AMERSA

Interdisciplinary Leaders in Substance Use Education, Research, Care and Policy

44th Annual National Conference

1976 ~ 2020

BOOK OF ABSTRACTS

AMERSA 2020 VIRTUAL CONFERENCE

TOGETHER WE RISE: CONFRONTING COVID, RACISM AND ADDICTION

BOOK OF ABSTRACTS

TABLE OF CONTENTS

Scientific Research, Curricula, Quality Improvement, Program, and Clinical Case Presentations

Page(s)

Session 1 • COVID-19

Session 2 • MEDICATIONS FOR OPIOIOD USE DISORDER

7. **Extended Release Buprenorphine for a Patient with Severe Opioid Use Disorder Experiencing Short-Term**
   Anna-Maria South, MD; Devin Oller, MD - University of Kentucky

7. **Using Extended Release Buprenorphine Injection to Discontinue Sublingual Buprenorphine**
   Alexis Ritvo, MD, MPH; Susan Calcaterra, MD, MPH; Jonathan Ritvo, MD - University of Colorado Anschutz Medical Campus

9. **Substance Use Navigators and Technical Assistance are Associated with a Rapid Increase in Hospital Buprenorphine Initiation**
   Hannah Snyder, MD[1]; Melissa Speener, MPH[2]; Arianna Sampson, PA-C; Aimee Moulin MD; Andrew Herring, MD[3] – 1. UCSF Dept. of Family and Community Medicine; 2. Public Health Institute-CA Bridge Program; 3. Highland Hospital-Alameda Health System

9. **Provider Perceptions of Medication for Opioid Use Disorder from Qualitative Interviews in Allegheny County, Pennsylvania**
   Nicole Paul, BA; Amy Kennedy, MD; Simone Taubenberger, PhD; Judy Chang, MD, MPH - University of Pittsburgh School of Medicine

10. **Prolonged Precipitated Withdrawal During Monitored Buprenorphine Induction in a Patient With Non-Pharmaceutical Fentanyl Use**
    Evan D. Gale, MD; Melissa Weimer, DO, MCR, FASAM - Yale Program in Addiction Medicine

11. **Increasing Access to Buprenorphine in Safety-Net Primary Care Clinics: The New York City Buprenorphine Nurse Care Manager Initiative**
    Marissa Kaplan-Dobbs, MPH; Jessica Kattan, MD, MPH; Ellenie Tuazon, MPH; Sabina Saleh, LCSW; Christian Jimenez, MPH; Hillary Kunins, MD, MPH, MS - New York City Department of Health and Mental Hygiene

Session 3 • EMERGENCY DEPARTMENT & HOSPITAL-BASED TREATMENT

11. **Changing the Care Environment For Acute Intoxication: Giving Clients an Alternative to the Emergency Department and Jail**
    Shannon Smith-Bernardin, PhD, RN, CNL - University of California, San Francisco

12. **Prevalence and Characteristics of Patients with Alcohol and Substance Use Disorders Among a National Sample of Emergency Department Visits and Hospitalizations From 2014-2017**
    Leslie W. Suen, MD; Anil N. Makam, MD, MPH; Margot B Kushel, MD, MPH; Daniel Repplinger, MD; Hannah R. Snyder, MD; Marlene Martin, MD; Oanh K. Nguyen, MD, MAS - University of California, San Francisco, Division of General Internal Medicine

12. **Expanding Access to Addiction Treatment for Inpatients Utilizing Existing Resources**
    Susan L. Calcaterra, MD, MPH; Lauren McBeth, BA; Angela Keniston, MSPH; Marisha Burden, MD - University of Colorado

13. **Patient-Directed Discharges Among PWUD Hospitalized with Serious S. Aureus Infections: Opportunities for Improvement**
    Ayesha Appa, MD; Meredith Adamo, MD; Stephenie Le, MD; Jennifer Davis, MD; Lisa Winston, MD; Sarah B. Doernberg, MD, MAS; Henry Chambers, MD; Marlene Martin, MD; Phillip Coffin, MD, MIA; Vivek Jain, MD, MAS - University of California San Francisco; Zuckerberg San Francisco General Hospital

14. **Multidisciplinary Hospital Team for Injection Drug Use-Related Infective Endocarditis Optimizes Patient Care and Improves Health Outcomes**
    Caroline G. Falker, MD[1]; Prashanth Vallabhajosyula, MD, MS; Arnar Geirsson, MD; Melissa B. Weimer, DO, MCR[2] – 1. VA Connecticut Healthcare System; 2. Yale University School of Medicine

14. **Association Between Inpatient Use of Medication For Opioid Use Disorder and Discharge Against Medical Advice**
    Hannah R. Tierney, BS; Hannah R Snyder, MD - University of California, San Francisco

Session 4 • PERCEPTION/INEQUITIES/STIGMA

15. Patient Attitudes Toward Substance Use Screening and Discussion in Primary Care Encounters
Leah Hamilton, PhD; Sarah Wakeman, MD; Timothy Wilens, MD; Joseph Kannry, MD; Richard N. Rosenthal, MD; Keith Goldfeld, DrPH; Angeline Adam, MD; Noa Appleton, MPH; Sarah Farkas, MA; Carmen Rosa, MS; John Rotrosen, MD; and Jennifer McNeely, MD, MS - New York University, Grossman School of Medicine

15. Primary Care Medical Staff Attitudes Toward Substance Use: Results of the Substance Abuse Attitudes Survey (SAAS)
Leah Hamilton, PhD; Noa Appleton, MPH; Sarah Wakeman, MD; Timothy Wilens, MD; Joseph Kannry, MD; Richard N. Rosenthal, MD; Keith Goldfeld, DrPH; Angeline Adam, MD; Sarah Farkas, MA; Carmen Rosa, MS; John Rotrosen, MD; and Jennifer McNeely, MD, MS - New York University, School of Medicine

16. Racial Inequities in Treatment Retention Evidenced Through the Implementation of Missouri's State Targeted Response Grant
Claire A. Wood, PhD; Alex Duello, MPH; Kori Richardson; Rachel Winograd, PhD - University of Missouri, St. Louis, Missouri Institute of Mental Health

17. 'I Didn't Feel Like a Number': Patient Experiences Receiving Buprenorphine Treatment in Primary Care Settings With the Support of a Nurse Care Manager
Nisha Beharie, DrPH; Alexandra Harocopos, PhD; Jessica Kattan, MD, MPH; Marissa Kaplan-Dobbs, MPH - New York City Department of Health and Mental Hygiene

17. "I Was Taking the Suboxone Even Though I Hated it…": A Qualitative Exploration of Stigma and Experiences Related to Taking Medications for Opioid Use Disorders Among Young Adults
Sarah M. Bagley, MD, MSc; Samantha F. Schoenberger, BA; Scott E. Hadland, MD, MPH MSc; Karsten Lunze, MD, MSc; George Massey, MD; Vanessa DellaBitta, MPH; Tae Woo Park, MD - Boston University School of Medicine, Boston Medical Center

18. Professional Factors that Predict Nurses' Motivation to Work with Patients with Opioids Use Problems: A National Survey
Khadejah F. Mahmoud, PhD, MSN; Susan M. Sereika, PhD; Deborah S. Finnell, DNS, RN; Dawn Lindsay, PhD; Kathryn R. Puskar, DRPH, RN; Ann M. Mitchell, PhD, RN - University of Pittsburgh Graduate School of Public Health

Session 5 • SOCIAL DETERMINATES OF HEALTH

18. Injections and Infection: Understanding Harm Reduction Utilization in a Rural State
Kinna Thakarar, DO, MPH; Kimberly Murray, MPP; Jenny Carwile, ScD; F.L. Lucas PhD; Deborah Burris, RN, CCRC; Timothy Borelli, DO; Robert Pinsky MD; Cheryl Liechty, MD, MPH; Robert Smith, MD - Maine Medical Center/Tufts University School of Medicine

19. Opioid Use in Pregnancy in Rural Communities: An Assessment of Treatment Implementation Needs, Barriers, and Facilitators
Shayla Archer, MS; Marcela C. Smid, MD, MS, MA; Alan Taylor Kelley MD, MPH, MSc; Jacob Baylis, MPH; Jacob Foringer; Gerald Cochran, MSW, PhD - University of Utah School of Medicine

19. Comparing Locations of Buprenorphine-Waivered Prescribers and Methadone Treatment Programs in New York City by Area-Based Poverty
Christian Jimenez, MPH; Ellenie Tuazon, MPH; Jessica Kattan, MD, MPH; Marissa Kaplan-Dobbs, MPH - New York City Department of Health and Mental Hygiene

20. Long-Term Social and Economic Outcomes of Adolescent Poly-Substance Use Among Canadian Boys from Low-Oncome Backgrounds
Nicholas Chadi, MD, MPH; *Francis Vergunst, PhD; Massimiliano Orri, PhD; Camille Brousseau-Paradis; Natalie Castellanos-Ryan, PhD; Jean R. Séguin, PhD; Daniel S. Nagin, PhD; Frank Vitaro, PhD; Richard E. Tremblay, PhD; Sylvana M. Côté, PhD - Sainte-Justine University Hospital Centre

21. Alcohol-Related Mortality Among People Experiencing Homelessness in San Francisco
Triveni DeFries, MD, MPH, Elizabeth Abbs, MD, Barry Zevin, MD, Caroline Cawley, MPH - UCSF/SFGH

21. Acceptability of a Mobile Addiction Program for People Experiencing Homelessness or Unstable Housing
Danielle R. Fine, MD, MSc; Karen Weinstock; Sarah Mackin, MPH; Isabel Plakas; Jessie M. Gaeta, MD; Travis P. Baggett, MD, MPH - Massachusetts General Hospital

Session 6 • ALCOHOL, TOBACCO, MARIJUANA, AND STIMULANTS (AND KRATOM)

22. Long-Term Buprenorphine Treatment for Kratom Use Disorder: A Case Series
Viktoriya R. Broyan, MS[1]; Jessica K. Brar, BS[2]; Tristen Allgaier; Jeffrey T. Allgaier, MD, FACEP, FASAM – 1. Ideal Option, PLLC; 2. Elson S. Floyd College of Medicine, Washington State University

22. Does Perceived Risk of Harm Mediate the Effects of a Primary Care Alcohol Screening and Brief Advice Intervention for Adolescents?
Amy Flynn, MS; Himani Byregowda, BDS, MPH; John Rogers Knight, MD; Sion K. Harris, PhD - Boston Children's Hospital

23. Trend in Marijuana Exposure in Newborns Before and After Recreational Legalization
Allek Scheele, MD; Amy Herbig, MD; Andrea Hadley, MD - Helen DeVos Children's Hospital

24. Trend in Accidental Marijuana Ingestion Related Hospital Visits After Recreational Legalization
Allek Scheele, MD; Cara Poland, MD; Andrea Hadley, MD - Helen DeVos Children's Hospital

25. A Case Series of Nine Patients with Methamphetamine Associated Dilated Cardiomyopathy Introduced to Contingency Management Through Heart Plus: A Novel Addiction/Cardiology Co-Management Clinic
Sarah Leyde, MD; Leslie Suen, MD; Albert Liu, MD, MPH; Marlene Martin, MD; Jonathan Davis, MD; Soraya Azari, MD - University of California San Francisco

25. A Social Media Intervention to Address Cigarette Smoking and Heavy Episodic Drinking: A Pilot Randomized Controlled Trial
Meredith C. Meacham, PhD, MPH; Danielle E. Ramo, PhD; Judith J. Prochaska, PhD, MPH; Larissa J. Maier, PhD; Kevin L. Delucchi, PhD; Manpreet Kaur, MA; Derek D. Satre, PhD - University of California San Francisco

Session 7 • OPIOID ANALGESICS AND OPIOID OVERDOSE

26. Opioid Management eConsults: An Examination of Question Styles and Outcomes
Laila Khalid, MD, MPH; Joanna L. Starrels, MD, MS; Daniel Lipsey; Tiffany Lu, MD, MS; Sharon Rikin, MD, MS - Montefiore Medical Center

26. Effect of Gist Risk Messages on Parents' Decisions to Retain Left-Over Prescription Opioids
Terri Voepel-Lewis, PhD; Carol J. Boyd, PhD; Alan R. Tait, PhD; Sean E. McCabe, PhD; Brian J. Zikmund-Fisher, PhD - University of Michigan

27. Take ACTION: Opioid Overdose Prevention Curriculum for Medical Students
Chin Hwa (Gina) Yi Dahlem PhD, FNP-C, FAANP; Rebecca Pilkerton, MD; James Cranford, PhD; Jackie Kercheval, BA; Eve Losman, MD, MHSA - University of Michigan - Ann Arbor

28. State Opioid Prescribing Policies in 2014 Were Not Associated With Reduction in Subsequent Overdose Mortality
Michele Buonora, MD, MS; Marcus Bachhuber, MD, MPH; Pooja Shah, BS; Lorlette Haughton, MPH; Chinazo O. Cunningham, MD, MS; Joanna L. Starrels, MD, MS - Montefiore Medical Center

28. Community Overdose Response: Incidence of Drug Overdose and Naloxone Uptake in Pennsylvania Public Libraries
Margaret Lowenstein, MD, MPhil, MSHP; Zachary Meisel, MD, MSHP; Rachel Feuerstein-Simon, MPH, MPA; Claire Szapary; Omaya Torres; Aminata Jalloh; Abby Dolan, BA; Carolyn Cannuscio, ScD - University of Pennsylvania

29. Characteristics of Emerging Post-Overdose Outreach Programs in Massachusetts
Scott W. Formica, PhD; Katherine M. Waye, MPH; Allyn Benintendi, MBE; Shapei Yan, MPH; Sarah Bagley, MD, MSc; Julia Keosaian, MPH; Leo Beletsky, JD, MPH; Jennifer Carroll, PhD, MPH; Ziming Xuan, ScD; Robert Apsler, PhD; David Rosenbloom, PhD; Traci Green, PhD, MSc; Alexander Y. Walley, MD, MSc - Boston Medical Center, Boston University School of Medicine

POSTER ABSTRACTS

31. Naloxone Availability and Accessibility of Michigan Pharmacies Through the Statewide Naloxone Standing Order
Chin Hwa (Gina) Yi Dahlem PhD, FNP-C, FAANP; George Gray, BS, MS; Shivani Kaushal, BS; Heidi Rieck, BS, MPH - MOPEN/MEDIC Project Team - University of Michigan - Ann Arbor

31. Attitudes Toward Harm Reduction among Substance Use Treatment Professionals in Philadelphia
Roxane Javadi, BS; Kristine Lagana, BS; Tess Krowicki, BS; David Bennett, PhD; Sharlene Irving, MBA; Barbera Schindler, MD - Drexel University College of Medicine

32. Preparing Primary Care Physicians to Treat Addiction: Inclusion of Addiction Training During Internal Medicine Residency
Bethany Canver, MD, MSW; Stephen Holt, MD; Katie Clark, MSPH, CSAC; Alayna Liptak, RN - Yale Primary Care Residency Program

32. Safety Protocols During Home-Based Post-Overdose Outreach: Perspectives from Public Health/Public Safety Teams
Emily R. Cummins, PhD[1]; Jennifer J. Carroll, MPH, PhD[2]; Alexander Yale Walley, MSc, MD[1,3]; Scott Formica, PhD; Katherine Waye, MPH; Sarah Bagley, MD – 1. Boston Medical Center; 2. Elon University; 3. Boston University

33. "I Don't Want To Be Able to Draw a Family Tree Out of Who I've Infected" -Hepatitis C Infectivity Burden Amongst Hospitalized Adults Who Use
Ximena A Levander, MD; Taylor Vega, BA; Andrew Seaman, MD; P. Todd Korthuis, MD, MPH; Honora Englander, MD - Oregon Health and Science University

33. Successfully Optimizing Treatment of Opioid Use Disorder During COVID-19
Stacy Shoshan, MD, PhD[1]; Irina El Or, MD[2]; Paola Rosca, MD, MPP[1] – 1. Ministry of Health, Jerusalem, Israel; 2. Association for Public Health, Jerusalem, Israel

34. It's Not One Thing: Understanding Determinants of Unsheltered Homelessness in a Large National Sample of Veterans
Stefan G. Kertesz, MD, MSc; Aerin Derussy, MPH; Joshua Richman, MD, PhD; Erika L. Austin, PhD; Allyson L. Varley, PhD; Ann Elizabeth Montgomery, PhD; Audrey C. Jones, PhD; Adam J. Gordon, MD, MPH; April Hoge, MPH; Kevin Riggs, MD; Lillian Gelberg, MD - Birmingham VA Medical Center, University of Alabama at Birmingham

35. Internalized Stigma in Relation to Cigarettes Smoked Per Day After the Completion of a Smoking Readiness Program in Residential Treatment Settings
J. Konadu Fokuo, PhD; Caravella McCuistian, PhD; Valerie Gruber, PhD; Thao Le, MPH; Jessie Wong, MPH; Elana Straus, BA; Carmen Masson, PhD - University of California San Francisco

35. Development of a Secondary Prevention Smartphone App for Students with Unhealthy Alcohol Use: Results from a Qualitative Assessment
Nicolas Bertholet, MD, MSc; Elodie Schmutz, MA; John A. Cunningham, PhD; Jennifer McNeely, MD, MSc; Gerhard Gmel, PhD; Jean-Bernard Daeppen, MD; Véronique S. Grazioli, PhD - Lausanne University Hospital

36. Clinical Case Series: Treating ADHD in People Experiencing Homelessness and Substances Use Disorders
Sarah Dobbins, MPH, MS, PMHNP-BC; Leah Warner, MPH, MS, NP - SFDPH

37. Prevalence and Spectrum of Unhealthy Alcohol Use Among Hospitalized Patients in an Urban Safety-Net Hospital
Joseph Patrick Clement, MS, RN, CCNS[1]; Marlene Martin, MD[2]; Triveni Defries, MD, MPH; Anil N. Makam, MD, MAS; Oanh Nguyen, MD, MAS; Matthew Perrotta, MPH – 1. Zuckerberg San Francisco General Hospital and Trauma Center; 2. University of California San Francisco

37. Educational Trainings to Improve Opioid Overdose Response Among Health Center Staff: A Quality Improvement Initiative
Audrey Stephenson, BA[1]; Alessandra Calvo-Friedman, MD[1]; Lisa Altshuler, PhD[2]; Kathleen Hanley, MD[2]; Sondra Zabar, MD[2]; 2. Department of Medicine, NYU Langone Health, New York, NY

38. **Exploring Uptake of Medication Treatment Among Opioid Users Experiencing Homelessness**
Natalie Swartz, BA[1]; Tatheer Adnan; Flavia Peréa, PhD; Travis P. Baggett, MD, MPH; Avik Chatterjee, MD, MPH[2] – 1. Harvard College; 2. Boston University School of Medicine

38. **The Acceptability and Feasibility of Smartphone-Based Recovery Coaching and Contingency Management to Reduce Substance Use Among Young Adults.**
Win Turner, PhD, LADC; Jody Kamon, PhD - C4BHI/SBU

39. **A Cascade of Hepatitis C Screening and Care at Maine Medical Center Internal Medicine Clinics, May 2015 – May 2019**
Wollelaw Agmas, MD; Brian King, MD; Wendy Craig, PhD; Kinna Thakarar, DO - Maine Medical Center

39. **Exploring and Overcoming Barriers to Discharging Patients with OUD to SNF**
Zoë Kopp, MD; Irina Kryzhanoskava, MD – University of California San Francisco Department of Medicine

40. **A Quality Improvement Study Using Trauma Informed Communication within a Primary Care Office Setting Providing Medical Assisted Treatment**
Michelle Harwick, DNP, FNP-BC, PMHNP-BC, ACNP-BC, DARTT; Rosemary Taylor, PhD, RN, CNL; Rick A. Butts, EDD, LPCC-S, DARTT, EMDR, SEP; Valerie R. Burns, MS, LPC, CSAC, NCC, DARTT - Purposeful Becoming, LLC

41. **A Quality Improvement (QI) Study Using Trauma Informed Communication for Self-Leadership for Workplace Joy**
Michelle Harwick, DNP, FNP-BC, PMHNP-BC, ACNP-BC, DARTT; Rosemary Taylor, PhD, RN, CNL; Rick A. Butts, EDD, LPCC-S, DARTT, EMDR, SEP; Valerie R. Burns, MS, LPC, CSAC, NCC, DARTT - Purposeful Becoming, LLC

41. **Not Just a Plant: Precipitated Withdrawal with Chronic Kratom Use**
Erin Bredenberg, MD, MPH - University of Colorado Division of Hospital Medicine

42. **Understanding Stigmatizing Healthcare Experiences of Individuals in Recovery from Opioid Use Disorder**
Cody Cowley, BS - University of Texas at Austin

42. **Policy Transfer Model: Can the U.S. Successfully Borrow from Portugal's National Drug Policy?**
Stephanie Elias Sarabia, PhD, MSW - Ramapo College of New Jersey

43. **Primary Care-Embedded Interdisciplinary Controlled Substance Review Committee: Safer and Smarter Controlled Substance Prescribing**
Deborah Yip, BA; Irina Kryzhanovskaya, MD - University of California San Francisco School of Medicine

44. **A Brief Report on the Immediate Use of Injectable Extended-Release Buprenorphine**
Amanda Crausman, BA1; Robert Crausman, MD, MMS2 – 1. William James College; Ocean State Healthcare

44. **A Missed Opportunity in a Case of Mixed Withdrawal**
Maya Appley, MD, MPH; Era Kryzhanovskaya, MD – University of California San Francisco

45. **Early Experiences of Buprenorphine Integration at an Opioid Treatment Program Affiliated With a Large Academic Safety-net Hospital: Treatment Outcomes at 30 and 180 Days**
Maya Appley, MD, MPH; Leslie Suen, MD; Scott Steiger, MD – University of California San Francisco

46. **Multidisciplinary Teams are Needed to Treat Opioid Use Disorder and Infective Endocarditis: A Case Series**
Caroline G. Falker, MD[1]; Kenneth L. Morford, MD; Lynda E. Rosenfeld, MD; Jeanette M. Tetrault, MD, FACP, FASAM; Shashank Jain, MD; Melissa Weimer, DO, MCR, FASAM[2] – 1. VA Connecticut Healthcare System; 2. Yale University School of Medicine

47. **Online Mutual Help for Problematic Alcohol Use: Disengagement During COVID-19**
Jason B. Colditz, MEd; Scott D. Rothenberger, PhD; Jane M. Liebschutz, MD, MPH, FACP; Bruce L. Rollman, MD, MPH; Kevin L. Kraemer, MD, MSc - University of Pittsburgh

47. **Public Funding for Transformative Drugs: The Case of Buprenorphine for Opioid Use Disorder**
Rachel E. Barenie, PharmD, JD, MPH; Aaron S. Kesselheim, MD, JD, MPH - Harvard Medical School/Brigham and Women's Hospital

48. Developing Diversity: Outcomes of a Residency Research Track and Summer Research Fellowship at the Medical University of South Carolina
Jennifer L. Jones, MD; Emily J. Bristol; Sudie E. Back, PhD; Sarah W. Book, MD; Kelly Barth, DO; Kathleen T. Brady, MD, PhD - Medical University of South Carolina

48. Preventing Overdose From the Inside, Out: A Clinical Case Presentation From a Novel OBAT Reentry Program
Allyson Pinkhover, MPH, CPhT, BS; Kelly Celata, MCJ, BA - Brockton Neighborhood Health Center

49. Patient Perspectives on Receiving Treatment For Tobacco, Alcohol, and Opioid Use Disorders in HIV Clinics
Kenneth L. Morford, MD; David A. Fiellin, MD; Phillip A. Chan, MD, MS; Deborah H. Cornman, PhD; Srinivas Muvvala, MD, MPH; Benjamin J. Oldfield, MD, MHS; Jessica Yager, MD, MPH; E. Jennifer Edelman, MD, MHS - Yale School of Medicine

50. Developing Resident CHAMP-ions to Practice Behavioral Health and Addiction Medicine in Primary Care
Kenneth L. Morford, MD; Emma T. Biegacki, MPH; Dana A. Cavallo, PhD; Stephen R. Holt, MD, MS; Jeanette M. Tetrault, MD - Yale School of Medicine

50. Development of a Screening, Brief Intervention and Referral to Treatment (SBIRT) Interprofessional Patient Simulation Training Curriculum for Opioid Misuse
Janice Vendetti, MPH; Nathaniel Rickles, PharmD, PhD; Bonnie McRee, PhD; Katherine Robaina, MPH; Iwona Pawlukiewicz, MPH; Petra Clark-Dufner, MA; Karen Steinberg Gallucci, PhD - UConn Health

51. Integration of Medication Assisted Treatment Waiver Training into the Medical School Curriculum
Irvin C. Lien, BS; Randell Seaton, BS; Aaron Szpytman, BS; Jody Chou, BS; Victoria Webber, BS; Sabrina Dass, BA; Eva Waineo, MD; Diane Levine, MD - Wayne State University School of Medicine

51. Flight of the Navigator: Overcoming Complex Co-Occurring Medical Disorders and Homelessness Using Patient Navigators and Financial Incentives in an Older Individual With Opioid Use Disorder Enrolled in Project HOUDINI LINK
Cameo Taylor; Sandra Flores, MPH; Twinisha Doyle, BA; Alexandra Haas, MFT; Emily F. Dauria, PhD, MPH; D. Andrew Tompkins, MD, MHS - University of California San Francisco

52. Expanding Access to X-Waiver Curriculum for Students in the Setting of COVID Pandemic
Scott Steiger, MD[1]; Rosalind De Lisser, FNP, PMHNP[2]; Elizabeth Castillo, MPH, FNP[2]; Matt Tierney, MS, NP[2] – 1. School of Medicine, University of California San Francisco; 2. School of Nursing, University of California San Francisco

53. Childhood Trauma, PTSD, and Overdose Among Latinx Treatment Users in the Commonwealth of Massachusetts
Cynthia Tschampl, PhD; Melisa Canuto, LICSW; Diliana De Jesús, MA; Melinda D'Ippolito, LICSW, MPH; Micaurys Guzman; Nick Huntington, PhD, Mary Jo Larson, PhD; Emily Stewart, BA; Yinuo Xu, MA; Lena Lundgren, PhD - Brandeis University

54. ONE Rx: Community Pharmacy Based Screening and Interventions for Opioid Misuse and Accidental Overdose
Jayme A Steig, PharmD; Mark Strand, PhD; Heidi Eukel, PharmD; Elizabeth Skoy, PharmD; Amy Werremeyer, PharmD; Oliver Frenzel, PharmD - North Dakota State University

54. Assessing Social Work and Nursing Students' Attitudes, Perceived Confidence and Competence in Working With Adolescents With Substance Use Disorder
Victoria A. Osborne-Leute, PhD, MSW; Emma Molloy, MSW - Sacred Heart University

55. Buprenorphine Prescribing Among Primary Care Providers: Barriers and Possible Solutions
Sarah Leyde, MD; Juliana Macri, MD; Tessa Rife PharmD, BCGP; Shalini Patel, MD - University of California San Francisco

55. Integration of Primary Care and Mental Health into a Hispanic Massachusetts Addiction Treatment System: Needs and Outcomes
Mary Jo Larson, PhD; Nick Huntington, PhD; Diliana De Jesús, MA; Cynthia Tschampl, PhD; Yinuo Xu, MA; Melinda D'Ippolito, LICSW, MPH; Micaurys Guzman; Melisa Canuto, LICSW; Emily Stewart; Lena Lundgren, PhD - Brandeis University

56. Navigating Your Way to Treatment: Results from an Embedded Buprenorphine Clinic in Primary Care
Valeria Gutierrez, BA; Irina Kryzhanovskaya, MD – University of California San Francisco

56. Introduction of Extended-Release Buprenorphine Program into an Office Based Addiction Treatment Program for People Experiencing Homelessness in Boston Before and During COVID-19.
Evan Russell, NP[1]; Samantha Ciarocco, MSW, LICSW[1]; Benjamin Bearnot, MD, MPH, FASAM[2,3] – 1. Boston Health Care for the Homeless Program, Boston MA; 2. Division of General Internal Medicine, Massachusetts General Hospital, Boston, MA; 3. Department of Medicine, Harvard Medical School, Boston, MA

57. Patient Preferences on Choosing Buprenorphine Over Methadone in a Large, Safety-Net Opioid Treatment Program: A Qualitative Study
Laura Checkley, MD; Scott Steiger, MD; Kelly Knight, PhD - University of California San Francisco

57. Integrating System-Level Metrics to Evaluate Naloxone Distribution Among Patients Seen by a Hospital-Based Addiction Consult Service
Caroline King, MPH; Jackie Sharpe, PharmD; Bradley M. Buchheit, MD, MS; Honora Englander, MD - OHSU

58. Successful Microdose Transition From High Dose Oxycodone to Buprenorphine in a Patient with Sickle Cell Disease Hospitalized for a Vaso-Occlusive Episode
Sarah Leyde, MD; Triveni Defries, MD, MPH - University of California San Francisco

59. Substance Use, Mental Health Treatment Seeking, and Perceptions of Unmet Need in Individuals With a Past Year Major Depressive Episode: Results From the 2017 National Survey of Drug Use and Health
Aaron Hunt, MS; Leah Adams, PhD - George Mason University

59. Understanding Predictors of Treatment Failures For Opioid Use Disorders Accessing Treatment-As-Usual Services
Sara Beeler-Stinn, LCSW, MPA; David Patterson Silver Wolf, PhD; Autumn Asher BlackDeer, MSW; Matthew Grossman – WASHU, St. Louis

60. Successful Implementation of Managed Alcohol Programs in the US During the COVID-19 Crisis
Jessica Ristau, MD[1]; Seth Gomez, PharmD[2]; Nicky Mehtani, MD, MPH[1]; Michelle Nance, NP[3]; Colleen Surlyn, MD; Joanna Eveland, MD; Shannon Smith-Bernardin, PhD, MSN, RN[3]; Devora Keller, MD[3] – 1. University of California, San Francisco, Zuckerberg San Francisco General Hospital; 2. Alameda County Behavioral Health Care Services; 3. School of Nursing, University of California-San Francisco, CA; San Francisco Department of Public Health, San Francisco, CA

60. Efficacy of a Spiritual Intervention in Improving the Psychospiritual Well-Being of People With Substance Use Disorders: A Pilot Randomized Controlled Trial
Audrey Hang Hai, PhD; Bill Wigmore, BA; Cynthia Franklin, PhD; Clayton Shorkey, PhD; Kirk von Sternberg, PhD; Allan Hugh Cole Jr., PhD; Diana M. DiNitto, PhD – Boston University

61. Pharmacy Nonprescription Syringe (NPS) Policy Survey
Danielle Kubicsko, PharmD; Jeffrey Paul Bratberg, PharmD - University of Rhode Island

61. On the Razor's Edge: Untreated Opioid Use Disorder in US Jails
Surabhi Nirkhe, MD - University of California San Francisco

62. Barriers and Motivators For Progressing Along the Buprenorphine Training and Prescribing Path
Rachel P. Winograd, PhD; Bridget Coffey, MSW, MA; Candice Woolfolk, PhD, MPH; Claire A. Wood, PhD; Margaret Nagle, PhD, CNS-PMH, BC, FAAN- University of Missouri, St. Louis - Missouri Institute of Mental Health

63. Feasibility of Hospital Buprenorphine Initiation Outside of Urban Academic Centers
Hannah Snyder, MD[1]; Arianna Sampson, PA-C[2]; Melissa Speener, MPH; Aimee Moulin, MD[3]; Andrew Herring, MD[4] – 1. University of California San Francisco, Department of Family and Community Medicine; 2. Marshall Medical Center; 3. University of California Davis, Department of Emergency Medicine; 4. Highland Hospital-Alameda Health System

63. Provider-Panel and Practice-Level Characteristics Associated with Prescriber Initial Adoption of Medication for Opioid Use Disorder in Pennsylvania Medicaid
Gerald Cochran, MSW, PhD; Evan Cole, PhD; Michael Sharbaugh, MA; Dylan Nagy, MA; Adam J. Gordon, MD; Walid Gellad, MD; Janice Pringle, PhD; Todd Bear, PhD; Jack Warwick; Coleman Drake, PhD; Chung-Chou H. Chang, PhD; Ellen DiDomenico, MA; David Kelley, MD; Julie Donohue, MD - University of Utah, School of Medicine, Division of Epidemiology

64. **A Status Report of a NIH Helping to End Addiction Long-term (HEAL)-Supported Study: Validation of A National Prescription Monitoring Program Opioid Risk Algorithm**
Gerald Cochran, MSW, PhD; Jennifer Brown, PhD; Stacey Frede, PharmD; Margie E. Snyder, PharmD; M. Aryana Bryan, MSW; Brooke Taylor, PharmD; Omolola Adeoye–Olatunde, PharmD; Udi Ghitza, PhD; Theresa Winhusen, PhD - University of Utah, School of Medicine, Division of Epidemiology

65. **Impact of the International Collaborative Addiction Medicine Research Fellowship for Physicians on Future Engagement in Addiction Research: A Controlled Comparison Trial**
Jan Klimas, PhD, MSC; Huiru Dong, PhD (c); Michee Hamilton, MSC; Lauren Gorfinkel, MPH; Walter Cullen, MD; Evan Wood, MD, PHD; Nadia Fairbairn, MD - BC Centre on Substance Use

65. **COVID-19's Impact on Addiction Care Team Consults in an Urban, Safety-Net Hospital**
Marlene Martin, MD; Hannah Snyder, MD; Oanh Nguyen, MD - UCSF

66. **Do No Harm: Harm Reduction Curriculum for Pre-Clinical Students**
Raagini Jawa, MD, MPH[1]; Nivetha Saravanan, BA[2]; Shana Burrowes, MPH, PhD[2,3]; Lindsay Demers, MS, PhD[4] – 1. Department of Infectious Disease and General Internal Medicine; 2. Boston University School of Medicine 3. Department of Medicine, School of Medicine; 4. Department of Health Law Policy and Management, Boston School of Public Health

67. **Sustained Diagnosis, Despite Sustained Remission: Barriers to Methadone Treatment for a Woman Living in a Rural Community with Opioid Use Disorder in Long-Term Recovery**
Ellen W. Green MD, PhD; Ximena Levander, MD - Oregon Health and Science University

67. **An Evaluation of Safer Opioid Prescribing in Hospital Settings: A Program Overview (AESOP)**
Tamara Mihic, PharmD; Lianping Ti, PhD; Stephen Shalansky, PharmD; Michael Legal, PharmD; Seonaid Nolan, MD - St. Paul's Hospital

68. **Humor & Opioid Recovery**
Benjamin Canha, PhD, RN - University of Maryland, School of Nursing

68. **Descriptive Analyses of Naloxone Co-Prescribing and Co-Dispensing in the Rhode Island (RI) Prescription Drug Monitoring Program (PDMP)**
Brian Bishop, PharmD; Jeffrey Bratberg, PharmD, FAPhA; Laura Chambers, PhD, MPH - University of Rhode Island College of Pharmacy

69. **Provider Attitudes Towards Shared Decision Making in Opioid Agonist Treatment**
Emily Loscalzo, PsyD; Ronald E. Myers, DSW, PhD; Jason Kraman, LSW; Margaret Lowenstein, MD, MPhil, MSHP - Thomas Jefferson University

70. **Advancing Nurse Delivery of Alcohol Screening and Brief Intervention (ASBI) Using Competency-Based Simulation Technology**
Yovan Gonzalez, DNP, FNP-BC; Deborah S. Finnell, DNS, CARN-AP, FAAN- Gouverneur Healthcare

70. **"If They Can Somehow Just Get The Ball Rollin'" – Exploring Needs of Hospitalized Adults Who Use Drugs To Improve Engagement in HCV Curative Treatment**
Taylor Vega, BA[1]; Ximena Levander, MD[1]; Andrew Seaman, MD[1,2]; Todd Korthuis, MD, MPH[1]; Honora Englander, MD[1] – 1. Oregon Health & Science University; 2. Central City Concern

71. **Assessing the Availability of Buprenorphine/Naloxone in Pharmacies Via Telephone Audit: A Feasibility Pilot**
Lucas G. Hill, PharmD; Sorina B. Torrez, Pharm D; Lindsey J. Loera, PharmD; Mandy L. Renfro, PharmD; Kelly R. Reveles, PharmD, PhD; Kirk E. Evoy, PharmD - The University of Texas at Austin College of Pharmacy

71. **Socio-Demographic Characteristics of Cannabinoid and Synthetic Cannabinoid Decedents in Florida, 2014-2018**
Armiel Suriaga, MSN-RN, PhD (c); Ruth M. Tappen, EdD, RN, FAAN - Florida Atlantic University

72. **Veterans with Substance Use Disorder: A Public Health Perspective of Traumatic Brain Injury and Addiction Susceptibility**
Margaret Kucia, PA-C, MPH; Heather Basehore, PhD - Coatesville VA Medical Center

72. Patient Perspectives Regarding Universal Self-Administered Screening for Tobacco and Cannabis in a Large Health Care System
Lillian Gelberg, MD, MPH; Whitney Akabike, MSPH; Sophie Feller, MD; Efren Aguilar, BS; Roya Ijadi-Maghsoodi, MD; Steve Shoptaw, PhD - David Geffen School of Medicine, UCLA Department of Family Medicine

73. The Phenomenology of Stigma in Healthcare Settings Among People in 12-Step Fellowships
Corinne Beaugard, MSW; Nicole Boss, BA; Jorge Delva, PhD, MSW - Boston University School of Social Work

73. Expanding the Addiction Medicine Workforce: Coaching and Guiding Physicians Through the Practice Pathway
Lia Bennett, MPH[1]; Kelly Strutz, PhD[2]; Cara Poland, MD, MEd, FACP, DFASAM[1] – 1. Spectrum Health Medical Group; 2. Michigan State University

74. Patient Outcomes After the First Year of Indiana's OTP Expansion: The Results of Valle Vista OTP Patients
Siobhan A. Morse, MHSA, CRC, CAI, MAC[1]; Kristen Primeau, LCSW[2]; Simon Feng, MD, ISAM, CCFP[2] – 1. Universal Health Services; 2. Valle Vista Health System

75. FRONTLINES Training Program: Model Description and Initial Evaluation
James H. Bray, PhD[1]; Alicia Kowalchuk, DO[2]; Kevin Schulz, MD[3]; Jessica Bray, MA; Brittany Zaring-Hinkle, MA; Angelia Esparza, BSN; Joann Shulte, DO; David Persse, MD – 1. University of Texas San Antonio; 2. Baylor College of Medicine; 3. Houston Fire Department

75. Perioperative Management of Pain and Opioid Use Disorder in a Patient Prescribed Extended Release Buprenorphine: A Case Report
Kristine E. Torres-Lockhart, MD; Leah J. Leisch, MD; Joseph H. Donroe, MD, MPH; Melissa B. Weimer, DO, MCR - Yale School of Medicine

76. Multiple Substance Use and Blood Pressure in Homeless and Unstably Housed Women
Leslie W. Suen, MD; Eric Vittinghoff, PhD; Alan H.B. Wu, PhD; Phillip O. Coffin, MD, MIA; Priscilla Hsue, MD; Kara L. Lynch, PhD; Dhruv S. Kazi, MD; Elise D. Riley, PhD - University of California, San Francisco, Division of General Internal Medicine

76. Nurses' Motivation to Work with Patients with Alcohol Use Problems: Identifying Stigma Perception Predictors Using A National Survey
Khadejah F. Mahmoud, PhD, MSN; Susan M. Sereika, PhD; Deborah S. Finnell, DNS, RN; Dawn Lindsay, PhD; Kathryn R. Puskar, DRPH, RN; Ann M. Mitchell, PhD, RN - University of Pittsburgh Graduate School of Public Health

77. Stigma and Opioid Addiction: What We Have Learned From The Opioid Epidemic
Kimberly Goodyear, PhD[1,2]; David Chavanne, PhD[3] – 1. Center for Alcohol and Addiction Studies, Department of Behavioral and Social Sciences, Brown University; 2. Department of Psychiatry and Human Behavior, Brown University; 3. Department of Economics, Connecticut College

77. Pain and Withdrawal Symptoms During Standard Inpatient Buprenorphine Induction
Clare Ronan, MD*; Nika Sulakvelidze, MD*; Alyssa Peterkin, MD; Ellen Rubin, PharmD; Zoe M. Weinstein, MD, MS - Boston University/Boston Medical Center
*Co-first authors

78. Converging Vulnerabilities: Hospitalized Patients With Substance Use Disorder in the Time of COVID-19
Dana Button, BS; Caroline King, MP; Taylor Vega, BA; Honora Englander, MD, FACP - Oregon Health and Science University

79. Expanding Patient Choice of Medication in the Youth Opioid Recovery Support (YORS) Intervention – Extended Release Naltrexone or Extended Release Buprenorphine
Kevin Wenzel, PhD; Jared Wildberger, MA; Marc Fishman, MD; Victoria Selby, PhD; Luciana Lavorato, MA; Julia Thomas, BS - Maryland Treatment Centers

79. Mobile Administration of Extended-Release OUD Medication in a Time of COVID-19
Jennifer Stidham, BA; Kevin Wenzel, PhD; Stanley Moody, RN; Julia Thomas, BS; Luciana Lavorato, MA; Jared Wildberger, MA; Marc Fishman, MD – Maryland Treatment Centers

80. Cannabis Use and its Association With Depression and Substance Use: Gateway or Gatekeeper?
Precious Akanyirige, BS; Ashley Ezema, BA; Ike S. Okwuosa, MD; Quentin R Youmans, MD; Kevin Simon, MD – Boston's Children's Hospital

81. Interprofessional Team-Based Model Increases Initiation of Buprenorphine for Hospitalized Patients with OUD
Richard Bottner, PA-C; Nick Christian, MBDA, MD; Amber Baysinger, PhD; Blair Walker, MD; Rachel Holliman, LMSW; Evan Solice, M.Div; Ken Giorgi, RN; Kirsten Mason, PharmD; Hemali Patel, MD; Elise Carper, MA, RN, ANP-BC, ACHPN; Mason Payne, LMSW, LCDC; Michael Brode, MD; Clarissa Johnston, MD; Snehal Patel, MD; Katelyn Roth, NP; Chris Moriates, MD - Dell Medical School at the University of Texas Austin

81. Reproductive Health Needs Among Women in Treatment for Substance Use Disorder
Jaanki Bhakta, DNP; Elizabeth Morse, DNP, FNP-BC; David Phillippi, PhD - Belmont University

81. A Glance to What Works: Long-term Practices in the Work Routine of Professionals Who Attended a Training on Alcohol and Other Drugs
Liz Paola Domingues, MSc; Danilo Locatelli, MSc; André Bedendo, PhD; Ana Regina Noto, PhD - Universidade Federal de Sao Paulo

82. Operationalizing a Substance Use Disorder Resource Collaborative During a Global Pandemic
Amanda Graveson, MS; Rachel Lockard, MPH; Kelsey Priest, PhD, MPH; Patrick Brown, BS; Honora Englander, MD - Oregon Health and Science University

