outreach to communities most impacted by overdose. We demonstrate that student-run outreach rooted in harm reduction principles can be effective and hope that others replicate this model elsewhere.

Empowering Harm Reduction: A Cost-Efficient Training Program for Contingency Management in Syringe Services Programs

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Background: Contingency management (CM), a behavioral intervention that leverages positive reinforcement,[1,2] is the most effective intervention available across a range of outcomes related to stimulant use including abstinence, reductions in use, and utilization and adherence to other health services.[3-10] Despite a growing body of evidence demonstrating its feasibility in various community-based settings, CM remains underutilized in the United States, particularly in harm

reduction settings like syringe services programs. [11-14] Existing resources for CM implementation are limited and often come at a cost.

Objective: To develop and offer a low-cost training program for staff delivering contingency management for reducing stimulant use among people accessing services at an SSP.

Methods: The development process involved a thorough literature review, consultations with experts, and utilization of free online modules. Direct-care staff underwent an introductory session followed by completion of the "Contingency Management for Direct Care Staff" online module. Subsequently, they engaged in role-playing activities spread over a month.[15,16] Final competency was assessed using the Contingency Management Competency Scale (CMCS), with a score of 4 indicating proficiency.[17] Evaluation included staff interviews and CMCS scores.

Results: Following the training program, staff reported increased confidence in their CM skills, with all members achieving a CMCS score of ≥ 4. The program identified free resources and developed additional materials to address implementation gaps. Templates for patient handouts, program protocols, role-play scripts, physician note templates, CM session tracking forms, and implementation checklists were created. Barriers included scheduling conflicts and interruptions due to the drop-in nature of SSP services.

Conclusions: This innovative curriculum, accessible at no cost and featuring customizable templates, fills a crucial gap in CM training for direct-care staff. Its availability can help expand CM implementation in harm reduction settings, addressing the urgent need to combat polysubstance use in the ongoing opioid epidemic.[18,19]

Evaluating an Atlantic Canadian Injectable Opioid Agonist Treatment Program from the Perspective of Program Users

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Background: Safer supply programs (SSPs) are a form of harm reduction service that have been implemented in response to the opioid toxicity crisis. SSPs provide access to pharmaceutical grade substances as an alternative to the illicit drug supply. Injectable opioid agonist treatment (iOAT) is a form of safer supply, but is specifically offered to people with opioid use disorder, and typically includes daily supervised dosing and access to other resources for participants. Given that SSPs are a relatively new form of harm reduction in Canada, data on the impact of the programs are still emerging.

Objective: To evaluate an Atlantic Canadian iOAT program, aiming to better understand the barriers and facilitators of success in the program, and the overall program experience, from the perspective of program users.

Methods: The current study was part of mixed-methods evaluation of Health Canada's funded SSPs. Semi-structured interviews were completed in November 2022 with participants ($N = 22$) receiving iOAT at the River Stone Recovery Centre, located in New Brunswick, Canada.

Participants were asked about their experiences accessing the iOAT program and about the programs' impacts on their lives. Interviews were recorded, transcribed, and analyzed using an Interpretive Phenomenological Analysis.

Results: Participants mentioned the low-threshold, high-tolerance, and harm reductionist approach of the program, positive relationships with clinic staff, carry dose experiences, and program outcomes. Outcomes included positive changes to mental health, physical health, and personal relationships, improvements in financial stability and safety, and decreases in substance use and engagement in criminal activities. Despite these positive experiences, participants also discussed barriers (e.g., transportation challenges, time constraints, etc.) to accessing the program, and the negative impacts of interruptions (e.g., from being arrested, hospitalized, etc.) to their safer supply.

Conclusions: The results from this study contribute to a better understanding of the experiences of individuals enrolled in SSPs, specifically iOAT programs. Important considerations for program implementation include having a low-threshold, high-tolerance approach and ensuring a non-stigmatizing environment for individuals seeking treatment. The current study has implications for the specific program evaluated, future program implementation, and people who use drugs' access to harm reduction services.

Search and Seizure: A Descriptive Analysis of Hospital Searches Among Patients with Substance Use Disorders

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Background: Approximately 40% or more of patients with substance use disorders (SUDs) continue substance use in hospital settings.[1] To protect patient and employee safety, clinicians often request that security personnel search patients' rooms and belongings for illicit drugs. However, little is known about what is found during hospital searches, patient responses to searches, or the impact of searches on clinical care.

Objective: To conduct a descriptive analysis of room searches among patients with SUDs. We described the clinical context for searches, what was confiscated, and outcomes after searches, including patient-directed discharge and in-hospital drug overdose.

Methods: We reviewed all electronic hospital security reports filed between 7/2021-7/2023 at an urban, academic hospital in Philadelphia. We linked reports to clinical data from the electronic health record and used descriptive statistics to characterize the data with analysis performed in Stata.

Results: Over two years, security received 576 room search requests, of which 457 (79%) were for patients with SUDs. Among patients with SUDs, 41% of requests occurred in the Emergency Department and the remainder occurred on inpatient units. Nurses requested most searches

(82%). 195 searches (32%) resulted in no items confiscated. Otherwise, confiscated items included tobacco and smoking materials (17%), confirmed or suspected drugs (16%), syringes (13%), unspecified "paraphernalia" (8%), labeled prescription medications (5%), alcohol (1%), cannabis (1%), and miscellaneous items (i.e., scissors) (7%). Patients required naloxone for likely in-hospital drug use after 18 searches (4%). There were 20 patient-directed discharges (5% of encounters) within 1 hour of patients undergoing or declining searches.

Conclusions: Over two years at an academic hospital, nurses on inpatient units initiated most searches for patients with SUDs. About one third of searches resulted in no items confiscated, one in five involved confiscation of syringes or unspecified "paraphernalia," and one in six resulted in confiscation of drugs or alcohol. After searches, naloxone for overdose reversal and patient-directed discharges occurred but were uncommon. These findings demonstrate the need for clear, patient-centered protocols around hospital searches and in-hospital substance use that balance staff safety concerns with patient well-being.

[1]Barnett BS, Morris NP, Suzuki J. Addressing in-hospital illicit substance use. *Lancet Psychiatry*. 2021;8(1):17-18. doi:10.1016/S2215-0366(20)30487-9

A Qualitative Assessment of Healthcare Experiences of Patients Engaged By the Reach Medical Outreach Model of Care to People Who Use Drugs in Ithaca, New York.

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Background: People who use drugs (PWUD) can experience extensive barriers to care, including homelessness. REACH (Respectful, Equitable Access to Compassionate Healthcare) Medical, a harm reduction-based practice in Ithaca, NY, deploys an innovative outreach model for patients facing housing insecurity to provide healthcare and medications for opioid use disorder via telehealth. In REACH's outreach model, a Community Health Worker visits encampments equipped with a data-enabled smartphone, personal protective equipment, and basic living and medical supplies for unhoused patients.

Objective: We aimed to understand how patients at REACH engaged with the outreach model and in other health care.

Methods: A purposive sample of 16 REACH patients participated in semi-structured, approximately one-hour interviews to provide accounts of their experience receiving care within and outside of REACH. REACH outreach participants were recruited in outreach settings by two research team members between November-December of 2021. The qualitative interview asked questions about healthcare services in the community and at REACH, provider interactions, level of understanding and involvement with care, and suggestions for improving care. All interview participants received a $30 gift card incentive as compensation for their time. The qualitative interviews were recorded, transcribed, and coded using NVIVO qualitative coding software. Thematic analysis was conducted by four researchers.

Results: Three major themes emerged. First, patients had significant discriminatory experiences receiving healthcare in the area, involving stigma due to their housing status and substance use. Secondly, REACH created a strong rapport with outreach patients, due to their ability to provide nonjudgmental care, emotional support, and harm reduction-focused services, which led to a high level of attributed expertise on caring for patients with a substance use disorder. Finally, the outreach model was accessible to patients and met their needs, even during the height of COVID-19, with respect to their medication management and COVID-related services.

Conclusions: An outreach care model provided continuous, affirming care to PWUD experiencing homelessness. Outreach services were, for some, the only source of care obtained. This model's implementation can overcome challenges in rural areas, such as a lack of providers or access to transportation for healthcare appointments.

Hospital-Based Care

High-Dose Fentanyl and Buprenorphine Continuation As Support for the Treatment of Buprenorphine Precipitated Withdrawal

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Background: Buprenorphine precipitated opioid withdrawal (BPOW) is uncommon and presents a challenging clinical scenario. In our Emergency Department (ED), we introduced the CA Bridge BPOW protocol, and include high-dose intravenous fentanyl and buprenorphine continuation for severe or refractory cases.

Objective: We implemented a BPOW protocol that combines high-dose intravenous fentanyl with buprenorphine continuation. The aim of the protocol is resolution of withdrawal symptoms and continuation of medications for opioid use disorder (MOUD) at hospital discharge.

Methods: This is a retrospective observational study of patients who had severe BPOW refractory between October 1, 2022 and March 31, 2024. The primary outcome was defined as continuation of a therapeutic dose of buprenorphine (>16mg) at ED or hospital discharge. We also assessed for adverse events.

Results: Fourteen patients had severe BPOW requiring high-dose intravenous fentanyl. The mean patient age was 47.5 (standard deviation: 13.8); 12 patients identified as male, and 2 identified as female. Twelve of the patients were using fentanyl prior to BPOW, one was using methadone, and one was using methadone and fentanyl.

Total initial sublingual buprenorphine doses in the first six hours of treatment ranged from 4mg to 64mg (median 32mg, interquartile range [IQR]: 16mg-40mg); four patients also received intravenous buprenorphine (range: 0.6mg-2.1mg). Total doses of intravenous fentanyl pushes ranged from 400-7100mcg (median: 1200mcg, IQR: 800-1800). Thirteen patients received

ketamine and 12 patients received benzodiazepines. There were no episodes of respiratory depression or naloxone administration.

Twelve patients (85.7%) were admitted to the hospital for a median duration of two days (IQR: 1-3.5). Among the fourteen patients, eleven (78.6%) successfully tolerated therapeutic buprenorphine doses prior to discharge, two (14.3%) patients elected to continue methadone, and there was one self-directed discharge prior to therapeutic buprenorphine. Six patients received extended-release buprenorphine prior to hospital discharge.

Within 30 days of discharge, 9 (64.3%) patients attended follow-up in outpatient addiction treatment; of those nine, 7 were taking buprenorphine and 2 were taking methadone. Five patients were lost to follow up.

Conclusions: An ED treatment protocol for severe BPOW using intravenous fentanyl and buprenorphine continuation appears safe and resulted in high rates of therapeutic doses of MOUD at discharge.

Improving the Hospital Care Environment for People Who Use Drugs

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Background: People who use drugs (PWUD) experience stigma in healthcare settings, driving poor health outcomes. Challenges specific to the acute care setting include pain, withdrawal, staff stigma, and a “prison-like” environment. A recent survey showed no consensus best practices for in-hospital substance use. Our hospital lacks a policy governing suspected in-hospital substance use, and staff reactions to this situation vary widely.

Objective: To collectively define our hospital’s care environment problems affecting hospitalized PWUD, incorporating multiple professional and patient perspectives.

Methods: We convened a multidisciplinary workgroup with representation from physicians (emergency medicine, psychiatry, internal and family medicine), nursing, behavioral health, social work, pastoral care, safety, risk management, security, and peer specialists. Several members had lived experience of substance use. Workgroup members described challenges and opportunities from their perspectives, and qualitative analysis of meeting transcript revealed 4 themes around which subgroups were assembled. Gap analysis informed a list of principles and recommendations to improve the care environment. Group members were surveyed for approval of the final recommendations.

Results: Qualitatively derived themes were patient-team communication, overdose response and harm reduction, patient-directed discharge operations, and safety toolkit. Final recommendations included a new hospital policy addressing in- hospital substance use, universal patient-facing materials regarding use of searches, a standardized approach to use of searches, interdisciplinary decision-making process for instituting and removing restrictions, improved information technology infrastructure to track temporary restrictions, and interprofessional education on

policy and shared values. 93% of responding work group members approved the ultimate recommendations.

Conclusions: Suspected substance use in our hospital leads to variable responses, inconsistent restrictions, loss of patient trust, and increased staff distress about how to keep patients safe. Many hospitals lack policies and likely face similar challenges. Soliciting broad perspectives on the care environment for PWUD resulted in an ambitious but highly acceptable set of recommendations. A new policy will form the basis of an education campaign and patient-facing materials. A gift card program awarding compassionate care for PWUD has been implemented to publicize specific examples of a welcoming care environment for this population. Many recommendations are transferrable to other hospitals, and the consensus process is an adoptable model for developing locally-relevant ideas.

Association of Surgery with Discontinuation of Buprenorphine for the Treatment of Opioid Use Disorder

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Background**:** Historically, buprenorphine, a partial μ-opioid agonist used to treat opioid use disorder (OUD), was stopped prior to surgery due to concerns that it could interfere with perioperative analgesia. Such changes to medication regimens may pose safety issues when temporary pauses unintentionally lead to delays in medication resumption or even complete medication cessation. Discontinuation of buprenorphine in non-surgical care settings has been linked to multiple safety risks including emergency department visits, relapse, and overdose. Although recent guidelines recommend that buprenorphine be continued perioperatively, the impact of surgical care on treatment with buprenorphine remains poorly defined.

Objective**:** In this study, we examined the association between surgery and discontinuation or delay in resumption of buprenorphine for the treatment of OUD.

Methods**:** This retrospective cohort study used deidentified claims data from Truven Marketscan from 2016 to 2021. The study cohort consisted of patients with an initial 90-day period of continuous use of buprenorphine for treatment of OUD. Patients in the exposure group underwent at least one surgical procedure. We conducted multivariable logistic regressions to model the occurrence of treatment retention as a function of surgical exposure, patient demographic characteristics, clinical characteristics, and year. The primary outcome was buprenorphine treatment retention, defined as having at least one claim for buprenorphine in each of the three 30-day periods after surgery. Secondary outcomes included delay in resumption of buprenorphine treatment.

Results: 39,336 individuals with continuous use of buprenorphine for OUD prior to surgery were identified, with 3,580 (9.1%) individuals undergoing surgery. During 3-month follow-up, 27,839 (70.8%) individuals continued buprenorphine treatment. Our analysis of a propensity score-

matched sample indicates that surgery was associated with a lower rate of treatment retention during 3-month follow-up (surgery 69.0% vs. non-surgery 72.0%; p=0.005). Among individuals who continued treatment, surgery was associated with fewer days preceding resumption of buprenorphine treatment (adjusted days difference, -2.1; $p<0.001$).

Conclusions**:** In this study, surgery was associated with a greater risk of buprenorphine discontinuation, but not delays in treatment. These results emphasize the need for actionable strategies to ensure that buprenorphine treatment is resumed among patients with OUD following surgery.

"They Treat Me Differently Now": Two Disparate Responses to in-Hospital Substance Use

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Background: Up to 47% of people who use drugs report substance use while hospitalized, which is associated with self-directed discharges, 30-day readmissions, and mortality. In 2021, the Addiction Consult Team (ACT) at our safety-net hospital proposed a less punitive, more patient-centered in-hospital substance use (IHSU) policy. The revised policy prohibits substance use on campus, requires that substances and paraphernalia be securely stored or disposed of, and provides strategies to support patients in the event of IHSU. For example, urine drug screening (UDS) is voluntary, and hospital security is not an initial responder. This policy has been adopted unevenly.

Learning Objectives:

- Recognize how punitive reactions to IHSU reinforce stigma, erode trust between patients and staff, and derail patient treatment goals.
- Discover how more patient-centered responses can build collaboration, prioritize safety, and reveal unmet patient needs.

Case Presentation:

Case 1: 40-year-old woman initiates buprenorphine for opioid use disorder (OUD) during a six-month hospitalization for complications of necrotizing fasciitis. At month five, her nurse finds her unresponsive and bradypneic; she responds to naloxone. Nursing accuses her partner of bringing in drugs. The following week, her nurse discovers her sedated with a lighter and pipe. She is responsive and does not require naloxone; a UDS is obtained without consent. Thereafter, staff requires unit notification for visitors and that her door remain open when her partner visits. ACT is consulted; patient and partner describe feeling shamed and mistreated over the response to IHSU.

Case 2: 48-year-old woman admitted with cellulitis initiates methadone for OUD. On day eight, ACT finds her sedated, holding foil, powder, and a lighter. Naloxone is not required. ACT facilitates a meeting with the patient, primary team, and nurse to discuss the IHSU policy. Patient acknowledges reasons for IHSU (cravings, loneliness), reconfirms her treatment goals, agrees to

methadone titration, and requests drug supply disposal. Her team supports ACT's recommendations.

Discussion: Although our hospital established an IHSU policy, adoption has been uneven. These disparate responses to IHSU demonstrate how punitive responses that do not follow the policy can increase stigma, disrupt therapeutic alliances, and undermine treatment. Conversely, nonjudgmental, team-based approaches can promote patient safety, partnership, and appropriate care.

Methadone and Buprenorphine 1

Public Transit Access to Methadone Treatment in Miami-Dade County, Florida

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Background: In 2021, more than 106,000 people in the United States died due to drug overdose, approximately 75% of which involved opioids. Methadone is an opioid receptor agonist medication that has been shown to reduce rates of opioid overdose and all-cause mortality. However, it is tightly regulated by SAMHSA and must initially be dispensed daily under direct observation at federally certified opioid treatment programs (OTPs). Geographic distance to OTPs is thus a major barrier that people with opioid use disorder (OUD) face in accessing treatment.

Objective: To assess public transit access to methadone treatment in Miami-Dade County, Florida.

Methods: Public transit times were calculated using the R library r5r, which facilitates multi-modal transportation network routing. General Transit Feed Specification data was combined with street network data from OpenStreetMap for Miami-Dade County. Transit times were estimated from the population-weighted centroid of each zip code with enrollees of the IDEA Miami Syringe Services Program (SSP) to the nearest OTP using 10 departure windows that aligned with OTP service hours.

Results: The average one-way transit time from zip codes with SSP clients in Miami-Dade County to the nearest OTP is 78 minutes. Sixty-nine of the 73 (95%) zip codes with SSP clients in Miami-Dade County have an average transit time to the closest OTP greater than 30 minutes. Transit times differ substantially between zip codes with different numbers of SSP clients, but not between departure windows.

Conclusions: In previous studies, 'opioid treatment deserts' have been defined as a public transit travel threshold of 30 minutes. Nearly all zip codes with SSP clients in Miami-Dade County can thus be classified as methadone treatment deserts. The public transit times between SSP clients' locations in Miami-Dade County and the four registered OTPs thus represent a significant barrier to methadone treatment initiation and retention and demand urgent action to establish additional

OTPs in the neighborhoods with the greatest number of people with OUD and to improve public transit in Miami-Dade County, more generally.

Pain Control and Self-Directed Discharge Among Hospitalized People with Opioid Use Disorder

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Background: Acute pain requiring hospitalization is common among people with opioid use disorder (OUD), and can be challenging to treat. Experiencing poorly controlled acute pain contributes to feeling stigmatized and is a cited reason for self-directed hospital discharge among people with OUD. Self-directed discharge increases the risk for hospital readmission, morbidity and mortality. However, it is unknown whether pain control among hospitalized people with OUD is associated with self-directed discharge.

Objective: To determine whether pain control is associated with self-directed discharge among hospitalized people with OUD.

Methods: We conducted a retrospective cohort study of all hospitalized adults with a documented diagnosis of OUD (defined by ICD code) or who received a medication for OUD (methadone, buprenorphine, naltrexone; MOUD) while hospitalized, and were discharged between 1/1/2022 and 12/31/2023 from a large academic teaching hospital in Bronx, New York. The primary outcome was self-directed discharge, compared to planned discharge home or to a facility, and the primary independent variable was average pain score (0-10) during the hospitalization. Multivariable logistic regression was conducted among participants admitted in acute pain (defined as admission pain score $\geq$5), controlling for demographic and clinical factors (age, sex, race and ethnicity, hospital facility, admitting service, MOUD type).

Results: Between 2022 and 2023, there were 7,543 hospitalizations among 4,665 people with a documented diagnosis of OUD or who received an MOUD while hospitalized. Among these, 3,392 (73%) had a documented diagnosis of OUD and 49% received methadone, 7% buprenorphine, and 9% naltrexone. 33% did not receive any MOUD. Among participants admitted in acute pain, a 1-point increase in average pain score was associated with 32% higher odds of self-directed discharge (aOR 1.32, 95% CI 1.00-1.85). Among those who received methadone only, a 1-point increase in average pain score was associated with 76% higher odds of self-directed discharge (aOR 1.76, 95% CI 1.00-3.10).

Conclusions: In this retrospective cohort study, less effective pain control was associated with higher odds of self-directed discharge among hospitalized people with OUD. Developing and testing clinical interventions to better manage acute pain among hospitalized people with OUD may help reduce the likelihood of self-directed hospital discharge and associated negative health outcomes.

The Civil Right to Medication for Opioid Use Disorder

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Background: Access to medications for Opioid Use Disorder (MOUD) in carceral settings remains elusive. The Americans with Disabilities Act (ADA) provides a civil right to this treatment. Medical and legal professionals should collaborate to identify institutional treatment gaps and take real steps to broaden access.

Learning Objectives:

- Understand how and where MOUD access has been expanded in carceral settings
- Learn about a clinical case where an individual was denied MOUD upon incarceration, what steps the doctor took, and how a lawyer stepped in
- Learn what rights individuals with opioid use disorder (OUD) have, what steps providers can take to advocate, and how lawyers can help
- Understand what steps can facilitate continued and increased access to MOUD throughout the country

Case Presentation: A 52 year old man, recently released from jail, established primary care. He was adherent with his appointments and prescribed SL bupe/nlx 8mg-2mg TID, achieving his treatment goals. He became incarcerated again and informed his doctor that he was denied his MOUD. His doctor called the jail dozens of times to no avail. She reported this to the Assistant US Attorney, who then referred her to an attorney who accepted this patient as a client. The patient ultimately received his medication again through legal intervention.

Discussion: Litigation is a pathway to enforce the civil right to MOUD. Medical providers are a first line witness to inequities their patients with OUD face, yet may not know how best to take action. This presentation will empower providers with knowledge and resources to effectively advocate for their patients.

While it isn't innovative for physicians and attorneys to collaborate, this framework is: a physician identifies a patient denied MOUD, contacts an attorney, the attorney investigates and takes legal action.

At the end of this session, Participants will understand how the ADA protects access to MOUD and how to collaborate with lawyers when access is denied in carceral and other settings. Participants will be empowered to take action; the more action taken, the more protection can be garnered on a broad scale.

Implementation of Universal Screening for Posttraumatic Stress Disorder (PTSD) in an Opioid Treatment Program

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Background: Individuals with substance use disorders (SUD) experience high rates of trauma exposure and PTSD compared to the general population. Individuals with comorbid PTSD and

SUD experience more severe symptoms of PTSD, are more vulnerable to developing multiple addictions, and typically have a more complex clinical course. Despite this, PTSD is underdiagnosed in SUD treatment settings and is often left unaddressed. Universal PTSD screening represents a practical approach for recognizing impacts of trauma and fits well within SAMSHA's framework for implementing trauma informed healthcare (TIHC).

Objective: Implement universal screening for PTSD for new patients entering an opioid treatment program.

Methods: Addictions counselors and supervisors attended training on screening for PTSD and procedures for responding sensitively and effectively to positive screens. Psychoeducational materials were provided for counselors to utilize with positive screens. Counselors administered the Primary Care Screen for PTSD for DSM-5 (PC-PTSD-5) as part of routine intakes completed at the University of Maryland Addiction Treatment Center beginning in August, 2023.

Data was collected from the medical record on rates of screening using the PC-PTSD-5, rates of positive screens as well as documentation of the actions taken following a positive screen (i.e., providing psychoeducation, referral to mental health treatment), appointment attendance.

Results:

Counselors completed screens at 72.2% of intake visits.

Among new patients screened for PTSD, 55% screened positive for likely PTSD.

Counselors used the smart phrase that allowed us to track actions taken in response to a positive screen 22% of the time, making it difficult to accurately track responses to these screens.

18% of positive screens completed at least one appointment with a trauma specialist.

The overall rate of no shows and cancellations for therapy and psychiatry appointments with trauma specialists is 47%.

Difficulties/barriers to implementation will also be discussed including staff turnover, limited provider availability, and comorbid medical problems.

Conclusions: Universal screening for PTSD in SUD treatment settings can help identify patients in need of additional services. Patient engagement in trauma specialty treatment is low, even when patients with PTSD are identified, indicating additional strategies to improve patient engagement and retention are needed to reach this patient population.

Buy and Bill Vs Patient Supplied XR Bup: A Nursing Administration Perspective

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Background: Since beginning XR BUP in March 2020, our healthcare for the homeless clinic has administered over 2,400 injections of XR BUP to over 340 outpatient clients. One concern that our program wanted to investigate is the potential effect on how a variety of billing streams for XR BUP could potentially delay care or administration patterns.

Objective: Our aim was to investigate if a client's insurance status, which determines the XR BUP revenue stream, has a measurable effect on overall revenue for the program as well as a patient's ability to receive their XR BUP doses in a timely manner that promotes safety and best care practices.

Methods: This research includes a retrospective review of reverse-distributed doses of XR BUP, indexed reports for cost of inventory and refrigerated storage, profit margin reports from our billing team that include 340b revenue, distribution patterns for patients insurance plans, and collection of supported clinical and financial benefits of same day "buy and bill" administration in comparison to benefits and risks associated with specialty pharmacy supplied doses.

Results: A majority of our active clients have maintained insurance products that allow for use of our buy and bill revenue stream. We will present overall cost differentials between the two revenue streams, including cost of equipment and reverse distribution services. Our experience suggests that the clinical benefits of same-day dosing via buy-and-bill are significant, and the immediate and ongoing costs in the effort of administration are far outweighed by these aforementioned benefits and by 340b revenue.

Conclusions: Preliminary results suggest that it behooves our patients to have within-ACO insurance products as it allows for greater ease of access to XR BUP via buy and bill revenue stream, and less delays in patient care. We anticipate that ease of use and overall profit of 340b pricing will outweigh profit procures from patient-supplied dosing.

Methadone and Buprenorphine 2

"It Wasn't to Get High; It Was Just to Get By": A Study of the Experience of Patients Who Use Illicitly Manufactured Fentanyl during Methadone Treatment and Recommendations to Improve Care Delivery in Vermont and New Hampshire

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Background: In March 2020, federal regulations were updated to enhance access to methadone and mitigate COVID-19 exposure. While these regulation recommendations remain in effect, high rates of illicitly manufactured fentanyl (IMF) use and opioid overdose persist in Vermont and New Hampshire. It is unknown how clinics are meeting the needs of patients who continue to use IMF while in treatment.

Objective: To explore the experiences of patients who use IMF during methadone treatment for opioid use disorder and develop recommendations to improve care delivery.

Methods: Semi-structured one-hour interviews and a brief survey were conducted with 26 patients attending methadone clinics in Vermont (n=14) and New Hampshire (n=12) from March 2023 to January 2024. Interviews focused on treatment induction, dosing, clinic changes initiated during COVID-19, IMF use, opioid overdose, harm reduction access, and policy recommendations to improve care delivery. Interviews were audio recorded, transcribed, and analyzed using general thematic analysis.

Results: Most participants identified as White (88%; n=23), male (62%; n=16), and were unemployed or disabled (69%; n=18). The current daily dose ranged from 35-220 mg and commuting time to the clinic ranged from 10 to >60 minutes. Patients had higher IMF use prior to dose stabilization and discussed how an accelerated induction could have helped reduce their IMF use. Most reported daily discomfort or withdrawal during induction and used IMF to prevent severe withdrawal. No participants received the federally allowed 14-or 28-day take home doses. Those who reported split dosing their take homes described how this mitigated their cravings. Patients described high access to harm reduction materials at clinics and in the community. Patients advocated for increased take home dosing, longer dosing windows, and additional supports for patients who use IMF, especially patients traveling long distances with inconsistent cellular service.

Conclusions: Patients who use IMF while in methadone treatment describe using IMF to supplement inadequate methadone dosing, especially during induction. In the era of increasing synthetic opioid use, findings may help to guide the development of federal mandated treatment standards to supplement SAMHSA's Final Rule, in addition to state and clinic policies to remove barriers to treatment access and success.

Accessibility to Opioid Treatment Programs (OTPs) Via Personal Vehicle Versus Mass Transit across Census Block Groups in Connecticut

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Background: Travel times are a barrier to methadone maintenance treatment. Research on OTP accessibility has primarily focused on travel times via personal vehicle rather than via mass transit, which many people rely on, especially in low-income households.

Objective: Compare differences in travel time via personal vehicle versus mass transit to OTPs in Connecticut.

Methods: We generated travel time from all census block groups (CBGs) via personal vehicle and mass transit to the nearest OTP. To characterize CBGs, we used US Census urban/rural designations, US Census ACS data on household car ownership, and 2019-2021overdose decedent locations to generate per-capita opioid overdose death rates. Finally, we identified CBGs with high overdose rates (≥200 per 100K), low car ownership (≥5% households without car), and high mass transit OTP travel times (>60 minutes or no mass transit access).

Results: Our results for median personal vehicle and mass transit travel time and percent of CBGs with no mass transit are captured in the Table.

Table: Travel time in minutes from census block groups to nearest OTP

	Personal vehicle (median, IQR)	Mass transit (median, IQR)	No mass transit access
All CBGs (2,702)	11.0 (7.5, 16.3)	54.5 (38.9, 79.0)	17.9%
Rurality			
Urban (2,025)	9.8 (6.9, 13.6)	51.8 (37.7, 69.2)	9.8%
Rural (497)	19.2 (14.8, 25.2)	98.9 (79.1, 129.3)	54.1%
% households without a car			
<5% (1,329)	13.7 (10.1, 19.1)	64.4 (49.5, 93.0)	28.7%
≥5% (1,373)	8.6 (6.0, 12.6)	47.5 (13.2, 66.8)	7.4%
Overdose deaths per capita			
<50 per 100K (1,202)	12.8 (9.2, 18)	59.2 (43.9, 87.5)	22.2%
≥50, <100 per 100K (454)	11 (7.3, 16.3)	58.1 (38.7, 83.8)	17.0%
≥100, <200 per 100K (557)	9.9 (7.0, 14.6)	52.2 (37.5, 75.1)	17.6%
≥200 per 100K (489)	8.2 (5.9, 11.7)	45.4 (30.7, 63.3)	8.6%

Among the 489 CBGs with high rates of overdoses, we identified 98 (20%) with low car ownership and poor mass transit access to OTPs.

Conclusions: Poor mass transit access to OTPs was common and higher in rural areas. Areas with high overdose rates, low car ownership, and high mass transit travel times should be targets for interventions, such as mobile methadone, to lower travel-based barriers to OTP access.

Tianeptine Use Disorder Treated with Methadone Maintenance: A Case Report

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Background: Tianeptine is an atypical tricyclic antidepressant (TCA) available as an over-the-counter supplement and at high doses, acts as a mu-opioid receptor agonist. Recently, reports of tianeptine use have highlighted the drug's potential for dependence, tolerance, and withdrawal. Tianeptine's pharmacologic activity at the mu receptor, responsiveness to naloxone reversal, and opioid withdrawal-like abstinence syndrome have prompted clinicians to use medications for opioid use disorder (MOUD) for the treatment of tianeptine use disorder.

Learning Objectives:

1. Describe tianeptine's pharmacologic properties.
2. Discuss pharmacologic approaches to treating tianeptine use disorder based on its pharmacologic properties.

Case Presentation: A 51-year-old woman presented to an opioid treatment program (OTP) seeking medical treatment for tianeptine dependence and withdrawal. The patient reported using tianeptine every 3-4 hours to avoid withdrawal. The patient reported experiencing restlessness, sweating, and anxiety after 3-4 hours of abstinence. The patient tried using buprenorphine/naloxone to treat her tianeptine use disorder but found it ineffective for treating her symptoms.

The patient's past medical history included hypothyroidism, depression, and chronic low back pain. She reported no alcohol, depressant, stimulant, THC, or nicotine use. The patient reported no allergies and her medications included levothyroxine and fluoxetine. Her physical exam and intake labs were unremarkable.

The patient was initiated on methadone with a starting dose of 30mg and increasing daily doses thereafter. The patient now reports abstinence from tianeptine for multiple months and has advanced to phase 4 in the OTP – allowing 2 weeks of take-home doses – while titrating to a maintenance dose of 98mg methadone by mouth daily.

Discussion: Several published reports chronicle the use of methadone to manage acute tianeptine withdrawal, but few (if any) reports in the literature document its efficacy as a maintenance medication for tianeptine use disorder. This case highlights methadone's potential as a maintenance treatment for tianeptine use disorder.

Public health messaging about tianeptine should highlight the potential harms of use, as patients may mistakenly perceive an over-the-counter product as a safe way to treat OUD; however, tianeptine has been linked to serious harms, including overdose and death.

Multi-Disciplinary Process for Patient-Centered Decisions on Take Home Medication in the Setting of Positive Toxicology in a Large, Urban Opioid Treatment Program

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Background: Historically, restrictions on take home medication (THM) from Opioid Treatment Programs (OTP) have been stringent. Consequently, many people were excluded from access to treatment. The COVID 19 pandemic led regulatory bodies to ease these restrictions. These policy changes were later shown to be safe and the 42 CFR Final Rule now maintains that patients with "no active substance use disorder" can receive THM. There is limited guidance however on determining this, and challenges exist to apply it in large OTP clinic settings. These challenges combined with many recent changes in policy, have led some OTP staff to have discomfort with their roles and THM policies.

Objective: To create a procedure for how to individually evaluate patients with positive toxicology screen by clinically assessing them for active substance use disorders and other risk factors, and weighing them against clinical benefits in order to make patient-centered decisions regarding THM. Our second objective was to increase teamwork, collaboration, and comfort in staffs' role in the process, as well as comfort in the content of our policy and its alignment with the guidance from regulatory bodies.

Methods: The leadership team held 3 meetings to plan the workflows and educational process. A sub-group created an SUD assessment tool tailored to the 5 risk factors indicated by the regulatory bodies, while also incorporating protective factors of increased access to THM. A series of 4 all-staff meetings were used to provide background information on regulatory guidance, teach the workflows, and listen to feedback. Staff opinions were assessed with surveys at baseline, initiation, and 1 month post-initiation.

Results: At baseline, responses reflected a level of discomfort and low confidence in their understanding of the THM policy, it's alignment with regulatory guidance, and discontent in their roles within the process. Post intervention we saw an increase in confidence and understanding of the policy and comfort in their roles, which was sustained 1 month later.

Conclusions: Changes in THM guidance challenge OTP clinics to create patient-centered policies and workflows. Focused education for staff can improve levels of comfort and understanding with the policy, and satisfaction with their roles in the process.

Early Results of a Rapid Methadone Titration Initiation Protocol for Hospitalized Patients with Opioid Use Disorder

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Background: Guidelines for initiating opioid use disorder (OUD) medications are rapidly evolving. We developed and evaluated a rapid methadone titration initiation protocol (RMT) for hospitalized patients with OUD and daily fentanyl use.

Objective: We describe RMT reach and adverse events among the first 21 hospitalizations receiving RMT.

Methods: We developed the RMT in our safety-net hospital which allows a maximum of 60mg on day 1, 80mg on day 2, and 100mg on day 3. Eligibility includes: seen by an Addiction Consult Team (ACT) clinician, newly initiating methadone, self-reporting daily fentanyl use, and 65-years-old. We excluded hospitalizations with end-stage organ damage, severe illness, not using fentanyl daily, were peripartum, incarcerated, or received methadone for >48h prior to ACT involvement.

We conducted a retrospective structured chart review of hospitalizations initiating methadone for OUD between 9/11/23-12/1/23. For RMT hospitalizations, we abstracted demographic and clinical characteristics, discharge disposition, methadone doses, and adverse events. Research analysts abstracted data and questions were resolved by clinicians.

Results: Among 57 hospitalizations ACT evaluated for methadone initiation, 26 (46%) were RMT-eligible, and 21/26 (81%) received RMT. RMT patients were on average 40±8 years of age and predominantly male (79%), white (84%), and experiencing homelessness (74%). Fifteen (79%) had a concurrent stimulant use disorder, 15 (79%) tobacco use disorder, 3 (16%) alcohol use disorder, and 3 (16%) benzodiazepine use disorder. Median length of hospitalization was 6 (IQR 7.0) days; 1 (4.8%) had a self-directed discharge. Median daily methadone doses on days 1-5 were: 40mg, 60mg, 75mg, 80mg, and 80mg. It took a median of 9 days (range 3-14) to reach 100mg methadone.

Reasons hospitalizations did not receive RMT include: end-stage organ damage/severe illness (n=15), not using fentanyl daily (n=11), clinician judgment (n=5), and unknown (n=5). Five (23.8%) hospitalizations had chart-documentation of sedation; 1 required decreasing the methadone dose and 4 self-resolved with observation. None were RMT-related.

Conclusions: Nearly half of hospitalizations referred for methadone initiation were RMT-eligible. About one-quarter had documented sedation, without additional adverse events. A RMT appeared feasible in our hospital with an ACT, close monitoring, and careful patient selection.

Opioid Overdose 1

Code Bupe: Implementing Post-Overdose EMS Buprenorphine Programs across Missouri

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Background: Opioid overdose emergency calls offer an ideal touchpoint for emergency medical services (EMS) to initiate buprenorphine, a medication shown to relieve withdrawal symptoms and reduce future overdose risk. In Missouri, six EMS agencies are piloting the development of EMS-led buprenorphine programs, with guidance, structure, and support provided by national practice developers alongside a Missouri-based project team.

Objective: We aimed to identify agency-level critical barriers and facilitators associated with successful development of EMS-led buprenorphine programming in Missouri.

Methods: The Drug Overdose Trust and Safety + Mobile Buprenorphine Rescue Intervention for Life-saving Encounters (DOTS+MOBILE) project focuses on harnessing EMS occupational motivations to increase their harm reduction-oriented practices. The DOTS+MOBILE team designed and delivered EMS buprenorphine training through monthly practice calls with six jurisdictions across Missouri. Using the implementation science framework EPIS (Exploration, Preparation, Implementation, Sustainment), we conducted readiness interviews with representatives from each agency (N=6) during the Exploration and Preparation phases of the project. Interviews were coded using reflexive thematic analysis.

Results: Themes reflected internal and external barriers and facilitators to developing EMS-led buprenorphine programming as EMS agencies prepared for the implementation stage. Internal barriers included feelings of futility related to treating people who use drugs and concern about increasing workload among frontline staff; external barriers included inconsistent relationships with community providers and uncertainty about long-term patient outcomes. Internal facilitators included the adoption of clear protocols and integration with Community Paramedic programming; external facilitators included statewide investment in harm reduction programs and implementation support from EMS practice developers.

Conclusions: Broad external facilitators such as increased opioid-related investment and statewide harm reduction infrastructure make EMS-led buprenorphine programming a timely intervention to replicate in other communities. Characteristics of the DOTS+MOBILE model such as information-sharing between EMS experts, development of clear protocols, and collaboration with Community Paramedics were perceived to be highly effective in fostering readiness for implementation. Administrators seeking to develop similar programming should mitigate implementation barriers by preparing EMS-specific training for frontline staff to improve understanding of opioid use disorder and the evidence-based impact of buprenorphine and by building EMS connections with a continuum of community providers to alleviate gaps in post-overdose follow-up care.

Availability of Over-the-Counter Naloxone at Community Pharmacies in North Carolina: A Secret Shopper Study

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Background: In March 2023, the Food and Drug Administration (FDA) approved a nasal spray formulation of naloxone as an over-the-counter (OTC) product, which became available at pharmacies in September 2023.

Objective: This study aims to: (a) document whether pharmacies stock OTC naloxone and (b) examine whether geographic disparities in pharmacy-based naloxone availability exist.

Methods: A cross-sectional secret shopper study with a random sample of 600 North Carolina community pharmacies was conducted from November 2023 to January 2024. The sample was stratified by county and pharmacy type (chain, independent) with county health department pharmacies always included. Trained secret shoppers called pharmacies to enact a script and documented: whether the pharmacy sold naloxone, how it was dispensed (OTC, doctor's prescription, standing order), whether it could be picked up same-day, its location (behind-the-counter, on-the-shelf), and out-of-pocket cost. Using rural-urban commuting area codes (RUCA), pharmacies were designated as urban (RUCA 1), suburban (RUCA 2-3) or rural (RUCA 4-10). Data were analyzed descriptively and chi-square tests and one-way ANOVA were used to determine whether availability and price, respectively, varied by rurality.

Results: A total of 579 community pharmacies were reached, including 281 (48.5%) urban, 68 (11.7%) suburban, and 230 (39.7%) rural pharmacies. Only 278/579 (48%) pharmacies offered to dispense OTC naloxone. Among the 487 pharmacies that dispensed naloxone, same-day pick-up was available at 356 (73.1%), with naloxone primarily being located behind-the-counter (n=281, 57.7%) or on-the-shelf (n=100, 20.5%). Ninety-seven (19.9%) pharmacies required a prescription for naloxone purchase, with rural pharmacies requiring a prescription more often than urban/suburban pharmacies (chi-square=6.06, df=2, $p<0.05$). Only one health department pharmacy offered to dispense OTC naloxone. Among chain and independent pharmacies, the mean cost was US$64 (SD=$35; median=$46.5; range=$0-$296), with no significant difference in median price by rurality.

Conclusions: Less than half of NC pharmacies dispensed OTC naloxone. Barriers to pharmacy-based naloxone access include behind-the-counter location and a median cost that is higher than the suggested retail price for OTC naloxone. Rural pharmacies were more likely to require a prescription for naloxone, which indicates that training about OTC naloxone and the statewide standing order is still needed.

Nonprescription Syringe and over-the-Counter Naloxone Availability in Community Pharmacies: A Secret Shopper Purchase Audit in Austin, TX

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Background: People who inject drugs (PWID) are at risk of injection-related infections and accidental overdose death. Syringe services programs provide sterile syringes and naloxone, but they face legal barriers in Texas. Community pharmacies can serve as critical access points, however, anecdotal reports indicate many are unwilling to sell syringes to PWID and naloxone is not consistently stocked.

Objective: To determine the accessibility of nonprescription syringes and over-the-counter (OTC) naloxone in community pharmacies in Austin, Texas.

Methods: All community pharmacies in Austin (N=125) were visited in-person by third-year PharmD students simulating a person requesting to purchase “a bag of 10 syringes”. Outcomes related to syringes included frequency of successful purchase attempts, cost, and reasons for unsuccessful attempts. Secondary outcomes related to OTC naloxone included availability, cost, location in the pharmacy, and if theft deterrent measures were utilized. All responses were recorded immediately after the encounter using a 10-item online form.

Results: Data were obtained from all 125 pharmacies. A slight majority of syringe purchase attempts were successful (58.4%) with a median cost of $3.19. The most common reason for denial was needing a prescription on file (88.5%), with one pharmacy stating “by law I can’t sell without a script”. A slight majority of pharmacies had a location in the OTC aisles for naloxone (55.2%) with a median cost of $44.99. Most pharmacies with OTC naloxone in the aisles stocked physical boxes (84.1%), while others provided cards to redeem at the counter (15.9%). Of those stocking physical boxes in the aisles, a majority had available stock (77.6%). Of those with available stock, the median number of boxes was four (range = 1–10). Many pharmacies implemented some form of theft deterrence (55.1%) including: electronic monitoring stickers, spider wrap devices, locked plastic boxes, or keeping OTC naloxone behind the pharmacy counter.

Conclusions: These findings support anecdotal reports that critical supplies for PWID to avoid preventable infections and overdose death are not routinely accessible in community pharmacies in Austin. This audit should be conducted in a broader geographic sample using PWID as auditors to provide further insight.

Rapid Transition from a Continuous Naloxone Infusion to Sublingual Buprenorphine after an Opioid Overdose

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Background: With increasing frequency, providers are encountering patients with opioid overdose who repetitively recrudesce after intermittent bolus dosing of naloxone. Some require a continuous infusion to maintain ventilation, which necessitates admission to a monitored setting. Buprenorphine is a long-lasting partial-agonist that can compete with the respiratory depressant effects of full agonist opioids.

Learning Objectives: Buprenorphine could shorten the duration of a continuous naloxone infusion, but how to use buprenorphine in this setting is not well described. This case presentation describes the replacement by sublingual buprenorphine of a continuous naloxone infusion in a patient experiencing recurrent respiratory depression from an opioid overdose. The objective of this case presentation is to educate addiction medicine providers in a potential option for managing patients with opioid overdoses using sublingual (SL) buprenorphine.

Case Presentation: A 38-year-old man presented to the ED after receiving 2 mg of intranasal naloxone by EMS for a suspected opioid overdose. On arrival he was alert and oriented. The

patient received 11 bolus doses of IV naloxone for respiratory depression over the course of 6 hours, with doses ranging from 0.04 mg to 0.4 mg, totaling 1.96 mg (see figure 1). He was started on a continuous naloxone infusion at 0.21 mg/hr approximately 7 hours after arrival and remained on it for 16 hours, until he began showing symptoms of opioid withdrawal. Thirty minutes prior to discontinuing the naloxone infusion he received16 mg of SL buprenorphine to facilitate discontinuation of the infusion. The patient did not develop any withdrawal syndrome after receiving buprenorphine, the naloxone infusion was discontinued, and the patient was ultimately discharged from the hospital on buprenorphine.

Discussion: This case series describes a novel strategy of using buprenorphine to discontinue a naloxone infusion in a patient with prolonged opioid toxicity. The strategy described deserves further research as it may decrease hospital resource utilization associated with continuous naloxone infusions and allow patients to be started on buprenorphine more rapidly.

Reversal of Opioid Overdose with Intravenous Buprenorphine and Rapid Transition to Extended-Release Buprenorphine

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Background: Buprenorphine can reverse overdose but is rarely used. Advantages include reversing overdose while simultaneously initiating maintenance treatment. Excessive opioid load in overdose may facilitate rapid low-dose induction, as withdrawal is mitigated by the excess opioid binding to spare mu-opioid receptors.

Post-overdose patients have reduced treatment engagement and high overdose risk. XR buprenorphine may provide more robust short-term continuity versus sublingual formulations and potentially reduce short-term overdose rates. EMS providers could potentially initiate this protocol in the prehospital setting.

Learning Objectives:

1. Discuss IV buprenorphine pharmacology for fentanyl overdose reversal
2. Identify patients and scenarios to maximize benefits and minimize risks of IV buprenorphine reversal
3. Describe a protocol using IV buprenorphine for opioid overdose reversal (with or without preceding naloxone reversal) and rapid advancement to full-dose XR buprenorphine

Case Presentation:

1. A 57-year-old female with housing insecurity, opioid, alcohol, and stimulant use disorders, prior buprenorphine treatment, and recurrent overdose was brought to the ED after opioid overdose. She was unresponsive with respiratory depression and responded to naloxone. She received IV buprenorphine starting at 0.15 mg, then 0.3 mg and 0.6 mg increments hourly, titrated to responsiveness. 2.85 mg was administered over 7 hours,

followed by buprenorphine-XR 300mg. She was observed for 4 hours, then discharged. At follow-up, she reported feeling well.

2. A 26-year-old male with OUD, prior buprenorphine treatment, and recent incarceration, presented to ED with opioid intoxication and a goal of restarting buprenorphine treatment, then became unresponsive after overdosing with fentanyl in the ED bathroom. No respiratory depression, naloxone not administered. He received IV buprenorphine at 0.3mg and 0.6mg increments hourly. 3.3 mg was administered over 7 hours, followed by buprenorphine-XR 300mg. He was observed for 40 minutes, then discharged. At follow-up, he reported feeling well.

Discussion: Although buprenorphine is not commonly used for opioid reversal, this novel protocol optimizes its potential and balances risks and benefits by first confirming opioid overdose through naloxone response or clinical history, then administering small, titrated IV buprenorphine doses to maintain reversal while efficiently progressing to full-dose XR buprenorphine in under 8 hours. It could potentially be initiated by EMS in the prehospital setting.

Opioid Overdose 2

Surmounting Stigma: Missouri First Responder Attitudes Towards People Who Use Drugs Improve Following Training

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Background: The Missouri Coordinating Overdose Response Partnerships and Support (MO-CORPS) project aims to reduce stigma among first responders by [1] utilizing the concept of "overdose chain of survival" and the disease model of addiction, [2] instilling confidence by overdose response best-practices [3] providing specific resources for care-coordination.

Objective: To examine [1] effects of MO-CORPS training on first responders' stigma towards people who use drugs (PWUD), and [2] differences in this effect between law enforcement officers (LEO) and Fire/EMS personnel.

Methods: Pre- and post-training surveys collected between August 2023 and March 2024 measured stigma endorsement across four dimensions: "dangerousness", "blame", "social distancing", and "fatalism" (scored 1 to 5). For each dimension, we regressed the mean stigma score on interaction of profession (LEO vs.Fire/EMS) with posttest timepoint, and tenure length and gender as covariates, comparing marginal means across pre- and post-training scores of LEO and Fire/EMS.

Results: Respondents included 123 LEO and 330 Fire/EMS personnel. Training was associated with reduction in stigma across all dimensions($p<.001$) except fatalism ($p=.40$). Fire/EMS had consistently higher marginal means (higher stigma) than LEOs at pre- and posttest across all stigma dimensions: dangerousness (LEO pre vs. post: 3.48 vs. 3.16; Fire/EMS pre vs. post: 3.55

vs 3.31); blame (LEO pre vs post: 3.00 vs. 2.71; Fire/EMS pre vs post: 3.24 vs. 2.98); social distancing (LEO pre vs. post: 3.40 vs. 2.99; Fire/EMS pre vs. post: 3.43 vs. 3.15) and fatalism (LEO pre vs. post: 2.56 vs. 2.43; Fire/EMS pre vs. post: 2.69 vs. 2.64).

Conclusions: Training was associated with reduced stigma among LEO and Fire/EMS professionals. The lack of a significant reduction in fatalistic beliefs could be due to floor effects in our sample. We speculate that Fire/EMS have higher stigma than LEO because they respond to overdose events more frequently, including responding to repeated overdoses, which itself has been associated with increased stigma toward PWUD as well as professional burnout and compassion fatigue.

Mechanisms of Overdose from Unintentional Fentanyl Use Among People Who Use Stimulants: A Qualitative Study

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Background: Fentanyl contributes to over 90% of overdose deaths in San Francisco, with rising fentanyl and stimulant co-involvement in overdose fatalities. Our previous research found that up to 40% of nonfatal opioid overdoses in San Francisco were from unintentional fentanyl use, with most people intending to use stimulants. However, the mechanisms of fentanyl exposure in this group are unclear.

Objective: To characterize mechanisms of unintentional fentanyl use resulting in overdose among people who intend to use stimulants and not opioids.

Methods: We interviewed 10 people who use stimulants and avoid opioids who experienced an overdose attributed to unintentional fentanyl use between August 2023 and February 2024. The interviews were semi-structured and included questions about participants' drug use practices, the events leading up to their most recent overdose, and ways they protect themselves from fentanyl. An inductive coding approach was utilized to identify key themes that characterized the mechanisms of unintentional fentanyl use and context in which overdoses occurred, informed by the risk environment framework.

Results: Participants used powder and crack cocaine and methamphetamine and were racially and ethnically diverse. Multiple micro- and macro-level factors were identified that contribute to overdose. Individual-level factors included obtaining drugs from an unfamiliar source, using drugs that the participant found without knowing the source, mixing up drug use equipment with peers that use fentanyl, and suspecting being intentionally given fentanyl by someone else. Participants employed a range of practices to protect themselves from fentanyl, but their state of mind and social context created situations where usual precautions were not utilized, including feeling a sense of urgency to use, fatigue, being high or drunk, and wanting to help friends. Finally, structural factors, such as inadequate housing, criminalization of sex work and drug use, and inconsistency of drug sources, were identified by participants as contributing to unintentional fentanyl use and overdose.

Conclusions: We identified multiple mechanisms of unintentional fentanyl use operating at individual, interpersonal, and structural levels. The complexity of the phenomenon with no single dominant mechanism suggests interventions are needed at multiple levels of the risk environment to prevent overdoses among this population.

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

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Background: Post-overdose outreach programs propagated throughout Massachusetts in response to increases in opioid-related overdoses. Little is known about how these programs adapted to interpersonal, organizational, and societal changes resulting from the COVID-19 pandemic.

Objective: To describe post-overdose outreach program adaptations and practices implemented since the onset of the COVID-19 pandemic and the perceived impact they had on program staff and survivors.

Methods: In 2023, we conducted 30 qualitative interviews with post-overdose program staff (n=17) and overdose survivors (n=13) who received post-overdose outreach services from agencies in 10 Massachusetts municipalities. Interviews with staff explored the impact of COVID-19 pandemic on their agencies, the post-overdose program, and the survivors they serve. Adaptations to their approach and resources provided to address pandemic-related challenges were discussed. Survivor participants were asked about the impacts of COVID-19 pandemic on their substance use, related personal lives, and experiences with post-overdose outreach services. Interviews were recorded, transcribed, and organized using deductive and inductive codes.

Results: The post-overdose programs included 7 programs that existed prior to the COVID-19 pandemic, and 3 programs developed in 2021. Two major consequences of the COVID-19 pandemic that led to adaptations, included 1) teams' efforts to reduce the risk of transmission, including physical distancing and 2) the staff shortages due to illness and resignations. Physical distancing efforts led to changes such as making contactless deliveries of overdose prevention supplies, and separate travel to survivors' residences. These measures negatively affected relationship-building and collaborative planning among outreach teams and with survivors. Staffing shortages led to reduced capacity to conduct outreach, resulting in suspension of services in some municipalities. Competing pandemic-related demands on public safety partners impacted their ability to provide staffing and data to outreach teams. Some programs adapted by forming new partnerships with agencies that met other socio-economic needs of survivors and by increasing use of social media to increase awareness of available resources.

Conclusions: Post-overdose outreach programs experienced challenges following the onset of the COVID-19 pandemic, which required adaptations to their normal protocols and operations.

These adaptations had downstream impacts but allowed most outreach operations to continue and some to make adaptations permanent.

Trends in Nonfatal Opioid Overdose Among Veterans Health Administration Patients with Opioid Use Disorder Following COVID-Related Policy Changes for Opioid Use Disorder Treatment

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Background: Fatal and nonfatal opioid overdoses—particularly fentanyl-involved—have sharply increased in recent years. The COVID-19 pandemic overlapped with this increase, but also prompted policy changes that increased flexibility in provision of medications for opioid use disorder (MOUD), which are known to reduce overdose risk. These changes (e.g., increased telehealth for buprenorphine and take-home doses for methadone) helped sustain MOUD access and may have improved access in rural areas. However, little is known about how opioid overdose trends shifted during the pandemic among patients with diagnosed OUD, for whom MOUD is indicated.

Objective: We descriptively examined trends in nonfatal opioid overdose before and after COVID-related MOUD policy changes among patients with diagnosed OUD in the national Veterans Health Administration (VHA), compared across urban and rural residence.

Methods: Electronic health record data were extracted for monthly rolling cohorts of patients with diagnosed OUD with ≥1 outpatient visit during the past year for each month 3/1/2018-2/1/2022 (24-months prior to/following COVID-related policy changes in 3/2020; N=110,144 unique patients). We described the proportion with ≥1 nonfatal opioid overdose treated in VHA during each month. We examined monthly trends overall and among patients in urban vs. rural areas.

Results: Overall, the monthly proportion with ≥1 overdose remained stable before and after COVID-related policy changes (0.27% month 1, 0.23% month 24, 0.25% month 25, 0.20% month 48). Results were similar among urban patients (0.31% month 1, 0.27% month 24, 0.29% month 25, 0.22% month 48). The monthly proportion was also stable over time among rural patients, but lower compared to urban (0.16% month 1, 0.12% month 24, 0.15% month 25, 0.15% month 48).

Conclusions: During a period when nonfatal opioid overdoses were increasing in the broader population, nonfatal opioid overdoses treated in VHA among VHA patients with diagnosed OUD remained stable before and after COVID-related policy changes. Flexible MOUD policies may have prevented increases in overdose for people with OUD, but other factors may have contributed (e.g., fentanyl-involved overdoses—which largely drove increases more broadly—may be less likely to be treated in the VHA system). Further research is needed to understand factors underlying these trends.

Unravelling the Opioid Crisis in Urban Centers: Community Strategies to Address Overdose Deaths in Boston, MA

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Background: In 2022, Boston experienced a significant 7% increase in opioid overdose fatalities, highlighting a deepening public health crisis fueled by potent substances like fentanyl. With the United States recording over 100,000 overdose deaths in the same year, the urgency for effective interventions in Boston is more pressing than ever. This study seeks to understand the nuanced landscape of opioid overdose prevention in a city grappling with complex challenges.

Objective: The primary aim of this research is to explore the diverse insights and perspectives held by key stakeholders in healthcare, law enforcement, and community organizations regarding strategies for opioid overdose prevention in Boston.

Methods: We employed an inductive thematic approach, utilizing Braun and Clarke's six-stage process to analyze qualitative data gathered from 15 stakeholders. These stakeholders included law enforcement officials, community leaders, health policy officials, and officials from treatment and recovery centers. Interviews were conducted both in person (10) and virtually (5) to accommodate participant availability and preferences. Data were rigorously analyzed using MAXQDA software to ensure a systematic examination of the responses.

Results: Our findings reveal six refined themes that represent a broad spectrum of stakeholder perspectives: Community Empowerment and Collaborative Action; Barriers and Equity in Access; Innovative and Educational Strategies; Policy and Systemic Solutions for Socioeconomic Challenges; Integrated Mental and Substance Use Services; and Integrated Community Safety and Technological Recovery Solutions. These themes underscore the critical importance of community-driven initiatives, equitable access to prevention and treatment services, and the integration of technological innovations with community and law enforcement efforts.

Conclusions: The study concludes that addressing the opioid crisis in Boston requires a dynamic and comprehensive approach that leverages the expertise and experiences of various stakeholders. Effective strategies must prioritize community empowerment, tackle barriers to access, and utilize technological innovations in tandem with policy reforms. These insights provide a foundation for developing targeted interventions that can adapt to and address the evolving nature of the opioid crisis in urban settings.

Outpatient Care

The Good, the Bad, and the Ugly: Patient Perspectives on Low Dose Buprenorphine Initiation in the Outpatient Setting in the Fentanyl Era

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Background: Buprenorphine initiation has proved challenging in the fentanyl era, prompting increasing use of low-dose initiation (LDI) strategies to avoid precipitated withdrawal. However, successful initiation rates using LDI is low in outpatient settings, and patient perspectives on their experiences using LDI have not yet been explored.

Objective**:** Evaluate the facilitators and barriers to successful LDI completion among patients who use fentanyl in San Francisco, CA.

Methods: We conducted a qualitative study of in-depth interviews among patients who use fentanyl and received LDI to initiate buprenorphine treatment for opioid use disorder from a substance use disorder treatment clinic in San Francisco, CA. Semi-structured interview guides focused on 1) experiences with buprenorphine and LDI use; 2) withdrawal symptoms and management; 3) barriers and facilitators to successful LDI completion; 4) future areas for improvement. We transcribed, coded, and applied thematic analysis to determine major themes.

Results: We completed 17 interviews between February and March 2024. Patients were on average 40 years old, predominantly men (76%), and white (59% white). Facilitators to completing LDI included a welcoming clinic environment with a non-stigmatizing approach, and staff familiarity and expertise with LDI. Having medications bubble-packed through a co-located specialty pharmacy also was frequently cited as a significant facilitator for success. Patients noted barriers to LDI completion including persistent and prolonged mild withdrawal symptoms throughout (most notably anxiety and nausea), not perceiving any immediate benefit from taking small doses of buprenorphine, and losing the sensation of fentanyl in the middle of initiation leading to feelings of psychological loss. A minority of patients also experienced moderate to severe withdrawal symptoms despite following the LDI protocol instructions, and many highlighted the need to try LDI at least twice before being successful.

Conclusions**:** Despite multiple facilitators at the clinic level to ease LDI completion, patients experienced multiple individual-level barriers. Multiple LDI attempts may enhance success. Future interventions can focus on supporting patients through LDI in outpatient settings, including increasing use of anxiolytic medications and enhanced therapeutic supports.

Low-Dose Buprenorphine Initiation with and without 3 Days of Dispensed Methadone Among Patients at a Low-Threshold Addiction Clinic

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Background: Low-dose initiation (LDI) of buprenorphine with full opioid agonist continuation involves initiating buprenorphine at a low dose with gradual up-titration to therapeutic doses while continuing full agonist opioids. In our low-barrier clinic, we utilized the Drug Enforcement

Administration's exception to dispense 3 days of methadone to alleviate acute withdrawal symptoms while starting LDI buprenorphine.