82. Cannabis Use, Attitudes, and Diversion Among Adolescents and Young Adults Presenting for Substance Use Treatment Following Medical Cannabis Legalization in Massachusetts
Maddie O'Connell, MPH; Sharon Levy, MD, MPH; Lydia A. Shrier, MD, MPH; Sion K. Harris, PhD - Division of Adolescent/Young Adult Medicine, Boston Children's Hospital

83. State Recovery Programs for Pharmacists and Students with Substance Use Disorders: A Nation-Wide Survey Investigating Program Policies, Methods, and Treatment Options
Emerald O'Rourke, PharmD; Jeffrey Paul Bratberg, PharmD - University of Rhode Island College of Pharmacy

84. Pharmacy Student's Knowledge, Skills and Attitudes Related to the Use of Cannabis
Shawn Riser Taylor, PharmD, CPP, CDCES; Ryan E. Owens, PharmD, BCPS; Antoine Al-Achi, BS (Pharmacy), MPharm, MS, PhD, CT (ASCP) - Wingate University School of Pharmacy

84. From Bus Pass to Recovery Class: A Peer Mentor's Role in Wellness as Part of an Inpatient Addiction Consult Service
Sarika Gurnani, BS; Yoel Benarroch, BS; Theresa Rolley, CARC; Zoe M. Weinstein, MD, MS - Boston University School of Medicine

85. Childhood Trauma as Barrier to Engagement in Residential Substance Use Disorder Treatment
Rebecca Carden, DNP; Elizabeth Morse, DNP, FNP-BC, MPH; David Phillippi, PhD; Brian Wind, PhD - Belmont University

85. Characteristics of Inpatients Hospitalized for Substance Use Disorder Who Received Osteopathic Manipulative Treatment From 7/1/2016-6/30/2017
Alisa M. Cleary, DO; E. Katherine Nenninger, MD; Kinna Thakarar, DO; David Keller, DO - Maine Medical Center - Portland, ME

86. "Baby Steps" Towards Harm Reduction in Traditional Substance Use Treatment in the Midwest
Alex Duello, MPH; Bridget Coffey, MSW, MA; Claire A. Wood, PhD; Rachel P. Winograd, PhD - University of Missouri St. Louis - Missouri Institute of Mental Health

86. Discrimination and DSM-5 Psychiatric and Substance Use Disorders among US Sexual Minorities
Carol J Boyd, PhD; Erin Kahle, PhD; Philip T Veliz, PhD; Sean Esteban McCabe, PhD - University of Michigan School of Nursing

87. History of Alcohol-Related Treatment and Intent to Reduce Alcohol Use Among People Living with HIV in Florida
Rebecca J Fisk, MPH; Gladys Ibanez, PhD; Babette Brumback, PhD; Robert L Cook, MD, MPH -Department of Epidemiology, University of Florida, Gainesville, FL

88. Environmental Scan of Opioid-Related Activities in Academic Pharmacy
Lynette R. Bradley-Baker, PhD, RPh; Matt Cipriani, MLS; Dorothy Farrell, PhD; Thomas Maggio, MBA; Jeffrey P. Bratberg, PharmD, FAPhA; Andria F. Church, PharmD, BCPS, BCPP; Sara E. Dugan, PharmD; Thomas S. Franko, PharmD; Otito F. Iwuchukwu, PhD, RPh; Cynthia P. Koh-Knox Sharp, PharmD; Talia Puzantian, PharmD, BCPP; Jilla Sabeti, PhD; Daniel J. Ventricelli, MPH, PharmD - American Association of Colleges of Pharmacy

88. Injunctive Norms and Self-Regulation as Predictors of Drinking Behaviors in College Students
Megan M. Risi, MA; Christina T. Schulz, MA; Coral L. Shuster, MA; Robert G. Laforge, ScD – University of Rhode Island

89. Poly-Substance Use in the Context of Vaping Among College Students: Implications for Prevention and Risk Reduction
Jessica Samuolis, PhD; Kerry Morgan, PhD; Anna Greer, PhD; Gabrielle Diaz, BS; Kyle Elimanco, BS - Sacred Heart University

89. Process Evaluation Results of a Multi-Year, Multi-Pronged, Interdisciplinary Approach to Opioid Misuse Prevention on a University Campus
Jessica Samuolis, PhD; Victoria Osborne-Leute, PhD, MSW; Janice Kessler, LCSW; Kerry Morgan, PhD - Sacred Heart University

90. Associations of Marijuana Use, Use Frequency, and Cannabis Use Disorder with Ambulatory Care Utilization and Screenings For Substance Use in Ambulatory Settings
John Moore, MSW; Diana DiNitto, PhD - The University of Texas at Austin

90. Development of a Dynamic Reference Database For Use on Inpatient Addiction Medicine Consult Services
Evan Dov Gale, MD; Jeanette Tetrault, MD; Melissa Weimer, DO, MCR, FASAM - Yale Program in Addiction Medicine

91. Comparing Substance Use Risk Profiles Across Clinical Settings: Implications For Screening, Brief Intervention, and Treatment
Michael A. Lawson, PhD; Shanna McIntosh, MS; David L. Albright, PhD; Jennifer Smith, MSW - School of Social Work, University of Alabama

91. A Systematic Review of Patient and Provider Perspectives of Medications for Treatment of Opioid Use Disorder
Katharine Cioe, BS; Breanne E. Biondi, MPH; Rebecca Easly, BA; Amanda Simard, BS; Xiao Zheng; Sandra A. Springer, MD - Frank H. Netter School of Medicine at Quinnipiac University

92. A Survey of Emergency Department Nurses' Attitudes and Perceptions Toward Working With Individuals Who Use Drugs
Samantha Blakemore, MPH; Matthew Heerema, BA; Alicia Ventura, MPH; Justin Alves, RN, ACRN, CARN; Charmaine Lastimoso, MPH, MSN, NP-C; Kristin Wason, MSN, NP-C, CARN; Colleen LaBelle, MSN, RN-BC, CARN - Department of Medicine, Boston Medical Center and Boston University School of Medicine, Boston, MA, USA; Grayken Center for Addiction, Boston Medical Center, Boston, MA, USA

92. Potential Effects of the Negative Bias Towards Patients with Heavy Alcohol Use among Medical Residents
Erin M. Portillo, BS; Brianna N. Holcomb; Sandra Oviedo-Ramirez, PhD; Stormy Monks, PhD, MPH, CHES; Michael Parsa, MD, FAAEM, FACEP; Craig Field, PhD, MPH - The University of Texas at El Paso

93. The Feasibility of an Opioid Overdose Educational Training Program for Recovery Coaches in Washington D.C.
Leilani Attilio, DNP, NP-C[1]; Erin Athey, DNP, FNP-BC[2]; Kate Malliarakis, PhD, ANP-BC[2] – 1. Community Health Care Clinic, Tacoma, Washington; 2. The George Washington University School of Nursing, Washington D.C.

94. Perceived Stigma Among Patients With Substance Use Disorder and HIV Who Received Integrated Care in Vietnam
Nguyen Thu Trang, PhD (c); Dinh Thi Thanh Thuy; Nguyen Thu Hang; Andrew Edsall; Kim Hoffman, PhD; Gavin Bart, MD, PhD; P. Todd Korthuis, MD, MPH; Le Minh Giang, MD, PhD - Hanoi Medical University

Best Research Abstract

Impact of Medicaid Expansion on Access to Medications for Opioid Use Disorder (MOUD) among Opioid Users Experiencing Homelessness

Natalie Swartz, BA[1]; Avik Chatterjee, MD, MPH[2]; David Cutler, PhD – 1. Harvard College; 2. Boston University School of Medicine

Background: No study had examined the impact of Affordable Care Act state Medicaid expansions on MOUD access for people experiencing homelessness (PEH), who face higher opioid mortality than housed individuals. **Objective:** This study set out to examine whether Medicaid expansion had a differential effect on MOUD access for PEH. **Methods:** Data were obtained from the Treatment Episodes Data Set-Admissions for 2006-2017. The sample consisted of 5,818,170 admissions for opioid use at treatment centers that receive public funding. The primary outcome variable indicated whether treatment plans included MOUD. The first regression used difference-in-differences to evaluate whether Medicaid expansion had a differential effect on MOUD inclusion for housed versus homeless clients. The second regression examined whether these effects differed by treatment setting. Controls included socio-economic demographics, referral source, and clinical severity. **Results:** Across states, PEH made up a mean of 13.8% of admissions. MOUD was included in 34.2% of admissions for housed clients versus 18.5% of admissions for homeless clients.
Medicaid expansion was associated with a 9.8 (95% CI, 2.5 to 17.0) percentage point increase in the proportion of MOUD-inclusive treatment plans. The effect on PEH was not statistically different. PEH, however, were overall 12.0 (95% CI, -17.6 to -6.4) percentage points less likely to have MOUD treatment plans.
Expansion was only associated with an MOUD increase in outpatient settings, with a 12.6 (95% CI, 3.4 to 21.8) percentage point increase in MOUD likelihood. This increase was not statistically different for homeless clients. PEH, however, were 27.8 (95% CI, -35.5 to -20.3) percentage points less likely to access treatment in an outpatient setting. **Conclusions:** State Medicaid expansion increased the likelihood of MOUD-inclusive treatment plans for housed and homeless clients alike. Yet, the pre-existing disparity in access between the groups persisted, which can at least partially be explained by low rates of outpatient admission for PEH.

Best Research Abstract Runner-Up

Using a Care Continuum Model to Evaluate the Impact of Implementing Reflex Hepatitis C Virus RNA Testing Strategy Among People Receiving Treatment For Opioid Dependence

Ashly E Jordan, PhD, MPH; David C Perlman, MD; Charles M Cleland, PhD; Katarzyna Wyka, PhD; Bruce R Schackman, PhD, MBA; Denis Nash, PhD, MPH - New York University

Background: Care continuum models can be employed as evaluation metrics to assess the impact of public health interventions, such as testing strategies to increase case detection, at both the population level and within specific programs or clinics. Current assessments in the US of the hepatitis C virus (HCV) care continuum have identified large gaps among people who use drugs (PWUD), despite known HCV prevention strategies and curative HCV treatment, particularly in linking PWUD testing positive for HCV antibodies to care. **Objectives:** We examined the impact of implementing a reflex HCV RNA testing strategy for all persons testing positive for HCV antibodies in the largest not-for-profit opioid treatment program (OTP) in the US (in NYC, 2013-2016) on HCV care continuum outcomes among program participants. **Methods**: Data from OTP patients were examined as two sequential, cross-sectional time periods, 2013-2014 (off-site referral of those with a positive HCV antibody test) and 2015-2016 (on-site reflex qualitative HCV VL testing and off-site referral for those with reactive qualitative HCV viral load (VL) tests). **Results**: The study included 11,267 patients. After the implementation of reflex testing the proportion of those HCV antibody positive whose viremic status was ascertained increased significantly from 5% to 63.1% ($p<0.001$). Proportions of those HCV antibody tested (52.5% -vs. 73.3%), linked to HCV care (15.7% vs 51.8%), and receiving HCV treatment (12.0% vs 44.7%) all increased significantly after implementation of on-site qualitative reflex VL testing. **Conclusions:** Care continuum models can serve as valuable public health metrics for evaluating population-level and clinic-level

program implementation. Analyses identified significant gaps in the HCV care continuum steps of testing, linkage-to-care, and treatment. HCV reflex testing can be implemented at scale to facilitate the detection of active HCV infection, which may facilitate linkage to care, treatment and cure. . Findings demonstrate the utility of reflex qualitative HCV VL testing in facilitating the identification of active viremia in a single phlebotomy; this is an important public health strategy that should be expanded to more OTPs. While the proportion HCV treated increased significantly, high rates of unmet treatment need persisted suggesting that HCV control will require significant expansion of HCV treatment.

The John Nelson Chappel Best Curricula, Quality Improvement, and Program Abstract Award

Interprofessional Addiction Education: Implementation Strategies for Online Training

Ellen L. Edens, MD, MPE[1,2]; Belinda Platt, BS[3]; Brent Moore, PhD[1,2]; Shannon Drew, MD[1,2]; Robert Heimer, PhD[4]; Robert Krause, DPN APRN[5]; Lindsay Powell, APRN[5]; Elizabeth Roessler, PA-C[6]; Jeanette M. Tetrault, MD[7]; Andrew Wilbur, MD; Marissa Rocha, RN; Miriam Giles, BA[8]; Kathryn Cates-Wessel, BA[8]
1. Department of Psychiatry, Yale School of Medicine; 2.VA Connecticut Healthcare System; 3.Yale Poorvu Center for Teaching and Learning; 4. Yale School of Public Health; 5. Yale School of Nursing; 6. Physician Associate Program, Yale School of Medicine; 7. Department of Medicine, Yale School of Medicine; 8. American Academy of Addiction Psychiatry

Background: Despite a proliferation of online content related to SUD treatment, uncertainty remains about which implementation approaches best maximize educational benefit. Through a SAMHSA-funded grant, the American Academy of Addiction Psychiatry (AAAP), the American College of Academic Addiction Medicine (ACAAM) and a coalition schools partnered with Yale to accelerate development of a foundational SUD course and actively disseminate to students. **Objective**: To evaluate the effectiveness of four models of implementing the online course content across multiple health profession training programs. **Methods**: Course content was decided upon by an interprofessional team from Yale Schools of Public Health, Nursing, and Medicine. The course consists of 6 modules each with 3-5 short lessons, in-video quiz questions, a clinical case vignette, interprofessional panel discussions, an interactive map activity, and a module quiz. A coalition of 34 interprofessional schools participated. Implementation strategy choices included 1) Virtual Classroom-synchronous, in-class learning of online content; 2) Flipped Classroom-required asynchronous learning; 3) Set it and Forget it-optional asynchronous learning; 4) Other-defined by faculty, often a hybrid of 2 and 3. Instructors identified and registered potential students. Brief online pre and post-course surveys were completed on demographics, program details, course engagement, and rating of self-efficacy in assessing, diagnosing, referring, and treating SUD. Implementation outcomes included course registration, initiation, completion and grades, and post course ratings of SUD self-efficacy. **Results**: Instructors reported their planned implementation approach. No instructor planned to use the "virtual classroom" approach. Instructors identified 1005 potential students with 49% (490) utilizing "Set it and Forget it", 35% (353) "Flipped Classroom", and 16% (162) an "Other" option. Students enrolled from 6 disciplines of social work (16%), medicine (4%), nursing (58%), pharmacy (15%), and physician assistant (<1%) and psychology (4%). Compared to courses using the "Set it and Forget it" approach, students exposed to the "Flipped Classroom" and "Online Drop-In discussion" were more likely to register for, initiate, and complete the course (p's <.001). **Conclusion:** These findings suggest that the 'Flipped Classroom' implementation approach used for an on-line SUD course for health professional students can affect student engagement and completion.

Curricula, Quality Improvement, and Program Abstract Runner-Up

Needle Exchange Technology (NEXT): A Novel Internet-Based Mail-Delivered Syringe Services Program

Benjamin T. Hayes, MD, MPH, MSW; Jamie Favarro, MSW; Czarina Behrends, PhD, MPH; Aaron D. Fox, MD, MS - Montefiore Medical Center

Background: Syringe service programs (SSPs) reduce the risk of transmissible infections among people who inject drugs (PWID). Despite proven benefits, most PWID in the US have poor access to SSPs. Barriers include scarce distribution, policy restrictions, and community-level stigma. The COVID-19 pandemic has further highlighted the vulnerabilities of traditional in-person SSP models. Expanding access to these critical services requires innovate service delivery models. **Objective:** To describe patient characteristics of a novel internet-based mail-delivered SSP. **Methods:** NEXT is a non-profit, internet-based program that provides harm reduction supplies by mail to all 50 states and Puerto Rico. NEXT, founded February 2018, is the first of its kind in the US. NEXT provides sterile injection supplies and naloxone under standing orders from prescribers in participating states. Participants complete an enrollment questionnaire when they request supplies. We examined data from February 2018 through August 2019 of mail-order SSP participants to examine the risk profile of NEXT participants, focusing on past year overdoses, prevalence of chronic infectious diseases (HIV and HCV) and prior sources of injections supplies. **Results:** Within 17 months of service delivery, NEXT delivered 93,959 sterile syringes to 173 individuals. Mean age was 35, 53% of participants were women, 87% were white. 59% were stably housed and 59% were uninsured. Drugs used in the 30 days prior to enrollment included heroin (69%), methamphetamine (51%), and non-prescribed opioids (34%).
Overdoses: Participants reported that 25% overdosed and 66% witnessed an overdose in the past year.
Chronic infectious diseases: 38% reported HCV infection; 1% reported HIV infection.
Prior sources of injection supplies: 62% of participants reported getting injection supplies from acquaintances, 22% from pharmacies, and 4% from SSPs. **Conclusions**: NEXT serves PWID who reported a high frequency of overdose and HCV infection. Few participants used pharmacies or other SSPs for supplies, and most appeared to rely heavily on secondary distribution from acquaintances. Importantly, this program reaches a large proportion of women and young adults, groups that are under-represented in traditional SSPs. The internet-based platform appears to be reaching participants in need of harm reduction supplies. Future work will evaluate the reach of NEXT to underserved populations.

COVID-19

Rapidly Adjusting Buprenorphine Waiver Training for Medical Students in the Setting of the COVID-19 Pandemic

Jared W Klein, MD, MPH; James Darnton, MD; Judith I Tsui, MD, MPH - University of Washington/Harborview Medical Center

Background: The University of Washington School of Medicine provides optional buprenorphine waiver training to medical students during the final course before graduation. In March 2020, just a few weeks before the scheduled training sessions, all in-person coursework was cancelled due to the COVID-19 pandemic. **Objective:** We aimed to preserve high-quality, engaging buprenorphine waiver training for graduating medical students while switching from an in-person to live online format with just 4 weeks of lead time. **Methods**: We rapidly mobilized to secure permission from the sponsoring organization to deliver content via a live online format. All team members completed training on Zoom features including screen sharing, breakout rooms, polling and chat function and we integrated these active learning features in our sessions. Additionally, we enhanced the training to include an overview of changes to federal policies for opioid use disorder (OUD) treatment as a result of the COVID-19 public health emergency. Students were surveyed on their learning experience at the conclusion of each session. **Results:** We trained 104 medical students during 3 sessions in April 2020, which is a 73% increase from the previous year and captures nearly half of the graduating class. At the conclusion of the training, the overwhelming majority of learners "agreed" or "strongly agreed" in their ability to screen for and diagnose OUD (95%), counsel patients with OUD about treatment options (88%) and prescribe buprenorphine to patients with OUD (82%). Most participants were very or somewhat satisfied with the training (90%), which was similar to the prior year (88%). A few participants noted that an in-person format would have been preferable to the webinar format, although live webinar was deemed preferable to online recordings. Faculty noted challenges engaging learners during the webinars, with fewer questions and less robust discussion compared to the prior years' in-person sessions. **Conclusions:** In response to COVID-19,

buprenorphine waiver training was successfully delivered in a fully remote format to medical students which resulted in high participation rates and satisfaction ratings. There remain opportunities to improve engagement of learners in case-based discussions when using a webinar format.

Virtual Buprenorphine Management in the Era of COVID-19

Meredith Lynn, MD; Jeffrey Wilhite, MPH; Sondra Zabar, MD; Kathleen Hanley, MD - NYU School of Medicine

Background: There is great concern that patients with opioid use disorder (OUD) will have greater difficulty accessing treatment during the COVID-19 pandemic putting them at greater risk of relapse and overdose. As with other primary care services, there was an urgent need to adapt treatment for OUD to a telemedicine (remote) format. In response to this need, we developed an Objective Structured Clinical Exam (OSCE) to assess our residents' skills in buprenorphine management via a virtual clinic visit. **Objective**: To evaluate Primary Care residents on buprenorphine management skills during a simulated virtual clinic visit. **Methods:** 23 residents participated in a case involving a young man for his virtual buprenorphine maintenance visit as part of a 10-station annual OSCE. He is scheduled for a follow-up which is conducted via a video due to the COVID-19 pandemic. A highly trained standardized patient (SP) evaluated the residents on communication and case-specific skills: assessing substance use, mood symptoms, and social support; counseling on buprenorphine use, risk of overdose and naloxone access; interpreting urine toxicology. Assessment items used a behaviorally anchored scale with response options: not done, partly done, well done. Analyses are reported as frequencies of well-done items. **Results**: Of the 23 residents who participated in the case, 93% evaluated the patient's opioid use, 70% explored opioid withdrawal symptoms, 78% inquired about opioid cravings, and 78% asked about mood symptoms. However only 48% asked about other substance use, 39% explored social supports, 52% correctly interpreted the urine toxicology, 26% counseled on optimal use of buprenorphine and only 9% ensured the patient had access to a naloxone kit. The patient felt the encounter helped him understand his treatment with 30% of the residents. Residents' evaluated the case as valuable for practicing outpatient treatment for OUD via a virtual video visit. **Conclusions**: Most residents performed core aspects of the evaluation well, however we did uncover room for enhanced assessment of social supports and evaluation of other substance use and ensuring access to naloxone, highlighting the need for more robust training. Ongoing virtual clinic visit training will be increasingly important, particularly for patients with OUD, to ensure access to care.

COVID-19: A Catalyst for Change in Telehealth Service Delivery for the Management of Opioid Use Disorder

Nicky J. Mehtani, MD, MPH; Jessica T. Ristau, MD; Hannah Snyder, MD; Colleen Surlyn, MD; Joanna Eveland, MD; Shannon Smith-Bernardin, PhD, RN, CNL; Kelly Knight, PhD - University of California, San Francisco

Background: COVID-19 has exacerbated poverty, structural racism, and income inequality—social issues that drive addiction and have created the epidemic of opioid-associated overdose. The co-existence of these epidemics has necessitated care practice changes, including the use of telehealth-based encounters for the diagnosis and management of opioid use disorder (OUD). **Objective**: To introduce a novel telehealth model that delivers low-threshold OUD treatment to marginalized patient populations. **Methods**: We describe the development and implementation of the "Addiction Telehealth Program" (ATP), a telephone-based program designed under the framework of an existing safety net clinic in San Francisco to reduce treatment access barriers for people with substance use disorders in the context of COVID-19. The program was adapted to treat OUD among guests of the city's Isolation and Quarantine (I&Q) sites. Telehealth encounters were documented in the electronic medical record and in an internal tracking system for the San Francisco Department of Public Health (SFDPH) COVID-19 Containment Response. Descriptive statistics were collected on a case series of patients initiated on buprenorphine at I&Q sites through ATP. **Results:** Between April 10 and May 25, 2020, ATP consulted on the management of opioid, alcohol, GHB, marijuana, and stimulant use for 59 guests at San

Francisco's I&Q sites. Twelve patients had untreated OUD and were newly prescribed buprenorphine. Of these, 1 patient left against medical advice (AMA) prior to the delivery of prescribed buprenorphine at the site, 3 left AMA after initiating treatment, and, of the remaining 8 patients, 7 reported continuing to take buprenorphine at the time of I&Q discharge. All patients initiated on buprenorphine were marginally housed, 67% were Black, and 58% had never previously been prescribed medications for OUD. **Conclusions**: ATP demonstrates the feasibility of telehealth-based management of OUD among I&Q site guests in San Francisco and supports the implementation of similar programs in areas of the U.S. where access to addiction treatment is limited. ATP's ability to reach marginalized patient populations is largely due to legal changes permitting the prescribing of buprenorphine via telehealth without the requirement of an in-person visit, which we advocate should extend beyond the COVID-19 public health emergency.

Increased Buprenorphine Accessibility in Rural Communities During COVID-19 – A Case Report
Ximena A. Levander, MD; Bradley M. Buchheit, MD, MS - Oregon Health and Science University

Background:
Despite increased availability of telemedicine, rural areas of the United States have continued to experience significant barriers to buprenorphine access for people with opioid use disorder. On January 31, 2020, due to the COVID-19 pandemic, the Drug Enforcement Administration and the Substance Abuse and Mental Health Services Administration, announced a clinician could conduct an initial assessment for buprenorphine initiation via secure audio-visual (virtual) visit; on March 31,2020 this policy extended to telephone only. The Harm Reduction and BRidges to Care (HRBR) Clinic, a low-threshold buprenorphine clinic, rapidly scaled up capacity to utilize policy changes to increase buprenorphine access, including to rural communities.

Learning Objectives:
1) Identify barriers to providing medications for opioid use disorders in rural areas.
2) Recognize how emergency policy changes due to COVID-19 increased accessibility to buprenorphine via telemedicine offered through a low-barrier harm reduction clinic.

Case Presentation:
A 48-year-old man from rural town – over 2 hours away – presented for initial encounter via virtual visit. He started using pill opioids about 10 years ago for back pain. He started injecting heroin about 4 years ago. His current daily use is either injecting quarter to half gram of heroin or taking 10 to 15 hydrocodone-acetaminophen pills. He has never overdosed and has naloxone from community event. On assessment, he met DSM-V criteria for severe opioid use disorder, history of methamphetamine use, in remission. Prescription drug monitoring program was reviewed and appropriate. Last use of opioids was night prior resulting in moderate withdrawal symptoms. He had never taken buprenorphine. After risk/benefit discussion, he consented and we prescribed buprenorphine-naloxone 2-0.5mg SL TID (6/1.5mg daily). On follow-up in a week he reported mild cravings, thus dose increased to 8/2mg daily. Given ongoing limitations to buprenorphine prescribers nearby, current plan remains HRBR follow-up. He plans to establish with primary care for HIV/HCV screening.

Discussion:
This case demonstrates how policy changes related to access to medications for opioid use disorder during COVID-19 improved access to buprenorphine for a patient in a rural community who would otherwise have limited treatment access.

Implementation of a Telephonic-based Pathway to Address Substance Use as Part of Usual Care during COVID-19
Laura Harrison, MPH; Linda DeMasi, MBA; Stephen Butkus, MS; Kate O'Neill, RN; Megan O'Grady, PhD; Joseph Conigliaro, MD, MPH; Jon Morgenstern, PhD; Nancy Kwon, MD, MPA; John D'Angelo, MD; Sandeep Kapoor, MD, MS-HPPL - Northwell Health | Zucker School of Medicine at Hofstra/Northwell

Background: Our Screening, Brief Intervention, and Referral to Treatment (SBIRT) program serves to address substance use with patients as part of usual care in emergency medicine, ambulatory, and inpatient settings within 23 hospitals. Due to COVID-19, we had to minimize staff on-site, including health coaches and social workers who engage with patients identified as at-risk for substance use disorder. **Objective:** To implement a Telephonic-based SBIRT model to address patients' substance use while minimizing in-person interactions due to COVID-19. **Methods**: As "non-essential" staff, SBIRT Health Coaches were removed from clinical sites and assigned on a rotating basis to cover "Telephonic SBIRT". Calls to a central number automatically forwarded to the mobile phone of the health coach on duty. We established shifts covering 8am-12am, 7 days per week, and developed a flyer that was emailed and marketed to staff of our large integrated health system. We developed a customized semi-templated documentation, inclusive of evidence-based screening tools and checkboxes for brief interventions, referrals to treatment, and virtual resources provided. We developed a form the Health Coach could fill in to email the caller virtual resources, and another to virtually obtain consent to enroll participants into a SUD care navigation program (Project Connect). **Results**: In 10 weeks, we had 265 calls, 139 (53%) incoming, 122 (46%) outgoing, and 4 (1%) voicemails. 74 (28%) of calls were with patients, 5 (2%) family or friends, 132 (50%) staff members, and 54 (20%) treatment providers. Calls stemmed from 11 sites, 69 unique staff members and 57 unique patient cases. We provided 35 full screens, (91% high-risk), 29 brief interventions, referrals for 52 patients, emailed virtual resources to 31 individuals, and enrolled 4 patients in Project Connect. **Conclusions**: Health coaches provided SBIRT services for additional sites and covered extended hours. Most calls were for patients with high-risk substance use, illustrating necessity for front-line health professional education regarding the ability of the Telephonic SBIRT Team to address the full spectrum of substance use. Telephonic SBIRT is a model we can continue to develop and sustain.

Competing Priorities During the COVID-19 Pandemic: Treating GHB Use Disorder Via Telehealth at an Isolation and Quarantine Site

Jessica Ristau, MD; Scott Steiger, MD; Tricia Wright, MD - UCSF

Background: In March 2020, San Francisco established Isolation and Quarantine (I&Q) sites for SARS-CoV-2 positive or exposed individuals to isolate and prevent transmission. At the time of the case (April 2020), I&Q sites provided a hotel room, food and television. Without a working cell phone, patients had limited ability to connect with friends and family.

Learning Objectives:

Understand treatment of GHB withdrawal

Appreciate potential tension between public health and patient autonomy.

Case Presentation: 30M h/o HIV experiencing homelessness at an I&Q site for COVID-19 exposure requested addiction consult for GHB withdrawal as a barrier to completing quarantine. The patient reported consuming 1 oz of pure GHB every 3 days for 12 years and denied seizure or prior hospitalization for withdrawal. He was diagnosed with HIV 6 months prior and had sought treatment 3 weeks after diagnosis but was subsequently lost to follow up. Gabapentin 300mg QID was started for GHB withdrawal on Day 1 with improvement in cravings and withdrawal by Day 2, which he attributed to gabapentin. Day 6 he left quarantine for 8 hours to comfort his aunt who had attempted suicide, denying use during this time and returned to voluntary quarantine. Later that day, he reported difficulties with the television, his sole form of entertainment. He voiced conflicting goals of contributing to the public health response by staying in quarantine, while also wanting to leave due to boredom. Day 7 he was connected to HIV telehealth to start ARVs. Day 8 he left AMA, citing boredom, presenting directly to prior HIV providers to start on ARVs.

Discussion: GHB withdrawal from chronic use of > 1 g/day can be life threatening. Withdrawal usually begins within the first 24hrs and is typically treated with benzodiazepines although mild withdrawal is often treated with gabapentin.

Addiction Medicine consultation may support public health goals by keeping potentially infectious people in the I&Q sites
Providing cognitively engaging activities to patients in quarantine may improve substance use and public health outcomes

MEDICATIONS FOR OPIOIOD USE DISORDER

Extended Release Buprenorphine for a Patient with Severe Opioid Use Disorder Experiencing Short-Term

Anna-Maria South, MD; Devin Oller, MD - University of Kentucky

Background:
At least 12% of patients experiencing incarceration meet criteria for OUD (Chandler et al). Extended release buprenorphine (Bup-XR) demonstrates noninferior retention in treatment rates compared to sublingual buprenorphine (Bup/nx) and zero diversion risk, representing a potential treatment for patients with OUD experiencing incarceration.

Learning Objectives:
• Identify barriers and benefits of Bup-XR for patients pending incarceration
• Discuss benefits of initiation of MOUD during incarceration

Case Presentation:
CW is a 30 year old female with severe OUD who presented to the hospital from the county jail in active opioid withdrawal (COWS of 12 on evaluation), requesting treatment for OUD. CW reported uncertainty about the length of her incarceration—parole could be granted at an upcoming court appointment in the coming weeks. CW was started on SL Bup/nx and titrated to 16 mg daily. As the prison system did not allow SL Bup/Nx, she was administered 300 mg of Bup-XR on hospital day 9, paid for by a grant available to the University of Kentucky to treat OUD, and given walk in hours for our institution's bridge clinic. After release, CW followed up 35 days after Bup-XR. CW reported no opioid withdrawal, and was administered 300 mg of Bup-XR. Her OUD is in early remission.

Discussion:
No studies have evaluated Bup-XR in incarcerated patients with OUD. Patients without access to MOUD often continue to use opioids illicitly while incarcerated, though many do not, facing decreased tolerance and increased risk of overdose—a leading cause of mortality after release (Sharma et al). Initiation of MOUD during incarceration decreases the risk of illicit opioid use after release significantly (Moore et al), but patients are often left to arrange their own follow up, usually without being provided any resources by the jail. For patients experiencing short (<30 day) stays in carceral settings after hospitalization, our case demonstrates that Bup-XR can be used to bridge patients into treatment post-release. Institutions should investigate the financial and logistical feasibility of Bup-XR initiation in hospitalized patients with OUD facing additional time in jails or prisons.

Using Extended Release Buprenorphine Injection to Discontinue Sublingual Buprenorphine

Alexis Ritvo, MD, MPH; Susan Calcaterra, MD, MPH; Jonathan Ritvo, MD - University of Colorado Anschutz Medical Campus

Background: Tapering off sublingual buprenorphine (SL-BUP) may be challenging due to its high potency, 35-hour half-life, and because cessation of 2 mg dose (lowest available) often leads to intolerable withdrawal symptoms. Extended-release buprenorphine (XR-BUP) is a monthly injectable buprenorphine for the treatment

of opioid use disorder (OUD) with a half-life of ≈50days. Stable patients maintained on SL-BUP who desire opioid cessation may successfully fully taper off using a single XR-BUP 100mg injection.

Learning Objectives

1. Review three successful cases of novel use of XR-BUP to taper patients off of SL-BUP with minimal side effects.

Case Presentation:

CASE PRESENTATION

AGE GENDER	SUBSTANCE-RELATED DIAGNOSES	OPIOID USE PRIOR TO SL-BUP	MAX SL-BUP DOSE, TOTAL TIME ON SL-BUP	SL-BUP TAPER ATTEMPTS	SL-BUP DOSE AT TIME OF XR-BUP	PATIENT-REPORTED EXPERIENCE WITH XR-BUP	OPIOID CESSATION SINCE
51yo Male	Moderate OUD, Alcohol use disorder (AUD) in sustained remission	Inhaled heroin 1 year	8mg qday, 6 years	Several times over 5 years, decreased to 2mg, tried taper using buprenorphine patch and tramadol	4mg	"Slight, not intolerable, malaise", irritableness in 4th-6th week "akin to not having coffee", pre-injection constipation resolved over 2-3 months	Feb 2019
35yo Female	Physiologic opioid dependence; AUD in sustained remission	Oxycodone 25-30mg daily for pregnancy-related migraines.	6mg qday, 14 months	Decreased to 2mg for 10 months	2mg	"I experienced zero withdrawal symptoms once the XR-Bup was in place. The only downside was a small amount of pain with injection."	Feb 2019
46yo Female	Physiologic opioid dependence	Prescription opioids for post-operative pain ≈950 MME	20mg qday, 13 months	Decreased to 6mg for 9 months	6mg	"Once I had the shot I had no withdrawal symptoms, even after the first month"	Aug 2019

SUMMARY TABLE

Discussion: We demonstrate a novel off-label use of XR-BUP 100mg to facilitate discontinuation of SL-BUP without intolerable side effects among a subset of stable patients who were appropriate to discontinue buprenorphine. Two patients were on SL-BUP for physical dependence to prescribed opioids and did not meet OUD criteria. Thus, this approach may not be appropriate for all patients maintained on SL-BUP. Future studies will evaluate patient-reported outcomes for patients with moderate to severe OUD.

References:
1. Tanum L, Solli KK, Latif ZE, et al. Effectiveness of Injectable Extended-Release Naltrexone vs Daily Buprenorphine-Naloxone for Opioid Dependence: A Randomized Clinical Noninferiority Trial. JAMA psychiatry. 2017;74(12):1197-1205.

2. Laffont CM, Gomeni R, Heidbreder C, Jones III J, Nasser AF. Population pharmacokinetic modeling after repeated administrations of RBP□6000, a new, subcutaneously injectable, long□acting, sustained□release formulation of buprenorphine, for the treatment of opioid use disorder. The Journal of Clinical Pharmacology. 2016;56(7):806-815.

3. Haight BR, Learned SM, Laffont CM, et al. Efficacy and safety of a monthly buprenorphine depot injection for opioid use disorder: a multicentre, randomised, double-blind, placebo-controlled, phase 3 trial. Lancet. 2019;393(10173):778-790.

Substance Use Navigators and Technical Assistance are Associated with a Rapid Increase in Hospital Buprenorphine Initiation

Hannah Snyder, MD[1]; Melissa Speener, MPH[2]; Arianna Sampson, PA-C; Aimee Moulin MD; Andrew Herring, MD[3] – 1. UCSF Dept. of Family and Community Medicine; 2. Public Health Institute-CA Bridge Program; 3. Highland Hospital-Alameda Health System

Background: The California Bridge Program (CA Bridge) promotes hospital initiation medications for opioid use disorder (MOUD). Despite a robust evidence base, adoption of hospital initiation of MOUD has been low. **Objective**: The program objective was to launch sustainable MOUD access in emergency departments and inpatient units across California, by supporting generalists employed by the hospital. This evaluation describes the initial results of CA Bridge facilitation support and technical assistance to a large and diverse cohort of acute care hospitals in California implementing MOUD programs. **Methods**: Each site received funding for program development, including clinician salary support, educational expenses and substance use navigator support. Most sites did not have substance use navigators prior to participation in the program. Sites participated in conferences, received a package of clinical guidance from the program website, and worked with assigned clinician & navigator coaches to overcome issues. Each participating hospital provided monthly aggregate data on their activities related to MOUD implementation. Summary descriptive analyses were performed on data collected from April 2019 through January 2020. **Results**: A total of 30 hospitals were included in the first cohort of CA Bridge, one was excluded from analysis due to inaccurate data reporting. During the study period, a total of 6,038 people with OUD were identified, 4,032 were administered buprenorphine, and 2,455 attended a follow up visit. The median number of people with OUD identified per site increased from 4 (SD 24.3) to 23 (SD 21.9), while the median number of patients administered buprenorphine increased from 1 (SD 23.2) to 14 (SD 25.5). Median attendance at follow up outpatient, of those who accepted referrals, was 63% (SD 28.6%). **Conclusion**: The CA Bridge program of implementation facilitation, limited funding, and technical assistance was associated with a large increase in the number of patients initiating MOUD and linking to outpatient addiction treatment.

Provider Perceptions of Medication for Opioid Use Disorder from Qualitative Interviews in Allegheny County, Pennsylvania

Nicole Paul, BA; Amy Kennedy, MD; Simone Taubenberger, PhD; Judy Chang, MD, MPH - University of Pittsburgh School of Medicine

Background: Medication for Opioid Use Disorder (MOUD) has been shown to be safe, cost effective, and lower the risk of opioid overdose. However, access to and use of MOUD, as well as expansion of MOUD prescribers, in Allegheny County, PA, has been limited. **Objective**: To explore attitudes, opinions, and beliefs of MOUD among healthcare and social service providers. **Methods**: As part of an ethnographic study focusing

on neighborhoods of Allegheny County with the highest opioid overdose death rates, we conducted semi-structured qualitative interviews with key stakeholders living or working in these communities. For this analysis, we focused on a subset of interviews with physicians, nurses, care managers, peer-support specialists, and other professionals who provide treatment for persons with opioid use disorders. We collaboratively developed a coding scheme using a grounded theory approach and subsequently validated results via data triangulation and investigator triangulation. **Results:** Thirty-eight provider interviews were included in our analysis. We identified the following major themes related to MOUD from the perspectives of our provider participants. Among concerns and challenges, participants noted: 1) lack of uniformity and quality control of MOUD, especially with respect to buprenorphine/naloxone treatment; 2) referrals to MOUD centers or providers is a "word of mouth insider system"; 3) lack of a centralized source for the public to navigate and assess county MOUD services; 4) challenges optimizing timing of MOUD service access with patient motivation for treatment, and 5) stigma as a barrier to MOUD care. Providers also described different opinions about the centrality and duration of MOUD; some providers believed that MOUD was a "tool" for achieving complete abstinence from opioid-containing substances, while others viewed it as a long-term treatment for a chronic medical condition. **Conclusions**: Quality control of MOUD delivery and referrals to care is a major concern for healthcare and social service providers. Understanding the structural barriers and community biases regarding MOUD will better inform the design of referral systems and delivery of MOUD in clinical practice.

Prolonged Precipitated Withdrawal During Monitored Buprenorphine Induction in a Patient With Non-Pharmaceutical Fentanyl Use

Evan D. Gale, MD; Melissa Weimer, DO, MCR, FASAM - Yale Program in Addiction Medicine

Background

Non-pharmaceutical fentanyl (NPF) is now a commonly used illicit opioid. Some patients with opioid use disorder (OUD) exclusively use NPF. Patients using NPF have described precipitated withdrawal when self-initiating buprenorphine, even after 80 hours of opioid abstinence. Inpatient literature on this subject is sparse. This case details precipitated withdrawal in a patient with exclusive NPF use who was treated with buprenorphine based on current addiction medicine practice.

Learning Objectives

- Describe precipitated opioid withdrawal related to NPF use.
- Identify pharmacologic differences between heroin and NPF.
- Recognize considerations for initiating medications for OUD in patients exclusively using NPF.

Case Presentation

A 41-year-old man with obesity (BMI 39) was admitted to the hospital for treatment of influenza. He reported daily intranasal use of 30 bags of NPF and requested buprenorphine treatment. The Addiction Medicine Consult Service (AMCS) evaluated him on hospital day (HD) 2, which was 24 hours since last use of NPF. The AMCS determined the patient had severe OUD and moderate opioid withdrawal (COWS=12). Urine toxicology showed fentanyl only. The patient received 4mg sublingual buprenorphine-naloxone (SL BUP) and subsequently developed a COWS = 20. Over the course of the next 24 hours, the patient was given a total of 36mg of buprenorphine, high dose benzodiazepines, clonidine, hydroxyzine, and ketorolac to treat his severe opioid withdrawal.

Precipitated withdrawal symptoms continued to be severe on HD 3-5 despite ongoing SL BUP of 24mg daily and other adjuvant treatments. On HD 6, opioid withdrawal symptoms began to resolve and a benzodiazepine taper was started. The patient was discharged on HD 8 on 24mg SL BUP daily with close outpatient follow-up.

Discussion

Fentanyl's high lipophilicity compared to other opioids may contribute to precipitated withdrawal occurring from buprenorphine initiation even when patients are opioid abstinent for 12-24 hours. Elevated BMI may be a

risk factor due to the likelihood of large fentanyl deposition in fat tissues. For obese patients with exclusive NPF use, methadone may be preferred over buprenorphine for rapid stabilization without risk of prolonged precipitated withdrawal.