Objective: We aim to describe implementation of LDI buprenorphine with opioid continuation for patients with opioid use disorder in an outpatient setting with and without 3 days of dispensed methadone.

Methods: This was a retrospective observational study of 65 patients who were prescribed LDI buprenorphine with or without 3 days of dispensed methadone. We hypothesized that the addition of methadone would be associated with improved buprenorphine treatment uptake. The primary outcome was defined as achieving a therapeutic buprenorphine dose (>16mg/day) within 14 days of initial prescription.

Results: Sixty-five patients were prescribed LDI buprenorphine, 28 (43.1%) with dispensed methadone and 37 (56.9%) without methadone. The median age was 39.3 (SD: 12.3); 21 (32.3%) were Black, 9 (13.8%) Latinx, 24 (36.9%) White, 4 (6.1%) Asian; 28 (44.6%) identified as female, 35 (53.8%) male, and 1 (1.5%) non-binary. Fifty patients (78.1%) used fentanyl and 28 (43.1%) also used methamphetamines.

Overall, 20 (30.8%) successfully transitioned to buprenorphine within 14 days of buprenorphine LDI, and 2 (3.1%) patients transitioned to methadone; 31 (47.7%) patients had clinic engagement at 30 days.

Eleven (39.3%) of the 28 patients who had methadone dispensed compared with 9 (24.3%) of the 37 patients who did not have methadone dispensed were on therapeutic buprenorphine within 14 days of initiation (difference in proportions 15.0%, 95% confidence interval –7.8-37.7%).

Six patients experienced precipitated withdrawal: 2 with methadone dispensed and 4 without. Three patients had an emergency department visit related to precipitated withdrawal, none of whom had dispensed methadone. No patients overdosed.

Conclusions: Dispensed methadone for LDI buprenorphine initiation had a similar success rate compared to LDI buprenorphine without dispensed methadone. Further research should prospectively evaluate LDI with and without dispensed methadone to alleviate acute withdrawal symptoms.

Mobile Clinic for Individuals with Opioid Use Disorder: A Qualitative Analysis

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Background: People with substance use disorders (SUD) face many barriers to receiving evidence-based treatments including access to traditional office-based clinics due to stigma. There are several evidence-based interventions proven to reduce deaths and disease among people living with SUD, including medications for addiction treatment (MAT), distribution of

overdose-reversing naloxone, and harm reduction strategies such as safer consumption supplies. With the goal of reducing morbidity and mortality, a pilot program involved four mobile clinics in Massachusetts designed to increase access by providing low-threshold medical care alongside harm reduction services.

Objective: For this evaluation we employed the RE-AIM framework to assess the impact of the initiative: Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM). The first two RE-AIM dimensions operate at the individual-level (i.e., those who are intended to benefit), while the remaining dimensions focus on the staff and setting levels. In accordance with the more recent RE-AIM methodology expansion, we used qualitative methods to understand the "how" and "why" of the results.

Methods: We used a mixed-methods design and report on the qualitative findings here. For the qualitative analysis we made scheduled site visits and conducted individual semi-structured interviews provider interview at each of the four clinics. In addition, we supported a monthly learning collaborative of staff from the four agencies involved with this initiative.

Results: Clinicians described many challenges and opportunities. The typical patient is unhoused, has a substance use disorder, and is disconnected from traditional pathways to care. Clinicians initiate people on buprenorphine largely due to the trust they establish with patients. The philosophy of care is patient-centered. Mobile clinics provide a wide range of healthcare and harm reduction services. Finding a location to park and relations with police can be challenging. The workflow is uneven due to the model being built on as-needed care, rather than scheduled care.

Conclusions: This study provides insight into how mobile clinics focused on addiction services address gaps in care for persons with OUD and who are at risk of fatal opioid overdoses. Harm reduction plus clinical services are a critical intervention, and the financial sustainability of mobile clinics must be tested.

"The Go-To Response Is Let's Get Them Back in Here": Factors Influencing Adoption of Low-Barrier Treatment Practices in Outpatient Buprenorphine

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Background**:** Treatment of opioid use disorder (OUD) with buprenorphine reduces overdose and all-cause mortality, but treatment uptake is limited, and retention is poor. Prior work has identified that restrictions from payors, pharmacies, and other entities create barriers to care. Less research has focused on restrictions at the clinician level that may limit engagement or retention in treatment ("high-barrier" practices) or factors that influence adoption of policies to promote access and retention ("low-barrier" practices).

Objective**:** To explore perspectives among OUD treatment providers about adoption of high- vs. low-barrier buprenorphine prescribing practices.

Methods**:** We conducted semi-structured interviews with clinicians and staff providing outpatient buprenorphine treatment in Philadelphia from 12/2022-7/2023. Interviews focused on buprenorphine prescribing practices and factors influencing these practices, including training, clinic delivery model, regulatory requirements, and personal philosophies. Transcripts were analyzed using thematic content analysis, and we report key themes.

Results**:** We interviewed 28 providers and staff: 17 physicians, 5 Master's-level mental health clinicians, 1 advanced practice provider, 4 non-clinician program leaders or staff. Mean age was 47; participants were 43% women; 71% White, 18% Black, and 4% Asian. 85% had treated OUD for ³5 years. Adoption of low-barrier practices varied. Participants reported a wide range of clinical practice regarding patient eligibility for buprenorphine, buprenorphine inductions (home vs. observed), frequency of visits and monitoring required, incorporation of harm reduction strategies, and other treatment prerequisites. There was a high level of reliance on urine drug testing as a marker of stability among participants, but differences in how testing was used clinically. Some practice patterns were driven by care setting and reimbursement (e.g. behavioral health settings tended to emphasize counseling). However, practice patterns were largely driven by personal philosophies towards treatment and harm reduction, perceived risks related to buprenorphine diversion, and differences in how providers define treatment success.

Conclusions**:** We found high levels of variability in clinician practices around buprenorphine prescribing and monitoring, largely influenced by personal beliefs about treatment success and harm reduction. Increasing buprenorphine access and retention will likely require addressing this variability with strategies that mitigate concerns about risks and support the evidence-based benefits of harm reduction.

Beyond the X-Waiver: Perspectives on Buprenorphine Access & Barriers in the Outpatient Setting

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Background: Although buprenorphine is a highly effective treatment for opioid use disorder (OUD), there are numerous barriers to its widespread use. The elimination of the DATA-2000 waiver ("X-waiver") in late 2022 marked a major change in the regulatory landscape with the potential to substantially increase the number of prescribers, but expansion of prescribers so far has been limited.

Objective: To explore perspectives among OUD treatment providers about the impact of the X-waiver and its removal on buprenorphine access and prescribing.

Methods: We conducted semi-structured interviews with clinicians and staff providing outpatient buprenorphine treatment in Philadelphia from 12/2022-7/2023, before and after the X-waiver elimination. Interviews queried outpatient buprenorphine treatment practices exploring what influences these practices, challenges, and suggestions for improvement. Transcripts were analyzed using thematic content analysis, and we report key themes.

Results: We interviewed 28 providers and staff: 17 physicians, 5 Master's-level mental health clinicians, 1 advanced practice provider, 4 non-clinician program leaders or staff. Mean age was 47; participants were 43% women; 71% White, 18% Black, and 4% Asian. 85% had treated OUD for >5 years.

Participants viewed X-waiver removal positively, simplifying prescribing and encouraging more providers to prescribe buprenorphine, but were of mixed opinion about the real-world impact X-waiver removal would have. They noted that colleagues were often still hesitant to provide OUD care due to the perceived complexity of patients and potential burdens on their practice. While some participants found the prior X-waiver curriculum outdated and inadequate, many emphasized the need for ongoing education and support to prepare prescribers for intricacies of OUD treatment. The consensus was that a meaningful increase in buprenorphine access would require meaningful support and resources. This includes more user-friendly treatment guidelines, clarity in regulations, and greater exposure and mentorship during clinical training to increase provider readiness and confidence with buprenorphine treatment.

Conclusions: Participants felt that the X-waiver removal was a necessary improvement to increase buprenorphine access, but insufficient on its own. Future policy and dissemination efforts to adoption of buprenorphine prescribing should focus on incorporating OUD care into mainstream clinical training and clarifying treatment and regulatory guidelines to address the persistent barriers.

Pain, Opioids, and Suicide

Patterns of Opioid Misuse and Related Clinical Signs Among Veterans with Subsyndromal Opioid Use Disorder: A Latent Class Analysis

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Background: Understanding associations between opioid misuse patterns and adverse outcomes could help guide clinical decision-making. This is particularly important for individuals exhibiting signs of misuse without meeting criteria for moderate to severe opioid use disorder (OUD), a condition called subsyndromal OUD, whose severity is often unclear and for whom no empiric classification system exists.

Objective: To determine clinically relevant classes of patients with subsyndromal OUD using latent class analysis (LCA) and identify adverse outcome risks within classes.

Methods: We reviewed the electronic health records of 615 Veterans who were first assigned ICD-9 or ICD-10 codes for opioid use, abuse, or dependence between 2014-2021 and were on long-term opioid therapy, defined as ≥15 daily prescribed morphine milligram equivalents (MMEs) for ≥84 of 90 days preceding diagnosis. We developed a list of 25 OUD-related signs, including DSM-V OUD criteria and related clinical signs (e.g., high MMEs, aberrant urine drug screens, other substance use), as our LCA indicator variables. We identified these in patient

medical notes during the month before and two weeks following diagnosis and used the Bayesian Information Criterion to identify unique classes. We conducted class interpretation using model-estimated probabilities. We descriptively examined characteristics predictive of class membership, using binominal logistic regression, and adverse outcomes during the 12 months post-diagnosis.

Results: We identified two distinct classes. Class 1 (36.7% of the sample) exhibited high prevalence of DSM-V criteria and OUD-related signs. Individuals in class 2 (63.3%) were likely to have high MMEs, comorbid substance use, and co-prescription of psychoactive medications, but not other OUD-related signs. Younger age (OR=1.02, p=0.009), common mental health disorder diagnoses (OR=1.78, p=0.003), non-opioid substance use disorder (SUD) (OR=1.92, p=0.001), and homelessness (OR=2.33, p=0.009) were predictive of class 1 membership. Class 1 had higher adverse outcome rates than Class 2, including withdrawal (37.3% vs. 16.2%, p<0.001), worsened anxiety (21.4% vs. 9.4%, p=0.001), worsened SUD (28.6% vs. 12.7%, p<0.001), worsened OUD (37.3% vs. 17.7%, p<0.001), and suicidality (12.3% vs. 5.1%, p=0.016).

Conclusions: Patients with subsyndromal OUD are classifiable into two distinct groups, one of which demonstrates high prevalence of OUD-related signs, including DSM-V criteria, and worse health outcomes and may necessitate different treatment management.

Characteristics of Primary Care Patients with Risky Opioid Use: Baseline Data from the "Subthreshold Opioid Use Disorder Prevention" (STOP) Trial of a Collaborative Care Intervention, Conducted in the NIDA Clinical Trials Network

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Background: Approximately half of the 9.2 million Americans with opioid misuse have mild or no symptoms of opioid use disorder (OUD). Although they are at elevated risk of developing moderate-severe OUD, overdose, or other consequences of opioid use, little is known about their health and demographic characteristics. The "Subthreshold Opioid Use Disorder Prevention" (STOP) Trial is testing a collaborative care intervention for reducing risky opioid use in primary care patients. The study is ongoing, with outcomes anticipated in late 2024.

Objective: This presentation describes baseline characteristics of participants in the national NIDA Clinical Trials Network study.

Methods: Recruitment at the five participating sites occurred from March 2021-May 2023. Adult patients (≥18 years) with current illicit or non-medical opioid use, who did not meet DSM-5 criteria for moderate-severe OUD, were eligible. Baseline assessments captured self-reported opioid and other substance use, physical/mental health, and demographics: Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS), Current Opioid Misuse Measure

(COMM), CIDI, depression (PHQ-8), anxiety (PROMIS short form), pain symptoms (BPI), and a single-item global health assessment.

Results: Among the 202 participants, the majority was female (63.4%), white (72.8%) and non-Hispanic (96.5%), with a mean age of 55.7 (SD=12.7) years. On the TAPS-1, which captures past-year use, 26.7% screened positive for unhealthy use of tobacco, 54.0% for alcohol, 62.4% for prescription drugs (non-medical use), and 37.6% for other drugs. On the TAPS-2, which assesses current (past 90 days) use and level of risk, 49.0% had current problem use or high-risk use of prescription opioids, and 4.5% had current problem use or high-risk use of illicit opioids. 36.6% had COMM scores >9, indicating high risk of opioid misuse. Approximately one-third had moderate-severe symptoms of anxiety (35.8%) and/or depression (31.2%). A majority (54.2%) reported their pain on average as moderate-severe, and 60.9% described their health as fair/poor.

Conclusions: Primary care patients with subthreshold OUD have a high burden of comorbid substance use, pain, mood disorder symptoms, and poor general health status that may present challenges to reducing risky opioid use. A holistic collaborative care intervention has the potential to address the complex needs of this group.

Risk Factors for Chronic Pain Among People Who Inject Drugs in Denver, CO and Los Angeles, CA, 2021/22

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Background: The few studies that have examined chronic pain among people who inject drugs (PWID) have found it to be common (ranging from 47% to 52%).

Objective: To report chronic pain measures and to examine factors associated with chronic pain, and more severe pain and disability among PWID.

Methods: Opioid using, PWID were interviewed during 2021/22 in Denver, CO, and Los Angeles, CA about chronic pain, chronic pain severity (using the Chronic Pain Grade questionnaire [CPG], Smith et al., 1997), demographic and socioeconomic characteristics, substance use patterns (type, route, and frequency), violent experiences, and health problems in the last 90 days (n=472). We used logistic regression model to examine the factors associated with any chronic pain for the whole sample and multinomial regression model to predict pain severity among the sub-sample reporting chronic pain (n=255).

Results: The sample (N=472) was demographically diverse (52% white, 26% Hispanic, 10% American Indian, 6% Black, 6% other), 23% female or transgendered, and 50% under 40 years old. About half (53%) reported monthly income below $1,000 and 84% were unhoused/unstably housed. Any chronic pain was associated with experiencing 4+ violent events relative to none [AOR]= 3.48; 95% confidence interval [CI]=1.83, 6.60), 20 or more years of injection relative to <10 injection years (AOR=2.16, 95% CI=1.33, 3.51), and any mental health diagnosis relative to

no diagnosis (AOR=1.67, 95% CI=1.10, 2.52). Among participants reporting any chronic pain (n=255), 38% were grade IV pain severity, 26% were grade III, 30% were grade II, 6% were grade 1, and none were grade 0. Higher grade pain intensity was positively associated with at least one violent event and injection 3 or more times a day (AOR=9.67; 95% CI=1.92, 48.72 as compared to grade I).

Conclusions: Chronic pain is prevalent among PWID. High pain intensity and disability, as captured in the CP grade classification, is common for those with chronic pain. Structural interventions that impact the intersectional risk environment such as housing, violence prevention and intervention, and harm reduction services are indicated to manage chronic pain in this population.

Toward a Deeper Understanding of Suicides That Follow Prescription Opioid Reduction in Pain: Preliminary Results from 19 Psychological Autopsies

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Background: Suicides after prescription opioid reduction are reported, but poorly understood. They reflect a constellation of risk factors difficult to interrogate with statistical data. In-depth examination of suicides through interviews and record review, known as “psychological autopsy”, has not previously been attempted for suicides following a change in medical care.

Objective: To identify actionable opportunities for suicide prevention based on preliminary results from an ongoing study that uses psychological autopsy to examine suicides after prescription opioid reduction.

Methods: Direct-to-public recruitment solicited persons who lost a friend or family member to suicide following prescription opioid reduction. Screening surveys led to interview invitations based on avowed confidence in the death being a suicide and occurring in context of opioid reduction. The interview guide, crafted by a multidisciplinary team, reflected the Socioecological Model and Interpersonal Theory of Suicide. Recorded interviews last 90-120 minutes, with interviewer and notetaker rating informant’s knowledge on a 1-5 scale. We here report themes from transcripts and screening surveys, based on preliminary qualitative review.

Results: As of 4/20/2024, 19 interviews were completed (15 family, 3 friends, 1 doctor) regarding 17 decedents (mean age 50, 14 men, 3 women). Gunshot and overdose were typical means of death. Interviewees’ knowledge ratings averaged 3.5 (median, 4). Common themes, according to the socioecological model, were:

Society: clinicians’ declared fears of investigation

Community: fragmentation of care, loss of pain or mental health care after geographic moves, social isolation

Interpersonal: feeling a burden to others, lack of belongingness, conversational mention of suicide

Individual: adverse childhood, severe pain-related injuries, failed pain interventions, financial duress.

Informants varied in whether they regarded medication dependence as, itself, an addiction. They sometimes agreed with the decedent that no viable path of continued health care existed.

Conclusions: These preliminary findings suggest points of leverage to protect persons with ongoing pain and opioid reduction. These include support for prescribing clinicians, health system outreach to high risk patients making a geographic move, attention to persons with history of failed pain interventions and other risk factors, protection of social connections. Responding to explicit suicide mentions may require entirely new care responses. Continuation of this study will refine these insights.

Suicidal Ideation Among Non-Psychiatric Patients with Opioid Use Disorder in an Urban Emergency Department: Correlates and Future Overdose Events

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Background**:** Patients with opioid use disorder (OUD) are at high risk for both overdose and suicide.

Objective**:** The objective of this analysis is to determine correlates of suicidal ideation among a cohort of patients with OUD seeking non-psychiatric care in an urban ED and determine if baseline suicidal ideation is associated with future overdose.

Methods**:** Patients in an urban ED in Seattle, WA were approached to participate in the ED-LINC trial from 4/2022 to 3/2024 trial by trained RAs. English speaking patients with OUD currently using opioids that were receiving medical care in the ED or inpatient area were eligible. Patients were excluded if they were having a primary psychiatric emergency or did not have a method of contact such as a cell phone. After providing informed consent, participants completed a baseline survey assessing demographics, substance use, and mental health comorbidities. Suicidal ideation was obtained from the PHQ-9. Overdose events were determined through a statewide health information exchange up to one year from enrollment. Descriptive statistics were performed along with chi-square or t-tests for dichotomous and continuous variables.

Results**:** A total of 226 participants were enrolled and completed a baseline interview (average age 42 years (SD 11.7 years), 73% male, 54% unemployed, 46% unstably housed). A total of 39% (n=88) expressed thoughts of suicidal ideation (SI) in the past two weeks. Nearly all (86%) used fentanyl and among those who used fentanyl, 47% used every day in the past 30 days. There was no difference in SI among those who used fentanyl daily compared to those who used less than daily ($C2 = 4.99$, $p=0.12$) Patients who also used methamphetamine were more likely to

have SI than those that did not use methamphetamine (C2 =4.99, p= 0.03). Baseline suicidal ideation was not associated with future overdose (C2=0.62, p=0.43).

Conclusions**:** Suicidal ideation is common among patients without a psychiatric emergency seeking care in the ED. Co-use of methamphetamine could be an important marker of risk and more work is needed to understand this relationship. Importantly, overdose and suicide prevention messages should go together given the difficulty in predicting these outcomes in this high-risk population.

Pediatrics 1

Provider Experiences of Substance Use-Related Disorder Management in Pediatric Hospitals: A Qualitative Analysis of Key Informant Interviews

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Background: Substance use disorders (SUDs) affect 11% of adolescents and young adults (AYAs) based on recent estimates, and most adults with a SUD began use prior to age 18.[1] Despite this, clear evidence related to treatment of pediatric and adolescent addiction is lacking, particular in the inpatient setting.[2]

Objective: The aim of this qualitative study was to describe the current state of inpatient care of AYAs who are treated for substance-use related issues in a selection of pediatric hospitals via descriptive analysis of semi-structured interviews of key informants.

Methods: We recruited adolescent and addiction medicine physicians from 9 institutions that receive funding through the Maternal Child Health Bureau's Leadership Education in Adolescent Health grant program. Semi-structured, key-informant interviews (n=10) were administered, audio-video recorded and transcribed via Microsoft Teams and its embedded AI Transcription software. In addition to summarizing clinical services across institutions, inductive and deductive thematic analysis was conducted, transcripts were double-coded and reviewed to consensus by the first two authors, and themes were generated.

Results: With respect to clinical services, the findings indicated similarities in the disciplines involved in inpatient care across institutions. Differences included which medications could be offered, how to connect patients with resources, and the robustness of psychosocial support.

Eight total themes emerged from qualitative analysis: (1) There is insufficient training and experience in addiction care and systems of SUD care in younger populations; (2) Clinical pathways/algorithms standardize practice; (3) Medical problems are prioritized over SUD care during admissions; (4) Access to SUD care has many facilitators/barriers (ex: insurance,

geography, legal concerns); (5) Lack of data in children's hospitals is associated with lack of resource allocation; (6) Attitudes towards addiction and AYAs can hinder or facilitate care; (7) SUD in AYAs has been underrecognized and the need for care is increasing; and (8) Individuals and/or collaborative champions promote positive change.

Conclusions: This is the first qualitative descriptive study to characterize the management of substance-use related issues in selected pediatric hospitals. By characterizing the current state of caring for this population, we can target potential solutions and advocate for changes within hospitals, public policies, and training programs to address this unmet need.

Polysubstance-Involved Opioid Overdose Deaths Among US Youth, 2020 to 2023

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Background: Drug overdoses are the third leading cause of death in US children under 19 and the leading cause of death in young adults aged 18-24. Among adults, rising polysubstance deaths define the most recent 'fourth wave' of the overdose crisis. However, among adolescents, polysubstance use has historically been less common. Little is known about the age at which youth overdoses transition from involving only opioids to also involving other substances.

Objective: In this cross-sectional study, we examined polysubstance-involved opioid overdose deaths by single year ages 15-24 to assess for age transitions in polysubstance use.

Methods: We extracted drug overdose fatalities from 2020-2023 for youth aged 15-24 from CDC WONDER. Values for 2022 and 2023 were provisional. We identified overdoses involving opioids with and without other substances (i.e., methamphetamine, cocaine, benzodiazepines, alcohol, and other substances) using *ICD-10* codes, and categorized deaths according to age, sex, race, ethnicity, and census region.

Results: From 2020-2023, there were 33,276 opioid overdose deaths among youth aged 15-24 (Table 1). Fentanyl and other synthetic opioids were the most commonly involved opioids (n=20,672; 93.6%). Overall, one-third of all opioid overdose deaths (n=11,189; 33.6%) involved polysubstance use, and polysubstance use increases steadily with single year age. Such deaths comprised 20.8% of opioid overdose deaths among 15-year-olds, 27.7% among 18-year-olds and 36.6% among 24-year-olds. Collectively, stimulants (i.e., including methamphetamine, cocaine, and/or other psychostimulants) were involved in 7,955 (71.1%) of all polysubstance-involved overdose deaths and 23.9% of allopioid overdose deaths. Stimulants were involved in 10.4% of opioid overdose deaths among 15-year-olds, 14.8% among 18-year-olds and 25.5% among 24-year-olds. (Figure 1).

Conclusions: Polysubstance involvement in opioid overdose deaths steadily increased throughout adolescence and young adulthood, and most commonly involved stimulants. Interventions to reduce overdose deaths should account for the increasing involvement of polysubstance use as youth enter into adulthood.

Risk Perceptions, Parental Substance Use, and Peer Disapproval Predict Early Onset Substance in Adolescents with Comorbid Psychologic and Somatic Symptom Trajectories

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Background: From late childhood to early adolescence, peers become increasingly influential relative to parents. Youth with high-risk characteristics such as comorbid psychologic and somatic symptoms (CPSS), may be particularly prone to peer influence related to substance use (SU) behavior. Yet, the effect of peer influence on these high-risk youths' SU remains poorly understood.

Objective: To examine the relative influence of youths' perceived risk of drugs, parental SU problems, and peer disapproval on early SU in high symptom adolescents.

Methods: We used longitudinal Adolescent Brain and Cognitive Development Study® data (2016-2022) from youth (1 child per family) without prior SU at baseline (mean age 10.0yr) that were differentiated with moderate-high comorbid CPSS trajectories over 5 years. Youth-reported perceived drug risks and peer disapproval, and parent-reported SU problems were assessed annually. Lifetime SU, derived from 6-month assessments (i.e., > sip of alcohol, >puff of tobacco or marijuana, any other SU) was regressed on the factors of interest in two-steps, controlling for child age, sex, race, ethnicity, and household income.

Results: 290/2,331 high symptom youths (12.4%) reported Lifetime SU by year 5 (mean age 13.6y). Youths' perceived risk of drugs and peer disapproval decreased over time ($p<.001$). Controlled for effects of child/family characteristics, Step 1 of our analysis showed that parental SU doubled the odds for youths' lifetime SU (adj. OR 2.10 [95% CI 1.60, 2.76], $p<0.001$) while higher risk perceptions lowered the odds (0.52 [0.39, 0.70], $p<0.001$). Peer disapproval decreased the risk by 80% at Step 2 (adj. OR 0.19 [0.12, 0.31], $p<0.001$), eliminating the significance of risk perceptions (adj. OR 0.82 [95% CI 0.59, 1.13], $p=0.228$), but not parental SU (adj. OR 2.03 [1.54, 2.68], $p<0.001$). Area under the curve analyses revealed no difference in predictive ability for lifetime SU when peer disapproval was added to the model (i.e., Step 1 AUC 0.69 [0.66, 0.73], Step 2 AUC 0.72 [0.69, 0.76]).

Conclusions: Although peer influence becomes more salient during adolescence, parents continue to have a strong influence on early onset SU. Intervention efforts aimed at preventing early SU in moderate-high CPSS youth should consider both parental and peer influences.

Seeking Solutions: The Role of Behaviors and Personal and Social Beliefs in College Alcohol Help-Seeking Intent

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Background: In the past year, approximately 15% of college students used alcohol at levels indicative of an Alcohol Use Disorder (AUD) based on the Diagnostic and Statistical Manual of

Mental Disorders (DSM–5) criteria. Despite this prevalence, approximately 8% of those with an AUD sought help.

Objective: This study assessed associations between college students' drinking behaviors, their beliefs about the effectiveness of alcohol use treatment, and their intentions to seek professional help for alcohol use.

Methods: Cross-sectional data were collected via Qualtrics Panels from a nationally representative sample of U.S. college students who reported past-year alcohol consumption (n=1561). Survey questions assessed prevalence of problematic alcohol use, which was used to determine participants' Alcohol Use Disorder Identification Test [AUDIT] scores (possible range of 0 – 40). Multiple linear regression models were used to determine associations between participants' intent to seek alcohol-use professional help if they are notified of being a problematic alcohol user, and a series of predictor variables, including AUDIT scores, beliefs about the effectiveness of alcohol treatment (perceived effectiveness), beliefs about peers seeking alcohol treatment (descriptive norms), and various demographic variables.

Results: The average AUDIT score was 10.44, indicating hazardous alcohol use. About 27% of participants reported an AUDIT score ≥15, suggesting the likelihood of dependence. Regression results indicated that higher AUDIT scores ($p<.01$) were negatively associated with intent to seek professional help, while perceived effectiveness of alcohol use treatment ($p<.05$) was positively associated with intent. Additionally, non-White participants reported lower intent to seek professional help compared to their White counterparts ($p<.01$). Descriptive norms, age, and sex were not significant.

Conclusions: College students in greater need of professional help for alcohol use (i.e., those with higher AUDIT scores) reported lower intentions to seek help if they were notified of problematic alcohol use. Conversely, college students who considered professional help to be effective reported higher intentions to seek help. This study introduces innovative insights into the complex interplay of alcohol behaviors and personal beliefs on help-seeking behaviors, thus highlighting the need for more effective, innovative, targeted messaging and interventions in college health programs to transform students' help-seeking hesitancy to help-seeking acceptance.

Expanding Access to Addiction Knowledge: Engaging High School Students with Addiction Medicine Content

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Background: The Inclusion, Diversity, & Equity in Addiction medicine, Addiction research, and Addiction health professions (IDEAAA) Program aims to foster diversity, equity, inclusion, and accessibility through the education, mentorship, and advancement of people who are underrepresented in the addiction workforce. IDEAAA collaborated with high school education programs to integrate addiction-related topics into programming.

Objective: To increase high school student exposure to addiction medicine topics, evaluate their experience with sessions, and assess their knowledge of addiction medicine before and after programming.

Methods: Students participated in four sessions from February 2022 through April 2023. Content included overview and substance specific didactics, experiential sessions including a naloxone demonstration, and sessions on career opportunities. We evaluated 1) students' perceptions of addiction, 2) knowledge of specific topics, and 3) feedback on session quality before and after. We also collected qualitative text responses.

Results: Among 104 survey responses, 80% of students enjoyed the topics presented (M=80, SD=20.63). 1) Students identified media as the most common way they previously learned about addiction, 2) 87% of students somewhat to strongly agree addiction is an important topic for young people to learn about, 3) 77% of students somewhat to strongly agree addiction impacts their community, and 4) 73% of students somewhat to strongly agree addiction is a stigmatized health problem. Free response questions revealed students are interested in prevention and addiction care and that sessions reduced misconceptions and misinformation. For example: "*TV presentation of things are so fake*", "*fentanyl is the drug that is more commonly seen when someone overdoses*", "*This knowledge makes me want to have more sympathy for those battling with addiction,"* and *"where [can] we or someone we know can go to get help."*

Conclusions: We identified themes that demonstrate the importance of increasing addiction education opportunities for early-stage learners. Our findings demonstrate that addiction medicine education can increase students' overall knowledge and encourage students to become public health leaders in their communities. Investing in addiction medicine learning opportunities for students from underrepresented groups may also inspire interest in addiction medicine careers and foster the development of a more diverse workforce.

Pediatrics 2

The Role of Hospital Climate and Nurse Stigma on Implementation of Chestfeeding and Skin-to-Skin Care for Neonatal Opioid Withdrawal Syndrome

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Background: Family-delivered nonpharmacologic care is primary treatment for neonatal opioid withdrawal syndrome (NOWS). However, chestfeeding rates among birthing persons treated for opioid use disorder remain low, and little is known regarding skin-to-skin (StS) care. Challenges to implementing nonpharmacologic care may be due to context factors of implementation climate, or the receptivity of the clinical context to evidence-based practices, and clinician stigmatizing attitudes towards perinatal substance use (PSU).

Objective**:** To examine the role of implementation climate and nurse stigma on chestfeeding and StS outcomes for infants with NOWS.

Methods: This study used a multi-site cross-sectional design to collect clinician survey data and patient medical record data from four Midwestern US hospitals. Clinician surveys (N=531) provided data on context factors, including hospital implementation climate (Implementation Climate Scale) and nurse stigma toward PSU (Modified Attitudes About Drug Use in Pregnancy Scale). Chestfeeding and StS outcome data were abstracted from 254 linked medical records of opioid-exposed dyads eligible to chestfeed. Maternal age, race, reproductive history, infant gestational age, distance from hospital, and neonatal intensive care unit (NICU) admission were collected as covariates. To determine the effect of implementation climate and nurse stigma on chestfeeding and StS outcomes, logistic regression models were estimated and accounted for covariates and clustering of observations by hospital.

Results: Of the 254 dyads, 126 chestfed at least once during the delivery hospitalization (49.6%) and 130 had evidence of StS care (51.2%). Infants were more likely to chestfeed and receive StS care if they were born in hospitals with better implementation climates (chestfeed aOR=3.36, 95% CI 2.28,5.07; StS aOR=4.34, 95% CI 2.22,8.49) and with less nurse stigma towards PSU (chestfeed aOR=2.91, 95% CI 1.36,6.24; StS aOR=2.76, 95% CI 1.07,7.12). NICU admission was the only significant covariate for each outcome (chestfeed aOR=0.43, 95% CI 0.22,0.86; StS aOR=0.38, 95% CI 0.20, 0.71).

Conclusions: Nonpharmacologic care is primary treatment for NOWS and is an important element of evidence-based models of care. Implementing nonpharmacologic care delivered by families may be improved by bolstering the implementation climate to be more conducive to supporting these evidence-based care practices and by addressing nurse stigma towards PSU.

Disparities in Patterns of Prescription Stimulant Use for ADHD in US Children

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Background: Research has shown that early onset and longer term prescription stimulants may have a protective affect against development of substance use disorders (SUD) in adolescents with Attention Deficit Hyperactivity Disorder (ADHD), however, disparities based on race, ethnicity, gender, and socioeconomic status (SES) may impact the potential benefit of these medications in minoritized populations of children.

Objective: To examine disparities in stimulant use patterns among a diverse sample of US children using longitudinal data.

Methods: This secondary analysis used baseline through 3rd-year follow-up (2016–2020) data from the Adolescent Brain Cognitive Development Study (ABCD) (N=11,875). The ABCD Study is the largest longitudinal study of child/adolescent neurodevelopment and mental health in the US. This study examined sociodemographic factors, ADHD medication use including stimulant and non-stimulant medications, and ADHD severity.

Results: By the 3rd-year follow-up, complete case data on 9705 children showed that 10% (873) of children had received a stimulant medication, and 3% (254) had received both a stimulant and

non-stimulant. Female children were significantly more likely to never have received stimulants compared to male children (93% vs. 84%, OR 2.39, 95% CI 2.08-2.75, $p < 0.001$). Throughout the study period, females exhibited lower mean ADHD severity scores compared to males, though this difference diminished over time. Black children were more likely to discontinue stimulants (8% vs. 5%, OR 1.91, 95% CI 1.48-2.44, $p < 0.001$), and Asian children were more likely to have never received stimulants (95% vs. 88%, OR 2.83, 95% CI 1.25-5.04, $p < 0.01$) compared to White children. Hispanic children had a higher likelihood of never having received stimulants compared to non-Hispanic children (91% vs. 88%, OR 1.34, 95% CI 1.12-1.59, $p < 0.001$). Children from households with total incomes <$100,000 were more likely to discontinue medications compared to those from higher income households. Children in lower income families were more likely to have clinically significant ADHD but less likely to receive stimulants.

Conclusions: Significant disparities exist in stimulant use patterns among US children based on gender, race, ethnicity, and socioeconomic status. Understanding and addressing these disparities are crucial for ensuring equitable access to ADHD treatment and improving SUD outcomes for all children.

Preparing Colorado Health Professionals in Primary Care and School-Based Health Centers (SBHCs) to Intervene Early for Adolescent Substance Use through Screening, Brief Intervention, and Referral to Treatment (SBIRT)

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Background: Colorado adolescents are 37% more likely to have used substances in the past month compared to the general population of adolescents in the U.S.. Health professionals can prevent, identify, and intervene early for adolescent substance use by using the evidence-based Screening, Brief Intervention, and Referral to Treatment (SBIRT) model. Primary care practices, including SBHCs, reach a diverse population of Colorado adolescents; an optimal setting for SBIRT implementation. NORC and Peer Assistance Services, Inc. examined SBIRT adoption among Colorado health professionals and identified opportunities for training and technical assistance (T/TA).

Objective: To discuss opportunities to prepare the workforce and strengthen SBIRT implementation through T/TA in Colorado.

Methods: Primary care and SBHC professionals serving adolescents and young adults (age 11 - 25) (n=107) were recruited to complete a survey assessing confidence and SBIRT practice, facilitators and barriers to SBIRT implementation, and T/TA needs. Of these professionals, 68.2% were medical professionals, 21.5% were behavioral health professionals, and 40.2% served adolescents in rural/frontier communities. Key informant interviews were conducted to further explore barriers, facilitators, and workforce needs. Data collection occurred from October 2022 – May 2023.

Results: Among the 75.4% of professionals who currently screen adolescents for substance use, 56% use a validated screening tool. Seventy percent of professionals currently deliver brief intervention and/or motivational interviewing and reported an average confidence level of 6.8 (0=not at all confidence to 10=extremely confident) in their ability to conduct a brief intervention. Professionals who previously received formal SBIRT training (56.1%) were over three times more likely to report higher confidence to deliver brief intervention compared to professionals who did not receive training (AOR=3.4, p=0.01). Professionals reported a need for SBIRT training, adolescent-facing resources on substance use, and educational materials for families on substance use.

Conclusions: While adolescent substance use continues to decrease across the U.S., Colorado adolescents frequently consume substances, demonstrating the need to effectively identify and address patterns of use. Our findings suggest that Colorado health professionals are eager to receive and could benefit from SBIRT T/TA to engage youth and families in conversations to prevent and intervene early for substance use.

Curriculum for Pediatric Residents on SBIRT in Primary Care

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Background**:** Adolescence is a formative time with unique biopsychosocial considerations associated with an increased risk of substance use, highlighting the importance of prevention and early intervention. While the American Academy of Pediatrics recommends universal substance use screening, brief intervention, and referral to treatment (SBIRT) in adolescents, less than 50% of pediatric residencies provide SBIRT training with insufficient faculty expertise, time, and available content as often cited barriers.

Objective**:** We describe the development of a curriculum that uses active learning principles to teach SBIRT to pediatric interns at a single residency.

Methods**:** We created a 4-hour curriculum with the following objectives regarding adolescent substance use: 1) discuss epidemiology and trends; 2) interpret validated screening tools; 3) navigate issues around confidentiality; and 4) apply principles of brief intervention to counsel adolescents. This last objective was achieved through communication skills drills and scripts. The curriculum was paired with digital interventions including electronic health record shortcuts to support documentation and referrals and physical interventions including a pocket card to facilitate resource provision. The curriculum was delivered from December 2023 to February 2024 during a dedicated academic half-day. We administered a deidentified pre- and 2-month postsurvey via Qualtrics assessing objective knowledge (via a 16-item multiple-choice test) and self-rated knowledge, comfort, current practices, and perceived barriers on addressing adolescent substance use in primary care on a 5-point Likert scale. We compared pre- and postsurvey responses using Wilcoxon signed-rank test.

Results**:** 30 interns completed the curriculum and presurvey while 17 responded to the postsurvey. There were statistically significant changes ($p<0.05$) on average in all categories:

comfort (5 items, pre 3.13, post 4.26), self-rated knowledge (6 items, pre 1.87, post 3.82), current practice (5 items, pre 2.76, post 3.49), and barriers (5 items, pre 3.93, post 3.28). Knowledge test scores increased from 41.9% to 59.9% ($p<0.05$).

Conclusions**:** Our findings demonstrate significant improvements across all measures on addressing adolescent substance use at 2 months post-curriculum. Further evaluation is needed to assess if these changes are sustained over time and the skills taught are adopted into clinical practice to inform future iterations of this curriculum.

Peer Support

Embedding and Sustaining Peers in Emergency Departments: Exploring Program Implementation and Outcomes

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Background: Recent increases in fatal overdose among Black Philadelphia has prompted treatment expansion in Emergency Departments (EDs), an important touchpoint for people who use drugs. Integrating peer recovery specialists (PRS) into EDs is a promising strategy to increase treatment engagement and post-discharge linkage. However, models for sustainable PRS implementation in EDs are limited, particularly those facilitating ED linkage to opioid treatment programs (OTPs).

Objective: To implement PRS support in an urban, academic ED to increase access and warm-handoffs to methadone and buprenorphine.

Methods: Our program is embedded within a West Philadelphia ED in a predominantly Black neighborhood heavily impacted by fatal overdose. To develop the program, we met with hospital leadership to identify stakeholders and care gaps. We then drafted and disseminated clinical pathways for ED buprenorphine and methadone initiation. Key program elements include embedded ED PRS support, close partnership with a local OTP to facilitate warm-handoff for next-day methadone after ED initiation, and navigation to treatment and harm reduction services. We measured program feasibility and patient outcomes using chart review, prescription data monitoring program data, and follow-up with our partner OTP.

Results: Beginning in September 2023, PRSs were embedded in the ED and navigate patients to in-person or virtual buprenorphine follow-up or next-day OTP care after initial dosing of methadone in the ED. PRSs have connected 94 patients with resources and facilitated navigation to inpatient care for 32 patients. Patients engaged by PRSs were 50% identified white, 39% Black/African-American, and 15% Hispanic/Latino. 89% of patients were insured by Medicaid, 37% of participants also reported housing insecurity, and 51% had not engaged in primary care in the prior year. For patients who initiated MOUD in the ED, 30% started buprenorphine, 51% initiated methadone and 3% initiated Naltrexone.

Key program facilitators include strengthening relationships with ED clinician and social work champions and close collaboration with our partner OTP facilitates same-day methadone and care continuity. Barriers included variable ED clinician adoption and comfort with MOUD initiation.

Conclusions: Embedding PRSs in EDs is feasible to facilitate MOUD initiation using existing ED staff and infrastructure and reach marginalized groups disconnected from traditional healthcare settings.

Development and Training for Peer-Delivered Contingency Management for Stimulant Use Harm Reduction across Oregon

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Background: Novel strategies are urgently needed to engage people who use stimulants. Contingency management (CM) is the most effective intervention for stimulant use and can engage non-treatment-seeking populations, especially when delivered by peer recovery support specialists (peers).

Objective: Develop a novel peer-delivered CM program for stimulant use harm reduction and train peers to effectively use CM to support clients' self-identified harm reduction and recovery goals for the PEER-CM (Peers Expanding Engagement in Stimulant Harm Reduction with Contingency Management) study.

Methods: We used a community based participatory research (CBPR) process involving nine peer-led organizations (3 rural and 6 urban organizations across Oregon) to develop a CM program focused on harm reduction and self-identified goals. Peer organizations provided feedback on CM rewards, schedule, and incentivized goals. Peers completed CM-specific training including coaching-to-criterion of CM skills based on six core domains of the Contingency Management Competence Scale (CMCS). Following coaching, peers completed a one-on-one role-play with a standardized patient. Coaches rated each CMCS skill according to its Likert scale (1=Very Poor to 7=Excellent) and an *a priori* rating criterion of 4 ('adequate'). Role-plays included feedback and a 'replay' of skills, if necessary.

Results: PEER-CM compares two approaches to peer-delivered CM using gift card rewards for up to 6 months (Table 1). Self-identified goals were chosen through a collaborative process and organized into 6 domains: (1) Overdose/overamping prevention (2) Substance use supports (3) Daily living/housing (4) Education/employment (5) Mental/physical/spiritual health (6) Social relationships.

Standard of care · $20 for weekly peer visits (up to $300) **Intervention** · $20 for weekly peer visits (up to $300) · $30 for completed goals (up to $300)

Table 1. PEER-CM design

After CM training, all 46 peers met the *a priori* criterion in their role-play. 21 (46%) peers required a 'replay' of a skill to adequately demonstrate all six skills. Mean CMSC summary scores were 28.6 on first attempt and 29.7 on second attempt.

Conclusions**:** The PEER-CM study uses a CBPR approach and is among the first trials to use peer-delivered CM in non-treatment settings for stimulant use. A large, multisite sample of peers demonstrated adequate CM delivery with acceptable fidelity.

Patient and Navigator Experiences with the Opioid Use Disorder Treatment System in Philadelphia, Pennsylvania

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Background: Addressing challenges of an opioid use disorder (OUD) treatment system requires a comprehensive grasp of multiple system-level siloes from the perspective of patients who are accessing services and those helping patients navigate the system. Identifying facilitators and barriers to treatment entry and retention are critical.

Learning Objectives: Describe common barriers and facilitators to OUD treatment entry and retention for patients with OUD.

Case Presentation: We conducted 13 focus groups with 70 people with a history of OUD in Philadelphia. Participants were recruited from non-profit organizations, OUD treatment programs, and street intercept. Focus groups were conducted with certified recovery specialists (CRS); people with experience in inpatient, outpatient, methadone, and buprenorphine programs in Philadelphia; identity-specific groups with Black women, Black men, and Latino men, pregnant and parenting people; and people accessing harm reduction services. Focus group guides varied by group, but overarching focus remained on participants' experiences navigating the OUD treatment system. CRS focus groups were summarized and edited by the research team; all other focus groups were coded for thematic analysis.

Discussion: Most focus group participants had accessed multiple treatment types and reported experiences with different modalities. Salient themes that emerged from analysis included frustrations with the assessment process; reflections on facilitators and barriers by treatment type (inpatient, methadone, buprenorphine); and recommendations across treatment modalities. Assessment centers were identified as a barrier to OUD treatment; issues discussed included length of assessment, operating hours, and withdrawal management. Data from this study were used to develop recommendations for policymakers and other stakeholders of OUD treatment programs to improve care across the spectrum of services. Expansion of inpatient programs that can support patients with complex comorbid conditions is needed to prevent delays for patients deemed ineligible for lower levels of care. Housing and income were identified as significant deterrents to initiating drug treatment and greater resources are needed. Greater investment in the OUD workforce is needed, especially expanding staff with lived experience.

Peer Recovery Coach (PRC) As an Intervention for Incarcerated Individuals with Opioid Use Disorder (OUD): Perceptions from Staff

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Background: The two weeks following release from incarceration represent a critical period where strategies to reduce overdose risk are vital for individuals with OUD. One evidence-based strategy to strengthen recovery support and reduce overdose is to connect individuals with OUD with PRCs. This project evaluated the implementation processes of the Reach, Inspire, Serve, Empower (RISE) initiative, a program created to add PRCs in the Genesee County jail in Flint, Michigan for inmates with OUD.

Objective: This project aimed to evaluate the experiences and impacts of a PRC program on both jail staff and community partners involved in the RISE initiative. Guided by the Consolidated Framework for Implementation Research (CFIR), the objective was to identify barriers and facilitators to RISE implementation, using semi-structured interviews of RISE and jail staff.

Methods: Between November 2023 and April 2024, 11 participants underwent semi-structured qualitative interviews with a standardized interview guide. Interviews were audio-recorded, transcribed, and rapidly analyzed immediately post-interview using a templated Excel summary matrix. Themes and sub-themes were identified from these notes. The duration of each interview ranged from 20 to 37 minutes.

Results: The RISE program consists of dedicated PRCs and partners, aims to improve community health, participant well-being, and reduce healthcare and municipal costs. Implementation barriers included insufficient program dissemination to jail staff that could refer clients to RISE, a lack of OUD knowledge among jail staff and non-standardized referral processes leading to duplication of efforts. Interviewees sought additional client time and comprehensive program outcomes to inform decision-making and demonstrate value. Lastly, RISE lacks referrals to those in community corrections and post-incarceration follow-up. Implementation facilitators included support from inter-program leaders, motivated personnel, excellent community engagement, and external partner trust.

Conclusions: Providing additional staff training and standardizing policies are essential steps for the success and expansion of RISE. Adoption of new software holds promise to alleviate many of the identified barriers. Expanding services post-incarceration and including court involvement will improve community relations and align with program sustainability and reduction of OUD-related overdose and recidivism.

Peer Led Substance Use Disorder Navigation to Support Reentry for Returning Citizens

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Background**:** The risk of overdose is 40x higher for those leaving incarceration than the general population. Among the barriers to continued care are appointment availability for medications for opioid use disorder (MOUD), benefits enrollment, transportation, pharmacy navigation, copay assistance and challenges coordinating logistics for those on house arrest. Telehealth navigation and prescribing is a promising tool to address these barriers.

Objective**:** The objective is to explore the impact of a collaborative initiative between a peer-led telehealth program, and an addiction medicine physician embedded in the jail system, in establishing a safety net for individuals inducted on buprenorphine and transitioning from incarceration to the community

Methods**:** Penn's CareConnect Warmline –a telehealth buprenorphine bridge clinic and peer-led substance use navigation service – partnered with an addiction medicine physician at the Philadelphia jail to establish a warm handoff bundle of services. Our team performed targeted outreach with other local jails, strengthened relationships with clinical champions within each jail system, and provided educational materials to raise awareness about services offered.

Services target post-incarceration needs including detailed case management to assist in coordinating clinical care, probation and parole logistics, transportation, housing, and employment. To facilitate referral and post-release care linkage, individuals leaving incarceration are informed about the CareConnect Warmline when initiating MOUD in jail.

Results**:** Over 26 months, our team engaged 143 individuals post-incarceration. Most patients identified as male (84%) with a mean age of 35. Patients were 40%, Black, 32% White, and 15% Hispanic. Most were publicly insured (69%), uninsured (19%). 30% of referrals came directly from the jail, and 29% from a provider outside of jail system. 94% of patients reported prior buprenorphine use, 80% reported no current use of substances. 86% received a bridge prescription to continue their buprenorphine; 14% of callers received a prescription to initiate buprenorphine. 20% of callers received case management services, and 20% received pharmacy navigation.

Conclusions**:** Post-discharge telehealth and care navigation retained more than two-thirds of patients in care 30 days post-incarceration. This work underscores the potential for telehealth

navigation as a vital component of comprehensive SUD treatment strategies for individuals transitioning from correctional to community settings.

Policing and Incarceration

Creating Clinical Partnerships with Law Enforcement to Support for People Who Use Drugs Using a Harm Reduction Lens

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Background: Medical and law enforcement settings have historically perpetuated stigma against people who use drugs , creating harms for individuals, families, and communities. With the support of the City of Philadelphia, the Center for Addiction Medicine and Policy (CAMP) has partnered with law enforcement through a Police-Assisted Diversion (PAD) program to support justice-involved individuals and prevent criminal justice involvement by addressing underlying medical and social needs.

Objective: To assess feasibility and acceptability of clinical partnerships with police to enhance substance use care and resource connection for community members.

Methods: CAMP provides resources as an alternative to arrest for low-level, non-violent crimes, with a goal of connecting patients to treatment, harm reduction services, and preventing future legal involvement. Same-day referrals to CAMP via arrest-diversion or social referral are assessed by a substance use navigator who tailors a care plan and navigates resources. There are no requirements for program-involvement. Patients desiring buprenorphine are scheduled with our same-day telehealth bridge clinic and linked to longitudinal care. I We also provide linkages to other treatment and harm reduction services, food and clothing resources along with transportation and co-pay assistance. For evaluation, we reviewed clinical records and state prescription monitoring program data and report patient characteristics, services, and resources offered.

Results: From 5/2023 – 3/2024, the CAMP-PAD program served 227 patients. Referrals were initiated from police (20%), word of mouth (31%), or other service providers (46%). Most were social referrals (93%) with 5% originating from arrest diversions. 63% identified as male with a mean age of 40. Patients were 34% Black, 47% White, and 9% Hispanic/Latino. 42% were uninsured, 43% had Medicaid, and 25% were homeless or unstably housed. 60% received naloxone through the program who did not already have it. Of those engaged with Buprenorphine through the program (n=178), 43% patients had an active buprenorphine prescription 30 days after initial engagement.

Conclusions: Partnerships between law enforcement and low-barrier services can amplify program reach and mitigate individual and community harms from criminal justice involvement. This novel entry into care allows for marginalized individuals to receive comprehensive services.

"You Need to Prove That What You Say Is True": Patient Experiences with Urine Drug Testing in Buprenorphine Treatment

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Background: Urine drug testing (UDT) is routine in primary-care-based buprenorphine treatment, but there is little data on patient attitudes toward and experiences with UDT.

Objective: To examine patient attitudes toward and experiences with UDT, focusing on choice and views of UDT benefits and harms.

Methods: We conducted in-depth, semi-structured qualitative interviews with N=23 patients with opioid use disorder who had completed UDT in buprenorphine treatment within the past 5 years. The interview covered patients' experience with UDT, perceptions of UDT benefits and harms, and attitudes toward patient choice in UDT. We used a hybrid rapid qualitative and thematic analysis approach to data interpretation.

Results: We identified five central themes: 1) Lack of choice: No patients in our sample had been given a choice about UDT. Patients reported that it was required to continue receiving a buprenorphine prescription and legally required for providers and programs; 2) Negative experiences with UDT: many patients reported histories of invasive observed UDT, including while incarcerated or on probation or parole. Patients also described discomfort and false positive results; 3) Benefits of UDT: Some patients harnessed UDT for their own benefit. Patients appreciated learning of the presence of fentanyl and other substances in the drug supply. Many patients described UDT as motivating, reinforcing, and a source of pride when tests came back negative; 4) UDT and the patient-provider relationship: A trusting relationship with a provider substantially improved patients' experience of UDT. Many patients interpreted providers ordering UDT as an act of caring about their well-being. However, many patients described needing UDT as "proof" that they were telling their provider the truth about their substance use; 5) Misinformation about UDT: Patients believed UDT could provide detailed information about substance use quantity and timing and other health conditions, likely reflecting a lack of clinician transparency about UDT capabilities.

Conclusions: Patients identified a lack of choice and reported negative experiences with UDT, as well as reporting benefits, particularly within a trusting patient-provider relationship. Centering patient choice, preferences, and UDT history in conversations about UDT, alongside comprehensive counseling, can maximize patient benefits and minimize potential UDT harms.

Medications for Opioid Use Disorder (MOUD) in Massachusetts' County Houses of Correction: Preliminary Findings on Post-Release MOUD Treatment, Overdose, Reincarceration and Mortality

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Background: In response to a legislative mandate in Massachusetts, seven county houses of correction (HOC, i.e. jails) initiated a pilot program in 2019 to provide all FDA-approved forms of medication to treat opioid use disorder (MOUD) to eligible jailed persons with OUD.

Objective**:** The study objective was to examine the impact of MOUD treatment in jail on post-release MOUD treatment, documented non-fatal and fatal opioid overdose, all-cause mortality and reincarceration among persons with OUD.

Methods: Analyses included 6,383 jailed persons with OUD who did (n=2,723; 42%) and did not (n=3,660; 58%) receive MOUD treatment who were enrolled between September 2019 and December 2020 and exited before July 2021, ensuring at least 180 days of post-release community follow-up. Propensity score (PS) weights adjusted for selection effects for in-jail MOUD receipt, accounting for age, sex, race, educational attainment, HOC county, adjudication status, veteran status, homeless history, pre-incarceration overdose, MOUD at jail entry and days incarcerated.

Results: Most individuals treated with MOUD in these jails received buprenorphine (68.1%), followed by methadone (25.7%), and naltrexone (6.1%). More of those treated with MOUD in jail were non-Hispanic White than those not treated with MOUD (75.1% vs. 58.4%), and fewer were non-Hispanic Black (5.8% vs. 16.3%) or Hispanic (18.4% vs. 24.1%). Also, a greater proportion of sentenced (65.2%) than pre-trial (37.0%) persons were treated with MOUD. Individuals treated with MOUD in jail were more likely to receive community MOUD treatment in the first 30-days post-release than individuals not treated with MOUD in jail (PS weight adjusted odds ratio [aOR], 3.2, 95% CI, 3.0-3.5, $p<0.01$). Those treated with MOUD in jail also had fewer total opioid overdoses (aOR 0.66, 95% CI, 0.59-0.73) and reincarcerations (aOR 0.88, 95% CI, 0.81-0.95) in the first 180-days post-release. No statistically significant effect on 180-day overdose fatality was detected (aOR 0.83, 95% 0.61-1.13), although all-cause mortality was reduced over the entire follow-up period (adjusted hazard ratio 0.48, 95% 0.41-0.56).

Conclusions: Jail-based MOUD treatment is associated with continued post-release MOUD treatment in the community, as well as lower rates of total opioid overdose, reincarceration and all-cause mortality. Racial and ethnic disparities in MOUD treatment access merit intervention.

Evaluating the Quality of Medication Assisted Treatment for Opioid Use Disorder in New Jersey County Jails: A Comprehensive Needs Assessment Approach

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Background**:** In county jails, medication-assisted treatment for opioid use disorder (MOUD) has become a cutting-edge approach to treating opioid addiction, lowering the number of opioid

overdoses and overdose deaths brought on by the increased use of synthetic opioids. Ensuring the quality of MOUD programs in county jails remains a pressing concern nationwide.

Objective**:** This study aims to assess the effectiveness of MOUD during jail incarceration in New Jersey and explore the coordination between county jail facilities, health care providers, and the transition to community-based treatment.

Methods**:** A comprehensive quality improvement needs assessment was developed that integrated quantitative analysis of MOUD program metrics with interviews conducted among medical providers within the county jail system. The study was conducted across New Jersey County jails over 12 months, from 2022 to 2023. Needs assessment measures included the availability of FDA-approved MOUD treatment and the utilization of a validated screening tool for incarcerated patients with substance use disorder. Data from the needs assessment were examined to determine the perceived barriers to, and efficacy of MOUD. Program summaries and action plans were also created to guarantee the success of MOUD's implementation in county jails.

Results**:** The findings indicate significant variability in the quality of MOUD programs across county jails. Although certain facilities demonstrated high MOUD retention rates and medication adherence, others encountered barriers related to staff training, coordination issues between correctional and medical staff, and stigma. Interviews with MOUD medical providers revealed common challenges, such as barriers to the induction of incarcerated patients a month prior to release and providing a bridge supply of multiple doses/days of MOUD, diversion, and reentry services.

Conclusions**:** This study emphasizes how crucial it is to evaluate and enhance the quality of MOUD programs across all county jails to treat opioid addiction incarcerated patients. Findings underscore the need for standardized protocols, staff training, enhanced collaboration between healthcare providers and correctional staff, reducing stigma, and addressing diversion. Optimizing MOUD outcomes and encouraging effective reintroduction into the community for people with opioid use disorders requires a system-thinking approach.

Buprenorphine in Jails: An Innovative Mixed-Methods Pilot Project in Rural Appalachia

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Background: Rates of opioid use among persons who are currently, or have history of, incarceration are disproportionately high relative to the general population. Additionally, people experiencing opioid use disorder that spend time in jails are at elevated risk for overdose post release. Medication for opioid use disorder (MOUD) is a crucial component of opioid use treatment in the general population. Despite the strong evidence-base for MOUDs effectiveness, they are rarely utilized in correctional facilities for inmates with opioid use disorder.

Objective: The Tennessee Department of Health conducted a pilot project to provide MOUD treatment and inmate/patient navigation services in the Jefferson County Jail in Eastern Appalachia. A behavioral health treatment facility provided all telehealth prescribing of buprenorphine. Another mental health, substance use, and social services provider provided all jail navigation services, continued to interact with patients post release, and collected retention data for this evaluation.

Methods: The study design was a hybrid type 2 implementation and outcome evaluation. The hybrid type 2 implementation and outcome evaluation model was achieved through extracting data from 79 patient charts who were receiving buprenorphine treatment in the Jefferson County Jail. We supplemented the patient charts with qualitative interviews with jail staff who were involved in the MOUD program.

Results: Out of the 79 individuals in the intervention program, three-month retention was 68.75%, while six-month retention was 66.10%. Additionally, the findings from the five qualitative interviews with jail staff were categorized as either barriers or facilitators to implementation. With post-release follow-ups, judge and sheriff rapport, and staff commitment identified during the interviews as program facilitators, and stigma, limited capacity, and lack of internal resources identified during interviews as barriers.

Conclusions: There is strong, yet little, evidence supporting MOUD initiation within the criminal justice system. The MOUD pilot project supported the evidence in MOUD initiation among those experiencing incarceration, with strong three and six-month retentions rates. The program's findings identified and guided modification of the implementation strategy to integrate MOUD treatment and inmate navigation in the jail system. The program findings will be able to provide important guidance to other rural counties seeking to implement similar programs.

Professional Education 1

US and Canadian Medical Student Attitudes Toward People Who Inject Drugs: An Online Survey

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Background: People who inject drugs (PWID) broadly report discrimination and stigma accessing medical care, which creates barriers to care and worsens health outcomes. Although several studies have described physician attitudes toward PWID, there are no data describing medical student attitudes toward PWID.

Objective: To assess medical student attitudes towards PWID in the United States (US) and Canada.

Methods: From May 2023 to July 2023, we conducted an anonymous online survey of US and Canadian medical students via email invitation to all 220 accredited medical schools. We assessed attitudes using a validated ten-point survey developed to measure healthcare worker attitudes toward PWID. Five statements displayed negative attitudes and five displayed positive attitudes. These were measured on a Likert scale (strongly disagree, disagree, neutral, agree, strongly agree) and transformed to a numeric 5-point scale to calculate a stigma score (from 1-5). Agreement with stigma-indicative statements was assigned a higher score and vice versa. We fit multivariate linear regression models to assess differences in mean stigma score by sociodemographics including age, gender, year in training, and medical school geographic region.

Results: A sample of 568 students from 52 medical schools completed the survey. The stigma score ranged from 1-5 (mean 2.26) with a median of 2 (IQR 1-3). In adjusted models, age less than 24 years of age was associated with a mean stigma score 0.41 (95% CI 0.24-0.57) higher relative to participants who were 33 years or older. Non-binary gender was associated with a -0.64 (95% CI -0.82 to -0.46) lower mean stigma score relative to cisgender male participants. Fourth- and third-year students had 0.19 (95% CI 0.09-0.29) and 0.21 (95% CI 0.12-0.31) higher mean stigma scores, respectively, relative to first year students. Being in medical school in the Southern US was associated with 0.26 (95% CI 0.17 to 0.36) higher mean stigma score relative to the Western US.

Conclusions: Medical student stigma toward PWID is prevalent and varies by region, age, gender, and year in training. Additional studies are needed to further characterize this stigma, its impact on patient care, and strategies to reduce stigma among medical students, including changes to medical student curricula and training.

Centering a Harm Reduction Framework for Substance Use Disorder Counseling in Medical Student Education: A Pilot Curriculum

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Background: Harm reduction has been shown to reduce negative health impacts on people who use substances. While medical schools have increasingly adopted curricula for counseling people with substance use disorders (SUDs), there is little formal training on harm reduction principles, practices, or community-centered programming.

Objective: To assess the impact of a novel harm reduction curriculum on medical student confidence with SUD counseling.

Methods: We administered a novel curricular intervention to all first-year students (n=144) during the SUD counseling session of their clinical skills course. The curriculum involved pre-session readings (a harm reduction practices guide and substance-specific counseling guides), an interactive panel with local harm reduction specialists, and small group practice cases facilitated

by community members with lived experience. An anonymous 14 item pre- / post- Likert-scaled survey was distributed to all students who participated in the curriculum.

Results: 113 out of 144 first-year students responded to the pre-survey, 68 students responded to the post-survey, and 57 students responded to both the pre- and post-survey.

In the pre-survey group, students were more likely to agree or strongly agree that they were confident in screening for SUD compared to counseling patients with SUD using harm reduction strategies (43.3% vs 14.2% for alcohol use disorder (AUD), 38.6% vs 15.7% for tobacco use disorder (TUD), and 21.3% vs 11.8% for opioid use disorder (OUD)).

Among those who responded to both the pre- and post-survey, students demonstrated increased confidence in six of six confidence measures post-intervention (table 1).

Measure	Less Confident	No Change	More Confident
Screening for AUD	4%	44%	53%
Screening for TUD	2%	40%	58%
Screening for OUD	0%	28%	72%
Harm reduction for AUD	4%	21%	75%
Harm reduction for TUD	4%	30%	67%
Harm reduction for OUD	5%	19%	75%

Table 1. Changes in student confidence post-intervention.

Conclusions: Medical students have limited exposure to harm reduction practices and are less confident in integrating harm reduction into substance use counseling, with only 1 in 7 students expressing confidence in this skill pre-intervention. After implementation of an integrated harm reduction curriculum, students report increased confidence in both screening and counseling patients across all three substance use disorders.

Preparing Healthcare Workers to Discuss Harm Reduction with Patients Who Use Drugs through a Brief Workshop

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Background: Integrating harm reduction services into medical settings can reduce stigma and improve engagement with patients who use drugs (PWUD). However, harm reduction is underrepresented in health professions education. Consequently, healthcare workers may be unprepared to discuss harm reduction with their patients. At our institution, a separate survey of internal medicine residents found that the majority were uncomfortable discussing overdose prevention strategies with PWUD. Curricula adapted to a range of healthcare professionals may help close this gap.

Objective: To evaluate a workshop designed to educate a range of healthcare professionals in harm reduction concepts and practices.

Methods: Patient navigators within our interprofessional addiction consult team in a safety-net, academic hospital designed a 45-minute workshop focused on harm reduction core concepts and practices. The workshop included a module on harm reduction principles, a video on functions of specific safer-use supplies, and a case-based practice on history taking and addiction treatment. We led three workshops to third-year medical students (n=15), internal medicine residents (n=4), and bedside nurses (n=6). We administered pre/post free-response surveys evaluating participants' knowledge of safer-use supplies, overdose prevention resources, and taking a harm reduction-focused history. We coded survey answers as correct/ incorrect and compared pre- and post-workshop answers using a paired t-test.

Results: At baseline, participants lacked knowledge of safer-use supplies, overdose prevention resources, and taking a harm reduction-focused history. Upon workshop completion, all participants demonstrated significant improvement in all three competencies (Table 1; overall rate of correct answers: 13.3% (pre) and 89.3% (post), $p < 0.001$).

Table 1: Rate of Survey Responses by Competency

Competencies	**Presurvey** ***(n=25)***	**Postsurvey** ***(n=25)***	**p-value**
Understanding functions of safer-use supplies	5 (20%)	23 (92%)	p<0.001
Knowledge of harm reduction resources	5 (20%)	24 (96%)	p<0.001
Taking a substance use history focused on harm reduction	0 (0%)	20 (80%)	p<0.001

Conclusions: This brief workshop improved core harm reduction knowledge in medical trainees and bedside nurses. Specifically, upon workshop completion, participants were more prepared to discuss safer-use supplies, refer patients to harm reduction resources, and take a substance use history. Our workshop materials are readily accessible online.

Pilot Evaluation of a Novel, Cooperative Opioid Use Disorder (OUD) Board Game

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Background: Insufficient training, low comfort and confidence, and stigma are well-documented barriers to healthcare provider engagement in OUD care. Incorporating training into healthcare curricula is a practical approach to increasing provider preparedness.

Objective: To evaluate students' (1) reactions to playing a novel, educational OUD board game and (2) changes in knowledge, skills, attitudes, confidence, and commitment about providing OUD care after playing the game.

Methods: A narrative, cooperative, campaign board game was developed in which players select a "Hero" (physician, pharmacist, nurse, licensed clinical social worker, physical therapist, or patient) and collaborate on a series of "Care Tasks" (e.g., screening for OUD) to progress the patient through stages of recovery. "Life Events" (e.g., overdose) occur throughout gameplay that positively or negatively impact players' progress. The game was designed to expose learners to lived experiences of persons with OUD, demonstrate how life events influence patient and provider capacity to engage in care, and simulate interprofessional collaboration. Pre- and post-surveys were developed using the Kirkpatrick Model to assess reactions to the game and changes in knowledge, skills, attitudes, confidence, and commitment about OUD care. Modified items from the Brief Substance Abuse Attitude Survey (BSAAS) were also included to assess stigma. The game was implemented in Spring 2024 for first-year Doctor of Pharmacy students (n=149) at a midwestern, public university. Surveys were administered electronically immediately before and after playing the game. Descriptive statistics were computed for all survey items, and paired t-tests were performed to compare pre- and post-survey responses using Microsoft Excel.

Results: 143 students completed pre- and post-surveys (96.0% response rate). Respondents agreed or strongly agreed that the game was enjoyable to play (95.8%), relevant to their future practice (93.7%), and helped them learn about providing comprehensive OUD care (92.3%). Statistically significant improvements were observed across all knowledge, skill, attitude, confidence, and commitment items, and nine out of 14 BSAAS items.

Conclusions: Students enjoyed playing this novel OUD board game and experienced positive, meaningful learning outcomes. Future efforts to implement the game across other institutions and healthcare disciplines are in progress.

Implementation of a Substance Use Curriculum in an Academic Medical Center: Strategies to Expand Treatment of Substance Use Disorder

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Background: The growing public health challenge of opioid use disorder (OUD) and other substance use disorders (SUDs) necessitates expanded training for current and future health care

professionals in SUD. To address stigma and increase uptake of evidence-based treatment, we developed a "TEACH-UP" model combining didactic and clinical experiences to disseminate evidence-based care to a range of learners and clinicians in an academic medical center.

Objective: To describe TEACH-UP implementation and outcomes.

Methods: TEACH-UP was implemented at Penn's Schools of Medicine and Nursing, and University of Pennsylvania Health System from 2021-2024. Interventions integrated didactic training and experiential learning opportunities in addiction medicine for students while also providing didactic training sessions for housestaff, APPs, and faculty focused on the recognition and management of SUDs, including use of medications for OUD. Initial trainings included the DATA 2000 (X-Waiver) certification and transitioned to optional education sessions delivered in a 4-8 hour hybrid format. We assessed impact of the interventions using survey and narrative-based educational evaluations as well as pre-post inpatient and outpatient buprenorphine prescribing before and after the trainings.

Results: We surveyed first- and second- year medical students, nurse practitioner students, and current faculty (n=72, 46% response rate). Integrating SUD training into the curriculum and providing experiential learning opportunities were positively rated by medical and nursing students. Participants agreed or strongly agreed training initiatives increased knowledge (91.6%), improved ability to work effectively (90.3%), and enhanced professional development (87.5%). Experiential learning sessions, such as shadowing in integrated MOUD-primary care clinics and harm reduction outreach experiences, received positive qualitative feedback and were deemed valuable by participants. From 1/2021 to1/2024, outpatient buprenorphine prescriptions and inpatient buprenorphine orders increased significantly ($p < .05$).

Conclusions: Targeted SUD education and experiential learning were highly rated by medical student learners and described as beneficial to effectively treating patients. The findings highlight the importance of SUD training across all levels of training, including faculty. Integrating SUD education into the curriculum and providing experiential learning opportunities can enhance provider readiness and support for patients with SUDs, particularly in initiation of MOUD.

Professional Education 2

The Impact of Near-Peer Teaching on a Naloxone Training Workshop and Opioid Overdose Simulation

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Background: To prepare future clinicians to recognize and treat opioid overdose victims, it is imperative to provide hands-on training and equip medical students with naloxone in our communities. Although recent literature suggests that near-peer teaching in medical education

may lead to similar outcomes compared to faculty-led teaching, near-peer teaching offers cognitive and social congruence, which fosters an ideal learning environment.

Objective: The objective of this study is to compare the effectiveness of near-peer teaching versus faculty-led teaching methods for naloxone training.

Methods: Pre-clerkship students participated in a 1-hour workshop that consisted of an inpatient simulated opioid overdose using high-fidelity mannequins followed by hands-on naloxone training. Post-tests/surveys were administered including the Opioid Overdose Knowledge Scale (OOKS) and Opioid Overdose Attitudes Scale (OOAS). Descriptive statistics and independent t-tests assessed for significant differences ($p<0.05$). Qualitative analysis incorporated Glaser's constant comparative method to identify themes.

Results: In total, 537 medical students participated in the in-person workshop from 2019 to 2022 and 288 students completed the surveys (response rate = 53.6%). Results from the OOKS test demonstrated significant gains in knowledge for (percent correct = 84.5% ± 0.09 versus 80.2% ± 0.1, $p = 0.0002$) and significant improvement in overall attitudes (OOAS) towards opioid overdoses [total score = 105.5 ± 8.4, $p = 0.021$ (1=completely disagree, 5= completely agree)] for near-peer led sessions compared to faculty-led sessions, respectively. Themes from open-ended questions included how the hands-on instructions made students feel comfortable with using naloxone in real-life situations and the effectiveness of the training by a peer medical student with previous emergency medical service training

Conclusions: Our results demonstrate that a near-peer teaching, hands-on workshop focused on opioid overdose recognition and management significantly improved students' knowledge of and attitudes towards opioid overdoses. This 1-hour workshop can be implemented by other programs to help combat the current opioid epidemic by increasing the number of healthcare trainees trained in opioid overdose management. Additionally, based on the positive response regarding learning from an experienced peer, continued efforts to implement near-peer teaching within the medical school curriculum can be advantageous for knowledge acquisition and interprofessional collaboration, particularly by capitalizing on the unique backgrounds of students.

Feasibility and Learner Experience in a Multidisciplinary Addiction Training Program

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Background: Multidisciplinary, team-based approaches to addiction treatment are common, yet commingled training involving separate professional schools and students is not.

Objective: This 2023-2025 pilot program, 'NYU Multidisciplinary Addiction Training (NYU MAT),' aims to expand addiction medicine education for a diverse mix of 41 pre- and post-graduate allied health professionals in NYC and foster addiction-focused careers.

Methods: NYU MAT Program is implementing a new addiction medicine curriculum for two cohorts of one-year learners: 1) n=35 ‘Scholars,’ allied health students in a part-time paid scholarship program, 2) n=6 ‘Fellows,’ full-time licensed non-physician professionals recruited to a one-year clinical fellowship. Sponsored by NYS Office of Addiction Services and Supports, faculty and partner schools at NYU are Medicine, Nursing, Social Work, and Occupational Therapy. Faculty include 3 addiction medicine physician fellows and senior clinician leaders from each school. Curriculum content for both Scholars and Fellows consists of webinar didactics, journal clubs, simulations, and volunteering. MAT Fellows rotate at academic, public hospitals, and community addiction treatment sites. Pre/post data gathering assesses knowledge and attitudes using validated instruments, reflective journaling, and program evaluations. Analysis is descriptive and qualitative.

Results: 2023-2024 recruitment for n=35 Scholars positions yielded 350 applications from across NYC. Scholars are students in: Masters in Social Work (n=14), Undergraduate Social Work (n=2), Nursing (n=5), Nurse Practitioner (n=5), Psychology (n=3), Occupational Therapy (n=4), Certified Alcohol Substance Abuse Counseling (n=2). Institutions represented: NYU, Columbia, CUNY and Hunter, Mercy College. Six Fellows recruited are a Certified Peer Recovery Advocate, two Licensed Masters in Social Work, and three Psychiatric Nurse Practitioners. Pre-program assessments documented 63.52% of Scholars were ‘neutral-disagree’ on confidence in screening for and treating substance use disorders. Scholars' monthly journals to date reflect increased understanding of interprofessionalism within addiction care teams.

Conclusions: This pilot multidisciplinary training program for allied health professionals brings an academic addiction medicine curriculum to non-physician learners. Multidisciplinary cohorts mixing with faculty from 4 degree programs are both pre- and post-licensed learners. Early results show high general interest and feasible recruitment. Student Scholar data shows a need for improved interprofessional approaches to clinical training and addiction medicine content.

Reimagining Recovery: A Health Justice-Oriented Training for Professionals By Michigan State University Extension

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Background: In the Great Lakes region, Michigan State University Extension (MSUE) partners with five other state university Extension systems to form the Great Lakes Rural Opioid Technical Assistance Regional Center (Great Lakes ROTA-RC). The center employs evidence-based/emerging practices and provides virtual and/or on-demand education and technical assistance for rural community members on mental health and substance use disorders.

Objective: MSUE created and delivered a 3-part virtual training titled “Reimagining Recovery: A Systems Approach to Addressing Substance Use Disorder.” The training adopts a health justice-oriented approach, exploring the research behind structural, social, and root determinants of addiction, limitations of the brain disease model of addiction, and how criminalizing and punitive approaches to substance use are both normalized and exacerbating the overdose crisis.

Presenters emphasize non-punitive strategies to support people who use drugs and/or are living in recovery, including harm reduction.

Methods: The primary audience for this training includes professionals working in substance use disorder prevention, treatment, and recovery spaces and any other intersecting systems, such as health care, criminal legal, and education. The training is evaluated using an online post-event survey distributed to participants at the conclusion of each part. Interviews were conducted with several participants to learn about their experience in the training.

Results: Participants who completed the post-event survey (n=60) were primarily employed as social and human services workers, peer recovery specialists, and in various community and clinical care settings. Almost all participants (98%) reported being satisfied with the series. Most participants stated that the information provided was useful and several participants said they wished the training was longer.

Conclusions: This training is relevant to educators and professionals aiming to align their substance use disorder prevention, treatment, and recovery efforts with health equity and justice principles. By embracing a systems approach and emphasizing non-punitive strategies, this series contributes to a paradigm shift where people can reimagine their role in addressing substance use disorder in their communities.

Hearing Hope: The Power of Narrative Storytelling in Addiction Medicine

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Background**:** Stigma for individuals with substance use disorder (SUD) remains a significant problem unsolved by traditional didactic educational strategies. Narrative storytelling shares lived experiences of those with SUD to improve empathy and augment provider compassion. Stories create connections and share hope, which may catalyze a deeper understanding among healthcare team members caring for those with SUD.

Objective**:** Use narrative storytelling to improve healthcare providers/caregivers' knowledge and empathic practice in caring for individuals with SUD.

Methods**:** Two, free 60-minute sessions occurred via an online-video platform through Boston Medical Center Grayken Center for Addiction Training and Technical Assistance. These offerings were part of our recovery month educational series in September 2023 and offered continuing education credit. Addiction nurse educators moderated the sessions, which included panelists with SUD. The audience included healthcare and SUD treatment caregivers. Post-training surveys assessed if objectives were met and how activity would affect future practice changes. Participant feedback was reviewed and themes identified.

Results**:** A total of 153 people attended these sessions, with 86 learners in session 1 and 67 learners in session 2. Professions included nurses (22%), recovery coaches (15%) and social

workers (13%). Among surveyed participants, 100% reported improvement in identifying examples of stigma. Sessions improved self-reported knowledge among 95% of participants and 90% reported improved ability to work effectively with interprofessional teams. Survey participants highlighted the role of stigma, hope and the power of shared experience as a learning tool. Areas for improvement included the need for perspectives of people on medication treatment.

Conclusions**:** Narrative storytelling improves knowledge and promotes empathy for people with SUD. It may be an effective approach to reduce healthcare providers' and caregivers' stigma. Stories provide hope and a deeper appreciation of the many pathways to recovery. Future narrative storytelling should represent diverse recovery perspectives including those on medication for SUD to understand the impact on provider stigma and empathy.

An Interprofessional Case-Based Discussion on Opioid Use Disorder: Influencing Knowledge, Confidence and Stigma Among Future Prescribers

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Background: The opioid epidemic requires a multi-pronged approach to prescriber's training regarding evidence-based practices for people with opioid use disorder (OUD). Medications for OUD (MOUD) are lifesaving, effective treatment options, however, utilization and access to MOUD depends on prescribing clinician knowledge, training and attitudes. MOUD care is often provided in an interprofessional setting and has growing rates of application compared to individual prescribing approaches. Despite interprofessional education (IPE) occurring across graduate programs, current literature is limited in understanding how IPE approaches benefit future MOUD providers' clinical practice.

Objective: To evaluate nurse practitioner (NP), physician assistant (PA), and medical doctorate (MD) students' acceptability of IPE curricula and its impact on their knowledge, confidence and stigma related to treating patients with OUD.

Methods: In 2022 and 2023, a 4-hour IPE OUD case-based discussion workshop consisting of 2.5-hour asynchronous lectures and 1.5-hour synchronous IPE OUD material was developed. The workshop included mixed cohorts of NP, PA, and MD students facilitated by buprenorphine-waivered medical professionals and focused on MOUD prescribing and inter-team collaboration. Pre and post-test surveys assessed student knowledge, confidence, and attitudes towards OUD. Variables were recoded to ensure consistent directionality. Paired sample t-tests evaluated differences between pre and post test data among the IPE cohorts; Wilcoxon signed-rank tests were used when normality was violated. Family-wise error rates for p-values were corrected using the Holm method. Qualitative feedback was thematically analyzed from free-response questions on the post-test survey.

Results: 459 students attended the workshop. 394 students completed both pre-and-post IPE surveys. Significant improvements were observed across all measures with greatest changes in effect size for confidence in treating and diagnosing patients with OUD ($p<0.001$, $d=0.75$; $p<0.001$, $d=0.70$) and knowledge ($p<0.001$, $d=0.64$). Across clinical training programs, 94.49% of students would recommend this training to a colleague and 81.89% noted that the workshop clarified their role on an interprofessional team caring for patients with OUD.

Conclusions: IPE approaches for future MOUD providers can facilitate their confidence providing multidisciplinary care and aid in changing attitudes and knowledge of OUD. Refining IPE OUD curricula to reflect evolving best practices and needs of patients with OUD should be considered.

Special Topics 1

Improving Alcohol Use Disorder Diagnosis and Treatment in a Primary Care Setting Using a Clinical Decision Support System

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Background: Alcohol use disorder (AUD) affects ~11% of US adults and leads to adverse health outcomes. Primary care providers (PCPs) provide a critical role in diagnosing and treating patients with AUD.

Objective: The purpose of this analysis was to measure the rates of diagnosis and treatment of adults with AUD at an academic internal medicine clinic before and after implementing a clinical decision support system.

Methods: The electronic health records of all adult patients who received care at an academic internal medicine clinic between 1/1/2023 and 3/31/2024 were queried to identify the rates of AUD diagnosis and treatment. In tandem, we implemented an AUD clinical decision support system on 12/20/2023. Our system included a passive alert to screen all adult patients using an EHR-based AUDIT/AUDIT-C screener. For patients who screened positive, another passive alert would prompt clinicians to use an alcohol use order set. The order set contained a clinical decision support tool to guide diagnosis and treatment decisions, behavioral intervention scripting, orders for medication for alcohol use disorder (MAUD), referral orders, and patient education materials.

Results: Prior to our intervention, only 3% (509/18,417) of unique adult patients who had an office or telemedicine visit in 2023 carried a current AUD-related diagnosis. In the first 3 months after implementation of our intervention, 498 patients were screened for AUD. 42% of PCPs (67/161) completed at least 1 screening with a patient.

Compared to the 12 months prior to implementation, there was increase in “Alcohol Use” documentation as an encounter diagnosis or problem in the first quarter of 2024 (n=93) compared to the quarterly average in 2023 (n=49). For AUD, there was a 12% increase in

documentation in the first quarter of 2024 (n=209) compared to the quarterly average in 2023 (n=186). MAUD and referral numbers remained stable.

Conclusions: EHR-based clinical decision support systems are promising strategies to empower PCPs to diagnose and treat AUD. Future areas of work include evaluating for long-term changes in AUD treatment and scaling this intervention to the full health care system, including additional primary care clinics and specialty clinics.

Attitudes Toward Medications for Opioid Use Disorder Among Residents in Low-Threshold Harm Reduction Housing Sites in Boston

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Background: In 2022, the City of Boston implemented six low-threshold harm reduction housing (HRH) sites, as a response to challenges of substance use and homelessness at a tent encampment near a major intersection ("Mass and Cass"). HRH sites provided robust harm reduction services and sobriety was not a barrier to entry. A key feature of HRH sites was clinical partnerships to offer on-site Medications for Opioid Use Disorder (MOUD)–including buprenorphine, methadone, or naltrexone–or facilitated MOUD connection off-site.

Objective: We sought to assess how placement in HRH shaped attitudes toward MOUD.

Methods: Building on formative work at Mass and Cass as part of two rapid assessment studies in 2022 and 2023, we developed a survey instrument and interview guide to better understand substance use patterns and engagement in harm reduction and MOUD among HRH residents. We recruited 106 HRH residents from six sites to complete the survey, inviting 28 participants for longitudinal semi-structured interviews assessing substance use patterns, harm reduction practices, and attitudes toward MOUD. Data for this analysis came from baseline surveys and interviews.

Results: Thirty-five survey participants (33%) were currently receiving MOUD anywhere, but only 32 participants (30.2%) were aware of MOUD service access at HRH. Residents described the impact of HRH on medication treatment prospects: "Now that I'm here, I actually have the stability and the time to really think about stuff like that." HRH locations further away from buprenorphine clinics and methadone programs created a barrier to MOUD engagement: "Very far from all the services, it makes things a lot harder." In contrast, HRH locations with on-site or nearby MOUD options facilitated engagement. Additionally, HRH-associated MOUD programs had different clinical practices that facilitated engagement, such as increasing dosage at a faster, personalized pace than off-site clinics: "they bump you up quickly...that doesn't happen when you go to the clinic."

Conclusions: HRH sites improved MOUD engagement among residents by providing stability for care receipt and by facilitating on- and off-site MOUD initiation. Future studies should assess

interventions to optimize MOUD initiation and retention at HRH, and the role of HRH in fatal overdose prevention.

Barriers and Facilitators of Medication for Opioid Use Disorder (MOUD) in Skilled Nursing Facilities (SNFs)

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Background: Despite increasing need for Medication for Opioid Use Disorder (MOUD) in Skilled Nursing Facilities (SNFs) due to the aging of the population and the ongoing opioid epidemic, access to MOUD in SNFs remains limited or unavailable and little is known about barriers and facilitators of MOUD in SNFs.

Objective: To understand current practice, barriers, and facilitators of MOUD in SNFs.

Methods: We surveyed 42 SNFs in New York that collaborate with Montefiore Health System about their current MOUD practices. Using a pre-specified list of barriers and facilitators that we identified from the literature and our own experience we asked respondents to identify the degree to which each was a barrier or facilitator of MOUD at their SNF. We classified a barrier as significant if a SNF reported it as moderate or major and a facilitator as helpful if a SNF reported it as somewhat or extremely helpful.

Results: Twenty-three SNFs (57%) responded. These SNFs have over 1500 beds. Medical directors completed half (48%) of the surveys; administrators (17%), nursing leaders (13%), admissions staff (13%), or others (9%) completed the remainder. Twelve (52%) administered any MOUD in the last year. Of these 12, all but one facility reported administering either MOUD to 10 or fewer patients. The four most common significant barriers were: lack of ability to transfer for a higher level of addiction care (76%), lack of prior experience managing OUD (71%), lack of training and mentorship in OUD management (71%), and high perceived burden to provide buprenorphine (67%). The five most common helpful facilitators were: clinician training on co-management of OUD and chronic pain (95%), staff training on OUD and harm reduction (90%), clear referral pathways for OUD patients (90%), partnership with addiction experts (90%), and consensus guidelines for provision of OUD in SNFs (90%).

Conclusions: In our survey results, few patients across all SNFs surveyed received MOUD in the last year. Importantly, SNFs endorsed a need and willingness to collaborate with addiction experts to enhance their knowledge base. This presents an opportunity to better support their readiness to routinely deliver MOUD.

Would We, Could We? Measuring Attitudinal and Capacity Barriers to Supporting Residents on MOUD in Recovery Housing

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Background: Recovery housing is an important resource for individuals recovering from opioid use disorder (OUD), including those who take medications for OUD (MOUD) . To increase utilization of MOUD within recovery housing, we must first identify dominant barriers as they exist in this setting.

Objective: We aimed to develop a novel tool to identify attitudinal and capacity-related barriers to supporting recovery home residents on MOUD.

Methods: Drawing from the extant literature and expert consultation, we developed an assessment of attitudinal and capacity barriers to different MOUDs, with versions for both operators and residents. Likert-scale attitudinal items assess: General stigma; Recovery housing-specific stigma; Pharmacological properties; Theoretical treatment orientation; Preference for psychosocial treatment over medication; Mistrust of scientific research; Suspicion of negative/profit motives; and Risk of diversion. Capacity domains assess: General capacity; Care coordination; Storage/diversion risk; Staffing; Training; Monitoring; and Regulatory burdens. We launched an online survey containing these domains in January 2024.

Results: Housing operators (n=112) reported high acceptance of residents on naltrexone (88%), followed by buprenorphine (78%), and methadone (63%). With the exception of 'Preference for psychosocial treatment,' internal consistency of the subscales for operators ($\underline{\omega}$=.77-.93) and residents (n=150; $\underline{\omega}$=.82-.91) were acceptable. Regarding overall attitudinal barriers, 'General stigma,' 'Preference for psychosocial treatment,' and 'Risk of diversion' were most highly endorsed by both operators and residents (mean range=2.5-3.1 of 5). Regarding capacity barriers, lack of 'Care coordination,' 'Training,' and 'Staffing' were most endorsed by operators (mean range=2.2-2.4). Both operators and residents reported their most desired capacity improvements to be 'transportation to/from appointments,' 'training on how to support people on medication,' and 'MOUD education/awareness for residents.' Across domains, operators endorsed better MOUD attitudes than their residents (all p's<.05) with attitudinal barriers differing by medication type (p<.001).

Conclusions: Preliminary findings suggest overall low to moderate stigma toward MOUD among operators and residents in recovery housing, with operators reporting less stigma than their residents. Given agreement among operators and residents regarding their most-needed capacity improvements, investments to reduce operational MOUD barriers in recovery housing should come quickly.

Co-Developing and Implementing a Promotor Curriculum: Program for Education in Drugs and Alcohol for Latine (PEDAL)

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Background**:** *Promotores* (community health workers) can provide cultural- and language-informed interventions to advance health. Promotores have improved outcomes across chronic and infectious diseases with medical and psychosocial complexities. However, there are no Spanish promotor curricula focused on addiction.

Objective**:** We developed partnerships with multiple Latine-serving community-based organizations (CBO) in San Francisco to co-design and implement PEDAL, a Spanish-language curriculum to train promotores in addiction. We describe the process and early outcomes.

Methods**:** We conducted a needs assessment of addiction-related needs among Latine San Franciscans in 2022. We gathered CBO, Department of Public Health, and clinician representatives to inform PEDAL, with the goal of empowering Spanish-speaking promotores to communicate about substance use, recognize unhealthy substance use, and link community members to services.

UCSF addiction medicine faculty, CBO, and National Harm Reduction Coalition (NHRC) leads iteratively co-developed the linguistically- and culturally-informed curriculum over four months. UCSF faculty and NHRC leads delivered 13 interactive sessions over 11 weeks and met weekly with promotor leads to obtain post-session feedback.

Our evaluation included participant characteristics, and pre-and post-course scores on validated stigma and attitude scales and confidence in course goals using paired t-tests. For each session, we assessed comprehension with knowledge questions and homework reflections. We analyzed themes from pre- and post-course written reflections on PEDAL impact.

Results**:** A total of 16 promotores and 4 promotor leaders participated. Most participants identified as women (80%), mean age was 44 (SD 9.0), and mean time as a promotor was 7.1 years (SD 5.6). Participants had high attendance (95.9%) and homework completion (92.8%). Promotores scored 79.4% on knowledge assessment questions. Stigma, attitudes, and confidence in course goals significantly improved. The major themes from the pre- and post-course reflections were increased empathy towards people who use drugs and alcohol, increased confidence in overdose prevention, community resources, and motivational interviewing, and a desire for further training.

Conclusions**:** PEDAL reduced stigma, improved attitudes, and increased confidence across the course goals. Curricula such as PEDAL may equip promotores to provide linguistically- and culturally-informed addiction services.

Special Topics 2

Demand and Supply of Telemedicine Services for Racial and Ethnic Minority High Schoolers Affected By Violence and Substance Use During the Pandemic

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Background: Between 2019 and 2020, US high schoolers faced escalating substance use and violence, with the highest rates since 1994. Firearm-related homicides surged by 34.6%, disproportionately affecting racial and ethnic minority (REM) youth, notably non-Hispanic African American and American Indian or Alaska Native males. Adolescent alcohol and substance use also spiked, particularly among AI/AN, White, older, and sexual and gender minority students. The pandemic disrupted services but led to increased telehealth use among at-risk REM adolescents, highlighting the need to understand factors driving online help-seeking.

Objective: 1) Examine the prevalence of youth violence and substance use (YV/SU) among REM adolescents during the pandemic, 2) Evaluate the association between YV/SU and REM telemedicine use during the pandemic.

Methods: Participants (*n*=3241) were a nationally representative sample of US 9th-12th students who completed the CDC Adolescent and Behavioral Experiences Survey (ABES). We examined seven YV victimization outcomes, four YV perpetration outcomes, two family violence outcomes, and six substance use outcomes on telemedicine use for mental health (dependent variable) in the previous year, using univariate (frequency distribution), bivariate (Chi-square), and multiple logistic regression models.

Results: This sample was largely female (50.7%), Black or African American (48.3%), Hispanic or Latinx (20.6%), and identified as straight/heterosexual (69.5%). We found significant gender differences in violence perpetration/victimization and telemedicine help-seeking. Telehealth use was significantly associated with substance use (cigarette smoking, vaping, alcohol, marijuana, prescription meds, and illicit drug use) (p-value =.001), and with all peer and family violence outcomes ($p < 0.001$). Controlling for covariates, gun carrying was associated with 4.8x higher odds of using mental telehealth. Students in a physical fight or carrying a weapon (gun, knife, or club) on school property had 2.45x and 8.09x the odds of utilizing mental telehealth. Bullied students were 2.5x more likely to use mental telehealth (p-value< 0.05). Illicit drug use (cocaine, heroin, methamphetamines, and ecstasy) were associated with a higher likelihood of telehealth use (AOR = 1.3, p-value =.05).

Conclusions: Our findings suggest important implications. Telehealth help-seeking emerged as a crucial support for adolescents affected by violence and substance use, offering a valuable complement to in-person services in the post-pandemic era.

”Un Attracteur De Soins”: Bringing People into Care. Qualitative Study of Interprofessional French Healthcare Clinicians’ Attitudes Towards Opioid Agonist Therapy

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Background**:** France has among the highest rates of opioid agonist therapy (OAT) and the lowest rates of opioid-related overdose death worldwide: 87% of French people with opioid use disorder receive methadone or buprenorphine (versus <20% in the US) and opioid-related overdose rates are 32-times lower. US OAT access gaps persist despite recent reforms, including removing the buprenorphine X-waiver and increasing methadone take-home dose flexibility. Buprenorphine prescriptions decreased in 2021 and most Opioid Treatment Programs require daily supervised dosing. Understanding French clinician perspectives could inform US efforts to change policy around OAT access and engagement.

Objective**:** Understand interprofessional French perspectives on OAT, including purpose, perceived risks/ benefits, and practice.

Methods**:** Using an ethnographic approach, we conducted in-depth, semi-structured interviews with a diverse sample of 18 interprofessional clinicians (e.g. pharmacists, nurses, physicians) and stakeholders (e.g. government leaders) across France. We conducted a thematic analysis using an inductive approach at the semantic level.

Results**:** All participants considered OAT a harm reduction strategy, goals of which included helping patients achieve stability; reduce infection, overdose, and death; and engage with healthcare. No participants spontaneously identified abstinence from substance use as the purpose of OAT. When prompted, participants felt abstinence was a high bar, and if it was the goal, that it be the patient's – not clinician's – priority. Participants felt expecting abstinence could lead patients to disengage or hide use, reinforcing "une double vie" (double life). Generally, participants felt OAT was very low risk, and balanced risk of prescribing with harms of withholding OAT. Participants emphasized that strict controls (e.g. involuntary drug testing, mandatory supervised dosing) were counterproductive. However, they specified that this did not mean an anything goes, "laissez-faire" approach. Participants acknowledged that often patients and clinicians have different goals and emphasized that communication – including listening to and learning from patients - was essential.

Conclusions**:** Abstinence is not the goal of OAT in France, where interprofessional clinicians contextualize OAT risks and benefits, and prioritize patient engagement. French perspectives offer a sharp contrast to prevailing US attitudes and may inform US efforts to improve OAT access and retention in care.

Evaluation of the Clinical Efficacy of an Application to Support Prescribing of Medication for Addiction Treatment

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Background: Medications for addiction treatment (MAT) are underutilized. Barriers to MAT prescribing include inadequate training, education, and clinical support. The Boston Medical Center MAT Quick Start application (BMC MAT app) is a free mobile and online clinical

support tool designed to increase prescriber comfort in prescribing MAT for opioid use disorder (OUD) and alcohol use disorder (AUD).

Objective: The purpose of this study was to evaluate the clinical utility of and satisfaction with the BMC MAT app for providers prescribing MAT.

Methods: In May 2023, 1,186 prescribers who completed a BMC waiver training between January 2019 and December 2022 were emailed information about the BMC MAT app and encouraged to use it. Four weeks later, a follow-up email was sent with a link to an electronic survey requesting feedback about the app. Reminder emails were sent between June and August 2023. The survey assessed the following domains: clinical utility, impact on practice, prescriber satisfaction, and ease of use. Survey data were cleaned, aggregated, and summarized.

Results: Of the 120 respondents, 43 had used the BMC MAT app in clinical practice and were included in analyses. Most participants were advanced practice providers (63%), 40% worked in outpatient addiction treatment settings, and the median number of years in the profession was 8.5. Prescribers primarily utilized the app to start patients on sublingual buprenorphine (62%) and manage pain in patients on buprenorphine (45%). The majority agreed or strongly agreed that the app was (1) a useful tool for treating addiction (91%) and (2) a positive addition to their clinical practice (79%). Additionally, most agreed or strongly agreed that they were (1) satisfied with the app as a tool for caring for patients with addiction (86%) and (2) comfortable with their ability to use the app (86%).

Conclusions: Prescribers need accessible information and support to feel confident prescribing MAT. The BMC MAT app is an example of a free, online clinical support tool designed to address barriers to MAT prescribing. Our findings suggest that clinical decision tools such as the BMC MAT app can support evidence-based practice and prescribing of life-saving medications.

Non-Abstinence Among US Adults in Recovery: Findings from the 2022 National Survey on Drug Use and Health

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Background: Most US treatment and recovery services are abstinence-based. However, many people in recovery do not abstain from alcohol and other drug use completely.

Objective: To estimate the prevalence of non-abstinence among US adults in recovery and identify characteristics associated with non-abstinence.

Methods: Non-abstinence, defined as any past-month use of alcohol, illicit drugs, or nonmedical use of prescription drugs, was estimated among a sample of 3,763 US adults in self-perceived recovery from the 2022 National Survey of Drug Use and Health, weighted to be nationally representative. Multiple logistic regression was used to identify socio-demographic and substance use characteristics associated with non-abstinent recovery.

Results: Nearly two-thirds (65.2%, 95% CI=62.6-67.8) of adults who self-identified as in recovery reported past month alcohol or other drug use. Over half (50.8%) reported past-month alcohol use and one-third (33.2%) reported past-month cannabis use. Smaller proportions reported past-month use of cocaine or methamphetamine (3.8%), hallucinogens (2.9%), heroin (0.8%), and nonmedical use of prescription drugs (3.0% opioids, 1.7% stimulants, 1.9% benzodiazepines). Among adults in recovery, females had lower odds of non-abstinence than males (aOR=0.73, 95% CI=0.54-0.99), and lesbian/gay-identified individuals had greater odds of non-abstinence than heterosexual-identified individuals (aOR=2.39, 95% CI=1.13-5.07). Greater religiosity (aOR=0.90, 0.84-0.96) and past-year mutual aid attendance (aOR=0.16, 95% CI=0.06-0.27) were associated with lower odds of non-abstinence. Relative to those without a past-year DSM-5 substance use disorder (SUD), odds of non-abstinence were greater among those with one mild SUD (aOR=14.60, 9.05-23.55), one moderate or severe SUD (aOR=13.05, 7.06-24.14), and multiple SUDs (aOR=23.33, 10.59-51.37).

Conclusions: Most US adults who identified as in recovery were non-abstinent. Findings support calls to better integrate harm reduction, treatment, and recovery support services, and highlight subpopulations of recovering persons who might benefit from a harm reduction approach. Though adults in abstinent and non-abstinent recovery did not differ significantly on measures of well-being, non-abstinent recovery was associated with increased odds of past-year DSM-5 SUD. These findings underscore the importance of expanding the scope and reach of recovery support services (e.g., mutual aid) to engage those who may not wish to abstain from alcohol and other drug use completely.

From Clinic to Consult Service: Navigating a Case of Ketamine Withdrawal

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Background**:** Ketamine is a non-competitive NMDA receptor antagonist growing in popularity for its dissociative and antidepressant properties. Chronic ketamine use can lead to physical dependence and withdrawal, often manifesting as nervous system hyperexcitation, anxiety and agitation due to glutamatergic dysregulation. Unpredictable symptom severity and limited resources makes outpatient withdrawal management challenging. There are few case reports describing ketamine withdrawal and treatment, and no standardized withdrawal protocols. In this case study, we describe the presentation of a patient with ketamine withdrawal to an outpatient clinic, the decision to facilitate a direct inpatient medicine admission for management with the support of the hospital's Addiction Consult Team (ACT), and effective treatment of ketamine withdrawal.

Learning Objectives:

- Recognize signs and symptoms of chronic ketamine use and withdrawal.
- Apply knowledge about ketamine's mechanism of action as an NMDA receptor antagonist to devise and implement withdrawal treatment.
- Discuss collaborative management of ketamine withdrawal in outpatient and inpatient settings

Case Presentation**:** 42-year-old man with bipolar disorder, anxiety, stimulant use disorder and opioid use disorder in remission uses ketamine and nitrous oxide daily. He experiences ketamine-related dysuria and abdominal cramping, and attempts to stop use repeatedly on his own. He returns to use rapidly due to worsening anxiety, tremors, and restlessness. He sees his physician weekly, and reports most recent cessation attempt was more successful due to non-prescribed benzodiazepine use, however describes possible seizure with nitrous oxide use and ketamine cessation. He's admitted directly to the hospital for withdrawal management with ACT's support. The effect of ketamine on glutamate receptors is considered, and a treatment plan is developed using a phenobarbital taper to reduce glutamatergic excitation and enhance GABAergic inhibition for seizure protection, and clonidine for noradrenergic inhibition to decrease restlessness. Acute withdrawal is effectively managed with this regimen and ketamine-associated symptoms improve by discharge.

Discussion**:** As ketamine use for non-anesthetic purposes increases and access to self-administered ketamine for depression expands, clinicians should prepare to encounter dependence and withdrawal requiring more intensive management beyond outpatient settings. This case highlights the novel use of phenobarbital and alpha-adrenergic agonists to manage ketamine withdrawal, as well as the benefits of close collaboration between outpatient and inpatient practice.

Stigma

Silent Struggles: Unveiling Stigma in Healthcare with Perinatal Opioid Use Disorder

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Background: Perinatal OUD contributes to the Maternal Health Crisis in the United States, with overdoses accounting for up to 16% of all pregnancy-related deaths.[1] Treatment with medications for opioid use disorder (MOUD) is associated with improved neonatal and maternal outcomes including decreases in preterm birth and maternal risk of post-partum overdose.[2] However, pregnant patients on MOUD experience significant stigma, which can lead to decreased utilization of healthcare and poor outcomes.[3]

Objective: This study uses the Health Stigma and Discrimination Framework to further understand stigmatization in healthcare-related interactions for pregnant patients on MOUD and the impact of stigma on patients and their health outcomes through the use of qualitative methods.

Methods: In-depth semi-structured interviews were conducted with 10 patients receiving collocated perinatal care and MOUD treatment at an outpatient clinic with providers trained in Obstetrics and Gynecology, Family Medicine, and Addiction Medicine. Patients were recruited by convenience sampling and ranged in age from 24 to 40 years. Black women made up 40% of the participants and white women made up 60%. Transcripts were coded with a grounded theory

framework. An abductive approach was used to interpret the data through the lens of the Health and Stigma Discrimination Framework.

Results: Prejudice, lack of knowledge, conceptions of motherhood, and automatic state involvement at the time of delivery were identified as key drivers and facilitators of stigma. Subpar care, inadequate pain control, fear of losing custody, and internalized stigma were identified as key stigma experiences. These experiences impacted where patients were willing to seek care, the acceptability of optimal MOUD dosing, and the likelihood of using MOUD in future pregnancies. Additionally, patients identified positive interactions where providers created safe and affirming environments, which led to improved self-conceptions related to motherhood and increased acceptance of MOUD and optimal dosing.

Conclusions: This research demonstrates clear areas for intervention to decrease the drivers, facilitators, and manifestations of stigma. Potential interventions include increased education of perinatal healthcare professions about MOUD; changing punitive state laws and hospital policies that mandate state involvement for all patients on MOUD during pregnancy; and involving Addiction Medicine or Pain Management teams to assist with peripartum pain control.

Public Perceptions of Opioid Misuse Recovery and Related Resources in a Nationally Representative Sample of U.S. Adults

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Background: Despite nationwide attention to the opioid crisis, little is known about the general U.S. public's opinions about recovery from opioid misuse or how to achieve it.

Objective: To understand how the U.S. public defines recovery from opioid misuse and the resources they view as most helpful to the recovery process, and to compare differences by opioid misuse history and demographic characteristics.

Methods: In a nationally representative survey administered to the AmeriSpeak® Panel in October/November 2021, 6,351 respondents ranked 10 potential definitions of recovery, and nine resources that might contribute to recovery. We used multivariate ordinal logistic regressions to explore differences in these rankings by respondents' opioid misuse experience (personal opioid misuse history, family/friend opioid misuse history, no opioid misuse history) and demographic characteristics (race, sex at birth, age).

Results: Among the definitions of recovery listed, "seeking professional help" was the most endorsed definition (M=6.97). Compared to those with no opioid misuse history, those with personal opioid misuse history ranked enhanced quality of life ($M_{personal}$=5.99, M_{none}=5.74; P=.049) and having a sense of purpose ($M_{personal}$=6.64, M_{none}=6.41; P=.029) significantly higher and ranked abstaining from any substance use ($M_{personal}$=6.21, M_{none}=6.68; P=.009) and no use of any drug ($M_{personal}$=5.07, M_{none}=5.52; $P_{personal}$<.001) significantly lower as recovery definitions. Compared to White respondents, Black and Hispanic respondents ranked religious in nature (M_{Black}=4.98,

$M_{Hispanic}$=4.71, M_{White}=3.74; P_{Black}<.001, $P_{Hispanic}$<.001) significantly higher as a recovery definition. Among the resources listed, “rehab” received the highest average ranking (M=7.16) as being “helpful to recovery.” “Prescribed medication” received the third lowest average ranking of 4.05. Those with family/friend opioid misuse history ranked prescribed medication significantly lower than other respondents ($M_{family/friend}$=3.89, M_{none}=4.09, $M_{personal}$=4.31; P=.003), as did female respondents (M_{female}=3.95, M_{male}=4.20; P<.001).

Conclusions: Many factors influence one's views on recovery, including opioid misuse experience, race, sex at birth, and age. Most notably, individuals with personal opioid misuse histories hold views of recovery that are less abstinence-focused and emphasize other aspects of well-being compared to others. Disparate perceptions underscore the need to better communicate the multifaceted nature of recovery, the multiple pathways to achieve recovery, and the available evidence base for effective services (e.g., medications for opioid use disorder).

Effectiveness of the NO Stigma Simulation Suite in Reducing Stigma and Improving Attitudes and Empathy in Opioid Use Disorder Care: A Pilot Study

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Background: Nurses play a crucial role in helping individuals with OUD overcome barriers to treatment. However, negative attitudes among healthcare professionals, especially nurses, can hinder effective care. Interventions that equip nurses with the knowledge, skills and attitudes needed to promote positive and effective care are essential. The NO-STIGMA simulation suite was developed to promote optimal care and reduce stigma experienced by individuals with OUD and their families when seeking healthcare. The six high-fidelity simulations address *Delay in Care, Pain Management, Family Centered Care, Harm Reduction, Telehealth Medication Assisted Therapy,* and *Care of the Older Adult with OUD*.

Objective: To test the effectiveness of the NO-STIGMA simulation suite in reducing stigma and increasing empathy and caring attitudes towards individuals with OUD and their families.

Methods: A mixed-method design assessed the effectiveness of the simulations to address stigma, caring attitudes, and empathy among 60 nursing students from various academic levels. Implicit stigma, explicit stigma, empathy, and caring attitudes were measured pre- and post-simulation using the Drug User Stigmatization Scale (DUSS), Drug and Drug Problems Perceptions Questionnaire (DDPPQ) and the Jefferson Scale of Empathy-Health Professional Students (JSE-HCP). Simulation learning effectiveness was measured using the Simulation Effectiveness Tool-Modified (SET-M) post- simulation. Thematic content analysis was conducted to evaluate qualitative data from debriefing transcripts.

Results: Significant improvements were noted in implicit stigma ($p = 0.001$), explicit stigma ($p = 0.001$), and caring attitudes towards patients with OUD ($p = 0.001$). No significant differences were noted in empathy ($p = 0.795$). Average simulation effectiveness scores ($M = 50.58$) indicated the simulations met the needs of the student population. Thematic content analysis of

debriefing transcripts identified five themes: *Out of my comfort zone, Limited OUD knowledge, Treating the person not the disorder, Need more education,* and *Recognition of stigma*.

Conclusions: The NO STIGMA simulation suite is an effective intervention for decreasing stigma and increasing caring attitudes in nurses when caring for individuals with OUD and their families. While increases in empathy were not statistically significant, further testing of the NO STIGMA simulation suite with other healthcare professionals is warranted.

The Impact of Anti-Stigma Education in the Healthcare Field: A Program Design

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Background: In 2021, only 1.1% of 43 million people who qualified for a substance use disorder (SUD) sought treatment in the past year (SAMHSA, 2021). There is an urgent need to reduce the stigma surrounding SUD and addiction treatment in education and research.

Objective: MI CARES, the Michigan Collaborative for Addiction Resources and Education Systems, aims to combat stigma by providing comprehensive training to physicians, medical residents, and students. The MI CARES curriculum provides a full anti-stigma education in addiction.

Methods: We formed an advisory committee comprising college leadership, medical students, and staff to pilot a 4-week (75.5 hours) addiction medicine elective for Year 1 medical students. Our initial pilot launched in 2021, and the data presented is from the latest iteration. Using a modified Substance Abuse Attitudes Survey, we assessed pre- and post-course attitudes via student surveys. Analyzing Likert scale responses, we examined sustained changes in attitudes toward SUD and treatment. We outline our anti-stigma education implementation and discuss initial findings from our substance use attitudes survey. Furthermore, we will detail our inter-professional education efforts with nursing students, offering opportunities for addiction education and research.

Results: The current elective has been delivered to 133 MSU Year 1-2 students. Student feedback shows they prefer MI CARES modules over other nationally recognized curricula (e.g., PCSS). Furthermore, student attitudes show sustained attitude changes for one-year post-course. Significant positive attitude changes included responses to the following survey questions: “Substance Use Disorder is a treatable disease ($p<0.083$), “A person with substance use disorder are unpleasant to work with as patients” ($p < 0.0024$), and “Once a patient is abstinent and off all medication for their substance use disorder, not further contact with a physician is necessary.” ($p<0.0306$).

Conclusions: The importance of implementation in earlier years of education can be shown through a difference in attitudes based on the year of training in which they receive anti-stigma education. The more stigma healthcare providers bring to the table, the greater the decrease in care a person with a substance use disorder receives.

Stimulants 1

Combined Contingency Management for Stimulant Use Disorder and ART Adherence: An Implementation-Effectiveness Pilot in HIV Primary Care

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Background: Contingency management (CM) is first-line treatment for stimulant use disorder (StUD) but remains underutilized. HIV care offers a critical venue for CM, given the relatively high prevalence of StUD and relationship between stimulant use and anti-retroviral treatment (ART) non-adherence. We conducted an implementation-effectiveness pilot in two safety-net HIV primary care clinics, providing 12 weeks of once-weekly CM with incentives for stimulant non-reactive and tenofovir-reactive urine testing.

Objective: Assess implementation of once-weekly CM in safety-net HIV primary care using the RE-AIM framework, focusing on reach and effectiveness.

Methods: Demographics and substance use characteristics were collected at baseline. During each study visit, we collected point-of-care results and weekly frequency of stimulant use as self-reported on 7-day Timeline Followback (TLFB). We compared TLFB results at baseline to participants' last study week using a paired t-test.

Results: REACH: In four months, 37 participants with StUD enrolled. Thirty-one (84%) had HIV; 25 were on tenofovir-based regimens; 14 had detectable viral loads in the past year. Participants were Black (43%), white (41%), and Latinx (30%); 3 (8%) primarily spoke Spanish. Participants included 41% cis-men, 32% cis-women, and 27% gender minorities. 57% were unhoused. Participants used methamphetamine (73%) and cocaine (37%).

Twenty-eight (76%) were retained after enrollment, 20 (72%) of whom earned incentives for tenofovir adherence in addition to stimulant reduction. 131 visits occurred. Participants attended an average of 5/12 visits.

EFFECTIVENESS: Participants provided urine tests in 98% of visits. 57% of tests were non-reactive for stimulants and 98% were positive for tenofovir. 17 patients provided a non-reactive stimulant test (61%). The average frequency of stimulant use reported in the last study week was 2 days/week (standard deviation 2.6), less than the 3 days/week (standard deviation 2.8) reported at baseline ($p = 0.02$).

Conclusions: Implementing CM in HIV primary care to address StUD and ART adherence engaged a diverse population with high rates of homelessness and viremia. Although inconsistent for some, engagement was high, with urine testing conducted at nearly all visits. Participants in once weekly CM reported reduced stimulant use with urine testing suggestive of high ART adherence, overall emphasizing benefit of tailoring CM to specific populations.

Implementation of Post-Overdose Outreach Program Strategies and Toolkit Modules for Overdose Survivors Who Use Cocaine and Methamphetamine

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Background**:** Post-overdose outreach programs have not been specifically designed to engage people who use cocaine or methamphetamine with a specific focus on Black, Latino, Native or youth overdose survivors. The PRONTO Stimulant study collaborated with post-overdose outreach program staff to develop a toolkit of strategies and training modules to improve engagement and overdose reduction among these populations.

Objective: To describe the implementation of toolkit strategies and training modules among post-overdose outreach programs.

Methods: In 2022, we convened 11 meetings with staff from 9 post-overdose outreach agencies funded by the Massachusetts Department of Public Health to develop a toolkit of strategies to promote broader engagement with under-served populations. The 21-module toolkit was launched in March 2023 and included infographics, trainings, community planning exercises, and educational videos. At baseline and 9-months post-implementation, we surveyed programs to evaluate the toolkit. We categorized toolkit module implementation as: (1) not at baseline or 9 months; (2) at baseline, not at 9 months (3) at baseline and 9 months; or (4) not at baseline, new at 9 months.

Results**:** Eleven agencies operated 12 municipal programs for which survey data were available. At baseline and 9 months, all programs offered fentanyl test strips and naloxone kits, and almost all (11/12) offered safer smoking kits to survivors, naloxone kits to family members, and maintained confidentiality by meeting with survivors and family members in separate spaces during outreach. At 9 months, the most commonly adopted toolkit items were Vein/Wound Care Training (7/12), Stimulant 101 Training (6/12), Grief Support Referral or Linkage (5/12), and Online Referral to Outreach for people who use stimulants (5/12). One third of programs adopted Culturally Responsive Trainings for working with Black, Latino, and Native survivors and Identifying and Engaging youth (4/12).

Conclusions**:** Public health-funded Massachusetts post-overdose outreach programs implemented multiple new toolkit items developed to improve outreach for overdose survivors who use cocaine or methamphetamine or for Black, Latino, Native, and youth overdose survivors. A process evaluation via qualitative interviews is underway to understand implementation facilitators and barriers of toolkit implementation.

Harm Reduction in a Cocaine Research Study: A Case Report

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Background: The distribution of harm reduction supplies, including fentanyl strips and naloxone, is a key element of harm reduction. However, it is not universally included in research protocols despite significant prevalence of fentanyl contamination in cocaine supplies. This case describes a patient actively enrolled in a cocaine use disorder treatment study who was hospitalized due to fentanyl overdose.

Learning Objectives:

1. Explore fentanyl in the cocaine supply and documented clusters of overdoses linked to fentanyl contamination.
2. Identify best practices for the distribution of fentanyl test strips and naloxone in non-opioid research studies.

Case Presentation: The participant presented to the clinic three days post-accidental fentanyl overdose. He has a history of cocaine use, meeting criteria for current severe Cocaine Use Disorder according to the DSM-5. He did not knowingly use opioids. He reported smoking crack-cocaine on the night of the overdose, then waking in the hospital, where he was informed that he had experienced an opioid overdose. The participant's partner had administered one dose of 4.0 mg intranasal naloxone. Upon arrival of first responders, the participant was given an additional 4.0 mg intranasal naloxone due to suspected accidental opioid overdose. Once at the hospital, an additional 2.80 mg naloxone was administered intravenously, after which overdose reversal was achieved. In clinical assessments conducted at the hospital, it was determined the participant's crack-cocaine was contaminated with fentanyl. When a urine drug screen was conducted at the clinic three days later, he tested positive for fentanyl.

Discussion: People who unknowingly use stimulants mixed with or replaced by fentanyl are at increased risk from overdose. Prevalence of fentanyl in cocaine samples ranges from less than 1% to 15%, with significant regional variation. In the clinical trial referenced above, two other participants report similar incidents of accidental opioid overdose after using contaminated cocaine. Given this risk, we have utilized the distribution of fentanyl testing strips to mediate risk of fentanyl overdose due to contamination within the cocaine supply. Each participant is provided with education regarding fentanyl test strips, as well as offered intranasal naloxone and the Never Use Alone harm reduction hotline number.

"You Want to Know the Person That's Lying There": Patient Experiences of Hospital-Based Care after a Stimulant-Related Overdose

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Background: The proportion of overdose deaths involving stimulants like cocaine and crystal methamphetamine is increasing. Understanding the health care engagement of people who

experience stimulant-involved overdoses is the critical next step to the development of health system interventions to prevent overdose, yet little is specifically known about their interactions with hospital-based care after an overdose.

Objective: To inform how hospital-based services can optimally respond and prevent overdoses, we examined the perspectives of people with lived experience of a stimulant-involved overdose.

Methods: Between March and December 2023, we recruited adults who survived a stimulant-involved overdose between 1/1/2016 and 12/31/2020, identified from a large Northeastern hospital's electronic health record system. We sent 270 opt-out letters, and followed up with 494 outreach phone calls. Semi-structured qualitative interviews explored patient history of stimulant use and their acute care (hospital or emergency department) experiences after a stimulant-involved overdose. Data was analyzed using a hybrid, rapid-thematic analysis approach.

Results: Of 22 screened, 10 were eligible and six interviews were completed and transcribed. Overdose experiences fell into two categories: opioid-involved, depressive overdoses and "overamps," characterized by patients' reports of anxiety, paranoia, and hallucinations after stimulant use. Preliminary analyses identified the following themes in patients' acute care experiences of either a depressive or stimulant-forward overdose: overwhelming and impersonal experiences of care; new identification of serious health issues; and evidence-based, harm reduction interventions, such as naloxone prescription, were absent in patient reports.

Conclusions: Mail and telephone outreach to people who have experienced stimulant-involved overdose identified by hospital records is challenging. People who have survived a stimulant-involved overdose either experienced a depressive overdose or an "overamp." Regardless of the overdose type, they received few overdose prevention interventions during their hospital encounters. Further stakeholder-engaged, community-based work is warranted to better characterize the health care needs and preferences of individuals following a stimulant-involved overdose.

Supporting Hospitalized Adults with Stimulant Use Disorder Using a Mobile App Contingency Management Program

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Background**:** Hospitalizations and deaths related to stimulant use disorder (StUD) are rising rapidly. Contingency management (CM) uses positive rewards to incentivize behaviors and is the most effective treatment for StUD. CM has the potential to support hospitalized patients with StUD.

Objective**:** Evaluate feasibility and acceptability of a novel hospital-based mobile app CM program for patients with StUD.

Methods**:** We implemented a mobile app-based CM program by adapting an existing program to the hospital. We recruited hospitalized patients with moderate to severe StUD and either an expected hospital length of stay >2 weeks or a diagnosis of heart failure. Patients received gift cards for participating in CM-incentivized activities, including counseling, drug testing, and recovery-oriented reflections through the mobile app. Patients could participate for 2 months (including after hospital discharge), earning up to $330. A nurse supported implementation—troubleshooting technological issues and educating patients/staff. We collected program engagement data (app usage, rewards earned) and conducted qualitative interviews on patients' CM experience.

Results**:** From August 2022- February 2024, 82 patients met inclusion criteria. 37 consented and completed intake. 28 (76%) had severe StUD and 26 (68%) had a co-occurring opioid use disorder. Average hospital length of stay was 36.6 days, with 26 (70%) admitted for serious infection and 6 (16%) for heart failure. Engagement varied—the top quartile engaged 8.2 average weeks with $142.96 average earnings, and the bottom quartile engaged 2.9 average weeks with $5.92 average earnings. Highly engaged participants felt the "positivity" of CM helped them stay "focused" and "motivated," and liked the convenience of a mobile app. Participants appreciated starting CM in the hospital and felt it helped them focus on "self-care" and learn recovery tools instead of being "bored" or stressed in the hospital. Feeling "consumed by thoughts" about serious medical problems and dealing with pain limited engagement while hospitalized. 22 (59%) patients continued engaging after hospital discharge. Post-discharge barriers included competing priorities (e.g. lack of housing, medical appointments) and technological challenges.

Conclusions**:** A novel hospital-based mobile app CM program helped patients with StUD cope with hospitalization and supported recovery goals, although program engagement varied widely.

Stimulants 2

Patient Characteristics Associated with Receipt of Contingency Management for Stimulant Use Disorder in the Veterans Health Administration

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Background: Stimulant use disorder (StUD) and stimulant-related harms have increased substantially. Contingency management (CM) is the most effective treatment for StUD but is underused. The Veterans Health Administration (VHA) undertook one of the largest CM implementation efforts to date, but CM receipt among VHA patients with StUD is still low. To inform ongoing efforts, it is important to understand which patient characteristics are associated with CM receipt. To our knowledge, no studies have examined this in a real-world clinical setting.

Objective: Among VHA patients with StUD, we compared characteristics between those who did and did not receive CM.

Methods: We extracted electronic health record data for patients with StUD with ≥1 visit from 10/1/20-9/30/22 in 81 VHA facilities that had implemented CM. CM receipt was defined as having ≥1 CM session with a linked StUD diagnosis in the year following each patient's first visit during the study period. Multivariable logistic regression estimated associations between demographic and clinical characteristics and CM receipt, adjusted for all other characteristics.