Increasing Access to Buprenorphine in Safety-Net Primary Care Clinics: The New York City Buprenorphine Nurse Care Manager Initiative

Marissa Kaplan-Dobbs, MPH; Jessica Kattan, MD, MPH; Ellenie Tuazon, MPH; Sabina Saleh, LCSW; Christian Jimenez, MPH; Hillary Kunins, MD, MPH, MS - New York City Department of Health and Mental Hygiene

Background: Opioid overdose deaths are a public health crisis in New York City (NYC). In 2018, there were 1,444 unintentional drug overdose deaths in NYC; 80% of these involved an opioid. Buprenorphine is a safe and effective medication for opioid use disorder (OUD). Despite its effectiveness, buprenorphine is underutilized. **Objective:** To increase access to buprenorphine treatment for underserved NYC populations, the NYC Department of Health and Mental Hygiene (DOHMH) established the Buprenorphine Nurse Care Manager Initiative (BNCMI). We developed the BNCMI to increase the buprenorphine prescribing capacity of primary care providers serving patients in safety net clinics. **Methods:** Through a competitive grant process, DOHMH selected 14 agencies to receive $150,000 annually for a Nurse Care Manager and to operate BNCMI. Some agencies operate BNCMI at multiple clinics; others at a single location. DOHMH also provides technical assistance, clinical education, and mentorship to new buprenorphine providers to initiate offering buprenorphine treatment. We assessed two main implementation outcomes: (1) number of new buprenorphine providers; and (2) number of patients treated with buprenorphine. We reviewed the distribution of demographic characteristics for patients with available intake data. **Results**: As of August 2019, a total of 116 providers started prescribing buprenorphine at the 27 BNCMI clinics; among these, there were 64 internists, 27 nurse practitioners, 17 family medicine physicians, four pediatricians, three physician assistants, and one obstetrician/gynecologist. A total of 1,018 patients enrolled during December 2016–August 2019; among these, intake data were available for 812 patients. The majority of patients identified as men (74%) and Latinx (42%) and were Medicaid beneficiaries (72%). **Conclusions:** BNCMI successfully increased buprenorphine treatment in primary care clinics and reached underserved populations. Similar interventions that target underserved patients and support providers to expand treatment capacity can improve care for people with OUD, and may reduce related morbidity and mortality. Other jurisdictions and healthcare systems could adopt this model to increase delivery of effective treatment for OUD in primary care settings.

EMERGENCY DEPARTMENT & HOSPITAL-BASED TREATMENT

Changing the Care Environment For Acute Intoxication: Giving Clients an Alternative to the Emergency Department and Jail

Shannon Smith-Bernardin, PhD, RN, CNL - University of California, San Francisco

Background: Caring for individuals with acute intoxication has substantial impact on public health, criminal justice, and emergency services. In the United States, nearly 30% of patients in medical or psychiatric emergency departments are intoxicated on alcohol, with up to 70% of patients intoxicated during the peak hours. The criminal justice system likewise arrests hundreds of thousands of individuals for intoxication each year. In an effort to reduce these individual and societal harms, many communities have developed “sobering centers” to care for intoxicated adults. **Objective**: • Examine operational and care practices at sobering centers through the U.S. • Identify best practices and barriers to providing care to adults with acute intoxication **Methods**: A survey was developed and distributed to leadership of centers: operating in the U.S., providing care to adults intoxicated in public, for short-term (<24 hour) stays. **Results**: Fifty-three programs were screened with 37 fitting inclusion criteria; twenty-six responded (70% rate). The majority of centers operate 24/7, averaging 5560 visits annually (median 4680, range 300-22,000). Staffing including medical personnel (80%)

and substance use specialists (70%) with budgets of $202,000 to $4.8 million annually (median $1,165,500) funded by city, county, state, law enforcement, hospital systems, and grants. In addition to alcohol, most care for intoxication related to opioids, marijuana, methamphetamines, cocaine/crack, or other drugs. Most clients are appropriate for sobering care with 4.3% of clients collectively requiring transfer to the ED and 4.3% to the police or psychiatric facility due to inappropriate or combative behavior. Offering a compassionate environment with dedicated staff was identified as a critical component of success. Other best practices include providing outreach to community members, establishing inter-organizational communication, and establishing a continuum of care for clients. Primary barriers included dependency on grant and/ or static funding, a lack of community resources available to clients, and an increase in the severity of co-morbid mental illness. **Conclusions**: Findings suggest sobering centers play a principal role in stabilizing adults who are acutely intoxicated and symptomatic of a substance use disorder. Sobering centers models vary, yet share a focus on harm reduction, community collaboration, and low-barrier access.

Prevalence and Characteristics of Patients with Alcohol and Substance Use Disorders Among a National Sample of Emergency Department Visits and Hospitalizations From 2014-2017

Leslie W Suen, MD; Anil N Makam, MD, MPH; Margot B Kushel, MD, MPH; Daniel Repplinger, MD; Hannah R Snyder, MD; Marlene Martin, MD; Oanh K Nguyen, MD, MAS - University of California, San Francisco, Division of General Internal Medicine

Background: Increasing prevalence of alcohol (AUD) and substance use disorders (SUD) are contributing to declining national life expectancy. However, the prevalence and characteristics of patients with AUD and SUD in Emergency Department (ED) visits and hospitalizations are unknown. **Objective**: To describe the prevalence and characteristics of ED visits and hospitalizations of patients with AUD, SUD or with neither diagnosis. **Methods**: We analyzed data from the 2014-2017 National Hospital Ambulatory Medical Care Survey (NHAMCS), an annual, nationally representative survey of ED visits. Since 2014, NHAMCS has tracked the presence of AUD and SUD. We described prevalence and characteristics of ED visits and hospitalizations and conducted a stratified analysis comparing patients with AUD or SUD by safety-net hospital status. **Results:** In 2017, there were 10.1 million visits (10.3% of ED visits) and 1.6 million hospitalizations (13.7% of hospitalizations) among patients with AUD or SUD. Compared to those without AUD or SUD, patients with AUD or SUD were more likely to have Medicaid insurance for ED visits (AUD: 31.9%, SUD: 35.5%, neither: 24.6%) and hospitalizations (AUD: 28.9%, SUD: 37.0%, neither: 14.6%); and were more likely to experience homelessness (AUD: 6.2%, SUD 4.4%, neither 0.5% in ED visits; AUD: 6.0%, SUD 8.6%, neither: 0.4% in hospitalizations). Patients with AUD or SUD also presented more commonly with trauma (AUD: 54.0%, SUD 39.7%, neither: 26.7% in ED visits, AUD: 36.8%, SUD: 28.4%, neither: 15.2% in hospitalizations), and received more behavioral health interventions (p-values <0.05 for all comparisons). Characteristics of patients with AUD or SUD stratified by safety net hospital status were similar. **Conclusion**: In this national study, 1 in 10 ED visits and 1 in 7 hospitalized adults had AUD or SUD, almost double that of national estimates for AUD and SUD among the general population. This suggests disproportionate utilization of acute services among patients with AUD or SUD. Our results also highlight the complex medical, psychosocial, and behavioral needs of patients with AUD or SUD receiving acute care. Similarities between safety net and non-safety net institutions indicate these results may be generalizable to all US hospitals.

Expanding Access to Addiction Treatment for Inpatients Utilizing Existing Resources

Susan L. Calcaterra, MD, MPH; Lauren McBeth, BA; Angela Keniston, MSPH; Marisha Burden, MD - University of Colorado

Background: There are 50,000 hospitalists caring for patients in US hospitals. If properly trained, this hospitalist workforce has the capacity to greatly expand addiction treatment to hospitalized patients across the country. **Objective**: We aimed to expand addiction treatment in the hospital setting by training hospitalists in addiction medicine practice. **Methods**: In 2018, we obtained funding to build a hospitalist driven addiction

consult service in partnership with an addiction medicine trained hospital physician. In year one, eleven hospitalists were recruited from an academic hospital who participated in a comprehensive addiction medicine training program which included: 1) a 13-part lecture series covering medications for opioid and alcohol use disorder, trauma and addiction, interpretation of drug testing, among others, 2) online addiction training modules with textbook, 3) American Society of Addiction Medicine membership, and 4) 10 - ½ day shadowing shifts with an addiction medicine physician. In year two, hospitalists began attending on a Monday through Friday addiction consult service. The program supports a dedicated social worker and peer recovery coach. All participating hospitalists have committed to taking the Addiction Medicine board exam by 2021. **Results**: In year one, all hospitalists became buprenorphine waivered, completed online addiction modules, and 90 of 110 shadow shifts. We hired a dedicated addiction social worker and peer recovery coach who visited six community treatment partners and three methadone clinics. In year two, we began our Monday through Friday addiction consult service. From October 2019 to March 2020, we initiated buprenorphine 39 times, prescribed naloxone at discharge 327 times, prescribed naltrexone or acamprosate 212 times, enrolled 25 patients into a methadone program, and billed over $200,000 for addiction services provided. Our social worker and recovery coach continued to link patients to treatment post discharge. Hospitalists will take the Addiction Medicine board exam in 2021 through the practice pathway. **Conclusions**: Program success requires 1) a motivated addictions expert to support hospitalists, 2) hospital leadership support, and 3) hospital support for a dedicated addiction medicine social worker. Our hospitalist addition medicine program represents a scalable intervention to rapidly build addiction medicine expertise to expand addiction medicine services to hospitalized patients.

Patient-Directed Discharges Among PWUD Hospitalized with Serious S. Aureus Infections: Opportunities for Improvement

Ayesha Appa, MD; Meredith Adamo, MD; Stephenie Le, MD; Jennifer Davis, MD; Lisa Winston, MD; Sarah B. Doernberg, MD, MAS; Henry Chambers, MD; Marlene Martin, MD; Phillip Coffin, MD, MIA; Vivek Jain, MD, MAS - University of California San Francisco; Zuckerberg San Francisco General Hospital

Background: Rates of serious bacterial infections are rising among persons who use drugs (PWUD). PWUD also have high rates of patient-directed ("against medical advice") discharges, which elevate risk of 30-day mortality and hospital readmissions. **Objective:** We sought to determine magnitude and determinants of patient-directed discharge (PDD) among PWUD hospitalized for severe Staphylococcus aureus infection; determine rates of recurrence; and explore strategies to deliver more effective care. **Methods:** We conducted a retrospective study of hospitalizations among adults with S. aureus bacteremia, endocarditis, epidural abscess, and/or vertebral osteomyelitis at two urban academic hospitals in San Francisco between 2013–2018. We performed structured chart reviews to ascertain demographic, clinical, and substance use data. We compared hospitalization features of PWUD with and without PDD and estimated the odds of infection recurrence at one year via multivariable logistic regression. **Results:** Overall, 80/340 (24%) of hospitalizations for severe S. aureus infections among PWUD involved a PDD. PWUD with a PDD were more likely to be experiencing homelessness (59% vs. 31%; p <0.001) and use methamphetamine (61% vs. 47%; p=0.03) compared to those without PDD. Among patients using opioids, fewer in the PDD group were on opioid use disorder (OUD) medication treatment prior to admission (27% vs. 45% in non-PDD group; p=0.03). During hospitalization, PWUD with PDD were less likely to receive a peripherally-inserted central catheter (PICC) (46% vs. 26%; p=0.003). Frequently documented reasons for PDD included housing concerns, social isolation, and being accused of using drugs in the hospital. Over half of PDD patients 41/80 (51%) required admission for recurrent or ongoing S. aureus infection vs. 54/260 (21%) patients without PDD, with adjusted odds ratio 4.9 (95% CI 2.8-8.9). One-year mortality was 13% after PDD vs. 10% after regular discharge (p=0.03).
Conclusions: Among PWUD hospitalized with severe S. aureus infections, PDD was associated with elevated risk of recurrent infection and one-year mortality. Urgent interventions are needed to (1) improve access to home- or shelter-based IV antibiotic therapy, (2) better initiate and maintain OUD treatment, (3) improve the experience of hospitalization with more supportive, patient-centered care, and (4) develop inpatient management tools for methamphetamine use disorder.

Multidisciplinary Hospital Team for Injection Drug Use-Related Infective Endocarditis Optimizes Patient Care and Improves Health Outcomes

Caroline G. Falker, MD[1]; Prashanth Vallabhajosyula, MD, MS; Arnar Geirsson, MD; Melissa B. Weimer, DO, MCR[2] – 1. VA Connecticut Healthcare System; 2. Yale University School of Medicine

Background: Injection drug use-related infective endocarditis (IDU-IE) has increased over the last 10 years. Patients with IDU-IE may require cardiac surgery; however, many cardiothoracic (CT) surgeons do not feel comfortable addressing the underlying complexity of substance use disorders. A multidisciplinary team approach integrating an Addiction Medicine consult service (AMCS) may be beneficial to address the complex needs of patients with IDU-IE. **Objective:** Describe the feasibility and initial outcomes of a multidisciplinary team designed to optimize the care of patients with IDU-IE. **Methods:** This is a case series of patients with IDU-IE requiring CT surgery who were admitted to one academic health system over 14 months whose inpatient treatment was managed by a multidisciplinary hospital team (CT surgery, AMCS, Internal Medicine, Infectious Disease, case management, social work, and nursing). We describe team concept, feasibility, and outcomes. Patient outcomes including prescription of medication for OUD (MOUD), 30-day hospital readmission, 30-day OUD treatment engagement, and mortality are descriptively summarized. **Results**: Stakeholders from the multidisciplinary team met to establish a team charter and determine logistics for meeting. All members agreed to meet on a volunteer basis. The team virtually met weekly for approximately 30 minutes to discuss patient cases using an agreed upon framework. Barriers to meeting were predominantly scheduling conflicts. 29 patients with IDU-IE requiring cardiac surgery were treated during the study period. 27 (93.1%) were prescribed MOUD and 100% completed hospitalization. Mean hospital length of stay was 33.8 days. Three patients (11.5%) died within 3 months of hospital admission. Excluding those who died, 7/26 (26.9%) patients were readmitted to the hospital within 30 days. Addiction treatment engagement was verified for 22 patients, and of those 90.9% remained engaged in MOUD at 30 days. **Conclusions**: This observational study shows that treatment of patients with IDU-IE using a multidisciplinary team is feasible and acceptable, though scheduling the multiple specialists is a barrier. Team members describe a great benefit for patients and staff. Patient outcomes are favorable with high rates of MOUD use and completion of medical treatments. Future research should compare outcomes for patients with IDU-IE who receive usual versus multidisciplinary team-based care.

Association Between Inpatient Use of Medication For Opioid Use Disorder and Discharge Against Medical Advice

Hannah R. Tierney, BS; Hannah R Snyder, MD - University of California, San Francisco

Background: People with opioid use disorder (OUD) have high rates of discharging from the hospital against medical advice (AMA). AMA discharges are associated with increased mortality and hospital readmission rates. Interventions for reducing AMA discharges are lacking, but previous work has highlighted inadequate treatment of withdrawal symptoms as a primary driver. Medications for opioid use disorder (MOUD) are being prescribed more commonly in the acute hospital setting, yet little is known about their impact on discharge disposition. **Objective**: To characterize the prevalence and patterns of AMA discharges among patients with OUD on a general medicine service and associations with MOUD use. **Methods:** This was a retrospective study based on electronic medical record data from an urban hospital. Records were examined for adult patients with OUD who were hospitalized from 1/1/16-6/30/18 for acute medical illness. Demographic information, co-morbidities and data on hospital stay were collected, including prescribing of MOUD. We examined the first hospitalization during the study time period and compared patients who discharged AMA with those who did not using bivariate analysis. **Results:** There were 1,195 unique patients with OUD hospitalized during our study time period. We found that white race (61.9% vs. 48.0%, $p < 0.001$), Medicaid insurance (82.5% vs. 74.5%, $p = 0.021$), cocaine or stimulant use (71.2% vs. 63.2%, $p=0.040$), and lower severity of illness on a 1-4 scale (mean 2.1 (SD 0.8) vs. 2.4 (SD 0.8), $p < 0.001$) were associated with discharging AMA. 19.3% of patients who did not receive MOUD discharged AMA, 18.8% of patients who were initiated on MOUD in the hospital discharged AMA, and 8.7% of patients maintained on outpatient MOUD treatment during the hospitalization discharged

AMA (p <0.001). 93% of the MOUD prescribed was methadone and 7% was buprenorphine. **Conclusions:** Discharge AMA among patients with OUD from general medical services varied by demographic and clinical characteristics. Continuation of outpatient MOUD during the hospitalization was associated with lower rates of discharge AMA while hospital MOUD initiation was not. Further research is needed to examine the relationship between MOUD and hospital discharge disposition.

PERCEPTION/INEQUITIES/STIGMA

Patient Attitudes Toward Substance Use Screening and Discussion in Primary Care Encounters
Leah Hamilton, PhD; Sarah Wakeman, MD; Timothy Wilens, MD; Joseph Kannry, MD; Richard N. Rosenthal, MD; Keith Goldfeld, DrPH; Angeline Adam, MD; Noa Appleton, MPH; Sarah Farkas, MA; Carmen Rosa, MS; John Rotrosen, MD; and Jennifer McNeely, MD, MS - New York University, Grossman School of Medicine

Background: Alcohol and drug use are often under-identified in primary care settings. Although prior research indicates that patients are generally supportive of alcohol screening, less is known about attitudes toward drug screening or the collection of this information in electronic health records (EHRs). **Objective**: As a part of an implementation study of EHR-integrated substance use screening in primary care, conducted in the NIDA Clinical Trials Network, patients were surveyed on their attitudes toward screening for substance use during medical encounters. **Methods**: Surveys were administered to patients in six urban academic primary care clinics following the introduction of a screening program. Participants were recruited from the waiting room and self-administered an 18-item survey exploring attitudes toward screening for alcohol and drug use, and discussing substance use with healthcare providers. Responses were collected using a 5-point Likert scale ranging from strongly agree to strongly disagree. **Results:** Participants (N = 553; mean age 54.2; 58.9% female; 60.4% white, 21.7% Black; 5.6% Asian, 17.9% Hispanic/Latino) overwhelmingly felt that they should be asked about their substance use (91%), and deemed it appropriate for their doctor to recommend reducing use if it adversely affects their health (92%). Most (87%) were equally comfortable discussing alcohol or drug use. A majority (63%) preferred discussing substance use with their doctor over other medical staff. Responses were mixed regarding screening modality: 55% preferred face-to-face, 25% had no preference, 19% preferred self-administration. Participants overwhelmingly reported that they would be honest with their provider (94%), but many (30%) were concerned about the confidentiality of information collected in their medical record. **Conclusions:** Patients strongly supported screening for drug and alcohol use in primary care, and discussing it with their doctor. However, patients' concerns about having their substance use documented in their medical record could pose a barrier to achieving accurate responses. These findings suggest a need to educate patients on the confidentiality of medical records and the value of disclosing substance use for their medical care.

Primary Care Medical Staff Attitudes Toward Substance Use: Results of the Substance Abuse Attitudes Survey (SAAS)
Leah Hamilton, PhD; Noa Appleton, MPH; Sarah Wakeman, MD; Timothy Wilens, MD; Joseph Kannry, MD; Richard N. Rosenthal, MD; Keith Goldfeld, DrPH; Angeline Adam, MD; Sarah Farkas, MA; Carmen Rosa, MS; John Rotrosen, MD; and Jennifer McNeely, MD, MS - New York University, School of Medicine

Background: Under-treatment of drug and alcohol use in primary care settings has been attributed, in part, to medical providers' negative attitudes toward substance use. **Objective**: As a part of an implementation study of electronic health record-integrated substance use screening in primary care clinics, conducted in the NIDA Clinical Trials Network, we assessed baseline attitudes among medical staff. **Methods**: Eligible participants were primary care providers and medical assistants in six urban academic primary care clinics. Prior to implementation of a substance use screening program, participants completed the Substance Abuse Attitudes Survey (SAAS), a validated 50-item self-administered survey that measures attitudes to substance use in five domains: permissiveness, non-moralism, non-stereotyping, treatment intervention, and treatment optimism. Participants were asked to rate their level of agreement with each item on a five-point Likert scale. **Results**: In

total, 139/191 (73% response rate) eligible staff completed the survey. Participants had mean age 42; 75% were female; 10% Hispanic/Latino, 65% White, 6% Black, 25% Asian (multi-race selection allowed). The majority of the sample was physicians (78%), while 9% were nurse practitioners, and 11% were medical assistants. Participants had an overall average of 13.4 years in practice. Just over one-third reported moderate to high satisfaction treating patients with drug problems (37.3%) and alcohol problems (36.7%). The proportion of participants having positive attitudes in each of the following domains were: non-moralism (70.1 %); non-stereotyping (58.3%); treatment intervention (48.6%); treatment optimism (49.6%); and permissiveness (46.2%). Negative attitudes toward permissiveness reflect responses to items addressing health effects of substance use, especially among teens. **Conclusions**: While most primary care staff did not endorse moralistic or stereotyping statements about alcohol and drug use, attitudes toward addiction treatment were mixed, with less than half endorsing positive attitudes toward treatment effectiveness. Our results suggest a need to improve attitudes, particularly toward addiction treatment. This could be accomplished through education and increased exposure to effective interventions that can be delivered by primary care providers, including office-based treatment for alcohol and opioid use disorder.

Racial Inequities in Treatment Retention Evidenced Through the Implementation of Missouri's State Targeted Response Grant

Claire A. Wood, PhD; Alex Duello, MPH; Kori Richardson; Rachel Winograd, PhD - University of Missouri, St. Louis, Missouri Institute of Mental Health

Background: Findings from Missouri's State Targeted Response (STR) grant with a Medication First (MedFirst) treatment approach for opioid use disorder (OUD) were promising (e.g., increased utilization of medications, increased treatment retention), particularly for those patients treated with buprenorphine. Despite promising outcomes, opioid overdose deaths in Missouri continued to increase. Particularly problematic was a diverging trajectory by race, driven by the St. Louis region, with overdose deaths increasing 30% among Black individuals versus 16% among White individuals from 2017 to 2018. **Objective**: Examine differences by race between STR and the year prior (Pre-STR) in buprenorphine-involved OUD treatment services and outcomes in the St. Louis region in 2018. **Methods**: We analyzed Pre-STR and STR state claims data to assess differences in admission rates, buprenorphine utilization, and treatment retention, by race, using chi-square tests and bonferroni-corrected pairwise comparisons. **Results**: Results demonstrated differences in treatment admissions, buprenorphine utilization, and treatment retention between Pre-STR and STR and by Race (Table 1). Black individuals represented a smaller proportion of treatment episodes during STR relative to Pre-STR. Relative to Pre-STR, buprenorphine utilization and treatment retention increased for White individuals during STR, but did not increase for Black individuals. Within STR, similar proportions of Black and White individuals received buprenorphine; however, the retention rate for White individuals was significantly higher at each timepoint. **Conclusions**: In the St. Louis region, improvements in treatment access, buprenorphine utilization, and retention during STR were limited to White individuals. Despite receiving buprenorphine at similar proportions, White individuals in STR were more likely than Black individuals to remain in treatment. Targeted efforts are needed to decrease racial inequities in treatment engagement and retention, such as reducing implicit bias and increasing culturally responsive treatment strategies.

	Pre-STR		STR		p-value
	White	Black	White	Black	
Treatment Admissions	54.2%	45.8%	58.4%	41.6%	.044
Buprenorphine Utilization	45.1%[a]	55.6%[b]	58.6%[b]	51.7%[a,b]	<.001
Percent Retained in Treatment:					
1 month	40.6%[a]	51.3%[b]	67.7%[c]	49.5%[a,b]	<.001
3 months	20.6%[a]	31.0%[b]	45.7%[c]	28.3%[a,b]	<.001
6 months	7.9%[a]	15.5%[b]	34.1%[c]	12.0%[a,b]	<.001
9 months	4.5%[a]	8.3%[a]	26.6%[b]	8.3%[a]	<.001

Each unique subscript letter denotes column proportions that significantly differ (p<.05)

'I Didn't Feel Like a Number': Patient Experiences Receiving Buprenorphine Treatment in Primary Care Settings With the Support of a Nurse Care Manager

Nisha Beharie, DrPH; Alexandra Harocopos, PhD; Jessica Kattan, MD, MPH; Marissa Kaplan-Dobbs, MPH - New York City Department of Health and Mental Hygiene

Background: In 2019, the median time buprenorphine patients in New York City (NYC) filled a prescription was 6 months, and 37% of patients filled a prescription for only 1 to 3 months. To promote increased retention in buprenorphine care, the NYC Department of Health and Mental Hygiene (DOHMH) implemented a Nurse Care Manager (NCM) initiative in 2016, a model in which NCMs coordinate buprenorphine treatment in primary care safety-net clinics. **Objective**: To explore how patients experienced the care they received from NCMs. **Methods**: Between 2017−2019, DOHMH staff conducted in-person, in-depth interviews with patients receiving buprenorphine treatment at an NCM primary care site. Patients who had been in care for at least 6 months at the time of the interview were considered in-care patients; patients who had left care within six months of starting treatment were considered out-of-care. Coding and analyses of transcripts were conducted using Dedoose and incorporated both a priori (derived from the interview guide) and emergent codes. A thematic analytic approach and framework analysis were used to capture concepts related to patient experience of NCM care received, and to assess differences between in-care and out-of-care patients. **Results:** Thirty-one in-care and 19 out-of-care patients were interviewed. The following themes were common to both groups: 1) Patients felt that NCMs showed genuine care and concern for their overall wellbeing; 2) NCMs provided critical clinical support (e.g., guidance when starting medication); and 3) NCMs provided essential logistical support (e.g., resolving insurance barriers). Themes that were unique to in-care patients were: 1) The care provided by NCMs was a motivating factor in their continuing treatment; and 2) Patients perceived NCMs as an integral part of a larger clinical team providing treatment. Reasons out-of-care patients left treatment were generally unrelated to the NCM care they received. **Conclusion:** In a primary care setting, NCMs play a critical role in patient care. These data suggest that by providing emotional, clinical, and logistical support, and intensive engagement (e.g., frequent phone calls), the care that NCMs provide might increase retention of patients in buprenorphine treatment.

"I Was Taking the Suboxone Even Though I Hated it…": A Qualitative Exploration of Stigma and Experiences Related to Taking Medications for Opioid Use Disorders Among Young Adults

Sarah M. Bagley, MD, MSc; Samantha F. Schoenberger, BA; Scott E. Hadland, MD, MPH MSc; Karsten Lunze, MD, MSc; George Massey, MD; Vanessa DellaBitta, MPH; Tae Woo Park, MD - Boston University School of Medicine, Boston Medical Center

Background: Medications for opioid use disorder (MOUD) are considered first line treatment for people of all ages with opioid use disorder (OUD), yet access to MOUD treatment for young adults remains low. Stigma related to receiving medication treatment remains understudied among YAs. **Objective**: To explore the experiences and attitudes of young adults treated with MOUD. **Methods**: We used qualitative methods to conduct semi-structured interviews with young adults (ages 18-29) in care for opioid use disorder. All interviews were audio-recorded and professionally transcribed. We developed codes around four dimensions: 1) experiences with MOUD; 2) MOUD treatment decision-making; 3) beliefs about MOUD; and 4) impact of beliefs on treatment engagement. Interviews were double-coded and analyzed to build themes based on these dimensions. **Results:** We enrolled twenty young adults, average age 25.7 years and median 25 years. Seventy-five percent identified as Caucasian and 35% as female. We identified four themes. First, all YAs described ambivalence about taking MOUD. Many reported benefits of MOUD such as a decrease in cravings, while also expressing a strong desire to discontinue treatment with MOUD. Second, young adults cited complex and diverse reasons for their ambivalence, including treatment with MOUD meant they were "not completely sober", stigma related to receiving MOUD, and competing interests such as employment and childcare. The third theme was that young adults experienced stigma related to MOUD from numerous sources, including treatment providers, family members, peers, self-help groups, and social media. This was stigma directly related to MOUD and distinct from having an opioid use disorder. The fourth theme was that support systems and

social networks, both medical and nonmedical, influenced treatment decision-making. Oftentimes, young adults received conflicting advice from these networks. **Conclusions**: Stigma explains some but not all of the ambivalence that young adults experience toward MOUD. Many voices, including peers and family, influence young adults treated with MOUD, and medical providers may not be the most influential voices. Efforts to engage and retain young adults in MOUD care should reflect the diversity of factors including misconceptions about not being truly sober and the impact of family and peer beliefs that may affect their decision-making. Consider abstract for either poster or oral presentation

Professional Factors that Predict Nurses' Motivation to Work with Patients with Opioids Use Problems: A National Survey

Khadejah F. Mahmoud, PhD, MSN; Susan M. Sereika, PhD; Deborah S. Finnell, DNS, RN; Dawn Lindsay, PhD; Kathryn R. Puskar, DRPH, RN; Ann M. Mitchell, PhD, RN - University of Pittsburgh Graduate School of Public Health

Background: The current opioid epidemic presents a global public health issue that contributes to increased morbidity, premature deaths and economic burden. Despite increased training of healthcare professionals, including nurses, the implementation of substance use screening, brief intervention and referral to treatment (SBIRT) has remained limited. Low motivation among nurses has been associated with delays in identification and treatment of patients with opioid use problems. **Objective**: To identify professional factors (work experience with substance use (SU), SU-education, role adequacy, role legitimacy, role support, task-specific self-esteem, work satisfaction, perceived role responsibility, and perceived self-efficacy) that predict nurses' motivation to work with patients with opioid use problems. **Methods**: A descriptive correlational design was used. A sample of 460 addiction-trained nurses, psychiatric-mental health nurses and medical-surgical nurses were recruited from four national nursing organizations. Professional attitudes and motivation to work with patients with opioid use problems were measured using an investigator-developed questionnaire, modified alcohol and alcohol problems perception questionnaire (AAPPQ) and modified perceived role responsibility and self-efficacy sub-scales. **Results**: Nurses who reported receiving substance use education in nursing school had poorer motivation scores related to opioid use problems ($p = .010$). Nurses who had a work experience with substance use ($p = .024$), who felt confident to work with patients with opioid use problems (task-specific self-esteem) ($p < .001$), or who were satisfied to work with these patients ($p < .001$) reported higher levels of motivation. **Conclusions**: The study's findings can help increase our understanding of professional predictors of nurses' motivation to work with patients with opioid use problems. These findings can also form the basis for developing specific interventions designed to target nurses' motivation in order to promote the implementation of SBIRT for opioid use problems.

SOCIAL DETERMINATES OF HEALTH

Injections and Infection: Understanding Harm Reduction Utilization in a Rural State

Kinna Thakarar, DO, MPH; Kimberly Murray, MPP; Jenny Carwile, ScD; F.L. Lucas PhD; Deborah Burris, RN, CCRC; Timothy Borelli, DO; Robert Pinsky MD; Cheryl Liechty, MD, MPH; Robert Smith, MD - Maine Medical Center/Tufts University School of Medicine

Background: Increasing rates of injection drug use (IDU) associated-infections suggest significant syringe service program (SSP) underutilization. **Objectives**: 1) Assess patient knowledge, attitudes, and practices of safe injection techniques and 2) Determine predictors of SSP utilization in a rural state. **Methods**: This is fifteen-month cross-sectional study of participants hospitalized with IDU-associated infections at four hospitals in Maine. Data were collected through Audio Computer-Assisted Self-Interview survey and medical record review. Descriptive analyses were performed to characterize injection knowledge, attitudes and practices. The primary outcome was past 3-month SSP utilization, and the main independent variable was self-reported distance to SSP. Secondary outcomes were uptake of clean drug equipment, naloxone, and treatment with

medication for opioid use disorder. Logistic regression analyses were performed to identify factors associated with the primary outcome, controlling for gender, homelessness, history of overdose, having primary care physician and distance to SSP. **Results**: Of the 101 study participants, 62 participants (65%) reported past 3 month SSP utilization, though only 33% used SSPs frequently. Few participants (10%) reported clean needle/syringe use or clean drug equipment use (5%). Forty-eight percent of participants reported naloxone uptake, and 66% of participants were prescribed MOUD prior to admission. Many participants (59%) lived more than 10 miles from an SSP, with 18% of participants living in rural areas. Fifty-four percent reported difficulty accessing an SSP. Participants who lived more than 10 miles of an SSP were 89% less likely to use an SSP (adjusted odds ratio 0.11; 95% CI 0.03-0.34). **Conclusions**: Our study highlights unsafe injection practices and lack of frequent SSP utilization among people admitted with IDU-associated infections in Maine. Especially given increasing stimulant use in our state, these results also highlight the need to promote harm reduction even among individuals prescribed medication for opioid use disorder. Particularly in rural areas where individuals may live more than 10 miles from an SSP, expansion of harm reduction services should be a priority.

Opioid Use in Pregnancy in Rural Communities: An Assessment of Treatment Implementation Needs, Barriers, and Facilitators

Shayla Archer, MS; Marcela C. Smid, MD, MS, MA; Alan Taylor Kelley MD, MPH, MSc; Jacob Baylis, MPH; Jacob Foringer; Gerald Cochran, MSW, PhD - University of Utah School of Medicine

Background: Pregnant women living in rural communities are disproportionately affected by opioid use and often have limited access to treatment options. Little is known about facilitators and barriers involved in implementing opioid use disorder (OUD) treatment for pregnant women in rural communities. **Objective:** To identify implementation needs, facilitators and barriers for OUD treatment in pregnancy in a rural/frontier, racially diverse community. **Methods**: We conducted a mixed methods cross-sectional needs assessment among health care providers and patient advocates. A close-ended/self-report electronic survey assessing provider care practices and attitudes regarding OUD in pregnancy was sent to all providers listed in Utah's professional license database within the target area. Qualitative interviews following Consolidated Framework for Implementation Research were conducted with health care providers and patient advocates. Descriptive statistics were used to characterize quantitative assessments and a two-cycle coding process was employed with qualitative data. **Results**: Of 352 eligible providers contacted, 115 licensed professionals provided consent to complete the survey (response rate=33%). Participants included nurses (n=48), counselors/therapists (n=13), physician assistants (n=13), physicians (n=4) and "others" (n=5). Overall, 66% of respondents rarely/never use a formal OUD screener with pregnant patients; nearly 50% of respondents rarely/never refer pregnant women with OUD to treatment; and 71% reported little or no skill at prescribing naloxone to pregnant women. On a measure of provider stigma using a scale of 1-7 (7=high stigma; 1=low stigma), the average response toward pregnant women was 3.19 (physician assistants [Mean=4.65, SD=.35], nurses [Mean=3.2, SD=.80]; counselors/therapists [Mean=2.7, SD=1.98], physicians [Mean=2.49, SD=.84]). Qualitative interviews (n=16) with health care providers and patient advocates included common themes: opioid/other substance use are major community problems; knowledge and resources for OUD/substance use are lacking; and off-reservation healthcare clinics attribute OUD/substance use issues to patient populations treated in on-reservation healthcare clinics and vice-versa. **Conclusions:** Greater resources and education are needed to support rural OUD treatment for pregnant women. These findings should be leveraged to plan interventions for pregnant women with OUD in rural areas.

Comparing Locations of Buprenorphine-Waivered Prescribers and Methadone Treatment Programs in New York City by Area-Based Poverty

Christian Jimenez, MPH; Ellenie Tuazon, MPH; Jessica Kattan, MD, MPH; Marissa Kaplan-Dobbs, MPH - New York City Department of Health and Mental Hygiene

Background: During 2018, New York City (NYC) residents of very high poverty areas had double the rate of unintentional opioid-involved overdose death than residents of low poverty areas. Buprenorphine and methadone are treatments that mitigate overdose risk. Methadone often requires observed dosing in Opioid Treatment Programs (OTP); buprenorphine is available from waivered prescribers and can be taken at home. **Objectives:** Compare locations of buprenorphine-waivered prescribers and OTPs by area-based poverty to inform NYC Department of Health and Mental Hygiene's (DOHMH) efforts to equitably reduce opioid overdose deaths. **Methods:** We identified NYC addresses as of February 2020 for buprenorphine-waivered prescribers and OTPs using Drug Enforcement Agency and Office of Addiction Services and Supports databases, respectively. We used the American Community Survey 2014–2018 to determine zip code-level area-based poverty (proportion of population living below 100% of Federal Poverty Level) in four categories: low (0–<10%), medium (10–<20%), high (20–<30%), very high (30–100%). We applied these categories to addresses of buprenorphine-waivered prescribers and OTPs and calculated crude rates using intercensal 2018 population estimates. **Results:** High poverty areas had the lowest number and rate of buprenorphine-waivered prescribers (558; 2.7 per 10,000). Very high poverty areas had a similarly low prescriber number (559), but higher rate (4.8 per 10,000). Medium poverty areas had the highest prescriber number (1,173; 3.3 per 10,000). Low poverty areas had a similarly high prescriber number and the highest rate (976; 6.0 per 10,000). The number and rates of OTPs generally increased with increasing poverty. Low poverty areas had the lowest number and rate of OTPs (7; 4.3 per 1,000,000) compared to medium, (21; 5.9 per 1,000,000), high (16; 7.8 per 1,000,000), and very high (24; 20.4 per 1,000,000) poverty areas. **Conclusion:** These data demonstrate disparities in location of treatment type by area-based poverty. OTPs were more commonly located in higher poverty neighborhoods; the opposite trend was generally observed for buprenorphine, with prescribers more frequently located in lower poverty neighborhoods. These findings have important implications regarding equitable treatment access and will inform DOHMH's efforts to increase the number of buprenorphine-waivered prescribers and treatment uptake in low-income areas.

Long-Term Social and Economic Outcomes of Adolescent Poly-Substance Use Among Canadian Boys from Low-Oncome Backgrounds

Nicholas Chadi, MD, MPH; *Francis Vergunst, PhD; Massimiliano Orri, PhD; Camille Brousseau-Paradis; Natalie Castellanos-Ryan, PhD; Jean R. Séguin, PhD; Daniel S. Nagin, PhD; Frank Vitaro, PhD; Richard E. Tremblay, PhD; Sylvana M. Côté, PhD - Sainte-Justine University Hospital Centre

Background: Substance use is a significant public health concern that disproportionately burdens males and low-income communities. Yet the long-term social and economic consequences of substance use in these population are poorly documented. **Objectives**: (1) To identify profiles of adolescent substance use based on alcohol, tobacco, cannabis, and other illicit drug consumption and (2) to examine their association with social and economic outcomes in adulthood. **Methods:** Prospective data was collected from a cohort of adolescent boys from low socioeconomic neighborhoods (n=890) in Montreal, Canada over a 31-year follow-up period. Profiles of concurrent consumption of alcohol, tobacco, cannabis and other illicit drugs from age 13-17 years were identified using group-based multi-trajectory modeling and linked to provincial/federal government records for high school graduation, criminal convictions, personal and household income, welfare receipt and partnership status from age 19-37 using multivariable regression models. Models were adjusted for IQ, family background and early behavioral problems. **Results**: Four poly-substance use trajectories from age 13-17 years were identified: abstinent (n=128, 14.4%), late-onset (high alcohol use prevalence by age 17; n=412, 46.5%), mid-onset (high alcohol, tobacco and cannabis use prevalence by age 16; n=249, 28.1%) and early-onset (high prevalence of all substances by age 15; n=98, 11.1%). Relative to the late onset (reference) group, participants in the early-onset profile were 3.0 times (95%CI=1.68–5.53) more likely to have left school without a high school diploma, 2.7 times (95%CI=1.56–4.68) more likely to have a criminal conviction by age 24 years, earned US$10,185 less (95%CI=-15,225– -5144) per year at age 33-37 years and had US$15,790 lower (95%CI=-23,378– -8218) household income at age 33-37 years. They also received 1.3 times (95%CI=1.15–1.57) more welfare from age 19-37 years and were 0.76 times (95%CI=0.60–0.95) less likely to be partnered, independent of early childhood predictors. **Conclusions**: In this sample of males from low-income backgrounds

living in a large North American city, early adolescent onset poly-substance use by age 13 was associated with poor social and economic outcomes across early adulthood. Early prevention aiming to delay the onset of substance use behaviors to late adolescence has potential for high societal cost savings.
*Equal contribution

Alcohol-Related Mortality Among People Experiencing Homelessness in San Francisco
Triveni DeFries, MD, MPH, Elizabeth Abbs, MD, Barry Zevin, MD, Caroline Cawley, MPH - UCSF/SFGH

Background: Premature mortality is common among people experiencing homelessness, and alcohol has been identified as a leading cause of death. **Objective:** To better understand the circumstances of death and inform prevention strategies, we evaluated alcohol-related mortality among people experiencing homelessness in San Francisco. **Methods:** We conducted a descriptive analysis of people who died between 2016-2019 while experiencing homelessness in San Francisco. Patients were included if they had a toxicology report performed that showed alcohol. We examined data from death reports by the Office of the Chief Medical Examiner, the integrated Coordinated Care Management System, and electronic health records to assess demographics, causes and location of death, co-morbidities, and service utilization. **Results**: There were 104 alcohol involved deaths; 97 (93%) were among men, 58 (56%) were white, 18 (17%) were African-American, and 16 (17%) were Latinx. The median age at time of death was 49 years (interquartile range 39 to 57). Of the 65 cases with autopsy results, 25 (38%) died of acute intoxication, 19 (29%) from accidental trauma or hypothermia, and 21 (32%) from underlying medical problems. Deaths related to multiple substances were more common than those related to alcohol alone (78% vs 22%), and 39% of deaths involved methamphetamines. 30 (41%) of individuals experienced homelessness for more than a decade, while 8 (11%) were homeless less than a year prior to death; 58 (56%) of people used medical services in their last year of life in variable patterns, predominantly in acute settings. **Conclusions:** Among alcohol-involved deaths of people experiencing homelessness in San Francisco, more than two-thirds of deaths were caused by acute intoxication, injury and hypothermia. Environments where people experiencing homelessness cause alcohol and other substances may be a modifiable risk factor. The remaining one-third of deaths were due to chronic disease, suggesting an important role for comprehensive care. Interventions should account for highly varying patterns of service utilization, and tailor not only to those who frequently utilize medical care but to those not engaged in traditional service touchpoints. A Homeless Death Review process can facilitate understanding of the factors impacting substance-related deaths and inform strategies that mitigate harm.

Acceptability of a Mobile Addiction Program for People Experiencing Homelessness or Unstable Housing
Danielle R. Fine, MD, MSc; Karen Weinstock; Sarah Mackin, MPH; Isabel Plakas; Jessie M. Gaeta, MD; Travis P. Baggett, MD, MPH - Massachusetts General Hospital

Background: Persons experiencing homelessness have a substantially higher prevalence of substance use disorders (SUDs) and are much more likely to die of drug overdose than the general population. Innovative initiatives have been developed to deliver addiction services to homeless individuals who often face substantial barriers to receiving such care in traditional settings. Understanding patient-reported outcomes of these initiatives is critical to facilitating their improvement and sustainability. **Objective:** To assess patient-reported outcomes of a mobile program designed to deliver addiction services to homeless and unstably housed individuals. **Methods:** Between 12/2019 and 03/2020, we conducted an in-person survey of a convenience sample of adults (≥ 18 years) who had ≥ 1 clinical encounter with a mobile addiction program in Boston, Massachusetts. Cognitive pre-testing in 10 individuals informed development of the instrument, which assessed prior healthcare experiences, acceptability of the mobile program, and SUD outcomes. We used descriptive statistics to present the demographic characteristics of respondents and their perceptions of the care they received through this initiative. **Results:** Of the 92 participants, 71% were male, 66% were white, and the mean age was 39.5 years (SD 12.4). Twenty-three percent were living in a shelter, 28.2% were unsheltered, and 23.9% were doubled-up. Approximately 63% reported being unfairly treated by a healthcare professional

previously. Almost all trusted and felt respected by the program staff (98.9%), reported that the program fit their healthcare needs (97.8%), and would recommend it to their friends (100%). Seventy percent reported that they would decrease their drug and alcohol use, and 77.2% reported that their chance of overdose was reduced because of the program. Only 29% reported that they would transition their care to an office-based setting, while 95.7% reported that they will return to the mobile unit for care. **Conclusions:** The mobile addiction program was highly accepted among a cohort of homeless and unstably housed individuals. Participants were less unanimous about the impact the program would have on their substance use, and relatively few had plans to transition to office-based care. These findings support the need for mobile addiction programs capable of longitudinally delivering care to high-risk individuals with SUDs.

ALCOHOL, TOBACCO, MARIJUANA, AND STIMULANTS (AND KRATOM)

Long-Term Buprenorphine Treatment for Kratom Use Disorder: A Case Series

Viktoriya R. Broyan, MS[1]; Jessica K. Brar, BS[2]; Tristen Allgaier; Jeffrey T. Allgaier, MD, FACEP, FASAM – 1. Ideal Option, PLLC; 2. Elson S. Floyd College of Medicine, Washington State University

Background:
Opioid agonist therapy with buprenorphine is an evidence-based effective treatment for opioid use disorder. However, there has been increasing use of alternative substances that can produce central nervous system effects similar to opioids. One of these substances is Kratom, which comes from the leaves of a tropical tree (Mitragyna speciosa) that is mainly found in Southeast Asia. Due to its addictive potential, accessibility, and legal status throughout most of the United States and elsewhere, there have been an increasing number of cases of kratom use disorder (KUD). Unfortunately, kratom use has been associated with fatal overdoses, seizures, and other severe detrimental effects. Thus, it's important to consider effective treatment options.

Learning Objectives:
Learning objectives include recognizing how the chemical composition of kratom can contribute to opioid-like effects, why kratom may be used in place of traditional opioids, and how buprenorphine treatment can be used for KUD. Target variables include past length and average daily dose of kratom, buprenorphine induction, stabilizing and current buprenorphine dose, current outpatient appointment frequency, urine definitive drug test results, duration of treatment, and current treatment status.

Case Presentation:
This case series consists of 28 patients with kratom as their primary substance use disorder. Length of kratom use ranged between three months to 25 years, with an average daily kratom dose of 92g/day. Eighteen patients were inducted on a buprenorphine dose between 8-16mg, seven on 2-6mg, and three on 18-20mg. Twenty patients were stabilized on 8-16mg of buprenorphine, five on 2-6mg and two on 18-20mg. There was no correlation between stabilizing dose and average daily dose of kratom. Twenty out of 28 patients are still receiving outpatient buprenorphine treatment. These patients have remained in treatment anywhere from five to 22 months, with an average duration of eleven months. Six patients were lost to follow-up due to missed appointments, one tapered down to 0.25mg of buprenorphine and self-discharged, and one moved out of town.

Discussion:
To our knowledge, this is the largest case series to date exploring long-term buprenorphine treatment for KUD. Our findings suggest that buprenorphine can be used as an effective treatment option for KUD.

Does Perceived Risk of Harm Mediate the Effects of a Primary Care Alcohol Screening and Brief Advice Intervention for Adolescents?

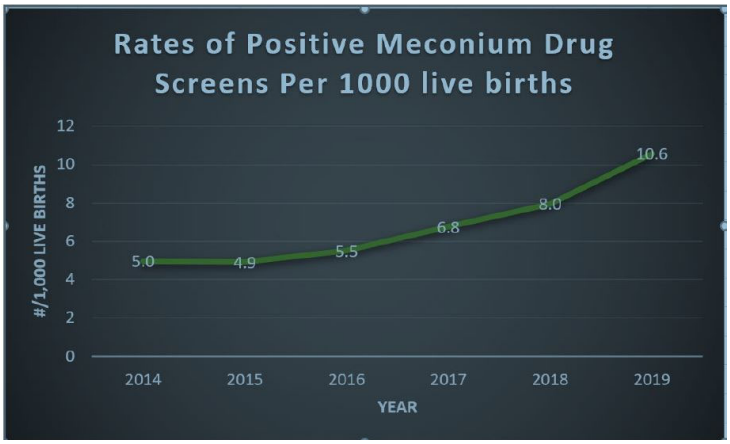
Amy Flynn, MS; Himani Byregowda, BDS, MPH; John Rogers Knight, MD; Sion K. Harris, PhD - Boston Children's Hospital

Background: A previous multisite primary care trial comparing computer-facilitated Screening and Brief Advice (cSBA) to usual care (UC) found lower rates of alcohol use among adolescent patients receiving cSBA. A hypothesized intervention mechanism was increasing perceived risk of harm (PRoH) of use. **Objective**: To examine whether PRoH mediated the cSBA intervention effect on adolescent alcohol use during a 3-month follow-up period. **Methods**: This study analyzed data from a quasi-experimental trial of cSBA among 12- to 18-year-olds recruited from 9 New England practices. The study used a pretest-posttest design with practices serving as their own controls; an 18-month UC phase was followed by an 18-month intervention phase. cSBA included pre-visit self-administered screening, personalized feedback, and psychoeducation illustrating substance use harms, followed by clinician brief advice. We used the Hayes approach to examine whether PRoH mediated the intervention effect on likelihood of any past 90-days drinking at 3-months follow-up. We used adjusted logistic regression modeling and examined two mediator variables representing trajectories from baseline to 3-months in PRoH of trying alcohol, and binge drinking every weekend (0=stayed at, or declined to no/low risk, 1=increased from low to moderate/great risk, and 2=stayed at moderate/great risk). Because prior alcohol use could modify PRoH and intervention effects, we conducted analyses stratified by baseline past-12-month drinking. **Results**: Among adolescents with prior drinking (n=647), PRoH (of weekly binge drinking) fully mediated the cSBA effect (indirect effect -0.08, [95% CI -0.189, -0.009]; direct effect -0.29 [-0.683, 0.101]), with cSBA associated with higher PRoH over time compared to UC (beta-coefficient 0.18 [0.02, 0.34]) and higher PROH decreasing odds of reporting past-3-month drinking at follow-up (-0.46 [-0.716, -0.214]). In those with no past-12-month alcohol use (n=1449), cSBA was also associated with enhanced PRoH (of trying alcohol) (0.13 [0.020, 0.232]), and higher PRoH decreased odds of any drinking (-0.43 [-0.855, -0.008]); however, PRoH did not mediate the cSBA effect (indirect effect -0.05 [-0.155, 0.000]; direct effect -0.71 [-1.351, -0.065]). **Conclusion:** Computer-facilitated screening and brief advice can enhance adolescents' perceived risk of harm from alcohol use, which in turn contributes to a reduction in short-term drinking risk.

Trend in Marijuana Exposure in Newborns Before and After Recreational Legalization

Allek Scheele, MD; Amy Herbig, MD; Andrea Hadley, MD - Helen DeVos Children's Hospital

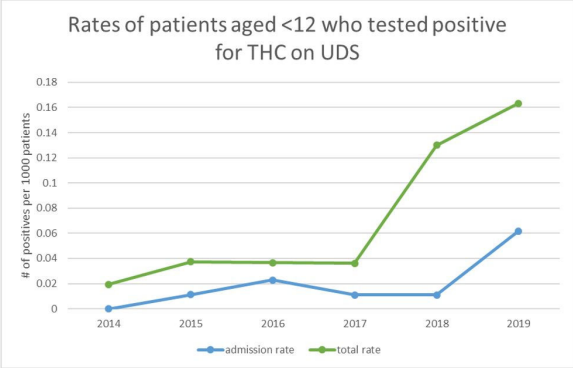
Introduction: Recreational Marijuana legalization has become more popular with each election season. Despite strong recommendations from the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists against the use of marijuana in pregnancy, use by this population is increasing. The 2016 National Survey on Drug Use and Health revealed that 4.9% of pregnant women 15 through 44 years of age reported use of marijuana, a 3.4% increase from the prior year**. Objective:** The objective of this study is to identify the rate of newborn exposure to marijuana in utero before and after recreational legalization. **Methods:** Retrospective chart review of newborns 5 years prior to recreational marijuana legalization to the present. We included patients born at the Well Nursery and NICU at our tertiary care hospital who had a meconium positive for THC. Deidentified patient data was gathered and supplied by data abstractors. The total number of births was generated by review of monthly, internal, electronic medical record reports. **Results**: Between January of 2014 and January of 2020, 320 newborns tested positive for THC in their meconium. The number of newborns found to be positive for THC per 1,000 live births was 5.0, 4.9, 5.5, 6.8, 8.0, and 10.6 year over year. **Conclusions:** The number of newborns positive for THC has increased every year from 2014 to 2019 and has more than doubled over this time. The largest increase occurred between 2018 and 2019, which coincides with legalization of recreational marijuana. Newborn meconium is tested if their mother is positive for non-prescription drugs during pregnancy or at time of delivery. Because not all newborns are screened at birth, current data underestimates in utero THC exposure. Our study demonstrates a 32.5% increase in THC exposed newborns after recreational use of marijuana was legalized for adults, while total number of births at that time declined by 2.6%, suggesting pregnant women are more likely to use marijuana during their pregnancy after legalization of recreational use. This shows a need for further studies and educational interventions to warn pregnant mothers about the risks of marijuana use during pregnancy.



Consider abstract for either poster or oral presentation

Trend in Accidental Marijuana Ingestion Related Hospital Visits After Recreational Legalization
Allek Scheele, MD; Cara Poland, MD; Andrea Hadley, MD - Helen DeVos Children's Hospital

Introduction: Legalization of Recreational Marijuana increases with each election season. This led to increasing availability of marijuana and a decrease in stigma. Many of these products are edible with appealing appearances, lending themselves to accidental pediatric exposure. **Objective:** The objective of this study is to identify the volume of patients under age 12 with accidental ingestion of marijuana at a tertiary care center before and after recreational legalization in December 2018. **Methods:** Retrospective chart review of children under age 12 treated in our system who had a urine drug screen test positive for THC five years prior to recreational marijuana legalization to one-year post. Data included patient demographics, urine drug screen results, admission unit, and diagnosis codes. Medical record reports generated lists of total number of admissions and ED visits. Rates of positive tests and admission where calculated and evaluated with Chi-squared analysis. **Results:** Between January 2014 and January 2020, there were 0.02-0.04 patients per 1000 who tested positive for THC on a urine drug screen. In 2018 there was a statistically significant increase to 0.13 per 1000 and to 0.16 per 1000 total patients in 2019. The rate of patients with a positive drug screen for THC who required admission to the hospital was 0.1-0.2 patients per 1000 per year from 2015 – 2018, with an increase to 0.6 in 2019, which approaches statistical significance (p-value 0.06). **Conclusions:** The number of children under age 12 testing positive for THC during an ED visit or hospital admission has increased significantly since 2017. This implies increased overall exposure for children in the community. More children are requiring admission to the hospital which may indicate increased severity. The largest increase in total exposure was from 2017-2018 when the resolution to legalize recreational marijuana passed. The largest increase in admissions was from 2018 - 2019, the first year of legalization. These findings suggest an increase in availability in THC containing products and decrease in stigma lead to an increase in accidental ingestions and healthcare utilization. This demonstrates the need for community education regarding marijuana safety practices.



A Case Series of Nine Patients with Methamphetamine Associated Dilated Cardiomyopathy Introduced to Contingency Management Through Heart Plus: A Novel Addiction/Cardiology Co-Management Clinic
Sarah Leyde, MD; Leslie Suen, MD; Albert Liu, MD, MPH; Marlene Martin, MD; Jonathan Davis, MD; Soraya Azari, MD - University of California San Francisco

Background:
Methamphetamine use can lead to dilated cardiomyopathy (MA-CMP) and pulmonary hypertension. Despite being younger, patients with MA-CMP have higher readmission rates and mortality than patients with non-methamphetamine associated heart failure (HF). Methamphetamine cessation improves HF symptoms and readmission rates. Contingency management (CM) is an effective behavioral treatment for methamphetamine use disorder.

Learning Objectives:
1) Recognize methamphetamine use as a risk factor for worse outcomes in patients with HF
2) Utilize CM and collaborate across specialties when caring for patients with MA-CMP

Case Presentation:
9 patients with recent MA-CMP admissions agreed to participate in a pilot addiction/cardiology co-management clinic with biweekly CM for 12 weeks. The clinic closed after 1 week due to COVID-19. Despite their young age (mean = 46 years, range 34-61), all patients had advanced heart failure (ACC/AHA class C-D), severely reduced cardiac function (ejection fraction ranging from 10-30%), and frequent ED/hospital admissions (mean = 7/year, range 4-15). 67% of patients were homeless or marginally housed. All but 1 patient had been referred to cardiology clinic, but 25% never engaged, and there was a 55% no-show rate in the 6 months preceding the pilot clinic. Despite low rates of engagement previously, 78% of patients attended the initial pilot clinic visit. Only 1 patient did not return for the second visit due to an unrelated medical emergency. We used CM to provide patients with rewards of varying magnitude for attendance and nonreactive urine toxicology. All patients who attended the second visit had nonreactive urine toxicology for stimulants and patients earned an average of $7 per visit in gift cards. 3 months after COVID-19 forced clinic closure, 4/9 patients (44%) remain in recovery from methamphetamine use disorder per their report and engage in care, 3/9 (33%) patients are using methamphetamine and are not engaging in care, and 2/9 (22%) are lost to follow-up.

Discussion:
In this case series, medically and psychosocially complex patients with MA-CMP were highly engaged in a novel addiction/cardiology CM clinic. Future interventions should provide patients with MA-CMP evidence-based care for both HF and methamphetamine use disorder.

A Social Media Intervention to Address Cigarette Smoking and Heavy Episodic Drinking: A Pilot Randomized Controlled Trial
Meredith C. Meacham, PhD, MPH; Danielle E. Ramo, PhD; Judith J. Prochaska, PhD, MPH; Larissa J. Maier, PhD; Kevin L. Delucchi, PhD; Manpreet Kaur, MA; Derek D. Satre, PhD - University of California San Francisco

Background: Co-occurrence of tobacco use and heavy episodic drinking (HED; 5+ drinks for men and 4+ drinks for women per occasion) is common among young adults; both warrant attention and intervention.
Objective: In a two-group randomized pilot trial, we investigated whether a Facebook-based smoking cessation intervention addressing both alcohol and tobacco use would increase smoking abstinence and reduce HED compared to a similar intervention only addressing tobacco.
Methods: Participants were 179 young adults (age 18-25; 49.7% male; 80.4% non-Hispanic White) recruited from Facebook and Instagram who reported smoking 4+ days/week and past-month HED. The Smoking Tobacco and Drinking (STAND) intervention (N=84) and the Tobacco Status Project (TSP), a tobacco-only intervention (N=95), both included 90 daily Facebook posts and weekly live counseling sessions in secret

groups. Self-reported 7-day smoking abstinence was verified via remote salivary cotinine tests at 3, 6, and 12 months (with retention at 83%, 66%, and 84%, respectively). Alcohol use was self-reported.
Results: At baseline, the participants averaged 10.4 cigarettes per day (SD=6.9) and 8.9 HED occasions in the past month (SD=8.1), with 27.4% in a preparation stage of change for quitting smoking cigarettes. Participants reported significant improvements in cigarette smoking and alcohol use outcomes over time, with no significant differences by treatment condition. At 12 months, intent-to-treat smoking abstinence rates were 3.5% in STAND vs. 0% in TSP (biochemically-verified) and 29.4% in STAND vs. 25.5% in TSP (self-reported). Compared to TSP, the STAND intervention was rated more favorably for supporting health and providing information that was read and used.
Conclusions: Adding an alcohol treatment component to a tobacco cessation social media intervention was acceptable and engaging but did not result in significant differences by treatment condition in smoking or alcohol use outcomes. Participants in both conditions reported smoking and drinking less over time, suggesting covariation in behavioral changes.
Indicate format preference:

OPIOID ANALGESICS AND OPIOID OVERDOSE

Opioid Management eConsults: An Examination of Question Styles and Outcomes
Laila Khalid, MD, MPH; Joanna L. Starrels, MD, MS; Daniel Lipsey; Tiffany Lu, MD, MS; Sharon Rikin, MD, MS - Montefiore Medical Center

Background: Managing patients on long-term opioid therapy (LTOT) can be challenging for providers. However, referring patients to pain specialists is often not practical due to a specialist shortage or long wait times. Opioid management e-consults may help increase access to specialists, potentially deferring the need for an in-person visit. **Objective:** 1) To identify major styles of provider questions and specialist recommendations in e-consults; 2) To examine need for patient appointment with specialist after e-consultation. **Methods**: We implemented an innovative opioid management e-consult program at a large academic medical center in Bronx, NY in July 2019 using the Epic platform. E-consults were made available to primary care and sub-specialties. Requesting providers were asked to provide a brief summary and identify questions in the e-consult which were addressed by three internists with expertise in chronic pain and addiction medicine (LK, JS, TL). We extracted patient sociodemographics, referring provider specialty, and textual data from EMR e-consults. We conducted content analysis of provider questions and specialist recommendations. We also report outcomes regarding appointment recommendations resulting from e-consult requests. **Results:** During the first 8 months, 25 e-consults were requested by general internists (12), family medicine (8), hematology (4) and OB/GYN physicians (1). Mean age of patients was 54 years, 68% were female, 84% were on LTOT, 40% had back pain and 20% had sickle cell disease. We identified two major styles of e-consult questions: 1) general questions about opioid management (68%) such as request for pain management plan, help in choosing an opioid and 2) patient-specific questions (48%) such as buprenorphine as alternative medication. Recommendations from specialists provided general advice on multimodal pain management, approach to patients with chronic pain and urine drug screen interpretation, in addition to answering the specific question. Of 25 requests, 14 did not require a patient appointment with a specialist. **Conclusions**: We identified general and specific styles of questioning by providers seeking opioid management e-consults. Specialists were able to address questions and provide guidance for opioid management with more than half avoiding need for a patient appointment. E-consults may be a feasible and effective model for providing guidance to providers on opioid management.

Effect of Gist Risk Messages on Parents' Decisions to Retain Left-Over Prescription Opioids
Terri Voepel-Lewis, PhD; Carol J. Boyd, PhD; Alan R. Tait, PhD; Sean E. McCabe, PhD; Brian J. Zikmund-Fisher, PhD - University of Michigan

Background: Easy access to risky prescription medication has contributed to widespread misuse and poisonings among children and teens. Most unintentional pediatric opioid poisonings occur at home from exposure to readily available prescriptions. Additionally, a majority of teens who misused opioids reported getting those drugs from left-over prescription medications from their family. Of concern are findings that a majority of prescribed opioid doses are left-over and retained after acute pain treatment. Parental decisions to keep left-over prescription opioids may be related to an underestimation of the risks posed to family members. **Objective**: The purpose of this randomized, controlled longitudinal study was to determine whether our interactive Scenario-Tailored Opioid Messaging Program (STOMP) would increase parents' risk perceptions and disposal intentions, thereby decreasing their behavioral retention of left-over opioids. **Methods**: We recruited 650 parents whose children were prescribed an opioid for short-term acute pain treatment. We randomized parents to receive routine prescription information with or without our STOMP intervention. At baseline, and at 3 and 14 days thereafter, we assessed parents' perceived risk of keeping/sharing opioids and of child misuse (sharing between children/teens) as well as their disposal intentions. We assessed parents' retention behavior (keeping their child's left-over opioid) once the child had stopped using the opioid. Mixed effect models tested our hypotheses controlling for other parent and child factors. **Results**: Perceived riskiness of keeping/sharing opioids and of child misuse increased over time for STOMP parents ($p<.001$) but not for Control parents ($p=.59$). STOMP was associated with a 38% increased likelihood of disposal intentions overall (OR 1.38 [95% CI 1.07, 1.79]) and when adjusted for low and high risk perceptions. STOMP parents were 47% less likely than Control parents to report opioid retention behavior (STOMP OR 0.53 [95% CI 0.33, 0.84]) when controlled for all other factors. Higher perceived riskiness of keeping/sharing and of child misuse significantly lowered opioid retention behavior while past parental misuse increased the odds of retention. **Conclusion**: A scenario-focused behavioral intervention that emphasized the bottom-line risks of keeping and misusing opioids enhanced parents' perceived riskiness of keeping and misusing prescription opioids and decreased their retention of left-over medication.

Take ACTION: Opioid Overdose Prevention Curriculum for Medical Students

Chin Hwa (Gina) Yi Dahlem PhD, FNP-C, FAANP; Rebecca Pilkerton, MD; James Cranford, PhD; Jackie Kercheval, BA; Eve Losman, MD, MHSA - University of Michigan - Ann Arbor

Background: Opioid overdose deaths in the U.S. have reached epidemic proportions. Educating future physicians on how to respond to overdoses, train others, and co-prescribe naloxone is critical to reduce the mortality. **Objective**: This project evaluates the impact of in-person naloxone training on students' understanding of overdose prevention, feelings of preparedness, and confidence to teach others. **Methods**: The training was administered to third- and fourth-year medical students (N=156) during their Emergency Medicine clerkship. Trainings ranged from 30-40 minutes and covered: 1) epidemiology, 2) myths/facts, 3) legislation, 4) risk factors, 5) pharmacokinetics of naloxone 6) overdose response using A.C.T.I.O.N. acronym, 7) co-prescribing naloxone, and 8) teaching patients about overdose prevention. Students were surveyed prior to, immediately after, and 3 months following the session. Descriptive statistics were calculated, and paired samples t-tests were used to analyze the changes in knowledge, feelings of preparedness, and confidence. **Results**: 119 students (M [SD] age=27.0 [2.7], 50% female, 75% fourth-year students) completed the pre-survey, 81 (68%) responded to the immediate post-survey, and 17 (14%) completed the three- month post-survey. Twenty-seven (22%) of the students reported witnessing an overdose, 4 (3%) had given naloxone previously, 12 (10%) had counseled a patient on naloxone, and 35 (29%) reported witnessing an attending co-prescribe naloxone. Statistically significant increases were observed from pre- to post-surveys in all measures of naloxone knowledge (M=4.8 to M=6.5, $p<.001$). The students also felt more prepared to respond to an overdose (M=3.0 to M=4.3, $p<.001$), talk to patients (M=3.3 to M=4.3, $p<.001$), co-prescribe (M=2.6 to M=3.8, $p< .001$), and train others (M=2.4 to M=4.2, $p<.001$). Lastly, the students were more confident in teaching others about overdose risk factors (M=3.4 to M=4.2, $p<.001$), recognizing signs of overdose (M=3.7 to M=4.4, $p< .001$), administering (M=2.7 to M=4.3, $p<.001$), and co-prescribing naloxone (M=2.5 to M=3.8, $p<.001$). **Conclusion**: A brief, in-person overdose prevention training was effective in improving clinical medical students'

knowledge, preparedness, and confidence in responding to overdose, teaching others, and co-prescribing naloxone. Future studies will examine the effectiveness of an online curriculum.

State Opioid Prescribing Policies in 2014 Were Not Associated With Reduction in Subsequent Overdose Mortality

Michele Buonora, MD, MS; Marcus Bachhuber, MD, MPH; Pooja Shah, BS; Lorlette Haughton, MPH; Chinazo O. Cunningham, MD, MS; Joanna L. Starrels, MD, MS - Montefiore Medical Center

Background: In response to the opioid epidemic, state policies were enacted to reduce inappropriate prescribing and promote risk-mitigation practices. However, policies vary widely and little is known about their impact on important health outcomes such as overdose mortality. **Objective**: To systematically review US state opioid-prescribing policies active January 1, 2014 and determine whether overall stringency or specific provisions were associated with overdose mortality in subsequent 5 years. **Methods**: In 2014, we conducted a systematic internet-based review of US state opioid-prescribing policies enacted before January 1, 2014. We determined presence and strength of 7 opioid-prescribing provisions: 1) prescriber training, 2) provider response to misuse, 3) treatment agreements, 4) prescription monitoring programs, 5) drug testing, 6) opioid dosing limits, and 7) periodic assessments. For each state, a provision was considered "strong" if there was a strong recommendation (e.g., "should") or mandate ("must"). We also calculated overall stringency of each state's policies as the total number of "strong" provisions (0-7). Using year- and state-specific age-adjusted overdose mortality (ICD-10 underlying cause-of-death codes) from the CDC WONDER database, multivariable linear regression tested the association of overall state stringency with 5-year change in overdose mortality 2014-2018, adjusting for baseline (2013) overdose mortality. **Results:** US state policies varied; median overall stringency was 1.5 (IQR 1-3, range 0-5). On multivariable linear regression, neither overall state stringency nor specific provisions were associated with 5-year change in overdose mortality (Table). Sensitivity analysis using peak rather than change in overdose mortality between 2014-2018 was also not significant. **Conclusions**: In 2014, US state opioid-prescribing policies varied, and neither overall state stringency nor specific provisions were associated with 5-year change in overdose mortality. Future research will assess relationships between policies and overdose mortality specifically related to prescription opioids, heroin, and synthetic opioids.

Table. Association of opioid-prescribing policies with change in overdose mortality 2014-2018

	Standardized beta	***p*-value**
Overall state stringency *	-0.10	*0.54*
"Strong" provisions (yes/no) *		
Prescriber training	-0.17	*0.29*
Provider response to misuse	-0.02	*0.92*
Treatment agreements	-0.18	*0.36*
Prescription monitoring programs	0.32	*0.06*
Drug testing	-0.02	*0.93*
Opioid dosing limits	0.24	*0.10*
Periodic assessments	-0.06	*0.67*

* Multivariable linear regression adjusted for baseline (2013) overdose mortality

Community Overdose Response: Incidence of Drug Overdose and Naloxone Uptake in Pennsylvania Public Libraries

Margaret Lowenstein, MD, MPhil, MSHP; Zachary Meisel, MD, MSHP; Rachel Feuerstein-Simon, MPH, MPA; Claire Szapary; Omaya Torres; Aminata Jalloh; Abby Dolan, BA; Carolyn Cannuscio, ScD - University of Pennsylvania

Background: Naloxone distribution is a key strategy to reduce overdose deaths, and there is need to expand current efforts to reach wider networks of at-risk individuals. Public libraries are open, accessible community spaces that frequently host people who use drugs (PWUD). Prior work has demonstrated libraries also experience on-site overdose, and national programs have specifically targeted libraries as naloxone distribution sites. However, little is known about the incidence of overdose or uptake of overdose response efforts in libraries. **Objectives:** 1) Quantify drug overdose and naloxone uptake in Pennsylvania (PA) public libraries and 2) Assess library and county characteristics associated with naloxone uptake. **Methods:** We conducted a cross-sectional telephone survey of a 75% random sample of PA public libraries from July-December 2019. Survey items assessed past-year overdose incidence, on-site naloxone, staff overdose response training, and interest in addiction resources. We used National Center on Health Statistics urban-rural classification system and CDC WONDER data to describe county characteristics, descriptive statistics for survey responses, and logistic regression to analyze characteristics associated with stocking naloxone. **Results:** 353 libraries responded (79% response) representing 63 of 67 counties in PA. 76% of libraries were located in metropolitan areas (43% large, 22% medium and 11% small metro) and 24% in rural areas. Median overdose death rate in counties where libraries were located was 29/100,000 (range 0-62/100,000). 12% of libraries reported one or more past-year overdoses (range 1->10). On-site overdose was associated with urban location (OR 3.3, 95% CI 1.1-9.5) and high county overdose death rate (OR 3.4, 95% CI 1.6-7.2). 84 libraries (24%) had naloxone on-site, but only 30% of libraries with on-site naloxone received training. After controlling for county overdose death rate, stocking naloxone was associated with prior on-site overdose (OR 2.795% CI 1.4-5.3) and urban location (OR 4.1, 95% CI 1.8-9.3). 81% reported interest in additional resources to address addiction. **Conclusions:** Overdoses occur in public libraries, with some responding to this crisis by stocking naloxone and training staff in overdose response. Our findings suggest that libraries are an important community setting for overdose prevention efforts and may be a promising venue for future interventions.

Characteristics of Emerging Post-Overdose Outreach Programs in Massachusetts

Scott W. Formica, PhD; Katherine M. Waye, MPH; Allyn Benintendi, MBE; Shapei Yan, MPH; Sarah Bagley, MD, MSc; Julia Keosaian, MPH; Leo Beletsky, JD, MPH; Jennifer Carroll, PhD, MPH; Ziming Xuan, ScD; Robert Apsler, PhD; David Rosenbloom, PhD; Traci Green, PhD, MSc; Alexander Y. Walley, MD, MSc - Boston Medical Center, Boston University School of Medicine

Background: Individuals who survive an overdose are at significantly higher risk for repeat overdose and death. Identifying this high-risk population poses a unique opportunity to engage individuals in substance use disorder (SUD) treatment and overdose prevention services. Municipalities throughout the US are utilizing teams of public health and public safety personnel to offer services like opioid overdose education and naloxone rescue kits, linkage to treatment for SUD, and offering safer drug use supplies, but little is known about the structure, function, and impact of these programs. **Objective**: To complete a statewide inventory of Massachusetts post-overdose outreach programs, describing key characteristics. **Methods**: From February-July 2019, we sent an online 5-item screener to Massachusetts public safety and public health representatives to identify post-overdose programs. From August-November 2019, we surveyed identified programs using a 73-item survey that included team composition, outreach target and timing, service offerings, naloxone delivery, privacy, mandated treatment, and cross-community collaboration. We analyzed screener and survey responses using descriptive statistics. **Results**: We received screener responses from 100% (351/351) of Massachusetts municipalities and identified 157 post-overdose outreach programs. Complete survey responses were received from 88% (138/157) of identified post-overdose programs. The majority (86%, 119/138) of programs began in 2015 or later and included public health and public safety professionals (83%, 114/138). More than half of visits last up to 20 minutes (59%, 79/135) and occur 1 to 7 days after an overdose (90%, 124/138). SUD treatment navigation (97%, 133/137) and overdose prevention education (93%, 128/137) were the most common services offered. Two thirds (66% 90/138) of programs distributed naloxone rescue kits. Most programs had a confidentiality protocol (84%, 114/135) and facilitated court-mandated treatment in some circumstances (81%, 112/138). Programs commonly conducted additional in-person follow-up (86%, 119/138) with about half of follow-up led solely by public health professionals (54%, 64/119). **Conclusions:** Post-overdose outreach is an

emerging response to the overdose crisis that seeks to engage recent overdose survivors who might not otherwise access substance use disorder treatment and overdose prevention. Further research is warranted to understand the effectiveness, benefits and risks of these programs, and establish best practice guidelines.

Naloxone Availability and Accessibility of Michigan Pharmacies Through the Statewide Naloxone Standing Order

Chin Hwa (Gina) Yi Dahlem PhD, FNP-C, FAANP; George Gray, BS, MS; Shivani Kaushal, BS; Heidi Rieck, BS, MPH- MOPEN/MEDIC Project Team - University of Michigan - Ann Arbor

Background: To improve availability and access to naloxone, 49 states have implemented a Statewide Naloxone Standing Order (SO) from pharmacies. We aim to identify the availability and accessibility of naloxone through pharmacies that participate in the Michigan SO that was passed in 2016 for select counties in Michigan. **Methods**: Pharmacies (N=689) within eight counties (Genesee, Grand Traverse, Ingham, Kalamazoo, Kent, Saginaw, Washtenaw, and Wayne) were abstracted from the State Naloxone SO Pharmacy list database. From June to December of 2019, telephone interviews were conducted using an interview script. The survey contained a list of 12 questions regarding existing naloxone dispensing procedures, out-of-pocket cost, and education practices for staff and customers. **Results:** Out of 622 pharmacies, 90.6% (n=568) of the respondents reported participating in the SO. Of the identified SO pharmacies (n=515), 195 (37.9%) never had a customer pick up naloxone through the SO, and 44 (8.5%) were uncertain. 87% (n=491) of the pharmacies had naloxone in-stock. Of the 74 pharmacies that did not have naloxone in stock, 33 reported that naloxone could be obtained within 1 day of ordering. Naloxone was available as generic intramuscular naloxone, Narcan nasal spray, and Evzio auto-injector with out-of-pockets costs ranging from $35.11 to $5000. 525 (93.2%) pharmacies provided patient education about naloxone and overdose prevention. 514 pharmacies (92.3% respondents) provided training on how to use naloxone and educate patients on how to use it to their staff and pharmacists. **Conclusions**: Results suggest that naloxone was available and accessible across the 8 counties. However, barriers to utilization of the SO exists. Pharmacy staff knowledge of SO dispensing procedures, variability of out-of-pocket costs, or lack of awareness of SO could contribute to barriers to SO utilization. Ensuring access to naloxone is critical for preventing overdoses. Future research should explore barriers and facilitators to SO utilization and examine the dispensing rate of naloxone through the SO in relationship to a county's overdose burden rate.

Attitudes Toward Harm Reduction among Substance Use Treatment Professionals in Philadelphia

Roxane Javadi, BS; Kristine Lagana, BS; Tess Krowicki, BS; David Bennett, PhD; Sharlene Irving, MBA; Barbera Schindler, MD - Drexel University College of Medicine

Background: "Harm reduction" (HR) refers to a set of evidence-based interventions aimed at reducing negative outcomes associated with substance use (SU). Philadelphia has adopted HR strategies that have empirically reduced morbidity and mortality but continue to remain controversial to the general public. **Objective:** This study sought to examine attitudes about HR among SU treatment professionals in the Philadelphia area, including whether they recommended and implemented HR interventions in their own clinical practice. We focused on professionals working in SUD recovery centers since it was unclear where they stood on HR interventions that treat secondary consequences of SUD and may stand antithetical to abstinence strategies. **Methods**: We surveyed 118 treatment professionals via an anonymous online response tool to assess their attitudes regarding four specific HR interventions: medication assisted treatment (MAT), naloxone, syringe exchange programs (SEPs), and overdose prevention sites (OPS). Treatment professionals worked in both outpatient and inpatient settings and included program directors, managers, clinical supervisors, counselors/therapists, peer-specialists, and others. **Results**: More than 90% of professionals agreed that MAT and naloxone should be discussed with clients, and over 80% agreed SEPs and OPS should be discussed. However, only 30% indicated being comfortable if an NEP opened on their block and only 28% if an OPS opened on their block, indicating a gap between professional and personal attitudes. Professionals with more education and knowledge about the interventions tended to feel more positively about them, while professionals who espoused abstinence and 12-step programs had more negative views of naloxone (r=-.219, p=.040) SEPs and OPS (r=-.264, p=.010). **Conclusion:** Overall, the findings of our study -the first to examine SU treatment professionals' attitudes towards HR in Philadelphia- suggest that professionals generally support HR and are consistent with the city's public health policies. However, the findings reveal that a substantial minority of

professionals have negative or mixed perceptions of HR interventions. Further research should explore the role of education to enhance professionals' attitudes about HR and determine whether this translates into actionable support.

Preparing Primary Care Physicians to Treat Addiction: Inclusion of Addiction Training During Internal Medicine Residency

Bethany Canver, MD, MSW; Stephen Holt, MD; Katie Clark, MSPH, CSAC; Alayna Liptak, RN - Yale Primary Care Residency Program

Background: People with substance use disorders (SUD) disproportionately interface with the healthcare system. Physicians in general internal medicine (GIM) lack comfort and skills required to manage SUD which leads to a dearth of providers willing and able to treat SUD. Given the prevalence of SUD, interventions to increase provider skill and comfort are needed. **Objective**: We evaluated the impact of a multi-faceted, longitudinal addiction medicine curriculum embedded within an internal medicine residency on graduates' clinical practices and comfort level treating SUD. **Methods**: A survey was emailed to all GIM graduates from a single academic primary care residency program who graduated between 2016-2018 (n=53). The survey assessed pharmacotherapy prescribing habits since residency, comfort with SUD pharmacotherapy, overall comfort treating SUD, and experience correcting stigmatizing language or providing guidance to colleagues on the care of patients with SUD. **Results**: 64% of graduates (n=34) responded to the survey. 91% (n=31) perceived themselves as more comfortable treating patients with SUD than their colleagues. All graduates felt comfortable using medications to treat SUD. 86% (n=29) perceived themselves as more comfortable using pharmacotherapy to treat SUD than their colleagues. Since completing residency, 68.7% (n=22) prescribed medications for alcohol use disorder and 50% (n=17) prescribed medications for opioid use disorder. 67% (n=23) corrected stigmatizing language heard in the workplace. 58% (n=20) had been asked by a colleague for guidance on diagnosis or management of SUD. **Conclusions:** A recent survey suggested that the majority of primary care providers have little interest in caring for patients with SUD, however, recent graduates of a single residency program with a robust, structured, required, longitudinal addiction medicine training experience all reported a willingness to treat patients with SUD. Additionally, they reported comfort with prescribing pharmacotherapy for SUD, had taken an active role in reducing SUD-related stigma, and served as a resource for colleagues and trainees. Future research should identify the specific features of a residency program experience that are most essential to building a primary care workforce willing to care for patients with SUD.

Safety Protocols During Home-Based Post-Overdose Outreach: Perspectives from Public Health/Public Safety Teams

Emily R. Cummins, PhD[1]; Jennifer J. Carroll, MPH, PhD[2]; Alexander Yale Walley, MSc, MD[1,3]; Scott Formica, PhD; Katherine Waye, MPH; Sarah Bagley, MD – 1. Boston Medical Center; 2. Elon University; 3. Boston University

Background: In response to the worsening opioid-related overdose crisis, novel partnerships between public health and public safety stakeholders have proliferated across Massachusetts. The goal of these programs is for small teams of public health and public safety personnel to engage non-fatal overdose survivors during a home visit, generally within 72-hours of an overdose, and connect them to treatment or support services. Our ongoing mixed-methods study identified 157 towns that have these programs in Massachusetts through July 2019. Documented protocols, including safety protocols, among these programs are uncommon. **Objective:** This paper explores perceptions of safety among post-overdose outreach team members and how these perceptions influence roles and protocols during home visits. The aim of this analysis was to understand how law enforcement and public health partners come to agreements about safety and how this manifests during outreach visits. **Methods:** Data were examined from 27 semi-structured interviews conducted with law enforcement, social workers, recovery coaches, harm reductionists, and a firefighter at five program sites. All transcripts were reviewed and coded by at least two members of the research team using inductive coding. **Results:** Safety often

came up during team discussions when preparing to conduct home-based outreach. Given the general lack of protocols, including those addressing safety, police guidance directed the approach to a visit. This resulted in law enforcement typically making decisions about what constituted a safe visit, with non-law enforcement team members aligning. Law enforcement officers set the tone of the visit by enacting skills related to general scene safety--such as posting near doors or declining to take a seat in OD survivors' homes. **Conclusions:** As outreach with overdose survivors that partners law enforcement with public health providers becomes more common, developing best practices will require assessing the complex negotiations, contestations, and agreements that emerge when law enforcement and public health work together. Safety protocols need to account and allow for the perspectives of not only law enforcement and the public health partners, but also the perspectives of overdose survivors and the social networks who are home when the outreach team visits.

"I Don't Want To Be Able to Draw a Family Tree Out of Who I've Infected" -Hepatitis C Infectivity Burden Amongst Hospitalized Adults Who Use

Ximena A Levander, MD; Taylor Vega, BA; Andrew Seaman, MD; P. Todd Korthuis, MD, MPH; Honora Englander, MD - Oregon Health and Science University

Background: People who use drugs (PWUD) infected with hepatitis C (HCV) face stigma related to substance use and HCV status. In a qualitative study of hospitalized PWUD with HCV exploring HCV treatment readiness and engagement, without prompting, participants expressed significant "concern" about transmitting HCV. **Objective:** These findings related to HCV transmission concerns, led us to conduct focused analyses exploring HCV infectivity burden including gender differences that PWUD experience regarding their HCV infection and how infectivity affects motivations for HCV treatment. **Methods**: We conducted in-depth semi-structured individual interviews with 27 hospitalized adults who use substances with HCV infection seen by an addiction consult service at a single urban academic medical center in Portland, Oregon between June and November 2019. We audio-recorded and transcribed interviews. Transcripts were coded in dyads deductively and inductively at the semantic level then thematically analyzed using iterative categorization. We conducted sub-analyses based off self-reported participant gender. **Results**: The majority of participants identified as Caucasian (85%), male gender (67%) and primarily using opioids (78%). Many reported "worry" around possibly infecting 1) children/family 2) romantic partners 3) other PWUD 4) healthcare workers. Interestingly, women raised different concerns around HCV infectivity than men. Women reported behavioral changes including "hiding razor blades," "throwing outside" menstrual-related items, and avoiding "kissing." Preventing transmission to young children and anticipated emotional relief significantly motivated HCV treatment engagement. Many raised concerns about infecting potential romantic partners – expressing HCV hindered them socially – choosing not to "go out with anybody." Many reported behaviors to avoid transmission to other PWUD –stating they "can't spare" supplies, snapping needles, and announcing HCV status to others. Participants with open wounds or upcoming surgery voiced wanting to avoid HCV exposure to healthcare workers. **Conclusion**: Most participants worried about transmitting HCV. Hospitalization may be an opportunity to discuss strategies to reduce risk of HCV transmission along with universal precautions. Doing so, may alleviate anxieties and provide opportunity to discuss HCV treatment readiness and facilitate treatment coordination.

Successfully Optimizing Treatment of Opioid Use Disorder During COVID-19

Stacy Shoshan, MD, PhD[1]; Irina El Or, MD[2]; Paola Rosca, MD, MPP[1] – 1. Ministry of Health, Jerusalem, Israel; 2. Association for Public Health, Jerusalem, Israel

Background:

Opioid use disorder due to prescription medications is an increasing problem worldwide. The COVID-19 pandemic only further increased the challenges of individuals struggling to get access to treatment and live in recovery. We are presenting a case of a woman whom we successfully helped progress in her recovery by optimizing the choice of medication, route of administration and psychosocial treatment.

Learning Objectives:
1. Deciding when methadone or buprenorphine/naloxone is the most appropriate medication
2. Suitability of patients for extended-release buprenorphine, a monthly subcutaneous injection instead of daily sublingual medication
3. Considerations when changing psychosocial therapy

Case Presentation:
A 37-year-old woman, raped 7 years prior, "woke up the next day with fibromyalgia." Management with high dose oxycodone did not resolve her full-body pain, but rather resulted in opioid use disorder and repeated suicide attempts. At our opioid treatment program, she stabilized on methadone and had weekly individual psychosocial meetings. After being fired, her physician prescribed benzodiazepines and she took all 60 pills as a suicide attempt. Upon return to treatment, she was offered buprenorphine/naloxone for safety reasons and continued weekly psychosocial therapy. She was encouraged to begin dedicated sexual trauma therapy offered at a specialized treatment center. She found new employment and was working until the COVID-19 outbreak when she was forced to take unpaid leave. Due to financial constraints and lack of public transportation, it became impossible for her to attend treatment. Therefore, she began monthly extended-release buprenorphine injections and weekly phone meetings. Ultimately, she transferred her psychosocial treatment to the sexual trauma specialist.

Discussion:
As patients progress through treatment, the plan must accommodate the patient's needs. When it no longer became safe to continue the patient on methadone due to overdose risk, she was transitioned onto buprenorphine/naloxone. During the COVID-19 outbreak, due to financial and social distancing constraints, her medication needs were more successfully met by a monthly injection of extended-release buprenorphine. Since she was no longer obligated to come for weekly medication and psychosocial treatment, she had more available time and money to invest in travelling to a different center to receive specialized sexual trauma therapy.