Results: Among 92,214 patients, only 1,075 (1%) received CM. Several characteristics were associated with CM receipt: older age (45-64 vs. 18-29; adjusted odds ratio [aOR] 1,96, 95% confidence interval [CI] 1.16-3.29), Black race (vs. White; aOR 1.41, 95% CI 1.22-1.62), unstable housing (aOR 1.81, 95% CI 1.59-2.05), higher service-connected disability (50-100% vs. none; aOR 1.35, 95% CI 1.15-1.58), opioid use disorder (aOR 1.31, 95% CI 1.13-1.52), alcohol use disorder (aOR 1.30, 95% CI 1.13-1.49), and other drug use disorder (aOR 1.47, 95% CI 1.27-1.70). Post-traumatic stress disorder (PTSD; aOR 0.86, 95% CI 0.75-0.99) and ≥3 Elixhauser comorbidities (vs. <3; aOR 0.74, 95% CI 0.63-0.86) were negatively associated with CM receipt.

Conclusions: Findings suggest that CM implementation in the VHA has generally been more likely to reach complex patients, though potential barriers related to PTSD and multiple comorbidities need further study. However, CM receipt remains very low overall. Efforts are needed to substantially expand CM provision to more patients with StUD. More research is needed to understand why certain groups of patients are more or less likely to be engaged in CM care.

Rebuilding Hope: A Contingency Framework for Stimulant Use Among Unhoused

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Background: Contingency Management (CM) is an evidence-based behavioral intervention strategy typically used with fixed cohorts over set periods for stimulant use disorders, which have limited medication options and high relapse rates. By providing tangible rewards for abstinence, CM helps develop healthy habits and strengthen motivation to remain drug-free.

Objective: This pilot aimed to tailor a small CM program to unhoused individuals with methamphetamine use served by a healthcare clinic in Santa Clara County, California. Unlike typical fixed cohort/period CM programs, our objective was to modify implementation to suit clients' unique challenges.

Methods: Five participants enrolled for 12 weekly drop-in rapid urine screening visits. They received gift cards ($10, $20, $100) or affirmations drawn from a fishbowl for negative screens, with reward opportunities increasing weekly up to 6 draws to encourage continued engagement without obligating longer visits.

Results: One participant remained abstinent throughout. Another maintained intermittent abstinence while continuing engagement. One achieved 5 weeks' abstinence before dropping out.

Two dropped out in the first week of the program. No group therapy was provided to minimize visit length and to encourage patients to return.

Conclusions: Implementing CM with a highly vulnerable population requires modifying existing treatment models. Innovations are needed, like rolling enrollment to fit unstable living situations. Rewarding attendance can reduce barriers, regardless of urine drug screen results. Increasing accessibility and identifying funding sources is also crucial. Participants cited psychosocial stressors and shame over relapses as primary reasons for dropping out. This highlights the need for destigmatizing, low-threshold support approaches.

Understanding Resiliency in People Who Use Methamphetamine Demographically Matched to Acute Stimulant Toxicity Decedents

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Background: Deaths from acute methamphetamine toxicity are dramatically increasing in the U.S. Resilience, the ability to successfully manage or adapt to adversity or trauma, may play a key role in future interventions aimed at reducing the risk of stimulant-involved deaths.

Objective: We sought to investigate resilience among a sample of people who use methamphetamine who were demographically similar to decedents of acute stimulant toxicity in San Francisco.

Methods: We conducted mixed-methods interviews to assess resilience factors among a convenience sample of adults living in San Francisco who had used methamphetamine for ≥5 years and >10 of the past 30 days and did not intentionally use opioids. Interviews were thematically coded and analyzed by two study team members. We created a novel measure to approximate methamphetamine exposure as "gram/year" history (average daily use multiplied by years of use). Resilience was measured using the validated Brief Resilience Scale; scores were categorized as low, normal, and high resilience. We also explored the three most prevalent qualitative themes that co-occurred with the theme of resilience

Results: Of 19 interviewees, median age was 50 years (IQR: 42-59) and most were cisgender men (79%); 37% were White, 26% Black/African American, and 27% Multiracial. Median methamphetamine exposure was 19 gram-years [IQR 9–47]. Resilience was low in 42%, normal in 47%, and high in 11% of participants. The most frequent co-occurring themes with resilience related to self-care, utilization of harm reduction for substance use, and supportive social relationships

Conclusions: Preliminary qualitative analyses revealed that among people who use methamphetamine, resilience was related to substance use harm reduction and positive social relationships. Future interventions to prevent acute stimulant toxicity may consider creating or strengthening supportive social networks and incorporating harm reduction strategies. Resilience scores were low in this cohort. Future analyses will compare resilience scores in this cohort

against those of a sample of decedents of acute stimulant toxicity to explore the role of resilience in stimulant-involved deaths. We will also compare resilience scores and gram-year data with people who primarily use cocaine, to better understand resilience and cumulative stimulant exposure across different stimulants

Harm Reduction Based Contingency Management for Stimulant Use Disorder

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Background: Stimulant use disorder (SUD) is a significant cause of morbidity and mortality in San Francisco (SF), including unintentional opioid overdose. Though there are no FDA-approved medications for SUD, contingency management (CM), an operant conditioning method, is an effective behavioral treatment. SUD CM programs incentivize abstinence by linking immediate rewards with non-reactive urine toxicology. In SF, the Tenderloin (TL) and South of Market (SoMA) neighborhoods have a high concentration of SUD and overdose, as well as a high prevalence of poverty, housing instability, and mental illness. These neighborhoods have limited CM treatment options, and existing programs are strictly abstinence-based, which excludes patients who desire to reduce use. We developed a CM program that incentivizes decreased stimulant use for patients with SUD in the TL and SoMA.

Objective: To demonstrate that harm reduction-based CM is a desired and effective treatment modality for SUD and that we are able to engage a population that is most vulnerable to stimulant-related harms.

Methods: In October 2023, we implemented a twice weekly 12-week CM program for SUD that supported engagement and abstinence independently through gift card incentives. Sessions involved a peer-led group and individual counseling with a clinician. We recruited participants from two public primary care clinics located in the TL and SoMA. The program is evaluated through demographic variables collected from patient charts as well as qualitative surveys of participants who completed the 12-week program.

Results: After 6 months, 12 participants had graduated, 12 were actively enrolled, 17 had been disenrolled, and 59 were on the waitlist. Of graduates, 58% were Black, 25% were Latinx, and 17% were White. 92% of graduates had a stimulant-related medical or psychiatric comorbidity and 58% reported a prior accidental opioid overdose. Program graduates attended an average of 17 of 24 possible visits (range: 8-24). Three graduates provided non-reactive urine drug screens during the program. 100% of graduates reported decreased stimulant use at the end of the program. All graduates reported satisfaction with the program model.

Conclusions: CM programs for SUD can promote harm reduction by incentivizing engagement and abstinence independently. Such programs are desired by patients and are effective in reducing use.

Tracking Methamphetamine-Involved Deaths in the US: What Are We Missing?

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Background: The landscape of drug-related deaths is shifting, with methamphetamines accounting for an increasing proportion of fatalities. The age distribution of overdose rates is also changing, with increases in age groups 35 and older. However, published accounts fail to include methamphetamine-involved deaths from causes other than overdose, such as cardiovascular disease (CVD). This omission underestimates the true toll of methamphetamines, underscoring the urgent need for a comprehensive response to a worsening public health problem.

Objective: To describe mortality incidence and trends for all causes of death where methamphetamines were a contributing factor from 2018-2022.

Methods: Using 2018-2022 CDC-NVSS data, I identified all deaths where methamphetamines were listed as a contributing cause. I categorized deaths as overdose, CVD, or Other (e.g., lung diseases, malignancy, septicemia), grouped into 10-year age intervals. Decedents younger <15 years or ³75 years were omitted from the age-related analysis as the numbers were very low. Overdose deaths were also categorized based on fentanyl-methamphetamine co-involvement.

Results**:** From 2018 to 2022, all-cause methamphetamine-involved deaths increased by 147% (17,321 to 42,756). Overdose deaths increased by 170% (12,676 to 34,265), CVD deaths by 72% (1,585 to 2,722), and Other deaths by 89% (3,060 to 5,769). Percentage increases in all-cause, overdose, CVD, and Other deaths rose monotonically with age. The 15-24 age group saw increases of 66% for all-cause, 80% for overdose, 6% for Other, but a decrease of 42% in CVD deaths. The 65-74 age group experienced the largest increases: 247% for all-cause, 279% for overdose, 183% for CVD, and 220% for Other.

Overdose deaths with fentanyl-methamphetamine co-involvement surged by 499% (3,613 to 21,647 cases), with the increase being most pronounced in the 65-74 age group (1,152% rise) compared to the 15-24 age group (227% increase).

Conclusions**:** Methamphetamine-involved mortality has been underestimated by more than 20% because only overdoses have been counted. Future methamphetamine research should investigate the interactions and competition among diverse causes of death over time. As there are no FDA-approved medications for methamphetamine use disorder, prevention and treatment initiatives should prioritize culturally sensitive health services, evidence-based training for healthcare providers, and collaboration with patients and the community.

Telehealth

Harm Reduction in Peer-Assisted Telemedicine for Hepatitis C: Secondary Outcomes of a Randomized Controlled Trial

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Background: Both hepatitis C (HCV) treatment and harm reduction strategies for people who use drugs (PWUD) are needed to end the HCV epidemic. While HCV treatment for PWUD improves harm reduction practices, this effect is unclear among rural PWUD who face heightened barriers to access harm reduction services.

Objective: To assess changes in harm reduction behaviors after HCV treatment, we examine secondary outcomes of a randomized trial comparing peer-facilitated telemedicine for HCV treatment (TeleHepC) to peer-facilitated usual care in rural PWUD. We hypothesize that TeleHepC increases harm reduction behaviors and that peers facilitate this change.

Methods: Univariate statistics and mixed-effects logistic regression describe the sample. To minimize inflation bias, we first compared a model including main effects plus interactions between exposure and time to a model with main effects only, using a type-III likelihood ratio (LR) test, and only made further comparisons between groups at each timepoint if the LR test was significant. Outcomes include self-reported frequency of injection drug use (IDU) and self-reported frequency of injection equipment sharing (IES), surveyed 12 and 36 weeks after HCV treatment completion. Exposures include randomized group, frequency of contact with a peer, HCV treatment initiation status, and HCV cure status.

Results: IDU declined over time and, relative to peer-assisted usual care, participants in the TeleHepC arm reported less IDU at follow up (30% vs. 71%, OR = 0.42, p = 0.02). Greater numbers of peer interactions were associated with decreased IDU (90% percentile of peer interactions = 32% IDU vs. median = 64% IDU vs. 10^{th} percentile = 69% IDU, p = 0.04). IES decreased over time, with greater frequency of peer interactions associated with decreased IES (90% percentile of peer interactions = 0% IES vs. median = 5.6% IES vs. 10^{th} percentile = 24% IES, p = 0.047).

Conclusions: Peer-assisted telemedicine for HCV treatment decreased injection drug use and injection equipment sharing. Peers contribute to this effect, supporting the role of peers in facilitating HCV treatment paired with harm reduction.

Preliminary Findings on a Novel Buprenorphine Home Delivery Program and Retention in Telemedicine Treatment for Opioid Use Disorder in Texas

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Background: Individuals receiving treatment for opioid use disorder (OUD) face barriers to obtaining buprenorphine ranging from logistical challenges like transportation to lack of availability in pharmacies driven by perceived and actual limits on wholesale orders. Home delivery interventions have been shown to improve medication adherence for other chronic diseases. Although home delivery of buprenorphine could improve access to and continued engagement in OUD treatment, the impact of buprenorphine home delivery on OUD treatment outcomes has not been assessed.

Objective: To assess the relationship between patient enrollment in a novel buprenorphine home delivery program and 3-month and 6-month retention in telemedicine treatment for OUD.

Methods: Using electronic health records, we identified a retrospective cohort of adults in Texas who initiated telemedicine OUD treatment between May 1, 2023, and December 31, 2023, and received at least one prescription. Treatment exposure was defined as having a prescription sent to a home delivery pharmacy partner within 45 days of enrollment. We described the characteristics of patients using home delivery and estimated the odds of attending a telemedicine visit 3 and 6 months after enrollment as a function of home delivery use.

Results: The sample included 337 individuals with the following characteristics: mean age 40.8 years (SD 10.1), 51.0% male, and 80.9% commercially insured. Only 7.4% (n=25) of patients opted into home delivery of buprenorphine. At 3 months, 80.0% of individuals receiving home delivery were retained in care vs. 59.0% of individuals not receiving home delivery (odds ratio: 2.78, 95% confidence interval [CI]: 1.02 - 7.61). At 6 months, retention among individuals receiving and not receiving home delivery was 78.6% vs. 45.5%, respectively (OR: 4.39, 95% CI: 1.19 - 16.2, n=203).

Conclusions: These findings provide preliminary support for the use of buprenorphine home delivery as a strategy to improve retention in OUD treatment. This analysis was limited by sample size and low overall uptake of delivery services. Future analyses are needed to assess potential confounding and confirm the impact of home delivery on patient outcomes in telemedicine treatment for OUD.

Telemedicine Hotline to Improve Access to Medications for Opioid Use Disorder — Illinois and MAR NOW

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Background: In 2021, there were 3,013 fatalities due to opioid overdose in Illinois, a 2.3% increase from 2020 and a 35.8% increase from 2019. During the COVID-19 pandemic, the DEA enacted flexibility for prescribing buprenorphine through telehealth. The Substance Use Prevention and Recovery Division of the Illinois Department of Human Services and the Chicago Department of Public Health partnered to initiate an OUD treatment hotline called Medication Assisted Recovery Now (MAR NOW).

Objective: To characterize buprenorphine and methadone initiation and program efficacy in Illinois.

Methods: Treatment for OUD selection, initiation, and follow-up data were collected. All adult patients (18 years and older) were transferred to MAR NOW regardless of ability to pay, insurance status, location within the state, or citizenship status. We performed a descriptive analysis looking at medication prescribed or dispensed, treatment initiation, community follow-up, and location of initiation.

Results: During May 9, 2022–March 3, 2024, the hotline received 1,698 calls from Illinois residents. In total, 1288 (76%) persons requested buprenorphine and 1263 (98%) of those patients were connected to medication (verified initiation); 1190 (94%) initiated therapy at home and 73 (6%) in clinic. Of those that initiated therapy at home, 1170 (98%) of patients were connected to a community provider for ongoing care (verified attendance at first appointment). In total, 312 patients sought methadone (19%), 252 (81%) patients attended their first appointment at an OTP. Fifty-seven out of 59 (97%) patients who requested withdrawal management and medical stabilization showed to their appointment and 36 of 39 (92%) patients who requested residential treatment presented to the treatment facility. Two patients reported adverse events, no patients were terminated from care due to misuse or diversion. Almost all Illinois counties are represented in the patient sample.

Conclusions: We observed high initiation of services including MOUD, as well as connection to the community for continued services. MAR NOW contributes to the growing evidence that low-barrier access to treatment and medications by telemedicine with intensive case management is an effective program model, particularly when the goal is state saturation as almost all counties in Illinois are represented in this model of care.

Development and Implementation of a 24/7 State-Wide Telehealth Hotline for Initiation of Buprenorphine for People with OUD in Washington State

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Background: Buprenorphine is an evidence-based treatment for opioid use disorder (OUD), yet barriers persist in accessing this medication. In response, we developed a 24/7 telehealth hotline with a goal to initiate buprenorphine for people in Washington with OUD and provide active linkage to ongoing care.

Objective: We aim to describe our tele-bup hotline, prescribing philosophy and results for the first 3 months of service.

Methods: We were awarded a program grant by Seattle King County Public Health in 2023 to develop and implement telehealth to prescribe buprenorphine for people with OUD within Washington. A 24/7 hotline was created which offered audio/video and audio-only consultations, staffed by Emergency physicians (e.g. prescribers). Prescribers received training emphasizing patient-centeredness, and trauma-informed care. Prior to starting prescribers obtain verbal consent for the tele-health encounter and proceed with the visit. All prescribers were trained to provide a high-dose start of buprenorphine 32mg-24 mg on day 1 with a plan for 24 mg daily. Standard discharge instructions were provided, and patients were encouraged to call for further needs. Within 72 hours, a Linkage to Care Coordinator (LTCC) contacted patients to ensure medication pickup, offer support, and facilitate connections with local treatment providers.

Results: During the first three months, 105 patients utilized the telehealth program. Among the initial 93 patients prescribed buprenorphine, 45% were White and 66% were male, with 20%

recently released from incarceration. Almost all patients (99%) had a diagnosis of OUD and 87 (94%) received a prescription for buprenorphine. Over half (60%) of patients answered a follow up call by the LTCCs. On follow-up contact, 79 (91%) patients had picked up the buprenorphine, 10 (12%) were already established in care and 58 (67%) were scheduled or referred to a walk-in clinic. Most of these patients (78%) expressed a preference for in-person follow up care as opposed to follow up care by telehealth.

Conclusions: Telehealth can be used to initiate buprenorphine for patients with OUD. The overwhelming majority of callers picked up the initial prescription with 51% getting linked to follow-up care. Scaling efforts could target areas with health disparities, utilizing telehealth alongside LTCC support to enhance OUD care accessibility.

Scaling a Virtual Buprenorphine Bridge Clinic: Outcomes and Lessons Learned

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Background: CareConnect, a telehealth buprenorphine bridge clinic, provides rapid access to buprenorphine and navigation support to people who use drugs. Our team established CareConnect in November 2021 in partnership with an existing virtual urgent care in our health system and the Philadelphia Department of Public Health to provide same day buprenorphine treatment. The program has expanded incorporating additional Substance Use Navigators and Certified Recovery Specialists to triage and intake patients, provide pharmacy navigation and link patients to community-based care for longitudinal buprenorphine treatment.

Objective: To describe scaling and outcomes for patients with visits in our telemedicine buprenorphine bridge clinic.

Methods: We conducted a retrospective chart review in the Epic electronic medical record of all patients seen since inception and used prescription drug monitoring program to assess follow-up.

Results: Since inception, CareConnect has served 1,567 patients. Patients were 59% male; 45% white, 37% Black and 10% Hispanic/Latino ethnicity. 22% of patients reported housing insecurity. 72% had Medicaid insurance, 6% had Medicare, 6% had private/commercial insurance, and 15% were uninsured. Additionally, 9% of all patients were recently released from incarceration, 1% were currently pregnant and 10% had inpatient substance use treatment within the past 90 days. Most patients (78%) were calling for a bridge prescription (meaning they had an active buprenorphine prescription in the past 14 days), while 21% of patients were newly initiating or re-initiating buprenorphine. Half of all patients were referred by their current provider, 4% were referred from the carceral system and 25% were referred through word of mouth. Lastly, 92% of all patients picked up their initial prescription, 69% filled at least one additional buprenorphine prescription within 30 days of their initial visit, and 51% of all patients had an active buprenorphine prescription at 30 days.

Lessons learned include the importance of building partnerships and referral pathways with organizations servicing especially vulnerable populations, including returning citizens and pregnant and post-partum persons.

Conclusions: Scaling up our virtual buprenorphine bridge clinic facilitated access to rapid support for patients with OUD seeking to initiate or continue buprenorphine treatment. Providing buprenorphine via a low barrier telehealth access point enhances continuity and prevents gaps in buprenorphine treatment.

Unhoused Populations

"Expedited Referrals" from SSP to OTP: Innovative Approaches to Reducing Barriers to Methadone Treatment for Patients Who Use Opioids and Experience Homelessness

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Background: Methadone maintenance treatment (MMT) is the "gold standard" treatment for opioid use disorder (OUD). As fentanyl has overtaken the illicit opioid supply, more patients are having difficulty with initiation and/or continuation of buprenorphine, making access to methadone treatment even more critical. However, patients face significant barriers to enrollment at opioid treatment programs (OTPs). For patients experiencing homelessness or unstable housing - many of whom lack photo identification, cell phones, and reliable transportation - those barriers are magnified.

Objective**:** We created a multifactorial intervention to address the above-described barriers in order to facilitate prompt OTP admission for patients with OUD experiencing homelessness and unstable housing.

Methods**:** Our target population was patients with OUD and unstable housing who utilize a federally qualified health center (FQHC)-based mobile health and syringe services program [SSP] in Lawrence, MA. As part of the HEALing Communities Study, we developed an expedited referral process whereby mobile health clinicians discussed treatment options, confirmed patient eligibility for OTP treatment, and provided preliminary “clearance” for MMT. SSP staff and recovery coaches assisted with outreach, engagement, and coordination. Staff from a nearby partner OTP were present at the SSP during afternoon hours so patients could complete psychosocial intakes with flexible scheduling and in a familiar environment. With the support of our State Opioid Treatment Authority, the OTP accepted FQHC “Facesheets” as temporary photo ID when needed. Patient who completed psychosocial intake were able to start dosing at the OTP within 1-3 days.

Results: Over six months (from July 2023 to December 2023) an "expedited referrals" process was developed and refined. Seventy-five (75) individuals completed psychosocial evaluations and 64 were admitted and dosed at the OTP. Many patients who had previously assumed they

could not seek treatment with methadone were eager to do so when barriers to access were reduced.

Conclusions: Intentional efforts to reduce barriers to methadone initiation via partnerships between mobile health programs, SSPs, and OTPs could be a helpful tool in combating the overdose crisis. In the future, our FQHC is hoping to administer methadone via the "72-hour rule" to allow for direct admissions to the OTP and further facilitate treatment initiation.

A Qualitative Exploration of the Substance Use Impacts of a Large-Scale Hoteling Intervention for People Experiencing Homelessness in NYC during the COVID-19 Pandemic

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Background: Thousands of people experiencing homelessness (PEH) nationwide were moved into hotels as a protective measure during the COVID-19 pandemic. These initiatives may hold lessons for responses to homelessness beyond the pandemic, but little is known about their impact on substance use (SU).

Objective: To explore how SU behaviors and treatment access changed for PEH who were placed into "density hotels" during the COVID-19 pandemic in NYC.

Methods: We conducted in-depth, one-on-one, semi-structured telephone interviews with clients and staff who had stayed and worked in NYC density hotels. To be eligible, clients had to have used drugs or alcohol while being a hotel resident. Purposeful sampling continued until reaching theoretical saturation. Interviews were audio-recorded and professionally transcribed. We completed rigorous rapid qualitative analysis using template summaries and summary matrices (reviewed by a minimum of 2 researchers with results triangulated). Methods and interpretation of results were guided by a community advisory board with PEH and other key stakeholders.

Results: We completed 52 interviews with clients (n=29) and staff (n=23) who stayed or worked in over 45 hotels operated by 17 nonprofit organizations. Participants were diverse in gender (34 men, 18 women), race (33 Black, 10 White, 2 American Indian/Native Hawaiian, 1 Asian, 6 other), ethnicity (12 Latinx, 40 not Latinx), and age (range 24–69 years). Key themes included: 1) hotel rooms presented new challenges for overdose prevention compared to congregate shelters; mitigation strategies included regular wellness checks and naloxone distribution; 2) impact on client SU was mixed, though generally increases in use were noted and attributed to micro-environmental (e.g., privacy in hotel rooms, increased availability of drugs in hotels) and macro-environmental/social factors (e.g., pandemic-related stress and isolation/boredom); 3) increased privacy and decreased stress at hotels vs. congregate shelters allowed some clients to better meet SU-related and other life goals.

Conclusions: The density hoteling initiative appeared to have both positive and negative SU-related impacts, which were multi-level and intertwined with overall pandemic-related impacts.

Research is needed on how hoteling might impact SU outside the pandemic context and how to best mitigate overdose risk in settings such as hotels with private rooms.

Innovations at the Intersection of Homelessness and Substance Use during the COVID-19 Pandemic: A Scoping Review

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Background: The COVID-19 pandemic led to disruptions in substance use and harm reduction services for people experiencing homelessness (PEH) as well as opportunities to innovate. Innovations born of necessity during the pandemic may offer insights on more effective approaches to the intertwined issues of homelessness and substance use beyond the pandemic.

Objective: To conduct a literature review on interventions related to substance use and homelessness that emerged during the COVID-19 pandemic.

Methods: We completed a search of 5 databases (CINAHL, PubMed, PsycINFO, EMBASE, and World of Science), 3 gray literature databases (OAIster, NYAM, and OpenGrey) and a tailored Google search in November 2022; an updated search was completed in September 2023. Articles were screened using predefined inclusion and exclusion criteria. Included articles were in English, published after February 2020, and involved a new or expanded intervention addressing drug or alcohol use among PEH during the COVID-19 pandemic. Articles were excluded if they did not meaningfully discuss the needs of PEH or only addressed tobacco use. Two team members reviewed each article, with a 3rd adjudicating discrepancies. Relevant information from each article was extracted by one team member with a 2nd team member checking, then summarized.

Results: The searches yielded 811 unique articles. 73 articles met inclusion criteria, describing 91 interventions from 13 countries. Most articles discussed interventions related to opioids, including treatment and overdose prevention (n=70). Most articles (n=53) described interventions that were newly created during the COVID-19 pandemic; others (n=20) described interventions that had substantially changed in response to the pandemic. Interventions included managed alcohol programs, safe consumption sites, safer supply, telehealth prescribing of MOUD, and methadone delivery. Articles reported few adverse effects related to these innovations. Challenges associated with interventions included inequitable access to technology for PEH.

Conclusions: The COVID-19 pandemic and related responses presented opportunities for programs providing substance use treatment and harm reduction services to PEH to innovate. Further evidence is needed to determine which COVID-19 related innovations were most impactful and how they should be prioritized and continued post-pandemic.

What a Difference *This* Home Makes: Changes in Drug Use, HIV Risk and Prevention Behaviors Among Residents Relocated from Encampments to Low-Threshold Harm Reduction Housing Sites in Boston

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Background: Following a series of rapid tent encampment removals in 2021-2022 around a Boston area known for concentrated public drug use and homelessness, city and state jurisdictions collaborated with police to relocate 612 unhoused people into six low-threshold harm reduction housing (HRH) sites. Uniquely, HRH sites did not require abstinence from drug use and were equipped with numerous harm reduction services, supplies, policies, security measures and access to co-located medical care.

Objective: We measured self-reported changes in drug use, HIV risk and prevention behaviors from before to after placement in HRH.

Methods: Interviewers administered surveys to 106 residents recruited from six HRH sites between September 2023-February 2024. Survey items derived from prior formative assessments of the same population. Questions gathered current and perceived change in behaviors and care from prior to relocation to now. We used descriptive statistics to summarize data.

Results: All but one resident reported active drug use. Since relocation to HRH, residents reported reductions in crack/cocaine (69.9%), methamphetamine (71.4%) and opioid (71.2%) use, obtaining drugs from fewer dealers (an overdose risk; 35.8%), and less drug use in public (55.7%). For the 65 residents continuing to inject drugs, 44.6% named their HRH site as the main source of sterile syringes and 29 of 85 (34.1%) residents smoking drugs sourced safer smoking supplies from HRH sites. Still, not having a syringe (12 of 30 instances), borrowing a syringe (10 of 24 instances), and using alone (55 of 88 instances) in the past month at the HRH site were not uncommon events. Since coming to HRH, a majority (71.7%) stated having longer and better quality sleep. Eighteen (17.0%) residents reported starting pre-exposure prophylaxis for HIV prevention and none of the 8 HIV+ residents experienced treatment disruption. Additionally, 28 (26.4%) residents initiated or centralized primary healthcare at HRH or began care proximal to HRH.

Conclusions: Relocation to HRH resulted in reductions in resident-reported drug use, risk behaviors, and unsafe living conditions while simultaneously improving or maintaining essential HIV prevention, treatment, and sleep quality. HRH must secure sufficient, 24/7 access to harm reduction supplies on-site and support residents in not using alone.

A Qualitative Investigation of Methadone Treatment Experiences, Facilitators, and Barriers Among People Experiencing Homelessness with Opioid Use Disorder

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Background: People experiencing homelessness (PEH) with opioid use disorder (OUD) face disproportionately high overdose risk, yet are less likely than their housed counterparts to have access to or maintain engagement with standard-of-care treatments for OUD including methadone treatment (MT). However, little research has examined experiences, barriers, and facilitators related to MT engagement among PEH.

Objective: We aimed to examine MT experiences, barriers, and facilitators while experiencing homelessness among a cohort of individuals with current or prior homelessness experience currently engaged in low-barrier MT.

Methods: From December 2022 to May 2023, we recruited adults enrolled in MT at a low-barrier clinic in New Haven, Connecticut with current or prior homelessness experience that overlapped with enrollment in outpatient MT. All participants provided written informed consent and were compensated $25 for an hour of study participation. Investigators (with no clinical relationship with participants) conducted private, individual interviews using a semi-structured interview guide containing questions about experiences seeking OUD treatment, including their experiences in low-barrier MT, while experiencing homelessness. Participants also completed surveys containing questions about demographics, homelessness experience, and resource needs. All interviews were audio-recorded, transcribed, and then analyzed in ATLAS.ti using thematic analysis.

Results: Fifty patients participated in the study (31 men, 19 women, average age=44 years). Participants on average reported a lifetime 56.6 months without housing, 2.4 periods of homelessness in the 3 years prior, and 80% had been unhoused for over one year. In thematic analysis, we identified numerous themes and sub-themes related to participants' experiences receiving MT while experiencing homelessness. Top level themes included: 1) Program-level barriers to receiving MT (e.g., desire for flexibility in treatment requirements); 2) General barriers to receiving MT (e.g., transportation); 3) Perceptions of low-barrier treatment (e.g., non-judgmental staff); 4) Advice for other PEH seeking MT (e.g., "be an advocate for yourself").

Conclusions: PEH enrolled in MT have unique experiences, facilitators, and barriers that impact their treatment engagement. Understanding MT experiences among PEH is an important first step in improving MT systems to better serve this important population who is at high risk for overdose yet underrepresented in MT research.

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Stigma-Free Access to Harm Reduction Supplies: A Cross-Sector Approach

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Background: As the opioid overdose crisis reaches new heights in conjunction with contaminants infiltrating the drug supply, innovative harm reduction strategies are essential to mitigate risks and save lives. MATTERS (Medication for Addiction Treatment and Electronic Referrals) began by linking individuals to treatment and since then has rapidly expanded its harm reduction services, introducing stigma-free initiatives to increase access to life-saving supplies like drug testing strips and naloxone.

Objective: The primary objective of MATTERS' harm reduction services is to reduce drug use related harms and overdose deaths through the application of stigma-free harm reduction initiatives. These services include mail-based distribution of fentanyl and xylazine test strips and a state-wide harm reduction vending machine program.

Methods: The target population of MATTERS includes people who use drugs, particularly those using substances that have high rates of fentanyl or xylazine contamination. MATTERS utilizes a cross-sector approach, establishing partnerships with governmental agencies, treatment centers, and private businesses to support its initiatives. The mail-based distribution service provides participants with test strips via mail, eliminating the need for face-to-face interactions. Similarly, the outdoor harm reduction vending machine program offers discreet access to test strips and naloxone. Participants enter a universal code, their year of birth and zip code. Utilizing this data, MATTERS can track trends in usage based on age, location, time of access, and products dispensed.

Results: MATTERS has distributed over 12 million test strips across New York and has installed 15 centrally monitored, outdoor harm reduction vending machines with plans to install another 30-40 across New York State. Additionally, through reviewing age and zip code data from our vending machines, MATTERS is reaching a wide range of individuals, many in the 50+ age group, which has been gradually more affected by increased overdose death rates.

Conclusions: This program demonstrates the efficacy of harm reduction strategies in addressing the opioid crisis. The stigma-free nature of the program, combined with its cross-sector collaborations, emphasizes its relevance and applicability in diverse settings. The program's success highlights the importance of comprehensive harm reduction approaches in saving lives and empowering people who use drugs to have a more informed relationship with their drug use.

Long-Acting Injectable Antiretroviral Treatment Retention Among People with HIV Who Use Drugs

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Background: Psychosocial and structural barriers to daily oral antiretroviral adherence have contributed to disproportionate rates of HIV morbidity among people who use drugs (PWUD) and people experiencing homelessness (PEH). While real-world demonstration projects suggest that novel long-acting injectable antiretroviral therapies (LA-ART), including intramuscular cabotegravir/rilpivirine and subcutaneous lenacapavir, reduce ART adherence barriers for

PWUD, their implementation is complex. Utilization of LA-ART shifts adherence responsibilities from patients to providers, and little is known regarding long-term retention among socially vulnerable populations, who frequently experience healthcare interruptions.

Objective: To identify programmatic factors supporting long-term LA-ART retention among PWUD and PEH.

Methods: A multidisciplinary LA-ART program was implemented within a low-barrier, municipal clinic designated for PWUD and PEH in San Francisco, CA. Rates of HIV viremia and delayed injections were measured over the first 30 months of implementation.

Results: Between November 2021-April 2024, 21 patients initiated LA-ART (81% non-White race/ethnicity; 38% street homeless; 48% sheltered homeless; 29% with opioid use disorder; 76% with methamphetamine use disorder; and 33% with bipolar disorder or schizophrenia). Fourteen initiated injections with baseline HIV viremia, 8 of whom had never previously been virally suppressed as outpatients. Rates of HIV virologic suppression (<100 copies) increased from 24% over the 3 months preceding LA-ART to 95% at latest follow up (mean 13.7 months, SD 9.1 months). One patient experienced virologic failure due to delayed injections and increased methamphetamine use, requiring LA-ART discontinuation despite continued challenges with daily oral ART adherence. Of the 275 total LA-ART doses administered, 9% were delayed >7 days and 21% were administered outside of clinic (10% at syringe access sites; 9% in shelters, tents, or supportive housing; and 2% in jail or inpatient settings).

Conclusions: In the context of highly supportive clinical environments with robust outreach capabilities, implementation of LA-ART can provide durable HIV virologic suppression for >12 months to PWUD and PEH facing considerable barriers to oral ART adherence. Multidisciplinary panel management, facilitation of drop-in injection visits, mobile outreach capacity, judicious use of programmatic eligibility criteria, and collaboration with partnering organizations are critical to minimizing risks of virologic failure and LA-ART resistance in such settings, particularly for patients with methamphetamine use disorder.

Comparing Long-Acting Injectable Versus Oral HIV Antiretroviral Therapy for People Who Use Drugs

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Background: Despite extraordinary advancements in the potency and accessibility of HIV antiretroviral therapies (ART), people experiencing homelessness (PEH) remain at increased risk of HIV-related morbidities due to barriers in adhering to treatment. These vulnerabilities are exacerbated among people with co-occurring substance use disorders (SUDs) and severe mental illness, highlighting the need for novel interventions to improve HIV care outcomes in this population. Long-acting injectable formulations of ART (LA-ART) offer promise in addressing adherence challenges, yet their efficacy and impact on HIV virologic suppression among PEH remains understudied.

Objective: To compare rates of HIV virologic suppression and care engagement between PEH receiving LA-ART vs. oral ART.

Methods: A retrospective chart review was conducted, analyzing demographic, care engagement, HIV viral load, and co-morbidity data among patients with HIV attending a low-barrier clinic serving San Francisco PEH between January-December 2023. Patients who attended only one clinic visit or who were established in HIV care elsewhere were excluded.

Results: Among 94 unique patients with HIV included in this analysis, 87 received oral ART and 20 received LA-ART over the 2023 calendar year. Patients receiving LA-ART had more clinic visits per person-year than those on oral ART (mean 27.6 vs. 11.2 visits; $p<0.001$). While 62% of patients on oral ART achieved HIV virologic suppression (<30 copies) at least once in 2023 and 48% maintained suppression at the most recent follow-up, 95% of patients on LA-ART achieved and maintained virologic suppression. Patients on LA-ART were more likely than those on oral ART to identify as transgender/non-binary (30% vs. 16%) and to be diagnosed with a psychotic disorder (40% vs. 27%) or other mental health condition (60% vs. 48%). However, the populations were similar with regard to age (mean 43.5, SD 11.6), race/ethnicity (71% non-White), sex (64% cisgender male), and the prevalence of stimulant (71%) and opioid use disorders (30%).

Conclusions: Compared to oral ART, LA-ART was associated with increased rates of HIV virologic suppression and care engagement among PEH at a low-barrier clinic setting. These findings underscore the potential of LA-ART to address HIV care disparities among people who use drugs and support increased public health investment in LA-ART implementation.

Associations between HIV Primary Care Provider Characteristics and Harm Reduction Acceptability: A Mixed-Methods Study

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Background: Harm reduction can improve outcomes for people who use drugs and may be particularly salient in HIV primary care settings where retention in care is critical to patients' success. However, the degree to which HIV providers are accepting of harm reduction is largely unexplored. Additionally, there is a dearth of research exploring how acceptance of harm reduction develops among providers.

Objective: Using a mixed methods approach we sought to understand characteristics of providers associated with increased harm reduction acceptability, which may inform harm reduction training and practice among HIV primary care providers and ultimately improve care for people with HIV who use drugs.

Methods: Using a sequential explanatory design, we collected quantitative data via an electronic survey of providers (n=132) in three HIV primary care clinics in the US, followed by qualitative data through semi-structured interviews (n=23) from the same population. The survey

incorporated the Harm Reduction Acceptability Scale along with sociodemographic and professional characteristics. We used multiple linear regression to explore variables associated with increased acceptability of harm reduction (HR) followed by thematic analysis of qualitative data to deepen our understanding of these variables.

Results: Our quantitative analysis suggests both practicing in a geographic location with broader harm reduction policies (e.g., legal syringe services) and more years providing care to people with HIV (PWH) predicted greater harm reduction acceptability. In qualitative interviews, providers with less experience providing care to PWH more frequently endorsed negative attitudes towards people who use drugs. Providers with more years of HIV care experience discussed being mission-driven and patient-centered. Few of the providers who participated in qualitative interviews reported having had formal HR training, though those with more years of HIV experience reported being exposed to other providers who modeled HR care.

Conclusions: Our findings suggest opportunities to improve care outcomes for PWH who use drugs. While access to formal harm reduction training was strikingly rare, more years of experience caring for PWH appears to increase providers' exposure to HR champions. This suggests that formal HR coaching operating on a peer-to-peer basis may improve acceptability and practice of HR in HIV primary care settings.

Forms of Intimate Partner Violence As Predictors of Substance Use Among Women Living with and without HIV

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Background: The syndemic of intimate partner violence (IPV), substance use, and HIV can exacerbate health risks among women in the United States. Understanding the relationship between IPV, substance use, and HIV is critical to reduce co-occurring risks and improve health outcomes among women with substance use disorders (SUDs).

Objective: To investigate the predictive associations of IPV forms on subsequent substance use among women with and without HIV.

Methods: Using longitudinal data from the Women's Interagency HIV Study, which surveyed women semiannually from 1994-2019, we utilized modified Poisson regression to evaluate the association between IPV and subsequent substance use (unhealthy drinking, smoking, and cannabis, crack or cocaine, heroin, other drug, polydrug, and any drug use) and examine differing effects by HIV status. Separate models used incident and lifetime IPV exposures for any IPV and IPV forms (psychological only, physical without sexual, and any sexual IPV). Adjusted models included an interaction between IPV and HIV status, individual covariates, and standard errors clustered at the individual level.

Results: The sample included 3,706 participants. Most identified as Black (72%), non-Hispanic (84%), heterosexual (87%), and were living with HIV (74%). Any incident IPV was associated with increased risk of subsequent smoking (aIRR 1.08 [1.02,1.15]), crack or cocaine (aIRR 1.28 [1.04,1.57]), heroin (aIRR 1.75 [1.17, 2.62]), polydrug (aIRR 1.62 [1.12, 2.35]), and any drug use (aIRR 1.29 [1.08, 1.54]). Incident psychological IPV was associated with increased risk of crack or cocaine use (aIRR 1.29 [1.08, 1.54]). Incident physical IPV was associated with increased risk of smoking (aIRR 1.10 [1.02, 1.19]), heroin (aIRR 1.87 [1.04, 3.38]), other drug (aIRR 2.16 [1.46, 3.19]), polydrug (aIRR 1.95 [1.14, 3.33]), and any drug use (aIRR 1.44 [1.14, 1.83]). Incident sexual IPV was associated with increased risk of smoking (aIRR 1.21 [1.09, 1.34]). Additionally, HIV status exacerbated the association between forms of IPV and unhealthy drinking, smoking, and other drug use.

Conclusions: IPV experiences are associated with increased subsequent substance use among women. To address the unique factors that shape substance use risk among women, it is vital to address IPV in SUD treatment, particularly among those living with HIV.

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Harm Reduction Supply Distribution Via Vending Machines: 8-Month Outcomes for a California Veterans Affairs Health Care System

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Background: Harm reduction supply distribution via vending machines promotes anonymity, access, and reduces overdose deaths and drug-related infections. Limited research exists evaluating vending machine distribution of supplies beyond syringes and naloxone, within healthcare systems, and for people who have experienced housing insecurity.

Objective: To evaluate 8-month outcomes of harm reduction supply distribution via vending machines for a California Veterans Affairs Health Care System Harm Reduction Program.

Methods: Fourteen harm reduction vending machines were installed August through September 2023, and one in March 2024: two in a hospital, seven in outpatient clinics, and six in Veterans supportive housing. Vending machines dispensed free safer drug use, hygiene, wound care, and sex supplies. An electronic survey was used to collect Veteran registration for vending machine access, demographics, and resource acceptance. VendNovation web-based software was used to collect vending machine dispensing data. Outcomes were evaluated with descriptive statistics.

Results: Between August 2023 to March 2024, 281 Veterans registered for vending machine access, and 199 (70.8%) accessed ≥1 item/kit. A total of 3,567 items/kits were dispensed, with more dispensed in supportive housing (61.5%) than healthcare settings (38.5%). Vending machines in supportive housing were most accessed (66.6%) outside regular business hours compared to healthcare settings, where most were accessed during business hours (93.9%). Common items dispensed included sterile syringes (n=422), hygiene kits (n=350), condoms (n=337), wound care kits (n=312), and alcohol swabs (n=212).

Among Veterans who completed demographics question(s), age was 60.2±13.8 years. Most identified as male gender (n=229, 81.5%). The most common racial/ethnic identities were White/Caucasian (n=112, 39.9%), Black/African American (n=81, 28.8%), and Hispanic/Latinx (n=36, 12.8%). During vending machine registration, 126 (44.8%) Veterans accepted naloxone, 56 (19.9%) overdose education, 38 (13.5%) community harm reduction resources, 32 (11.4%) substance treatment resources, and 29 (10.3%) drug-related infection testing/treatment.

Conclusions: Co-location of harm reduction vending machines in settings serving Veterans with housing needs facilitated access, particularly outside regular business hours. Sterile syringes, hygiene/wound care supplies, and condoms were most accessed. Registration for vending machines also increased access to clinical education and treatment resources. Evaluation of staff/Veteran feedback on the machines, supplies, use experience, and impact on health outcomes/quality of life is ongoing.

Multi-Site Harm Reduction Kit Implementation and Distribution

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Background**:** Harm reduction which includes drug checking, safer drug use equipment, and overdose prevention and education is an evidence-based strategy to address drug-related harms. Despite this, traditional addiction treatment settings often do not provide the full spectrum of harm reduction services beyond naloxone and test strip provision. Pennsylvania, which shoulders a disproportionate burden of US drug-related morbidity and mortality, has established multiple Centers of Excellence for Opioid Use Disorder (COEs) statewide. We describe the implementation and distribution of kits at three COEs with heterogeneous treatment settings (dual-diagnosis, peripartum, and primary care) in Pittsburgh, PA.

Objective**:** We assessed kit uptake and implementation barriers and facilitators two months post-implementation across all COEs.

Methods**:** Pre-implementation, we identified site champions to develop site-specific clinical workflows for kit distribution and conducted staff and provider trainings on harm reduction kits. Paired with patient-facing educational material, these kits included boofing (per rectum), injection, naloxone, smoking, snorting, fentanyl/xylazine test strips, and wound care. Distribution began in February 2024, and we tracked kit number and types distributed per COE and post-implementation barriers and facilitators through weekly check-ins with site champions.

Results**:** Two months post-implementation, a total of 483 kits were distributed to 105 unique patients across all 3 COEs, which was an average of 20 kits per week per site. Among kits distributed, 10.3% were injection, 17.2% smoking, 10.8% snorting, 3.1% boofing, 16.4% fentanyl test strip, 13.3% xylazine test strip, 14.3% naloxone, and 14.9% wound care kits. Over two months, 23 weekly check-ins were completed with all sites. Notable implementation facilitators included positive patient feedback on kit availability and opportunity for secondary distribution and encouraging conversations on risk mitigation. Significant implementation

barriers included adaptations to site-specific workflows, acceptability among staff of on-site kits, and managing inventory.

Conclusions**:** We leveraged implementation strategies of site champions, site-specific workflows, and tailored harm reduction trainings to successfully implement kit distribution at 3 COEs. In just two months, we discovered a considerable demand for kits among patients engaged in addiction treatment, highlighting the importance of making harm reduction services more accessible to all individuals across the addiction care continuum.

Lower the Barriers: Treatment of Hepatitis C in an Opiate Treatment Program

Laura Pugh, MD; Soraya Azari, MD - University of California, San Francisco

Background: Hepatitis C is a common, treatable etiology for liver failure, liver cancer, and need for liver transplant, and people who inject drugs have a high prevalence of hepatitis C infection. Opioid treatment programs (OTPs) methadone or buprenorphine to patients for treatment of an opioid use disorder represent an ideal setting for identifying and treating hepatitis C infection.

Objective: From 2016 to 2023, all patients enrolled in the OTP at a large county safety net hospital were offered Hep C screening and treatment. This observational, quality-improvement study describes the treatment outcomes of the 295 patients who participated.

Methods: All patients enrolled in the OTP were offered Hepatitis C screening. Those with active Hep C were offered participation in voluntary directly observed therapy (DOT) where they would receive Hep C treatment at the time of their methadone or buprenorphine dosing.

Results: A total of 295 patients were diagnosed with active hepatitis C and expressed interest in treatment. 5 (1.7%) patients left the program prior to starting treatment, and 14 patients (4.8%) initiated but did not complete their treatment course. Patients experienced high rates of cure with variable ability to adhere strictly to the treatment regimen. 32% of treatment courses were taken with no missed days. 41% of treatment courses had 1-10 missed days, 22% had greater than 10 days missed, and 3% of encounters had an unknown number of missed days. 268 (97.1%) of patients who completed treatment were cured, and 92.4% of patients who started treatment were cured. 4 patients (1.0%) were lost to follow up with no testing after treatment, and 4 patients (1.4%) had a positive SVR or post-SVR12 viral load concerning for treatment failure less likely versus reinfection.

Conclusions: These findings demonstrate that treatment of Hepatitis C among patients receiving care at an opiate treatment program is safe, effective, and able to achieve a high rate of cure even for high-risk patients who missed days during their treatment course. Treatment Hep C in OTPs represents a critical opportunity to provide low barrier care to the patients at highest risk of contracting and experiencing consequences of Hep C.

Increases in PrEP Awareness but Not PrEP Use Among People Who Inject Drugs

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Background: HIV pre-exposure prophylaxis (PrEP) prevents HIV transmission. However, PrEP uptake remains low among people who inject drugs (PWID), even when clinically indicated.

Objective: We assess changes in PrEP awareness, access, and use from 2018 to 2022 and factors associated with PrEP awareness in 2022.

Methods: Using data from the 2018 and 2022 cycles of the National HIV Behavior Survey (NHBS) in Portland, we analyzed a sample of HIV negative PWID indicated for PrEP through injection and sex behaviors. First, we compared percentages of PrEP awareness, access, and use in 2018 and 2022, testing for differences across years using χ^2 and Fischer's Exact Test. Then, for 2022 only, covariates hypothesized to be associated with PrEP awareness were included in a generalized linear model to generate adjusted prevalence ratios (aPR) and 95% confidence intervals (CI).

Results: PrEP was indicated in 354/439 (80.6%) HIV negative participants in 2018 and 196/278 (70.5%) participants in 2022.Compared to 2018, PrEP awareness was higher in 2022 (33.2% vs 17.2%, $p<0.001$). There were no differences in PrEP access or use from 2018 to 2022. In the 2022 sample, PrEP awareness was higher among those with: gay or lesbian sexual identity (aPR=1.776, 95% CI=1.14-2.75, Hispanic ethnicity (aPR=1.26, 95% CI=1.01-1.58), education beyond high school (aPR=1.16, 95%CI=1.00-1.34), and previous drug treatment (aPR=1.20, 95% CI=1.05-1.37). PrEP awareness was lower among those reporting amphetamine use (aPR=0.766, 95% CI=0.61-0.95).

Conclusions: Although PrEP awareness increased between 2018 and 2022, PrEP access and use were unchanged and remained rare. Higher awareness was associated with gay or lesbian sexual identity, Hispanic ethnicity, higher education, and receipt of drug treatment. The inverse association between awareness and amphetamine use is concerning given the elevated rate of amphetamine use among a recent cluster of new HIV infections among PWID in Portland. PrEP awareness may be rising among PWID in Portland, but PrEP use remains insufficient to realize HIV epidemic control goals.

Operationalization of Long-Acting Pre-Exposure Prophylaxis for Socially Vulnerable Populations

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Background: Long-acting injectable cabotegravir (LA-CAB) as pre-exposure prophylaxis (PrEP) holds promise for reducing HIV transmission among people experiencing homelessness (PEH) and people who use drugs (PWUD), who face barriers to daily oral PrEP adherence. However, the implementation of LA-CAB in clinical settings serving vulnerable patients presents challenges.

Objective: To evaluate the feasibility of providing LA-CAB to PEH and PWUD.

Methods: Eligible patients at a low-barrier clinic serving San Francisco PEH were offered LA-CAB starting in October 2022, necessitating the development of a multidisciplinary team to support monitoring and adaptation of CDC PrEP guidelines to address the needs of vulnerable patients. LA-CAB retention, delayed injections (>7 days), missed lab draws, and HIV outcomes were measured over the first 18 months of implementation.

Results: Between October 2022-April 2024, at least 27 patients were referred for LA-CAB initiation, among whom 24 were prescribed LA-CAB and 19 ultimately initiated injections (58% non-White race/ethnicity; 21% transgender/non-binary; 16% street homeless; 37% sheltered homeless; 32% with opioid use disorder; 63% with methamphetamine use disorder; 32% with bipolar disorder or schizophrenia). Nearly half experienced a >7-day delay between their baseline labs (confirming HIV negative status) and initiation of injections, and only 4 received all CDC-guideline-recommended lab draws. All 19 patients remained HIV negative at the latest follow up (mean 7.0 months, SD 4.1 months) and, as of May 2024, 15 continued to receive LA-CAB injections. Of the 90 total doses of LA-CAB administered, 12% were delayed >7 days and 44% were administered at shelters, tents, or supporting housing.

Conclusions: LA-CAB implementation was feasible within a low-barrier clinic serving particularly vulnerable PEH and PWUD. However, several logistical challenges were identified during pilot implementation, including delays in receiving LA-CAB from off-site pharmacies, personnel requirements to manage medication inventories and issue timely injection reminders, and CDC guidelines advocating for laboratory monitoring at intervals untenable for many patients. Patients in this program also represent a more psychosocially stable cohort than the clinic's overall population, suggesting that the perceived value of PrEP may be reduced in the context of competing priorities associated with homelessness. Streamlining laboratory requirements and facilitating same-day starts may improve LA-CAB uptake in this population.

Welcome Reception and Poster Session

Evaluation of an OUD Consult Service on Success of Post-Acute Care Discharge Recommendations for Hospitalized Patients with OUD

Anya Agrawal, MD[1], **Megan Muller, MD Candidate**[2]; Mim Ari, MD; Nikita Thomas, MSPH; George Weyer, MD - (1)University of Chicago Medicine, (2)University of Chicago Pritzker School of Medicine

Background: Patients with opioid use disorder (OUD) frequently experience hospitalizations and often need post-acute care but are more likely to be rejected than patients without OUD. The impact of addiction consult services on post-acute care referral success is unknown.

Objective: To assess the impact of an OUD consult on post-acute care referral success.

Methods: Over 14 months, 380 patients with OUD who were recommended for post-acute care at a single academic medical center were identified for chart review. The primary outcome was rate of referral success (patient's actual discharge location matching their recommended post-

acute care discharge location). Secondary outcomes included length of stay, MOUD induction, and MOUD and naloxone prescription on discharge. Descriptive and regression analyses were conducted to compare patients who received an OUD consult and those who did not.

Results: Patients in the consult group (n=207) were more likely to have active OUD ($p<0.001$), and less likely to have Medicare insurance ($p=0.02$), be admitted from a rehab facility ($p=0.02$), and be on MOUD prior to admission ($p<0.001$) than patients in the non-consult group (n=173). The rates of referral success for consult and non-consult groups were 49.3% and 54.9%, respectively. When controlled for active OUD status, insurance status, housing status, and being on MOUD prior to admission, receiving an OUD consult did not significantly predict referral success ($p=0.38$). Not having active OUD on admission ($p=0.01$) and being admitted from a rehab facility ($p=0.04$) were greater predictors of referral success. Length of stay was not different between groups ($p=0.10$). Patients in the consult group were more likely to have started MOUD during their admission (odds ratio [OR], 72.4; $p<0.001$), and be discharged with MOUD (OR, 12.0; $p<0.001$) or naloxone (OR, 9.54; $p<0.001$).

Conclusions: Receipt of an OUD consult was not found to improve rates of referral success in hospitalized patients with OUD, though this may be due to the non-random nature of the study population. The overall rate of referral success in this study population is low, highlighting the need for a multi-faceted approach to improve referral success including policy change, education, and building relationships with local post-acute care facilities.

Taking Contingency Management from Conceptualization to Clinical Practice

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Background: Stimulant use disorders (StUD) are on the rise nationally and overdoses involving stimulants are driving morbidity at alarming rates. Though there are no FDA-approved medications that treat StUD; there are behavioral health interventions with decades of research and evidence to support their use to combat the growing stimulant crisis. Contingency management (CM) is arguably one of the most well studied interventions to treat StUD and yet remains an under utilized intervention in part due to challenges with its feasible clinical implementation.

Objective: To create a web-based application (WBA) for monitoring and tracking CM in a stimulant treatment clinic that reduces staff burden and optimizes CM delivery.

Methods: CM monitors from a stimulant treatment clinic met with a computer scientist to translate existing excel-based data tracking for CM to the necessary components to build a WBA. After information gathering meetings, beta-testing was completed by CM monitors and program auditors for fidelity to the CM model and ease of use of WBA technology. The WBA was loaded to a confidential hospital server for a soft launch in the stimulant treatment clinic at an academic medical center. Data was collected regarding efficiency of CM tracking and the need for code de-bugging throughout the clinical week. Interviews were done with CM

monitoring staff and program auditors on user experience and feasibility for further roll out of the program.

Results: Interviews of CM monitoring staff and auditors revealed similar themes regarding ease of use, decrease in time expended on data input and data cleaning, and reports that patients found the CM delivery to be smoother. Time spent on individual CM data collection and monitoring decreased by five minutes on average per patient with a time saving of about three hours per CM monitor per week. Number of CM interruptions for de-bugging code dropped from up to seven daily to less than one monthly.

Conclusions: Though CM has demonstrated efficacy in clinical trials in treating StUDs, significant barrier remain in implementing it clinically. Innovative tools like WBAs that are user friendly and efficient are necessary components of a meaningful and robust roll out of CM in addiction treatment settings.

"We Need More GPs Trained in Addiction": Patient Perspectives on Addiction Care in Primary Care Settings

Nikki Kalani Apana, BA; **Irina Kryzhanovskaya, MD** - University of California, San Francisco

Background: Drug overdose deaths in the US continue to rise, with numbers surpassing 110,000 in 2022.[1] There is an urgent need for greater access to life-saving treatment for substance use disorders (SUD). Despite the efficacy of medications like methadone and buprenorphine for opioid use disorder (OUD), over 90% of adults with a SUD do not receive any treatment.[2,3] Integrating SUD treatment into primary care has shown promise in mitigating access barriers.[4,5] However, little is known about patient preferences for receiving SUD treatment in primary care compared to specialty settings.[6] Understanding patient preferences for SUD treatment is essential to improving care delivery and increasing treatment engagement.[7]

Objective: This qualitative study aimed to explore patient preferences for integrated, co-located, and coordinated SUD treatment models. Integrated care involves the primary care provider (PCP) treating SUD, while co-located and coordinated models involve a separate addiction specialist for SUD treatment either within or outside the primary care clinic.

Methods: Fifteen participants were recruited from a primary care-based addiction medicine clinic located in an urban, academic medical center in California. Participants aged 18 or older with a SUD diagnosis were interviewed for 45-60 minutes via telephone or in-person. Analysis was conducted through Dedoose 9.0 using the socio-ecological model of health as a conceptual framework.

Results: The majority of participants (n=10; 66.7%) preferred an integrated care model. Among those who preferred the non-integrated models, over half were willing to consider an integrated model if the PCP were trained in addiction. Patient preferences were influenced by SUD complexity, patient-provider relationship, clinic characteristics, and provider training. Regardless

of location, participants preferred clinicians knowledgeable in addiction who delivered non-judgmental, patient-centered care.

Conclusions: In this novel qualitative study, the majority of participants favored the integrated model, citing convenience, destigmatization, and longitudinal care from a trusted provider as key benefits. However, concerns were raised regarding clinician competency in SUD treatment, suggesting a need for additional training to effectively address, diagnose, and treat SUD in primary care. Additionally, participants advocated for more patient-centered integrated care models with wrap-around services like access to peer recovery specialists, counseling, and patient navigation to meet their needs and promote treatment engagement.

Providing Family Centered Recovery Care in Pediatric Clinical Settings: A Social Work and Community Health Worker Framework

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Background: Research indicates that nationwide, 8.7 million children have a parent who suffers from a substance use disorder (SUD). Partnerships between Community Health Workers (CHW) and Social Workers (SW) can lead to better outcomes for patients. However, there is a lack of multidisciplinary support for children and families impacted by SUD's, specifically in a pediatric setting.

Objective: We describe the benefits of having embedded SW and CHW in a pediatric medical home for children-whose parents have a SUD. Our objective is to report on the innovative family centered care model within SOFAR (Supporting Our Families through Addiction and Recovery) and the work of our SW and CHW team in supporting our families.

Methods: We analyzed data from electronic health records since the inception of family centered care practices, specifically looking at SW and CHW services/interventions provided to children and/or their parents.

Results: At the close of April 2024, there were 355 children enrolled in the SOFAR clinic. From August 2022- April 2024, there were 5,729 patient encounters by the SW and CHW. Among those encounters we separated them by services for child/family and services for parent. Of those encounters documented as services provided for child/family, CHW addressed "material needs" 26% of the time and "care coordination" 92.9% of the time. SW provided "individual counseling" 41% of the time. Among encounters documented as support for parents, CHW completed 1,273 care coordination encounters, including arranging transportation to clinics, housing supports, scheduling medical appointments (inclusive of primary care, mental health, and SUD treatment). SW provided support to parents 715 times, these encounters include referrals, recovery support, and mental health support.

Conclusions: We have seen unmet social and mental health needs being addressed for our families in our new family centered care model. Continued work should examine the program

model and if it can impact engagement and retention in SUD care and help keep families together by addressing these critical needs in a pediatric setting.

Integrating a Modified Contingency Management Intervention for Youth with Psychosis and Frequent Substance Use in a Community-Based Coordinated Specialty Care Program

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Background: Contingency management (CM) is an evidence-based intervention for substance use reduction, with effectiveness across substances, and high rates of efficacy. Notably, despite youth with psychotic spectrum disorders having high rates of substance use disorder co-morbidity, CM is not typically integrated in the coordinated specialty care (CSC) model for first episode psychosis.

Objective: We examined the feasibility and implementation of a modified CM intervention for youth with psychosis and frequent substance use. Instead of targeting abstinence from substance use, engagement in clinical services and pro-social behaviors were incentivized in an urban community-based CSC program within a health safety-net hospital.

Methods: CM was offered as a points-based rewards program to patients engaging in the CSC program, with patients being eligible to earn up to 15 points ($15) per week for participating in the incentivized categories: engagement (e.g., meeting with care team members, completing lab work, attending family session); getting out (e.g., going to the gym, movies, or out with family and friends); or doing something new (e.g., attending a class, volunteering, job interview).

Results: In the first 6 months of the CM program, 31 youth met criteria for enrollment in the CSC program, and were eligible to be offered CM. The youth had a mean age of 22 years ± 4.7 years, were 74% male (n=23), 58% Black (n=18), 19% White (n=6), 22% Hispanic (n=7), and 97% (n=30) publically insured. In total, 39% (n=12) agreed to participate in CM, 52% (n=16) were not engaging consistently enough in the CSC to be introduced to CM, and 10% (n=3) declined due to lack of interest in CM (e.g., not interested in incentivized behaviors/rewards). CM participants earned an average of 7.6 points per month (SD: 2.8). Of the CM participants, 17% (n=2) were highly engaged reaching the $75 annual monetary limit, becoming eligible for a prize lottery (e.g., art supplies, basketballs).

Conclusions: This modified-CM intervention is a feasible intervention to implement in a community-based CSC program for youth with psychosis and frequent substance use but would benefit from modifications to increase uptake among patients with less consistent engagement in the CSC.