It's Not One Thing: Understanding Determinants of Unsheltered Homelessness in a Large National Sample of Veterans
Stefan G Kertesz, MD, MSc; Aerin Derussy, MPH; Joshua Richman, MD, PhD; Erika L Austin, PhD; Allyson L Varley, PhD; Ann Elizabeth Montgomery, PhD; Audrey C. Jones, PhD; Adam J. Gordon, MD, MPH; April Hoge, MPH; Kevin Riggs, MD; Lillian Gelberg, MD - Birmingham VA Medical Center, University of Alabama at Birmingham

Background: Unsheltered homelessness has risen in many communities, spurring debate about the relative importance of personal (e.g. addiction) and community factors (e.g. rental markets) in causing it. Systematic analyses to address this question require large datasets that are difficult to collect. **Objectives**: We examined differences in personal and community factors for Veterans with and without recent unsheltered experience. We modeled the relative contributions of personal and community factors to unshelteredness**. Methods**: We surveyed 5406 Veterans with experience of homelessness accessing primary care in 26 US communities. We compared 481 unsheltered respondents (>7 nights in last 6 months spent outdoors or other places not meant for sleeping) with 4925 sheltered respondents (>0 nights in the last 6 months outdoors or other places not meant for sleeping). Community characteristics included warmer weather and a costly rental market for their communities. Personal characteristics included demographics, criminal justice involvement, income, medical diagnoses, social support, and substance use problems. Multivariable logistic regression was used to model likelihood of unsheltered experience. We graphed the modeled probability of unshelteredness against the number of vulnerabilities. **Results:** Unsheltered and sheltered Veterans differed significantly for almost every variable other than age and race/ethnicity. Independent predictors of unshelteredness included a costly rental market (OR 1.48, 95%CI 1.08-2.05), warmer weather (OR 1.84, 95%CI 1.33-2.54), income <$1000/month (OR 1.33, 95%CI 1.15-1.55), past difficulty with housing or employment due to criminal record (OR 1.47, 95%CI

1.26-1.71), a recent night in jail (OR 1.75, 95%CI 1.42-2.17), poor social support (OR 1.37, 95%CI 1.18-1.58), medical diagnoses (OR 1.09, 95%CI 1.04-1.15), emotional distress (OR 1.50, 95%CI 1.28-1.75), and a drug use problem (OR 2.09, 95%CI 1.76-2.48) but not an alcohol problem (OR 1.0, 95%CI 0.86-1.17). There was a linear association between the number of vulnerabilities and the probability of being unsheltered (p<.001). **Conclusions**: Unsheltered homelessness can be understood as the net result of an additive combination of personal and community-based factors; no single factor stands out as determinative. Rental markets, personal economic factors, criminal justice, social disaffiliation, and emotional distress represent potentially actionable points of leverage for clinical and policy-level interventions.

Internalized Stigma in Relation to Cigarettes Smoked Per Day After the Completion of a Smoking Readiness Program in Residential Treatment Settings

J. Konadu Fokuo, PhD; Caravella McCuistian, PhD; Valerie Gruber, PhD; Thao Le, MPH; Jessie Wong, MPH; Elana Straus, BA; Carmen Masson, PhD - University of California San Francisco

Background:
The high prevalence of smoking among individuals receiving treatment for substance use disorder (SUD) has led to repeated calls for integrating smoking readiness and cessation treatment programs into these settings. As the integration of readiness into tobacco-smoking programs is new, little is known about the consequences of these tobacco-smoking programs on how person who smoke may internalize smoking-related stigma.**Objective:** This study examined the relationship between internalized self-stigma and reduction in smoking behavior. **Methods:** Participants were current persons who smoke tobacco enrolled in psycho-education smoking cessation readiness programs at residential SUD treatment centers in San Francisco. Participants completed pre and post-readiness measures of the Internalized Stigma of Smoking Inventory (ISSI) and cigarettes smoked per day. **Results:** The sample (N=48) was mostly male (73.5%), with a mean age of 47.4 (SD=12.0). There was a significant decrease in the number of cigarette smoked per day post-readiness (M=7.4, SD=5.8) compared to pre-readiness ((M=9.8, SD=6.3), $t(48) = 3.0$, $p < .05$). There was also significant increase in self-stigma scores post-readiness (M=2.6, SD=1.1), compared to the pre-readiness (M=2.4, SD=0.9), $t(48) = -2.9$, $p < .05$. Results of the Pearson correlation indicated that there was a significant negative association between self-stigma and number of cigarettes smoked per day, ($r(48) = -.37$ $p < .05$). A simple linear regression assessed if self-stigma pre-readiness significantly predicted cigarettes smoked post-readiness. The results of a linear regression indicated the model was significant, $F(1, 35) = 5.44$, $p < .05$. It found that self-stigma, specifically shame, predicted cigarettes smoked per day at the end of the readiness program ($\beta = -2.98$, $p < .05$). **Conclusions:** Persons who smoked who reported greater feelings of stigmatization about their smoking pre-readiness program were more likely to report a reduction in their smoking habits post-readiness. This suggests that feelings of self-stigmatization are related to greater motivation to reduce cigarette use. By examining how self-stigma influences cessation intervention effectiveness, we can better tailor interventions to participants in residential treatment for SUDs. Further research can explore which stage of stigma internalization is optional for motivation and behavioral change approaches.
Indicate format preference:

Development of a Secondary Prevention Smartphone App for Students with Unhealthy Alcohol Use: Results from a Qualitative Assessment

Nicolas Bertholet, MD, MSc; Elodie Schmutz, MA; John A. Cunningham, PhD; Jennifer McNeely, MD, MSc; Gerhard Gmel, PhD; Jean-Bernard Daeppen, MD; Véronique S. Grazioli, PhD - Lausanne University Hospital

Background: University students commonly engage in unhealthy alcohol use. Despite considerable efforts devoted to the development of prevention interventions aiming at reducing unhealthy alcohol use in this population, their delivery remains often challenging. Information technology-based interventions are promising given their potential to have broad reach across the population**. Objective**: This study aimed to develop a secondary prevention smartphone application with an iterative qualitative design involving the target

population. **Methods:** The application development included testing a first prototype (developed based on an app tested in pilot studies), followed by adaptation of the application based on the results of participants' feedback, and then testing of a second prototype. Participants (18 years or more, screened positive for unhealthy alcohol use (AUDIT-C>=4 for men >=3 for women) were students from four higher education institutions in the French-speaking part of Switzerland. Participants tested prototype 1 and/or prototype 2 and provided feedback in one-to-one semi-structured interviews after three weeks of testing. **Results**: Mean participant age was 23.3; 50% female. Nine students tested prototype 1 and participated in qualitative interviews. Content analysis identified six main themes: "General acceptance of the app," "Importance of the app usability", "Importance of the design," "Importance of targeted and relevant app content," "Importance of credibility," "Importance of notifications." These themes reflected participants' recommendations for increasing usability; to improve the design (simple, use of graphs); to include useful and rewarding content; to make the application look serious and credible; and to add notifications to ensure application use over time. Eleven students tested prototype 2 (6 who tested prototype 1 and 5 newly recruited to allow for "naïve" assessment of prototype 2) and participated in qualitative interviews. The six same themes emerged from the analysis. Most participants endorsed positive perceptions of the application and repeat participants from phase 1 generally found the design and content of the application improved. **Conclusions:** Students recommended that prevention smartphone applications be easy to use, useful, rewarding, serious and credible. These findings may be important to consider when developing prevention smartphone applications to increase the likelihood of application use over time.

Clinical Case Series: Treating ADHD in People Experiencing Homelessness and Substances Use Disorders

Sarah Dobbins, MPH, MS, PMHNP-BC; Leah Warner, MPH, MS, NP - SFDPH

Introduction:

Treatment of adult ADHD in clients with substance use disorders (SUDs) is complicated by concerns for client safety and wellbeing. Randomized control trials examining psychostimulants for co-occurring adult ADHD and stimulant use disorder generally show improved symptoms. Furthermore, some studies also show a reduction in stimulant use. However, there is still not clear evidence about the safety and efficacy of psychostimulants in the context of co-occurring ADHD, SUDs, serious mental illness, and/or chronic health conditions.

Learning Objectives:

This clinical case series will facilitate a discussion of the impact of SUDs on outpatient psychostimulant treatment for ADHD in a clinic serving people experiencing homelessness, making difficult treatment decisions and setting treatment goals, and monitoring for safety in the context of harm-reduction.

Case series:

This case series examines the treatment trajectories of 10 clients with SUDs and ADHD in a Street Medicine clinic. All clients have stimulant use disorder and 8 also have opiate use disorder; Five clients are treated with Suboxone in our Street Medicine program and 3 are treated with methadone in a separate clinic. Co-morbid conditions include PTSD, depression, and psychosis, type 2 diabetes, obesity, Chron's disease, HIV, hypertension, and combined systolic and diastolic heart failure.

Clients generally reported improvements in ADHD symptomology as well reduced stimulant use when taking prescribed psychostimulants. Consistently returning to the clinic for refills and monitoring was the primary challenge for most clients. Seven of the 10 clients met with a psychiatric provider at least once, but none consistently accepted and/or took psychiatric medications. The clients with substantial psychotic symptoms and ongoing methamphetamine use had the most challenges with PS treatment.

Discussion:

Street Medicine providers use a team-based, patient-centered approach to prescribing and managing ADHD treatment. In this presentation, we discuss a) scientific evidence supporting psychostimulant treatment of

ADHD in people with co-occurring SUDs and serious mental illness, b) making treatment decisions in the context of medical and psychiatric co-occurring conditions, c) risks and benefits of prescribing psychostimulants in this patient population, and d) our experience with adjunctive treatments that support client success.

Prevalence and Spectrum of Unhealthy Alcohol Use Among Hospitalized Patients in an Urban Safety-Net Hospital

Joseph Patrick Clement, MS, RN, CCNS[1]; Marlene Martin, MD[2]; Triveni Defries, MD, MPH; Anil N. Makam, MD, MAS; Oanh Nguyen, MD, MAS; Matthew Perrotta, MPH – 1. Zuckerberg San Francisco General Hospital and Trauma Center; 2. University of California San Francisco

Background: Alcohol Use Disorder (AUD) is a costly and prevalent substance use disorder in the United States, with 14.4 million adults meeting criteria in the last year. Rates of alcohol-related death have accelerated across gender, race and ethnic categories in recent years. Although hospitalization presents an opportunity to address AUD, the prevalence and spectrum of unhealthy alcohol use among hospitalized patients are unknown. **Objective:** In 2015 we implemented a nurse-led program to screen for and characterize the severity of unhealthy alcohol use among hospitalized patients. We describe the prevalence and spectrum of unhealthy alcohol use among hospitalized patients in this setting during a two-year period. **Methods:** This is a retrospective analysis of adult patients hospitalized between January 1, 2016-December 31, 2018 in a 284-bed safety-net, urban hospital in San Francisco, California. Individuals at high risk for unhealthy alcohol use (i.e., who screened positive for unhealthy alcohol use via a single-question screen or who had a hospitalization in the previous year requiring a clinical institute withdrawal assessment for alcohol (CIWA) were administered the Alcohol Use Disorders Identification Test (AUDIT) by licensed vocational nurses (LVNs) to assess the severity of unhealthy alcohol use. Depending on the AUDIT score, LVNs counseled patients on safer drinking limits and/or screened for eligibility for medication-assisted therapy with naltrexone. **Results:** Of 36,878 hospitalizations over two years, 4,760 (12.9%) had a positive single-question screen or a previous hospitalization with CIWA orders; of these, 3,219 (67.6%) were administered the AUDIT. AUDIT scores predicted AUD in 2,413 hospitalizations, for an overall hospitalization prevalence of 6.5%. Of those predicted to have AUD, AUDIT results predicted mild AUD in 732 (30.3%) cases; moderate in 734 (30.4%), and severe in 947 (39.2%). **Conclusions:** We found that nearly 1 in 15 hospitalizations among adults had AUD, and with more severe AUD more highly prevalent. Our findings suggest a need for a systematic approach to identifying unhealthy alcohol use among hospitalized patients, and for more treatments targeted at moderate to severe AUD embedded within hospital settings.

Educational Trainings to Improve Opioid Overdose Response Among Health Center Staff: A Quality Improvement Initiative

Audrey Stephenson, BA[1]; Alessandra Calvo-Friedman, MD[1]; Lisa Altshuler, PhD[2]; Kathleen Hanley, MD[2]; Sondra Zabar, MD[2]; 2. Department of Medicine, NYU Langone Health, New York, NY

Background: There were seven opioid overdoses at NYC Health and Hospitals Gotham/Gouverneur Health Center (GHC) from December 2018 through February 2019, an alarming increase from the year prior. **Objective**: To increase the readiness of all GHC and satellite clinic staff to recognize and respond to opioid overdoses as well as decrease staff's stigma around patients with opioid use disorder (OUD). **Methods**: The intervention was an hour-long training and discussion on opioid overdose response, compassionate language, and treatments for OUD. The training was administered to groups of staff from April through July 2019. Training participants (N=294), which included all professional and support staff, were evaluated with validated pre- and post-tests immediately before and after the training as well as a feedback form after the training. Naloxone nasal spray kits were distributed to all interested participants. **Results**: Knowledge scores had a significant increase from pre- to post-test ($p<0.001$; Hedge's $g=1.518$), demonstrating increased knowledge of overdose response, use of compassionate language, and treatment for OUD. Attitudinal scores also had a

significant increase from pre- to post-test ($p<0.001$; Hedge's $g=0.816$), demonstrating decreased stigma around patients with OUD. Knowledge scores increased significantly more for administrative staff compared to providers ($p<0.05$), clerical staff compared to providers ($p<0.0001$), and other healthcare staff compared to providers ($p<0.001$). This suggests that administrative, clerical, and other healthcare staff's knowledge scores increased significantly more than those of providers, the group with the highest pre-test scores and lowest difference between pre- and post-test. There was no significant difference between the scores for environmental staff, hospital police, nurses, patient care associates, or therapists. 187 naloxone kits were distributed. Based on the responses on the feedback form, the participants were generally satisfied with the training. **Conclusion**: An hour-long training and discussion addressing opioid overdose response, compassionate language, and treatments for OUD increased health center staff's knowledge of and readiness to respond to an overdose as well as reduced their stigma around patients with OUD. Additionally, the greater improvement in knowledge scores of certain non-clinical staff compared with those of providers was important because all staff play a valuable role in creating the patient experience.

Exploring Uptake of Medication Treatment Among Opioid Users Experiencing Homelessness

Natalie Swartz, BA[1]; Tatheer Adnan; Flavia Peréa, PhD; Travis P. Baggett, MD, MPH; Avik Chatterjee, MD, MPH[2] – 1. Harvard College; 2. Boston University School of Medicine

Background: People experiencing homelessness (PEH) are 30 times more likely to die from opioid overdose. Medications for opioid use disorder (MOUD) reduce fatal overdose risk. **Objective:** This study set out to examine facilitators and deterrents for MOUD access among PEH. **Methods:** We recruited 29 PEH with a self-reported history of opioid overdose from a drop-in center in Boston, MA. We conducted semi-structured interviews exploring MOUD uptake, including after overdose events. We used Borkan's immersion/crystallization method and NVivo12 analysis software to identify and organize themes. We compared themes across 17 participants who had and 12 participants who had not initiated MOUD. **Results:** Stressors related to chronic opioid use ("sick and tired of being sick and tired") – as opposed to acute overdose events – emerged as drivers of 'when' participants were most interested in MOUD. Participants commonly reported that "after someone overdoses, nobody really cares about the resources there are. They care about getting more [opioids] because usually they're sick at that point because of the Narcan." 'Why' participants did or did not want MOUD was affected by personal perceptions of MOUD benefits and risks ("just substituting one drug for another"), as well as by inter-personal influences within a high-use environment ("there would be a line of about 30 people going down the street in various stages of loading up…on my way to the clinic"). With regards to 'how' participants accessed MOUD, MassHealth emerged as a structural lever supporting MOUD access whereas poor MOUD integration into health, recovery, and incarceration systems emerged as structural barriers. **Conclusions**: Increasing MOUD uptake among PEH will require (1) clinical interventions that address medication concerns and facilitate MOUD initiation outside crisis events; (2) environment-level interventions that innovate MOUD delivery for PEH living around heavy opioid use; and (3) structural interventions that expand Medicaid coverage and integrate MOUD across health, recovery, and carceral pathways.

The Acceptability and Feasibility of Smartphone-Based Recovery Coaching and Contingency Management to Reduce Substance Use Among Young Adults.

Win Turner, PhD, LADC; Jody Kamon, PhD - C4BHI/SBU

Background: Screening and intervening with young adults (18-24 years old) to reduce substance use including nicotine is a major healthcare problem. Contingency management (CM) is a highly effective but rarely used method to reduce substance use. Young adults are known to be specially focused and fluent in online applications and may be more interested in a technology based CM approach for reducing their substance use. **Objective:** To examine the feasibility and acceptability of an app-based substance use intervention utilizing CM to increase engagement and deliver evidence-based interventions for risky substance misuse among a college population. **Methods**: Through a college health center's SBIRT efforts, students identified with risky substance

misuse (alcohol, nicotine, marijuana, other drugs) were offered the opportunity to sign up for smartphone-based CM including a) facetime" b) recovery coaching, c) blue tooth substance monitoring, d) healthy activities and e) "smart bank" incentives. Additionally, a unique aspect of this CM project was the acceptance of student chosen substance goals as targets for enhancing engagement and internal motivation. Findings presented include fourteen students engaged while living on a college campus as well as their time post COVID-19 living off campus. **Results:** Twelve of 14 young adults continue to be engaged in Dynamicare 3 months post-enrollment. Evaluation data included monthly self-report of functioning and toxicological testing. Ratings on ease of use, helpfulness, and satisfaction were high with 75% to 100% of participants reporting strong satisfaction depending on the indicator. Based on self-report and testing data, participants reduced their nicotine use. Additional data will be presented on alcohol and cannabis use, as well as depression and anxiety. **Conclusion**: This pilot study demonstrated the Smartphone based CM with "facetime and/or text" recovery coaching is not only feasible but also acceptable to young adults. Vaping reductions However, the CM approach used with self-selection of reduction goals and the values of the incentives were not successful in reducing risk for a majority of the participants. Cannabis users did not engage or reduce their cannabis use.

A Cascade of Hepatitis C Screening and Care at Maine Medical Center Internal Medicine Clinics, May 2015 – May 2019

Wollelaw Agmas, MD; Brian King, MD; Wendy Craig, PhD; Kinna Thakarar, DO - Maine Medical Center

Background: In the United States, an estimated 2.7 to 3.9 million people live with hepatitis C virus (HCV) infection, and coinciding with the opioid epidemic the annual rate of acute HCV infection tripled from 2009 to 2018. Maine's 2018 surveillance report revealed a 314% increase since 2013. **Objective:** To identify gaps in HCV screening and care at a Maine institution's internal medicine clinics. **Methods**: We identified patients visiting our internal medicine clinics from 2015-2019 who were eligible for HCV screening based on CDC's risk-based testing recommendations: birth between 1945-1965, opioid use disorder (OUD), ALT level >35 units/Liter for ≥ 6 months, HIV, hepatitis B infection or treatment with dialysis. We used descriptive analyses to summarize the proportion of patients achieving each level within the cascade of care, from screening to successful treatment. **Results**: During the study period, 4948 patients were eligible for HCV screening; 2791 (53%) were male, 4112 (83%) were white, and 4411 (89%) were age >50 years. Birth cohort was the most frequent reason for eligibility 4319 (87%). Additionally, 330 (6.7%) had OUD, 748 (15%) had ALT level >35 for ≥6 months, 568 (12%) had HIV or hepatitis B coinfections, and 72 (1.5%) received dialysis. Among eligible patients, 2791 (56%) received HCV antibody testing, 124 (2.5%) were diagnosed with chronic HCV (positive HCV RNA PCR), 78 (1.6%) were linked to care, 29 (0.6%) were treated with direct-acting antiviral medications, and 12 (0.2%) achieved sustained virologic response. Among the 124 patients with chronic HCV, 58% were age under fifty, 51% had history of OUD, 41% were born 1945-1965, 62% had ALT>35 for ≥6 months, and 3.2% received dialysis. Patients with OUD contributed only 6.7% of eligible individuals, but notably accounted 51% of patients with chronic HCV. **Conclusions:** The rate of HCV screening and subsequent continuum of care at our institution's internal medicine clinics is low. Our study provides insight about opportunities for intervention with special attention to people with opioid use disorder. The HCV cascade of care could be improved by further education on recent changes to HCV screening and treatment guidelines.

Exploring and Overcoming Barriers to Discharging Patients with OUD to SNF

Zoë Kopp, MD; Irina Kryzhanoskava, MD – University of California San Francisco Department of Medicine

Background:

A 55-year-old man with a history of depression, paraplegia due to motor-vehicle accident complicated by chronic leg ulceration and pain, and opioid use disorder (OUD) was admitted to the Medicine service for osteomyelitis and wound care. He was previously prescribed fentanyl, oxycontin and oxycodone for pain until 2018, when he transitioned to buprenorphine-naloxone (bup-nlx). During his hospital course, he underwent surgical wound and bone debridement, started intravenous (IV) antibiotics, and continued bup-nlx for pain.

Ultimately, he was discharged to a skilled nursing facility (SNF) for wound care, IV antibiotics and physical therapy.

Learning Objectives:
- Describe barriers to SNF discharge for patients with OUD
- Review possible steps to overcome barriers
- Recognize need for system-level change to overcome barriers

Case Presentation:
SNF placement was challenging for this patient although he had an established, PCP, a stable dose of bup-nlx, and a clear indication for SNF placement. The SNF referral was expanded to include a wider radius, and only one accepting facility was found within 50 miles of his home. Per the team case manager (CM), his history of OUD and active bup-nlx prescription was "another barrier in the list of barriers."

Discussion:
Many patients with OUD have limited options for SNF placement. Despite an anti-discrimination law (ADA) protecting patients receiving medications for OUD (MOUD), obtaining methadone or buprenorphine at SNF is difficult. Barriers to timely, safe, and patient-centered discharge to SNF include inadequate and restrictive insurance coverage, stigmatizing and racially unequal treatment of persons with OUD,, and SNF-cited logistical barriers to caring for patients with OUD (informal conversations with local CM). Physician and CM education is vital to improving access to SNF for patients with OUD. Physicians must understand the negative consequences of ill-phrased documentation and the importance of continuing or initiating MOUD in hospitalized patients. Basic knowledge of MOUD and laws protecting persons with OUD should be shared with CM and discharge planning teams. Similarly, hospital systems are critical partners in creating SNF workflows for patients to safely discharge with streamlined access to primary care and MOUD.

A Quality Improvement Study Using Trauma Informed Communication within a Primary Care Office Setting Providing Medical Assisted Treatment
Michelle Harwick, DNP, FNP-BC, PMHNP-BC, ACNP-BC, DARTT; Rosemary Taylor, PhD, RN, CNL; Rick A. Butts, EDD, LPCC-S, DARTT, EMDR, SEP; Valerie R. Burns, MS, LPC, CSAC, NCC, DARTT - Purposeful Becoming, LLC

Background: Individuals with at least four adverse childhood experiences (ACEs) are at increased risk of all adverse health outcomes compared with individuals with no ACEs (Hughes et al, 2017). Magen, et al (2017) recognized that the clinician's ability to form strong therapeutic alliances with patients is an essential clinical skill that is associated both with a higher quality of care. Patients receiving care at a facility within the Northeast United States were provided coaching using the "Healing Our Core Issues" HOCI model (Bergstrom, 2019). This quality improvement project was initiated in 2019 to evaluate the effectiveness of this trauma informed communication intervention within a community health center providing medical assisted treatment for substance use disorder. **Objectives:** 1) Patients will manage self-esteem and boundaries**;** 2) Patients will learn to offer affirmation, nurturing and limit-setting to improve relationships; 3) Patients will use talking and listening boundaries for mutual relationships. **Methods:** Twenty-six patients who received the counseling for "self-esteem and boundaries" from October 2018-2019 were contacted by letter and asked to complete a questionnaire and share their experience of the intervention. Response rate was 46% (n=12). **Results**: The average ACE score was 4.58. Conversations started 2 years prior when patients were "feeling down and out," "depressed," "experienced relational boundary issues," and "experienced low self-esteem." Rating of the intervention was 8.86/10. The HOCI model's impact on relationship with self, significant others, and with their provider was 7.5/8/9.3 out of 10. Relationship with self: "I am in control of how I feel," "forgiven myself so I can move forward," "self-awareness," "feeling good enough," "not letting my past dictate the end of the conversation," "honesty with self and others," and "growth." Relationship with others: "feeling more mindful," "self-forgiveness," "self-acceptance," "honesty," "recognizing historical tapes," and "controlling feelings in a

positive way." They reported that provider "feels like an equal," "a feeling of growth," "she obviously cares," "comfortable," "she's incredible and helped in more ways than I can explain," "honesty is important," and "I experience self-forgiveness**." Conclusions**: The importance of relationship-centered health care to mitigate the effect of ACEs-related stress and trauma was reinforced in this quality improvement project.

A Quality Improvement (QI) Study Using Trauma Informed Communication for Self-Leadership for Workplace Joy

Michelle Harwick, DNP, FNP-BC, PMHNP-BC, ACNP-BC, DARTT; Rosemary Taylor, PhD, RN, CNL; Rick A. Butts, EDD, LPCC-S, DARTT, EMDR, SEP; Valerie R. Burns, MS, LPC, CSAC, NCC, DARTT - Purposeful Becoming, LLC

Background: The Institute for Healthcare Improvement (IHI) calls for healthcare organizations shift from a focus on "burnout," to one of "joy in work," and to "ask staff what matters to them, identify impediments, make joy in work a shared responsibility, and use improvement science to test approaches." Trauma affects over 40% of the United States population (Forman-Hoffman, et al, 2016), and resultant post-traumatic stress can impact the healthcare workforce on multiple levels. Burnout rates are high among physicians at 54% (Perlo & Feeley, 2018) and nurses at 70% (Masterson, 2017). Providing "universal trauma precautions" requires self-leadership and self-awareness of one's own trauma history and current stress level, in order to provide optimal communication and care to both one's patients and one's fellow staff (Raja, et al, 2015). "Healing Our Core Issues" HOCI Model increases relational presence and self-leadership for both clinician and clients. **Objectives:** Encourage self and other compassion; Staff will use talking and listening boundaries to create mutual relationships; Determine staff education needs for the provision of universal trauma informed care. **Methods:** A 40-minute "trauma-informed communication for self-leadership" was presented as a quality improvement (QI) intervention. Participants were provided with a post-intervention questionnaire. **Results:** Results were evaluated at three months. Sixteen employees completed the QI project evaluation forms during February of 2020. Individuals who attended the QI project had higher self-compassion scores than those who did not. Staff found program helpful for "setting clear boundaries," "being mindful to manage stress," "paying attention to emotions and perceptions," and "not taking things personally." One-quarter did not know definition of an ACE score and three quarters did not know their own ACE score. Thirty-eight percent did not know the definition of trauma informed care. The biggest job challenges were "communication," "lack of support organizationally," and "time." Self-care resilience strategies included: "boundaries," "mindfulness," "communication and listening," "distraction," "compassion," and "self-affirmation and self-care". **Conclusion:** Conscious leadership and universal trauma informed care each require intrapersonal awareness of self and an interpersonal awareness of others. The HOCI trauma informed communication framework was useful for staff to begin to manage boundary violations in the workplace.

Not Just a Plant: Precipitated Withdrawal with Chronic Kratom Use

Erin Bredenberg, MD, MPH - University of Colorado Division of Hospital Medicine

Background: Kratom is a plant that contains compounds which act as mu-opioid receptor agonists. Use of kratom carries risks similar to those of other opioid agonists, including risk of precipitated withdrawal with the simultaneous use of opioid receptor antagonists.

Learning Objectives:
1. Understand the pharmacology of kratom
2. Understand the risks of precipitated opioid withdrawal with use of naltrexone and kratom

Case Presentation: A 56 y/o man with a history of opioid and alcohol use disorders presented with acute-onset encephalopathy. On presentation to the ED, the patient was severely agitated requiring sedation and intubation. Thorough workup for the cause of his encephalopathy was unrevealing.

Patient's mental status improved with supportive care and he was extubated, at which point a more thorough history was obtained. The patient reported being recently prescribed naltrexone for his alcohol use disorder. Approximately 1 hour after his first dose, he experienced sudden onset of diaphoresis, tremulousness, and urgent need to have a bowel movement, followed by progressive confusion. The patient also reported using kratom daily for several years for self-management of an opioid use disorder involving prescription opioids; he was no longer using any other opioids and the physician prescribing his naltrexone was not aware of his kratom use. Ultimately, the patient's clinical presentation was felt to be consistent with precipitated withdrawal due to naltrexone in the setting of chronic kratom use.

Discussion: Mitragyna speciose, also known as "kratom", is a plant from Southeast Asia which contains mitragynine, which acts as a mu-opioid receptor agonist. Despite FDA warnings about its use, this substance remains legal in many states, and use is increasing in the US. While safety information is lacking, there are case reports of dependence, withdrawal, and even deaths related to kratom use. Given increasing prevalence of use, it is important for providers to be aware of kratom and its potential interactions with other substances, including the potential for overdose with concomitant use of other opioid receptor agonists and as the potential for precipitated withdrawal with the use of opioid receptor antagonists.

Understanding Stigmatizing Healthcare Experiences of Individuals in Recovery from Opioid Use Disorder

Cody Cowley, BS - University of Texas at Austin

Background: Individuals with opioid use disorder (OUD) commonly face stigma in healthcare settings, which can negatively impact their treatment. Most studies designed to specifically investigate OUD stigma in healthcare settings focus on the provider perspective and few studies have directly investigated patients' perceptions of stigmatizing language. **Objective:** This study aims to better understand patient perspectives on stigmatizing healthcare experiences, including language use. **Methods**: 18 individuals who identified as being in recovery from OUD were recruited via flyers and word-of-mouth at a local community recovery organization. 3 focus groups were held with 6 participants each. Groups lasted up to 90-minutes and were led by a trained facilitator using a semi-structured interview guide that allowed participants to guide the conversation flow. **Results**: Preliminary analysis of qualitative interviews using applied thematic analysis elicited the following main emergent themes: (1) provider language use and self-identifying language; (2) provider body language and behavior; (3) fear and avoidance of the healthcare system; (4) infrequency of honesty, open communication, and trust between provider and patient; and (5) inadequate medical care including undertreating pain or overprescribing without inquiring about opioid use history. Participants noted that characteristics of positive interactions with providers included: (1) providers educating patients about OUD including harm reduction; (2) providers explaining to the patient what their care entailed; (3) collaborative decision-making; and (4) compassion and empathy. These characteristics were viewed as helping to build trust and an open line of communication between the provider and the patient. **Conclusion**: Individuals in recovery from OUD share similar stigmatizing encounters experienced in healthcare settings. The insights from this study can help inform how healthcare providers can interact with patients in a non-stigmatizing and recovery-oriented manner, including using respectful language, demonstrating compassion, encouraging open communication about opioid use, and involving the patient in formulating a treatment plan.

Policy Transfer Model: Can the U.S. Successfully Borrow from Portugal's National Drug Policy?

Stephanie Elias Sarabia, PhD, MSW - Ramapo College of New Jersey

Background: Facing an opioid epidemic in the 1990s similar to the current struggle in the United States, Portugal took a bold strategy by decriminalizing all drugs. This was one piece of Portugal's National Plan for Reducing Addictive Behaviors and Dependencies that puts forward a framework reflecting a balanced, comprehensive, integrated approach to addressing substance use from a public health perspective. The aims of

this national plan are to foster wellness and social welfare outcomes through access to care and health promotion. Portugal has demonstrated reductions in opioid use rates, deaths related to illicit drug use, incidents of illnesses related to illicit drug use such as HIV/AIDS and Hepatitis. Can the U.S. successfully borrow from Portugal's approach to drug policy? **Objectives:** Become knowledgeable about Portugal's National Drug Plan and research supporting its success. Acquire a working knowledge of the Policy Transfer Model to evaluate potential successes and failures of policy borrowing. Examine the options of borrowing policy approaches from Portugal to the United States to address the opioid epidemic employing the Policy Transfer Model. **Methods:** The Policy Transfer Model is used to evaluate the potential success of applying tenets of one policy model to another in a different context. It examines how comparable the two systems are for transferring policy based on their internal complexities. **Results:** A comparative analysis using the Policy Transfer Model suggests that a number of barriers exist to transferring components of the Portuguese national plan to the United States. Most notable among them are the ideological, political and institutional differences between the countries, the complexity of the opioid epidemic, and internal characteristics of the current U.S. approach that constrains a shift in policy. **Conclusions:** This presentation will examine the elements of the Portuguese National Plan for Reducing Addictive Behaviors and Dependencies, how their principles and strategies are executed and supported by research, and an analysis of the feasibility of adopting Portugal's policy approach to the United States using the Policy Transfer Model.

Primary Care-Embedded Interdisciplinary Controlled Substance Review Committee: Safer and Smarter Controlled Substance Prescribing

Deborah Yip, BA; Irina Kryzhanovskaya, MD - University of California San Francisco School of Medicine

Background: High-dose opioid prescriptions are common in primary care and a risk factor for overdose deaths. In 2018, over 9.9 million Americans reported misusing prescription opioids, 1.7 million reported having a prescription opioid use disorder (OUD), and nearly 15,000 died from prescription opioid-related overdoses. Alongside state and health system clinician education programs, a need exists for front-line, interdisciplinary review committees to advise and assist in safe prescribing for patients with complex medical histories. **Objective:** The Controlled Substance Review Committee (CSRC) at University of California, San Francisco, is an interdisciplinary committee embedded within a large urban academic primary care clinic that reviews complex cases of patients on controlled substances. The CSRC – comprised of primary care, psychiatry, pain and addiction medicine clinicians, nurses, social workers, and front-line staff – aims to provide education on safer prescribing practices, holistic pain management strategies, and awareness of use disorder development. **Methods:** The CSRC meets monthly for an hour to review 1-2 patient cases. The referring primary care provider (PCP) presents relevant patient history and poses specific questions to the committee regarding care challenges. After discussing the patient's case, committee members provide recommendations that are summarized and entered into the patient's electronic medical record (EMR). Following EMR chart review of previous CSRC recommendations, we describe the CSRC's impact based on patients' current medication regimens, linkage to mental health, pain or addiction treatment services, and mortality. **Results:** From February 2014 to April 2020, 79 patients were reviewed in the CSRC. The recommendations included initiating a taper (n=40), prescribing a lower dose or different pain-management drug (n=18), complete discontinuation of opioids (n=8), linkage to mental health or pain management services (n=31), holistic pain management (n=32), assessment and/or referral to OUD treatment (n=20), and naloxone co-prescription (n=22). Fifty-three are currently prescribed opioids; 5 are deceased. **Conclusions:** The CSRC is an educational and quality improvement environment enabling clinicians across training levels to provide safer, patient-centered care as a model scalable to other primary care clinics. We plan to further analyze the CSRC's impact with qualitative interviews of presenters about barriers and facilitators to implementing recommendations from the CSRC.

A Brief Report on the Immediate Use of Injectable Extended-Release Buprenorphine

Amanda Crausman, BA[1]; Robert Crausman, MD, MMS[2] – 1. William James College; Ocean State Healthcare

Background: Until 2017, buprenorphine for MAT had been available only in transmucosal preparations. Patients are generally introduced to the medication when actively withdrawing from opiates to avoid precipitating opiate withdrawal. In 2017, the FDA approved an injectable, extended-release buprenorphine preparation. To avoid precipitated withdrawal, prescribing information directs patients take transmucosal buprenorphine before transitioning to the injection. This requirement is limiting for some high-risk patients. Here we report the first patient administered injectable buprenorphine within 24 hours of her last use of illicit opiates.

Learning Objectives: To consider injectable extended-release Buprenorphine as a viable initial treatment option.

Case Presentation: The patient is a 26-year-old year old female referred to our private practice from the hospital upon discharge after the birth of her child. She has a history of extensive oral opiate abuse and cocaine abuse. She has no history of psychiatric illness, domestic violence or abuse. At the first visit we began MAT with a transmucosal buprenorphine preparation and planned on transitioning her to injectable extended-release buprenorphine. Despite plans to return the following week, she resumed opiate abuse and did not return for two months. She stated she did not believe she could comply with self-administered MAT. At this time, she was within 12 hours of her last use of opiates. Given the unsuccessful prior attempt to treat her with transitional transmucosal buprenorphine and concern for ongoing opiate abuse, we presented the option of administering injectable extended-release buprenorphine that day. The risks, benefits, and alternatives were discussed, including the absence of supporting literature for this approach and the potential of precipitated withdrawal. She enthusiastically accepted. She was premedicated with 4 mg intramuscular ondansetron and then injected with 300 mg of subcutaneous extended-release buprenorphine. She was then discharged uneventfully after 30 minutes of observation with a prescription for as-needed oral ondansetron. The following day she reported only mild nausea and has since done well in two months of treatment.

Discussion: We have since successfully treated three additional patients similarly and suggest it be considered as a viable initial treatment option.

A Missed Opportunity in a Case of Mixed Withdrawal

Maya Appley, MD, MPH; Era Kryzhanovskaya, MD – University of California San Francisco

Background: Managing withdrawal in people who use both alcohol and opioids can be challenging. Withdrawal assessment tools, including the Clinical Institute Withdrawal Assessment for Alcohol (CIWA) and Clinical Opiate Withdrawal Scale (COWS) have limited utility in the setting of concomitant withdrawal or intoxication from other substances. There is little guidance in the literature regarding management of mixed withdrawal and safe initiation of medications for opioid use disorder (MOUD) in patients with co-occurring alcohol withdrawal.

Learning Objectives:
1) Recognize limitations of withdrawal scales in the setting of mixed intoxication or withdrawal.
2) Acknowledge the paucity of guidance and utility of expert consultation when considering initiating MOUD in a patient with mixed withdrawal syndromes.

Case Presentation: A 40 year-old man with alcohol (AUD) and opiate use disorder (OUD) presented to the ED with anxiety, body aches and abdominal cramping for one day. His last drink and last opioid use were

approximately 24 hours prior to presentation. He had experienced two unintentional fentanyl overdoses in the previous 6 months. On exam, he was tachycardic, mildly tremulous and diaphoretic. Alcohol withdrawal was managed according to the CIWA protocol. Symptoms of opioid withdrawal became more prominent over the next 48 hours. The patient wished to re-engage in buprenorphine treatment, but benzodiazepine requirements based on CIWA remained too high to initiate buprenorphine, per hospital protocol. Expert consultation was not available. Noting that his opioid withdrawal was not adequately treated, the patient decided to discharge against medical advice.

Discussion: Application of withdrawal assessment tools without an understanding of their limitations can lead to over or under-treatment of AUD and OUD. Potential adverse consequences include over sedation, unnecessary suffering, mistrust of providers, discharge against medical advice and missed opportunities for harm reduction and initiating MOUD. Clinicians must recognize that opioid withdrawal can falsely elevate CIWA scores and utilize clinical judgment to determine when and how to deescalate CIWA in patients experiencing opiate withdrawal. Risks of concurrent use of benzodiazepines and buprenorphine must be carefully weighed with patient goals and the risks of untreated OUD. Expert consultation, when available, should be sought.

Early Experiences of Buprenorphine Integration at an Opioid Treatment Program Affiliated With a Large Academic Safety-net Hospital: Treatment Outcomes at 30 and 180 Days

Maya Appley, MD, MPH; Leslie Suen, MD; Scott Steiger, MD – University of California San Francisco

Background: Buprenorphine is an effective medication for opioid use disorder that has historically been delivered in office-based settings. Access to buprenorphine in Opioid Treatment Programs (OTPs) may offer some advantages over office-based treatment, but little has been reported about treatment outcomes of OTP-level buprenorphine. **Objective**: Describe 30- and 180-day outcomes for patients treated with at least one dose of buprenorphine at the Opiate Treatment Outpatient Program (OTOP), the OTP at San Francisco General Hospital, during the first 18 months of buprenorphine integration. **Methods**: This is a retrospective observational study conducted through review of the electronic medical record. Patients were either established on methadone at OTOP before transitioning to buprenorphine or were referred to start or continue buprenorphine treatment from local hospitals, clinics or other OTPs. We were unable to monitor outcomes after patients were transitioned to other clinical settings. **Results**: This study included 140 encounters with 129 patients. The patients were predominantly male (70.5%) and the mean age was 45.9 years (SD 12.0).

Table 1. 30- and 180-day outcomes for patients on and off medication for opioid use disorder (MOUD) among 140 encounters

	30 days N (% of total)	**180 days N (% of total)**
On MOUD, total	**102 (72.9)**	**75 (53.6)**
Buprenorphine at OTOP	74 (52.9)	30 (21.4)
Buprenorphine transitioned to another clinic	4 (2.9)	16 (11.4)
Methadone at OTOP	24 (17.1)	29 (20.7)
Not on MOUD, total	**38 (27.1)**	**65 (46.4)**
Lost to follow-up	38 (27.1)	62 (44.3)
Tapered off per patient preference	0 (0)	3 (2.1)

Of encounters resulting in buprenorphine discontinuation within 30 days, the median buprenorphine treatment duration was 4 days (IQR 1-11). For 24 encounters, only one dose was administered. **Conclusions**: Half of all encounters resulted in successful retention in medications for opioid use disorder at OTOP at 180 days or transition to another setting for continuation of buprenorphine. The varied

outcomes, including transitions to primary care and to and from methadone without treatment interruption highlight the flexibility afforded by buprenorphine integration into an OTP. The comparatively low rate of retention in buprenorphine and high rate of early attrition warrant further exploration.

Multidisciplinary Teams are Needed to Treat Opioid Use Disorder and Infective Endocarditis: A Case Series

Caroline G. Falker, MD[1]; Kenneth L. Morford, MD; Lynda E. Rosenfeld, MD; Jeanette M. Tetrault, MD, FACP, FASAM; Shashank Jain, MD; Melissa Weimer, DO, MCR, FASAM[2] – 1. VA Connecticut Healthcare System; 2. Yale University School of Medicine

Background:

Injection drug use-related infective endocarditis (IDU-IE) is increasing in the United States. Patients with IDU-IE have complex medical needs and risk factors for poor health outcomes. This case series describes two patients with IDU-IE and illustrates the importance of structured multidisciplinary care that includes addiction medicine (AM).

Learning Objectives:

Identify medical complications that can arise in patients with IDU-IE
Recognize the role of multidisciplinary teams in caring for patients with IDU-IE

Case Presentation:

Case 1: A 42-year-old woman with severe opioid use disorder (OUD) receiving methadone was admitted for cardiac arrest. She was diagnosed with candidal aortic valve IDU-IE. Cardiothoracic Surgery (CTS) performed valve replacement. She was discharged on methadone 60 mg/d and fluconazole 800 mg/d with AM, CTS and Infectious Disease (ID) follow-up.
Eight weeks later, after receiving a third QT prolonging medication, azithromycin, for bronchitis, she was admitted for hypokalemia and torsades de pointes (TdP). AM facilitated transition from methadone to buprenorphine to reduce ongoing TdP risk. Treatment required collaboration between AM, Cardiology, CTS and ID.

Case 2: A 21-year-old woman with remote IDU-IE s/p tricuspid valvectomy and severe OUD receiving methadone was admitted for decompensated heart failure related to prior valvectomy. CTS performed valve replacement and pacemaker placement. AM managed post-operative pain medications and methadone. She was discharged on methadone 120 mg/d. Paced ECG at discharge showed QTc 569ms (JTc 393ms), improved from admission (QTc 614ms).
Twelve days later she was admitted for TdP. AM was consulted to address methadone dosing. She declined transition to buprenorphine. Methadone was reduced (120 to 85 mg/d) and she was evaluated for defibrillator. Treatment required collaboration between AM, Cardiology, CTS and ID.

Discussion:

These cases illustrate that IDU-IE is a complex illness where the addition of AM to multidisciplinary care can prevent missed opportunities and improve outcomes. AM specialists serve an essential role convening specialties in the care of patients with OUD. In the absence of AM specialists, hospital teams may not have knowledge to best address patients' OUD to develop comprehensive treatment plans. These cases illustrate why AM specialists should be integrated into multidisciplinary teams to optimize care.

Online Mutual Help for Problematic Alcohol Use: Disengagement During COVID-19
Jason B. Colditz, MEd; Scott D. Rothenberger, PhD; Jane M. Liebschutz, MD, MPH, FACP; Bruce L. Rollman, MD, MPH; Kevin L. Kraemer, MD, MSc - University of Pittsburgh

Background: COVID-19 and associated social distancing is challenging for individuals recovering from problematic alcohol use. Participation in face-to-face mutual help groups (MHGs) such as Alcoholics Anonymous (AA) is a particular challenge during this time. Online MHGs may be particularly appealing to individuals while access to traditional in-person MHGs is limited. **Objectives**: We examined engagement within the peer-moderated "StopDrinking" MHG that has over 229,000 subscribers on the Reddit social media platform. We hypothesized that engagement in StopDrinking would increase due to demand for online support as COVID-19 social distancing progressed. **Methods**: We collected publicly available user engagement data (i.e., daily posts and associated responses) from 2/19/2018 through 4/30/2020 on the Reddit platform. We considered March and April of 2020 as months initially impacted by voluntary or mandated COVID-19 social distancing. Using autoregressive integrated moving average (ARIMA) models, we predicted daily engagement for this time period based on a training set of all available data prior to 3/1/2020. A final model of ARIMA(1,0,2) x (0,1,1)7 was selected based on optimal fit parameters. A Kalman filter with 95% prediction limits was employed to define significant thresholds for observed data to reside within. **Results**: All days of observed engagement in March and April 2020 were lower than corresponding predicted values. For 36.1% of days, observed engagement fell below the 95% prediction limit. Specifically, 15 days in March and 7 days in April had significantly lower than predicted engagement. **Conclusions**: Engagement with StopDrinking was markedly low during the COVID-19 social distancing timeframe. Potential explanations include competing time demands (e.g., child care, employment changes), use of other support modalities (e.g., AA video meetings), and higher rates of unmitigated problematic alcohol use. Continued investigation is warranted into online MHG engagement—particularly in contexts of crisis and isolation—to inform understandings and recommendations related to online MHGs for problematic alcohol use.

Public Funding for Transformative Drugs: The Case of Buprenorphine for Opioid Use Disorder
Rachel E. Barenie, PharmD, JD, MPH; Aaron S. Kesselheim, MD, JD, MPH - Harvard Medical School/Brigham and Women's Hospital

Background: Buprenorphine is a highly effective, office-based treatment for opioid use disorder (OUD), but affordable access to it remains challenging despite initial government investment in its development. **Objective**: To estimate the public sector's contribution to the development of buprenorphine for OUD. **Methods**: We researched buprenorphine's timeline of development as an OUD treatment to identify key terms (e.g., authors of pivotal studies, labeled indication). We then conducted a PubMed search for each key term. We extracted article identification numbers and linked them to federal funding through the NIH RePORTER. We reviewed the title, investigator, and organization of each award distributed up to and including 2002 and classified awards as "highly related," "possibly related," or neither. Dollar amounts of all related awards were converted to 2018 dollars. **Results**: Buprenorphine was discovered within the pharmaceutical industry, developed for OUD by investigators in government and academic centers, and commercialized through a formal government-industry partnership over the course of nearly four decades. We identified 29 key terms related to its development as a treatment for OUD that linked to 7,060 unique NIH awards. Upon review of each award, we identified 40 "highly related" (n=$39.1 million) and 20 "possibly related" (n=$22 million) awards. **Conclusions**: The public sector's contribution was important for developing buprenorphine as a treatment for OUD, with an estimated $61.1 million awarded to institutions and investigators in the US and abroad to support its development.

Developing Diversity: Outcomes of a Residency Research Track and Summer Research Fellowship at the Medical University of South Carolina

Jennifer L. Jones, MD; Emily J. Bristol; Sudie E. Back, PhD; Sarah W. Book, MD; Kelly Barth, DO; Kathleen T. Brady, MD, PhD - Medical University of South Carolina

Background: Addiction to alcohol, tobacco, and other drugs (e.g., opioids) remains a leading cause of morbidity and mortality in the U.S. A scientific workforce which represents a diversity of backgrounds and perspectives is essential to develop novel treatments and improve outcomes. Expanded research training opportunities are imperative, yet few dedicated addiction research training programs exist. In response to this unmet need, the Medical University of South Carolina established the Drug Abuse Research Training (DART) program. Since its inception in 2006, this NIH-funded research program has provided intensive training and mentorship to 43 psychiatry residents and 168 summer students (undergraduate, graduate and medical students). **Objectives**: To characterize the demographics, scholarly activities, subsequent research involvement, and barriers to engaging in research among DART program alumni. **Methods**: We conducted a survey of trainees who completed the DART program from 2006-2019. The survey questions focused on types of research engagement, career goals involving research, and obstacles to engaging in research or pursuing a research career. **Results:** Survey response rate was 82%. Approximately 31% of residents and 38% of summer trainees identified as under-represented in medicine (URM). Overall, 59% of trainees were female and 24% reported an educationally disadvantaged background. A majority of trainees (77%) were engaged in research since completing the DART program (62% of residents, 82% of summer trainees). Most trainees reported publications (57%), conference presentations (63%), and conference attendance (59%) since completing DART. Among psychiatry residents, 48% reported being an active member of a multidisciplinary team, 38% had served as a study physician or medical monitor, and 28% reported actively writing or submitting grants. Among those not engaged in research, difficulty finding a mentor (29%) and lack of confidence in research skills (21%) were leading modifiable research career barriers. **Conclusions:** This program provides a model for the development of other addiction research training programs and demonstrates successful recruitment of diverse trainees. The research training within the psychiatry residency program and the summer research fellowship were associated with a high level of subsequent research involvement. Efforts to reduce key barriers to engagement in research-based careers are needed.

Preventing Overdose From the Inside, Out: A Clinical Case Presentation From a Novel OBAT Reentry Program

Allyson Pinkhover, MPH, CPhT, BS; Kelly Celata, MCJ, BA - Brockton Neighborhood Health Center

Background:
In 2018 Brockton Neighborhood Health Center (BNHC) initiated reentry services at Plymouth County Correctional Facility (PCCF). The Reentry Coordinator position was created to refer individuals the Harm Reduction Clinic (HRC) for medications for opioid use disorder (MOUD) following incarceration. The Reentry Coordinator facilitates Opioid Overdose Prevention and Naloxone Trainings. This program builds rapport between BNHC and the incarcerated population and introduces harm reduction concepts within PCCF.

Learning Objectives:
1) Describe the advantages of harm reduction education in correctional facilities.
2) Summarize strategies for offering access to MOUD to incarcerated individuals.

Case Presentation:
This case presentation describes a 54-year-old male patient of the HRC who had maintained sobriety from opioids for several years and resumed use in 2018, which contributed to his incarceration in 2019. In 2018, this patient overdosed on seven occasions. At PCCF, this patient attended weekly Opioid Overdose Prevention and Naloxone Trainings. This patient connected with the Reentry Coordinator to access buprenorphine from the HRC immediately upon release in June of 2019. This patient did not attend his appointment with the HRC. The

Reentry Coordinator encountered this patient at a location in Brockton with a high incidence of substance use in July of 2019 and scheduled an intake for this patient to begin buprenorphine treatment. This patient did not follow up after this initial appointment. In September of 2019, this patient became reincarcerated and shared with the Reentry Coordinator that he had resumed use of opioids, but he had experienced zero overdoses during his period of freedom. He reported that he avoided using alone because of the overdose prevention strategies he had learned at PCCF. While this patient was incarcerated for the second time, he attended every Opioid Overdose Prevention and Naloxone Training offered to him. The Reentry Coordinator referred this patient to the HRC for a buprenorphine intake a second time. This patient has not followed up with this appointment.

Discussion:
This case demonstrates how harm reduction education is an effective tool for justice-involved individuals. Correctional facilities should consider establishing partnerships with treatment providers, which can be life-saving measures in the most severe cases.

Patient Perspectives on Receiving Treatment For Tobacco, Alcohol, and Opioid Use Disorders in HIV Clinics

Kenneth L. Morford, MD; David A. Fiellin, MD; Phillip A. Chan, MD, MS; Deborah H. Cornman, PhD; Srinivas Muvvala, MD, MPH; Benjamin J. Oldfield, MD, MHS; Jessica Yager, MD, MPH; E. Jennifer Edelman, MD, MHS - Yale School of Medicine

Background: Substance use continues to be a challenge among people living with HIV (PLWH). However, screening and treatments for substance use disorders (SUD) are inconsistently provided in HIV clinics. **Objective**: To explore patient perspectives on factors influencing receipt of evidence-based treatment for tobacco, alcohol and opioid use disorders at four HIV clinics in the US northeast. **Methods**: From July 2017–February 2019, we conducted four focus groups among PLWH and SUD receiving care at one of four HIV clinics in Brooklyn, NY; New Haven and Hartford, CT; and Providence, RI. Data collection and analyses were informed by the Promoting Action on Research Implementation in Health Services Research implementation science framework. Focus groups were recorded, professionally transcribed, and independently coded by three investigators. We used directed content analysis to identify themes. Participants also completed a brief survey assessing demographics and behaviors. **Results**: Among 28 participants, the mean age was 58, 61% were African American, and 32% were female. Current substance use was common: 71% tobacco, 46% alcohol, 39% heroin, and 39% prescription opioids. Overall, 57% reported receiving any SUD treatment. Regarding evidence: 1) patients recognized tobacco and opioid use as harmful, but endorsed fewer concerns regarding alcohol's impact on health; 2) barriers to using addiction treatment medications included lack of knowledge of their availability, stigma and misperceptions, and concerns of side effects. Regarding context: 1) patients were screened for substance use, but described inconsistent follow-up; 2) patients had favorable experiences receiving SUD education and treatment at their HIV clinics, particularly when provided by their HIV provider; 3) while HIV clinics were recognized to include multidisciplinary teams, patients preferred SUD care to be integrated at the provider level versus the clinic level. **Conclusions**: Efforts to implement SUD screening and treatments within HIV clinics will require a multi-faceted facilitation approach with enhanced patient education regarding alcohol's harmful effects and treatment options; stigma reduction around addiction treatment medications; provider training on SUD treatments to follow up positive screening; and integrated SUD treatment at the provider versus clinic level.

Developing Resident CHAMP-ions to Practice Behavioral Health and Addiction Medicine in Primary Care

Kenneth L. Morford, MD; Emma T. Biegacki, MPH; Dana A. Cavallo, PhD; Stephen R. Holt, MD, MS; Jeanette M. Tetrault, MD - Yale School of Medicine

Background: Only 11% of Americans with substance use disorders (SUD) receive treatment. Primary care providers are key to closing this treatment gap but often lack an adequate understanding of SUD stemming from stigma, misconceptions, and a medical education system with little emphasis on SUD. The Health Resources and Services Administration (HRSA)-funded Collaborative Behavioral Health and Addiction Medicine in Primary Care (CHAMP) program was developed in July 2019 for Yale Primary Care (YPC) residents, physician associate (PA) students, and faculty. Here, we describe the development and implementation of the CHAMP residency training track. **Objective**: To enhance training in behavioral health and addiction medicine via a longitudinal residency training track. **Methods**: Two YPC residents are recruited into the training track annually through a post-residency match application process. Over three years, CHAMP residents have clinical experiences focused on behavioral health and addiction medicine in outpatient and inpatient settings, and are assigned a primary care panel of approximately 50% patients with SUD. CHAMP residents receive training in medications for addiction treatment, motivational interviewing and cognitive behavioral therapy, and have direct supervision from addiction medicine physicians and a clinical psychologist. They participate in addiction medicine conferences, research meetings, and journal clubs; receive mentorship from addiction medicine faculty; and serve as facilitators for addiction medicine teaching activities. CHAMP residents complete an entrance survey during Year 1, a mid-point survey in Year 2, and an exit interview in Year 3. We document the number of completed rotations, supervision meetings, and CHAMP educational activities annually, and assess delivery of pharmacotherapy and behavioral counseling during patient encounters. **Results**: Two interns and one postgraduate year-2 resident were recruited into the training track in 2019-20. Two interns have been recruited for 2020-21. In 2019-20, CHAMP residents completed a total of four rotations consisting of 26 clinical sessions and attended a total of five lectures and 21 supervision meetings. Two CHAMP residents facilitated small groups for the "Taking a Substance Use History" workshop for 260 Yale medical, nursing and PA students. **Conclusion**: CHAMP demonstrates the feasibility of developing and implementing a residency training track in behavioral health and addiction medicine.

Development of a Screening, Brief Intervention and Referral to Treatment (SBIRT) Interprofessional Patient Simulation Training Curriculum for Opioid Misuse

Janice Vendetti, MPH; Nathaniel Rickles, PharmD, PhD; Bonnie McRee, PhD; Katherine Robaina, MPH; Iwona Pawlukiewicz, MPH; Petra Clark-Dufner, MA; Karen Steinberg Gallucci, PhD - UConn Health

Background: Specialty substance use treatment is often not appropriate or unavailable to individuals at risk for substance use disorders (SUD), creating the need to involve non-specialists to identify, and intervene with individuals at risk for SUD. One approach is to ensure health professions students are exposed to Screening, Brief Intervention and Referral to Treatment (SBIRT) in their curricula. Bringing disciplines together in training supports the integration of critical interprofessional knowledge/roles, values, and skills. **Objectives**: The SBIRT Interprofessional Patient Simulation (SIPS) training curriculum was developed to provide Urban Service Track (UST) scholars with sustainable on-line resources to increase their SBIRT skills and knowledge including hands-on application of those skills with standardized patients (SPs). **Methods**: Faculty experts developed the simulation and provided in-depth training SPs. The SIPS training was conducted with two cohorts of UST scholars from UConn's Schools of Medicine, Dentistry, Nursing, Social Work and Quinnipiac University's Program for Physician Assistant in April 2018 (n=21) and November 2018 (n=17). Training consisted of pre-event on-line video instruction for using the ASSIST-FC alcohol/drug screening instrument, video demonstration of an opioid-focused Brief Intervention, information on opioid misuse and drug-drug interactions. The in-person training paired 3 interprofessional students who worked independently to screen the SP for substance misuse and provide the appropriate intervention. After feedback from the SP, students were provided the opportunity to "rewind the script" using their collective experiences and SP feedback to develop a

team-based approach to the situation. After the simulation, trainees completed the Interprofessional Collaborative Competency Attainment Scale (ICCAS) to retrospectively assess their attainment of interprofessional collaboration skills. Sessions were videotaped and reviewed by faculty to assess adherence to SBIRT. **Results**: The mean training ratings for the ICCAS scale improved significantly for both cohorts; April, 2018 ($t17=5.33$, $p<.001$), November, 2018 ($t16=6.79$, $p<.001$). Video analysis indicated that compared to the individual approach, interprofessional groups were more successful scoring the instrument, utilizing motivational interviewing techniques and providing the appropriate intervention. **Conclusion**: The SIPS training curriculum provided health professions students with hands-on application of SBIRT skills in an interprofessional setting. Performance as a team resulted in more accurate delivery of SBIRT services.

Integration of Medication Assisted Treatment Waiver Training into the Medical School Curriculum

Irvin C. Lien, BS; Randell Seaton, BS; Aaron Szpytman, BS; Jody Chou, BS; Victoria Webber, BS; Sabrina Dass, BA; Eva Waineo, MD; Diane Levine, MD - Wayne State University School of Medicine

Background: The opioid epidemic remains a growing problem in the United States. Use of Medication-Assisted Treatment (MAT) has been shown to help patients recover from opioid use disorders (OUD). MAT is effective in decreasing OUD; however, only 2.2% of practicing physicians in America have been trained in MAT1. **Objective**: To increase the number of prescribers prepared to provide treatment for OUD, Wayne State University School of Medicine integrated the 8-hour MAT waiver training into its Internal Medicine clerkship curriculum. Upon completion of MAT waiver training, practitioners can prescribe buprenorphine under the Drug Addiction Treatment Act of 2000 (DATA 2000). The objectives of integrating this into the curriculum are two-fold: 1) to improve opioid use education and 2) to allow our students to feel more comfortable addressing and managing the opioid epidemic. **Methods**: MAT waiver training was provided free online by the Providers Clinical Support System (PCCS)2. All third-year students on the Internal Medicine clerkship were required to complete the training including additional webinars and modules. A pre and post-survey was used to assess short term impact on student's knowledge and attitudes on opioid use disorders. A 5-point Likert scale (1-strongly disagree to 5-strongly agree) was used to rate responses. **Results**: Medical students (n=141) completed a 7-question pre-survey and post-survey to assess how their attitudes towards OUD changed as a result of the training. After the online MAT waiver training, students' responses regarding clinical knowledge about OUD, familiarity with MAT, and likelihood to utilize MAT for their patients significantly differed with increased proportions of medical students in agreement across 6 of 7 pre-post survey items ($p<.0001$). Our hope is that MAT waiver training will allow for graduation of medical students who are ready to address the opioid epidemic during residency and as practitioners upon completion of their residency. **Conclusions**: After undergoing MAT waiver training, students' clinical knowledge about OUD and willingness to use MAT for their patients increased greatly. Online MAT waiver training is a low-cost (free) way to introduce MAT education into the undergraduate clinical curriculum preparing students to address opioid use disorder as future residents and practicing clinicians.

Flight of the Navigator: Overcoming Complex Co-Occurring Medical Disorders and Homelessness Using Patient Navigators and Financial Incentives in an Older Individual With Opioid Use Disorder Enrolled in Project HOUDINI LINK

Cameo Taylor; Sandra Flores, MPH; Twinisha Doyle, BA; Alexandra Haas, MFT; Emily F. Dauria, PhD, MPH; D. Andrew Tompkins, MD, MHS - University of California San Francisco

Background:
In San Francisco, 22,000 individuals report intravenous (IV) substance use, many of whom are aged 55 years or older. Hospitalizations for complications of this use are common and provide a unique opportunity to initiate medication assisted treatment (MAT) for patients with opioid use disorder (OUD). Zuckerberg San Francisco General (ZSFG) is an urban safety net hospital which has developed a robust MAT initiation program. Ongoing MAT engagement remains a problem for these patients once discharged. Project HOUDINI LINK (Hospital

Opioid Use Disorder treatment INItiation and LINKage to care) is a SAMHSA-funded program that provides six months of patient navigation, linkage to social and primary medical services, and financial incentives to patients initiating MAT while hospitalized at ZSFG.

Learning Objectives:
(1) Define the major components of Project HOUDINI LINK; (2) Explore how patient navigators may complement ongoing OUD treatment to achieve whole person care; (3) Examine the efficacy of patient navigators and financial incentives in overcoming significant barriers to ongoing MAT engagement.

Case Presentation:
The patient is a 64- year old homeless Caucasian Latinx woman, who was admitted to ZSFG due to multiple abscess wounds from IV opioid use. While hospitalized, she began methadone maintenance and enrolled in Project HOUDINI LINK. The patient had no primary care provider resulting in unmanaged COPD and cirrhosis from untreated Hepatitis C. Additionally, she had few social supports and was homeless having only recently relocated to San Francisco. The navigator helped link the patient to a community-based opioid treatment program, primary care, and temporary shelter prior to discharge. Despite intermittent homelessness, lice infestation, and an assault, she remained engaged in OUD treatment for 6 months after her initial hospitalization, started Hepatitis C treatment and actively participated in a diagnostic work-up for new, unexplained weight loss – all with the valuable assistance of her patient navigator.

Discussion:
Project HOUDINI LINK was developed to improve linkage rates in patients undergoing hospital-based OUD treatment initiation. The multiple and variable ongoing stressors following discharge highlight the need for prolonged programs that focus on the whole person and assist the patient in navigating complex medical, housing, and OUD treatment systems.

Expanding Access to X-Waiver Curriculum for Students in the Setting of COVID Pandemic
Scott Steiger, MD[1]; Rosalind De Lisser, FNP, PMHNP[2]; Elizabeth Castillo, MPH, FNP[2]; Matt Tierney, MS, NP[2] – 1. School of Medicine, University of California San Francisco; 2. School of Nursing, University of California San Francisco

Background: During the second year of a novel interprofessional elective adapted from the American Society of Addiction Medicine's (ASAM) "Treatment of Opioid Use Disorder Course," our University discontinued in-person classes and student visits to clinical sites due to the COVID-19 pandemic. **Objective**: To increase the number of nurse practitioner (NP) and medical (MD) students qualified to apply for the DATA 2000 waiver upon licensure. **Methods:** We offer DATA 2000 waiver training to NP and MD students. In 2019 we adapted the ASAM course to provide increased contact with content experts, case discussions, and a half-day clinical immersion at a treatment site. In 2020 with COVID-19 restrictions, we further adapted the course to include only e-learning methods. See table:

"Traditional"	***Spring 2019 Adaptations***	***Spring 2020 Adaptations***
8 hour "blended" course	4 hours online 4 hours lecture + small group case discussion	4 hours online 4 hours lecture + small group case discussion
16 hours online (ASAM)	1 hour Journal Club (JC) 1 hour Stigma Lecture (SL) 2 hours Small Group case	1 hour JC 1 hour SL

	discussion (SG) 2 hours homework for JC and SL 4 hours Clinical Immersion 6 hours online (ASAM)	2 hours SG 2 hours homework 4 hours reading, videos and assignments re: OBOT clinical applications 6 hours online (ASAM)

Legend: Live, e-learning

For immediate evaluation, we tracked the number of students completing each curricular component, and surveyed their satisfaction with the course. Long-term evaluation will include surveying graduates' experience using the waiver. **Results:** The number of NP and MD students qualified to apply for the X-waiver upon licensure increased from 53 (31 NP, 22 MD) in year 1 to 73 (41 NP, 32 MD) in year 2. The number of students reporting satisfaction with the quality of the training increased from 63% in year 1 to 70% in year 2. **Conclusions**: Transition to all e-learning did not impede expansion or acceptability of a curriculum designed to increase DATA 2000 waiver eligibility among NP and MD students at our university. Further curricular expansion and evaluation of graduates' waiver will continue.

Childhood Trauma, PTSD, and Overdose Among Latinx Treatment Users in the Commonwealth of Massachusetts

Cynthia Tschampl, PhD; Melisa Canuto, LICSW; Diliana De Jesús, MA; Melinda D'Ippolito, LICSW, MPH; Micaurys Guzman; Nick Huntington, PhD, Mary Jo Larson, PhD; Emily Stewart, BA; Yinuo Xu, MA; Lena Lundgren, PhD - Brandeis University

Background: Prior research has identified an association between PTSD and drug overdose among adults who use opioids. However, little research has been conducted on the relationship between childhood trauma, PTSD, and overdose, and study samples frequently do not include persons of Latinx ethnicity, who are at high risk of overdose. **Objective:** This study examined the relationship between childhood trauma, PTSD, and lifetime overdose in a sample seeking treatment for a substance use disorder (SUD) in Massachusetts**. Methods:** Assessment data from the Casa Esperanza integrated behavioral health and primary care treatment program were used to develop a dataset of unduplicated individuals (n=149) who completed an intake survey between April 2019 through August 2020. This sample was a convenience sample of treatment recipients, among whom 87% were of Latinx ethnicity and 73% were male. Multivariate logistic regression examined self-report of lifetime drug overdose as the dependent variable and two key independent variables: adverse childhood experiences (ACEs, 0-10) and a positive screen for PTSD (endorsed 3+ items out of 4 on the PTSD Checklist). We explored demographic characteristics and controlled lifetime heroin use (years) prior to intake. **Results:** Self-reported exposure to childhood trauma was high with 56% having experienced 4+ ACEs. No demographic characteristics were significantly associated with overdose in bivariate analyses; however, women were significantly more likely to report 4+ ACEs (Fisher's exact, p=0.012). Multivariate logistic regression (Nagelkerke R-square = 0.26) showed each additional ACE was associated with a 23% increase in odds of overdose (p=0.013). Each additional year of heroin use was associated with a 6.9% increase in odds of overdose (p<0.001). Although a positive screen for PTSD was significant in bivariate analysis, it was not in the full model (p=0.177). **Conclusion**: There is a significant association between the number of childhood adverse events and years of heroin use with the likelihood of lifetime drug overdose among predominantly Latinx, male individuals seeking treatment for substance use disorder. Clinical implications include the need to screen for both ACEs and PTSD among adults with SUD to assess risk for overdose. Additional research is needed to examine these relationships among a larger treatment sample.

ONE Rx: Community Pharmacy Based Screening and Interventions for Opioid Misuse and Accidental Overdose

Jayme A Steig, PharmD; Mark Strand, PhD; Heidi Eukel, PharmD; Elizabeth Skoy, PharmD; Amy Werremeyer, PharmD; Oliver Frenzel, PharmD - North Dakota State University

Background: Community pharmacists have opportunity to perform an essential role in addressing the opioid crisis by providing upstream interventions. Barriers to doing this include lack of confidence, inadequate training, and lack of time. **Objectives**: The Opioid and Naloxone Education (ONE Rx) program will provide pharmacists with the training, tools, and skills to assess risk for opioid misuse and overdose and provide appropriate interventions. **Methods**: ONE Rx provided a continuing education program including training on screening instruments, assess results, suggested interventions, and skills to overcome barriers. The training, screening, and interventions can be applied in any state and other practice settings.
Trained pharmacy personnel screen each patient presenting an opioid prescription with the screening tool for risk of opioid misuse and/or accidental overdose. This questionnaire includes risk factors such as history of substance abuse and psychological diseases to assess for opioid misuse. The patient's risk for accidental overdose is assessed with questions about comorbidities and concomitant medications that cause additional respiratory depression. The pharmacist uses the objective findings from the screening and a triage tool to determine which of the six critical interventions are appropriate for the patient. Critical interventions include: (1) community support services, (2) benefits of naloxone, (3) dispensing naloxone, (4) contacting the prescriber with concerns, (5) opioid use disorder, and (6) risks of opioid overdose. **Results:** Efficacy in ONE Rx translates to patients receiving one or more of the six critical interventions based on the pharmacist's assessment. Over the past 12 months, 3,887 patients have been screened at community pharmacies. Of these patients, 1,542 (39.7%) have received one or more of the six critical interventions. Additionally, 752 patients (19.3%) were identified at risk of accidental overdose and 170 patients (4.4%) at risk of opioid misuse. 10.9% of those at risk for overdose received naloxone. ONE Rx screening and interventions take an average of six minutes. Longitudinal, monthly reports show screenings and intervention results are consistently provided with similar outcomes. **Conclusions**: Education on upstream interventions regarding opioids is vital in opioid misuse and accidental overdose prevention. Using objective tools, pharmacists appropriately utilized them to guide their clinical judgement.

Assessing Social Work and Nursing Students' Attitudes, Perceived Confidence and Competence in Working With Adolescents With Substance Use Disorder

Victoria A. Osborne-Leute, PhD, MSW; Emma Molloy, MSW - Sacred Heart University

Background: Students in social work and nursing programs often work with adolescents with substance use disorder (SUD). Many schools of social work and of nursing now incorporate some sort of education around SUD, but this training is still typically minimal. Students in these professions have particular attitudes and perceived level of skill even before engaging in formal classroom education and field education, which can impact their work with clients. **Objective**: We wanted to examine differences in attitudes, perceived skill and confidence between nursing students and social work students, before an educational intervention was implemented. Do students in these professions differ from each other with regard to their attitudes and skill when working with adolescents with SUD? **Methods**: A survey of perceived level of confidence, skill, and attitudes was implemented prior to a didactic learning module and subsequent computer-based experiential learning. **Results**: Survey results (n=105) indicated that overall, social work (n=62) and nursing (n=41) students did not significantly differ with regard to their attitudes towards working with adolescents with SUD, as well as their perceived competence or confidence. There were, however, some significant differences found between groups: social work students felt more strongly that a confrontational style is useful in getting resistant clients to accept treatment ($t=3.90$ (101), $p<0.01$). Additionally, nursing students felt more competent in screening using standardized instruments ($t=-2.66(96)$, $p<0.01$) and in providing feedback about risky use ($t=-2.57(96)$, $p<0.05$). Social work students felt more confident than nursing students in their ability to express empathy and reflect the adolescents' emotions during an intervention ($t=2.085$ (94), $p<.05$). Nursing students also felt more ready to screen for alcohol or drug use and to provide brief interventions ($t=-2.087$ (96), $p<0.05$). **Conclusions**: Social

work students felt more confident and comfortable providing more abstract skills like empathy and reflection (counseling-related skills) while nursing students felt more confident with providing concrete action-based skills like screening and intervening. It was interesting to note that social work students more strongly agreed that a confrontational style was useful in getting resistant clients to accept treatment; this supports the implementation of training in motivational interviewing.

Buprenorphine Prescribing Among Primary Care Providers: Barriers and Possible Solutions

Sarah Leyde, MD; Juliana Macri, MD; Tessa Rife PharmD, BCGP; Shalini Patel, MD - University of California San Francisco

Background: Buprenorphine, an evidence-based treatment for opioid use disorder (OUD), can be prescribed by primary care providers (PCPs) with a DEA X-waiver. Within the San Francisco Veterans Affairs Healthcare System (SFVAHCS), only 33.0% of Veterans with OUD are prescribed medications for opioid use disorder. Of the 87 SFVAHCS PCPs, 17 (19.5%) are waivered; however, only 7 (8.0%) have prescribed buprenorphine within the past 6 months. **Objectives:** We sought to understand barriers to PCPs prescribing buprenorphine and identify interventions to increase prescribing. **Methods:** We created and distributed an anonymous online survey to all SFVAHCS PCPs (n=87). Non-waivered providers were surveyed to evaluate interest in becoming waivered and barriers to obtaining a waiver. Waivered providers were surveyed to evaluate barriers to prescribing buprenorphine and solutions to increase prescribing. **Results:** Of the 40 responders (46.0% response rate), 25 (62.5%) were not waivered and 15 (37.5%) were waivered. Some non-waivered providers expressed interest in obtaining a waiver (mean 3.60 on a 5-point Likert scale, where 5=very interested). The most frequently reported barriers to becoming waivered were: 1) lack of time to complete training (n=17); 2) limited access to training (n=9); and 3) lack of incentive to become waivered (n=8). Among waivered providers, the most commonly reported barriers to prescribing were: 1) lack of knowledge/experience (n=9); 2) lack of clinic support/infrastructure (n=8); and 3) lack of time to counsel patients (n=6). Interventions that waivered providers were interested in included: 1) a "buprenorphine mentor" (mean 4.57 on a 5-point Likert scale, where 5=very interested); 2) educational materials (mean 4.14); 3) a 1-hour refresher course (mean 4.00); and 4) data identifying potential candidates for buprenorphine (mean 4.00). **Conclusions:** Based on our survey of SFVAHCS PCPs, there are simple, actionable strategies that may increase the proportion of Veterans who have access to buprenorphine treatment. Providing time, training, and employer incentives could increase the number of waivered PCPs. Once waivered, PCPs need further support to ensure confidence and skills in routine prescribing of buprenorphine. Strategies include mentorship, educational materials, and establishing clinic infrastructure to reduce the administrative burden of prescribing buprenorphine.

Integration of Primary Care and Mental Health into a Hispanic Massachusetts Addiction Treatment System: Needs and Outcomes

Mary Jo Larson, PhD; Nick Huntington, PhD; Diliana De Jesús, MA; Cynthia Tschampl, PhD; Yinuo Xu, MA; Melinda D'Ippolito, LICSW, MPH; Micaurys Guzman; Melisa Canuto, LICSW; Emily Stewart; Lena Lundgren, PhD - Brandeis University

Background: Addiction treatment organizations that integrate medical/behavioral healthcare at the same geographic location may reach a broader group of patients than traditional programs. Addiction integrated care models can deliver integrated care to a high-need high-risk population. **Objective**: This study compared patient characteristics and outcomes for homeless and housed clients of one of the largest integrated care addiction treatment providers in Massachusetts, Casa Esperanza, Inc. **Methods**: Bivariate analysis was conducted of intake and 6-month assessment data for 199 clients of whom 58.4% responded they "consider self homeless" at both time points. Multivariate analysis was used tso examine associations of persistent homelessness with outcomes at follow-up including employment, anxiety (GAD7), depression (PhQ9), health status, pain, social activity limitations, usual activity limitations, relapse to drug use in past 30 days, and utilization outcomes.

Results: Nearly all Casa patients are Hispanic with many speaking Spanish at home. Patients who considered themselves homeless at Intake reported significantly higher levels of health-related needs: trauma, depression, anxiety, experience of violence, use of all drugs, unemployment and imprisonment. Compared to the group who was not persistently homeless, the persistently homeless group at follow-up was less likely to be employed, had higher anxiety scores, higher depression scores, was more likely to report moderate or greater pain, more likely to report relapse to drug use, and more likely to use detox services in the past 6 months. Those who were persistently homeless also were more likely in the past 30 days to have an inpatient mental health stay and inpatient addiction services but not more likely to receive a medication for addiction, to have an inpatient stay for physical health problem or use the emergency department in the past 30 days. **Conclusions**: Providing primary care, mental health psychotherapy, medications for substance use disorder (SUD) and mental health within an integrated addiction agency will likely increase the number of clients receiving comprehensive treatment and may better serve the group of clients who are persistently homeless.

Navigating Your Way to Treatment: Results from an Embedded Buprenorphine Clinic in Primary Care

Valeria Gutierrez, BA; Irina Kryzhanovskaya, MD – University of California San Francisco

Background: X-waivered providers in our healthcare system are scattered throughout various clinics, often practicing in silos. To address this problem, we launched an embedded buprenorphine clinic managed by a patient navigator within our General Internal Medicine (GIM) division. The embedded nature of the clinic in primary care increases access to treatment for opioid use disorder (OUD), enhances care coordination with the patient's primary care provider (PCP), and allows continuation of care in a less stigmatizing and more familiar environment. **Objective:** By launching an embedded buprenorphine clinic, we aimed
1) To increase access to treatment for patients with OUD in primary care
2) To enhance primary care capacity to treat patients with OUD in a timely manner
3) To expand the workforce to ensure clinic sustainability
Methods: A patient navigator manages the twice-monthly half-day buprenorphine clinic as the primary point of contact for referrals. The navigator calls patients ahead of their appointment, meets them in person during their visit, and follows-up with them afterwards. The clinic is staffed by an x-waivered primary care physician. Outreach efforts are focused on patients already receiving their primary care at the GIM clinic housing the buprenorphine clinic. Success is measured by:1. Scheduling patients within 14 days from referral; 2. Increasing the number of patient initiations on buprenorphine by 50% (from 8 to 12+/year)**;** 3. Doubling the number of x-waivered GIM physicians (from 15 in 2019 to at least 30 in 2020)**. Results:** In the first 9 months, we scheduled patients on average 19 days from referral (40% scheduled <14d), and evaluated 28 total patients for buprenorphine. 21 patients were either initiated or maintained on buprenorphine. 15 residents, 6 nurse practitioners, and 14 faculty physicians have received their waiver since the clinic and trainings launched. **Conclusions:** The creation of an embedded buprenorphine clinic in primary care increases access to treatment for OUD and helps patients overcome hurdles to care, solidifying the role of primary care in addiction treatment. The patient navigator role transforms the process of linking patients to care in a comfortable and well-known outpatient setting for optimal management of their chronic disease.

Introduction of Extended-Release Buprenorphine Program into an Office Based Addiction Treatment Program for People Experiencing Homelessness in Boston Before and During COVID-19.

Evan Russell, NP[1]; Samantha Ciarocco, MSW, LICSW[1]; Benjamin Bearnot, MD, MPH, FASAM[2,3] – 1. Boston Health Care for the Homeless Program, Boston MA; 2. Division of General Internal Medicine, Massachusetts General Hospital, Boston, MA; 3. Department of Medicine, Harvard Medical School, Boston, MA

Background: Extended-release buprenorphine (XR-buprenorphine) was approved in 2017 for treatment of opioid use disorder (OUD) as a once-monthly subcutaneous injection. Those who experience homelessness and OUD may have difficulty adhering to sublingual buprenorphine regimens, due to loss, theft, or inability to manage medications. **Objective:** To describe the timeline and barriers to implementing an XR-buprenorphine

program at two Boston Health Care for the Homeless Program (BHCHP) office-based addiction treatment (OBAT) clinic sites in Boston. **Methods**: We decided to offer XR-buprenorphine as a treatment option in the fall of 2019 with the goal of reducing some barriers of medication management and the number of in-clinic follow up visits. Physical changes to the clinic medication room, administrative policies, nurse training sessions, billing workflows, and licensure changes delayed the start date to February 2020. In March 2020, the global COVID-19 pandemic struck and changed the environment of care administration. **Results**: In August 2019, we began the process of introducing XR-buprenorphine. Over the subsequent 6 months we developed processes to procure, store, and administer XR-buprenorphine and initiated treatment in 14 individuals. After the arrival of COVID-19 pandemic BHCHP began to limit in-clinic services and deliver care at alternative care sites which paradoxically made once-monthly buprenorphine less viable as a treatment option. Regulation around XR-buprenorphine requires that the drug be ordered from a specialty pharmacy, stored with specific security and tracking, and administered by staff at a clinic site matching the address on the ordering provider's DEA registration. These created a burden to the clinic and a barrier to patients. **Conclusions**: BHCHP was able to establish XR-buprenorphine treatment program over a 6 month period, but found that regulations related to XR-buprenorphine limited its availability and created barriers to access of medication. Restrictions related to ordering, delivery, and administration limited the anticipated utility of the novel treatment. Inability to get the medication to where the patient preferred to receive treatment and necessity for in-person administration of the drug, particularly during the COVID-19 crisis, resulted in additional barriers to treatment than previously experienced with oral formulations of buprenorphine.

Patient Preferences on Choosing Buprenorphine Over Methadone in a Large, Safety-Net Opioid Treatment Program: A Qualitative Study

Laura Checkley, MD; Scott Steiger, MD; Kelly Knight, PhD - University of California San Francisco

Background: Buprenorphine availability for the treatment of opioid use disorders (OUD) has expanded in the United States. Programs that previously offered only methadone maintenance to patients with OUD now offer equal choice between buprenorphine and methadone at the same location, yet little is known about patient preferences for buprenorphine over methadone in these settings. **Objectives**: To understand the decision-making factors and motivations underlying why patients opt for buprenorphine over methadone for treatment of OUD when offered equally in a large, safety-net opioid treatment program (OTP). **Methods**: We conducted semi-structured, qualitative interviews with patients receiving buprenorphine, in which we asked about drug use and treatment history, reasons for choosing buprenorphine, advantages and disadvantages of choosing buprenorphine, and what they would like to see changed in their treatment experience. **Results:** Participants had varied exposure to buprenorphine prior to their current treatment, ranging from none to years of experience in multiple settings. Increased flexibility with take-home doses and a different subjective experience compared to methadone including decreased sedation and the idea that it is easier to remain opioid-free were shared motivations for choosing buprenorphine over methadone, and seen as continued advantages during their treatment. Difficulty with transition to buprenorphine was a noteworthy challenge for many. **Conclusions**: Overall, patients maintained on buprenorphine at a large, urban safety-net OTP viewed their treatment favorably compared to methadone. Increased autonomy in light of federal regulation differences and an improved physical profile were significant decision-making factors, although the number of patients choosing buprenorphine at the OTP remains low. Targeted patient education surrounding induction and focus on improving structural barriers such as dosing efficiency may enhance patient experiences.

Integrating System-Level Metrics to Evaluate Naloxone Distribution Among Patients Seen by a Hospital-Based Addiction Consult Service

Caroline King, MPH; Jackie Sharpe, PharmD; Bradley M. Buchheit, MD, MS; Honora Englander, MD - OHSU

Background: Hospitalization is a critical touchpoint for people with opioid use disorder. Before discharge, providers can prescribe naloxone, an opioid overdose reversal drug, to patients with opioid use. Previous

research has conceptualized a naloxone care continuum from a patient perspective; here, we integrate systems-level steps into this continuum to describe hospital-based distribution of naloxone. **Objective**: To evaluate hospital-based naloxone distribution using a continuum of system-level metrics. **Methods**: We analyzed data from patients with self-reported heroin or other opioid use in the 30 days prior to hospital admission, seen by an addiction consult service at an academic hospital from September 2015 through May 2018. We report the percentage of patients who used opioids, were prescribed naloxone, knew they were prescribed naloxone, obtained naloxone, and used naloxone successfully. **Results**: From 2015 to 2018, we consented 486 patients to participate in baseline (at hospital admission) and follow-up (after hospital discharge) surveys. Of those, 192 (39.5%) had used heroin, 170 (35.0%) had used other opioids, and 90 had used both (18.5%) in the previous 30 days. Of the 272 patients with any opioid use, 150 (55.1%) patients were prescribed naloxone during the study period. Naloxone prescribing increased annually, with rates trending 25.6%, 46.6%, 67.3%, and 77.5% from 2015 to 2018 respectively ($p<0.001$). 59 patients who were prescribed naloxone completed the study follow-up survey. Of those, 39 (66.1%) knew they were prescribed naloxone and picked it up from the pharmacy; 16 (27.1%) reported they did not know it had been prescribed. Of the 39 who reported picking up their naloxone, three (7.7%) reported using it successfully following discharge. **Conclusions**: A care continuum model that integrates system and patient level steps for patient naloxone access can help illuminate gaps in naloxone distribution. Further research should consider this framework to allow better evaluation of naloxone distribution by hospital-based providers and should seek to address modifiable gaps in the continuum.

Successful Microdose Transition From High Dose Oxycodone to Buprenorphine in a Patient with Sickle Cell Disease Hospitalized for a Vaso-Occlusive Episode

Sarah Leyde, MD; Triveni Defries, MD, MPH - University of California San Francisco

Background: Many adults with sickle cell disease (SCD) experience both chronic pain and acute pain flares due to vaso-occlusive episodes. Buprenorphine is increasingly used to treat chronic pain in patients with SCD, yet there are few established approaches on how to transition from full agonist opioids.