A Low Cost, Low Technology Intervention for Hospitalized Patients Who Inject Drugs Is Feasible for Increasing Evidence-Based Addiction Care but HIV PrEP Uptake Remains Limited

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Background: Approximately 14% of new HIV cases in Alabama are from injection drug use, and this does not include HIV transmission from substance use related behaviors such as transactional sex. Hospitalized patients who inject drugs (PWID) present an opportunity to provide addiction treatment and HIV pre-exposure prophylaxis (PrEP).

Objective: The objective of this study is to assess the feasibility and acceptability of novel, low barrier interventions aimed at increasing uptake of medications for opioid use disorders (MOUD) and PrEP in PWID.

Methods: In this prospective study, 60 hospitalized PWID who were HIV negative and receiving care at UAB Hospital (from October 2022 to February 2024) were randomized in a two-by-two factorial design to 4 arms: a smartphrase summary of evidence-based care added in the medical record (n=15), an outpatient peer recovery coach intervention (n=15), both (n=15), or standard of care (n=15). Patients completed standardized surveys on substance use, HIV risk behaviors, and their preferences for MOUD and PrEP at baseline. Exit surveys were conducted by phone to assess utilization of addiction treatment, PrEP services, and peer coaching. Feasibility was defined by appropriate use of smartphrase and access and engagement with the peer. We assessed preliminary effectiveness including utilization of MOUD, PrEP, and the peer coach.

Results: In the groups who received smartphrase with or without the peer (n=30), 70% had documentation of the smartphrase in their provider's consult note, and 90% had a MOUD referenced in their treatment plan. In the groups who received a peer with or without smartphrase (n=30), 100% were contacted, and 90% had MOUD referenced in treatment plan. However, PrEP was not provided on discharge for any patients in the study.

Conclusions: In this pilot study of two low barrier interventions for PWID, we found that both interventions are feasible and acceptable, but HIV prevention with PrEP is still lacking. Future directions are to expand the sample size to test if these interventions will increase MOUD and PrEP uptake in a Southern cohort of PWID.

Changes in Opioid Use Disorder Treatment during COVID-19 and Their Impact on American Indian/Alaska Native Communities

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Background: The United States (US) declared drug overdose a public health emergency in 2017. The COVID-19 pandemic worsened this crisis, causing a 53% increase in overdose deaths, with American Indian/Alaska Natives (AI/AN) experiencing the highest rates of all racial groups. In response to the pandemic, some OUD treatment policies were relaxed, aimed at improving

access to care. However, given the severity of preexisting disparities in access to evidence-based OUD care, it is unlikely that these policy changes impacted all racial and ethnic groups equally.

Objective: This review examines how the state- and federal-level policies impacted access to medications for opioid use disorder (MOUD) during the COVID-19 pandemic. Due to the devastating impact of overdose and COVID-19 on AI/AN communities, we also examined the inclusion of these populations in the studies.

Methods: Our systematic review followed PRISMA 2020 guidelines. Included studies focused on U.S. state- and federal-level opioid policy evaluation published in English between December 2019-March 2023. We used a data-based convergent synthesis design to extract and synthesize findings and the Mixed-Methods Appraisal Tool to appraise studies.

Results: Forty-four studies met the inclusion criteria; most were quantitative descriptive studies (n=25). Only two studies included AI/AN as a possible category for ethnicity and both had less that 4% of the sample identifying as AI/AN. No papers specifically addressed the overdose crisis among AI/AN communities. The use of telehealth increased buprenorphine treatment initiation and retention, and no increase in overdose rates was associated with allowing for additional take-home doses of methadone or buprenorphine. However, lack of OUD treatment providers and technology limits access to treatment, especially for patients in rural areas.

Conclusions: The overdose crisis among AI/AN communities needs urgent attention. To address the disproportionate overdose rates among these populations, research focused on improving access to treatment must include them, and researchers should investigate community-engaged, culturally appropriate strategies for increasing access to quality OUD care and harm reduction resources.

Does Knowledge of the Peer Support Worker Role in Substance Use Disorder Treatment and Recovery Organizations Differ across Role and Organization Type?

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Background: Peer Support Workers (PSWs) play an important role within substance use disorder (SUD) treatment and recovery support organizations, yet they face ongoing challenges in effectively integrating into these workplaces. Previous research identified ‘an understanding of the peer role’ as a key factor for successful integration. This study investigates knowledge of the PSW role within the SUD service system.

Objective: Determine whether the level of knowledge of the peer role varies based on position (i.e., PSW vs. supervisor) or organizational type (i.e., treatment vs. recovery).

Methods: We surveyed PSWs (n=162) and PSW supervisors (n=49) in Missouri, from recovery (n =71) and treatment (n=137) organizations. The survey asked about PSW integration into treatment and recovery agencies, including questions about supervisors’ and other non-peer

colleagues' knowledge of the peer role. The relations between position (PSW vs. supervisor) and organization (treatment vs. recovery) type and a composite score of five knowledge questions (α=.89) were examined.

Results: Most participants endorsed high knowledge (mean = 20.06 out of 25). Organization type (p=.04), but not position type (p=.92) was associated with greater knowledge. Specifically, participants from recovery support organizations endorsed greater knowledge than those from treatment-based organizations.

Conclusions: Overall, the sample endorsed high knowledge of the peer role. Although we expected peers to demonstrate greater knowledge compared to supervisors, there were no significant differences across position types. Notably, a significant proportion of supervisors had lived experience with SUD themselves (69%), which may account for the null findings for position type. These supervisors may identify with peers and their roles in a similar fashion as PSWs, though sample size precluded examining differences in knowledge among supervisors as a function of their SUD history. Recovery organizations reported higher knowledge than treatment-based organizations, perhaps because recovery organizations are typically peer-led. Future research should explore the level of knowledge among supervisors who do not have lived SUD experience to determine if prior SUD history influences supervisors' understanding of the peer role.

Scurvy: An Unusual Complication of Alcohol Use Disorder

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Background: 65-year-old female patient presents to Family Medicine clinic.

Learning Objectives: Discuss the uncommon diagnosis and treatment of vitamin C deficiency in people with alcohol use disorder.

Case Presentation: A 65-year-old female with hypertension, tobacco use, and alcohol use disorder presents to Family Medicine clinic with her adult daughter. She is not currently on any medications. She complains of worsening peripheral neuropathy. The patient reports drinking one-fifth of liquor per day. She admits to having a very poor diet and eats little throughout the day. Also admits to having some mild gum bleeding while brushing her teeth. On exam, she appears malnourished and cachectic. She has poor dentition with no obvious bleeding. Cardiorespiratory and abdominal exams within normal limits. She does have decreased sensation in her bilateral lower extremities. Several corkscrew hairs are noted on her legs along with perifollicular petechiae. Labs obtained showed marked macrocytosis with MCV 118, low folate of 4.7ng/mL, low vitamin B12 of 136 pc/mL, and an undetectable vitamin C level. Alcohol cessation counseling was provided and dietary changes were recommended along with vitamin supplementation (daily multivitamin, thiamine, folate, B12, and vitamin C).

Discussion: Vitamin C deficiency, or scurvy, is a disease that has been well-documented for millennia but has become much less common in the modern age with increased availability of fresh foods and increased fortification of processed foods. Vitamin C plays an important role in

several biochemical processes including collagen production and folate pathways. The most specific signs/symptoms of scurvy are perifollicular petechiae, corkscrew hairs, and follicular hyperkeratosis. It can be diagnosed clinically, though serum vitamin C or leukocyte vitamin C levels can be useful as well. The best way to treat scurvy is to modify their nutritional status. Additionally, you can treat with 1000mg of vitamin C daily for a month to help supplement. Vitamin deficiencies are common in people with alcohol use disorders, though B vitamins are more commonly thought of and routinely checked. A complete history and physical exam, along with an increased index of suspicion for nutrient deficiencies, is important in people with alcohol use and other substance use disorders.

Does Illicitly Manufactured Fentanyl Use Impact the Experience of Opioid Withdrawal Among Community-Recruited People Who Inject Drugs?

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Background: Illicitly manufactured fentanyl (IMF) is more potent and shorter acting than heroin. Fentanyl's unique pharmacokinetic profile has implications for opioid withdrawal symptoms.

Objective: To examine whether IMF among community recruited people who inject drugs (PWID) was associated with opioid withdrawal episodes, frequency, and pain severity.

Methods: Opioid using, PWID were interviewed during 2021/22 in Denver, CO, and Los Angeles, CA about drug use patterns (type, route, and frequency) and opioid withdrawal symptoms (any, number, and pain severity) in the last 90 days (n=472). We used multivariate models to examine if IMF use patterns were associated with any opioid withdrawal, number of opioid withdrawal episodes, and pain severity (very/extremely painful).

Results: The sample was demographically diverse (52% white, 26% Hispanic, 10% American Indian, 6% Black, 6% other), 23% female or transgendered, and 50% under 40 years old. Participants were low income (53% monthly income below $1,000) and unhoused (84%). Opioid withdrawal symptoms were measured with a single item (Bluthenthal et al., 2020). At least one opioid withdrawal episode was reported by 74% of participants. Among those with at least one opioid withdrawal episode (n=350), mean opioid withdrawal episodes were 26.06 (SD=31.82; median=10, IQR=4, 36.75). Severe pain was reported by 51%. IMF use was considered by route (injected or other) and frequency (any or daily) over the last 90 days. Covariates included other drugs used (heroin, stimulants, nonmedical opioid use, sedatives, tranquilizers, methadone, and buprenorphine), known sociodemographic and economic factors associated with opioid withdrawal (i.e., incarceration, hospitalization, treatment). In multivariate models that controlled for confounding, we found that any IMF injection in the last 90 days was independently associated with at least one opioid withdrawal episode (adjusted odds ratio[AOR]=1.93; 95% confidence interval [CI]=1.12, 3.34), while daily IMF injection was positively associated with number of opioid withdrawal episodes (prevalence odds ratio [POR]=1.12; 95% CI=1.05, 1.19). Participants reporting daily IMF use had increased odds of very or extremely painful opioid withdrawal symptoms (AOR=1.71; 95% CI=1.02, 2.87).

Conclusions: Varied patterns of fentanyl use are associated with opioid withdrawal measures. Efforts to improve fentanyl-specific opioid withdrawal management are needed.

Eastern Missouri's Engaging Patients in Care Coordination (EPICC) 2016-2023: An Examination of Racial Differences in Intake Completion and Treatment Retention

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Background: Engaging Patients in Care Coordination (EPICC) is a peer-led, post-overdose outreach and treatment linkage program in the Eastern region of Missouri. Launched in 2016, EPICC peer recovery coaches (PRCs) connect people to local substance use disorder (SUD) treatment agencies within 24-48 hours. In 2020, in response to increased overdose deaths among Black people and lack of Black participant representation, EPICC expanded from hospital-based outreach to include community-based outreach (e.g., churches, agencies in predominantly Black neighborhoods).

Objective: To examine racial differences in EPICC program outcomes (intake completion, treatment retention) across encounters between 2016 and 2023 and the impact of expanded outreach.

Methods: Chi-square and binary logistic regressions were conducted to examine racial differences in 1) completed intakes for SUD treatment services within the first 30 days of EPICC enrollment and 2) retention in SUD treatment at 30 days, 3-months, and 6-months post EPICC enrollment. We also compared the magnitude of racial differences before and after the launch of EPICC's racial equity initiatives (December 2016-2020 vs December 2020–2023). Data included 13,292 participants aged 14 and older (Median age = 36, 50.2% Black, 49.8% White, 67.1% Male, 32.6% Female).

Results: Across the study period (2016-2023), Black participants were less likely than White participants to complete an intake (44% vs 56%) or to be enrolled in SUD services at 30 days (Black=44%, White=56%), and 3 months (Black=46%, White=54%) post EPICC enrollment (ps 001). There were no overall racial differences at 6 months post EPICC enrollment. Regarding differences across time periods, post-2020, racial disparities in intake completion reduced (41% less likely vs. 21% less likely, $p<.001$), whereas disparities in 30-day retention increased (35% less likely vs. 37% less likely, $p=.01$). No differences in 3- or 6-month retention across time periods were found in multivariate analysis.

Conclusions: Post-overdose treatment linkage outcomes revealed racial disparities, particularly within the first 30 days of participation. Targeted efforts to reduce these disparities had mixed results. Future programs should proactively identify and mitigate barriers to initial treatment connections and early treatment retention.

Leveraging Asynchronous Learning to Satiate Prescriber Compliance for the Medication Access and Training Expansion (MATE) Act

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Background: Substance use and substance use disorders continue to impact Americans and their families. To address this public health crisis, the Consolidated Appropriations Act of 2023, including the Medication Access and Training Expansion (MATE) Act, requires new or renewing Drug Enforcement Administration (DEA) registrants to have completed at least 8 hours of training on substance use disorders. The required training hours can be completed through classroom learning, professional society meetings, virtual platforms, or other accredited continuing education sources.

Objective: Develop an easily accessible online platform for both Northwell and non-Northwell prescribers to choose from a variety of CME-accredited educational programs to meet the 8-hour MATE Act requirement.

Methods: In partnership with the Northwell Office of Continuing Medical Education (OCME) and Internal Communications, an easily accessible virtual platform was rapidly developed to house a portfolio of existing CME-accredited education focused on pain and substance use care, propelling an organizational mission to humanize care through education. No-cost educational options included series focused on Harm Reduction, Pain Care, Hospital-Based Opioid Treatment, and Personal Perspectives. Options were varied to allow providers to choose what they felt was most relevant to their practice. Following virtual platform and content approval, Internal Communications marketed the availability for wide-scale dissemination. Upon completion of an educational offering, learners are required to complete the Northwell Health CME Evaluation and then receive a completion certificate for their records. Registrations and completions were tracked via a customized dashboard.

Results: Series completions since go-live (5/15/2023 – 4/26/2024)

- Pain Care Educational Series (7.75hrs): **1,076**
- Harm Reduction Educational Series (3.5hrs): **1,203**
- Hospital-Based Opioid Treatment Educational Series (6.75hrs): **551**
- Personal Perspectives (2 series – 2.5hrs each): **1,407** combined

Surveys assessed achievement of learning objectives, for example, Pain Care participants reported they could apply multimodal pain care strategies in their practice, and post-survey results showed 90.6% off respondents “agree/strongly agree” they are prepared to assess pain (vs. 68.8% on pre-survey).

Conclusions: Easily accessible virtual asynchronous modules prove successful in delivering content for federally mandated educational requirements to prescribers with a DEA license. Virtual platforms can be easily updated to adjust for future educational mandates and newly available information.

Improving Tuberculosis (TB) Testing and Treatment of Latent Tuberculosis Infection (LTBI) in Patients with Substance Use Disorders (SUD) at a Community Health Center in Seattle, Washington

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Background**:** International Community Health Services (ICHS) is a FQHC in the Seattle area. ICHS has engaged in both internal projects and CDC-funded research on TB and LTBI. Prior and current studies focused on high-risk non-US-born patients. Patients with SUD, despite being high-risk for TB, have not been included.

Objective**:** At ICHS, according to internal reporting on diagnosis codes, approximately 900 patients across three clinics had a diagnosis of SUD between 10/2021 - 11/2023, excluding tobacco use disorder. Despite recommendations from the CDC and WHO to screen patients with SUD, a significant drop off was noted in eligible high-risk patients with SUD not being tested for TB. Providers reported not screening this population due to lack of awareness of guidelines, time required to explain TB screening, and hesitancy to treat patients with SUD because of drug interactions.

Methods: Data on the LTBI care cascade among patients with SUD between October 2021–November 2023 was obtained. Demographic and clinical data of patients with a substance use disorder who had at least one clinical visit at ICHS from October 2021 to November 2023 were extracted from the electronic medical record. The steps in the LTBI care cascade include identifying those who are eligible for LTBI testing, those who were tested, tested positive, chest x-ray ordered, LTBI diagnosis received, LTBI treatment prescribed, LTBI treatment started, and LTBI treatment completed. We included patients 18 and above with a substance use disorder diagnosis using ICD 10 diagnosis codes.

Results: The baseline data showed only 13% of the eligible high-risk patients with SUD were tested for TB infection. Additionally, only 50% of patients diagnosed with LTBI after radiology review were offered treatment, 71% of those who were offered treatment started treatment, and 80% of those who started LTBI treatment completed treatment.

Conclusions: The largest drop off in the LTBI care cascade among high-risk patients with SUD was at the step of TB testing. More interventions are necessary in the primary care setting to increase the proportion of high-risk persons with SUD who are tested and who complete LTBI evaluation and treatment.

Use of Cessation Resources and Quit Attempts Among Parents and Adolescents Participating in a Pilot Randomized Control Pediatric Clinic Based Smoking and Vaping Cessation Intervention

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Background: Smoking remains one of the strongest risk factors for premature mortality and morbidity. The Clinical Effort Against Secondhand Smoke (CEASE), a screening and facilitated referral intervention to help smokers quit, has been shown effective to help parents quit smoking in the U.S., but has not yet been implemented in Canada, or tested among teens and for vaping cessation.

Objective: To determine nicotine cessation resource utilization and quit attempts among participants in the first study of CEASE in Canada.

Methods: We conducted a pilot RCT in 5 general and subspecialty pediatric clinics in Montreal, Canada, between February 2023 and May 2024. Participants were either: 1) parents (>18 years) accompanying their child to a scheduled medical appointment, or 2) adolescent patients 14-17 years old, who reported smoking tobacco and/or vaping nicotine in the previous 7 days. Intervention group participants received facilitated access to existing behavioural (counseling, online and text message support) and pharmaceutical (nicotine replacement therapy) cessation resources at 0-, 1-, 3- and 6-months. Control group participants received facilitated access to resources only at 6 months. Baseline and follow-up questionnaires were completed. We present descriptive statistics, and use of cessation resources and self-reported nicotine quit attempts are compared between parent and adolescent participants in the intervention vs control groups using Fisher's exact test.

Results: In total, 74 parents (mean 40.0 ±6.5 standard deviation (SD) years) and 54 adolescents (mean 16.1 ±1.2 (SD) years) participated in the study. A majority of parent (73%) and adolescent (55.6%) participants identified as female. Three-quarters of parents reported cigarette use (75.4%), while nearly two-thirds of adolescents reported e-cigarette-only use (61.1%). During follow-up, self-reported use of cessation resources was 7.9% (intervention group) vs 8.3% (control group) among parents ($p>0.99$) and 14.8% vs 3.7% among adolescents ($p=0.35$). In addition, 18.4% vs 2.8% of parents ($p=0.06$) and 14.8% vs 7.4% of adolescents ($p=0.67$) reported quitting nicotine for more than 7 consecutive days.

Conclusions: Use of cessation resources was low among participants in both intervention and control groups. Though differences were not statistically significant, higher quit rates in the intervention group suggest pertinence for a fully powered effectiveness trial.

A Machine Learning Risk Prediction Model for Predicting Treatment Retention in Medication for Opioid Use Disorder

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Background: Veterans are twice as likely to die from opioid overdose than non-veterans. Patients who are not treated with MOUD can have a return to opioid use rate as high as 90%. Predicting MOUD treatment dropout using a machine learning (ML) risk prediction model may assist retaining veterans in MOUD treatment.

Objective: We aim to use a ML risk prediction model to examine which factors determines MOUD treatment success in veterans with opioid use disorder (OUD) at VA Pittsburgh.

Methods: We focused on veterans who received OUD treatment at the VA Pittsburgh from 2000 to 2022 and included veterans who met criteria for OUD and/or with related complications (n=3,881). Treatment sessions were defined as ongoing MOUD treatment with no breaks of 30+ days or switching of medication. Treatment success was defined as MOUD of 180+ days. We looked at treatment session with IM & Oral Naltrexone, Methadone, and Buprenorphine. We used several machine learning (ML) algorithms that used Pre-treatment descriptors (83) to build predictive models.

Results: We didn't have enough samples or treatment success rate with IM & Oral Naltrexone to build a ML model. Methadone data wasn't consistent. Buprenorphine data (2,586 patients, 8,847 treatment sessions) was of high quality, and we focused our ML efforts on this data. Overall, 33% of Buprenorphine treatment sessions were successful (180+ days). A logistic regression model with 18 predictors performed as well or better than more complex ML algorithms. This was evaluated in a hold-out sample (n=2,068) that was not used in model development. The most important predictors of treatment success were Number of previous treatment sessions, Elixhauser Count, and recentcy of Behavioral Health and Medical visits. Other key predictors include drug and alcohol test results, comorbidities, and OUD treatment history.

Conclusions: We found that ML models can successfully predict the likelihood of Buprenorphine MOUD treatment success/failures. The key predictors identified by the ML models also provide helpful clinical insights and helpful directions to pursue in further research into OUD treatment and risk. Future work is needed to incorporate Methadone and Naltrexone MOUD and extract insights into treatment success with these medications.

Utilizing Dyadic Perspectives to Address Family Stigma and Attitudes Towards Medication for Opioid Use Disorder (MOUD) Among Women

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Background: Stigmatization is one of the most common reasons for substance use treatment dropout and lack of family support, often fueled by stigmatization, is associated with such dropout. Research, however, has rarely examined family member attitudes, family relationships and stigma for MOUD among women with an OUD.

Objective: We utilized a convergent mixed methods design to examine the relationship between stigma and attitudes towards MOUD among both women with OUD and one identified adult family member.

Methods: 22 participants completed surveys and focus groups or interviews (18 women with OUD and four family members). Inclusion criteria included: a) identifying as female; b) age 18 or older; c) reporting opioid use at the time of treatment intake; d) receiving MOUD from a health professional or the treatment center; and e) being uninsured or insured through Medicaid.

Adult family members who were recruited were identified by clients enrolled in treatment as having current, regular interaction with the client. Stigma was measured using the Internalized Stigma of Substance Use Scale (ISSA), ISSA for caregivers (ISSA-C), and Perceived Stigma of Substance Abuse Scale (PSAS).

Results: For women with OUD, older age was associated with greater internalized stigma (r=.62; p=.01). Perceived stigma was related to the belief that substances help one to cope with stressors (r=.56; p=.01). Women and their family members reported experiencing similar stigma from the women's OUD/MOUD (M = 2.42, SD=0.35; M=2.40, SD=0.72, respectively). Interestingly, on the Addiction Beliefs Inventory both women (M= 22.76, SD=3.01) and family members (M=22.75, SD= 2.06) rated substance use most highly as a coping mechanism, and substance use as a disease second highest (M=16.94, SD=3.44; M=17.33, SD=1.53, respectively). Qualitative data identified relational themes around stigma, psychoeducation related to MOUD to address such stigma, and complicated family relationships due to OUD/MOUD.

Conclusions: Engaging family support systems has been identified as an integral part of OUD treatment, however, stigma from family members and internalized stigma, especially among middle-aged and older women, may continue to adversely impact MOUD adherence. Providing psychoeducation about MOUD for family members may help to improve attitudes toward MOUD and better support women with OUD.

Exploring the Role of Polysubstance Use Disorders on Depression and Suicidality Among Residential OUD Patients

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Background**:** Individuals with opioid use disorder (OUD) are at high risk for depression and suicidality. Research suggests that this risk is particularly pronounced among OUD patients with polysubstance use disorders (PUD). While other SUDs, such as alcohol (AUD), stimulants (StimUD), and cannabis (CUD), have also been shown to elevate risk for depression and suicide, the impact of these SUD comorbidities on depression and suicide within OUD treatment populations is not fully understood.

Objective**:** The aim of this exploratory study was to examine the potential link between PUD, depression, and lifetime suicide attempt among inpatients with OUD using extracted electronic health records (EHR) data.

Methods**:** EHR data exclusive to OUD patients admitted to a public-sector SUD treatment provider in Maryland during 12/1/2020-11/30/2021 were examined. Primary variables used were self-reported lifetime depression (y/n), depression in the month before admission (y/n), and lifetime suicide attempt (y/n). Additional variables included were AUD, StimUD, and CUD diagnoses. PUD types were categorized into eight different groups based on the number and pattern of comorbidities. Logistic regression models were used to determine associations between PUD types and depression and suicidality outcomes.

Results: Among 1,305 individuals with OUD included in the analyses, 71.52% reported lifetime depression, 64.52% reported past month depression, and 17.13% reported a lifetime suicide attempt. OUD patients with additional co-morbid SUDs (73.9%) were significantly more likely to experience both lifetime and past month depression compared to patients with OUD alone (26.09%). OUD + AUD + StimUD was the strongest predictor for both past month depression (OR = 4.07; p = 0.000) and lifetime depression (OR = 5.19; p = 0.000). Patients with additional co-morbid SUDs were also more likely to have a lifetime suicide attempt. OUD + AUD + StimUD + CUD was the strongest predictor of having a lifetime suicide attempt (OR = 3.25; p = 0.001).

Conclusions**:** Our findings support previous research suggesting that individuals with PUDs are more susceptible to depression and suicidality than those who have a single SUD and extend previous work to a treatment-seeking OUD sample. These findings emphasize the importance of comprehensive assessments and tailored interventions for individuals with OUD and PUDs.

Pharmacist Involvement in Motivational Interviewing Intervention for Patients with Prescription Opioid Misuse Behaviors

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Background: Community pharmacists are an underutilized resource to address opioid medication misuse among patients.

Objective: It is unknown in the field if high fidelity motivational interviewing (MI) targeting opioid medication misuse can be successfully integrated into structured medication therapy management (MTM) sessions delivered by pharmacists.

Methods: *Design/participants*: We conducted an exploratory analysis of recordings from three pharmacists who participated in one 16-hour MI training followed by monthly one-hour supervision sessions during 2 years of a behavioral health randomized clinical trial using MTM to target opioid medication misuse.
Procedure: 20-minute segments of sessions (N=47) that employed MI skills were coded using the MI Treatment Integrity Coding Manual (MITICM) 4.2.1.
Assessments/analyses: Frequencies/percentages and means were used to describe (1) demographic/health characteristics of intervention recipients and (2) fidelity of MI skills demonstrated by pharmacists including: global scores, complex/simple reflections, and MI adherent/non-adherent behavior counts. Competency is achieved with scores of 3 out of 5 in technical and 3.5 out of 5 in relational global scales and 40% rates of complex reflections. Proficiency-mastery is achieved with 4 out of 5 in technical and relational global scales and 50% complex reflections.

Results: All intervention recipients reported opioid medication misuse, were approximately 50 years old, and were mostly White (78.7%). Recipients screened positive for ≥moderate severity: post-traumatic stress (59.6%), depression (51.1%), and opioid use disorder (29.8%). Relational and technical global scores averaged 3.6 and 3.8, respectively. Percentage of complex reflections

averaged 60.2%. MI adherent behavior counts, on average, were 11 times greater than non-adherent behavior counts (adherent mean= 4.4, non-adherent mean=0.4) for all sessions.

Conclusions**:** Pharmacists delivering MTM sessions targeting opioid medication misuse can effectively integrate MI skills and receive consistently competent and/or proficient scores following structured training/supervision. Pharmacists utilizing MI withing MTM sessions have the potential to reduce misuse and opioid related risk.

What Is My Job, Anyway? A Textual Analysis of Peer Support Worker Job Postings

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Background: One frequently cited struggle peer support workers (PSWs) encounter is feeling employers do not understand their peer role, and PSWs are thus expected to perform many job tasks outside their scope. Previous research has shown that some ("authentic") expectations rely on PSWs' lived experience and training while other job expectations are more generic. Although many job requirements reflect concrete tasks to be performed in the job, intangible characteristics distinct to PSWs, such as having lived experience, are also important requirements for employment.

Objective: We aimed to explore what PSW job postings convey about how agencies conceptualize the use of PSWs. Specifically, we asked: 1) Do listed PSW job expectations differentially reflect more authentic or generic expectations? 2) Do authentic and generic expectations differ in how likely they are to be tangible tasks vs. intangible characteristics?

Methods: We conducted thematic textual analysis of 40 Missouri-based PWS jobs posted in 2023-2024. Codes were grouped as authentic or generic, and then as 'tangible task' or 'intangible characteristic.'

Results: Within the postings, 55% of expectations were authentic and 45% were generic. Authentic expectations were more likely to be intangible characteristics (n=98; 19%) compared to generic expectations (n=30; 7%). The most prevalent authentic expectations included: building recovery skills (n=51), mentoring (n=51), and collaborating with other behavioral health professionals (n=51). The most prevalent generic expectations included: building life skills (n=43), agency programming (n=41), and making referrals (n=34).

Conclusions: Job descriptions for PSW roles included more authentic than generic expectations. Those authentic expectations, however, were more likely to reflect intangible characteristics than were generic expectations. In other words, more of the generic codes referred to what the PSW would *do* in the job, and more of the authentic codes referred to who the PSW *is*. This suggests agencies expect PSWs to spend more time completing generic tasks than the more authentic tasks for which peers are uniquely positioned. Although there is no consensus about the ideal ratio of generic to authentic tasks, shifting job descriptions to include more authentic tangible

tasks could improve PSW role clarity, job satisfaction, and job retention in treatment and recovery organizations.

Evaluation of Barriers and Interventions for Emergency Department-Initiated Naltrexone for the Treatment of Alcohol Use Disorder

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Background: Alcohol use disorder (AUD) affects 100 million individuals worldwide and is a frequent reason for visits to the emergency department (ED). Recent studies have shown that initiating naltrexone in the ED is effective at reducing drinking behavior; however, this practice is underutilized.

Objective: The aim of this study is to 1. identify barriers patients and clinicians face when considering initiating naltrexone in the ED and 2. identify which interventions would be most helpful in increasing naltrexone prescribing in the ED.

Methods: Adopting the contextual inquiry (CI) methodology, we conducted ED site-visits in November 2023. Interviews were open-ended to gain holistic insights into what hinders the initiation of medication for alcohol use disorder (MAUD). Subjects included physicians, nurses, and physicians' assistants. A mixed-method survey was then conducted in March 2024, distributed via email to all emergency medicine attending physicians, fellows, and residents of the UPHS health system (n = 160). 97 responses were received (61% response rate). The survey measured physician comfort in performing various aspects of AUD treatment; the significance of barriers identified on CI and the value of potential interventions were measured using a 10-point continuous scale.

Results: The CI highlighted barriers faced by clinicians including a lack of an AUD screening protocol, lack of awareness of MAUD, and a practice of deferring treatment for non-emergent health issues. Patient barriers included discomfort in ED facilities, unfamiliarity with MAUD, and difficulty accessing outpatient care. On the survey, physicians identified to be least comfortable with prescribing and answering questions about naltrexone to treat AUD. Additionally the interventions rated to be the most helpful included a pathway for naltrexone, adding a naltrexone order set for discharging patients with AUD, and having substance use navigators to help connect patients to treatment.

Conclusions: We found that the under-treatment of AUD in the ED is a multifaceted issue that underscores the need to provide educational interventions to both patients and clinicians. Additionally, the results emphasize the need to simplify and streamline the processes of initiating MAUD and connecting individuals with AUD to outpatient care.

Culturally Tailored Treatment for Latines with a History of Adverse Childhood Experiences, Suicidality, and Current Substance Use Disorders

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Background: The relationship between adverse childhood experiences (ACEs) and suicide attempts is a significant public health and mental health concern among Latine individuals. Notably, among different Latine subgroups, suicidality differs, with Puerto Ricans (PR) having a higher prevalence of suicidality, along with depression, substance use disorder (SUD), and ACEs, compared to other Latine subgroups (Alegria et al., 2007; Baca-Garcia et al., 2011).

Objective: Despite this, there remains a gap in our understanding of the intersectionality between ACEs, Puerto Rican ethnicity, social determinants of health (SDOH), and suicide attempts among Latine individuals with substance use disorder (SUD).

Methods: Bivariate statistics and bi-nominal logistic regression were used to analyze assessment data on 270 adults, the majority of whom identify as Latine (89%), receiving substance use treatment at a bilingual/bicultural integrated behavioral health facility serving Latine communities in Massachusetts to examine the relationship between ACES, Puerto Rican ethnicity, and history of suicide attempts. We controlled for SDOH and SUD factors associated with suicide attempts at the bivariate level.

Results: Twenty-nine percent of the sample and 36% of PRs reported suicide attempts. Bivariate statistics demonstrate that PR clients, clients with higher ACES scores, and unemployed clients were significantly more likely to report a history of at least one suicide attempt. The logistic regression identified that higher ACES scores pose a significant risk for suicide attempts. For every one-unit increase in ACES scores, the odds of attempting suicide were 1.307 higher. In addition, unemployed clients were 3.6 times more likely to have attempted suicide than employed clients.

Conclusions: Findings identify high rates of suicide attempts for this sample of Latines, particularly for PRs entering SUD treatment. Acknowledging the significant influence of cultural background on mental health, Casa stands out as it crafts its interventions by providing culturally tailored treatment plans. This approach ensures that their clients receive linguistically appropriate care and culturally relevant treatment, strengthening the bond between the healthcare provider and the Latine community. This approach aims to empower their clients to overcome their addictions and trauma, making it a model for effective community-based mental health and substance use care.

Inpatient Addiction Medicine Consult Rotation Improves Learning Outcomes

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Background: Inpatient addiction consult services (ACS) have demonstrated clear benefits to morbidity and mortality of patients with substance use disorders (SUDs) [1]. Substantial evidence indicates that American physicians do not receive sufficient education in caring for

patients with SUDs [2], causing decreased access to quality care. Consult services of many specialties are valued by trainees [3], yet little quantitative data exist on the effectiveness of addiction medicine consult rotations in promoting specific learning objectives.

Objective: Assess changes in learners' confidence in learning objectives, correlations with rotation length, and perceptions of addiction medicine services following an ACS rotation at an urban, safety-net hospital.

Methods: Participants included students, residents, fellows, and attendings. They were given pre-rotation and post-rotation surveys assessing confidence in *medical*, *attitude-oriented*, and *logistical* learning objectives on a 5-point Likert scale. We report mean pre/post differences in ratings, mean post-rotation ratings, and Pearson correlation coefficients of mean changes with rotation length. Perceived value was assessed on a visual analog slider scale (range 0-100) asking, "how disappointed..." participants would be without local addiction services offered.

Results: For abstract submission,16 learners are included, with data to be updated for presentation. Medical learning objectives (mean difference 1.58 [$p<0.01$], post-rotation mean 4.32), attitude-oriented objectives (mean difference 1.67 [$p<0.01$], post-rotation mean 4.31), and logistical objectives (mean difference 1.81 [$p<0.01$], post-rotation mean 4.00) all improved across the rotation. Change in confidence in attitude-oriented objectives (unadjusted correlation coefficient 0.54, $p<0.05$), but not other objectives, correlated significantly with cumulative days on service. Perceived value of addiction medicine services did not change across the rotation (mean difference 3 ($p=0.27$), post-rotation mean 88.3).

Conclusions: Learners who rotated within this ACS increased in confidence in various outcomes related to medical, attitude-oriented, and logistical aspects of care for patients with SUDs. Interestingly, medical and logistical outcomes did not statistically significantly correlate with time spent on the rotation. This may be because of inadequate power or high pre-test scores but also emphasizes the need to ensure that quality learning opportunities persist over longer rotations. Further work should be done to convey the importance of addiction care to trainees.

Traveling to the Bus: A Retrospective Study of Distance Traveled to Reach a Mobile Buprenorphine Unit

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Background: Access to Medication for Opioid Use Disorder (MOUD) is important to prevent opioid overdose deaths, yet only 22% of people with opioid use disorder (OUD) in 2021 received MOUD. Low-threshold programs, particularly mobile units, provide easily accessible MOUD in neighborhoods with high overdose rates and often patients prefer to continue care in this model rather than transitioning to an alternative clinic. The Community Outreach Intervention Projects (COIP) Mobile Outreach Unit (MOU) provides low-threshold buprenorphine, primary care, and harm reduction in Chicago.

Objective: To evaluate the distance traveled by patients to access OUD treatment via the COIP MOU.

Methods: A retrospective chart review included patients who received treatment with buprenorphine for OUD by the COIP MOU in April 2023. The primary outcome was the distance traveled for COIP MOU care, estimated by the distance from the center of the patient's documented home zip code to the center of the zip code where MOUD services are provided from the COIP MOU. Secondary outcomes include patient demographics, patient-reported substance use history, and total number of visits between April 1, 2023 and November 28, 2023.

Results: A total of 81 unique patients from 31 different zip codes were seen over 145 visits in April 2023. The average age was 48 years (SD = 11 years) and 67% of patients were Black. All patients reported opioid use and 57% reported concurrent stimulant use. Route of use was primarily via insufflation (80%), followed by injection (27%), oral (2.5%), and subcutaneous (1%). Patients traveled a mean of 4.9 miles (SD = 4.2 miles), with 15% of patients traveling over 10 miles and up to 17 miles for care. Patients from <5 miles had an average of 7.5 total visits/patient and patients from >5 miles had an average of 10.1 total visits/patient.

Conclusions: Patients often travel distances to obtain opioids and may access OUD treatment in these areas via mobile units. Patients follow up at similar rates regardless of distance traveled, suggesting that convenience alone does not drive patient engagement in low-threshold MOUD care.

Integrating Addiction Medicine into a Liver Transplant Program

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Background: Rates of alcohol associated liver disease (ALD) have risen. ALD is now the leading indication for liver transplantation (LT) in the US. However, those with ALD remain unlikely to receive treatment for AUD and face barriers to LT. Few centers have implemented programs that offer collaborative care models for individuals with ALD and AUD.

Objective: In 2023, we launched the Healing Alcohol-associated Liver Disease Together (HALT) program that offers collaborative care services of hepatology, substance use counseling, and addiction medicine consultation. The objective was to improve the health of patients with ALD along a continuum of transplantation needs.

Methods: Gastroenterologists, hepatologists, primary care clinicians, LT social workers and post-LT providers refer patients with current or pre-LT ALD and unhealthy substance use to HALT for asynchronous, video-based telemedicine visits for ALD management, motivational interviewing, consultation on medications for addiction treatment, and psychosocial resources. We describe the program, its target population, and early outcomes for patients seen by the addiction medicine physician.

Results: From 09/2023 to 03/2024, 39 patients were seen for addiction medicine services with an average of 1.7 visits each (range 1-5). 4 (10%) patients were undergoing LT evaluation, 6 (15%) post-LT, 29 (74%) without immediate need for LT referral or not considered LT candidates. Patients were mean age 51 years, 23 (64%) male, 13 (33%) female, 20 (51%) white, 9 (23%) Latine. They lived in 17 counties across California. 67% were publicly insured. 36 (92%) had AUD, and 9 (23%) had nicotine or drug use disorder. 30 (77%) had cirrhosis with average Model for End-Stage Liver Disease score of 13.5. 30 patients (83%) were recommended medication for AUD: 18 (50%) naltrexone, 11 (31%) gabapentin, 8 (22%) acamprosate, and 1 (.02%) topiramate.

Conclusions: Integrating addiction medicine into a LT program fills the unmet need to address AUD that lays at the root of ALD and historically has excluded individuals from LT candidacy. Co-management of ALD and AUD is critical both pre- and post-LT. Implementation via telemedicine increased access to AUD treatment for patients of a transplant center that serves a large geographic region.

The Road to Recovery Initiative – Preliminary Results from Year 1 of a Novel Program of Substance Use Care in Vancouver, Canada

Brittany Dennis, MD; Travis de Wolfe, PhD; Erika Mundel, PhD; Harmony Johnson, MHA; Andrea Ryan, MD; Seonaid Nolan, MD - University of British Columbia

Background: Road to Recovery (R2R) is a new model of substance use care implemented in Vancouver, Canada in September 2023. The overall aims are to: (1) provide on-demand access to addiction care; (2) match individuals with a substance use disorder (SUD) with the most appropriate care setting; and (3) seamlessly support individuals across different phases/transitions of their recovery journey.

Objective: To characterize R2R's impact, an observational cohort study was created. Herein we seek to describe the baseline characteristics and 30-day health and substance use outcomes from the first-year of cohort participants recruited between October 2023 – October 2024.

Methods: Adults ($\geq$ 18 years) with a SUD who access hospital-based withdrawal management as part of R2R at St. Paul's Hospital in Vancouver, Canada are invited to complete a baseline and 12-month follow-up questionnaire and consent to database linkages over a 10-year study period (5-years retrospective and 5-years prospective to study enrolment).

Results: Between October 2023 and May 2024, 87 participants completed the study's baseline questionnaire. The mean age was 40 years (standard deviation [SD]: 13), 32% self-identified as female gender and 62% as ethnically White. Regarding SUD, opioid (53%) and alcohol use disorders (44%) were the most common, followed by stimulant (29%) and sedative use disorders (18%). Approximately 77% and 23% of participants reported a history of overdose ever and in the previous 6-months respectively. Furthermore, 87% and 62% of participants report visiting an emergency department (mean number ED visits: 4.4 [SD: 4.8]) or being admitted to hospital (mean number of hospitalizations: 4.0 [SD: 3.7]) in the previous 6 months respectively. During hospital admission, decompensation in psychiatric (30%) and medical comorbidities (22%) were

observed with a total of 13% of patients requiring transfer to a medical ward and 4% requiring critical care support.

Conclusions: While R2R study recruitment is ongoing and attracting a diverse population, preliminary findings demonstrate a majority of participants to be middle-aged, male and White, with a high degree of medical acuity, seeking treatment for opioid and/or alcohol use disorders. Ongoing data collection seeks to characterize the impact of this model of care on treatment trajectories among R2R participants.

Medications for Opioid Use Disorder: Optimizing Withdrawal Management in the Treatment of Endocarditis

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Background: Infective endocarditis is a devastating consequence of injection drug use due to a lack of access to resources and clean use supplies. Those with opioid use disorder (OUD) face known stigma in healthcare settings, often resulting in inadequate treatment of their OUD leading to incomplete treatment of comorbid conditions including pain management. Continuation or initiation of medications for opioid use disorder (MOUD) aids in withdrawal, provides fulfillment of baseline opioid requirements to allow focus on acute pain control, and promotes positive health outcomes.

Objective: This quality improvement project's focus is to determine the impact of MOUD on withdrawal management and pain control in patients hospitalized with infective endocarditis, as well as one-year readmission rates and mortality.

Methods: This sample observed patients admitted to the hospital from January 2021-December 2021, and a year after admission (January 2022-December 2022), with a diagnosis of infective endocarditis and OUD.

Results: From January 2021 to December 2021, 65 people met study criteria. The average age was 37.4. 47% of patients were male (31/65) and 92% were Caucasian (60/65). 81% were actively using substances (53/65); 45/65 using only opioids (69%) and 21/65 using both stimulants and opioids (32%). This was the first episode of endocarditis for 67.6% of patients (44/65). Regarding inpatient management, 10/65 (15.4%) received only methadone, 9/65 (13.8%) received only buprenorphine, 10/65 (15.4%) received only opioids, and 10/65 (15.4%) received no pain medications. 18/65 (27.6%) received both methadone and opioids and 7/65 (10.7%) received buprenorphine and opioids. 20/65 (30.7%) left against medical advice; 1/20 had drug paraphernalia, 2/20 left due to continued opioid withdrawal (on methadone or methadone with opioids). Of the 40% (26/65) readmitted, 42% were on a combination of MOUD and opioids. 17% (11/65) expired within the year and 36% of this group were prescribed only opioids.

Conclusions: The data demonstrates the importance of acute inpatient withdrawal management. While it doesn’t demonstrate significant efficacy between methadone and buprenorphine, it

reveals the possibility patients may be more willing to engage in acute care settings if they had previously been treated for acute pain and withdrawal while hospitalized.

Assessing and Addressing SUD Stigma Amongst Medical Students Using Interactive Modules

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Background: Stigmatizing encounters with healthcare providers deter patients from seeking effective substance use disorder (SUD) treatments. Education that directly addresses SUD stigma may improve treatment outcomes and promote equitable treatment of individuals. This project uses the educational frameworks of cultural humility and structural competency to guide students in understanding how individual factors and structural powers lead to health inequity.

Objective: Study aims were to (1) collect baseline data on attitudes surrounding SUD and (2) develop a technology-based SUD stigma intervention.

Methods: Third-year medical students completed SUD stigma surveys between August 2020 and April 2022 before starting an OBGYN Addiction Medicine clerkship. SUD stigma was assessed with the Medical Condition Regards scale (MCRS) consisting of 10 items using a 6-point Likert scale. A mean score was generated for each item with lower scores indicating higher stigma (range 1-5). Using data from the survey and a previously existing SUD curriculum, a multidisciplinary team created a virtual stigma intervention for medical students.

Results: For aim 1, 57 students completed surveys (90% response rate) with a mean MCRS score of 4.63 (SD=0.68), indicating low-moderate levels of stigma. Specific questions evaluated include: “Insurance plans should cover patients with SUDs to the same degree that they cover patients with other conditions”: 5.45 (SD=.84); “Working with patients with SUD is satisfying”: 4.78 (SD=1.06); “There is little I can do to help patients with SUD”: 4.68 (SD=0.90); “I wouldn’t mind getting up on call nights to care for patients with SUD”: 4.40 (SD=1.20). For aim 2, the newly developed intervention includes four modules that can be freely accessed online: (1) Education on SUDs and the biopsychosocial determinants of addiction, (2) Stigma Acknowledgement, (3) Patient Perspectives and (4) System Troubleshooting: an analysis of personal biases using a “choose-your-own-adventure” format.

Conclusions: Our survey results indicate the need for improved stigma-informed SUD education among rising medical providers. Our technology-based intervention represents a promising approach to educate healthcare professionals about SUD while also reducing stigmatization. Our results indicate that the pilot trial of this novel intervention is warranted.

Methadone and QT Prolongation: Supporting Patient Autonomy

Anne B. Duckles, MD, MPH; Sean Schlossers, MD - Cooper University Hospital

Background: Methadone is a lifesaving medication for the treatment of opioid use disorder (OUD), with over 350,000 patients in the United States receiving methadone treatment. Methadone has been shown to reduce overdose deaths and decrease the spread of HIV and hepatitis C. While generally safe, methadone can cause prolonged QT and associated cardiac arrhythmias, including Torsades de Pointes (TdP). As providers, it is our responsibility to not only be aware of the complications of methadone treatment, but also consider how to support our patients who have experienced these complications in ongoing recovery.

Learning Objectives: 1) Understand the cardiac risk of methadone, 2) Recognize the importance of patient autonomy in treatment for OUD, and 3) Consider the importance of multidisciplinary care in complicated OUD.

Case Presentation: GM is a 70-year-old man with a history of OUD on methadone who presented after being found unconscious. Cardiac monitoring showed polymorphic VT consistent with TdP. GM converted spontaneously to sinus rhythm with a QTc of 620 ms. QT prolongation was thought to be related to methadone and improved after discontinuation. GM was started on buprenorphine but experienced significant nausea and vomiting. He was discharged without medication for OUD. The timeline below highlights GM's difficulty in starting buprenorphine and ongoing fentanyl use:

- June 2023: admitted with TdP, methadone stopped
- July 2023: returned to fentanyl use
- September 2023: restarted methadone 80
- November 2023: maintained recovery on methadone 80 mg
- December 2023: QTc 545, methadone discontinued, started suboxone 24 mg
- January 2024: patient self-discontinued suboxone, returned to use
- April 2024: attempted to restart suboxone, ongoing fentanyl use

Discussion: This case raises important and challenging questions about patient autonomy in methadone treatment. GM has expressed desire to resume methadone and understands the risks, specifically weighing the risk of cardiac arrhythmia against fentanyl overdose. However, GM has been unable to restart methadone due to concerns about medical liability and risk. It is crucial for us to consider an individualized approach to this patient’s care. Less conventional options, such as an ICD for secondary prevention to facilitate methadone treatment and clear documentation of a thorough risk/benefit conversation may lead to more sustained recovery.

The Black Hole: A Case of Persistent DXM-Induced Psychosis

Anne B. Duckles, MD, MPH; Ryan Schmidt, MD - Cooper University Hospital

Background: Dextromethorphan (DXM) is in over 140 over-the-counter cold products in the United States. When taken in large quantities, DXM causes hallucinations, dissociation, and psychosis, mimicking the effect of ketamine and PCP via NMDA receptor antagonism. Rates of DXM use among youth and young adults are increasing, however there is little know about the effect of long-term DXM use.

Learning Objectives: 1) Identify populations that may be at higher risk of DXM use and 2) understand the dangers of DXM-induced psychosis.

Case Presentation: RM is a 43-year-old patient with a history of opioid use disorder on buprenorphine, depression, and recent incarceration on parole who presents with self-inflicted stab wound to abdomen after ingesting dextromethorphan.

RM reports taking approximately 60 tablets of cough medicine containing DXM several times per week, equivalent to 1200-1800 mg of DXM. He prefers DXM to other substances because it is not detected by urine toxicology required for parole. Prior to admission, RM took 1800 mg DXM and experienced the feeling of a "black hole" in his abdomen. He stabbed himself in the abdomen believing that this would save his life, causing injury to transverse colon. He underwent emergency surgery and was transferred to the inpatient psychiatric unit for further care. Though his acute hallucination resolved, RM continued to believe that the "black hole" had been real and that stabbing himself had been lifesaving. Given this persistent delusion, he was treated with quetiapine for persistent psychosis. His delusion persisted throughout his 14-day hospital stay and was still present on discharge.

Discussion: While DXM use is thought to be primarily among youth, patients who are subject to regular urine toxicology (on parole, truck drivers, etc) may also be at higher risk due to lack of detection of DXM on standard screening. Though there have been several reports of psychosis and violent behavior related to DXM use, most psychosis resolves after acute intoxication. This case demonstrates an episode of persistent psychosis requiring treatment with antipsychotics, possibly related to the long-term use of DXM in this patient. Physicians should be more vigilant about screening for DXM misuse and counseling patients on potential long-term dangers of use.

Beyond Endocarditis: An Interprofessional Plan of Care Process to Address Substance Use Disorder (SUD) and Comorbid Infections

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Background: In Philadelphia, ubiquitous xylazine contamination of the drug supply has extended the range of acute infectious complications of SUD to include complex skin/soft tissue infections, wounds, and osteomyelitis. Creating patient-centered management plans for conditions beyond endocarditis is critical for safe hospitalization and discharge of this marginalized population.

Objective: We created a specialized infectious disease (ID) consult team focusing on acute and chronic infectious complications of SUD staffed by ID physicians with an interest in this patient population. Our existing interprofessional addiction consult service (ACS) sought to better integrate this new team and to streamline comprehensive care planning, thus replicating the benefits of endocarditis teams but for a far broader range of diagnoses.

Methods: Leadership engagement meetings generated a commitment to weekly virtual "Plan of Care" (POC) rounds involving ID, addiction medicine/psychiatry, an addiction social worker,

and certified recovery specialists. Patients are discussed if followed by both ID and ACS with a focus on medical/surgical interventions, barriers to safe/timely discharge, recurrent admissions for progressive infections, or risk for patient directed discharge. Meeting goals include creating and communicating a longitudinal interprofessional care plan that encompasses medical/surgical and SUD management, post-acute care transitions, and contingency plans in early discharge.

Results: POC meetings started September 2023 with 32 meetings hosted over 9 months (92% of available weeks). 283 patients (48% of total ACS patients) had both ID and ACS services consulted, meeting criteria for discussion. Iterative process improvements over this period include a weekly, standardized summary note entered in the chart for each patient discussed; addition of a social worker specializing in post-acute placement; and implementation of "check-ins" for patients at risk of patient directed discharge.

Conclusions: The POC conference model creates a robust structure for cross-specialty collaboration and decision-making. Our flexible approach leverages the interprofessional expertise and creative problem solving needed for a rapidly shifting disease state and care environment. Current results demonstrate feasibility, sustainability, and promising value. Next steps in evaluation include longitudinal assessment of the quality, comprehensiveness, and completion of the developed care plans.

The Relationship between Maternal Adverse Childhood Experiences (ACEs) & Perinatal Substance Use (PSU): A Scoping Review

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Background: Childhood traumas, commonly termed adverse childhood experiences (ACEs), are a known risk factor for substance use disorders (SUD) in adulthood. Perinatal substance use (PSU) has significant health implications for both the mother and the fetus. Understanding the relationship between maternal ACEs and PSU is critical to improving maternal and neonatal health outcomes.

Objective: This scoping review aimed to evaluate and summarize the current literature on the relationship between maternal ACEs and substance use during pregnancy. Specific objectives included describing the prevalence and types of ACEs associated with PSU, maternal and neonatal outcomes, and maternal healthcare experiences.

Methods: The Joanna Briggs Institute (JBI) methodology for scoping reviews was utilized. Keywords related to ACEs, substance use, and pregnancy were used to conduct a systematic search of peer-reviewed research articles indexed in PubMed and PsychInfo.

Results: Ten studies met the criteria for data extraction and synthesis. Included studies identified women with ≥4 ACEs had significantly higher odds of PSU than those with fewer ACEs. Household substance use, maltreatment, and parental separation were the most common ACEs associated with PSU. The most frequently studied substances were marijuana, opioids, alcohol, and tobacco. Few studies investigated the association between ACEs and the subsequent

development of PSU and adverse pregnancy outcomes. Additionally, mothers with PSU faced significant barriers to care, including mistrust of providers and both perceived and real stigma.

Conclusions: This scoping review highlights the relationship between childhood trauma and substance use during pregnancy. Routine ACE screening and trauma-informed care are recommended in obstetric settings. Further research is needed to understand mediating factors, birth outcomes, and barriers to treatment. Policy and practice changes are necessary to improve support and access to equitable care for this vulnerable population and help prevent the intergenerational transmission of trauma and addiction.

Naloxone Vending Machines in Healthcare Settings

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Background: Naloxone is an effective and lifesaving strategy to prevent opioid overdose deaths. Acute care hospital settings are important access points for people who use drugs (PWUD) and their families to receive harm reduction supplies and education. One low barrier method of distributing naloxone is through vending machines.

Objective: To demonstrate the feasibility and acceptability of implementing naloxone vending machines in an acute care hospital setting for naloxone distribution to patients and community members in Michigan.

Methods: Vending machines were implemented in two locations at the Michigan Medicine hospital in Ann Arbor, Michigan: the emergency department (ED) waiting room and the main cafeteria. The machines dispense free boxes of naloxone with attached stickers providing information on naloxone administration and local recovery services. Patient education brochures with information about naloxone and how to respond to opioid overdoses are provided on the front of the machine. Tallies of naloxone dispensed at each machine are tracked by the program team. A paper survey was attached to the machines to collect descriptive data on demographics of people who accessed naloxone through the vending machine, reasons for obtaining naloxone, and acceptability of naloxone vending machines in the hospitals.

Results**:** From October 2023 - April 2024, the ED naloxone vending machine distributed 1280 boxes of naloxone. From February 2024 - April 2024, the cafeteria machine distributed 534 boxes. Preliminary survey results (n=108) show 71.3% (n=77) of people obtained naloxone through the vending machines because they want to be prepared for an overdose emergency, 40.7% (n=44) of people obtained naloxone because it is free, and 25.9% (n=28) have a family member, friend, or colleague they are concerned for. 100% of respondents feel the ED is an appropriate setting for the vending machine and 88.8% (n=83) like that the vending machine is available in this location. 51.8% of respondents (n=56) indicated that they would not have access to naloxone without these machines.

Conclusions**:** We have demonstrated the feasibility, acceptability, and community value/importance of naloxone vending machines in hospitals. We believe this program can

expand across healthcare systems throughout Michigan and other states to make naloxone more accessible for communities.

The Syndemic of Substance Use, HIV Vulnerability, and Incarceration in Washington State

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Background: Substance use, HIV vulnerability, and incarceration are a syndemic: public health problems with mutually magnifying effects that disproportionately affect those at the intersections of multiple minoritized identities. The syndemic approach proposes that interventions consider how they could be addressed together.

Objective: Understand the mutually reinforcing relationships between substance use, HIV vulnerability, and incarceration to inform public health interventions that address these issues together, rather than in isolation.

Methods: Fifty semi-structured interviews were conducted with staff at community-based organizations (CBOs) that serve people releasing from prison or jail (20), employees at jails or prisons (15), and people with lived experience of incarceration (PWLE) (15) in WA. Content related to substance use was extracted and analyzed using thematic analysis, with a mixed inductive-deductive approach, guided by Syndemic Theory.

Results: Key themes: (1) Some participants in all three groups characterized release as overwhelming and saw substance use and behaviors that increase HIV vulnerability as the default. (2) PWLE perceived themselves to be vulnerable to HIV and attributed their HIV vulnerability to sex while using substances but were not motivated to take PrEP while actively using. (3) Most CBOs and prison/jail staff were focused on substance use disorder services due to funder/employer priorities, but several had HIV prevention services or were interested in adding them. (4) Some PWLE described incarceration and sentencing alternatives as opportunities for substance use treatment, structure, and change. Others described the same interventions as an unjust obstruction to their ability to reintegrate into society.

Conclusions: The post-incarceration period is an opportunity to provide targeted support when participants are both receptive to help and at high risk for harmful outcomes such as returning to use. Interventions that integrate substance use disorder care and HIV prevention, potentially along with other needed services, may be more likely to succeed because the overwhelming nature of the post-release experience makes accessing multiple resources challenging.

PCPs Pass on Grass: A Pilot Survey of Opioid Treatment Agreements Enforcement By Primary Care Providers

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Background: Opioid treatment agreements (OTAs) aim to provide informed consent for patients on long-term opioid therapy (LTOT) and outline requirements for patients receiving LTOT. There's been some research characterizing stakeholder perceptions of OTAs, but little investigation of how OTAs affect clinical decision-making.

Objective:

- Describe how physicians respond to specific patient behaviors, including urine drug screening (UDS) aberrancy, in the context of LTOT
- Identify if OTA use modifies physician responses

Methods: We surveyed all General Internal Medicine primary care physicians (PCPs) practicing in university-affiliated primary care clinics. Participants were presented with two sets of 11 behaviors, including 5 behaviors relating to UDS, and asked how they would respond to these behaviors with or without the clinic's OTA – specifically if they would discontinue LTOT, discontinue the clinical relationship, or neither.

Results: The survey was sent to 82 providers, 46 of whom completed it.

	No OTA		OTA	
	Discontinue Therapy	Discontinue Relationship	Discontinue Therapy	Discontinue Relationship
Repeatedly cancelling appointments	67.4%	30.4%	60.9%	34.8%
Missing appointments	73.9%	43.5%	73.9%	47.8%
Requesting early refills	58.7%	0.0%	80.4%	2.2%
Refusing UDS	89.1%	6.5%	89.1%	8.7%
UDS positive for cannabis - Patient enrolled in medical marijuana program (MMP)	10.9%	0.0%	6.5%	0.0%
UDS positive for cannabis - Not enrolled in MMP	32.6%	0.0%	34.8%	0.0%
UDS positive medication not prescribed	63.0%	0.0%	58.7%	2.2%
UDS positive for illicit substance other than cannabis	91.3%	0.0%	84.8%	2.2%
UDS negative for prescribed opioid	67.4%	0.0%	60.9%	2.2%
Verbally rude to staff	76.1%	80.4%	78.3%	82.6%

Physically threatening to staff	93.5%	95.7%	89.1%	95.7%

Conclusions: PCPs are significantly more likely to respond to UDS aberrancy by discontinuing LTOT than the clinical relationship. Second, PCPs are less likely to discontinue LTOT or the clinical relationship for concomitant cannabis use (especially if enrolled in MMP- p-values not shown but available) versus concomitant use of other substances, suggesting that PCPs are appropriately acknowledging relatively low harms of cannabis use in the setting of LTOT versus non-prescribed prescription medications or illicit opioids.. Third, aggressive patient behavior wasn't tolerated regardless of OTA use, suggesting clauses like "We will treat clinic staff with respect" are unnecessary in OTAs.

One-Year Feasibility of Emergency Department Fentanyl Test Strip Distribution across a Large Urban Health System

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Background: Fentanyl test strips (FTS) are an overdose intervention pioneered by community-based organizations that people who use drugs (PWUD) use to guide drug use behavior amidst the unregulated drug supply. Despite enthusiasm for FTS by PWUD, FTS are not disseminated widely in U.S. medical settings. Emergency Departments (EDs) are crucial touchpoints for PWUD where dispensing of take-home naloxone (THN) represents the current overdose prevention intervention standard.

Objective: We aimed to: 1) describe real-world ED FTS distribution across a health system; 2) examine patient and visit characteristics associated with clinicians ordering FTS compared to THN-only, to identify opportunities to optimize FTS distribution.

Methods: ED Clinicians can order THN +/-FTS for any patient in our health system, which clinical pharmacists bring to the patient's bedside and counsel about. Data for the first year of ED visits where THN was ordered was abstracted from the EHR. We compared demographic and clinical characteristics of visits where clinicians ordered FTS to those with naloxone only, using pairwise tests and an analytic multivariable logistic regression model.

Results: From July 20, 2022-July 20, 2023, 237 (of 423) clinicians ordered THN for 1,279 unique individuals in 1,376 visits, 436 with FTS and 940 without. In pairwise analysis, FTS receipt was associated with being male, younger, non-White, and lacking commercial insurance; visits with a substance-related or overdose as chief complaint or diagnosis, attending physician, and patient-directed discharge (all p's<.05). In multivariable regression, higher odds of FTS receipt were associated with being male (OR=2.4; 95%CI=1.8–3.5), having a substance-related chief complaint (OR=2.0; 95%CI=1.2–3.2) or visit diagnosis (OR=5.5; 95%CI=3.8–8.0), and overdose visit diagnosis (OR=1.7; 95%CI=1.1–2.8). Lower odds of FTS receipt were associated with older patients (OR=0.98; 95%CI=0.97–0.99), non-community hospital sites (OR=.71;

95%CI=0.60-0.83), and non-attending clinicians (OR=0.83; 95%CI=0.69–0.98). We found no difference in length-of-stay.

Conclusions: This is the first report of non-experimental ED FTS distribution across a U.S. health system and a preliminary demonstration of a high-need innovation for overdose prevention. Integrating FTS into an existing THN program may be feasible, without disrupting ED workflow. FTS recipients differed significantly from those receiving THN only, revealing opportunities to optimize FTS ordering.

COVID-19 Vaccination Rates and Hesitancy Among Postpartum Individuals with Substance Use Disorders

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Background: Pregnant individuals with substance use disorders (SUD) are at higher risk of developing severe complications from COVID-19. Infants < 6 months of age are also at significant risk. Vaccination in perinatal individuals can help protect both mother and infant from severe outcomes; however, vaccine hesitancy is high.

Objective: We evaluated COVID-19 vaccination rates among postpartum patients with SUD and identified reasons for vaccine hesitancy.

Methods: We conducted a retrospective cohort study and telephone survey in a SUD-specific wraparound perinatal clinic.

Results: Retrospective cohort study included 207 postpartum patients. 80.7% were prescribed medication for SUD. 34.3% had received ≥ 1 COVID-19 vaccination, with 45.1% receiving 1, 47.9% receiving 2, and 7.0% completing 3 doses. Vaccination rates within the past 5 years for Tdap and influenza were higher (65.7%, p=<0.00001 and 42.5%, p=0.105508). COVID-19 vaccination rate was significantly higher than the rate within another non-SUD high-risk outpatient obstetric clinic at our institution (n=130), which had a rate of 12.0% (p =<0.00001). 20 postpartum patients completed the survey, of which 65.0% were < 6 months postpartum at time of survey completion. 40.0% received at least one COVID-19 vaccination, most having received vaccination before or during pregnancy (81.8%). Top reason to vaccinate was to protect themselves and their child(ren) (81.8%), followed by provider recommendation (45.5%) and friends or family encouraged vaccination (45.5%). Top reasons not to vaccinate included concern about side effects (66.7%), potential fetal risks (55.6%), and unvaccinated household (44.4%). Barriers to vaccination – inaccessible, inconvenient, no provider recommendation, medical condition preventing vaccination, lack of trust in vaccines or providers -- were very rarely reported (0.0-11.1%). Only 20.0% agreed or strongly agreed that individuals with SUD are more likely to be hospitalized or die from COVID-19. 40.0% reported plans to vaccinate their infant, of which 50.0% were vaccinated themselves. Top infant vaccine hesitancy reasons included concern about side effects and limited long-term vaccination data (83.3%).

Conclusions: Wraparound clinics for obstetric individuals with SUD may help provide preventative healthcare beyond SUD treatment. Educational gaps existed regarding risks of lack of vaccination among this high-risk population. Providers should impart evidence-based education and engage others accompanied to appointments.

A Survey of Opioid Overdose Preparedness in Texas School Districts

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Background: The Texas Opioid Training Initiative (TXOTI) is contracted with the Texas Health and Human Services Commission to provide a statewide naloxone standing order and facilitate opioid overdose preparedness efforts. In Spring 2023, Texas enacted legislation requiring public school districts to implement policies to acquire, administer, and dispose of opioid antagonists at all campuses that serve grades 6–12.

Objective: To assess how K–12 schools and school districts are implementing naloxone access for opioid overdose preparedness, and to identify needs for education and technical support.

Methods: An online survey was emailed to 409 contacts for Texas schools and school districts who subscribed to the TXOTI naloxone standing order. Survey items assessed current naloxone implementation and overdose prevention practices as well as relevant motivations, perceptions, and experiences.

Results: A total of 97 respondents completed at least 10% of the survey (24% response rate); 84 represented school districts while 13 represented individual schools. Nearly all respondents (92%) were nurses or other health services staff. Naloxone was available in all schools in 87% of the responding districts and 100% of the individual school respondents reported naloxone was currently available on their campus. Naloxone was available on most campuses before and after regular school hours, and this increased by grade (65% in elementary schools vs. 83% in high schools). However, accessibility varied significantly, with nearly all school staff having access while visitors and students rarely had access. Overall, respondents strongly agreed their campus was prepared to respond to an opioid overdose. Respondents were more comfortable talking about opioids and overdose with faculty and staff than with families and the broader community.

Conclusions: Schools and school districts subscribing to the TXOTI standing order report naloxone is available but to limited personnel. Substantial opportunities remain to expand the availability of naloxone and overdose prevention education in Texas schools, particularly through engagement with families and the broader community.

Initiation of Medications for Alcohol Use Disorder in Hospitalized Patients

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Background: Alcohol use disorder (AUD) is the most common substance use disorder in the United States yet remains very under treated. 2 FDA approved medications for AUD (MAUD), naltrexone, and acamprosate, are both associated with meaningful reductions in alcohol use, yet an estimated 1 to 5% of eligible patients are prescribed these medications.

Objective: This quality improvement project seeks to evaluate and increase rates of initiating MAUD in patients hospitalized with alcohol withdrawal.

Methods: We queried a list of hospitalized patients placed on the Clinical Institute for Withdrawal Assessment for Alcohol (CIWA-Ar) over 1 month, October 2023. We conducted a retrospective chart review of this population to evaluate for contraindications to naltrexone and acamprosate and assess for initiation on MAUD.

Results: 68 patients were placed on CIWA protocol in October 2023. 14 patients were excluded due to transfer (6), death (2) or restricted records (6). 54 patients admitted in alcohol withdrawal were assessed for eligibility for MAUD, inpatient initiation and/or new prescription for MAUD at discharge. 20 patients had contraindications to naltrexone (decompensated cirrhosis, active opioid use) and 1 patient had contraindication to acamprosate (CrCl<30). 3 patients were on acamprosate before admission, but 0 patients were newly started on acamprosate during admission or at discharge. Of 34 eligible patients, only 1 patient was prescribed naltrexone at discharge.

Conclusions: Research shows MAUD is underutilized despite evidence of its efficacy in reducing alcohol use. Our study demonstrates our own institution's low rates of MAUD initiation in patients admitted in alcohol withdrawal - 3% (n=1) of eligible patients prescribed naltrexone, 0% of eligible patients prescribed acamprosate - and provides impetus for quality improvement project aimed at improving MAUD prescribing. Patients admitted to the hospital for alcohol withdrawal may benefit from MAUD, and hospitalization is an opportunity to connect patients to this treatment. Reasons for low MAUD initiation may include provider comfort level, naltrexone being non-formulary, patient factors and competing priorities upon discharge. Next steps of our QI project include resident education and creation of an EMR order set to facilitate MAUD prescribing at our institution.

Exploring Therapeutic Logics in Adult Drug Treatment Court

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Background: Drug Treatment Courts (DTCs) have been implemented across the U.S. to divert persons with substance use disorder away from punitive criminal justice responses and towards therapeutic options. Generally, DTCs adopt the framework of "therapeutic jurisprudence," leveraging the risk of criminal sanctions to "encourage" adherence to DTC program elements. Little research explores the contradictions between support and punishment that DTCs can represent.

Objective: The aim of this project is to explore the therapeutic and rehabilitative goals maintained by DTC staff, including how those goals are shaped by staff understandings of addiction, the root causes of addiction, and the appearance of recovery.

Methods: Detailed observations were conducted during public sessions of the Wake County Adult DTC starting in January 2024 and will continue through August 2024. Interactions between participants and the DTC judge, including limited verbatim quotes, were recorded by hand. Notes were also taken on the use of rewards and sanctions by DTC staff. Notes were digitized and deductively coded using Kleinman's theory of Explanatory Models of Illness.

Results: DTC staff and participants most often described substance use as "chaos." By contrast, staff and participants described pathways to recovery with phrases like "fighting," "staying focused," and "the right thing to do." Often, DTC staff introduced this language, which participants then mirrored. When interacting with individual DTC participants, the DTC judge would guide conversations to center around factors like "routine," "consistency," and spending time around "the right people, places and things," regardless of what personal updates or challenges the participants reported. Participants were rewarded with "A-list" status for meeting all requirements and could leave court sessions early. Participants who missed requirements received sanctions like electronic monitoring and jail time.

Conclusions: Language used by DTC staff and mirrored participants assumptions that substance use is inherently chaotic and that progressing towards abstinence is a morally right path to take. The judge scripted participant interactions and deliberately led them to promote aspects of recovery that DTC staff already endorsed. The use of rewards and sanctions by DTC staff often contradicted program goals to promote the independence of participants.

Examining the Racial Disparities in Receipt of Medication for Opioid Use Disorder Among Pregnant Persons: A Meta-Analysis

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Background: Medication for Opioid Use Disorder (MOUD) is an evidence-based treatment for individuals with Opioid Use Disorder (OUD). The use of MOUD during pregnancy for treatment is recommended by both the American College of Obstetricians and Gynecologists and the Substance Abuse and Mental Health Services Administration. Despite these recommendations, less than half of pregnant persons receive MOUD for treatment and racial disparities in treatment receipt exist.

Objective: The objective of this study was to measure the association between race and MOUD receipt during pregnancy. This relationship was measured through two analyses: MOUD receipt among non-Hispanic Black pregnant persons versus non-Hispanic White pregnant persons and MOUD receipt among Hispanic pregnant persons versus non-Hispanic White pregnant persons.

Methods: PubMed and Embase were searched from the date of inception through February 2024 for articles examining race and MOUD receipt among pregnant persons. Studies were included if

they were observational, did not contain overlapping data, and reported either effect measures or sufficient data to calculate effect measures. A customized Newcastle-Ottawa scale was used to evaluate the study quality of the included articles. Random-effects meta-analyses were conducted to estimate the odds ratio of receiving treatment with 95% confidence intervals. Funnel plots were used to assess publication bias, and the I^2 test was used to evaluate heterogeneity.

Results: The initial search resulted in 268 articles for abstract review. Six of these studies met the inclusion criteria for the meta-analyses. The final analyses included data on 363,263 participants from across the United States. Receipt of MOUD among non-Hispanic Black pregnant persons was found to be significantly lower compared to non-Hispanic White pregnant persons with an OR of 0.29 (95% CI: 0.16, 0.54). Similarly, MOUD receipt among Hispanic pregnant persons was significantly lower compared to non-Hispanic White pregnant persons with an OR of 0.57 (95% CI: 0.46,0.71).

Conclusions: Inequitable access to MOUD during pregnancy contributes to the widening racial disparity gap in maternal and child health outcomes. Future research is needed to identify meaningful interventions aimed at addressing disparities in access, including a focus on structural and interpersonal racism in the context of healthcare delivery.

Characteristics of Ongoing Clinical Trials for Cocaine Use Disorder Registered on Global Clinical Trial Databases

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Background: Cocaine use disorder (CUD) affects 1.4 million people in the United States, yet no FDA-approved treatments exist. Current guidelines from the American Academy of Addiction Psychiatry (AAAP) and the American Society of Addiction Medicine (ASAM) suggest off-label pharmacological treatments like bupropion and topiramate, along with behavioral therapies like cognitive behavioral therapy (CBT) and contingency management (CM). The FDA's 2023 draft guideline for developing drugs to treat stimulant use disorder provides direction for trial design, outcome measures, and population selection, aiming to advance new therapies for CUD.

Learning Objectives: Understand the landscape of ongoing clinical trials for CUD treatments across global clinical trial databases. Identify the types of therapeutic interventions, populations, and outcomes being studied in current trials. Evaluate the alignment of ongoing trials with FDA recommendations for CUD treatment development.

Case Presentation: A search across six clinical trial databases (United States, Australia, Canada, Iran, Netherlands, Switzerland) identified ongoing trials for CUD. The search included trials at various phases and recruiting stages, focusing on treatment-based studies. A total of 35 trials were identified, mostly from the United States (28), with others from the Netherlands and a few other countries. These trials examined pharmacological, behavioral, and device-based interventions. The pharmacological approaches ranged from repurposed medications to novel agents like anti-cocaine vaccines. Behavioral treatments included CBT, CM, and their digital or app-based variations.

Discussion: Among the 35 trials identified, 23 (65.7%) focused exclusively on CUD, while others addressed co-occurring conditions or multiple substance use disorders. Only 14 trials (40.0%) fully complied with the FDA's recommendations for trial duration and design. This raises concerns about the development of effective CUD treatments, emphasizing the need for longer, more comprehensive, and standardized trials.

Digital platforms for behavioral therapies are emerging, with four trials exploring internet-based CBT and CM. However, these platforms require careful regulatory oversight to ensure safety and efficacy. Additionally, the limited number of trials with robust designs and longer durations suggests that more efforts are needed to encourage the development of innovative treatments for CUD.

Overall, addressing these challenges and aligning with FDA guidelines will be crucial for advancing effective treatments for CUD.

Utilizing Environmental Scans in Learning Collaboratives with African American Faith-Based Leaders to Address Substance Use and Social Determinants of Health

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Background: African American communities face unique challenges regarding substance use, influenced by socio-economic and environmental factors. Integrating faith-based leaders (FBLs) through Learning Collaboratives (LCs) offers a promising approach to address these challenges by leveraging their influential positions within these communities.

Objective: To assess the effectiveness of a Learning Collaborative model in increasing knowledge and engagement among African American FBLs in substance use disorders (SUDs) interventions, with a focus on environmental and social determinants of health (SDoH).

Methods: Ten FBLs participated in a 12-session LC focused on addiction, utilizing the Public Attitudes About Addiction (PAAA) survey for baseline and follow-up assessments. Environmental scans were conducted for each congregation's surrounding community to identify local SDoH, such as education levels and unemployment rates, which were then analyzed using the Healthy People 2030 framework. Data from surveys and in-depth phenomenological interviews post-LC were used to evaluate changes in FBLs' perceptions and knowledge.

Results: Preliminary findings indicated that while changes in survey responses were not statistically significant, environmental scans provided critical insights into community-specific needs and resources. In-depth interviews revealed increased awareness among FBLs regarding the impact of local SDoH on substance use and highlighted key strategies for community engagement, including reducing stigma and improving local economic opportunities.

Conclusions: The integration of environmental scans in LCs offers a valuable tool for FBLs to tailor SUD interventions to specific community needs. This approach not only enhances FBLs'

understanding of SDoH but also empowers them to implement targeted strategies that address the underlying factors of substance use in their congregations. Future cohorts will expand on these findings to further refine and validate the efficacy of this model.

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A Multidisciplinary Approach to Increasing Treatment of Alcohol Use Disorder in an Urban Academic Emergency Department

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Background: Alcohol use disorder (AUD) is a leading preventable cause of death associated with great morbidity and mortality. The emergency department (ED) can be an ideal focus for harm reduction efforts directed toward reducing alcohol use amongst patients with AUD. Medication-assisted treatment for AUD (MAUD) with naltrexone or acamprosate is a safe recommended intervention for the treatment of moderate to severe AUD which can be initiated in the ED.

Objective: Our goal was to develop and implement an innovative program aimed at identifying patients with AUD and initiating MAUD in a large, urban academic ED using a multidisciplinary approach.

Methods: Leaders of our SUD and pharmacy teams developed this novel program and launched it in May 2023. Upon its development, we provided education on it to ED and pharmacy staff via multiple modalities. Emergency medicine providers, and SUD team members, including linkage coordinators, health promotion advocates and peers, were instructed to screen patients for AUD. For those who screened positive, providers could initiate outpatient prescriptions for naltrexone or acamprosate while the patient was in the ED. During discharge pharmacy business hours, SUD team members delivered prescriptions to the bedside. Electronic medical record queries identified the amounts of ED patients with F10 codes suggesting alcohol dependence, patients with prescriptions for MAUD, and fill-rates.

Results: Outcomes were studied over an 11-month period from May 2023 to March 2024. There were 2,344 patients admitted or discharged from the ED with F10 codes suggesting alcohol dependence. Prescriptions for MAUD were ordered for 297 (12.7%) of these patients. 157 (52.9%) patients filled the prescriptions. Monthly medication prescription fill rates increased from 21.4% at the study period's inception to 65.9% at its end and averaged 50.71%.

Conclusions: The initiation of MAUD in the ED can be an impactful harm reduction technique. Screening ED patients for AUD may lead to increased prescription of MAUD. Utilization of multidisciplinary teams to assist with screening and streamlining delivery of prescriptions may improve prescription and fill rates, and utilization of therapies. Future efforts should address barriers to prescribing MAUD and filling these prescriptions.

Differences in Harm Reduction Acceptability and Stigma across Health Professionals' Level of Harm Reduction Education

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Background: Harm reduction (HR) is a pragmatic, evidence-based public health approach to care for people who use drugs (PWUD), but its acceptability among health professionals remains varied. Lack of acceptability negatively impacts HR service implementation, which perpetuates stigma towards PWUD and widens health inequities. Education is one method that can shift HR attitudes and minimize the stigma of addiction. Yet, questions remain regarding best practices, including the minimum amount of education required to effectively improve HR acceptability and decrease stigma.

Objective: To determine differences in HR acceptability and substance-related stigma across health professionals' level of HR education.

Methods: Health professions practitioners and students (N=94) completed a survey assessing HR education, HR acceptability (HRAS; Goddard, 2003) and substance-related stigma (OMS-HC; Modgill et al., 2014). Substance-related stigma was assessed across three subscales: attitudes, social distance, and communication. One-way ANOVA and post hoc pairwise comparisons were conducted to determine mean differences between four education groups: no education, beginner (1-10 hours), intermediate (11-20 hours), and advanced (>20 hours).

Results: Results indicated statistically significant mean differences in HRAS, stigma attitudes, and stigma communication scores across levels of HR education. There were no significant differences in stigma social distance scores across education level. Pairwise comparisons revealed that respondents with intermediate education (M=111.45, SD=11.66) had significantly higher HRAS scores than respondents with no education (M=101.73, SD=14.22) or beginner education (M=102.73, SD=14.33). Additionally, respondents with advanced education (M=8.57, SD=2.86) had significantly lower scores on the stigma attitudes subscale than respondents with no education (M=12.27, SD=4.22) or beginner education (M=10.95, SD=3.01). Respondents with advanced or intermediate education also endorsed greater comfort communicating about SUDs.

Conclusions: Results suggest that intermediate or advanced levels of HR education among health professionals are ideal to significantly increase HR acceptability, reduce stigmatizing attitudes, and increase comfort communicating about SUDs. These findings can inform minimum education requirements for professionals working with PWUD, including actionable support for standardization of HR content into health professions curricula and reevaluation of recent federally-mandated SUD training guidelines.

Addressing Substance Use-Related Stigmatizing Attitudes Among Prelicensure Nursing Students: A Pilot Study

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Background**:** Stigma is a well-documented barrier to health seeking behavior, engagement in care and adherence to substance use-related treatment. Health professionals with negative attitudes of persons with substance use disorders (SUDs) have a more avoidant approach in the delivery of care, make shorter visits, show less empathy, and have diminished personal engagement. As students prepare for their future professional role, it is essential to deliver stigma-reducing interventions to address these negative attitudes. This preparation is critically important for nursing students who, upon licensure, will comprise the largest component of the healthcare workforce.

Objective**:** To examine the effect of stigma-reducing education on Master's prelicensure nursing students' stigma related to persons with SUDs.

Methods**:** Nursing students in the Psychiatric Mental Health course at Johns Hopkins School of Nursing were included in this pre-post-test designed IRB-approved study. Prior to and after receiving the education, students completed an online 15-item Opening Minds Scale (OMS) for Health Care Professionals adapted for substance use-related stigma, which consisted of three subscales (attitudes, disclosure and health seeking, and social distance), wherein high scores reflect more stigmatizing attitudes. Educational content focused on SUDs including a focus on personal beliefs and attitudes related to caring for individuals who use substances. The intervention also included a video in which peer specialists describe their role and function. An independent t-test was used to compare the pre-post test scores

Results**:** The students (n=27) were predominantly female (81%), average age of 28.18 years, 11% Black or African American, 67% White, 11 % Asian. Results for the OMS subscales indicate that both negative attitudes ($t(37) = -.413$, $p = .477$) and social distance ($t(37) = -.363$, $p = .719$) scores increased after educational intervention; however, these changes were not significant. Conversely, disclosure and health seeking scores decreased significantly ($t(37) = 2.40$, $p = .022$) after the intervention.

Conclusions: Stigma scores for two subscales were not in the expected direction; however, disclosure/health seeking subscale scores decreased significantly. The findings should be viewed with caution because of the small sample size.

Enhancing the End-of-Life Care for a Patient with Substance Use Disorder: Exploring the Impact of Compassionate Advocacy in Addiction Medicine on Quality of Life and Systemwide Practices

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Background**:** For several years, "Stan" was a patient cared for by the Highland Hospital Bridge Clinic team initially for substance use disorder. Subsequently, he developed severe pain associated with metastatic neuroendocrine pancreatic cancer.

Learning Objectives**:**

-Learn strategies for treating pain in opioid use disorder (OUD) patients with chronic pain

-Identify, review, and update internal pain policies as they relate to patients with opioid dependence

-Take advantage of opportunities to advance systemic practices based on patient-centered needs

Case Presentation**:** Stan initially engaged at Highland Bridge Clinic for maintenance treatment of his OUD. As his pancreatic cancer progressed, his analgesic requirements became increasingly complex with a regimen including morphine milligram equivalents (MME) ranging from 1211 to 1869mg (including methadone 280mg daily) and ketamine 320mg daily divided as 40mg every 3 hours. His relief was limited by hospital policies and practices around both methadone and ketamine administration. His complex pain needs were a barrier to discharge skilled nursing facilities, necessitating discharge to a medical respite where he was unable to receive daily skilled assistance. His previously unrelieved pain led to breakdowns in therapeutic alliance with his primary team. After the Bridge team was consulted to assist in pain management, 7 of 9 physician-authored outpatient notes reported his pain as well controlled and that his psychosocial needs were being fulfilled.

Discussion**:** Stan taught us several things as a team which we can take forward, including the importance of optimizing pain regimens in this patient population. We utilized split-dose methadone administration, as was recommended in a recent consensus-driven report (Fitzgerald et al, JAMA Oncol. 2022). We also prescribed ketamine, given its growing body of evidence for use as an adjunct in refractory cancer pain. We left his care having learned more about how to leverage health system committees to optimize pain control particularly patients with undertreated pain secondary to complex opioid dependence, how to effectively collaborate with the palliative care team to manage complex OUD and pain, how to help maintain patient trust in a hospital system that has not always relieved their suffering, and how to honor the people we have lost by optimizing systems for better patient-centered care.

Increasing Buprenorphine and Naloxone Access in Texas Community Pharmacies through a Mailed Academic Detailing Intervention

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Background**:** Patients with opioid use disorder (OUD) must be able to access buprenorphine/naloxone (BUP/NX) and naloxone nasal spray (NNS) from pharmacies promptly.

Objective: To assess the impact of a mailed academic detailing intervention on BUP/NX availability and ability to attain NNS without a prescription in Texas community pharmacies overall and by pharmacy type.

Methods**:** A randomized, controlled trial was conducted in a random sample of 1,000 Texas community pharmacies assigned 1:1 to intervention and control groups. The intervention group

received investigator-developed handouts with access to online continuing education addressing BUP/NX and NNS availability and action items to improve OUD care. Pre- and post-intervention audits were conducted using a telephonic secret shopper approach. McNemar and Wilcoxon signed rank tests were used to compare within group changes and generalized estimating equations (GEE) were used to compare groups modeling Post variables as dependent with Pre variables and group as predictors.

Results**:** Data collected from 757 pharmacies were included in the final analyses. Baseline stocking of BUP/NX was low, and changes from pre to post were not significant within the intervention (35.3% vs 34.8%, p=0.84) and control (38.1% vs 36.3%, p=0.48) groups. Most pharmacies were willing to order BUP/NX if it was not in stock, and changes from pre to post were not significant within the intervention (60.3% vs 66.0%, p=0.20) and control (60.8% vs 57.4%, p=0.26) groups. GEE analyses did not identify significantly higher odds of BUP/NX stocking in intervention vs control pharmacies (aOR 1.08, p=0.73), but significantly higher odds of being willing to order (aOR 2.25, p=0.02) and of a composite outcome of stocking or being willing to order (aOR 2.17, p=0.01) were observed.

Conclusions**:** A low-intensity mailed academic detailing intervention led to a modest but significant increase in willingness to order BUP/NX if it was not in stock. This intervention is easily replicable and scalable, but modifications to increase the magnitude of its effect are needed.

Development and Evolution of a Tobacco Treatment Specialist Training for Healthcare Professionals in Kansas

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Background**:** Tobacco Treatment Specialist (TTS) training programs equip healthcare professionals with the competencies needed to use evidence-based strategies to combat tobacco use - the world's leading cause of preventable mortality.

Objective: The aim of this program was to expand the reach of evidence-based tobacco treatment in Kansas.

Methods**:** Using initial funding from the Kansas Health Foundation's *Tobacco Treatment and Recovery in Behavioral Health* initiative, we implemented a 4-day in-person TTS training for behavioral health providers across our state from 2016-2020. To expand our program's reach, we shifted the learning curriculum to an on-line, self-paced, asynchronous format concluding with a 1-day workshop for skills building and demonstration. This workshop was held virtually due to the COVID-19 pandemic; however, we adopted the format long-term in response to favorable participant feedback and to eliminate travel barriers. This program gained national accreditation from the Council for Tobacco Treatment Training Programs in 2020. Most trainees (80%) received a scholarship to attend the training, which was secured by our training program via contracts with state and other agencies, with the remaining being funded by the individual, their employer, or other grant.

Results**:** In the first 3 years of our accredited program (2021-2023), we hosted two training cohorts per year and trained 236 TTSs. During these three years, we trained 50, 62, and 124 students, respectively; 90% of trainees worked within our state. Out of 105 counties, we accrued trainees from workplaces in 44% (n = 46) of the counties, achieving geographic spread across the state. In Year 1, our training reached workers in 19 counties, and we added 10 and 17 novel counties in Years 2–3, respectively. All participants completed a post-program evaluation and overall provided a positive rating (mean = 4.56/5, *SD* =.570). Across 11 domains, trainees self-reported meeting training competencies (mean = 4.39/5, *SD* =.659).

Conclusions**:** The results indicate exponential growth and reach of the TTS program with trainees reporting meeting training goals. Future directions of the program include building a fully asynchronous training experience, continuing to expand curriculum in the face of the changing landscape of tobacco/nicotine use, and increasing our program's reach beyond our state.

Priority Interventions for Improving Health Outcomes for People with Injection-Drug Related Infections: A Mixed Methods Study

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Background: Severe injection-related infections (SIRI) are a serious consequence for people who inject drugs (PWID). Hospitalizations for SIRI (e.g., endocarditis, osteomyelitis, and skin and soft tissue infections) are increasing among PWID. By 2030, endocarditis is predicted to cause <250K deaths among PWID in the United States.

Objective: This study gathered both qualitative and quantitative evidence on treatment methods, barriers to improvement, and intervention strategies for PWID hospitalized with SIRI.

Methods: We conducted a mixed methods study using an exploratory sequential design approach. First, we collected qualitative data through in-depth, semi-structured interviews with healthcare providers at a single, multi-campus urban health system to learn about stakeholder perspectives (n=18). The qualitative data was used to conduct a quantitative, online survey directed at physicians at the same health system (n=181). Qualitative transcripts were analyzed using thematic analysis, and quantitative data using descriptive statistics.

Results: Qualitative data identified three domains where interventions may improve care for SIRI. In the survey, inpatient addiction medicine or psychiatry consultation was identified as the most useful intervention (71/145, 49%). Providers preferred patients to receive consultations as close to hospital admission as possible. While these consultations are important, 75/136, 55% of survey respondents noted limited availability. In qualitative data, reasons for limited availability included limited staffing, low capacity to see consults, and particularly limited ability to urgently see patients in withdrawal. Participants reported need for education about caring for SIRI, with 77/135, 57% of survey respondents classifying healthcare provider education about starting medications for opioid use disorder as very helpful. Participants emphasized the importance of continuing addiction care after discharge, but protocols and support for linking patients to

outpatient services are underdeveloped in hospitals. Despite linkage services being limited, 111/181, 61% of survey respondents selected outpatient addiction treatment follow-up as the most important service after discharge.

Conclusions: Providers reported a broad set of strategies that were necessary to implement or improve to optimize care for PWID with SIRI, including more inpatient consult services, improving care transitions, and provider education. Our results can be seen as provider-identified priority areas for health systems to build interventions to improve care.

Flexible Approaches to Buprenorphine Initiation in the Era of Fentanyl - a Case Series

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Background: With a rapidly changing, toxic drug supply including high potency synthetic opioids (HPSO) and adulterants, our success with traditional buprenorphine initiation is increasingly limited. Patients are having a more challenging time successfully transitioning onto buprenorphine. This has required providers and patients to utilize novel initiation strategies to best meet patients' needs in various treatment settings.

Learning Objectives:

-Review pharmacokinetics of buprenorphine formulations related to treatment initiation

-Identify approach to precipitated withdrawal management

-Discuss flexible buprenorphine initiation strategies in various treatment settings

Case Presentation: These two cases - one outpatient and one inpatient highlight flexible initiation strategies to meet patient specific needs. In the first case, a 25-year-old patient desired to be on buprenorphine treatment and had made multiple unsuccessful attempts to transition to sublingual (SL) buprenorphine with standard, low-dose and high-dose strategies. Using shared decision making, we opted to initiate on LAI weekly buprenorphine without a SL test dose in our outpatient clinic when patient was in moderate withdrawal to avoid precipitated withdrawal given slow onset of action. Two hours after initiation, he developed symptoms concerning for precipitated withdrawal and was hospitalized for IV hydration, adjunct medications and additional SL buprenorphine. He remains on LAI buprenorphine. In the second case, a 35-year-old patient who struggled with transition to SL buprenorphine in outpatient settings was admitted to the hospital with bacteremia and infective endocarditis. During hospitalization, their withdrawal was managed with short acting opioids though they desired to be on buprenorphine treatment. They declined SL buprenorphine and chose a low-dose transition due to their medical status, utilizing multiple (16) transdermal patches to successfully transition to monthly LAI buprenorphine without withdrawal symptoms. They have continued LAI buprenorphine post-discharge.

Discussion: It remains critical that as we consider alternative and flexible strategies to initiate buprenorphine, we must highlight patient preference, prior experiences, and individualize treatment plans using the best available evidence. In this case series we discuss multiple strategies to transition patients to buprenorphine without SL buprenorphine including the emerging potential of LAI buprenorphine initiation, low-dose transitions utilizing transdermal patches, and management of precipitated withdrawal. Future research is needed on these emerging initiation techniques to guide best practices.

Meeting an Urgent Need: Addressing Alcohol Use through Virtual Education

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Background**:** Despite increases in alcohol-related morbidity and mortality, unhealthy alcohol use and alcohol use disorders (AUDs) are often unidentified and undertreated. Providers demonstrate knowledge gaps in screening and managing unhealthy alcohol use and AUD. Due to low rates of professionals providing evidence-based treatment for AUD, we created an educational series to increase knowledge of alcohol use among addiction professionals.

Objective**:** Design an interdisciplinary, virtual series on alcohol-related topics to increase knowledge and promote practice changes in managing unhealthy alcohol use and AUD.

Methods**:** From August 2023 to December 2023, the series comprised 19, 30-minute virtual trainings on alcohol-related topics. The series encompassed evidence-based practices to manage patients with unhealthy alcohol use and AUD, including screening, medications for AUD, outpatient management of alcohol withdrawal syndrome, and high-intensity drinking. Trainings were led by an addiction-trained nurse educator and content experts across specialties and included opportunities for discussion. Participants completed a post-training evaluation that assessed increased knowledge, intent to change practice, and overall training satisfaction. Registration and evaluation data were aggregated and summarized.

Results**:** A total of 1,572 professionals participated, with a median of 58 attendees per training. Most attendees were mental health professionals (30%), prescribers (23%), nurses (21%), and peer supports (13%). Participants represented 48 U.S. states, the District of Columbia, two U.S. territories, and three other countries. Of the attendees, 1,153 (73%) completed a post-training evaluation. Almost all (99%) reported increased knowledge of the session topic; 68% stated an intent to change practice as a result of attending. Most participants rated their training satisfaction as 4 (24%) or 5 (74%), the highest possible ratings.

Conclusions**:** Accessible education on unhealthy alcohol use may improve the identification, treatment, and support of patients with AUD. This innovative, virtual series improved participant knowledge and may promote practice changes across the care continuum. The virtual format may have engaged a geographic range of participants. Other educational programs can adopt similar

approaches to disseminating information to improve evidence-based healthcare delivery and patient outcomes amidst a growing epidemic.

Opioid Antagonist Knowledge, Preferences, and Practices Among Substance Use Service Providers in Texas

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Background: Overdose deaths due to synthetic opioids are increasing in Texas, and a rapidly growing number of opioid antagonist products are available for acute overdose reversal in both intramuscular (IM) and intranasal (IN) formulations.

Objective: To assess knowledge, preferences, and practices related to opioid antagonist products among substance use service providers in Texas.

Methods: In-person attendees at the 2024 Texas Substance Use Symposium – an annual convening of health professionals, paraprofessionals, academics, state agency staff, and others who facilitate the provision of supportive services to people who use drugs – were invited to complete a 27-item online survey. Survey items included: demographics (9), knowledge (4), practices (6), and perceptions (8). The first 100 respondents were eligible to receive a $10 Amazon gift card.

Results: Complete responses were obtained from 119/488 attendees (response rate = 24.4%). A total of 31.1% had lived or living experience related to substance use, 18.5% had administered naloxone, and 10.9% had received naloxone. The average knowledge score was 65.2% (range 20–100%). Most had provided (prescribed or distributed) 0.4mg IM vials (55.5%) or 4mg IN (50.4%) in the past five years. Most currently provided 0.4mg IM vials (51.3%) and 4mg IN (48.7%). Approximately 1 in 5 were moderately or extremely worried about 4mg IN being ineffective (26.1%) or causing withdrawal symptoms (26.9%). A plurality reported no difference in confidence between higher-dose naloxone products (41.2%) and longer-acting antagonists (46.2%) compared to 4mg IN. Some were moderately or extremely worried about withdrawal with higher-dose naloxone products (49.6%) and longer-acting antagonists (34.5%). If every product was free and readily available, the most preferred products were 4mg IN (39.5%), 0.4mg IM vials (22.7%), 2mg IN (12.6%), and 0.4mg auto-injector (11.8%). Only 8.4% selected a higher-dose or longer-acting product compared to naloxone 4mg IN or 2mg IM.

Conclusions: Substance use service providers in Texas reported a clear preference for 4mg IN and 0.4mg IM naloxone products. Many were concerned about withdrawal symptoms associated with higher-dose and longer-acting products.

Anytime, Anywhere: Examining Low-Barrier Buprenorphine for Recently Incarcerated Individuals

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Background: The time following incarceration represents a period of increased morbidity and mortality, especially for individuals who use substances. Most notably, there is a 12-fold increase in all-cause mortality and a greater than 100-fold increase of overdose in the first two weeks after release. Reducing barriers to Medication for Opioid Use Disorder (MOUD) continuation or initiation immediately following release from incarceration represents a large gap in care provision. In 2021, the Allegheny Health Network Center for Inclusion Health created a post-incarceration clinic called RIvER (Rethinking Incarceration and Empowering Recovery) Clinic which provides low-barrier MOUD bridge prescriptions via telemedicine for individuals with OUD immediately upon release from jail, regardless of insurance status.

Objective: To demonstrate that low-barrier buprenorphine offered on-demand via telemedicine can reduce overdoses and increase engagement in care.

Methods: We conducted a retrospective chart review of patients with OUD who were provided with a buprenorphine prescription via telephone (aka bridge appointment) immediately after release from incarceration between September 2021 and April 2023. We abstracted patient demographics, housing status, ongoing substance use, date of first bridge prescription, and other health care needs from medical records. We assessed engagement in clinic after an initial bridge prescription, patients with multiple bridge prescriptions, and total outpatient appointments. We reviewed emergency department (ED) and hospital records for opioid overdoses and ED visits for OUD-related issues.

Results: Fifty patients with OUD (n=50) were provided with a bridge prescription immediately after release from incarceration, prior to an in-person visit with RIvER clinic. 84% of these patients returned for follow up in clinic after initial bridge prescription. The average amount of appointments in clinic was 9. 12% of these patients visited the ED after engaging with RIvER clinic. Out of the total patients who we gave a bridge script to, who did not end up coming in for an in-person appointment, 25% experienced opioid overdose. Out of the total patients who did come in for an in-person appointment after their bridge script, 7% experienced an overdose.

Conclusions: In the post-incarceration population, providing low-barrier MOUD improves medication access, engagement, and treatment retention, as well as reduces ED utilization and overdoses.

Examining Treatment Engagement and Retention in Care at a Low-Barrier Mobile MOUD Clinic

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Background: People who use drugs (PWUD) face multiple barriers in accessing healthcare services and Medications for Opioid Use Disorder (MOUD). The average retention rate in

MOUD clinics has been reported to be as low as 12% depending on the timeline and setting. Low-barrier service models improve utilization, engage PWUD in healthcare and expand buprenorphine use while aiming to reduce barriers to access. According to the CDC, Pennsylvania had the third-highest rate of drug overdose deaths in the U.S. consecutively between 2017-2019. In 2020, a syringe service program created a mobile MOUD clinic with a healthcare system. The focus was on low barrier prescribing of buprenorphine to mitigate overdose risk in high focus areas where the syringe service program was already operational (4 neighborhoods).

Objective: The purpose of this study was to examine low barrier prescribing of buprenorphine and related treatment engagement and subsequent engagement rates at 3, 6, 12 and 24 months in this setting.

Methods: We conducted a retrospective chart review of patients with OUD who were seen at the low barrier mobile MOUD clinic from June 9, 2021 to April 1, 2024. We abstracted patient demographics, total number of visits, date of first visit, and date of last visit from medical records. Engagement in care was measured at 3, 6, 12, and 24-months.

Results: Starting in October 2020 when the mobile clinic was established, 2202 patients were served. Out of this patient population, 1087 patients met the criteria for this study. Among the 1087 persons eligible for analysis, mean age was 45. Of those, engagement in care was 61.3% at 3 months, 61% at 6 months, 48.8% at 12 months, 34% at 24 months. 60.9% (662/1087) of the patients had more than 5 appointments in the mobile clinic, while 46.4% (505/1087) had more than 10 follow up appointments. The average number of appointments was 12.65.

Conclusions: Given the challenges PWUD experience in accessing healthcare services and MOUD, mobile health clinics with low threshold services aim to remove the barriers by offering flexibility and making addiction treatment more convenient, hereby increasing engagement and potential retention in treatment.

A Pilot Evaluation of a Same-Day Addiction Consult Service for Rural Veterans

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Background: Alcohol and opioid use disorders (AUD, OUD) are a major cause of morbidity and mortality among Veterans, yet only a minority of Veterans, and fewer rural Veterans, receive evidence-based medications for opioid and alcohol use disorder (MOAD). One approach to improve access to evidence-based treatment the Veterans Health Administration (VHA) has piloted is a pharmacist-physician management model (PPMM), which utilizes clinical pharmacist collaboration to improve access to evidence-based treatment, often through tele-health services.

Objective: We aimed to implement a PPMM with the goal of improving rural Veteran access to MOAD through primary care in 7 community-based outpatient clinics (CBOCs) in VHA Puget

Sound Healthcare System in February 2022. The model consisted of a primary care addiction-trained physician and clinical pharmacy practitioner who provided referred Veterans with same-day telephone assessment and MOAD initiation, if indicated.

Methods: Veterans with AUD and/or OUD receiving primary care in participating CBOCs during the year following implementation (2/2022-2/2023) were eligible for referral. We obtained data from internal program records and the VHA Corporate Data Warehouse to assess the sociodemographic characteristics (age, sex, race) and MOAD receipt among referred Veterans.

Results: Among Veterans diagnosed with AUD/OUD, 2,274 received primary care in the intervention clinics during the study period; AUD (n=2,062) and/or OUD (n=307). Of this population, 111 Veterans were referred and had at least 1 PPMM visit (AUD: n=93; OUD: n=9; AUD and OUD: n=9). The mean age was 52 years, 92% were Male, 68% White, 39% lived in rural zip codes and 12% received MOAD in the 90 days prior to implementation. Of the 102 Veterans referred to PPMM for AUD, 72 (71%) received medication (vs. 11% of those not referred). Of the 18 Veterans referred for OUD, 14 (78%) received medication (vs. 34% of those not referred).

Conclusions: In this pilot implementation of same-day telemedicine PPMM for MOAD, MOAD receipt was higher among referred Veterans relative to usual care. However, a significant population of Veterans with AUD/OUD seen in participating CBOCs were not referred to the program. Further evaluation of barriers and/or facilitators to referral are needed to guide improved program uptake.

Strategies to Improve Uptake and Delivery of Evidence-Informed, Equitable Care Guidelines for Hospitalized Pregnant People with SUD: A Scoping Review

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Background: Pregnant people with untreated substance use disorder (SUD) have an increased risk of overdose and severe maternal morbidity. Hospitalization is one opportunity to provide evidence-informed, equitable treatment and care for untreated SUD, yet uptake in acute care settings is limited.

Objective: To characterize strategies used to improve uptake and delivery of evidence-informed, equitable care guidelines for hospitalized pregnant people with SUD and identify research gaps.

Methods: We searched MEDLINE (PubMed), CINAHL Complete (EBSCO), Scopus (Elsevier), and APA PsychInfo (Ovid) for studies published from 2016 to 2023. Searches included keywords and database-specific vocabulary for “substance use”, “hospital”, “implementation” or “quality improvement”. Additionally, we used keywords to search conference proceedings from AMERSA and the Annual Conference on the Science of Dissemination and Implementation. We included US-based studies or abstracts that described strategies (i.e., tools, programs) involving

hospital settings or providers, and that aimed to address gaps in care for pregnant people with SUD. Two authors independently screened and extracted studies/abstracts. We used Leeman et al.'s framework to code strategies as: Dissemination; Implementation process; Integration; Capacity-building; or Scale-up.

Results: Twenty-eight studies (including 6 conference abstracts) met inclusion criteria (1762 studies identified, 661 duplicates removed, 1101 screened, 1073 excluded [1037 title/abstract, 36 full texts]). Studies were observational (n=14), quality improvement (n=7), descriptive (n=6), or experimental (n=1). Integration strategies (i.e., new care teams or protocols) were most common (n=10), followed by dissemination strategies (i.e., education; n=8) and scale-up strategies (i.e., community-based peer programs; n=7). Strategies targeted hospital providers (n=21), administrators (n=4), and providers-in-training (n=3). Five studies considered racial equity in design and implementation. Outcome measures were heterogenous across studies. Most dissemination strategies reported improved provider attitudes in pre-post intervention measures. Several integration strategies found increased adoption of treatments for SUD and improved hospital experiences among patients.

Conclusions: This scoping review highlights a strength of the current literature – most studies identified a strategy to improve provider attitudes. However, gaps in research and practice exist. Few studies considered racial equity or measured sustainability. Only one study was a more rigorous evaluation of an intervention. Implementation studies that test multi-component strategies, measure program sustainability, and incorporate racial equity are needed.

Developing Culturally Responsive TA Approaches for Tribal Opioid Response Grantees and Indigenous Communities

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Background**:** The Opioid Response Network (ORN), funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), is a reactive technical assistance initiative designed to respond to the overdose epidemic by providing technical assistance (TA) to support prevention, treatment, recovery and harm reduction efforts related to opioid use disorder (OUD) and other substance use disorders (SUD). Since 2018, ORN has received and responded to over 6,500 TA requests from individuals, communities, schools, hospital systems, and governments nationwide .

Objective**:** As the overdose crisis has disproportionately affected indigenous communities, ORN recognized the need to tailor training and TA delivery approaches to align with the needs of tribal and indigenous communities (Qeadan, et al., 2022). Research indicates that culturally responsive trainings, materials, as well as tribal autonomy over treatment are crucial for improving health outcomes (Richer & Rody, 2022).

Methods**:** In 2019, ORN developed an Indigenous Communities Workgroup (ICWG) to review TA requests for/from Indigenous communities and provide feedback on training and consultation approaches. The ICWG collaborated with other entities, such as the National American Indian Alaska Native ATTC center, and recruited consultants and subject matter experts from tribal communities to provide TA. In 2022, SAMHSA expanded ORN's role to provide TA to Tribal Opioid Response (TOR) grantees, growing the work of the ICWG and ORN's outreach to TOR grantees and their communities. ORN hosted grantee engagement sessions in 2023 to identify strengths and challenges. The themes that emerged across TOR grantees, included staff retention, implementing harm reduction, and creating culturally sensitive community partnerships.

Results**:** ORN's commitment to developing culturally responsive TA approaches for tribal and Indigenous communities has resulted in TA provision along various TA categories (see Figure 1)

Conclusions**:** Evaluation data shows that TA requests for/from Indigenous communities tend to close before TA provision at a lower rate than non-indigenous communities (see Figures 2 & 3). Additionally, TOR grantees with smaller award amounts tend to request TA at lower rates than those with larger awards, suggesting the need for more outreach and engagement with smaller TOR grantees to increase their utilization of TA services (see Figure 4).

Asynchronous Online Training Increased Primary Care Clinicians' Knowledge, Confidence, and Intent to Provide Substance Use Disorder Prevention and Treatment

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Background: Despite the pervasiveness of substance use disorders (SUDs), they continue to be under-recognized and undertreated in the primary care setting. New methods of training primary care clinicians (PCCs) are needed to improve access to treatment.

Objective: To evaluate the ability of an asynchronous online education course distributed in Texas to (1) engage PCCs and (2) provide office-based SUD prevention and treatment training in primary care practices.

Methods: An asynchronous online education program covered screening for substance use, brief interventions (SBI) for risky use, and medications for SUDs. A statewide self-selected sample of PCCs completed the program between March 2021 and July 2023. The program consisted of six online modules on SBI and SUD treatment. The program focused on alcohol (AUD), nicotine/tobacco (NUD), and opioid use disorders (OUD), trauma-informed care, and stigma. Modules were accessed remotely and took 5 to 15 minutes to complete. Baseline and post-training surveys were used to evaluate changes in knowledge, confidence, and intent to implement SBI and SUD treatment after completing the program. Changes were compared using paired t-tests. Clinician feedback regarding course content and delivery was also reported.

Results: Of 1,309 survey respondents, 613 were included. Of these, most were female (63.8%) and 50.9% practiced family medicine, 21.2% practiced Psychiatry or Addiction Medicine, and

the remainder practiced in other primary care fields. Knowledge about adolescent SUD screening tools increased from 21.9% to 75.7% after course completion ($p<0.001$). Knowledge about risky drinking among non-pregnant women increased from 24.5% at baseline to 64.9% ($p<0.001$). Confidence in providing pharmacotherapy for OUD improved significantly ($p<0.001$) as did intent to implement SBI and medications for AUD, NUD, and OUD ($p <0.001$). Satisfaction with the program was high. Nearly 60% of PCCs reported intention to implement SBI and SUD treatment due to the online educational program.

Conclusions: Knowledge, confidence, and intent to implement SBI and SUD treatment increased among PCCs after completing the online course. Provider satisfaction with this asynchronous interactive online course was high and improved intention to implement SBI and SUD treatment.

An Evaluation of Destigmatizing Addiction Medicine Training Session in Primary Care Addiction Medicine Clinic

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Background: After conducting a patient satisfaction survey in the Primary Care Addiction Medicine clinic, we encountered a barrier of addressing stigmatizing behaviors by clinic staff. Hence, we organized trainings for clinic staff to provide a space to discuss stigma, disseminating best practices to establish destigmatizing clinical care settings. We evaluated the attitudes clinical staff harbored towards patients with substance use disorders (SUD) prior to and after these didactic training sessions.

Objective: To evaluate stigmatizing attitudes among clinical staff and the impact of organizing training sessions to bring awareness to and consider how to reduce stigmatizing behaviors in addiction care.

Methods: We adapted the Opening Minds Stigma Scale for Health Care Providers (OMS-HC) into an 11-item Likert Scale-based questionnaire to self-report measurements of stigmatizing attitudes regarding addiction medicine. This survey was administered through a Qualtrics survey link prior to and after each training session. Pre- and post-training survey results were compared for each participant.

Results: 20 clinical staff (35% Medical Assistants, 20% Flow Managers, 20% Registered Nurses, 25% Front Desk Staff) working in addiction medicine responded to the questionnaire before and after the training sessions. 50% of staff felt more empowered to help people with SUD. Furthermore, 35% of staff disagreed to a greater extent with the statement that people with SUD do not try hard enough to improve their health. 35% of staff expressed improved reactions towards people with SUD after the training while 20% did not feel their reactions improved. However, 20% of staff agreed to a greater extent that healthcare providers should advocate for people with SUD and 55% felt more compassion towards people with SUD after the training.

Conclusions: We hope this study can inform us on how to work towards reducing bias and stigma towards addiction medicine care and improve patient experience in addiction medicine.

Despite some varying responses, most of the clinic staff felt equally if not more empowered and comfortable with working with addiction medicine patients after the training. This warrants for research into developing such training sessions to promote destigmatizing behaviors among healthcare providers.

Medical Students As First Responders: CPR and Naloxone Training in the Opioid Overdose Death Epidemic

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Background: In 2021, national drug overdose deaths surpassed 100,000, most of which were opioid-related and could have been prevented with naloxone. San Francisco similarly experienced high rates of substance-related mortality. We developed and implemented a case-based, hands-on naloxone training session for first year medical students to respond in this crisis.

Objective: We created a curricular intervention to train medical students in first responder basics: CPR and naloxone administration. This session aims to generate awareness of opioid-related deaths, describe the basics of CPR, and provide the tools and skills necessary to recognize and assist a person experiencing an opioid overdose.

Methods: Naloxone training was added to a preexisting workshop focused on providing first responder skills for first-year students. Case scenarios were drafted to reflect common presentations of opioid overdose in the community. After circulation to faculty experts, scenarios were edited to emphasize recognizing signs of opioid/opiate overdose, use of intra-nasal naloxone, and treatment without medical equipment. School of Medicine faculty used a guide with these cases and teaching points during the 45-minute session. Each student left with naloxone provided by the Naloxone Distribution Project (NDP) from the California Department of Healthcare Services.

Results: For evaluation, students rated the overall procedures session, on a scale of 1 (poor) to 5 (excellent). The available d ata from 2021 show a mean rating of 4.55; in 2022, a mean of 4.24 (SD=0.85); 2023 data show a mean of 4.31 (SD=0.97).

Conclusions: This session is an example of a novel adaptable curricular structure. Overseeing faculty support iterative growth of the session, most recently enhancing the learning experience with a patient simulation mannequin who made the cases come to life. This education session serves as a promising model for integrating lifesaving, bystander response education with awareness of the SUD crisis in the US.

A Kratom Conundrum: A Case of Kratom Use Disorder

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Background: Kratom, derived from the leaves of the *Mitragyna speciosa* tree, is known for its stimulant effects at lower doses and opioid-like effects at higher doses. Kratom is not regulated

and is increasingly a drug of choice among individuals both with and without opioid use disorder. Recreational kratom use can be accompanied by loss of control of use, tolerance, withdrawal, and ultimately kratom use disorder (KUD). The lack of a standardized treatment protocol for KUD poses management challenges, and clinicians should be aware of the risks associated with kratom use and opportunities for harm reduction.

Learning Objectives:

1. Recognize kratom as an increasingly common substance used across the country.
2. Describe risks associated with chronic kratom use and opportunities for harm reduction.
3. Outline an approach to managing kratom use disorder.

Case Presentation: A 72-year-old man with a history of hypertension, insomnia, and attention deficit hyperactivity disorder presented to clinic for assistance with reducing kratom use. He had been using kratom for two years as a substitute for tramadol, which he was purchasing from Mexico during a depressive episode. He reported consuming approximately 3-6 grams of kratom daily, taking additional capsules for social events. He took liquid THC for sleep, leading to frequent late-night eating and daytime stomach pains, the latter of which kratom alleviated. The patient was advised to engage in cognitive behavioral therapy with gradual reduction in his kratom and THC use, and was prescribed naloxone spray for emergencies. Low-dose buprenorphine treatment is also being considered for his recovery.

Discussion: People use kratom for both its stimulant and analgesic effects. Chronic use can result in gastrointestinal issues, insomnia, and physical dependence. Managing KUD involves harm reduction strategies, psychosocial support, and pharmacotherapy targeting symptoms. Although literature on KUD is limited, clinicians should explore patients' underlying causes of use, educate about the risks of chronic use, and emphasize gradual reduction. Naloxone can help in emergencies to reverse kratom's sedative effects. Case reports support a possible role of buprenorphine in KUD but more research is needed. This case highlights the challenges of managing KUD, the various root causes of use, and the need for a comprehensive, personalized approach to treatment.

A Synthetic Control Analysis of Marijuana Legalization’s Effect on State Overdose Mortality Rates

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Background: A long-standing narrative in the United States views marijuana as a “gateway drug” that introduces users to harder substances, which then have adverse effects on their health and livelihood. As a result, many argue that policies which decriminalize marijuana are exacerbating the problem of drug addiction. Seemingly in line with this argument, overdose related deaths - largely driven by increases in opioid consumption – have soared in recent years, and at the same time an increasing number of states have decriminalized marijuana.

Objective: Results from studies examining marijuana legalization's causal impact on overdose deaths are heavily varied. In this study, we take a comprehensive econometric approach to addressing the extent to which marijuana legalization has *caused* an increase in overdose deaths.

Methods: To examine the causal effect of marijuana legalization on overdose deaths, we combine state-year level data on marijuana policy and overdose deaths with state-of-the-art techniques from the field of causal inference, namely Two-Way Fixed Effect Difference-in-Differences analyses with Synthetic Control. We include data from states that enacted one of five marijuana legalization policies between 2010 and 2020. We estimate the causal effect of each policy separately for each state, and then use meta-analysis to calculate the overall effect of each policy intervention.

Results: We find that the passage of medical marijuana legalization laws and the opening of recreational dispensaries had no significant effect on annual state overdose death rates. The opening of medical marijuana dispensaries and the passage of recreational marijuana legalization laws also had no significant overall effect on overdose death rates, but the effect of these policies varied significantly across states such that there were significantly increases in some states and significant decreases in others.

Conclusions: Overall, these findings contradict the popular claim that marijuana decriminalization leads to increased use of more dangerous drugs (and thus overdose deaths) – and more generally questions the characterization of marijuana as a gateway drug. We also conclude that state implementation of drug decriminalization coupled with other relevant state characteristics lead to different outcomes.

Utilizing Transdermal Fentanyl As a Bridge to Buprenorphine Therapy in an Inpatient Setting: Challenges and Opportunities

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Background: The widespread availability and use of fentanyl and other high potency synthetic opioids (F/HPSO) have presented challenges to the standard buprenorphine initiation as their lipophilicity and variable half-life increase the risk of precipitated opioid withdrawal (POW). Since POW may discourage people using F/HPSO from considering buprenorphine therapy, new buprenorphine initiation techniques for mitigating POW are required. First described by Azar group as a method to transition patients from methadone to buprenorphine, bridging from full agonists to buprenorphine with transdermal fentanyl can reduce POW. However, this technique lacks a standard protocol for this application.

Objective:

1. Describe a safe and effective transdermal fentanyl protocol for buprenorphine initiation in an inpatient setting.
2. Determine key components for providing a transdermal fentanyl option to patients with F/HPSO.

Methods: We implemented a standardized transdermal fentanyl protocol to mitigate POW during buprenorphine initiation in an inpatient setting since October 2023. To date, 13 patients have used this protocol for buprenorphine initiation, and a retrospective case series review was conducted among them.

Results: Eight females and 5 males aged 29-53 years old were included. Among 13 patients, 2 took methadone with 115mg, daily, and 170mg, daily, respectively. The other 11 patients used illicit fentanyl with reported use ranging from 0.1 to 2 grams daily. Transdermal fentanyl dosages varied from 25 mcg/hr to 150 mcg/hr. Buprenorphine initiation started in the third day in 11 patients, and 2 others were unable to be initiated until 5 days due to persistent opioid withdrawal symptoms. Opioid withdrawal symptoms were measured using the Clinical Opiate Withdrawal Score every 4 hours (when patients were awake), which scored from 0-11 in patients during the transdermal fentanyl protocol. Patients were stable with buprenorphine dosages of 16-24 mg, SL daily. Overall, patients and staff were satisfied with this protocol.

Conclusions: Patients with F/HPSO were successfully transitioned to buprenorphine therapy with minimal and tolerable opioid withdrawal utilizing a standardized transdermal fentanyl protocol. Our observation indicates that transdermal fentanyl could be a safe and effective approach for buprenorphine initiation in individuals using F/HPSO to mitigate POW and improve patients' experiences with buprenorphine.

Bridge to Recovery: Linkage of Patients with Opioid Use Disorder to an Opioid Treatment Program for Methadone Continuation after Hospital Discharge

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Background: Opioid use disorder (OUD) is a serious public health crisis. Methadone is a safe and effective treatment of OUD, however access is difficult across the United States as it can only be dispensed by opioid treatment programs (OTPs). In addition, federal regulations pose significant barriers and require weeks to months for titration to a therapeutic dose. In the hospital, faster methadone titrations are possible given the increased monitoring available. In-hospital OUD treatment also results in decreased patient-directed discharges and readmissions as well as increased completion of parental antibiotics and likelihood of treatment retention. Thus, hospitals are crucial settings for methadone initiation. Post-discharge, linkage to an OTP is critical to treatment retention. Little is known about this transition between inpatient methadone initiation and treatment retention at an OTP.

Objective: To assess the effectiveness of in-hospital methadone initiation in facilitating follow up engagement at an OTP.

Methods: This is a retrospective chart review of patients who were initiated on methadone for OUD at an urban, academic medical center in the United States and set up with a follow up appointment at a nearby OTP for continuation of treatment.

Results: During the study period 236 patients received methadone for OUD. 48% of these patients went to their first OTP appointment after discharge. Of the patients who attended their first OTP appointment, 93% were still in treatment 4 weeks after hospital discharge. When comparing patients who did or did not attend their first OTP appointment, there was no difference in baseline demographics (sex, race, ethnicity, co-occurring use disorders, housing, insurance) or hospitalization characteristics (admission diagnosis, inpatient level of care). There was an association between total methadone doses during hospitalization and attendance at first OTP appointment. Patients who received more doses during hospitalization were more likely to attend their outpatient OTP appointment.

Conclusions: The hospital setting is an opportunity to initiate life-saving treatment for OUD. This study suggests that sociodemographic characteristics do not impact methadone treatment retention post-hospital discharge. It also shows that the total number of methadone doses is associated with increased OTP attendance post-hospital discharge, highlighting the importance of early initiation of OUD treatment in hospitalized patients.

An Ounce of Prevention Versus a Pound of Cure: A Case Report of Ketamine for Precipitated Withdrawal after Denial of Access to Methadone

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Background: Ketamine has been examined as a remedy for precipitated withdrawal (PW) from administration of buprenorphine; however, such antidotes may be avoided if methadone had greater accessibility.

Learning Objectives: 1) Summarize an effective regimen of ketamine to treat PW; 2) Identify strategies to prevent PW by using a patient-centered approach; 3) Illustrate how barriers to methadone treatment can lead to patient-directed discharge.

Case Presentation: This case examines an instance of PW in a 37-year-old female who presented to the emergency department (ED) after receiving buprenorphine at an inpatient rehabilitation facility. Her preference was for methadone, but it was not offered at the rehab facility. Her primary PW symptoms were pain and tremors. At the ED, we initially administered several medications via our Emergency Department Alternatives to Opioids (ED-ALT) program: acetaminophen 1000mg, diphenhydramine 50mg, midazolam 2mg, ondansetron 4mg, and an additional 8mg of buprenorphine before administering ketamine 22.7mg intravenous push. After receipt of ketamine, she self-reported a decrease in pain and tremors. She had a patient-directed discharge (PDD) after it was recommended that she be admitted, but she returned shortly after for admission. We were unable to readminister ketamine after admission to general medical floor due to hospital policy restrictions. Buprenorphine did not provide adequate withdrawal relief, which led to extreme agitation and placement in 4-point restraints. Psychiatry consult was ordered for methadone initiation, and she received methadone 5mg every six hours as needed. She subsequently left again via PDD, stating that methadone dose was insufficient to control her symptoms.