Learning Objectives:
1) Describe a microdose approach to buprenorphine transitions
2) Discuss the evidence for prescribing buprenorphine to patients with pain complications of SCD

Case Presentation: The patient is a 22-year old woman with SCD and chronic pain on 960MME of oxycodone who was admitted to the hospital from jail for a vaso-occlusive episode. Providers disagreed on whether she met criteria for opioid use disorder but it was clear that her pain was uncontrolled and her functional status was suboptimal on the current regimen. On hospital day 5, a 20mcg/hr transdermal buprenorphine patch was started while oxycodone was continued. Over the next week, transdermal and sublingual buprenorphine were slowly increased, and oxycodone was tapered off completely. Maximum COWS score was 7, which occurred after swallowing buprenorphine tablets. Buprenorphine was gradually uptitrated to 42mg/day (in four divided doses). The patient tolerated the transition well. In her own words, “I feel that the switch was very helpful and necessary. I would recommend it for anybody.”

Discussion: Previous reports of buprenorphine use among patients with sickle cell disease suggest safety, acceptability, and decreased healthcare utilization. Literature has shown that buprenorphine can be started after tapering full agonist opioids to lower morphine equivalent dosing in patients with SCD. This case is the first to present a microdose strategy that took place without first tapering opioids. In contrast to the traditional method of buprenorphine induction in which patients wait for moderate opioid withdrawal symptoms, we utilized a microdosing approach to minimize withdrawal. In this case, the dose of buprenorphine needed to control pain was significantly higher than is typical. Hospitalization for acute pain flare presented an opportunity to meet this patient’s goal to start buprenorphine, and to coordinate care across addiction and medical specialists as well as jail health services.

Substance Use, Mental Health Treatment Seeking, and Perceptions of Unmet Need in Individuals With a Past Year Major Depressive Episode: Results From the 2017 National Survey of Drug Use and Health
Aaron Hunt, MS; Leah Adams, PhD - George Mason University

Background: Rates of depression, a leading cause of disability and mortality world-wide, continue to trend upward. Despite the existence of effective treatment, there remains a significant treatment gap for depression, partially due to low professional help-seeking by people experiencing depressive episodes. Additionally, individuals with comorbid substance use may be doubly affected, as prior research has found this population to be at risk for an unmet need for healthcare. To address this gap, we considered differences between individuals who sought treatment and perceived an unmet need versus those who did neither. **Objective**: We examined group differences in overall health, impairment, and engagement in substance use between people who met criteria for a past year major depressive episode (MDE) and did not perceive an unmet need nor seek treatment for mental health care (Group 1) versus those with a past year MDE who did perceive an unmet need despite seeking treatment (Group 2). **Methods**: Data are from the 2017 National Survey of Drug Use and Health. Participants (N = 2,102) were over 18 and met criteria for a past year MDE. Comparisons were made through survey design adjusted chi squares and t-tests using R Version 3.4.1. **Results:** Group 1 had a significantly higher percentage of individuals who reported having "excellent" or "very good" health than Group 2 ($p < .001$). Group 2 reported significantly more role impairment than Group 1 ($p < .001$). Group 2 endorsed past year cannabis dependence, past year illicit drug dependence (other than cannabis), past year alcohol dependence, and past year substance dependence (any substance) at significantly higher rates than Group 1 (all $p's < .01$). **Conclusions**: Individuals with a past year Major Depressive Episode were more likely to perceive an unmet need for treatment after seeking it when their associated health was lower, they experienced greater impairment across life domains, and had a comorbid substance use diagnosis when compared to those who did not feel they had an unmet need despite not seeking treatment. These results underscore the importance of assessing populations with clinical depression for substance use, connecting individuals with care, and coordinating care across providers.

Understanding Predictors of Treatment Failures For Opioid Use Disorders Accessing Treatment-As-Usual Services
Sara Beeler-Stinn, LCSW, MPA; David Patterson Silver Wolf, PhD; Autumn Asher BlackDeer, MSW; Matthew Grossman – WASHU, St. Louis

Background: Over 2 million Americans are currently living with an opioid use disorder (OUD), a chronic, lifelong disorder without a cure. Over 400,000 opioid overdose deaths occurred between 1999 and is the longstanding leader of accidental deaths in the U.S. OUD treatments are usually multidisciplinary, including both psychotherapy and medications, and treated within the exact same structure of care as all other substance use disorders (eg, treatment-as-usual). Among the broader OUD population, some repeatedly overdose, relapse, end treatment, or do not respond to current treatment approaches. Rather than blame the patient, it is time to examine our treatment-as-usual service structure and understand predictors and profiles of treatment success using big data. **Objectives**: 1. Identify key predictors of treatment failure for OUDs; 2. Increase comprehension of reasons for treatment failure among OUDs; 3. Identify ways to analyze current approaches with OUDs. **Methods**: The 2017 Treatment Episode Data Set- Admissions (TEDS-A) was used to explore past treatments of individuals with an OUD. TEDS-A represents annual admissions from all certified treatment centers receiving federal/state grants. In 2017, there were over 2 million admissions with 607,152 patients diagnosed with an OUD. Along with basic demographic data, our predictive variable was the number of prior treatments. Binary Logistic Regression Models were utilized in this research. **Results**: 20% of the patients diagnosed with an OUD reported having 5 or more prior treatment attempts. American Indians/Alaskan Natives were 1.35 times more likely to have 5 or more prior treatments than Whites. Females were 82% as likely to report 5 or more treatments as men. People aged 18-20 were 65% as likely as those aged 30-34 to have 5 or more prior treatments. Note: If accepted, the full prediction model and its variables will be made available to attendees.

Conclusions: There is a significant number of patients being admitted to treatment-as-usual services with multiple past treatment experiences. Our prediction model shows the likelihood of continued, future treatment failures if treatment does not change. This large sub-group with past treatment failures require alternative treatments. Recycling this population back through the same treatment-as-usual, is both clinically and ethically questionable.

Successful Implementation of Managed Alcohol Programs in the US During the COVID-19 Crisis

Jessica Ristau, MD[1]; Seth Gomez, PharmD[2]; Nicky Mehtani, MD, MPH[1]; Michelle Nance, NP[3]; Colleen Surlyn, MD; Joanna Eveland, MD; Shannon Smith-Bernardin, PhD, MSN, RN[3]; Devora Keller, MD[3] – 1. University of California, San Francisco, Zuckerberg San Francisco General Hospital; 2. Alameda County Behavioral Health Care Services; 3. School of Nursing, University of California-San Francisco, CA; San Francisco Department of Public Health, San Francisco, CA

Background: The COVID-19 crisis presented new challenges and opportunities in managing alcohol use disorders among people experiencing homelessness and others unable to self-isolate during shelter-in-place restrictions. The current standard of care requiring abstinence for shelter engagement is impractical for many with severe alcohol use disorders and poses a modifiable risk towards adherence to self-isolation orders, particularly at Isolation and Quarantine (I&Q) sites. Managed Alcohol Programs (MAPs) have been successful in increasing housing adherence for those with physical alcohol dependence in Canada but, to our knowledge, have not previously been implemented in the U.S. To avoid life threatening alcohol withdrawal syndromes and support adherence to COVID-19 self-isolation and quarantine orders, the public health departments of San Francisco and Alameda County piloted the implementation of MAPs. **Objectives: 1.** Describe the implementation of MAPs in the Bay Area, including protocol development, quality improvement, evaluation, and challenges addressed; 2. Establish MAPs as an opportunity to increase adherence to (I&Q) sites during the COVID-19 pandemic**; 3.** Facilitate discussion on the continuation of alcohol management post COVID-19 **Methods:** We described the steps used to implement alcohol management at 3 public health isolation sites within San Francisco and Alameda Counties. All three settings utilized processes that included: identification of champions for system-level advocacy, engagement of stakeholders, protocol development, and iterative protocol change during the implementation process. **Results:** We present the MAP protocols, key lessons learned, and suggested outcomes to evaluate in future pilots. In the first two months of MAP implementation, over 26 individuals were enrolled collectively among all sites and there have been no adverse events. **Conclusions:** MAPs have been implemented in the US to aid adherence to I&Q site guidelines. Lessons learned from implementing pilot MAP programs provide a foundation for their expansion as a recognized public health intervention for individuals with severe alcohol use disorders who are unable to stabilize within existing care systems. Based on the success of MAP implementation, efforts are under way to investigate alcohol management in homeless populations more broadly.

Efficacy of a Spiritual Intervention in Improving the Psychospiritual Well-Being of People With Substance Use Disorders: A Pilot Randomized Controlled Trial

Audrey Hang Hai, PhD; Bill Wigmore, BA; Cynthia Franklin, PhD; Clayton Shorkey, PhD; Kirk von Sternberg, PhD; Allan Hugh Cole Jr., PhD; Diana M. DiNitto, PhD – Boston University

Background: Substance use is highly associated with low levels of psychospiritual well-being, and the co-occurrence of substance use and psychospiritual problems can lead to a wide range of negative consequences. Therefore, an integrated treatment approach that aims to improve both substance use and psychospiritual well-being is called for in substance use treatment. Prayer is the most commonly used alternative health treatment in the United States and holds promise as an effective ingredient of integrated treatment. Research supports prayer's effectiveness in reducing substance use. However, studies on prayer's efficacy in improving psychospiritual well-being among people with substance use disorders are lacking. This study addressed this gap by testing the effects of a prayer intervention, called Two Way Prayer Meditation (TWPM), on the

psychospiritual well-being of adults with substance use disorders. **Objectives**: Hypotheses were that practicing TWPM would be associated with (1) lower psychological distress, (2) higher self-esteem, and (3) higher spiritual well-being. **Methods**: This study employed a randomized controlled trial design with pretest and posttest. In total, 134 adults in four residential recovery programs participated in the study and were randomly assigned to either the TWPM condition or the treatment-as-usual control condition. Sensitivity analyses were conducted by excluding cases with more than minimum number of missing items. Treatment effect sizes were estimated using Hedges' g. **Results**: Both primary and sensitivity analyses found significant treatment effects on daily spiritual experiences (condition x time, b= 4.50, standard error [SE]= .74, t= 6.05, p<.001, Hedges's g= .62), reliance on God (b= 5.00, SE= 1.52, t= 3.29, p<.010, g= .49), private religious practice (b= 3.65, SE= 1.11, t= 3.29, p<.010, g= .36), and positive religious/spiritual coping (b= 1.77, SE= .35, t= 5.07, p<.001, g= .68). Treatment effects on psychological distress, self-esteem, and overall spirituality self-ranking reached significance in the primary analysis but not in the sensitivity analysis. **Conclusions**: This study found evidence of TWPM's efficacy in improving some aspects of the spiritual well-being of adults with substance use disorders. TWPM was also found to be promising in decreasing psychological distress and increasing self-esteem.

Pharmacy Nonprescription Syringe (NPS) Policy Survey

Danielle Kubicsko, PharmD; Jeffrey Paul Bratberg, PharmD - University of Rhode Island

Background: Vulnerable populations face barriers to sterile syringe access. Pharmacists offer low-barrier syringe access, but rules vary by state. **Objective**: This study's objective was to obtain information from state boards of pharmacy on current laws, regulations, and policies related to NPS access from community pharmacies. The goal is creation of a comprehensive guide specifically designed for community pharmacists based on NPS policies in each state to help enhance harm reduction strategies. **Methods**: A Rhode Island Department of Health/University of Rhode Island IRB-approved survey link was emailed to each jurisdiction's contact person on the National Association of Boards of Pharmacy (NABP) website in August and September 2019. Questions included information regarding sale requirements, recordkeeping, dissemination of educational material and additional restrictions. If not completed within ten business days, subjects were contacted by the phone number listed on the NABP website to conduct the survey via telephone or email. Descriptive statistics were used to report survey responses. **Results**: 36% (n=18) of 50 states responded, 32% (n=16) completed the survey and 87% provided policy links (n=14). In all responses, pharmacists can complete sales of NPS, and in 94% (n=15), other pharmacy personnel may. 19% (n=3) have age restrictions on sales. One state requires "suitable" identification. One specifies the patient be provided disposal options. 13% (n=2) require the seller have knowledge of the purchaser's intended use. In 25% (n=4) of reporting states, prevention of blood borne disease is specified as an acceptable reason for dispensing. Two require recordkeeping; the seller must ask the buyer for his/her name, address and intended use as well as document the quantity sold. 19% (n=3) had experienced policy changes since June of 2017 and provided links to such changes. Ongoing discussions have been taking place in 19% (n=3) regarding policy changes. **Conclusions:** Several NPS barriers were noted including identification requirements, knowledge of intended use, and recordkeeping. A review of the policy links demonstrates need for more clear and accessible policies in order for pharmacists to sustainably and equitably promote harm-reduction. Pharmacists play an essential advocacy role to sustain access and remove barriers.

On the Razor's Edge: Untreated Opioid Use Disorder in US Jails

Surabhi Nirkhe, MD - University of California San Francisco

Background:

Despite the overwhelming prevalence of opioid use disorder (OUD) among incarcerated individuals, jails and prisons are woefully ineffective at treatment. Where treatment is offered, its efficacy is hampered by concerns about diversion of medications for OUD (MOUD). The SF County Jail (SFCJ) is among the minority of jails

that offer pre-release MOUD in order to decrease the risk of post-release overdose. However, SFCJ does not initiate treatment at intake due to the risk of diversion.

Learning Objectives:
Identify current practices and limitations of OUD treatment in jail
Describe the risks of untreated OUD in jail

Case Presentation:
Following many unsuccessful requests for buprenorphine at SFCJ, a 25 year old man with OUD purposefully ingested multiple razor blades in order to be brought to the hospital to start maintenance buprenorphine. He started using non-prescription opioids at the age of 12, heroin at 14, and injection fentanyl in the last 2 years. Amidst multiple overdoses and drug-related incarcerations, his only perceived period of stability was a year when he was prescribed buprenorphine. He reported intermittent intranasal fentanyl use while in jail. In the emergency department, he was in no distress and had a CT that confirmed multiple metallic objects in the duodenum. His COWS score was 12, and he was started on buprenorphine/naloxone per protocol to a stable dose of 24/6 mg. After a period of monitoring, he was discharged to jail with a plan for serial imaging to confirm passage of the blades. We strongly recommended that he be continued on buprenorphine in jail.

Discussion:
This case emphasizes the need for improved access to MOUD in jail. Individuals with untreated OUD in jail are at high risk for complications and deaths related to substance use, both during and after incarceration. MOUD significantly reduces these deaths, as demonstrated by a 2014 retrospective cohort study in Australia. Although more scrutiny of OUD-related deaths in jail is needed, possible explanations include a high rate of suicide, suffering from untreated withdrawal, and risk of overdose. Where diversion is the primary concern, we need more investment in diversion-deterrent protocols and drug formulations in order to promote life-saving treatment.

Barriers and Motivators For Progressing Along the Buprenorphine Training and Prescribing Path
Rachel P. Winograd, PhD; Bridget Coffey, MSW, MA; Candice Woolfolk, PhD, MPH; Claire A. Wood, PhD; Margaret Nagle, PhD, CNS-PMH, BC, FAAN- University of Missouri, St. Louis - Missouri Institute of Mental Health

Background: Access to buprenorphine for opioid use disorder (OUD) is suboptimal, largely because few medical professionals are waivered to prescribe it and most treat only a small number of patients. No studies have examined how barriers and motivators differ across stages of the buprenorphine X-waiver path (considering obtaining an X-waiver, beginning to prescribe buprenorphine, prescribing to more people), nor have researchers compared the barriers/motivators of X-waivered providers who do not prescribe buprenorphine to those who do. **Objective**: Identify the strongest barriers and motivators associated with each progressive step of buprenorphine training and prescribing among a sample of Missouri-based medical professionals. **Methods**: We surveyed providers (N=130) who completed X-waiver courses between March 2017 and September 2019. We computed item weights using the proportion who endorsed each item and the average rank of the item's importance as a barrier or motivator across three distinct phases: 1) considering obtaining an X-waiver, 2) beginning to prescribe, and 3) prescribing to more people. **Results:** We divided respondents into two groups: prescribers (n=57, 46.3%) and non-prescribers (n=66, 53.7%). Across groups and phases, lack of access to psychosocial support services, need for higher levels of care, and clinical complexity were highly-endorsed and heavily-weighted barriers. Among non-prescribers, administrative burdens, potential of becoming an addiction clinic, and concern about misuse and diversion were barriers identified when initially obtaining X-waivers and considering prescribing buprenorphine. Among prescribers only, patients' inability to afford medications was a barrier across phases. Prominent motivators among prescribers and non-prescribers were the effectiveness of buprenorphine, improvement in other health outcomes through managed OUD, a personal interest in treating addiction, and finding OUD treatment rewarding. Only prescribers reported the presence of institutional support

and mentors or experienced colleagues as significant motivators. **Conclusion**: Barriers and motivators regarding buprenorphine training and prescribing vary by phase and between individuals who end up prescribing versus non-prescribers who only complete the X-waiver training. A particularly addressable difference was the endorsement of institutional support and mentorship as strong motivators among prescribers, suggesting such 'top down' backing is critical for progression from solely being X-waivered to being a practicing buprenorphine provider.

Feasibility of Hospital Buprenorphine Initiation Outside of Urban Academic Centers

Hannah Snyder, MD[1]; Arianna Sampson, PA-C[2]; Melissa Speener, MPH; Aimee Moulin, MD[3]; Andrew Herring, MD[4] – 1. University of California San Francisco, Department of Family and Community Medicine; 2. Marshall Medical Center; 3. University of California Davis, Department of Emergency Medicine; 4. Highland Hospital-Alameda Health System

Background: The California Bridge Program (CA Bridge) supports medications for opioid use disorder (MOUD) initiation in emergency department and inpatient settings. Hospital initiated MOUD is an accepted strategy in urban, academic settings, but it's implementation in rural and non-teaching settings has not been well described. **Objective:** To describe the initial results of CA Bridge support and technical assistance among a cohort of rural and non-teaching acute care hospitals in California implementing MOUD programs. Methods: Site and county characteristics were described using Office of Statewide Health Planning and Development and California Department of Public Health data. Hospitals provided monthly aggregate data on their activities related to MOUD implementation. Summary descriptive analyses were performed on data collected from April 2019 through January 2020. **Results**: Of the 29 included hospitals, 9 (31%) were classified as rural of whom 7 had <150 beds (78%). 20 of the included hospitals were non-teaching hospitals (69%). In April 2019, rural sites (n=8) reported a median of 1 person (SD 3.0) identified with OUD, 1 acute care encounter (SD 3.44) with buprenorphine administration, and 1 acute care identified person (SD 1.1) who attended follow up. In January 2020, rural sites (n=9) reported a median of 19 people (SD 22.7) identified with OUD, 6 acute care encounters (SD 12.5) with buprenorphine administration, and 7 acute care identified patients (SD 10.0) who attended follow up. In April 2019, non-teaching sites (n=14) reported a median of 2 people (SD 20.3) identified with OUD, 1 acute care encounter (SD 17.5) with buprenorphine administration, and 1 acute care identified persons (SD 11.3) who attended follow up. In January 2020, non-teaching sites (n=20) reported a median of 21 people (SD 22.3) identified with OUD, 12 acute care encounters (SD 27.1) with buprenorphine administration, and 9 acute care identified patients (SD 11.5) who attended follow up. **Conclusions**: Implementation support, targeted funding, and technical assistance may be associated with increases in acute care MOUD initiation in rural and non-teaching hospitals. MOUD initiation is feasible outside of urban academic medical centers.

Provider-Panel and Practice-Level Characteristics Associated with Prescriber Initial Adoption of Medication for Opioid Use Disorder in Pennsylvania Medicaid

Gerald Cochran, MSW, PhD; Evan Cole, PhD; Michael Sharbaugh, MA; Dylan Nagy, MA; Adam J. Gordon, MD; Walid Gellad, MD; Janice Pringle, PhD; Todd Bear, PhD; Jack Warwick; Coleman Drake, PhD; Chung-Chou H. Chang, PhD; Ellen DiDomenico, MA; David Kelley, MD; Julie Donohue, MD - University of Utah, School of Medicine, Division of Epidemiology

Background: Prescriber adoption of medication for opioid use disorder (MOUD) has been a barrier to expanding opioid use disorder (OUD) treatment. Limited data is available regarding what provider/practice-related conditions may promote adoption. **Objectives:** We explored provider-panel and practice-level factors and their relationship with initial MOUD adoption among urban/rural primary care providers (PCPs) in Pennsylvania. **Methods:** *Cohort.* We employed a retrospective cohort design from 2014-2018 using Pennsylvania Medicaid medical/pharmacy claims associated with non-dual eligible enrollees aged 18-64 years

as well as provider information. PCPs included in the study were required to be a Medicaid program provider, have no history of MOUD provision (buprenorphine/buprenorphine-naloxone or oral/extended release naltrexone claims), and have treated ≥10 Medicaid enrollees annually. *Variables*. Initial MOUD adoption was defined as a buprenorphine/buprenorphine-naloxone or oral/extended release naltrexone fill (only OUD formulations) from the PCP. Independent variables explored included a series of provider-panel and practice-level characteristics. *Analyses*. Data used in the analyses involved all years a PCP met inclusion criteria and were excluded in the dataset after adoption. Regression models were estimated for urban/rural adopters vs. non-adopters to assess associations between provider-panel and practice-level variables in the year preceding adoption. Models were estimated with robust standard errors to account for correlated observations for providers across time. **Results:** We examined data from 11,135 PCPs—of whom 895 adopted MOUD (113 rural/782 urban). Adopters of MOUD consistently served larger Medicaid populations compared to non-adopters (p<0.05)–with urban PCP practices of >250 enrollees having a 36% increased odds of adoption (p=0.03). Adopters also prescribed antidepressants/antipsychotics to consistently larger enrollee populations relative to non-adopters (p<0.05)–with increasing proportions of patients receiving antidepressant/antipsychotic medications from PCPs associated with increased odds for adoption (Odds Ratio[OR]=1.6-9.3, p<0.05). More adopters' Medicaid patients had OUD diagnoses compared to non-adopters (p<0.05), and for every 100 enrollees, each additional patient with OUD increased the odds for adopting by 4% in rural (p=0.02) and 2% in urban practices (p<0.0001). **Conclusion:** Initial MOUD adoption appears to be concentrated among PCPs prescribing mental health medications and caring for those with OUD. Future research should leverage these results to test/implement interventions targeting MOUD adoption among PCPs.

A Status Report of a NIH Helping to End Addiction Long-term (HEAL)-Supported Study: Validation of A National Prescription Monitoring Program Opioid Risk Algorithm

Gerald Cochran, MSW, PhD; Jennifer Brown, PhD; Stacey Frede, PharmD; Margie E. Snyder, PharmD; M. Aryana Bryan, MSW; Brooke Taylor, PharmD; Omolola Adeoye–Olatunde, PharmD; Udi Ghitza, PhD; Theresa Winhusen, PhD - University of Utah, School of Medicine, Division of Epidemiology

Background: Community pharmacies rely on Prescription Monitoring Programs (PMP) to help identify opioid-related risk; however, a validated PMP-based opioid-risk algorithm does not exist. The PharmScreen study (CTN-0093) is a critical NIH Helping to End Addiction Long-term (HEAL)-supported study designed to validate an opioid-risk algorithm developed/deployed by the largest US PMP vendor (present in 42/50 states). **Objective:** This presentation informs stakeholders regarding study status and if the hypothesized population for a priori-defined analyses is represented within the sample. **Methods**: In collaboration with a top-5 largest US pharmacy chain, patients picking up opioid medications are offered study information at point-of-sale in 19 Ohio/Indiana pharmacies. Power calculations (N=1,523) were based on national high-risk opioid use rates among patients with opioid medications (2.1%). Eligible/consented participants complete gold-standard opioid use, behavioral/general health, and demographic assessments. For this presentation, frequencies/percentages were calculated to describe high-risk opioid use defined by the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST); demographics were compared to previously published reports using t-/z-statistics; and logistic regression was employed to assess associations between known concomitant risk characteristics and high-risk opioid use. **Results**: From 11/1/2019-4/6/2020, 526 participants completed the study assessment (74% response rate). Consistent with national data, 3.7% (n=19) of respondents reported high-risk prescription opioid use. T-/z-test comparisons showed participant demographics (e.g. age, sex) were similar to existing studies of pharmacy patients filling opioid medications (p>0.05). Also consistent with previous national and clinical research, increased likelihood of high-risk opioid medication use was observed among respondents with high-risk sedative use (Odds Ratio[OR]=9.01), depression (OR=2.08), poor general health (OR=1.64), and more severe pain (OR=1.34) compared to those with moderate/low-risk use (p<0.05). **Conclusion**: To date, this HEAL-supported study has recruited participants with high-risk opioid use, demographics similar to previous

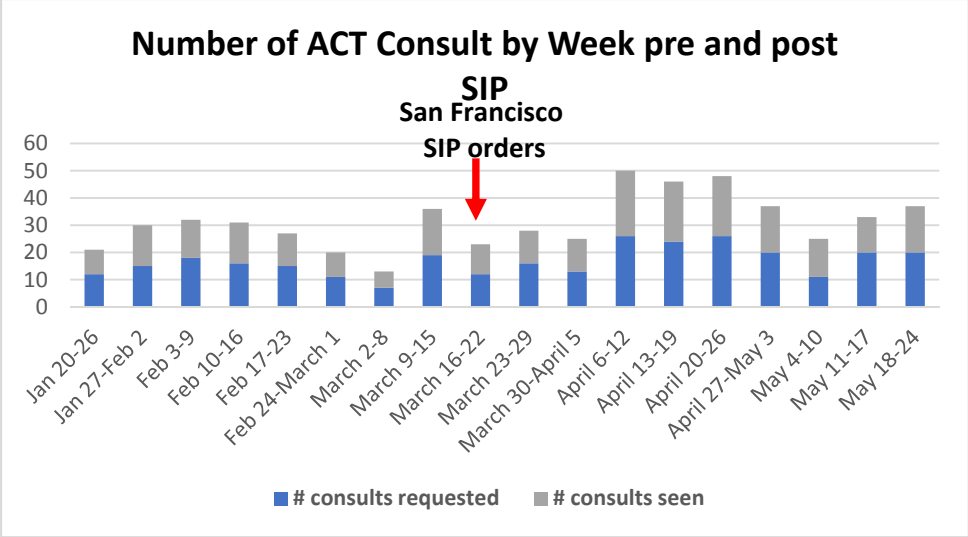
reports, and concomitant conditions associated with high-risk use—positioning it for successful completion of a priori analyses.

Impact of the International Collaborative Addiction Medicine Research Fellowship for Physicians on Future Engagement in Addiction Research: A Controlled Comparison Trial
Jan Klimas, PhD, MSC; Huiru Dong, PhD (c); Michee Hamilton, MSC; Lauren Gorfinkel, MPH; Walter Cullen, MD; Evan Wood, MD, PHD; Nadia Fairbairn, MD - BC Centre on Substance Use

Background: The International Collaborative Addiction Medicine Research Fellowship is a U.S. National Institute on Drug Abuse (NIDA)-funded program hosted by the British Columbia Centre on Substance Use (BCCSU) in Vancouver, Canada, a substance-use-focused addiction education, research, and care centre. **Objectives**: To prospectively evaluate how an international one-year intensive research training program for addiction medicine physicians contributed to subsequent research involvement and productivity. **Methods:** We compared admitted fellows with non-admitted controls, using baseline questionnaire and peer-reviewed publication rate. Data on participant publications were compared from fellowship enrolment onwards using biomedical databases (eg. PubMed). **Results**: Between July 2014 – July 2019, 56 (39 women) physicians enrolled in the study. At baseline, 45 participants reported past research involvement, 18 had one or more advanced graduate degrees (e.g., MPH), and had a median of one peer-reviewed, first author publication (Interquartile Range [IQR] = 0-2). They were internal medicine physicians (n = 8), family physicians (n = 33), psychiatrists (n = 5) and others (n = 4), with three-year median length of time in the study (IQR: 2-5). At fellowship completion, there was a significant difference between fellows (n = 25) and controls (n = 31) in total number of publications (Rate Ratio [RR] = 8.33, 95% Confidence Interval [CI], 2.87 – 24.21, $p<0.001$), as well as first author publications (RR = 3.88, 95% CI, 1.39 – 10.83, p = 0.001). **Discussion**: The first five years of fellows' productivity indicate undertaking this fellowship was independently associated with significant research outputs, signaling successful training of addiction physicians to help close the implementation gap between addiction science and clinical practice.

COVID-19's Impact on Addiction Care Team Consults in an Urban, Safety-Net Hospital
Marlene Martin, MD; Hannah Snyder, MD; Oanh Nguyen, MD - UCSF

Introduction: In January 2019, an inpatient addiction medicine consult service, the Addiction Care Team (ACT), launched in an urban safety-net hospital in San Francisco. ACT started with a staggered roll out to hospital services. Since January 2020, ACT has been in steady state–available to all hospital departments except psychiatry and the emergency department (ED). COVID-19 is disproportionately affecting marginalized populations, including those with substance use disorders (SUD). On March 16, 2020, San Francisco shelter-in-place (SIP) orders went into effect. Since then, EDs and hospitals report decreased patient volumes. We describe demand for the ACT's services before and after shelter-in-place orders. **Objective:** Describe the pattern of ACT consults since SIP order took effect in San Francisco. **Methods:** Retrospective analysis of ACT consultations by week from January 20, 2020-May 24, 2020. We describe the number of consultations, patient demographics, and number of successful residential intakes. **Results:**



Month	# consults requested	%Homeless	%Mental Health diagnosis	No Phone	# successful residential intakes
Jan 2020	59	39%	11.9%	96.6%	1
Feb 2020	60	53.3%	8.3%	85.0%	5
March 2020	59	64.4%	13.6%	71.2%	20
April 2020	97	58.1%	29.9%	71.1%	6
May (MTD)	57	47.4%	33.3%	84.2%	1

Conclusions: Despite an overall decrease in our hospital's census during COVID-19, ACT saw an acute and sustained demand for consultations after SIP.
Disasters such as pandemics exert their highest tolls on marginalized populations, including those with SUD. Trauma, social isolation, and economic distress may trigger return to use, increased use, and new substance use. Furthermore, disruptions in shelter systems, drug supply, and isolated substance use place patients at increased risk. For some people COVID-19 may drive treatment seeking while for others it may drive riskier use. At the same time, accessing treatment may be more difficult. We need qualitative patient experiences to determine the impact of COVID-19 on substance use in San Francisco. The increase in ACT consults among a psychosocially complex population is clear. In times of disasters, resources must target to our most marginalized populations.

Do No Harm: Harm Reduction Curriculum for Pre-Clinical Students

Raagini Jawa, MD, MPH[1]; Nivetha Saravanan, BA[2]; Shana Burrowes, MPH, PhD[2,3]; Lindsay Demers, MS, PhD[4] – 1. Department of Infectious Disease and General Internal Medicine; 2. Boston University School of Medicine 3. Department of Medicine, School of Medicine; 4. Department of Health Law Policy and Management, Boston School of Public Health

Introduction: In light of the growing opioid epidemic, there is a pressing need for healthcare providers to have training on the diagnosis and treatment of substance use disorder spanning the entire spectrum of addiction. It is critical that this education begins early in medical training to destigmatize and normalize addiction medicine. Despite recent advancements in substance use education, there is a lack of hands-on, standardized curricula on the harm reduction of injection drug use in the pre-clinical years. **Methods**: To fill this gap, we developed a multi-disciplinary, student-facilitated harm reduction workshop open to training graduate medical, dental, physician's assistant, and public health students with three main educational objectives. (1) Connect medical professionals with community partners, (2) Explore the ideology of harm reduction in an interactive discussion led by a second-year addiction medicine and infectious disease fellow, and (3) overview overdose education and naloxone training in a simulation-based didactic. All attendees were asked to take a voluntary pre- and post-training survey to evaluate workshop effectivity. **Results:** A total of 41 students from a variety of graduate

schools participated in this workshop. We were able to successfully link the pre- and post-data of 29 participants. Students were assessed on comfort in explaining harm reduction to a patient or peer, knowing materials needed to inject drugs and practices to minimize harm, and administering naloxone as a first responder (via a 5-point Likert scale). We saw statistically significant increases in all aforementioned categories. **Discussion**: We found that our training filled a curricular gap by significantly improving students' knowledge of and comfort in communicating harm reduction techniques and understanding the practices of injection drug use. The workshop can effectively train future health care professionals to better communicate with and treat patients with active substance use disorder.

Sustained Diagnosis, Despite Sustained Remission: Barriers to Methadone Treatment for a Woman Living in a Rural Community with Opioid Use Disorder in Long-Term Recovery

Ellen W. Green MD, PhD; Ximena Levander, MD - Oregon Health and Science University

Background

Currently, methadone to treat opioid use disorder (OUD) can only be dispensed by Substance Abuse and Mental Health Services Administration (SAMHSA)-certified opioid treatment programs (OTP). This limitation disproportionately affects Americans living in rural communities.

Learning Objectives

- Recognize barriers to methadone therapy that disproportionately affect rural patients
- Describe alternative modalities of methadone dispensing used internationally
- Determine implications of life-long OUD diagnosis on access to methadone for pain

Case Presentation

A 52-year-old woman was admitted for gallstone pancreatitis in the setting of decompensated cirrhosis from untreated hepatitis C infection and alcohol use. She also had chronic pain and a diagnosis of OUD, in sustained remission for 20 years. On hospital day two, she began experiencing opioid withdrawal symptoms and disclosed ongoing use of non-prescribed 30 milligrams of methadone daily. Her previous OTP had become concerned about her hepatic disease and discharged her from care. Her local primary care provider had prescribed methadone briefly for pain until realizing her OUD history and discontinued. While admitted, we continued methadone 30 mg daily with additional multimodal pain control. On discharge, we attempted referral to an OTP. Her location in a small town, a 90-minute drive from the nearest OTP, was too great a distance in her current medical state. Due to her complex hepatobiliary illness and pain, she felt unable to undertake a microdose buprenorphine induction at present.

Discussion

Other countries, like Canada and Australia, allow primary care prescribing to decrease barriers to methadone. In the United States, modeling indicates primary care prescribing would decrease drive time from an average of 50 minutes to 15 in rural communities. This case also raises the important questions: how long does someone carry a diagnosis of opioid use disorder and how should remote history of OUD affect primary care methadone prescribing for chronic pain? Given the implications of OUD diagnosis on potential barriers to non-OUD care, we need further research and clinical understanding of addiction and recovery to better guide longevity of OUD diagnosis and opioid treatment the setting of decades of sustained recovery.

An Evaluation of Safer Opioid Prescribing in Hospital Settings: A Program Overview (AESOP)

Tamara Mihic, PharmD; Lianping Ti, PhD; Stephen Shalansky, PharmD; Michael Legal, PharmD; Seonaid Nolan, MD - St. Paul's Hospital

Background: Opioid use in hospital and on discharge significantly increases the risk of chronic use and is often the first point of entry for previously opioid naïve patients. Despite this, there are a lack of interventions to

improve the safety of opioid prescribing in this setting. The objective of this study is to describe the implementation and evaluation design of a novel systems-level Opioid Stewardship Program (OSP) piloted at St. Paul's Hospital in Vancouver, Canada. **Methods:** Implemented in January 2020, the OSP consists of a clinical team of a clinical pharmacy specialist and addiction medicine physician who provide audit and feedback of patients receiving opioids in hospital to the most responsible physician (MRP). The program also addresses system-wide prescribing through education and review of hospital policies and order sets. The primary outcome of this study is the difference in proportion of inappropriate opioid prescribing after implementation of the OSP. Inappropriate opioid prescribing is defined through a set of 13 criteria identified through review of the literature, discussion, and consensus by the OSP clinical team and relevant experts. These criteria are also used as the screening criteria for the audit and feedback. Secondary outcomes include uptake of recommendations, high-dose opioid prescribing (>90 MME/d), severe opioid related adverse effects, hospital length of stay, physician and patient satisfaction, and cost-evaluation (if the program is found to be clinically effective). **Results:** Between January 13 – March 17 and May 1 – 22, 2020, the OSP screened 667 unique patients and clinically assessed 282 patients that met inclusion criteria. Of 132 (47%) patients who were found to have inappropriately prescribed opioids, a total of 316 recommendations were made. 91% of recommendations were accepted by the MRP. The most frequent recommendations were for discontinuation of as-needed opioids (28%), patient education (17%), addition or increase of non-opioid analgesics (17%), and adjustment of opioid dose (11%). **Conclusion:** The OSP provides an innovative way to improve opioid prescribing in the acute care setting and reduce adverse events. Findings from the project will provide knowledge users with evidence that will position them to improve health systems and policies in hospital settings.

Humor & Opioid Recovery

Benjamin Canha, PhD, RN - University of Maryland, School of Nursing

Background: The prevalence and mortality rates of opioid use disorders (OUD) have drastically increased in recent years in the United States. Narcotics Anonymous (N.A.) is a successful behavioral program supporting recovery for individuals with OUD. Humor may play an important role in maintaining group involvement and continuing support within the culture of the N.A. program. **Purpose**: The purpose of this study was to understand the ideas, beliefs, attitudes and behaviors of humor in individuals recovering from OUD who are participating in the N.A. program. **Design**: Qualitative ethnography design was used with three types of complementary data collection methods: observations at meetings and social gatherings, personal interviews, and a focus group session. **Results**: Instances of humor between N.A. members were noted in observations. Recorded one-on-one interviews with ten members recovering from OUD provided details of various experiences of humor and led to development of five essential themes: Feels Good, Social, Lighten Up, Healing and Alienate. These findings highlight the mostly positive personal and social benefits participants experienced, as well as possible negative effects. A focus group of seven N.A. members provided interactive discussion of humor and discussed the need to become more conscientious of the detrimental effects of humor. **Conclusion**: The implications of this study suggest the need to explore various humor interventions to assess their relative effectiveness in enhancing recovering and reducing relapses. Due to the small number of participants, results may not be generalizable to all those with OUD in N.A. or represent the possibly wide range of N.A. meetings. This study added to the depth of knowledge about the effects of humor on this population and their recovery process. The importance of humor and having fun in the recovery of OUD should be more widely recognized by healthcare providers as they help those with OUD, as humor has a role to play in supporting N.A. members' recovery from OUD.

Descriptive Analyses of Naloxone Co-Prescribing and Co-Dispensing in the Rhode Island (RI) Prescription Drug Monitoring Program (PDMP)

Brian Bishop, PharmD; Jeffrey Bratberg, PharmD, FAPhA; Laura Chambers, PhD, MPH - University of Rhode Island College of Pharmacy

Background: A majority of published pharmacy naloxone distribution analyses investigate the amount of naloxone that is dispensed from community pharmacies by using insurance claims databases. However, these methods are not representative because they fail to capture prescriptions that are filled without insurance. In October 2017, RI mandated all pharmacies to report dispensed naloxone to the PDMP and, in July 2018, RI mandated clinicians to co-prescribe naloxone to individuals at high risk of overdose. PDMPs are an ideal database for analyzing naloxone co-dispensing because they capture all dispensed prescriptions in real-time and are less expensive to access and monitor than claims databases. **Objective:** To describe trends in patient populations of community pharmacies in RI that were both co-prescribed and co-dispensed naloxone with high-risk medication regimens. **Methods:** We analyzed de-identified RI PDMP data for RI residents age 18 years and older from October 2017 through July 2019. We calculated the monthly percentage of patients who were co-dispensed naloxone with (1) co-dispensed opioids and benzodiazepines within 30 days of each other and (2) opioids greater than or equal to 50 morphine milligram equivalents (MME). **Results:** From October 2017 to July 2019, a majority of naloxone kits distributed were written prescriptions (87.1%; 11,795 written vs. 1,745 standing order). Naloxone co-dispensing for patients with opioid-benzodiazepine overlap within 30 days increased 11-fold from 2.2% (155/7,030) in June 2018 to 24.4% (1,398/5,732) in July 2019. Similarly, the co-dispensing of naloxone for patients with an opioid dose greater than or equal to 50 MME increased 6-fold from 5.0% (337/6,777) in June 2018 to 30.9% (1,787/5,791) in July 2019. **Conclusions:** Two populations dispensed high-risk prescription regimens had an increase in the rate of naloxone co-prescribing from June 2018 to July 2019, which was likely due to both a decrease in inappropriate opioid prescribing and RI's July 2018 mandate. PDMP data only include naloxone dispensed and fails to capture naloxone co-prescribed that was never dispensed, so our co-dispensed measures can be considered a lower bound for the actual rate of naloxone co-prescribing in RI.

Provider Attitudes Towards Shared Decision Making in Opioid Agonist Treatment

Emily Loscalzo, PsyD; Ronald E. Myers, DSW, PhD; Jason Kraman, LSW; Margaret Lowenstein, MD, MPhil, MSHP - Thomas Jefferson University

Background: Shared decision making (SDM), a process in which patients and providers collaborate on healthcare decisions, has received little attention in considering medications for opioid use disorder (MOUDs). **Objective**: We aimed to explore provider attitudes about SDM, knowledge about decision support interventions, and receptivity to using a decision support tool in an opioid agonist treatment (OAT) setting. **Methods**: In July 2018, we conducted semi-structured in-person interviews with multidisciplinary healthcare providers at an OAT program in an urban academic health system in Philadelphia. The interview guide included questions to elicit provider: 1) knowledge about SDM and 2) perceptions related to an online decision support tool (the Decision Counseling Program© or DCP). The DCP is designed to educate patients about their treatment options (methadone vs buprenorphine/naloxone) and guide patients through an exercise to clarify preference. Interviews were recorded, transcribed verbatim, and coded using thematic content analysis. A second research team member coded the transcripts independently. Major themes were conditionally identified and were checked against each other for internal coherence and consistency. Disagreements were resolved through team discussion. **Results**: We interviewed ten providers, including one physician, two nurses, two counselors, three administrators, one navigator, and one certified recovery specialist. Participants were majority female (80%), white (50%), <40 years of age (60%), and had an average of 9.9 years in practice. Most providers said that they tend to use motivational interviewing to guide patients toward accepting a recommended treatment option, rather than engage patients in preference clarification and SDM process. Several interviewees thought that using a tool like the DCP would enable patients to learn about treatment options, resolve values related to their options, and discuss treatment preference with their provider. Potential barriers to DCP use in practice included provider perceptions of time, cost, and patient capacity to complete the preference clarification exercise. **Conclusions**: Providers valued SDM for choices about MOUDs but did not have structured processes for implementation of SDM in practice. Tools like the DCP may be a promising way to increase uptake of SDM. Additional research will be needed to determine efficacy in this clinical setting.