Discussion: Prevention of PW and subsequent hospitalization may have been possible if methadone, the patient's preferred medication for opioid use disorder was administered via her inpatient program (Schoenfeld et al., 2022). While ketamine decreased PW symptoms while she was in the ED, this medication has limitations in hospital administration policies (Jovaiša et al., 2006; Lalanne et al., 2016; Heeney et al., 2002). Decreasing stringent regulations for methadone treatment could have more effectively treated this patient's withdrawal symptoms and prevented her premature discharge (Thakrar et al., 2023).

Assessment of a Michigan Overdose Fatality Review Team: Implementation and Feasibility

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Background: Overdose fatality case reviews have become a powerful tool providing local governments and communities insight to the systematic gaps in care for people who use drugs (PWUD), with a multidisciplinary team. Designed after child death reviews, the unique OFR platform has been utilized across > 32 states with increasing public health and safety interest. Widespread efforts to implement this new overdose prevention strategy, makes it important to explore barriers and facilitators to implementing OFR teams in a state where OFR legislation doesn't exist.

Objective: To understand facilitators and barriers of OFR implementation, an evaluation of Kent County, Michigan's 2019-2023 OFR team was performed.

Methods: Using a mixed-methods design, we conducted a feasibility survey after 6 months of OFR team member participation and semi-structured 1:1 interviews. We developed interview guides using the Consolidated Framework for Implementation Research (CFIR). Interviews were audio-recorded over Zoom and transcribed. Using an inductive and deductive approach, we created summary thematic aggregates based on previously established interview guide codes and rapid analysis with thematic consensus post transcript review. Applicable CFIR domains, constructs and established sub-themes were displayed in summary matrices.

Results: OFR team members (n=9) completed the feasibility survey and (n=13) were recruited for 1:1 interviews. All feasibility measures reported positive outcomes with highest mean scores for "the OFR should continue" and "I would recommend OFRs to other counties in Michigan." Team members reported facilitators to OFR implementation including the importance of local stakeholder awareness of participating OFR agency involvement, high OFR-investment from the team's lead facilitator, and OFR mission alignment with partnering agencies allowing for increased county-wide coordination to provide effective support for PWUD. Implementation barriers included the COVID-19 pandemic, lack of supportive OFR legislation inhibiting Kent County's ability to consistently perform identified death reviews and difficulty delegating OFR recommendations among team members.

Conclusions: OFR county success is limited by legislation, team member role-assignments and ability to implement team recommendations. Sustainable solutions to promote team member

participation, inter-agency accountability and policies enabling data sharing transparency should be explored in future OFR evaluations.

Impacts of Personal and Family Experiences of COVID-19 Infection on Health-Related Quality of Life Among Patients with Opioid Use Disorder: A Cohort Study

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Background: People with opioid use disorder (OUD) report poorer health-related quality of life (HRQOL) compared to the general population. Treatment for OUD improves HRQOL. Given the dual impact of the COVID-19 pandemic on HRQOL and OUD treatment, evaluating the effect of COVID-19 infection on HRQOL in this population is crucial.

Objective: To assess the relationship between COVID-19 infection and HRQOL among patients with OUD recruited from an office-based addiction treatment (OBAT) program.

Methods: A cohort of adult patients with OUD completed telephone interviews at baseline and 6-month follow-up between July 2021–December 2022. Participants reported personal and family experiences related to COVID-19 infection, including exposures, symptoms, quarantine, positive tests, treatment, severe illness, etc. Each item endorsed received one point; points were summed into a continuous score reflecting the extent of COVID-19 infection impacts, with higher scores indicating greater COVID-19 infection impact (possible range 0-111). HRQOL was assessed using the EQ-5D-3L, where participants reported problems vs. no problems (dichotomized) across five HRQOL dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. Logistic regression assessed associations between COVID-19 infection score and any problems on each EQ-5D-3L dimension. Analyses adjusted for age, race/ethnicity, and gender. Generalized estimating equations accounted for repeated outcomes on the same individuals.

Results: Among 149 participants at baseline, average age was 49 [standard deviation (SD)=12], 62.2% were white/non-Hispanic, and 57% were male. Average baseline COVID-19 infection score was 5 [SD=4]. Many participants experienced problems with mobility (41.9%), anxiety/depression (73.0%), and usual activities (41.9%). Higher COVID-19 infection score was associated with increased odds of problems with mobility, anxiety/depression, and usual activities (aOR=1.10, 95%CI:1.02-1.17; aOR=1.21, 95%CI:1.09-1.34; aOR=1.07 95%CI:1.00-1.14, respectively). COVID-19 infection score was not associated with problems with pain/discomfort or self-care.

Conclusions: Among patients with OUD, impacts of COVID-19 infection and impaired HRQOL were common. Higher COVID-19 infection impacts appeared to exacerbate poor HRQOL outcomes including problems with mobility, anxiety/depression, and usual activities. Findings highlight a need to improve and reinforce access to resources that protect HRQOL during times of stress and disruption for this at-risk population.

Challenges in Buprenorphine Initiation in Pregnant Patients: Optimizing Rapid Buprenorphine Induction Protocol on the Inpatient Antepartum Service

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Background: Opioid use disorder (OUD) in the fentanyl era is an emerging issue in pregnancy, requiring novel treatment. Traditional buprenorphine induction requires an opioid abstinence period to prevent precipitated withdrawal. The prolonged clearance of fentanyl is exacerbated in pregnancy, posing additional challenges to treatment. Initiating low doses of buprenorphine while cross tapering full agonists has proven to have multiple advantages - no abstinence period, minimal precipitated withdrawal, and shorter duration of induction. However, limited guidelines exist for induction in pregnancy.

Objective: To determine the most effective and patient-centered protocol for rapid low dose buprenorphine induction for hospitalized pregnant patients.

Methods: Retrospective review was conducted for 10 pregnant patients with OUD, admitted to Boston Medical Center's antepartum service, who completed the buprenorphine induction protocol between 3/2022-11/2023. The protocol starts patients on low-dose buprenorphine patches with overlapping full opioid agonists on day 1 and 2. On day 3, sublingual buprenorphine-naloxone is titrated to a therapeutic dose after cessation of full agonists. Primary outcomes included completion of buprenorphine induction, time to reach therapeutic dose, and engagement in prenatal care after discharge.

Results: Patients were in their first (n=2), second (n=5), and third trimesters (n=3). All 10 patients reported illicit opioid use (80% fentanyl use) in the past 48 hours. 100% of patients completed buprenorphine induction, with an average induction time of 53.9 hours (range 38.27-72.2 hours) and average time from first to therapeutic sublingual dose of 19.35 hours (range 9-24 hours). No patients exhibited precipitated withdrawal or discontinued induction because of withdrawal. Eight patients were discharged on therapeutic SL buprenorphine, and 2 on injectable buprenorphine. Seven patients engaged with specialty addiction prenatal care after discharge, 1 was lost to follow up, and 2 moved away.

Conclusions: Despite the challenges of fentanyl use in pregnancy, low dose buprenorphine can be initiated effectively in patients with OUD at all trimesters of pregnancy. Delayed fentanyl clearance does not preclude or prolong buprenorphine induction in pregnancy, and anticipation of precipitated withdrawal may be worse than actual risk. Compared to traditional outpatient buprenorphine induction, this protocol also expedites time to therapeutic dose and decreases the need to continue illicit opioids while titrating buprenorphine.

Comparing Multidisciplinary Service Utilization By Pregnant Individuals Receiving Care in an Integrated OB/Addiction Clinic Pre and Post Implementation of a Dedicated Clinical Social Worker

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Background: Integrated care offers multidisciplinary services to patients in a centralized location. Tailoring service availability helps individualize patient involvement with treatment and achieve an optimal combination of service utilization. Social workers play a significant role in assessing social factors that impact a patients' health needs. In the continued overdose crisis, integrated addiction care is increasingly needed, but clinical social workers are underutilized and their influence on patient engagement is unexplored.

Objective: Compare service utilization patterns by pregnant/postpartum patients before and after the addition of a designated clinical social worker in the Obstetric/Addiction integrated care clinic.

Methods: Retrospective research registry data from an outpatient Obstetric/Addiction Clinic was utilized. Pregnant participants delivered between September 2021–September 2022 (Pre-social worker; n=28) and January 2023–January 2024 (Post-social worker; n=17). Binary (yes/no) service utilization variables assessed during the pregnancy-to-postpartum transition (28-week gestation through 12-weeks postpartum) included 28-week labs, pediatric, anesthesia and lactation consultations, nutrition and dental referrals, completion of a Plan of Safe Care, and inpatient social work visits during hospitalization post-delivery. Chi square analysis was used to compare services utilized between groups.

Results: Participants were reproductive age [29 years (range (22-44)] and predominantly non-Latinx White (53%) and Black (24%). Pediatric consultation was the most utilized service (pre: 75% vs. post: 71%). Dental referrals (pre: 4% vs post: 0%) and nutrition referrals (pre: 4% vs. post: 6%) were provided least often. Inpatient social worker visits (pre: n=40% vs. post: n=77%, p=0.03) and completion of a Plan of Safe Care (pre: n=43% vs. post: n=77%, p=0.02) increased significantly post-social worker. There were no significant differences between pre and post groups for other utilization variables assessed. Although not significant, utilization of anesthesia (pre: 36% vs. post: 47%) and lactation consultations (pre: 36% vs. post: 53%) were more common in the post group.

Conclusions: Preliminary data from an Obstetric/Addiction program indicate that a dedicated clinical social worker is integral to meeting the unique needs of pregnant and postpartum individuals receiving addiction care. Findings support the need for future work investigating the impact of clinical social workers on addiction-related outcomes.

Project Better: Outcomes at the Pregnancy-to-Postpartum Transition from a Pilot Clinical Trial of a Technology-Delivered Intervention for Birthing People Receiving Medication for Opioid Use Disorder

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Background: Birthing people receiving medication for opioid use disorder (MOUD) face unique challenges during pregnancy and postpartum. Obstetric providers are not prepared to address these stressors that contribute to risk of serious adverse outcomes including overdose.

Objective: Describe preliminary harm-reduction focused outcomes specific to the postpartum transition from a pilot trial assessing BETTER's technology-delivered educational intervention for pregnant people receiving MOUD in a perinatal addiction clinic.

Methods: Participants were randomized to the technology-delivered educational intervention or standard practice control (brochure). BETTER's intervention offered three modules [postpartum transition, Neonatal Opioid Withdrawal Syndrome (NOWS), child welfare] via Computerized Intervention Authoring System (CIAS 3.0). Inclusion criteria were: ≥18 years of age, <34 weeks pregnant, current MOUD, and engaged in prenatal care for ≤10 weeks. Parenting Sense of Competence (PSOC; score range 16-96) scale and intervention-specific Perceived Competence Scales (PCS; score range 1-7) for three topic areas were administered at baseline, prenatal follow-up, and postpartum follow-up.

Results: Participants (n=29) were reproductive age [M = 30.0 years (SD = 4.4)], 66% white and 31% Black with a median gestational age of 24 weeks. Over half (59%) had been receiving MOUD ≥1 year, mostly buprenorphine (69%). Overall, 59% reported a prior overdose. Two-thirds (66%) experienced a prior birth; approximately half of those had prior interactions with child welfare, and two had infants treated for NOWS. Mean PSOC [baseline: 69.9 (14.4) vs. prenatal follow-up: 71.8 (13.8) vs. postpartum follow-up: 72.8 (13.3)] and PCS scores related to the postpartum transition [baseline: 6.0 (1.2) vs. prenatal follow-up: 6.2 (0.9) vs. postpartum follow-up: 6.6 (0.6)], NOWS [baseline: 6.6 (0.7) vs. prenatal follow-up: 6.3 (0.8) vs. postpartum follow-up: 6.7 (0.6)], and child welfare [baseline: 6.4 (1.0) vs. prenatal follow-up: 6.1 (1.0) vs. postpartum follow-up: 6.6 (0.5)] were high across study condition and time.

Conclusions: Patients in a multidisciplinary perinatal addiction clinic can achieve positive recovery outcomes including those specific to the unique biopsychosocial context during the transition from pregnancy to postpartum while in MOUD treatment. Future studies in general OB/GYN clinics are needed to assess whether Project BETTER can extend the reach of perinatal OUD interventions and improve parent-dyad OUD outcomes.

Recovery-Oriented Patient Reported Outcomes Among Pregnant People Receiving Medication for Opioid Use Disorder

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Background: While recovery is a primary goal of addiction treatment, it is multidimensional, individualized, and difficult to measure. Recovery-oriented patient-reported outcomes (PROs) go beyond traditional abstinence-based outcomes and can provide a more holistic measure of recovery when evaluating efficacy of addiction treatments. However, PROs are commonly

neglected in addiction studies, precluding their use in future clinical trials, including those in the perinatal period

Objective: This study aims to describe a set of recovery-oriented PROs for a unique patient population: pregnant people receiving medications for opioid use disorder (MOUD) in a multidisciplinary, integrated perinatal addiction clinic.

Methods: Participants (N=29) receiving MOUD completed a set of recovery-oriented PROs including: Treatment Effectiveness Assessment (TEA; scores range 4-40), Substance Use Recovery Evaluator (SURE; scores range 21-63), and PROMIS10 Global Health (score of 50 represents the general population and higher scores indicate more of the concept being measured), as part of a feasibility trial. Assessments were completed at baseline (during pregnancy), prenatal follow-up, and postpartum follow-up.

Results: Participants were reproductive-age (M=30 years), 65.5% White and 31.0% Black, and in their second trimester (median gestational age = 24.0 weeks). PRO scores reflected positive participant assessments of their quality of life and recovery across pregnancy and postpartum. Median TEA scores were 32 at baseline, 36 at prenatal follow-up, and 37 at postpartum follow-up. SURE scores averaged 52.8 [8.7] at baseline, 58.4 [4.2] at prenatal follow-up, and 54.8 [9.6] at postpartum follow-up. Based on normative PROMIS data from the general population, participants self-reported typical physical and mental health (Physical health: baseline 43.8 [6.9], prenatal: 46.6 [7.7] and postpartum: 48.0 [7.6]; Mental health: baseline 42.0 [9.5], prenatal: 47.2 [9.9], postpartum: 47.3 [8.6]).

Conclusions: Participants receiving MOUD report positive self-assessments of their quality of life/recovery throughout the perinatal period. Findings can be used to inform effect size estimates of future addiction treatment clinical trials among pregnant people receiving MOUD that aim to holistically measure recovery-based outcomes. Such research advancements ultimately are needed to promote patient-centered innovations and individualized assessments of treatment efficacy.

Patients, Colleagues, Systems, and Self: Exploring Layers of Physician Emotions in Caring for Pregnant People Who Use Substances and Their Newborns

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Background: Pregnant people who use substances experience significant stigma, including in healthcare settings, where physicians make high-stakes decisions about treatment plans, resource allocation, and even a person’s ability to parent. Previous psychology research has demonstrated the influence of emotions on decision-making, as well as on the development and expression of stigma. Yet the specific content of physician emotions, as well as approaches to processing these emotions, has been relatively under-examined.

Objective: We sought to better understand the emotional experiences of physicians who practice in safety-net labor and delivery/inpatient settings to inform strategies to facilitate more humanizing, equitable care.

Methods: From March 2021 to June 2022, semi-structured interviews were conducted with 24 physicians (obstetrics-gynecology, pediatrics, family medicine) caring for pregnant people who use substances and/or their newborns in the San Francisco Bay Area. We used deductive and inductive coding and identified themes regarding the nature, etiology, and processing of physician emotions.

Results: Physicians described experiencing a range of emotions related to interpersonal (patients, colleagues), systems-level, and internal dynamics. Emotions such as anger, sadness, frustration, and helplessness resulted from their deep care and empathy for patients, witnessing stigmatizing colleague behaviors, disagreement with punitive systems, and recognition of their own limitations to affect change. Few participants identified strategies for processing these emotions, and several described efforts to disengage from their emotional experience to preserve their sense of well-being and professionalism.

Conclusions: Physicians caring for pregnant people who use substances and their newborns experienced intense, multi-layered emotions. This study posits that additional efforts to support physician emotional processing and structural competency could improve healthcare experiences and outcomes for pregnant people who use substances.

High Dose Opioid Agonist Therapy for Patients with Opioid Use Disorder during Acute Hospitalizations

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Background: Patients suffering from opioid use disorder are medically, psychological, socially, and behaviorally complex, making their management in acute hospitalizations challenging. For some patients, there are hesitancy surrounding medications for opioid use disorder (MOUD), which often result in patient-directed discharge before completing medical treatment. Short-acting opiates have served as a strategy for induction, however high dose opioid agonist therapy (HDOAT) has not been explored. In this case series, we explored HDOAT as a safe and effective strategy during acute hospitalization to bridge patients to recovery.

Learning Objectives:

1. To demonstrate the clinical utility and safety of HDOAT
2. This approach, when used in selective patients, can help bridge patients towards completing medical therapy and substance recovery.

Case Presentation: We present five patients that were seen in our hospital with fentanyl/xylazine use. All five patients were admitted for injection-related infections and sepsis. Patient 1 was using 24-28 bags of fentanyl/xylazine daily. Patient 2 was using 12-14 bags of fentanyl/xylazine

and 18mg of alprazolam daily. Patient 3 was using 40-48 bags of fentanyl daily. Patient 4 was using 6 bags of fentanyl daily in addition to chronic methadone. Patient 5 was using 10-20 bags of fentanyl daily. All 5 patients had high tolerance and was given oxycodone extended release to manage acute withdrawal and oxycodone immediate release for pain symptoms during the acute phase of their hospitalizations. Notably, all five patients completed lifesaving surgery and medical therapy, and successfully transitioned to either buprenorphine-naloxone or methadone monotherapy upon discharge. None had inpatient overdoses or required naloxone administration. No patients were readmitted within thirty days.

Discussion: HDOAT is an unconventional but safe strategy to treat select patients during hospitalizations that are hesitant about recovery. HDOAT complements short acting opiates that are already in use to assist induction. Patients trust opioid agonist more which fosters better therapeutic relationships. Additionally, it reduces post-hospitalization overdoses in patients that choose to continue to use by maintaining their tolerance. Lastly, it must be acknowledged that HDOAT is only temporary with the intent of treating medical illnesses and life-threatening conditions during acute hospitalizations.

Trends in Medical Use, Nonmedical Use, Diversion Sources, and Perceived Availability of Prescription Stimulants, Opioids, and Benzodiazepines Among US Adolescents, 2009-2022

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Background**:** Relatively little is known about the trends in medical use, nonmedical use (NMU), and diversion sources of prescription stimulants, opioids, and benzodiazepines among United States (US) adolescents.

Objective**:** To examine trends in medical use, NMU, diversion sources, and perceived availability of prescription stimulants, opioids, and benzodiazepines among US adolescents (2009-2022).

Methods**:** The study used 14 cohorts (2009-2022) of nationally representative US adolescents in 12th grade (N=29,220) in the Monitoring the Future study. The modal response rate was 83%. Binary regression models estimated unadjusted linear trends for medical use, NMU, diversion sources, and perceived availability.

Results**:** Lifetime medical use of prescription opioids decreased significantly from 2009-2010 to 2021-2022, while significant declines were not detected for prescription benzodiazepines or stimulants. Past-year NMU of each prescription medication class significantly decreased over time; particularly for NMU of prescription opioids which decreased from 8.0% in 2009-2010 to 0.7% in 2021-2022 (linear trend, OR=0.75 [95% CI=0.72-0.77]). Among adolescents who reported past-year NMU of prescription stimulants, opioids, or benzodiazepines, peer-to-peer diversion sources significantly decreased over time. In 2009−2010, 58.0% were given

prescription medications for free by a friend; this decreased significantly to 26.9% in 2021−2022 (linear trend, OR=0.85 [95% CI=0.80-0.90]). In 2021-2022, one's own leftover medication was the most prevalent source for NMU of prescription opioids and stimulants. The perceived availability for each prescription medication class significantly decreased over time. This trend was particularly strong for prescription opioids with 21.4% believing it would probably be impossible for them to obtain prescription opioids for NMU in 2009-2010 and 41.8% in 2021-2022 (linear trend, OR=1.15 [95% CI=1.13-1.17]).

Conclusions**:** Trends involving prescription medications among US adolescents changed with significant decreases in NMU and perceived availability. A significant decline in medical use of prescription opioids was observed, possibly driven in part by changes in opioid prescribing guidelines. Peer-to-peer diversion sources for NMU for all classes declined, potentially due to COVID-related school closures limiting social interaction. In 2021-2022, one's own leftover medication was the most prevalent source for NMU of prescription opioids and stimulants and this has implications for potential interventions to reduce leftover medication supply (eg, clinical guidelines, disposal options).

Inpatient Pharmacist Comfortability with Opioid Use Disorder Medication Orders

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Background: As the evidence for strategies using medications for opioid use disorder (MOUD) expands, inpatient pharmacists are frequently the first line for medication related questions in the hospital. While MOUD is increasingly used in the acute care setting, this content has not been routinely covered in the pharmacy curricula leaving pharmacists with varying levels of comfort in reviewing these orders for accuracy and safety. The Substance Use Intervention Team (SUIT) at Rush University Medical Center (RUMC) assists primary teams in managing inpatients with opioid use disorder (OUD). In order to provide individualized care and successful linkage after discharge, a variety of MOUD are available including sublingual (SL), intravenous (IV), long acting injection (LAI), transdermal (TD) formulations of buprenorphine along with methadone (IV and PO) and naltrexone (PO and LAI).

Objective: To assess pharmacists' comfort with answering questions and reviewing hospital orders for MOUD.

Methods: Inpatient pharmacists were emailed a survey assessing their comfort in reviewing hospital orders for buprenorphine formulations (IV, SL, transdermal, LAI), methadone (IV, PO), and naltrexone. Responders were also asked their comfortability in answering OUD treatment questions and agent transitioning. Responses were collected using a Likert scale (1 = very uncomfortable, 5 = very comfortable). Pharmacists were also able to provide open-ended responses regarding what would be useful information to have when reviewing MOUD orders.

Results: Pharmacists (N = 46) reported they were most comfortable with methadone PO (60.9% somewhat or very comfortable) and least comfortable with buprenorphine LAI (8.7% somewhat or very comfortable). SL buprenorphine was the formulation pharmacists were most comfortable

with (43.5% somewhat or very comfortable). Overall, only 17.4% of pharmacists reported being somewhat or very comfortable answering OUD treatment questions and 6.5% were somewhat or very comfortable assisting with transitioning between formulations.

Conclusions: Pharmacists at a large, academic hospital with an active addiction medicine consult service reported varying levels of comfort with different types of MOUD. Most respondents reported low levels of comfort when reviewing buprenorphine compared to methadone, particularly involving LAI, transdermal, and IV formulations. This survey prompted us to create a resource document for pharmacists on MOUD.

Supporting Patients with Alcohol Use Disorder through Lifestyle Changes Using Design Thinking: A Model for Internal Medicine Residency Curricular Intervention

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Background:The prevalence of severe, moderate, and unhealthy alcohol use in hospitalized patients is common, ranging from 5 to 16%. Prior studies have shown that interventions aimed at reducing alcohol consumption during hospital admission result in decreased use for as long as 9 months post-discharge. However, standardized care for this vulnerable population approaching discharge is lacking.

Objective: We describe a quality improvement project using user-centered design thinking to improve resident physician comfort with evidence-based interventions for patients to meet their goals with regards to lifestyle changes, with particular attention to alcohol use disorder (AUD).

Methods: In this approach we aimed to understand and meet the needs of patients with AUD, and barriers amongst internal medicine resident physicians at the Kaiser Permanente Oakland Medical Center. We applied the five steps of design thinking: empathize, define, ideate, prototype and test.

Results: To empathize and understand the problem, we interviewed specialists in addiction medicine, residents, hospitalists, social workers, a substance use navigator, patients admitted with AUD, and attended an alcoholics anonymous meeting. Two salient themes emerged: 1. Most hospitalized patients are motivated to change and place value on the psycho-social component of recovery; 2. providers are most concerned with the logistic needs of patients with AUD and lack evidence-based interventions to provide.

This disconnect between patients and providers isolated a specific question: “how might we provide residents with evidence-based tools to meet the psycho-social needs of patients in the recovery process?” Following formal ideation, the intervention implemented was a motivational interviewing workshop, led by addiction medicine specialists, aimed at equipping residents with counseling skills for aiding patient lifestyle changes. Post-workshop, respondents showed a 27% increase in comfort assisting patients towards healthier lifestyles, a 44% increase in confidence in counseling skills, and a 37% increase in comfort intervening on patients’ substance use, compared to pre-workshop responses.

Conclusions: Formal teaching on motivational interviewing can improve providers' comfortability with non-medication options to support the recovery of patients with AUD. These results suggest motivational interview training can boost residents' confidence in counseling patients on various lifestyle changes like diet, exercise, or medication adherence.

Elevated Spirits: The Role of Campus Cultural Norms on Hazardous BAC and Audit Scores

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Background: In Texas, the legal blood alcohol concentration (BAC) limit is 0.08%. Exceeding this limit can lead to serious legal and health consequences. High-risk drinking (i.e., having a BAC level ≥ the legal limit) is common among college students and may stem from campus drinking culture, which is characterized by peer pressure and normalization.

Objective: The current study's objective was to assess the relationship between high-risk college students' drinking behaviors, participation in campus cultural norms (tailgating, celebrating team wins, local bar crawls), and peak BAC levels.

Methods: This cross-sectional study was conducted with college students (n=238) who violated their institution's alcohol policies. Participants self-reported alcohol behaviors (frequency, binge drinking), determinants (age-of-onset, campus drinking norms), Alcohol Use Disorder Identification Text (AUDIT; scale 0-40), sociodemographics, and questions related to Peak BAC during the last instance of heavy drinking. BAC was calculated using the Widmark formula. Multiple linear regressions were conducted.

Results: On average, students consumed alcohol 5 days in the past month and binge drank on at least 4 occasions. The average AUDIT score was 8, indicating hazardous alcohol use. About 7% of participants reported an AUDIT score >15, suggesting the likelihood of dependence. One-third of the sample reported engaging in campus drinking norms, 43% reported a BAC over Texas' legal limit, and 20% reported a BAC twice the legal limit (0.16). Regression results indicated past-month alcohol frequency ($p = .05$), past-month binge drinking ($p < .01$), participation in cultural norms ($p = .05$), and AUDIT score ($p < .05$) were all positively associated with Peak BAC, while respondent's age ($p < .10$) was negatively associated.

Conclusions: The study examined relationships between high-risk college students' peak BAC levels and their alcohol behaviors, campus drinking culture, and individual traits. The relationship between campus traditions and BAC levels remains largely unexplored, despite our awareness of drinking culture-related norms. One-third of the study sample participated in campus drinking culture, emphasizing peer and environmental influences on health behavior. Comprehensive campus health programs addressing alcohol patterns and cultural norms are essential. Future research should prioritize interventions targeting identified risk factors to mitigate alcohol-related harms and foster preventive measures among college students.

A Complex Case of Chronic Pain and Iatrogenic Opioid Use Disorder Successfully Treated By an Inpatient Addiction Medicine Service

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Background: Consultation by an inpatient addiction medicine service can provide continuity for complex patients with OUD who are frequently admitted. We present a patient who at the height of her OUD, struggled in an outpatient level of care, requiring multiple inpatient consulting services to cooperate in her care.

Learning Objectives: Interpret the significance of OUD management in patients with multiple co-morbidities who frequently present to the hospital.

To reflect on the role an inpatient addiction medicine consult service can play in assisting with readmissions.

Case Presentation: A 42 year old female with a history of lupus, pulmonary embolism, pericarditis, avascular necrosis, ovarian cysts, endometriosis, has been seen in our hospital since 2005. In 2015, she started presenting to the ED regularly for abdominal pain, which led to occasional admissions, further work up, surgical interventions, and brief courses of opioids. In 2019, palliative care began following her for her pain and she was started on chronic opioid analgesia. In 2020, her hospitalizations escalated, with 2-3 admissions per month, prompting the palliative team to request an addiction medicine consult. We confirmed the diagnosis of OUD and transitioned her to sublingual buprenorphine, but she struggled with adherence on discharge, resulting in further readmissions. Eventually, during a February 2023 admission, she agreed to receive buprenorphine long acting injectable (LAI) and was able to avoid re-hospitalization for 3 months, following in our addiction medicine clinic for her monthly LAI. For the remainder of 2023, she only had 4 admissions, during which, our team continued to build rapport and insight with her, working with the psychiatry consult liaison service to help her accept psychiatric pharmacotherapy. Since October 2023, she has not been re-hospitalized, has reliably followed up outpatient, and continued her medications.

Discussion: This patient had multiple painful conditions throughout her history, but while getting regularly treated with opioid analgesia, she also developed the behavioral and mood dysfunction associated with OUD. Our addiction medicine consult service saw her 60 times inpatient between 2020-2023, providing the continuity to help her make incremental therapeutic changes overtime, such as the initiation of buprenorphine LAI and the titration of psychiatric medications that contributed to her improvement.

Women's Perspectives on the Influence of Their Experiences of Intimate Partner Violence on Their Substance Use Behaviors and Substance Use Disorder Recovery Journey

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Background: Stress and trauma can trigger substance use among women and inhibit their engagement in substance use disorder (SUD) treatment. Intimate partner violence (IPV) is a prevalent source of stress and trauma among women, especially among those who use substances.

Objective: To better understand the impacts of IPV on SUD recovery, we conducted qualitative interviews with women with a history of IPV experience who were accessing SUD treatment. Interviews explored women's perspectives on the effects of IPV on their substance use, engagement in SUD services, and overall recovery journey.

Methods: Study participants (n = 12) were receiving SUD treatment associated with an urban, academic safety-net health system in Massachusetts. We conducted interviews from June to October 2023. Pre-interview questionnaires captured demographics and histories of IPV, substance use, and receipt of SUD services. Semi-structured interviews were audio-recorded and transcribed verbatim. We utilized an iterative coding process to identify inductive and deductive codes and themes from the transcripts.

Results: Participants were aged 33 to 66 years old; most were non-Hispanic white (n = 7) and had a history of polydrug use (n = 10), injection drug use (n = 8) and overdose (n = 7). We identified three significant themes regarding the effects of IPV: 1) Partner's coercive and controlling behaviors can control and contribute to women's substance use and inhibit SUD service engagement, 2) Mental health impacts of IPV can exacerbate substance use and inhibit engagement in SUD services, and 3) Women value mental health and IPV supportive services, along with SUD treatment, for their recovery.

Conclusions: Our findings highlight the need for the integration of mental health and IPV services along with SUD treatment to support women's successful recovery. It is vital to address the underlying source of stress and trauma among women who use substances. SUD services should employ a trauma-informed approach to recognize patients' trauma and acknowledge its role in their lives and SUD recovery. Integrated services may not only improve women's SUD treatment outcomes, but also overall health and well-being.

The Influence of Trauma on Emotional Regulation in Male Substance Treatment Residents

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Background: Trauma plays a role in the development of emotion dysregulation by decreasing one's ability to cope effectively during stressors. Substance use often serves as a negative coping mechanism to regulate intense emotions or decrease the impact of stressors. Within rural, ethnically, and racially diverse populations, substance abuse remains high, with limited access to treatment services.

Objective: The role of emotion regulation in ethnically and racially diverse substance abuse populations is limited and can inform culturally effective interventions.

Methods: A sample of adult male residents (N=668) aged between 18-44 years at a substance treatment facility participated in the study. The sample included participants who identified as White (*n*=584), Black (*n*=41), Hispanic (*n*=32), Native (*n*=25), Asian (*n*=8), and other or mixed race (*n*=7). Twenty-two participants did not indicate a race or ethnicity and were excluded from the sample. The PTSD-C (Post-Traumatic Stress Disorder-Civilian) scale and the DERS (Difficulties in Emotion Regulation) scale were administered to examine trauma, and emotion regulation.

Results: We found that PTSD-C scores predicted differences in DERS scores within different racial categories. Results suggested that trauma impacted emotion regulation difficulties in Native, and Black participants. Results also indicated that trauma impacted nonacceptance (intolerance emotional responses), clarity (lack of emotional awareness), and strategy (limited emotion regulation strategies) subscales for Black and Native participants.

Conclusions: PTSD-C scores showed differential emotional dysregulation problems across racial categories. These findings underscore the heterogeneous effects of trauma on emotion regulation across racial and ethnic groups. Understanding the ways trauma impacts emotion regulating among marginalized populations engaged in recovery could lead to more effective and culturally informed interventions in substance abuse treatment and recovery programs.

Postoperative Pain Management While on Extended-Release Buprenorphine: A Case Report of Supplementing with Sublingual Buprenorphine

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Background: Postoperative pain management for patients on buprenorphine for opioid use disorder (OUD) is a common clinical challenge. Many treatment approaches rely on adjusting the buprenorphine dose, limiting applicability for patients on extended-release buprenorphine (ER-BUP) formulations whose dose cannot be calculated or readily changed. While buprenorphine has a ceiling effect for respiratory depression, there is no maximum analgesic effect that can be reached, making it a relatively safe and effective option for acute pain management. Temporary dose increases of buprenorphine for acute pain in patients receiving ER-BUP formulations is not currently well documented.

Learning Objectives: Explore efficacy and safety of treating postoperative pain with sublingual buprenorphine/naloxone (SL-BUP/NAL) supplementation for a patient with OUD on ER-BUP.

Case Presentation: A 56-year-old male with OUD receiving ER-BUP 100mg monthly required a left total knee arthroplasty to replace worn out components. Due to history of opioid pain medication abuse, he preferred to avoid opioids for postoperative pain management. In collaboration with the surgical nurse practitioner and local pain and OUD subject matter experts, the psychiatrist opted to prescribe a quantity of 21 SL-BUP/NAL 8/2mg tablets to be dosed up to three times daily as needed for pain. Perioperatively, he received an adductor canal nerve block, and no pain management complications were noted. He received his regularly scheduled ER-BUP injection 4 days postoperatively. On postoperative day 8, pain management was perceived

as reasonable without any signs of oversedation. Through shared decision making, he was prescribed an additional 21 SL-BUP/NAL 8/2mg tablets for residual pain. Additional pain management strategies were optimized, including acetaminophen, heating pads, stretching, and physical therapy. The patient did not require additional interventions for pain and expressed overall satisfaction with his postoperative pain management.

Discussion: Although the steady-state concentration of ER-BUP is therapeutic for managing OUD, further analgesic benefit can be achieved with SL-BUP/NAL supplementation. This option may provide a more patient-centered approach to postoperative pain management and minimize triggers of past use in patients with OUD. The dosing used in this case is comparable to the steady-state concentration of ER-BUP 300mg, which was tolerated well for this patient without any adverse events, supporting the safety of this option.

Inpatient Addiction Consult Services: Insights and Recommendations from Six Model Programs in Massachusetts

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Background**:** The inpatient hospital setting is a potential intervention point where people at risk for overdose can be identified and connected to evidence-based substance use disorder (SUD) treatment and harm reduction services. Inpatient addiction consult service (ACS) programs have been shown to have a range of positive outcomes, but there remains an implementation gap, and ACS programs are not offered in many hospital settings.

Objective**:** 1) to understand implementation practices and challenges at established ACS programs, and 2) to identify recommendations for creating a more robust and effective system of hospital-based addiction care

Methods**:** The sample consisted of six inpatient ACS programs in Massachusetts that included academic and community hospitals of varying sizes in different regions. Data on ACS services were gathered through document review and semi-structured qualitative interviews with 2-5 providers or staff members at each hospital. Data were coded and analyzed to develop individual program profiles and identify cross-cutting themes.

Results**:** All programs shared a common core staffing structure, prioritized effective withdrawal management as the first step in a patient's care, took a patient-centered harm reduction approach, and operated a low-barrier bridge clinic and/or another model for outpatient SUD treatment services. Insufficient access to post-discharge follow-up care was a significant concern for participating hospitals. Participating programs also described stigma within their institutions towards people who use drugs or people with SUD, and highlighted financial sustainability as a major challenge.

For new programs, participating hospitals recommended starting by identifying leadership champions and building support among key stakeholders. They emphasized the importance of building a strong staff team and developing protocols for care within the hospital and for follow-

up care after discharge. Hospitals also recommended dedicating time to internal training and advocacy to raise awareness of the value an ACS program can offer and how to use it.

Conclusions: This work identified successful implementation practices used by established ACS programs as well as challenges they face. The findings can inform development of new ACS programs as well as policy and practice changes to expand, improve, and sustain this model of care.

An Anti-Stigma Curriculum for Medical Trainees Caring for Hospitalized People Who Use Drugs

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Background: Healthcare workers generally hold negative views of individuals with substance use disorders. This can lead to marginalization of people who use drugs (PWUD) and result in adverse health outcomes. Curricula are needed for medical trainees to identify and reduce stigma for hospitalized PWUD.

Objective**:** To create a curricular intervention for medical trainees to learn about and actively fight against the internalized, enacted, and structural stigma in the medical system towards PWUD.

Methods**:** A 45-minute asynchronous anti-stigma curriculum was designed for rotators starting on a 2- week addiction medicine consult rotation. First, trainees investigate their own internalized stigma with a personal bias assessment. Then, through case-based learning, trainees complete a narrated PowerPoint with interactive questions and written reflections on 1) examples of different types of stigma in the healthcare system, 2) how stigmatizing language impacts care, and 3) health implications of stigma on PWUD. An 18-item pre- and post-assessment (on completion of the rotation) was administered through RedCap with responses measured on a Likert-type scale (1= strongly agree to 5=strongly disagree). Assessment domains included preparedness to work with PWUD, attitudes and beliefs regarding PWUD, and knowledge related to stigma. A paired-sample t-test was conducted to compare answers before and after the curriculum.

Results: Twenty-one participants have completed the course and assessments including 7 medical students,12 residents, and 2 fellows (completion rate: 21/25, 84%). When assessing for change in attitudes, there was an increase in comfort when talking with PWUD (pre=2.81, post=1.76; $p<.001$), satisfaction with working with PWUD (pre=1.95, post=1.33; $p=0.002$), and belief that PWUD have challenging medical and social issues that trainees can learn from (pre=1.48, post=1.00; $p=0.002$). There was a significant inverse change regarding the belief that there is little trainees can do to help PWUD (pre=4.38, post=4.81; $p=0.009$), and that utilization of suboxone or methadone is replacing one addiction with another (pre=4.19, post=4.76; $p=0.004$).

Conclusions: An online asynchronous course to address stigma has had high completion rates, met curricular objectives, and demonstrated significant change in attitudes towards PWUD. This

brief, replicable curriculum shows promise in addressing medical provider stigma towards PWUD in the healthcare system.

Peer-to-Peer Opioid Overdose and Naloxone Training in Adolescents

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Background: After holding steady for many years, adolescent overdose deaths have increased significantly, with an average of 22 American teen deaths weekly in 2022, reflecting the equivalent of one classroom of high school students dying per week. Given that non-cannabis drug use by this age group is at an all-time low, this increase is likely primarily due to the contamination of the counterfeit drug supply with fentanyl. In 2021, fentanyl was detected in 93% of overdose deaths involving counterfeit pills, the use of which was more often observed in younger people and more than doubled in the U.S. and tripled in western states. A recent analysis of opioid overdose knowledge among adolescents and young adults in college found only 30.2% of 7071 study participants knew what naloxone was and only 14.2% knew how to administer it, suggesting a need for increasing awareness in this population.

Objective: To quantify the impact of peer-to-peer overdose training in adolescents.

Methods: A population-based sample of high school students in Los Angeles County participated in peer training between November 2023 and March 2024. Topics covered included trends in overdose deaths particularly in adolescents, defining opioids including fentanyl, recognizing overdose, and responding with naloxone. Participants completed an anonymous online before-after survey evaluating knowledge, attitudes and confidence regarding opioids, overdose and naloxone.

Results: 206 students (mean age 16.0 years; 50.0 % male, 47.6% female) participated in 15 training sessions and completed both pre- and post-training surveys. Students' knowledge, measured as percentage of correct responses, increased from a mean of 34.0% to 78.9% (95% CI -6% to 5%; $P<0.0001$). Students' attitudes, scored on a scale of 1-4 (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree), improved from a mean score of 2.98 to 3.52 (95% CI -0.09 to 0.10; $P<0.0001$). Confidence, rated on a scale of 1-4 (1=very low, 2=low, 3=high, 4=very high), improved from a mean score of 1.97 to 3.17 (95% CI -0.11 to 0.11; $P<0.0001$).

Conclusions: Peer-to-peer overdose and naloxone training significantly increases knowledge, improves attitudes, and raises confidence in adolescents. There is a clear need to increase overdose awareness in adolescents and peers should be incorporated into prevention efforts.

Persistent Opioid Withdrawal Symptoms in a Patient with OUD and Chronic Pain on Buprenorphine with an Intrathecal Morphine Pump

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Background: Buprenorphine dosing for opioid use disorder (OUD) or chronic pain generally does not exceed 24-32mg sublingual (SL) per day. At these dosages, there is near maximal mu opioid receptor occupancy and higher dosages are not covered by insurance payors.

Learning Objectives:

1. Review the pharmacokinetics of various buprenorphine formulations as it relates to serum levels and steady state kinetics
2. Examine the role of intrathecal opioid pumps in chronic pain management
3. Explore potential strategies for managing persistent opioid withdrawal symptoms

Case Presentation: 45-year-old male with history of chronic pain on chronic oral opioid therapy and an intrathecal (IT) morphine pump, OUD, anxiety and depression was seen by the addiction medicine team for poorly controlled pain and untreated OUD and recommended transition to buprenorphine.

He was receiving intrathecal (IT) morphine pump at rate of 10 mg/day (~ 10,000 oral morphine equivalents (OME)), oxycodone and hydromorphone and successfully transitioned to buprenorphine with a low dose initiation strategy and was titrated up to 8mg buprenorphine/naloxone QID (the highest dose covered by his insurer) due to persistent opioid withdrawal symptoms. Patient reported improvement in symptoms of pain, anxiety, and function since transition though required >32mg SL buprenorphine per day due to ongoing withdrawal symptoms. Symptoms worsened shortly after IT pump dosage decreases. He was transitioned to long acting injectable (LAI) buprenorphine to increase steady state levels of buprenorphine. It was recommended he use clonidine to manage ongoing withdrawal symptoms while optimizing his anxiety and PTSD treatment.

Discussion: This patient experienced persistent withdrawal symptoms on maximal SL buprenorphine. Potential mechanisms include: increased mu opioid receptor competition between full agonist and partial agonist due to high levels of morphine saturating the CNS, opioid hyperalgesia or autonomic dysregulation caused by cord irritation. LAI buprenorphine can achieve higher plasma concentrations than SL buprenorphine and may reduce competition at the opioid receptor between full and partial opioid agonists during dosing troughs. Given patient's improvement with additional SL buprenorphine and its overall safety profile, there may be rationale for prescribing dosages above 32 mg/day SL, although insurance coverage is a barrier.

Buprenorphine for Pain in Sickle Cell Disease: A Case Series

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Background: Acute pain crises secondary to sickle cell disease (SCD) are the most common cause of healthcare utilization (including ED visits and inpatient hospitalizations) in the U.S. Those living with SCD have historically required aggressive pain management using long term opioid therapy (LTOT) in the form of full opioid receptor agonists. This is often accompanied by stigma surrounding opioid use and can infrequently result in opioid use disorder (OUD).

Compared to full agonist therapy, buprenorphine, a partial m-opioid receptor agonist, has a favorable side effect profile, with less risk of respiratory depression and overdose. Given the risks of LTOT, our study explores buprenorphine in the management of SCD pain.

Objective: This case series examines the experience of transition to buprenorphine for 5 patients with SCD already on LTOT for pain control, with data collection via EMR and patient interviews.

Methods: 5 patients seen at the Yale Adult Primary Care Center underwent a low-dose buprenorphine induction lasting between 6-14 days. 3 patients had a history of avascular necrosis as a complication of SCD, 4 had been on disease-modifying therapy (e.g. hydroxyurea), and 2 met criteria for OUD. Outcome measures included healthcare utilization, defined as ED visits related to SCD in the 6 months before and after buprenorphine induction, and average morphine milligram equivalents (MME) of full opioid agonists. Patients were interviewed post-induction about their experience with the transition.

Results: Daily buprenorphine doses after induction ranged from 4-36 mg (mean 20 mg), while calculated MME after induction was less than prior (mean 572, range 150-1000, compared with mean 318, range 90-900). Number of ED visits related to SCD pain also decreased, from mean 4, range 0-6, before induction to mean 1.5, range 1-2, afterwards. Patients generally viewed the induction favorably and were glad to have made the transition.

Conclusions: Our study shows that for patients with SCD, with or without OUD, transitioning to buprenorphine was accompanied by an overall reduction in MME as well as pain-related acute care healthcare utilization. Our findings offer evidence for the use of buprenorphine as an effective, alternative treatment option for SCD pain.

Sexual Dysfunction in Women Taking Medications for Opioid Use Disorder: A Review of the Literature

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Background: Prior research has established a connection between opioid use and sexual dysfunction (SD); however, the side effects of medications for opioid use disorder (MOUD), which are often also opioids and taken long-term, are not well understood in women. Women with OUD experience an increased burden of socioeconomic, psychological, and sexual risks, yet they are less likely to receive MOUD when compared to men with similar OUD severity (Barbosa-Leiker et al., 2021, Jones et al., 2023).

Objective: We aim to understand how women taking MOUD are included in existing SD research.

Methods: We performed a PubMed search on April 7th, 2024 utilizing Medical Subject Headings (MeSH) search terms. This search focused on English-language, original research papers.

Results: After an initial screening of 42 articles, 24 were deemed relevant for inclusion. Of these studies, 14 examined SD in exclusively men, 8 examined SD in women and men, and 2 examined SD in exclusively women. The cumulative sample size for male participants was over five times that of female participants (4667 vs 723) among studies that included both males and females. Among the 10 studies that included women, 7 found evidence of SD in women on MOUD and 3 found no change in SD in women on MOUD.

Conclusions: There is limited literature directly assessing the relationship between SD and MOUD and women are vastly underrepresented in this scant literature. In studies that assess SD in men and women, men are five times more represented than women despite there being only 50% more men who receive MOUD than women per 2021 NSDUH data (Jones et al., 2023). This small sample limits the applicability of these studies to women taking MOUD, leaving us with a paucity of data with which to guide clinical sexual healthcare decisions in women on MOUD. Future studies on sexual health and MOUD in women are crucial to closing these gendered knowledge gaps and improving quality of life and side effect management in women on MOUD.

Exploring the Role of Racial and Ethnic Identity on Impersonal Sex Attitudes and Behaviors Among College Students with Early Trauma and High-Risk Alcohol Consumption

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Background**:** Alcohol use and casual sex among college students remains a concern. Students with a history of trauma are at an increased risk for binge-drinking, and risky sexual behavior. Individual differences, such as race and ethnicity, play a role in how trauma survivors respond. Cultural norms and values might differentially influence attitudes and participation in casual sex as a response to trauma and heavy alcohol use.

Objective: To investigate the impact of early childhood trauma and increased alcohol use on impersonal sex in a population of ethnically and racially diverse college students.

Methods: A sample of college students (N=2,828) in the United States (US) and the Philippines (MAge=19.507, SD=2.62) participated in the study. A majority of the participants identified as female (74.6%) and students from the University of Nebraska-Lincoln (58.7%). The sample included participants who identified as White (n=1904), Filipino (n=383), Hispanic (n=156), Black (n=85), Asian American (n=192), Native (n=105), Middle Eastern (n=82), and other or mixed race (n=80). The Early Trauma Inventory Self-Report (ETI-SF), AUDIT (Alcohol Use Disorders Identification Test), and the Impersonal Sexual Attitudes scale were administered.

Results: Results suggests that attitudes and inclinations towards casual sex are influenced by early trauma, alcohol consumption, and racial and ethnic identity. Increased scores on the impersonal sex scale indicate increased casual sexual behaviors. Notably, results showed that

individuals identifying as White, and Black who endorsed trauma and increased alcohol use had a significant positive relationship with casual sexual behavior and attitudes. Individuals identifying as Filipino had a significant negative relationship with casual sexual behavior and attitudes, suggesting this particular ethnic group may have cultural or social factors that influence attitudes towards casual sex, even amongst high-risk individuals with early trauma and alcohol misuse.

Conclusions**:** These findings suggests that the combination of early trauma and increased alcohol use may lead to varied attitudes and behaviors towards casual sex among, depending on individuals unique racial, ethnic, or cultural background. Cultural factors could play a significant role in shaping an individual's engagement in high-risk behaviors following trauma.

The Use of Spirituality during the Recovery Process for Older African Americans

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Background: Older African Americans (OAA), who identify as substance users, are grossly underrepresented in the literature as a group that deserve to be researched and identified as having a distinctive set of issues and problems that contributed to their substance use and recovery efficacy.

There is a gap in the research that examines social work practices and policy affecting the racially diverse needs for this population. Spirituality as an intervention tool would enhance the social work practitioner with an anti-racist approach to social work practice. It would also address the complexity of racial trauma, poverty and lack of support that often leads to substance use disorder amongst OAAs.

Objective: This presentation encourages a practice of the use of spirituality in substance use treatment interventions for older African Americans (OAAs). Exploring the use spirituality in the recovery process of this specifically marginalized group will add to the current research that addresses their needs from a cultural perspective.

Methods: The presenter will use qualitative research called Interpretative Phenomenological Analysis (IPA) to examine how spirituality influences the recovery process for OAAs. The presenter will reflect upon the intersectionality of OAA’s use of spirituality in the recovery process as an anti-racist approach to social work that will influence future practices specifically tailored to meet the needs of OAAs.

Results: The results from the IPA research concluded that spirituality has been used organically as a successful approach to substance use recovery efforts. Participants shared their stories of discomfort with tradition religious practices, inability to address barriers to treatment services, and the use of spirituality as a realistic and controllable recovery practice.

Conclusions: Substance use professionals will be better prepared to develop realistic and obtainable recovery treatment interventions sensitive to this population's needs. This Anti-racist lens begins with social work education but extends to medical and clinical practices. It highlights

substance use problems of ethnic minority clients and the needed development of substance use prevention and treatment programs for high-risk groups.

Texas Community Pharmacists' Knowledge, Perceptions, and Practices Related to Dispensing Buprenorphine for Opioid Use Disorder: A Cross-Sectional Online Survey

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Background: Opioid-related overdoses continue to increase in Texas and timely access to buprenorphine is critical. A 2020 audit found only 42% of Texas community pharmacies could promptly dispense a common buprenorphine formulation and 21% refused to dispense it altogether.

Objective: To assess Texas community pharmacists' knowledge regarding medications for opioid use disorder (MOUD) and practices related to buprenorphine dispensing for OUD, over-the-counter (OTC) naloxone stocking, and nonprescription syringe sales.

Methods: A random sample of 1000 publicly listed Texas pharmacies was generated. Each pharmacy was contacted by a trained research volunteer inviting them to complete an anonymous 31-item survey. Interested pharmacists provided their email address and were sent a link to complete the survey. The first 150 respondents were eligible to receive a $30 Amazon gift card. Descriptive statistics were used to characterize pharmacists' knowledge and practices. Responses were compared by pharmacy type using Chi-square and Kruskal-Wallis tests.

Results: Complete responses were obtained from 150 pharmacists (response rate = 15.0%) practicing in chain (CH 62.0%), independent (IND 29.3%), and institutional (INS 8.7%) pharmacies. The mean ± standard deviation score for MOUD knowledge questions was 53.2 ± 23.0. Fewer than half reported they can usually or always fill buprenorphine prescriptions without delay (44.0%) and this varied significantly by pharmacy type (CH 51.6%, IND 34.1%, INS 23.1%, p=0.004). Fewer than half reported being somewhat or extremely likely to dispense buprenorphine to an unfamiliar patient (46.3%) and this varied significantly by pharmacy type (CH 49.5%, IND 43.2%, INS 33.3%, p=0.049). In contrast, 76.5% reported willingness to dispense buprenorphine to a familiar patient with no significant variance by pharmacy type. Common reasons for refusal to fill buprenorphine were out-of-area patients, prescriptions believed to be illegitimate, and early refills. Additional responses regarding OTC naloxone and non-prescription syringe sales were collected and compared.

Conclusions: This statewide survey of Texas pharmacists identified substantial deficits in the availability of buprenorphine products for prompt dispensing and willingness to dispense buprenorphine to unfamiliar patients. These deficits were more pronounced in independent pharmacies than in chain pharmacies.

Characterizing Utilization of Medications for Opioid Use Disorder (MOUD) By Formulation in a National VA Dataset, 2002-2020

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Background: Observational studies can evaluate the efficacy of MOUD (methadone, buprenorphine, and naltrexone). However, current literature only differentiates between FDA-approved MOUD without distinguishing routes, which limits our ability to understand differences in efficacy and adverse events for MOUD formulations. This is concerning, especially considering FDA warnings of dental issues related to transmucosal buprenorphine. In addition, most observational studies exclude methadone because it is not captured as a dispensed prescription.

Objective: Describe methods for comprehensively capturing MOUD administration and differentiating MOUD by route

Methods: We identified patients with OUD in the VA Corporate Data Warehouse from 10/8/2001 to 11/30/2020 using ICD9/10 codes. We defined the index MOUD date as the first time a patient received 28 days of medication, with a one-year washout period. Patients did not reenter the cohort. Methadone was defined using Healthcare Common Procedure Coding System (HCPCS) for methadone and VA stopcode 523, a VA-specific identifier for opioid treatment programs. For buprenorphine, we grouped all transmucosal products and distinguished them from injectable based on National Drug Codes (NDC) and HCPCS. We distinguished oral and injectable naltrexone with NDC. When using NDC, we defined index buprenorphine and naltrexone as 28 days without interruption based on billing claim. When using HCPCS or stopcodes, we defined index exposure as at least 2 claims within a 28-day period. A chart review confirmed that each MOUD was appropriately identified by these definitions.

Results: A total of 79,532 patients received at least 28 days of MOUD from 10/8/2002 to 11/30/2020. Table 1 shows percentage of MOUD by category. Methadone-receiving patients identified using both code types were misclassified 30% of the time, 23% using HCPCS alone, and 63% using VA stopcode 523 alone.

MOUD Category	Number of Patients (%)
Buprenorphine (transmucosal)	21,125 (26%)
Buprenorphine (subcutaneous)	32 (0%)
Methadone	30,394 (37%)
Naltrexone (oral)	27,115 (33%)
Naltrexone (intramuscular)	2,616 (3%)
Total	81,282 (100%)

Conclusions: We provide a framework for identifying MOUD by route, including methadone, in large electronic datasets. Future MOUD studies using observational methods should apply this framework to include methadone and distinguish MOUD formulation.

Training Internal Medicine Residents to Treat Addiction: Building an Addiction Medicine Elective Curriculum

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Background: A survey of Internal Medicine (IM) residents at MGH demonstrated that > 60% felt unprepared to treat substance use disorders (SUDs). IM residents often have lower regard for patients with SUD than other diagnoses. In July 2022, the ACGME newly specified addiction medicine as a subspeciality in which IM residents should demonstrate a level of expertise.

Objective: To implement an elective that improves residents' knowledge and confidence in diagnosing and treating patients with SUDs using evidence-based practices including medications, motivational interviewing and harm reduction.

Methods: The elective is a two-week experience spanning inpatient, outpatient, and community settings. Residents spend 2 sessions/week at the outpatient Medication for Addiction Treatment (MAT) Clinic and one session/week at a methadone clinic. Residents also visit a syringe exchange and/or an alcohol rehabilitation. The rest of the learner's time is spent on the inpatient addiction consult service. There are in-person didactics and asynchronous learning via videos/podcasts. A survey assessing confidence, knowledge, and attitudes was administered before and after the elective.

Results: Thus far, 7 residents have taken the elective. 5 completed both the pre- and post-elective questionnaire. On the knowledge assessment, the average score increased from 52% to 72.5% ($p=0.017$). Prior to the elective, 3/5 residents felt unprepared to diagnose a SUD compared to 5/5 feeling prepared after the elective. Only 1/5 residents felt prepared to counsel patients about their SUD prior to the elective compared to 5/5 after the elective. None of the residents felt confident to treat a SUD prior to the elective compared with 5/5 after the elective.

Conclusions: While the outcome data is limited by number of participants, knowledge and confidence managing SUDs improved following the elective. This curriculum can be adopted by other IM programs who hope to enhance addiction education and community engagement. Design is rooted in adult learning theory by creating a flexible curriculum with diverse clinical sites and asynchronous online experiences. Potential barriers to implementation include a lack of addiction-trained faculty and a lack of community sites. However, addiction education is readily available through online resources to augment learning and community sites have been welcoming in creating partnerships for teaching and referrals.

"Don't Take Me Off the Meds, Doc!" the Challenges of Providing Patient-Centered, Guideline-Driven Care for Patients with Chronic Pain in Primary Care

Kara M Ryan, MD - Weill Cornell Medicine

Background: 3-4% of US adults are prescribed long-term opioid therapy (LTOT). There is a lack of evidence for the benefits of LTOT for chronic pain and substantial evidence of harms. The CDC Guidelines for Prescribing Opioids for Chronic Pain recommend tapering opioids when potential harms do not outweigh benefits. Opioid tapering carries risks of suicidal ideation, transition to illicit opioids, and overdose.

Learning Objectives:

- To exemplify the challenges that primary care providers face in the real-world implementation of opioid prescribing guidelines.
- To describe the risks associated with opioid continuation vs. discontinuation in patients with chronic pain and LTOT

Case Presentation: 71yo F with PMH IVDU s/p methadone (off x20 years), COPD, osteoporosis, multiple compression fractures and chronic back pain on opioid therapy since 2009. As her back pain progressed over the next decade, her opioid prescription steadily increased to 37MME, prescribed by pain management. The patient began regularly running out of her medication early due to an extra nighttime dose for uncontrolled pain. The patient was dismissed by pain management, referred to addiction medicine, and offered Suboxone for OUD. Upset by this diagnosis, she declined therapy. The patient's PCP continued her opioid prescription and she continued to run out early. Despite risk education, she declined tapering her medication. The primary care physician weighs how to proceed.

Discussion: Measuring the risks of continuing vs. discontinuing this patient's LTOT is challenging. In this case, the patient's opioid use specifically puts her at risk for respiratory depression, falls, and fractures. She has evidence of misuse, driven by a perceived need for further pain alleviation, as is common in chronic pain on LTOT. Her remote history of OUD further complicates the case, as she does not identify with her new diagnosis of OUD and rejects buprenorphine therapy as an option. This history also highlights a very real risk of illicit use and overdose that may exist with tapering opioid therapy against her preference. The ethical principle of nonmaleficence is at odds with patient autonomy. Practice guidelines offer a framework for safer opioid management in primary care but are often insufficient to capture the nuance in measuring an individual's risk-benefit profile.

Examination of the Relationship between Anticipated Intersectional Discrimination and Receipt of Tobacco Cessation Services and Quit Attempts Among Individuals in Substance Use Treatment

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Background: Feelings of discrimination have been shown to reduce efficacy of tobacco cessation interventions, and disproportionately impacts Black and Latinx communities, though little research has explored the impact of this while in a residential substance use disorder (SUD) treatment. Furthermore, the impact of intersectional discrimination, or discrimination based on

multiple systems of oppression (e.g., racism and sexism) in SUD treatment settings warrants additional examination.

Objective: This study was conducted to explore the association between anticipated intersectional discrimination and interest in receiving support to quit smoking, smoking quit attempts, and receipt of smoking cessation services among individuals in SUD treatment.

Methods: Cross-sectional surveys were conducted with clients across seven SUD treatment centers in California from 2023 to 2024 (n = 216). Surveys assessed interest in receiving help to quit smoking, attempts to quit smoking while in SUD treatment, and receipt of tobacco cessation services while in SUD treatment. Surveys also assessed the client's level of anticipated intersectional discrimination using the InDI-A, a measure designed to assess discrimination across multiple marginalized identities. Multiple t-tests were run to compare InDI-A levels based on one's interest to receive help to quit smoking while in SUD treatment, reported quit attempts while in SUD treatment, and receipt of tobacco cessation services.

Results: The sample was racially and ethnically diverse, with a mean age of 39.19 (SD = 11.2). There were no significant differences in InDI-A scores based on desire to receive help quitting smoking, reported quit attempts, or receipt of tobacco cessation services.

Conclusions: These findings suggest that anticipated intersectional discrimination may not be associated with tobacco use behaviors and receipt of cessation services among individuals in SUD treatment. However, additional research is needed on the measurement of intersectional discrimination in specialized healthcare settings such as SUD treatment.

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Using Structured Clinical Examinations to Teach Future Physicians Effective Communication Strategies Around Substance Use

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Background: Substance use disorders (SUD) result in significant morbidity and mortality. Yet despite the magnitude of this problem, as of 2018 only 8% of American medical schools had comprehensive addiction programs; few (21%) used OSCEs as part of their training curriculum. Because the relationship between healthcare providers and persons who use substances has historically been marred by bias and stigma, training future physicians in effective communication skills is critical to developing this essential doctor-patient relationship and the delivery of effective care.

Objective: Recognizing this gap in medical curricula, we designed and evaluated an OSCE to teach future physicians effective communication strategies when treating individuals who use substances.

Methods: Twenty-three MS3 and MS4 students completed a pair of recently developed OSCEs. One OSCE case described a patient with history of SUD, now on buprenorphine, coming in for a checkup with urine drug screen (UDS) positive for fentanyl and buprenorphine. The second OSCE case used the same scenario, however an unexpected finding was included (the UDS was positive for cocaine as well).

Multiple measures of communication effectiveness were collected, including interpersonal communication scores and history gathering scores. A novel substance-use specific communication task (SUSCT) rubric was also developed which assessed a variety of dimensions (i.e. acceptance/reassurance, harm reduction) often absent from traditional OSCE rubrics.

Results: History gathering scores in the cocaine positive OSCE (mean 72.04, SD 19.928) were significantly lower compared to cocaine negative OSCE (Mean 81.78, SD 15.169) $t(22) = -2.606$. The SUSCT scores for the cocaine positive OSCE (mean 88.96, SD 20.431) were significantly higher than the no cocaine OSCE (Mean 71.74, SD 27.185) $t(22) = 2.627$

Conclusions: The results suggest that the presence of cocaine in the UDS distracted students from extracting relevant information and taking a comprehensive substance use history. Surprisingly, the presence of cocaine in the UDS was also associated with improved SUSC task scores, suggesting that students were more aware of stigma, language, and harm reduction when addressing polysubstance use compared to opioid use.

This study provides important data regarding medical student attitudes towards SUD in varying real-world scenarios, illustrating targetable insights for future curricula development.

"I'm Still Finding My Way": A Longitudinal Analysis of Newly Certified Peer Specialist Employment Trajectories

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Background: Recent work has highlighted the challenges and benefits that Certified Peer Specialists (CPS) experience when transitioning to the peer support workforce, but little is known about CPS employment trajectories or the circumstances that impact their workforce involvement over time.

Objective: This longitudinal qualitative study will a) explore employment transitions among CPSs occurring between the first- and second-year following state certification; b) understand differences and commonalities across participants who remained in the CPS workforce in the months after their baseline interview, relative to those who did not

Methods: This study used within- and across-case analyses of longitudinal data from qualitative interviews with 13 CPS that participated in a multistate, 3-year observational prospective cohort study of CPS graduates to explore employment changes and circumstances that led to these transitions. Qualitative results were organized according to whether cases were ‘employed as a CPS at follow-up’ (N = 5) or ‘not employed as CPS at follow-up’ (N = 8).

Results: Participants that were ‘employed as a CPS’ at the time of the follow-up interview held various positions at baseline and shared a sense of optimism about their future work. At follow up, most remained in the same positions they held at baseline. They described personal fulfillment and a supportive work environment as reasons for remaining. Participants who were ‘not employed as a CPS’ at follow up were also not employed as a CPS at their baseline interview, but aspired to pursue future CPS work. At follow up, many remained unemployed due to health and disability, or described past traumatic experiences, stress, and burnout related to being a CPS as a reasons for leaving CPS work force permanently. All participants were challenged to find work as a CPS at various moments in their trajectories.

Conclusions: Our samples’ individual circumstances and ability to persevere were important considerations for securing CPS positions. Permanent exit from the CPS workforce may occur in their absence, particularly during the height of the COVID-19 pandemic. Despite employment challenges, participants were passionate about their works. Findings are discussed with implications for supporting CPS wellbeing and workforce retention

Analyzing Barriers and Facilitators to Harm Reduction Addiction Care Among Hospitalized Patients

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Background: Harm reduction began as an HIV/AIDS grassroots movement in the 1980s amongst people who use injection drugs (PWID) and the LGBTQ+ community. Over the past 40 years, harm reduction has become part of the foundation of treating substance use disorder (SUD) and preventing overdoses. However, research shows that, despite the high rates of PWUID hospitalizations, harm reduction practices are limited in in-patient settings. PWUID often leave the hospital early and against medical advice due to discrimination, cravings, or withdrawal (Sharma, 2017). This decreases PWUID’s quality of and access to healthcare, further emphasizing the need for harm reduction informed care.

Objective: The goal of this study is to analyze the barriers and facilitators to integrate harm reduction techniques into in-patient care for patients with SUD. We hypothesize physicians’ misunderstanding of SUDs, limited knowledge of harm reduction techniques, lack of harm reduction resources, and limited time are perceived barriers. Similarly, we hypothesize that specialist expertise, available harm reduction resources, education on management of SUDs, standardized institutional policies, and clarity on legality of practices will be cited as facilitators.

Methods: This quality improvement project studies how the Mount Sinai Hospital can support healthcare providers in delivering harm reduction care to hospitalized patients. Using background literature on international models of inpatient harm reduction care, a semi-structured interview guide is being developed. Interviews are being conducted with around 20 attending physicians, residents, nurses, social workers, and administrators until thematic saturation is observed. The interview responses are then de-identified, recorded, and transcribed. Interviews are analyzed, coded and reviewed for harmony using a reflexive-thematic approach.

Results: Interviews continue to be conducted and will be completed by September 2024. Preliminary harm reduction resources and practices remained underutilized in in-patient settings. An investigation is needed into the barriers that prevent harm reduction integration into in-patient care.

Conclusions: Harm reduction has long been utilized by PWUID to provide safe and destigmatized health care within their communities. As this practice spreads, it has become more integrated into formal healthcare settings. More research is needed to identify the barriers to integrating harm reduction into healthcare and to provide recommendations on how to overcome them.

Opioid Use Disorder Community Outreach: Reducing Stigma and Building Community Access to Narcan

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Background: The Rush Substance use Disorder (SUD) Center of Excellence, tasked by the Illinois Department of Human Services, Substance Use Prevention Recovery Services with identifying SUD issues of need, collaborating with statewide agencies in the development of SUD treatment capacity, and facilitating ongoing efforts to address the opioid crisis, identified a key area of intervention through engaging and providing educational content for community members and facilitating discussions surrounding perceptions of SUD, stigma, Naloxone training, and principles of harm reduction.

Objective: To examine how building education and OUD literacy in local communities will increase awareness of life saving interventions, and harm reduction, while decreasing stigma and misperceptions.

Methods: The educational sessions were conducted during various community outreach events. The team sought to examine how building education and OUD literacy in local communities and businesses increased awareness of life saving interventions, and harm reduction, while decreasing stigma and misperceptions. Responses were collected through a brief 12 question survey offered to individuals who received Narcan and training from staff.

Results: Results of the evaluation were compiled between March 2022 through December 2023. A total of 1050 respondents completed the survey, which is approximately 15% of the individuals who received Narcan kits from staff. From stigma questions 1-4, 89% of participants answered in the affirmative that they learned something regarding stigma. Moreover they not only learned something about stigma but the majority (84%) would also be willing to correct someone close to them if they had misinformation about OUD. From Narcan knowledge based questions 5-7 it is evident community knowledge was gained during the brief intervention session. In the progression from question 6 to question 7 we see an increase of comfortability using Narcan by 36%.

Conclusions: Comprehension increase, along with short response answers on individuals gaining the most knowledge on using Narcan, and learning the signs of an overdose, means future harm reduction interventions can be successfully implemented in a short window of time. Future interventions that offer long form presentations or trainings to raise community members' level of comfort and knowledge base is important to note for future community needs assessments.

Physical Therapy Onsite at Opioid Treatment Programs: Tailoring a Research Intervention for Individuals with OUD and Chronic Low Back Pain

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Background: Chronic low back pain (CLBP) is extremely common among people living with opioid use disorder (POUD), and it negatively impacts physical function and quality of life. Physical therapy (PT) protocols for CLBP are effective in general populations. However, many barriers exist for POUD to receive accessible care tailored to their needs. PT for CLBP has not been tailored for POUD or examined onsite at opioid treatment programs (OTPs).

Objective: To describe the development of a PT protocol tailored for POUD with CLBP to be delivered onsite at OTPs.

Methods: The Back Strengthening Onsite for General Wellness (B-STRONG) study is enrolling 345 individuals with CLBP receiving treatment for OUD at opioid treatment programs in the Bronx, NY. Participants are randomized to 12 weeks of PT, yoga, or treatment as usual. Through engagement of community partners including POUD, people with chronic pain, and health system partners, we tailored the PT protocol manual created by Saper et al. for delivery onsite at OTPs. Here, we describe the implementation challenges identified by our team and community partners and modifications made to address them.

Results: Community partners identified three key implementation challenges: 1) patients' negative prior experiences with clinicians including physical therapists, due to stigma; 2) concern that interventionists' physical contact with POUD could make people uncomfortable; and 3) concern that patient handouts and exercise guides be culturally relevant and easy to understand. Modifications made to address these challenges include: a) creating and delivering a training for physical therapists and all research staff about stigma and trauma-informed approaches, b) modifying the interventionist manual to include trauma-informed principles such as asking for consent prior to physical touch during exercises; and c) ensuring that participant handouts were body-positive, featured exercise models from the community, and accessible in English/Spanish for a range of literacy levels.

Conclusions: We tailored a PT intervention to be delivered onsite in OTPs to POUD and chronic pain, to improve accessibility, acceptability, and inclusiveness. Findings can inform other

clinical interventions in OTPs. If acceptable and effective, this work could promote expansion of PT services onsite at OTPs.

Adverse Events with Using Short-Acting Full-Agonist Opioids to Treat Inpatient Opioid Withdrawal

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Background: Increasing fentanyl use has led to more complicated opioid withdrawal (OW) in inpatients with opioid use disorder (OUD). In addition to methadone and buprenorphine, our hospital's Addiction Consult Team treats OW with short-acting full-agonist opioids (SAFAO). We investigated the number and characteristics of adverse events (AEs) among inpatients receiving SAFAO for OW.

Objective: Investigate AEs among inpatients with OUD receiving SAFAO for OW.

Methods: We conducted retrospective chart reviews of hospitalizations for adults receiving SAFAO for OW between March-July 2023 at an urban safety-net hospital. Patients included had self-reported heroin or fentanyl use. We identified AEs from clinical notes. Primary event was grade 3/4/5 sedation, defined by the Common Terminology Criteria for AEs (CTC-AE). Secondary events included fall, intubation, and naloxone administration while hospitalized.

Results: Of the 127 hospitalizations meeting inclusion criteria, five (4%) involved AEs. All involved oversedation, including four grade 3 ("difficult to arouse") and one grade 4 ("life-threatening") events. Two resulted from in-hospital substance use. Three involved SAFAO and additional polypharmacy with sedating medications to treat OW and/or concurrent withdrawal syndromes. Two hospitalizations with AEs were for patients only using heroin, though most hospitalizations were for patients using fentanyl (82%). Additional AEs included two falls, one intubation, and two naloxone administrations (Table 1).

Table 1: Adverse events among inpatients receiving SAFAO for OW.

Hospitalization AEs	Sedation Grade	Documented Reason for Sedation	Related to SAFAO?	Opioid Use	Comorbid Use Disorders
Hospitalization 1: Sedation	3	Methadone titration	Unlikely	Heroin	Stimulant Tobacco

Hospitalization 2: Sedation Fall	3	Concurrent opioid & alcohol withdrawal	Possibly	Fentanyl	Alcohol
Hospitalization 3: Sedation Fall Naloxone	3	In-hospital substance use	Unlikely	Fentanyl	Tobacco
Hospitalization 4: Sedation Naloxone Intubation	4	Polypharmacy with sedating medications	Probably	Heroin	Stimulant
Hospitalization 5: Sedation Naloxone	3	In-hospital substance use	Unlikely	Fentanyl	Alcohol Benzodiazepine

Conclusions: Using SAFAO to treat OW was generally well-tolerated with rare AEs directly resulting from SAFAO. In-hospital substance use may imply inadequately treated withdrawal. Polypharmacy with SAFAO may have contributed to two sedation-events. Hospitalizations for patients using heroin demonstrated more AEs, perhaps due to lower opioid tolerance, pointing to further clinician discernment in SAFAO recommendation and appropriate patient selection.

Reconsidering the Care Cascade for Opioid Use Disorder: A Retrospective Cohort Study of 12-Month Outcomes in HIV Primary Care with Embedded Addiction Services

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Background: Adapted from HIV care, the opioid use disorder (OUD) Cascade of Care (CoC) framework defines stages of OUD care, enabling systems-level outcomes assessment. Its utility in describing patients with polysubstance use and/or complex sociomedical needs is unknown.

Objective: Investigate the strengths and limitations of the CoC model by characterizing opioid-related outcomes among patients living with HIV experiencing homelessness.

Methods: The POP-UP clinic at San Francisco General Hospital provides HIV primary care for people experiencing homelessness and offers embedded addiction medicine services. We conducted a retrospective review of patients who reported opioid use at enrollment between February 2019 – April 2024 and tracked 12-month progression through a previously published OUD CoC.

Results: Of 145 POP-UP patients, 37 (26%) reported opioid use. Most (n=28,76%) were diagnosed with OUD, n=6 were in long-term remission. All patients with untreated OUD were offered MOUD (n=22), and 90% (20/22) elected to start MOUD.

Approximately half (20/37) of participants demonstrated linear progression through the CoC (Table). Thirty percent (11/37) did not fit well within the CoC due to non-linear engagement with OUD care (Table 1). For 16% (6/37), the CoC was not applicable, as they did not meet diagnostic criteria for OUD (Table). All n=6 had severe stimulant use disorder with either infrequent or unintentional fentanyl use, and all opioid overdose deaths in the study cohort were in this group (n=2).

Table: OUD CoC Among POP-UP Patients Using Opioids. N=37.

Linear Progression through CoC? (N)	**Reason if Non-linear?**	**N Retained at 6 Months**	**N in Remission at 12 Months (*from initial MOUD)**	**N Overdose Deaths**
Yes (20)	NA	9	6	0
No (11)	Stopped and restarted MOUD (9) Switched from Buprenorphine to Methadone (2)	NA	2* 2*	0
No (6)	Intermittent opioid use without OUD diagnosis (6)	NA	NA	2

Conclusions: The OUD CoC did not adequately capture the complexities of opioid related care for two key groups: (1) individuals intermittently on MOUD and (2) those at high-risk for opioid-related mortality without an OUD diagnosis. Overdose prevention strategies must expand to address the needs of these groups, especially individuals primarily using stimulants.

Patient Perception and Evaluation of a Shared-Decision Making Tool for Opioid Use Disorder

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Background: There are effective medications for treatment of opioid use disorder (OUD); however, patients continue to report barriers to accessing medications. Shared decision making (SDM) which incorporates the patient's goals and preferences into the treatment plan may alleviate this.

Objective: This study seeks to assess acceptability of a SDM tool for patients upon initiation of treatment of opioid use disorders.

Methods: We created a SDM tool to provide patients with an overview of medications for OUD and the differences in side effects, dosing, and routine management. We surveyed adults presenting to a federally qualified health center (FQHC) for management of OUD about their experience with OUD treatment and their perceptions of the SDM tool. The primary outcome was acceptability of the SDM tool. Patients were also given the chance to provide formative feedback on the tool qualitatively analyzed using inductive thematic analysis. We used QUANT-qual integrative mixed-methods design to integrate the quantitative and qualitative data.

Results: We surveyed 60 patients (average age 35-44, 33% female, 58% male, 8% non-binary). Most patients (76%, N=59) identified that the tool would have been helpful when starting treatment for OUD. Patients often reported an appreciation for additional information which allowed them to be more active in the decision-making process and gave the perception of increased options for treatment.

Conclusions: Patients found the SDM tool to be helpful and felt that the tool would have been useful prior to initiating treatment. Implementing SDM may alleviate patient's experience of stigma and lack of knowledge about MOUD.

Implementing Quality Improvement Initiative to Provide First-Year Medical Students with Harm Reduction Communication Skills

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Background: Medical schools are introducing harm reduction (HR) curriculum to equip students to care for patients with substance use disorders. Existing research assesses curriculum on overdose prevention and opioid use disorder management.

Objective**:** To evaluate curriculum designed to prepare students with a HR framework for communicating with patients about substance use more broadly.

Methods**:** In a student-led quality improvement initiative, students and faculty collaborated to incorporate HR into the first-year Interviewing and Communication Skills curriculum through preparatory materials and a panel discussion. To assess the new curriculum's impact on HR understanding and confidence, we conducted a pre-post survey (using 5-point Likert scale means for analysis) and focus group (using Borkan Immersion/Crystallization for thematic analysis).

Results: Of 170 students, 33 (19.4%) completed both the pre and post surveys. Understanding of HR improved (pre 3.58, post 4.15, $p<0.001$) between the two surveys. Concern about HR being detrimental decreased (pre 3.12, post 2.70, $p=0.006$). Students designated written materials and podcasts as most helpful. The focus group with four students surfaced the following themes: (1) most constructive components were stories of lived experience; (2) least constructive components seeded confusion about HR vs. abstinence; (3) students desired more HR exposure, including health equity content and longitudinal curriculum.

Conclusions: This quality improvement initiative improved students' understanding of HR communication, indicated avenues for further improvement and evaluation at our institution (including faculty HR training and content on racial justice intersectionality), and underscored key components for introducing HR communication skills curriculum at other institutions (including patient and provider narratives). This student-led work shows the promise of changing curriculums to help shape the attitudes of a generation of future physicians. By integrating harm reduction into curriculum about patient communication, medical schools can equip future providers with critical approaches for collaborating with patients in a rapidly evolving substance use landscape.

The Impact of Harm Reduction Education on Clinician Knowledge, Attitude, and Stigma of People Who Use Drugs

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Background: In addition to drug overdoses, hospitalizations for infectious complications of injection drug use (IDU) continue to rise. Harm reduction is an evidence-based, practical set of strategies to mitigate the negative consequences of drug use, and it is a movement that acknowledges that people may not stop using drugs. Clinician stigma remains a barrier to implementation of harm reduction practices, which further disempowers and jeopardizes the health of people who use drugs (PWUD).

Learning Objectives: Understand the impact of an interprofessional harm reduction training on student and clinician knowledge and stigma towards PWUD.

Methods: Harm reduction outreach specialists and faculty physicians delivered two virtual, interactive trainings. We conducted pre and post-surveys of knowledge and stigma. Stigma was evaluated using a validated instrument, The Medical Condition Regard Scale (MCRS). Using SPSS Version 29, pre-post survey responses were compared using McNemar's test for paired

knowledge/attitude categories, and paired t-test for stigma scores. The MaineHealth IRB deemed this study exempt.

Case Presentation: Of 238 participants, the majority were medical (n=69, 29%), nursing (n=14, 6%), dental (n= 62, 26%) and pharmacy (n=10, 4%) students. Sixty-five participants submitted pre and post-training surveys; fifty-eight completed both surveys**.** Although baseline knowledge of harm reduction was high, knowledge/attitudes showed a trend towards improvement. For example, comfortability applying harm reduction improved pre (74%) to post (95%, p=0.004) training, and participants increasingly applied harm reduction strategies, from 69% pre to 86% post-training (p=0.031). Participant stigma scores remained stable at 37.1 ± 3.3 pre, and 37.4 ± 4.0 post-training (p=0.68).

Discussion: Interprofessional harm reduction education taught by interprofessional teachers, including those with lived experience, improved clinician comfort and consistent application of harm reduction practices in a sample with already elevated baseline knowledge. However, a dissociation between knowledge and stigma was present, which could indicate that in clinicians with prominent self-reported knowledge, additional education may be necessary to deconstruct inherent bias and stigma. We plan to examine long term effectiveness with subsequent trainings. Our work highlights the power of including harm reduction training in interprofessional education.

Addiction Consult Service Substantially Improves Treatment Rate of Alcohol Use Disorder (AUD)

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Background: Prior to July 2023 at a San Francisco medical center hospital, there were low rates of inpatient initiation of maintenance pharmacotherapy for alcohol use disorder (AUD). During a 6-month period in 2019, among 81 patients admitted to the hospital with AUD, only 1 received standard pharmacotherapy for AUD. Faculty in academic nursing and medicine sought to improve inpatient treatment rates of AUD and other SUDs and created an inpatient substance use consult service to assist with this goal, initiating services in July 2023 with 1.25 FTE clinical staff.

Objective: By creating an inpatient addiction consult service at the hospital, we sought to achieve better rates of evidence-based medication treatment for SUDs, including AUD. These medications include: naltrexone, acamprosate, gabapentin, topiramate, and baclofen.

Methods: On request by inpatient teams, the addictions consultant provided patient-facing assessments and education on evidence-based treatments for AUD, including: available pharmacotherapies; psycho-social supports such as peer and professional counseling strategies targeting AUD outcomes, and; patient-specific harm reduction education related to alcohol use and the benefits of alcohol reduction or abstinence. Consultants then made treatment recommendations to the consult-seeking team. For patients with AUD, treatment recommendations included evidence-based pharmacotherapy tailored to the patient needs and

wishes. From a database that identified all patients with AUD seen by the addiction consult service, we calculated the percent that initiated evidence-based medication treatment for AUD while hospitalized.

Results: While the pre-consult environment included initiation of pharmacotherapy for AUD to 1% of inpatients with identified AUD during a 6 month period, during the first 9 months of service the addictions consultant(s) saw 97 patients with AUD, 69 (71%) of whom initiated pharmacotherapy for AUD during hospitalization.

Conclusions: The presence of 1 inpatient addiction specialty consultant at the academic medical center hospital each weekday from 8am to 5pm resulted in significant improvement in the initiation of evidence-based pharmacotherapies for AUD that are associated with alcohol reduction and cessation. Next steps and efforts might include identifying further benefits of initiating AUD pharmacotherapy for medical center patients, including cost and utilization data for patients with AUD, as well as mortality data.

A Crisis Unveiled: Confronting Overdose and Addiction

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Background: In 2023, San Francisco experienced the highest number of deaths due to overdose highlighting the persistent and catastrophic effects of the addiction and overdose crisis. Despite increasing recognition and efforts to prevent overdose, the crisis has continued to surge and disproportionately affect vulnerable communities including the Black population in San Francisco, individuals experiencing homelessness, and individuals with co-occurring psychiatric illnesses.

Learning Objectives: 1. Increase awareness of risk factors for overdose. 2. Review harm reduction principles. 3. Explore strategies to address the overdose crisis.

Case Presentation: A 42-year-old male diagnosed with schizophrenia and methamphetamine use disorder, in sustained remission in a controlled environment, presented to outpatient psychiatry to establish care shortly after discharge from a two-year hospitalization at a locked psychiatric facility. He was actively engaged in a dual-diagnosis residential program under mental health conservatorship and expressed commitment to maintaining abstinence from methamphetamine. Despite exhibiting stable symptoms over the subsequent two months, he endorsed occasional cravings for methamphetamine. His conservator was later notified of his departure from the residential program, and efforts to locate him were unsuccessful. Tragically, it was discovered that he passed away shortly after leaving the program, having been found unresponsive in the community. An autopsy revealed the cause of death to be accidental acute mixed drug intoxication, involving both fentanyl and methamphetamine.

Discussion: This patient experience underscores the severe ramifications of the addiction and overdose crisis. Numerous factors increased this patient’s risk of overdose including race, gender, instability in housing, chronic psychiatric illness, and recent prolonged hospitalization. While the patient also had protective factors for overdose including being in a controlled setting

with restricted access to substances and actively engaged in substance use and mental health treatment, there remains a necessity for harm reduction measures. Harm reduction interventions such as patient education about the toxic drug supply, life-saving medications for substance use disorder, naloxone, fentanyl strip tests, and provision of resources such as the Never Use Alone lifeline are essential. Given the lack of FDA-approved medications for methamphetamine use disorder, urgent attention is warranted to explore and support promising interventions such as contingency management.

Addressing Chronic Pain in Asian Individuals Using Integrative Modalities to Prevent Progression to Substance Misuse: A Qualitative Study

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Background: An estimated 1 in 5 Americans experience chronic pain. Among Asian populations, there is evidence of undertreatment of pain and inequitable pain burden that may lead to self-treatment, an important potential pathway of substance use disorder. However, there is significant lack of engagement of the Asian/American diaspora in trying to understand chronic pain experiences. And while integrative methods of pain management can be effective, there is very little focus on patient experiences with non-pharmacological interventions.

Objective: This study intentionally engages Asian individuals to (1) explore shared and geographic/identity-specific chronic pain experiences and (2) identify factors that influence ability to engage in goal-concordant integrative pain management.

Methods: Asian individuals who currently experience chronic pain were recruited from primary care and community-based settings across Montana and Washington. Participants needed to be English or Mandarin-speaking unless they had family willing to serve as an interpreter. Semi-structured interviews were offered remotely or in-person. Questions focused on participants' chronic pain experiences and management, with an emphasis on integrative approaches. Interviews were recorded, transcribed and then double-coded using thematic analysis.

Results: 16 participants (MT=6, WA=10) completed the interview. The cohort included self-identified Iranian, Chinese, Taiwanese, Thai, Vietnamese, Indonesian, Japanese, and multiracial. Participants varied in age (25-76; IQR=34-51) and years of chronic pain experienced (.5-53; IQR=5-24).

We identified several key themes: (1) patients express hesitancy towards isolated pharmacological management of pain and are seeking integrative modalities outside of the primary care setting (2) identities, particularly Asian, female, and proximal immigration narrative, intersect with chronic pain to create double invisibility (3) there is an interplay between regional and cultural access to integrative pain management (4) while patients view physicians as a trusted source, they are often met with mixed perceptions and knowledge of integrative approaches to pain.

Conclusions: These exploratory findings illuminate Asian-identifying experiences of chronic pain and specific factors that influence effective integrative pain management. Ultimately, this begins to inform how providers can critically engage with chronic pain patients of all identities to lessen pain burden and prevent progression to substance misuse.

Issues in Access to Outpatient Antibiotic Treatment for Patients Admitted with an Infectious Complication of Intravenous Drug Use

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Background: Emerging evidence shows Outpatient Parenteral Antibiotic Treatment (OPAT) is safe and effective in people who inject drugs (PWID) but is underutilized due to stigma and concerns about indwelling catheter tampering. Case series of OPAT for select populations of PWID show similar or improved outcomes when compared to usual care in terms of length of stay, readmission rates, and completion of antibiotic treatment course. Interdisciplinary meetings have been shown to be helpful in expanding OPAT for PWID. Despite this, PWID face discrimination, stigma, and challenges with accessing emerging standard of care treatment.

Learning Objectives:

1. Identify factors that make PWID admitted for injection drug use (IDU)-associated infections good candidates for OPAT
2. Discuss the role of interdisciplinary meetings to determine appropriate discharge disposition for PWID requiring OPAT
3. Identify barriers PWID admitted for IDU-associated infections face

Case Presentation: A 44 year-old man with a history of opioid use disorder (OUD) presented with rib pain and was found to have osteomyelitis with an overlying abscess of the 9th rib and methicillin resistant staphylococcus aureus (MRSA) bacteremia. The infectious disease team recommended 6 weeks of intravenous (IV) antibiotics, and the addiction medicine team initiated methadone for OUD. A multidisciplinary team of social workers, addiction medicine, infectious disease, and hospital medicine physicians recommended the patient for home infusion given the presence of multiple protective factors including social supports, employment, and initiation of ongoing OUD treatment. The patient was denied by the home infusion company due to history of substance use and discharged on oral antibiotics for the duration of the treatment course.

Discussion: Despite multiple studies showing similar outcomes for PWID discharged on OPAT compared to other discharge dispositions and a dearth of evidence for line tampering, PWID admitted for infectious complications typically do not receive OPAT. This case demonstrates that despite numerous evidence-based protective factors and an interdisciplinary approach to complex discharge planning for PWID requiring OPAT, our patient still did not get their preferred treatment course. It outlines the emergency of a new evidence-based standard of care for this patient population and the need for protections of federal and state anti-discrimination laws when the standard of care is not provided.

“K Cramps,” Recurrent Abdominal Pain in a Patient with Chronic Ketamine Use: A Case Report

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Background: The prevalence of medical and nonmedical ketamine use is increasing in the United States. This may lead to an increase in healthcare visits in individuals experiencing associated adverse effects. Healthcare providers will need to be able to effectively recognize and manage ketamine-related complications.

Learning Objectives:

1. Recognize clinical manifestations associated with chronic ketamine use.
2. Describe how to implement appropriate strategies for the management and referral of patients experiencing ketamine-related complications.

Case Presentation: A 31-year-old male with a three-year history of inhalational and injection nonmedical ketamine use presented to the Emergency Department twice within a week exhibiting symptoms of severe atraumatic back pain, non-localizing abdominal pain, and dyspepsia. A comprehensive work-up, including advanced imaging, was unrevealing for identifiable causes and patient was discharged with instructions for primary care follow up for further evaluation. Patient used information shared on Reddit, an online forum and social network, to identify the cause of the pain was related to chronic ketamine use, colloquially known as “K cramps” in the community of people who use ketamine. Subsequently, upon discontinuation of ketamine, the pain improved in 24 hours. The patient self-navigated to addiction treatment.

Discussion: Providers should consider sequelae of chronic ketamine use as a possible cause for gastrointestinal (GI) and urologic symptoms. Abdominal pain and GI symptoms have been reported in 21 to 27.5% of chronic ketamine users and urologic symptoms in approximately one third of chronic ketamine users. In this case, lack of provider knowledge about K Cramps contributed to delayed addiction treatment engagement and resolution of symptoms. This case underscores the diagnostic challenges encountered in discerning ketamine-related complications. In addition to thorough history, examination, and assessment for other acute medical problems, patients should be offered education, symptomatic treatment, and linkage to harm reduction and substance use disorder treatment services.

Utilizing the SBIRT Program Matrix to Evaluate a Systems-Level Approach to Implement a Screening, Brief Intervention and Referral to Treatment Program

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Background: As part of a 4-year multi-site cooperative agreement, Planned Parenthood of Southern New England implemented SBIRT services through a systems-level approach in 15

health centers across CT and RI. SBIRT services were provided to patients attending annual well-visits with the ultimate goal of preventing alcohol- and other substance-exposed pregnancies. Uniquely, SBIRT includes multiple services, often delivered by different providers across a variety of settings. The SBIRT Program Matrix provides a template to identify, classify and organize commonalities and variations in implementation drivers within programs, and specifying systems-level and provider-level outcomes; for example, provider and patient attributes, service delivery, performance site, and management supports.

Objective: Our objective was to operationalize the SBIRT Program Matrix to evaluate service implementation success across the 15 Planned Parenthood health centers.

Methods: Qualitative and quantitative data examined implementation outcomes through systems-level process data and individual-level provider performance metrics based on patient-level administrative data. We utilized frequencies and means for quantitative data analyses and theme analyses for qualitative data.

Results: Over a four-year period, 250 providers were trained in evidence-based practices, and the SBIRT program screened 80% of those attending preventive visits (23,444). Of those screening positive, 64% received a brief intervention although there were variations across health centers. Successful implementation within a systems-level approach included the use and modification of the electronic health record, flexible workflow protocols, customized training and technical assistance programs, quality assurance feedback loops, and stakeholder buy-in. Continuous program improvement included peer-training, audit feedback loops and ongoing coaching that aligned with Planned Parenthood's philosophy to providing medical services. Only minor, administrative changes were made to the evidence-based SBIRT protocols that were initially adopted for use.

Conclusions: Successful implementation implies that the newly adopted SBIRT services, established from evidence-based practices, are delivered with fidelity in non-research ("real-world") settings. Maximizing the use of technology, employing flexibility in program delivery, and institutionalizing processes and protocols supported workflow, efficiency, program reach and sustainability. As organized by the SBIRT Program Matrix, the variations across sites provided an opportunity to investigate the factors associated with implementation success that may serve as proxies for longer-term goals such as the prevention of substance-exposed pregnancies.

A National Needs Assessment of Adolescent Opioid Overdose Prevention Content in Pediatrics Clerkships in 2024

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Background: Adolescent opioid overdose deaths increased by 211% between 2019 and 2021. In 2022, about 22 adolescents died from drug overdoses weekly, with 75% involving fentanyl. In response, there are calls for pediatricians to screen for opioid use and exposure, treat opioid use disorder (OUD) and provide opioid overdose prevention education and naloxone prescriptions

for adolescent patients. Pediatrics clerkships are well positioned to train medical students to address this growing issue among adolescents, however coverage of these topics in pediatrics clerkships remains unknown.

Objective: To conduct a national needs assessment for opioid overdose prevention content in pediatrics clerkships.

Methods: Using a cross-sectional approach, pediatrics clerkship directors of accredited U.S. allopathic and osteopathic medical schools were surveyed in Spring of 2024. Web-based survey domains included content covered, barriers to teaching content, goals for educational resources, plans to expand/teach this content and school/clerkship characteristics. Descriptive statistics were used to analyze results using STATA version 18 (StataCorp).

Results: A total of 82 medical schools completed the survey (40.1% response rate). Sixty-three percent of pediatrics clerkships currently include any content on adolescent opioid risk, including the topics of screening adolescents for opioid use and overdose risk (58.5%); Screening, Brief Intervention and Referral to Treatment (48.8%); medications for OUD (9.8%); epidemiology of adolescent opioid overdoses (7.3%); and assessing need for naloxone (4.9%) and fentanyl testing kits (3.7%). Most participants indicated no plans to expand or initiate instruction of opioid overdose prevention (81.7%) of which a sizable percent (35.4%) were unsure. Top barriers cited included time to provide (85.4%) and create (72.0%) the content and lecturer expertise (47.6%). Lack of student interest was not a major barrier (6.1%). The most helpful resources indicated were sample cases (48.2%) and small group question and answers (45.7%).

Conclusions: Less than two-thirds of pediatrics clerkships currently offer any content on opioid overdose prevention for adolescents, marking a missed opportunity to train the pediatrics workforce for addressing and preventing adolescent opioid overdoses. Future studies will investigate the outcomes of curricular tools to cover opioid use screening, harm reduction interventions and OUD treatment more widely and robustly in the pediatrics clerkship.

Integrating Community Input into Naloxone Vending Machine Implementation

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Background: The number of communities implementing naloxone vending machines is growing exponentially to address increasing opioid overdose deaths. However, programs are often implemented in locations and with features people who use opioids report as a deterrent for use (e.g. near police and high foot traffic). To address this concern we used an iterative, community engaged implementation process called Effective, Adaptable and Sustainable for Your Community-Operationalizing Program Sustainability (EASY-OPS) to integrate community feedback into naloxone vending machine program development. EASY-OPS was implemented in a federally qualified healthcare system, public health department, and harm reduction agency in Colorado.

Objective: We assessed incorporation of community input into final naloxone vending machine locations and features using EASY-OPS in diverse settings.

Methods: EASY-OPS is an iterative program development approach that includes citizen scientists (community members who use opioids for nonmedical use in the last year) and the implementation team (organization leaders overseeing and staff implementing the program). Citizen scientists completed walking audit interviews, informing program location and feature preferences. Iterative follow up was conducted by interview, focus group and survey, and addressed implementation challenges for preferred features identified by the implementation team. We used rapid qualitative analysis to identify citizen scientists' desired program features and the implementation team's planned program features. Data was collected using audio recordings, interview debriefing notes, meeting notes, and field notes. Desired and planned features were compared to determine integration of community input.

Results: We completed 16 interviews, 1 focus group (n=5) and 6 anonymous surveys. 85% of participants had witnessed an opioid overdose and 19% had never obtained naloxone. All sites placed machines in preferred locations identified by citizen scientists. Ongoing data collection supported integration of citizen scientists' recommendations to address implementation challenges (e.g identified feasible secondary location when top choice did not meet security requirements). The harm reduction agency and public health department partnered with organizations for vending machine placement. Citizen scientists' feedback helped focus partnership outreach to preferred locations.

Conclusions: This pilot study demonstrates the value of EASY-OPS to pragmatically integrate community input without comprising program sustainability.

Pain and Nutritional Management for Xylazine Wounds and Withdrawal Causing Frequent Patient Directed Discharge

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Background: Xylazine is an alpha-2 agonist, originally developed as a veterinary sedative, that has infiltrated the drug supply of Philadelphia. Repetitive use of Xylazine has led to distinct necrotic wounds that are difficult to treat. People who use Xylazine require a multimodal approach that targets both the withdrawal syndrome of the drug, as well as specific nutritional deficiencies that impede wound healing.

Learning Objectives: List medications for managing xylazine withdrawal. Describe the nutritional deficiencies seen in a patient who developed severe xylazine wounds.

Case Presentation: A 38-year-old male presented for a severe wound on his right arm. He reported injecting 12-15 bags of fentanyl and xylazine multiple times per day for many years. He was admitted for sepsis secondary to bacteremia, septic pulmonary emboli, presumed endocarditis, and osteomyelitis. He was also found to be severely malnourished, complicating wound healing. A standard methadone induction and adjunctive medications for pain control and

withdrawal were started. However, his symptoms remained uncontrolled; he left the hospital and returned 3 days later. During this subsequent encounter, Addiction Medicine was consulted. The focus was on developing therapeutic rapport which prompted the patient to continue returning for care despite 6 additional patient-directed discharges over a 3-month period. Addiction Medicine and Acute Pain Management teams collaborated to develop a plan of a rapid, high-dose methadone induction in concert with medications specific for xylazine withdrawal and multi-modal pain control. Vitamins and electrolytes were aggressively repleted.

Discussion: Despite starting opioid agonist therapy for withdrawal, it was difficult to provide effective pain and xylazine withdrawal management for this patient with invasive infection from a severe xylazine wound. A multimodal approach with a combination of aggressive up titration or "rapid induction" of methadone, intravenous ketamine, patient-controlled hydromorphone, gabapentin, clonidine and tizanidine provided adequate pain and xylazine withdrawal control, thus allowing the patient to remain in the hospital for appropriate infection control. This patient's admission also led to our team developing a more comprehensive approach for nutritional optimization in patients who use xylazine to promote wound healing, including iron, vitamin D, vitamin C, zinc, thiamine, pyridoxine, folate, cobalamin, and copper studies.

Empowering Communities: Breaking Language Barriers to Reduce Youth Substance Use through Innovative Partnerships for Multilingual Prevention Resources in Missouri and Around the Globe

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Background: In 2022, the Ethnic Communities Opioid Response Network-Missouri (ECORN-MO) identified a data flaw in Missouri's overdose death reporting, neglecting to capture minorities ethnic groups. This highlighted a need for culturally appropriate prevention resources. In response, the Opioid Response Network (ORN), Mid-America Addiction Technology Transfer Center (MATTC), and Addiction Policy Forum (APF) collaborated with ECORN MO. APF developed evidence-based prevention materials, translating four tools into thirteen languages. These resources, crafted by the three organizations, were distributed statewide, nationally, and globally.

Objective: To develop evidence-based prevention materials in thirteen languages for parents and stakeholders in Missouri, targeting youth substance use. Materials were distributed online and through events, with evaluation metrics including clicks, downloads, views, and event participation.

Methods: Data from the United States Census Bureau and ECORN-MO identified the top spoken languages in Missouri. Expert translators at Bilingual International Assistant Services translated five prevention materials into these languages. APF, ORN, Mid-America ATTC, and ECORN-MO then distributed these materials online and at events, with ECORN-MO members promoting them within St. Louis's ethnic communities. Website access metrics were obtained.

Results: Prevention materials posted on Mid-America ATTC, the APF and ECORN-MO websites from August 2023 through April 2024 showed:

1031 Views

1578 Clicks

589 downloads from all 50 states and Puerto Rico, and over two hundred countries

Conclusions: Unique collaborations like this emphasize the importance of private, federally funded, and grassroots organizations working together on youth substance use prevention. Offering culturally and linguistically tailored resources leads to global access, shown by online engagement metrics and event attendance.

Piloting a Screening, Brief Intervention, and Referral to Treatment Curriculum for Medical Students during Emergency Department Rotation

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Background: People with substance use disorders (SUD) benefit from interprofessional, team-based care. Screening for unhealthy substance use is underutilized, particularly in hospital settings. Screening, brief intervention, and referral to treatment (SBIRT) is recommended across healthcare settings.

Objective: Leverage an interprofessional team to develop and implement an SBIRT and motivational interviewing (MI) training curriculum for second year medical students (MS2s) at an academic medical center in Austin, Texas. This project's objectives are to increase MS2 proficiency and comfort in administering SBIRT and MI for patients who use drugs.

Methods: MI and SBIRT instruction is delivered on the first day of clinical rotations by an interprofessional panel, followed by a written assessment and three Objective Structured Clinical Exams (OSCEs). After instruction MS2s identify appropriate patients during Emergency Department (ED) clinical rotations and administer SBIRT and/or apply MI techniques during patient interactions.

Impact is measured with mixed methods: 1) MS2 competency in MI and SBIRT, 2) MS2 attitudes and preparedness in MI techniques and administering SBIRT, and 3) patient experience. Competency is evaluated via written assessment and a score trend over three OSCEs. Attitudes and preparedness are measured with student self-report surveys. Patient experience is measured in semi-structured surveys immediately following SBIRT administration.

Results: Twelve MS2s were trained in administering SBIRT and using MI techniques in four months of curriculum delivery. Of the 12 trained MS2s, three formally administered SBIRT with

a patient in the ED and three additional students self-reported informal use of MI techniques during their ED rotation.

Written assessment scores increased by 6.7% (46% to 52.7%) from the pre-assessment to the post-assessment. Average OSCE scores increased 12.9% (average 17 positive behavior counts to 19.6) between the first and third sessions. Attitudes and Preparedness survey scores increased by 21.3% (69.2% to 90.5%) from the pre-survey to the post-survey.

Qualitative feedback from MS2s and patients to whom SBIRT was administered indicated strongly positive experiences; themes included providing information, compassion, evocation, and attending to change talk.

Conclusions: Early, interprofessional exposure to SBIRT and MI training may improve MS attitudes towards people who use drugs and may improve the management of future patients with risky substance use or SUD.

Assessing Concurrent Opioid Misuse Among Hospitalized Patients with Chronic Noncancer Pain

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Background: Chronic noncancer pain is common among hospitalized patients and many are on chronic opioid therapy. While opioids can be necessary, they are associated with increased risk. Ambulatory studies reveal that about 25% of individuals prescribed long-term opioids exhibit misuse behaviors. While the prevalence of concurrent chronic pain and opioid misuse among hospitalized patients appears to be rising, the true prevalence is unknown. Various therapies are available for treating co-existing chronic pain and opioid misuse, which hold promise for the hospitalized patient, but potential benefits need to be defined.

Objective: We aim to determine the prevalence and characteristics of concurrent chronic pain and opioid misuse among hospitalized patients and interest in treatment among those with suspected opioid misuse.

Methods: We conducted structured interviews of adult hospitalized patients with pain for at least 3 months and using a morphine milligram equivalent (MME) dose exceeding 50 mg/day. Exclusion criteria included individuals with a non-English preferred language, disoriented to person, place or time, undergoing active cancer treatment, or admitted primarily for a psychiatric condition. We used the Current Opioid Misuse Measure (COMM), a validated 17 item tool, with a cutoff score of ≥9 to identify opioid misuse.

Results: From April 2023 through April 2024, a total of 81 patients were enrolled in the study. The mean oral MME among all patients was 139.7 ± 113.4. About forty percent (42%) had a COMM score of ≥9, suggesting opioid misuse. Among these patients, nearly two-thirds (60%) expressed an interest in learning more about treatment. In bivariate analyses, being admitted due to worsening pain (P=0.006) and active other substance use (P=0.030) were significantly

associated with a higher risk of opioid misuse. Hospitalization was also higher among those with chronic pain and suspected opioid misuse (P=0.043).

Conclusions: Hospitalized patients who are on chronic opioid therapy for chronic pain have a higher likelihood of opioid misuse than previously reported in ambulatory settings. Two-thirds of those patients expressed interested in treatment, indicating that hospitalization may serve as an opportunity to identify and engage those individuals. Further exploration is warranted to assess methods and outcomes of treatment engagement during hospitalization.

Understanding Clinician Knowledge, Attitudes, and Practices Relating to Non-Pharmaceutical Fentanyl and Harm Reduction

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Background: Non-pharmaceutical fentanyl (NPF) is driving the epidemic of opioid overdose deaths, including the increase in adolescent overdose mortality in recent years. Adult and pediatric clinicians have a role to play in fostering awareness of the increased risk associated with NPF and providing interventions to reduce mortality.

Objective: To describe adult and pediatric clinician knowledge, attitudes and practices relating to NPF and harm reduction strategies.

Methods: We conducted a cross-sectional survey of adult and pediatric hospital-based and emergency clinicians at an academic medical center to assess clinician knowledge, attitudes, and practices related to NPF and harm reduction strategies. Descriptive statistics were used to present results and Chi square and Fishers Exact tests were used to compare groups.

Results: There were 136 responses (response rate 33%). Ninety-four percent viewed exposure to NPF as very (84%) or somewhat (10%) likely for someone using illicit opioids and 90% viewed it as very (44%) or somewhat likely (46%) for someone using non-opioid drugs. Ninety-three percent rated overdose prevention as very/extremely important for patients using illicit opioids and 86% rated it very/extremely important for patients using non-opioid drugs. Twenty-one percent were very/extremely familiar with overdose prevention strategies and 57% were comfortable/very comfortable counseling on overdose prevention. Utilization of harm reduction and treatment strategies was variable. Seventy-percent often/always prescribed naloxone to patients at risk of overdose, the most frequently utilized strategy, while 7.3% often/always providing fentanyl test kits, the most infrequently utilized strategy. Higher levels of comfort and familiarity with overdose prevention were associated with more frequent counseling on multiple harm reduction strategies. Among pediatric clinicians, 5% were very/extremely familiar and 35% were comfortable/very comfortable with overdose prevention, and 0% to 31% used each harm reduction/treatment strategy often/always.

Conclusions: Clinicians viewed overdose prevention as important, but had limited levels of comfort and familiarity with overdose prevention strategies. Clinician utilization of harm reduction and treatment strategies when caring for at-risk patients was variable and was particularly limited among pediatric clinicians, pointing to a need for support to improve clinician delivery of these strategies to patients at risk of overdose.

"It's Within Your Own Power": Shared Decision-Making to Support Transitions to Buprenorphine

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Background: Illicitly-manufactured fentanyl (IMF) in the drug supply has led to markedly increased opioid overdose deaths in the US. Buprenorphine is the most common first-line treatment for opioid use disorder (OUD) and substantially reduces morbidity and mortality. The pharmacologic characteristics of IMF, however, have made the transition to buprenorphine more difficult for some patients.

Novel methods of buprenorphine initiation have been recommended to improve patient experiences, but evidence for their use in the outpatient setting is lacking. In circumstances where clinical options are high-stakes but have limited or equivocal data, shared decision-making (SDM) is an evidence-based approach. SDM has been found to have benefit for patients with OUD, but has not yet been studied for buprenorphine initiation.

Objective: To explore participants' experiences with a SDM approach to buprenorphine initiation.

Methods: Participants were beginning care at a low barrier, telehealth buprenorphine clinic. Semi-structured qualitative interviews were completed between March 2023 and February 2024. Interviews were coded and analyzed using reflexive thematic analysis.

Results: Twenty participants completed interviews. Participants' mean age was 33 (range 18-48) years and they were predominantly female (n=10, 50% vs. n=8 male and n=2 transgender/non-binary), white (n=16; 80%) and had Medicaid insurance (n=19, 95%).

A standardized SDM approach was used for the discussions. Three themes emerged: 1) participants found SDM acceptable and a positive addition to their OUD treatment, 2) timing, prior initiation experiences, and active access to street drug supply impacted decisions regarding type of buprenorphine initiation they chose and 3) participants had advice for clinicians to improve SDM counseling.

Participants appreciated having additional information on methods of initiation, felt that their opinion mattered, and reported that SDM gave them some important control over their care plan. Their recommendations for clinicians included: ensuring patients are informed that withdrawal (or "feeling sick") can occur with any initiation method, that buprenorphine will eventually

"block" fentanyl effects once at a high enough dose and providing more guidance on how to taper off fentanyl if choosing a low-dose approach.

Conclusions: Participants appreciated shared decision-making in helping them choose how to begin buprenorphine and reported it enhanced their autonomy and individualization of care.

Rapid Methadone Titrations for Pregnant People with Fentanyl Use Disorder in the 2nd & 3rd Trimester

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Background: Methadone metabolism is increased substantially in the 2nd and 3rd trimesters of pregnancy. Methadone titration protocols that do not adjust for increased metabolism in late pregnancy contribute to prolonged withdrawal and prolonged hospital stays.

Learning Objectives: We present 3 pregnant patients with fentanyl use disorder who presented to labor and delivery (L&D) for methadone induction in the 2nd and 3rd trimester. All were treated with a rapid titration protocol, which included split dosing on day 1.

Case Presentation: Case 1: 36-year-old female 21w5d with fentanyl and methamphetamine use disorder presented to L&D in opioid withdrawal, interested in methadone induction. Overnight on admission, she received 40mg methadone. The following day she received 40mg BID; Day 2: 50mg BID; Day 3 60mg BID. Her dose was held at 60mg BID for the next 2 days. Her admission was 10 days. She discharged on a dose of 90mg BID. There were no incidents of oversedation during admission.

Case 2: 36-year-old female at 30w1d with fentanyl and methamphetamine use disorders presented to L&D for methadone induction. She received: Day 1 40mg BID, Day 2 50mg BID. She stabilized on this dose and did not require additional up-titration. Her admission was 8 days (primarily for obstetrical complications). She was discharged directly to a perinatal residential treatment facility. There were no incidents of oversedation during admission.

Case 3: 34-year-old female at 32w0d with fentanyl use disorder presented to L&D with preterm labor. On hospital day 2, she endorsed interest in methadone induction. She received 40mg BID on day 1; 50mg BID on day 2, and 60mg BID on day 3. She was held at that dose for 2 days. Her admission was 10 days. She was discharged at a dose of 80 BID directly to a perinatal residential treatment facility. There were no incidents of oversedation during admission.

Discussion: Increased methadone metabolism in pregnancy, coupled with increased opioid tolerance secondary to fentanyl, require adjusting methadone induction protocols. We present 3 cases of patients started on methadone at doses of 40mg BID day 1, 50mg BID day 2, 60mg BID day 3 without any incidents of oversedation.

Xylazine

Xylazine-Associated Wounds Among Hospitalized Patients in Philadelphia

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Background: The alpha$_2$-agonist xylazine is increasingly detected as an adulterant in illicitly manufactured fentanyl. Xylazine has been associated with wounds; however, the clinical features of these wounds remain poorly characterized.

Objective: To systematically describe the location, size, wound beds, chronicity, and clinical course of wounds among patients with confirmed recent xylazine exposure.

Methods: Case series of all Emergency Department (ED) or hospitalized patients with xylazine detected by urine gas chromatography-mass spectrometry and a wound-related chief complaint from three academic hospitals in Philadelphia, from 4/2022 to 2/2023. We reviewed clinical images and notes in the electronic health record. Three reviewers (a medical student, a wound care nurse, and an addiction specialist physician) developed and piloted a chart abstraction tool and independently double-coded six charts (96.7% agreement) before independent review. We used Fisher exact tests to compare wound types by size and chronicity.

Results: There were 59 wounds from 29 unique patients (51.7% male, mean age 39.4 years [SD 8.8], 100% using fentanyl, and 79.3% routine injected opioids). Fifty-three wounds (89.8%) were located on extremities and 41 (69.5%) involved extensor surfaces. Five (8.5%) exposed deeper structures (e.g., bone or tendon). Of 57 wounds with photographs, 34 (59.6%) had wound beds of predominantly devitalized tissue (eschar or slough). Twenty-eight (47.5%) wounds were acute, 12 (21.1%) were sub-acute, and 17 (29.8%) were chronic. Sub-acute and chronic wounds were more likely to be medium or large in size (OR 48.5, 95% CI 8.2-1274.8) and to feature devitalized wounds beds (OR 9.5, 95% CI 2.9-37.0). Seven patients (24.1%) received surgical intervention, none underwent skin-grafting or amputation, and 9 (31.0%) re-presented to the ED within 30 days of discharge.

Conclusions: Among hospitalized patients with recent xylazine exposure, wounds were commonly located on extensor surfaces of the extremities and frequently had devitalized tissue or exposed deep structures. Chronic wounds were more likely be larger and associated with necrosis. To our knowledge, this is the largest case series and the first to systematically describe wound location and types among persons with confirmed xylazine exposure. These findings can inform identification, management, and research to address this emerging public health threat.

Providers' Knowledge and Perception of Xylazine in the Unregulated Drug Supply: A Sequential Explanatory Mixed-Methods Study

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Background: Xylazine is increasingly prevalent in the unregulated opioid supply in the United States. Exposure to this adulterant can lead to significant harm, including prolonged sedation and necrotic wounds.

Objective: In the absence of literature describing healthcare providers' experiences with treating patients who have been exposed to xylazine, we aimed to explore what gaps must be addressed to improve healthcare education and best practices.

Methods: From October 2023 to February 2024, we conducted a sequential explanatory mixed-methods study, with (1) a quantitative survey phase utilizing convenience sampling of healthcare providers treating patients in Connecticut and (2) a qualitative semi-structured interview phase utilizing purposive sampling of providers with experience treating patients with xylazine exposure. Summary statistics from the survey were tabulated; interview transcripts were analyzed using thematic analysis.

Results: Seventy-eight healthcare providers were eligible to participate in our survey. Most participants had heard of xylazine (n=69, 95.8%) and had some knowledge about this adulterant; however, fewer participants reported seeing one or more patients exposed to xylazine (n=46, 59.8%). After sampling from this subgroup, we conducted fifteen interviews. This qualitative phase revealed six themes: (1) while xylazine is novel and concerning, participants explained that this is not exceptional (i.e., there are also other emerging issues for patients who use drugs); (2) participants perceived that xylazine was increasingly prevalent in the drug supply, even if they were not necessarily seeing more patients with xylazine-related outcomes (XROs); (3) participants' patients typically presented with non-XROs, making it difficult to know when conversations about xylazine were appropriate; (4) participants' patients with XROs may experience issues accessing healthcare; (5) providers and their patients are learning together about how to minimize XROs; (6) xylazine's emergence lead to increased worry, fear, and helplessness among providers.

Conclusions: Xylazine-specific education for healthcare providers is currently insufficient. Improving this education, as well as resources (e.g., drug checking technologies) and data (e.g., research on prevention and treatment of XROs), is crucial to improve care for patients who use drugs.

'Tranq Burn': Exploring the Etiology of Tranq-Related Soft Tissue Injuries

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Background: 'Tranq dope' is a combination of xylazine and fentanyl that is increasingly common in the US. Xylazine, an alpha-2-agonist, is structurally like clonidine, however it is unregulated and not FDA approved for use in humans. Typically injected, the use of tranq dope appears related to severe skin and soft tissue injury (SSTI) through an unknown mechanism. Previous research suggests that the high acidity of certain heroin source-forms contributes to vein damage and SSTI.

Objective: We explore the possibility of an etiologic role between the acidity of tranq dope and SSTI.

Methods: A convenience sample of persons who use drugs participated in semi-structured interviews (Philadelphia, Oct. 2023, n=30). Observations of wounds/injection locations were made. We analyzed narrative data for perceptions of wound causation. Our partner lab analyzed the pH of independently obtained samples of tranq dope (n= 6).

Results: Observed SSTI were extraordinarily severe. Several themes emerged related to wound etiology: 1) Tranq dope injection caused burning sensations (called 'tranq burn'); 2) vein loss occurred following chronic use of tranq dope; 3) vein loss resulted in increased injection attempts, the use of large central veins (e.g., jugular and femoral), as well as more frequent 'skin-popping'; and 4) wounds rapidly followed vein loss. The average pH of samples was 4. Lab work is ongoing to test additional samples and replicate "real-world" solution preparation conditions.

Conclusions: Combined use of xylazine and fentanyl appears to lead to venous sclerosis which increases the risk of subsequent SSTI. The acidity of the combination likely plays a role in a complex etiology which also includes poor tissue perfusion due to the vasoconstrictive properties of the alpha-2-agonist xylazine. Possible harm reduction interventions include dilution and buffering of injection solutions as well as tranq use via smoking. Stigma reduction and enhanced wound care are required in harm reduction and clinical settings.

Healing the 'Non-Healing': A Holistic Approach to Treating Xylazine-Associated Wounds

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Background: Xylazine, an alpha-2 adrenergic receptor agonist, is increasingly prevalent in the street supply of substances and associated with chronic wounds with delayed healing. There is limited knowledge of how xylazine contributes to the development and poor recovery of wounds, though consistent wound care appears to be crucial for healing. Barriers to care, including lack of low-threshold access to wound care and supplies and stigma within the medical system drive inconsistent treatment and healing for people who use drugs (PWUD).

Learning Objectives: We aim to present a patient case highlighting a multidisciplinary, holistic, and individualized approach to the care of xylazine-associated wounds.

Case Presentation: In May 2022, our team began working with a 41-year-old man experiencing severe chronic bilateral lower extremity wounds characteristic of xylazine-associated wounds. His medical history includes opioid, cocaine, and benzodiazepine use disorders, chronic Hepatitis C infection, post-traumatic stress disorder, major depressive disorder, and homelessness. Our low-threshold nursing, medical, and housing-support teams worked with him to treat the high burden of necrotic tissue characteristic of suspected xylazine exposure with enzymatic and autolytic debridement, identifying and treating hypergranulation with a topical

medium-potency corticosteroid, providing timely diagnosis and treatment of acute skin and soft tissue infections, and addressing pain management. A key aspect of his care was participation in our incentivized medication management program which fostered engagement. We worked closely with his Housing First Coordinator, who provides wrap-around services to support people newly in housing from street-based homelessness, including extensive case management. Additionally, we engaged with the patient in supporting treatment of his mental health conditions, and continued substance use, assisting with drug checking and initiation of methadone maintenance therapy through our partner organizations. An important aspect of our framework was a focus on relationship-building and shared-decision making, aimed at creating a safe space for him to receive care. As of April 2024, multiple wounds are completely healed.

Discussion: With increasing prevalence of xylazine-associated wounds in PWUD, person-centered, harm-reduction oriented wound care protocols are urgently needed in order to foster individualized care to promote healing, and in turn, combat the narrative that xylazine-associated wounds are inherently "non-healing."

Rethinking Harm Reduction Conversations: An Oronasal Fistula in a Woman Snorting Xylazine-Fentanyl

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Background: Nearly all (98%) street fentanyl samples in Philadelphia contain the alpha-2 agonist xylazine. Xylazine exposure has been associated with distinct wounds, even at locations distant from injection sites. To reduce the risk of xylazine-associated wounds, clinicians may recommend alternative routes of use such as insufflation (snorting). However, it is unknown if snorting may result in other complications of xylazine exposure.

Learning Objectives:

- Describe the clinical outcomes for a woman snorting xylazine-fentanyl in an attempt to avoid wounds from injection drug use.
- Evaluate the potential risks of harm reduction guidance to snort instead of inject drugs containing xylazine.

Case Presentation: KL is a 35-year-old woman from the Philadelphia area with severe opioid use disorder with fentanyl-xylazine use. After developing lower extremity wounds related to injection xylazine use, KL switched to exclusively snorting drugs to avoid wounds. After two years of snorting fentanyl-xylazine, she presented to the hospital with two weeks of headache and worsening right eye pain and vision. On exam, she had a large oronasal fistula. Imaging revealed large sinonasal cavitations with bony erosion extending to the orbits and hard palate with chronic infiltrative enhancements of both orbits. Biopsy tissue cultures of the sinuses grew methicillin-resistant *Staphylococcus aureus*, *Candida albicans*, and *Candida glabrata*. Infectious disease and otorhinolaryngology consultants believed her large palatal defect and oronasal fistula developed as a complication of chronic xylazine insufflation and recommended obturator prosthesis or free flap reconstruction if she maintained abstinence from xylazine-containing drugs. During a 27-day hospitalization, her outpatient methadone was titrated to a therapeutic

dose but she was ultimately discharged before medically advised. She remains engaged with outpatient methadone and surgical subspecialists. She gave written permission to describe this case.

Discussion: This case demonstrates that snorting xylazine-fentanyl may result in serious complications such as oronasal fistulas and sinonasal cavitations. Non-injection routes of using xylazine-containing drugs (such as snorting, inhalation, or rectal administration) may inadvertently expose people who use drugs to harms besides skin wounds. Basic science and clinical research are needed to better understand the clinical consequences of chronic xylazine exposure through various routes of administration and to inform evidence-based harm reduction strategies.