Advancing Nurse Delivery of Alcohol Screening and Brief Intervention (ASBI) Using Competency-Based Simulation Technology

Yovan Gonzalez, DNP, FNP-BC; Deborah S. Finnell, DNS, CARN-AP, FAAN- Gouverneur Healthcare

Background: Nurses, as key members of the healthcare team are well positioned to conduct alcohol screening and provide brief interventions in accord with the identified risk level. Healthcare organizations are seeking ways to educate their staff on these skills, measure their competency, and promote alcohol screening and brief intervention (ASBI) in day-to-day practice. **Objective**: The purpose of this quality improvement (QI) project was to evaluate the effect of an online ASBI simulation program relative to competency, preparedness, confidence, and likelihood to provide ASBI in practice. **Methods**: Thirty-three nurses in four ambulatory care departments at a Federally Qualified Health Center (FQHC) in the Northeastern region of United States participated in this pretest-posttest designed QI project. Descriptive statistics were used to determine competency to deliver ASBIs in four core assessment categories: (1) Raising the subject, (2) providing feedback, (3) enhancing motivation and (4) negotiating a plan. Measures of preparedness, confidence and likelihood to provide ASBIs were obtained prior to, after, and 90-day follow-up. Descriptive statistics were used to examine trends in these scores over time. **Results**: Of the 32 nurses completing the program, 87.5% attained a passing score for ASBI skills assessment. Twenty-nine of the 33 participants completed both the pre- and post-test survey with 8 completing the follow-up survey. The greatest percentage of change in pre- to post-test measures were in confidence (27-42%), followed by preparedness (19-34%) with likelihood lowest at 3-10% change. Change scores from pre- to follow-up continued to be positive, but lower than the pre-post change. **Conclusion:** Online simulation technology can be helpful as a tool to provide on-demand role-play practice in ASBIs while at the same time used to assess for competency in these skills in a low-pressure virtual environment. Not known is whether the system in which nurses practice provides the infrastructure to support ASBI delivery. Booster sessions may be needed to sustain nurses' skills.

"If They Can Somehow Just Get The Ball Rollin'" – Exploring Needs of Hospitalized Adults Who Use Drugs To Improve Engagement in HCV Curative Treatment

Taylor Vega, BA[1]; Ximena Levander, MD[1]; Andrew Seaman, MD[1,2]; Todd Korthuis, MD, MPH[1]; Honora Englander, MD[1] – 1. Oregon Health & Science University; 2. Central City Concern

Background: Hepatitis C virus (HCV) infections and injection drug use are interconnected, worsening crises. Despite ongoing public health investments, rates of hospitalization amongst PWUD and HCV care continuum gaps persist. Many HCV integrated care models focus on outpatient care settings and may fail to adapt to the specific needs of people who use drugs (PWUD). **Objective:** To explore needs of hospitalized PWUD with active HCV to increase readiness and engagement in HCV curative treatment. **Methods**: We conducted a qualitative study of hospitalized adult inpatients with substance use disorder and HCV. Researchers recorded in-depth semi-structured individual interviews of 27 hospitalized PWUD and HCV seen by an addiction consult service at a single urban academic medical center between June and November 2019. Interviews were transcribed and dual-coded deductively and inductively at the semantic level. We performed a thematic analysis using iterative categorization to identify themes. **Results:** Nearly all patients stated hospital providers did not address their HCV concerns, despite feeling "open" to discussions during admission. Some participants recognized needing to "focus" on acute medical and psychosocial issues. However, others voiced frustrations in not receiving updates on treatment eligibility or HCV health effects. Among those who had initiated HCV work-up before hospitalization, many described fragmented HCV care coordination. Others described outpatient barriers to HCV treatment including providers or insurers requiring "clean time." Some patients felt completing necessary HCV treatment work-up in the hospital would consolidate care, motivate follow-up, and support ongoing addictions engagement. Others preferred to focus on "immediate" health and addiction-related issues and postpone HCV care. Lastly, many expressed openness to engaging with an addiction peer, noting that the shared risk factor of intravenous drug use as more important to the relationship than HCV status. Some described peer engagement as a potential resource to learn about HCV and treatment. **Conclusion:** Hospital-level interventions for addressing gaps in the HCV care continuum may be warranted, and should consider the

dynamic needs of PWUD. Hospitalization may be an opportunity to educate patients on HCV and treatment eligibility and to discuss future treatment engagement.

Assessing the Availability of Buprenorphine/Naloxone in Pharmacies Via Telephone Audit: A Feasibility Pilot

Lucas G. Hill, PharmD; Sorina B. Torrez, Pharm D; Lindsey J. Loera, PharmD; Mandy L. Renfro, PharmD; Kelly R. Reveles, PharmD, PhD; Kirk E. Evoy, PharmD - The University of Texas at Austin College of Pharmacy

Background: It is vital that patients with opioid use disorder who have been prescribed buprenorphine are able to obtain it from a community pharmacy promptly to avoid dangerous treatment delays. However, anecdotal reports indicate pharmacies are often unable or unwilling to fill these prescriptions. Several recent telephone audits of pharmacies have described concerning gaps in naloxone access, and a similar approach for buprenorphine could provide valuable insight. **Objectives**: To confirm the feasibility of a telephone audit assessing availability of commonly prescribed buprenorphine formulations, and to explore availability of buprenorphine compared to other prescribed medications for identification of discriminatory practices. **Methods**: A random sample of 20 community pharmacies was generated from a list of all licensed pharmacies in Texas. A telephone audit script was developed to inquire about the availability of a commonly prescribed dose and quantity combination for generic buprenorphine/naloxone (bup/nx) tablets, bup/nx films, codeine/acetaminophen (cod/apap), and bisoprolol. Ten calls were completed for each of the four medications. Every pharmacy received a call regarding one bup/nx formulation and a separate call regarding either cod/apap or bisoprolol. Trained callers asked to speak to a pharmacist and inquired regarding availability in language implying they were reading directly from a prescription. Pharmacies were excluded if they could not be reached three times on different days. **Results**: Data were successfully obtained from 17 pharmacies. The following availability was reported by pharmacists: bup/nx tablets 5/8 (63%), bup/nx films 1/9 (11%), cod/apap 5/7 (74%), bisoprolol 4/9 (44%). In 8/9 instances where both a bup/nx formulation and the other medication were not in stock, responses regarding willingness to order were concordant. None of the pharmacists refused to provide availability information about any of the medications. **Conclusions**: In this pilot study, bup/nx formulations were only available in 35% of sample pharmacies and bup/nx films were particularly difficult to obtain. Preliminary data suggest a statewide telephone audit assessing availability buprenorphine formulations is feasible. However, comparing the availability of other prescribed medications seems unlikely to yield reliable information regarding discriminatory practices.

Socio-Demographic Characteristics of Cannabinoid and Synthetic Cannabinoid Decedents in Florida, 2014-2018

Armiel Suriaga, MSN-RN, PhD (c); Ruth M. Tappen, EdD, RN, FAAN - Florida Atlantic University

Background: While nearly 24 million people in the United States reported marijuana use in 2016, little is known about their health/death circumstances. Florida is one of the 29 states in the country that legalized the medical use of marijuana in 2016. The state reported a 42% increase in cannabinoid-related deaths from 2014 to 2018. **Objective**: To describe the socio-demographic profiles and the manner of death for decedents who were found to have cannabinoids and synthetic cannabinoids in their system at time of death, and to have cannabinoids and synthetic cannabinoids cited as a cause of mortality. **Method:** Using the 2014-2018 data from the Florida Medical Examiner Commission reports, descriptive statistics were used to describe the characteristics of cannabinoid and synthetic cannabinoid users and their manner of death. **Results**: From 2014-2018, about 10,024 people who died in Florida had cannabinoids in their system. For fifteen, cannabinoids were indicated as the cause of death; the majority of these were male (60%), non-Hispanic white (73%); with variability across age groups [18-24 years old (13%); 25-34 years old (33%); 35-44 and 45-64 years old (26%)]. For the broader cannabinoid-decedent group, 67% of their deaths occurred in urban counties and 100% of them died from accidents. Synthetic cannabinoid-use created a different profile: 186 cases recorded synthetic

cannabinoids as the cause of death and 33 decedents had synthetic cannabinoids in their system. There was a sudden jump in synthetic cannabinoid deaths in Florida from 3 in 2014 to 86 in 2018; 94% of these deaths were caused by accidents. During 2014-2018, 1 case was recorded as suicide, 3 deaths occurred from natural causes. In 2018 alone, 51% of synthetic cannabinoid deaths happened in Florida rural counties. The majority of the decedents were male (93%). Non-Hispanic whites accounted for 53% and blacks accounted for 46% of the cases. **Conclusion**: The majority of cannabinoid and synthetic cannabinoid users were male and died from accidents, creates a foundation for future research to address harm reduction in this population.

Veterans with Substance Use Disorder: A Public Health Perspective of Traumatic Brain Injury and Addiction Susceptibility

Margaret Kucia, PA-C, MPH; Heather Basehore, PhD - Coatesville VA Medical Center

Background: Traumatic brain injury (TBI) and substance use disorder (SUD) among veterans is a significant public health problem, as nearly 20% of veterans are affected by persistent lifelong post-TBI symptoms and prevalence of SUD among veterans is twice that of non-veterans. The association between SUD and TBI is well-established, but directionality between TBI and subsequent onset of SUD has not been widely substantiated. **Objectives**: This mid-point descriptive analysis identifies comorbidity and demographic characteristics of veterans with SUD, in relation to medical history, and TBI chronology, in support of delineating causal relationships between TBI and SUD development. **Methods**: 141 veterans currently receiving residential care for SUD were interviewed using validated data collection instruments. Health records were mined for TBI history and screening based on VHA guidelines. Veterans were divided into three categories: veterans with no history of TBI based on OSU TBI Identification Method (OSU TBI-ID), veterans with first TBI after reported onset of SUD, and veterans with a history of TBI prior to onset of SUD. **Results**: ANOVA testing indicated significant differences among all groups in mean age at onset of SUD ($F = 6.52$, $p = 0.002$). Between groups 2 and 3, significant differences existed in time elapsed since first TBI ($F = 28.06$, $p < 0.05$) and in age at first TBI ($F = 53.33$, $p < 0.001$). X2 testing indicated significant differences in prevalence of headache (18.12, $p = 0.0001$), confusion (7.08, $p = 0.0083$), and memory difficulty (9.50, $p = 0.0087$) among groups. Between groups 2 and 3, there was a significant difference in presence of TBI documentation within the health record (X2 7.72, $p = 0.005$). There were no significant differences in veterans meeting TBI screening policy criteria. **Conclusions**: TBI evaluation and treatment continue to be challenged by self-report, potentially associated with memory loss and confusion which more frequently impact veterans with SUD who experienced TBI. This analysis substantiates that veterans with TBI experience long-term sequelae across diverse eras of military service. Further, this analysis endorses the use of interdisciplinary research teams as “touch points” for healthcare delivery, screening, and policy recommendations.

Patient Perspectives Regarding Universal Self-Administered Screening for Tobacco and Cannabis in a Large Health Care System

Lillian Gelberg, MD, MPH; Whitney Akabike, MSPH; Sophie Feller, MD; Efren Aguilar, BS; Roya Ijadi-Maghsoodi, MD; Steve Shoptaw, PhD - David Geffen School of Medicine, UCLA Department of Family Medicine

Background: Tobacco and cannabis co-use is common and expected to increase in California with recent legalization of recreational cannabis. Studies have shown increased validity of self-reports of sensitive behaviors through patient self-administered computer-based assessment methods. **Objectives**: We sought to understand patient attitudes regarding implementation of a self-administered computerized universal screener via the EMR patient portal for tobacco and cannabis use and second-hand exposure among all UCLA primary care patients. **Methods:** We conducted 3 focus groups with adult UCLA patients (N=23, 91% Female) to explore patient views and experiences in relation to tobacco and cannabis use. Participants discussed thoughts about their primary care physician asking about use and secondhand exposure, for themselves and their children; benefits and concerns of screening; how to implement screening; and neighborhood factors

influencing use and exposure. Focus group sessions were audio-recorded, transcribed, and analyzed using content analysis. **Results**: Barriers to screening for all patients for tobacco and cannabis use included concern about privacy of records and time spent completing the questionnaires. Some patients felt it was beneficial to screen youth for tobacco and cannabis use, including as an opportunity to educate youth about the consequences of use, while expressing concern that youth may not disclose use due to confidentiality concerns. Patients described neighborhood influences contributing to use, availability of cannabis, and for the youth, peer pressure. **Conclusions:** Implementing a patient self-administered computerized tobacco and cannabis screener among primary care patients in a large health system may be a useful tool to provide patient education. However, patients may have concerns about screening that include privacy concerns and ramifications of disclosure, time spent on the screening, and honesty of disclosing use among youth. Understanding patient perceptions of screening for tobacco and cannabis use and exposure, and recommendations for computerized screening, can inform health systems when implementing universal tobacco and cannabis screening.

The Phenomenology of Stigma in Healthcare Settings Among People in 12-Step Fellowships

Corinne Beaugard, MSW; Nicole Boss, BA; Jorge Delva, PhD, MSW - Boston University School of Social Work

Background: Understanding the nature of healthcare experiences for people with substance use disorders (SUD) is critical for effective treatment. Stigma - the dehumanization of an individual based on social identity – is one barrier faced by this population. Extant research on patients with SUDs experience of stigma in healthcare settings demonstrates the correlative adverse effects: it is predictive of poorer health outcomes, concealment of substance use, and treatment noncompletion. **Objective:** This study employs a transcendental phenomenological approach to develop a rich understanding of this group's "meaning-making" of their healthcare experiences. It aims to gather participants' perspective on the supportive and harmful components of healthcare in their recovery process. **Methods**: This study was conducted during fall of 2019. The PI recruited 8 participants who attended 12-Step meetings and were in recovery for at least 1 year. Semi-structured interviews were employed to identify essential components of these participants' experiences. Prompts included questions like: "Can you describe interactions with healthcare providers that were affected by your drug or alcohol use?" and "What do you think providers should know when working with people who have addictive disorders?" The PI and research assistant conducted simultaneous analyses using Moustaka's process for transcendental phenomenology, coding the data for essential facets of individual participants and ultimately a composite description of the experience across cases. **Results**: Emergent themes included: Healthcare avoidance- All participants identified decreased healthcare utilization when in active addicttion, mostly because of negative experiences in healthcare. Patient-provider interactions: Participants identified that providers who used a humanistic approach to treatment and engaged the patient in care were more likely to positively affect their recovery process. Group affiliation with others with addictive disorders: participants described and the identity-affirming and perspective shifting experience of having people with lived-experience in treatment settings. **Conclusion**: This analysis helps to refine future research questions on healthcare provision as experienced by people in recovery. Addiction is complex to treat and often requires support from multiple healthcare disciplines. As such, it is worthwhile to understand more about how patients are affected by treatment experiences and what effectively engages patients in the recovery process.

Expanding the Addiction Medicine Workforce: Coaching and Guiding Physicians Through the Practice Pathway

Lia Bennett, MPH[1]; Kelly Strutz, PhD[2]; Cara Poland, MD, MEd, FACP, DFASAM[1] – 1. Spectrum Health Medical Group; 2. Michigan State University

Background: With under 200 physicians board certified in addiction medicine, Michigan could not meet the public heath demands addressing Substance Use Disorder Prevention and Treatment. The Michigan Collaborative Addiction Resources and Education System (MI CARES) was created to support ABMS-certified

physicians through the process of addiction medicine certification. The most common reason for application rejection is inappropriately filling out the application. **Objective:** To identify physicians engaged in the practice of addiction medicine but not currently board certified and provide a high level of technical support and education for proper documentation of their experiential hours on the addiction medicine certification examination offered by the American Board of Preventive Medicine. **Methods**: Beginning February 2019, participants were recruited through the allopathic medical school Dean's, engagement from professional medical societies, social media, direct recruitment and colleague recommendation resulted in 134 participants from 32 different states including Michigan. To assist participants applying for board certification, we provide technical and one-on-one support during all stages of the board certification process. Coupled with core content didactics, the curriculum provides a comprehensive plan that breaks down components of the application. Primary outcomes included the number of MI CARES participants to successfully apply for and sit the certification examination. **Results**: Due to high demand of our program, 3 early-program adopters from Michigan received approval to sit for the exam in 2019, including 1 participant that was denied approval in 2018. Two participants passed the exam, and one deferred. Currently, we have recruited participants from various medical specialties that include family medicine (35%), internal medicine (20%), psychiatry (18%), emergency medicine (10%), pediatrics (4%) and other (13%). The age of our participants ranges from 25-44 (49%), 45-64 (43%), 65+ (7%). For the 2020 exam, 10 participants have applied for the exam and as of June 1, 2020, one participant has been accepted, zero have been rejected and 8 are awaiting review. **Conclusions**: To increase the addiction medicine workforce, physicians need technical support during the medical board certification application process. This educational program shows promise supporting physicians across the nation to become board certified.

Patient Outcomes After the First Year of Indiana's OTP Expansion: The Results of Valle Vista OTP Patients

Siobhan A. Morse, MHSA, CRC, CAI, MAC[1]; Kristen Primeau, LCSW[2]; Simon Feng, MD, ISAM, CCFP[2] – 1. Universal Health Services; 2. Valle Vista Health System

Background: Indiana's drug-induced mortality rate quadrupled between 2000 and 2014 and deaths related to synthetic opioids increased over 600 percent between 2012 and 2016 (Indiana University, 2019) and the state witnessed a rise in the prevalence of HIV positive individuals thought to be associated with intravenous opioid use (Peters, et al, 2016). In response, Indiana filed an SUD1115B Waiver with CMS in 2014, received approval by CMS in 2015, and issued an RFI for 5 new Opioid Treatment Programs (OTP) in 2016. **Objective**: In 2018, Valle Vista Health System opened an OTP as one of the 5 sites selected by the State. This evaluation was undertaken to review outcomes of patients participating in the Valle Vista OTP location. **Methods**: Data from the medical records of the first 616 patients admitted to the Valle Vista OTP between July and November 2018 are presented. Additionally, of the 616 patients admitted between the program's inception on July 5, 2018 and June 30, 2019, 141 patients remained active in the program for 6 months or more. Of those still active, 95 completed a survey describing their outcomes along a number of life domains. **Results**: As of 11/20/19, 616 patients had admitted to the Valle Vista OTP. 53% of patients are female and the majority of a patients reported being single (65%) unemployed (51%) and Caucasian (94%) and between 30 and 39 years of age (42%). A near 90% compliance rate was observed in keeping appointments. Reduction in the use of opiates, amphetamines including methamphetamine, and cocaine was observed for the population. The majority of patients remained in treatment for more than 90 days. For those patients who completed the outcome survey, a majority of patients reported obtaining employment, reduced illicit drug use, compliance with legal requirements, obtaining housing, improved relationships and family reunification. **Conclusions**: While often overlooked in favor of newer MAT options, methadone treatment for opioid use disorder remains a viable option for improving the lives of patients suffering from opioid use disorder.

FRONTLINES Training Program: Model Description and Initial Evaluation

James H. Bray, PhD[1]; Alicia Kowalchuk, DO[2]; Kevin Schulz, MD[3]; Jessica Bray, MA; Brittany Zaring-Hinkle, MA; Angelia Esparza, BSN; Joann Shulte, DO; David Persse, MD – 1. University of Texas San Antonio; 2. Baylor College of Medicine; 3. Houston Fire Department

Background: Responding to the opioid epidemic requires multi-disciplinary and multifaceted approaches to be effective in large metropolitan areas. The FRONTLINES Project was developed and implemented in Houston with a joint effort from the Houston Fire Department (HFD), the Houston Health Department (HHD), Baylor College of Medicine and the University of Texas San Antonio to address the opioid crisis in the Houston area. FRONTLINES also partners with local and federal law enforcement and hospitals to address this problem. **Learning Objectives**: 1. Understand the response to opioid problems in Houston, Texas. 2. Learn about the implementation of an educational program to train first responders in dealing with opioid overdoses. 3. Understand how to connect opioid users and their family members to treatment. **Methods:** All HFD/EMS staff were required to take an online training on how to evaluate opioid overdoes and administer naloxone to patients. Eighty percent of staff (3,098) have taken the training. The training consists of a 20-minute video that describes how to evaluate someone for an opioid overdose, how to administer naloxone and how to connect the person to the affiliated treatment program. Staff completed a pre and post-test that evaluated attitudes, knowledge, and skills concerning opioid overdoses. **Results:** A paired-samples t-test was conducted to compare the mean scores on the substance use attitudes questions before and after the FRONTLINES training sessions. Responses to the questions ranged from 1 – strongly disagree to 5 – strongly agree. There was a significant change in scores from pre-training ($M = 3.22$, $SD = 0.61$) to post training ($M = 2.28$, $SD = 0.64$); $t(2944) = 7.29$, $p < 0.001$) that indicate that when the first responders completed the training session their attitudes, technical skills and knowledge of opioid issues significantly improved. In addition, 100% of the participants reported feeling confident in administering naloxone. **Conclusions**: The Frontlines project was successful in training first responders in identifying and dealing with opioid overdoses. The video training was helpful in first responders feeling confident in administering naloxone and connecting people with treatment options. Additional video training is planned for lay responders.

Perioperative Management of Pain and Opioid Use Disorder in a Patient Prescribed Extended Release Buprenorphine: A Case Report

Kristine E. Torres-Lockhart, MD; Leah J. Leisch, MD; Joseph H. Donroe, MD, MPH; Melissa B. Weimer, DO, MCR - Yale School of Medicine

Background:
There is limited data about perioperative management of patients prescribed buprenorphine. Many guidelines and expert opinions favor continuation of sublingual (SL) buprenorphine perioperatively, though there is no guidance on the management of subcutaneous (SC) extended release buprenorphine (Sublocade), a new depot formulation available for opioid use disorder (OUD) treatment. SC buprenorphine introduces new challenges for perioperative pain management due to its long half-life (>40 days) and higher plasma concentrations compared to SL buprenorphine. This case outlines the perioperative management considerations for a patient receiving SC buprenorphine prior to cardiac surgery.

Learning Objectives:
1.Describe pharmacokinetic differences of buprenorphine formulations and potential challenges for perioperative pain management.
2.Characterize factors to consider for surgical procedures in the setting of SC buprenorphine use.

Case Presentation:
Patient is a 37-year-old male with a history of severe OUD treated with 300mg SC buprenorphine every 4 weeks who is admitted to the hospital for tricuspid valve replacement due to tricuspid valve endocarditis and severe tricuspid regurgitation. His urine toxicology was notable for buprenorphine, cocaine, fentanyl, and

opiates and his last dose of SC buprenorphine was 29 days prior to admission. The addiction medicine team was consulted to assist in perioperative management due to concerns for prolonged opioid receptor blockade of SC buprenorphine. The patient was transitioned to SL buprenorphine/naloxone 4mg-1mg BID in the preoperative setting for pain and withdrawal management. The addiction medicine team recommended continuation of SL buprenorphine and multimodal treatments for postoperative pain using a multidisciplinary team approach with anesthesia and cardiac surgery services. Methadone was considered as an alternative, but the patient declined. Ultimately, surgery was delayed due to concerns for ongoing drug use and re-scheduled.

Discussion:
We describe the case of a patient with severe OUD and infective endocarditis necessitating cardiac surgery while on SC buprenorphine. The unique pharmacology of SC buprenorphine can potentially complicate perioperative pain management. Due to a lack of available clinical data and consensus on SC buprenorphine use perioperatively, we extrapolated from preclinical pharmacokinetic studies to guide our clinical decision making. More research is needed on SC buprenorphine use in the perioperative setting.

Multiple Substance Use and Blood Pressure in Homeless and Unstably Housed Women
Leslie W. Suen, MD; Eric Vittinghoff, PhD; Alan H.B. Wu, PhD; Phillip O. Coffin, MD, MIA; Priscilla Hsue, MD; Kara L. Lynch, PhD; Dhruv S. Kazi, MD; Elise D. Riley, PhD - University of California, San Francisco, Division of General Internal Medicine

Background: Substance use increases the risk of cardiovascular events. While the use of multiple substances is common in low-income women, their relationship of using multiple substances with cardiovascular risk factors like blood pressure has not been well characterized. **Objective(s):** To determine associations between multiple substance use and blood pressure in homeless and unstably housed women after adjusting for other risk factors associated with elevated blood pressure. **Methods:** We conducted a cohort study of 245 women between 2016 and 2019 in which participants completed six monthly study visits including vital sign assessment, an interview, and blood draw to assess drug use and cardiovascular health. The study recruited participants from homeless shelters, free meal programs, low-income hotels and street encampments. Data were analyzed using linear mixed models. Outcomes assessed were systolic and diastolic blood pressure (SBP and DBP). Predictor variables included toxicology-confirmed substance use (e.g., cocaine, alcohol, opioids). Covariates included age, race/ethnicity, body mass index, lipid profile, postmenopausal status, and presence of cardiovascular medications. **Results**: The median participant age was 53 years and 74% were women of color, including 36.7% identified as African American, and 15.1% identified as Latina. Among participants, 69.0% used tobacco, 52.7% used cocaine, 30.2% used methamphetamine, 29.0% used alcohol, and 2.0% used heroin. Two-thirds of participants used at least two substances (62.5%), and 79.8% had elevated blood pressure greater than 140mmgHg/90mmHg at >2 visits. Adjusting for age, race, BMI, cholesterol, and anti-hypertensive medication use, cocaine was the only substance that significantly increased SBP (3.6% increase; 95% CI 1.2, 6.0%) and increased DBP (3.3% increase; 95% CI 0.8, 5.8%). **Conclusions**: Among homeless and unstably housed women with high rates of multiple substance use, cocaine was the only substance used that was significantly associated with both SBP and DBP, and combinations of substances found no significant impact. Prioritizing reductions in cocaine use may have the strongest impact on reducing hypertension-associated morbidity in this population.

Nurses' Motivation to Work with Patients with Alcohol Use Problems: Identifying Stigma Perception Predictors Using A National Survey
Khadejah F. Mahmoud, PhD, MSN; Susan M. Sereika, PhD; Deborah S. Finnell, DNS, RN; Dawn Lindsay, PhD; Kathryn R. Puskar, DRPH, RN; Ann M. Mitchell, PhD, RN - University of Pittsburgh Graduate School of Public Health

Background: According to the World Health Organization, alcohol use contributes more than 5.0 % of the global burden of disease. In 2016, more than 34,000 Americans died as a result of alcohol poisoning. Despite

mounting evidence and increased training of nurses, the implementation of alcohol screening has been limited. Low motivation among nurses has been associated with delays in patients with alcohol use problems' access to care. **Objective**: To identify stigma perceptions (personal experiences, familiarity, perceived dangerousness, fear, social distance, personal responsibility beliefs, disease model, and psychosocial model) that predict nurses' motivation to work with patients with alcohol use problems. **Methods**: A descriptive correlational design was used. A sample of 460 behavioral mental health nurses and medical-surgical nurses were recruited using a nationwide online survey targeting four national nursing organizations. Stigma perceptions and motivation to work with patients with alcohol use problems were measured using an investigator-developed questionnaire, familiarity, perceived dangerousness, fear, social distance, personal responsibility beliefs, disease model, and psychosocial model and motivation sub-scales. **Results**: Nurses who perceived patients with alcohol use problems as dangerous were less likely to be motivated to work with this patient population ($p = .028$). **Conclusions:** The study's findings can help increase our understanding of the influence stigma perceptions has on nurses' motivation to work with patients with alcohol use problems.

Stigma and Opioid Addiction: What We Have Learned From The Opioid Epidemic

Kimberly Goodyear, PhD[1,2]; David Chavanne, PhD[3] – 1. Center for Alcohol and Addiction Studies, Department of Behavioral and Social Sciences, Brown University; 2. Department of Psychiatry and Human Behavior, Brown University; 3. Department of Economics, Connecticut College

Background: As the opioid epidemic persists in the United States, and as the availability of prescription opioids has curtailed due to policy measures set in place to battle prescription misuse, there is increasing evidence that people may transition from prescription opioids to heroin. In addition, there is a lack of understanding of what contributes to public perceptions of an individual with an opioid addiction. **Objectives**: Motivated by the surge in prescription opioid use and how that influx may have contributed to the current U.S. opioid epidemic, the present study aimed to examine public stigma of individuals who transitioned from prescription opioids to heroin. **Methods**: A randomized, between-subjects case vignette study (N = 1,998) was conducted with a nation-wide online survey. To assess public perceptions of stigma, participants rated a hypothetical individual who became addicted to prescription opioids on three conditions: 1) male versus female, 2) an individual who was prescribed prescription painkillers or took prescription painkillers from a friend and 3) an individual who transitioned to using heroin or who continued using prescription painkillers. **Results:** Our results first showed that there was higher negative stigma towards a male and toward an individual who took prescription painkillers from a friend, and both higher positive and negative stigma towards an individual who transitioned to heroin from prescription painkillers. Next, we showed that participants who were familiar with addiction (i.e., knowing someone with an opioid addiction) rated with higher positive affect and participants that had current or past opioid use rated with lower negative affect. Lastly, we found that higher addiction controllability ratings were associated with lower positive affect and higher negative affect, dangerousness and responsibility. These results indicate that the more that participants believed that addiction is within someone's control, the higher the stigma ratings. **Conclusions:** Our findings provide further evidence that information about individuals who become addicted to opioids can influence stigma perceptions.

Pain and Withdrawal Symptoms During Standard Inpatient Buprenorphine Induction

Clare Ronan, MD*; Nika Sulakvelidze, MD*; Alyssa Peterkin, MD; Ellen Rubin, PharmD; Zoe M. Weinstein, MD, MS - Boston University/Boston Medical Center
*Co-first authors

Background: With the advent of addiction consult services, the inpatient setting is an opportune environment for initiating buprenorphine. Buprenorphine inductions however can also be challenging due to prior experiences of precipitated withdrawal, acute pain requiring short acting opioids, and inability to undergo wash out period due to ongoing opioid withdrawal symptoms. **Objective**: We sought to characterize pain and withdrawal symptoms in patients who started buprenorphine with a traditional induction in a tertiary safety net

hospital. **Methods**: Over a 7-month period, our study team identified patients who desired buprenorphine while hospitalized, but providers felt would be challenging to manage with traditional induction protocols. We performed a retrospective chart review and gathered the following data: Clinical Opioid Withdrawal Scale (COWS) scores, pain scores, 30 day readmissions, Emergency Department (ED) visits and overdoses as well as prescription data regarding buprenorphine treatment at time of hospital discharge and 30 days after hospital discharge. **Results:** Thirty-five patients were identified. Of these patients, 71% (25/35) were started on buprenorphine during the hospitalization. Ninety-six percent (24/25) initiated on buprenorphine in the hospital had an active buprenorphine prescription on discharge. Average pain and COWS scores are listed in Table 1. At 30 days after discharge, 68% of patients discharged on buprenorphine remained on buprenorphine. In comparing patients who were discharged with buprenorphine to those who were not: 12.5% vs 45.5% had at least one inpatient admission, and 33% vs 23.7% had at least one ED visit at 30 days. One patient who was discharged with buprenorphine had 2 non-fatal overdoses within 30 days. **Conclusions**: This retrospective review identified baseline characteristics of patients deemed difficult to induce on buprenorphine in a tertiary safety net hospital. We will use this data for the next step of a quality improvement project to initiate buprenorphine through microdosing with transdermal buprenorphine.

Table 1.

	Average COWS Score, 0 - 48 (*n*)	Average Pain Score, 0 - 10 (*n*)
24 Hours Pre-Buprenorphine Induction	3.9 (*17*)	5.95 (*23*)
24 Hours Post-Buprenorphine Induction	2.65 (*20*)	5.8 (*22*)
48 Hours Post-Buprenorphine Induction	2.3 (*11)*)	5.4 (*16*)

Converging Vulnerabilities: Hospitalized Patients With Substance Use Disorder in the Time of COVID-19

Dana Button, BS; Caroline King, MP; Taylor Vega, BA; Honora Englander, MD, FACP - Oregon Health and Science University

Background: Hospitalized patients with substance use disorder (SUD) during the COVID-19 pandemic are at a unique intersection of health crises. People who use drugs (PWUD) experience many vulnerabilities such as housing insecurity, acute medical issues, and stigma – all of which may be compounded by COVID-19. **Objective:** This study aimed to evaluate how the COVID-19 pandemic has impacted the experience of healthcare, acute illness, and care transitions among hospitalized patients with SUD. **Methods**: We conducted a mixed-methods survey of hospitalized adults with SUD at an urban academic medical center in Portland, Oregon during COVID-19. Participants completed a survey assessing substance use patterns and a semi-structured interview performed by one of three independent interviewers. We used Stata to analyze patient characteristics and conducted thematic analysis using an inductive approach at the semantic level. **Results:** Of the 42 patients approached, 27 (64%) participated. Participants reported using alcohol (n=9, 33%), methamphetamine (n=9, 33%), and opioids (n=13, 48%) in the past 30 days and described changes in their substance use behavior and access. About half (n=14, 52%) of participants had a cell phone with them in the hospital. Many participants described changes in their healthcare experience. Some described feeling “afraid to come in at all” for fear of catching or spreading COVID-19 during hospitalization. Others felt that it was difficult to “move forward with trust” because of provider phone visits or masked staff. Participants also described feeling “lonely”, “isolated” and described providers as “locked away.” In anticipation of discharge,

many participants described concerns meeting their healthcare and personal needs given that COVID-19 had exacerbated housing insecurity and community resources while facing the new challenges of transitioning from acute illness. Some described financial challenges while others reported compounded "struggle[s] from day to day" to access housing, food, and substances. **Conclusions**: Patients with SUD know how to survive and cope at the margins, but both the COVID-19 pandemic and acute illness expose them to extreme vulnerabilities. Understanding experiences of PWUD during COVID-19 may provide valuable insight informing community and hospital response to natural disasters including pandemic response initiatives.

Expanding Patient Choice of Medication in the Youth Opioid Recovery Support (YORS) Intervention– Extended Release Naltrexone or Extended Release Buprenorphine

Kevin Wenzel, PhD; Jared Wildberger, MA; Marc Fishman, MD; Victoria Selby, PhD; Luciana Lavorato, MA; Julia Thomas, BS - Maryland Treatment Centers

Background: Opioid use disorder (OUD) is a major public health crisis, disproportionately affecting young adults who face developmental vulnerabilities including barriers to treatment adherence.The Youth Opioid Recovery Support (YORS) intervention is a multi-component assertive outreach intervention designed to improve engagement and adherence to treatment for youth with OUD. YORS includes: 1) home delivery of medication-assisted treatment (MAT); 2) family engagement; 3) assertive outreach; 4) contingency management for receipt of medication doses.YORS has demonstrated preliminary efficacy in a sample of young adults seeking MAT for OUD with extended-release naltrexone (XR-NTX). More recently available extended-release buprenorphine (XR-BUP) offers patients greater MAT choice. **Objective**: The purpose of this study was to test the feasibility and initial efficacy of the YORS intervention to patients who have chosen either XR-NTX or XR-BUP as compared to receiving XR-NTX in a treatment-as-usual (TAU) condition. **Methods**: Twenty-two young adults (ages 18-26) intending to pursue outpatient OUD treatment with XR-NTX (n=11) or XR-BUP (n=11) were recruited from inpatient treatment. T-tests and survival analysis estimates were used to compare this group to a similar historical group receiving XR-NTX who had been randomized to TAU in a prior study (n=20). Outcomes were medication receipt, opioid relapse, and days of opioid use. **Results**: Participants in the YORS condition received more medication doses in 12-weeks (M=1.91; SD=1.31) compared to those in TAU (M=0.40; SD=0.68), $p<.001$. Participants in the YORS group compared to TAU had lower rates of relapse (27.3% versus75.0%; p=.002). Participants in TAU were more likely to relapse sooner compared to the YORS condition (Log Rank $\chi 2(1)=5.27$, p=.022). Finally, TAU participants had more days of opioid use (M=22.35, SD=17.08) compared to YORS participants (M=9.45; SD=12.80), p=.008. There were no significant differences in outcomes between those who selected XR-BUP versus those who selected XR-NTX. **Conclusions**: These results suggest that the YORS intervention used in a small sample of patients choosing XR-BUP and XR-NTX is feasible and demonstrated improved outcomes compared to historical TAU. Future research should examine the efficacy of YORS with a larger randomized design, the individual contributions of YORS components, and the economic utility.

Mobile Administration of Extended-Release OUD Medication in a Time of COVID-19

Jennifer Stidham, BA; Kevin Wenzel, PhD; Stanley Moody, RN; Julia Thomas, BS; Luciana Lavorato, MA; Jared Wildberger, MA; Marc Fishman, MD – Maryland Treatment Centers

Background: Young adults face extensive barriers to engaging in standard treatment for opioid use disorder (OUD), leading to poor retention, adherence, and outcomes. The Youth Opioid Recovery Support (YORS) intervention aims to increase medication adherence and treatment engagement using several strategies including home delivery of extended-release medications for OUD. With increasing concern over COVID-19, we encountered new barriers to OUD treatment adherence such as fear of transmission and uncertainty regarding the risk/benefit ratio of the existing home delivery protocol. **Objective**: Our objective was to test the addition of van-based delivery of extended-release medications to the YORS intervention. This adaptation was selected to balance the benefit of providing low-barrier treatment against the risk of COVID-19 spread to staff and patients

posed by encountering patients (and other residents) in homes. **Methods**: The study team developed a set of procedures for van-based delivery using a large passenger van that took into consideration risk mitigation for COVID-19, patient confidentiality, feasibility, and comfort. Procedures included patient screening, van sanitation before and after visits, blocking van windows for privacy, wearing necessary personal protective equipment and offering to patients, point of care urine drug screen testing, and brief in person or telehealth counseling. Following the care episode, participants were informally asked about their reactions to van-based delivery with regard to all aspects of the procedure. **Results**: The study team has tested the van-based delivery procedures over three episodes of care (two XR-BUP and one XR-NTX). Two episodes occurred adjacent to the patient's residence and the remaining adjacent to an inpatient crisis treatment facility. The average distance traveled from the research facility was 4.6 miles, and staff teams consisted of nurses, therapists, and physicians ranging from 2-3 individuals per visit. One visit included a longer mobile mental health session, while others were brief check-ins with the nurse or physician. All patients endorsed willingness to receive future mobile administrations and did not endorse confidentiality or comfort related concerns. **Conclusions**: Although the current sample is small, participants have provided positive feedback regarding sanitation and delivery procedures. The addition of the van has reduced COVID-19 related barriers for young adults with OUD.

Cannabis Use and its Association With Depression and Substance Use: Gateway or Gatekeeper?

Precious Akanyirige, BS; Ashley Ezema, BA; Ike S. Okwuosa, MD; Quentin R Youmans, MD; Kevin Simon, MD – Boston's Children's Hospital

Background: The medical use of cannabis is widespread, and national efforts to legalize recreational use of marijuana are underway. There has been speculation that widespread utilization of marijuana can lead to substance use and depressive disorders. The effects of marijuana on mental health and substance use habits are not clear, as studies have demonstrated both protective and harmful associations. **Objective:** The objective of this study was to characterize the relationship between marijuana smoking and both illicit drug use and depression. **Methods:** This was an analysis of 15,757 adults ages 18-65 that were captured in the National Health And Nutrition Examination Survey (NHANES) from 2009-2016. The Cohort was categorized as marijuana smokers (MS) and non-marijuana smokers (NMS). The NMS group included respondents who neither smoked marijuana nor cigarettes. Logistic regressions were performed to compare the prevalence of depression, and illicit drug use. **Results:** The average age of the study population was 31.9 years old. MS were younger (37 vs 4.1.5 p= <0.0001), more likely to be male (55.2% vs 46.3% p= <0.0001), White (47.7% vs 29.4% p=<0.0001), and have a household income >$75,000 (p=23.5% vs. 28.9%). MS had higher odds of depression compared to NMS (OR 1.60, CI 1.42-1.79, p=<0.001). MS had higher odd of substance use compared to NMS (OR 23, CI 18.66-28.89, p= <0.001). **Conclusion:** Compared to NMS, MS was associated with higher odds of depression, and other substance use. Further studies explaining the mechanisms of this association are warranted. This study adds to the body of data to prepare physicians and allied health workers to care for MS as its use continues to become more widespread.

Interprofessional Team-Based Model Increases Initiation of Buprenorphine for Hospitalized Patients with OUD

Richard Bottner, PA-C; Nick Christian, MBDA, MD; Amber Baysinger, PhD; Blair Walker, MD; Rachel Holliman, LMSW; Evan Solice, M.Div; Ken Giorgi, RN; Kirsten Mason, PharmD; Hemali Patel, MD; Elise Carper, MA, RN, ANP-BC, ACHPN; Mason Payne, LMSW, LCDC; Michael Brode, MD; Clarissa Johnston, MD; Snehal Patel, MD; Katelyn Roth, NP; Chris Moriates, MD - Dell Medical School at the University of Texas Austin

Background: Buprenorphine is known to reduce mortality for patients with opioid use disorder (OUD). Buprenorphine initiation in the hospital setting increases completion of inpatient medical therapies and ultimately the transition to outpatient OUD treatment. Few hospitals nationwide have implemented protocols to bring this evidence-based treatment into hospital wards. **Objective**: The Buprenorphine Team (B-Team) is an

interprofessional team-based consultation service that works to screen and treat hospitalized patients for buprenorphine and facilitates transition to an outpatient clinic capable of continuing therapy. **Methods**: A protocol for inpatient screening and initiation of buprenorphine was developed based on a literature review and expert opinion. An outpatient clinic was engaged to ensure capacity was available to continue buprenorphine treatment at discharge. A core team was formed comprised of a pharmacist, nurse, social worker, physician assistant, psychiatrist, chaplain, palliative care and internal medicine providers. An initial screening is conducted by a B-Team clinical provider to determine eligibility for buprenorphine. If eligible, the B-Team provider initiates therapy in concert with the primary team. The team coordinates with the outpatient MAT clinic to ensure the patient receives an appointment prior to discharge. A B-Team provider prescribes a sufficient supply of buprenorphine to bridge until the outpatient appointment. Process measures are captured. The program and study have received IRB approval. **Results**: From September 2018 until September 2019, the B-Team received 122 patient referrals. Buprenorphine was initiated for 50 patients and 45 patients were connected to care at an outpatient clinic. Twenty-seven out of 45 eligible patients (60%) made it to their 1-week follow up appointment, and 17 out of 41 (41%) were engaged in outpatient treatment at 1-month. The program resulted in a 5-fold increase in unique prescriptions for buprenorphine in the hospital. **Conclusion**: A team-based model for inpatient initiation of buprenorphine increased the number of buprenorphine prescriptions and resulted in successful continuation of outpatient treatment in 60% of patients. The program was started at an institution without an addiction medicine consultation service, which makes it a promising model that could be replicated at other institutions.

Reproductive Health Needs Among Women in Treatment for Substance Use Disorder

Jaanki Bhakta, DNP; Elizabeth Morse, DNP, FNP-BC; David Phillippi, PhD - Belmont University

Background: Integrated care models for substance use disorder (SUD) and reproductive health care have been proposed as a strategy to increase access to reproductive health care for women in treatment for SUD. **Objective**: This study measured preferences regarding integration of SUD treatment and contraceptive care for women in an inpatient SUD treatment facility in Nashville, Tennessee**. Methods**: This cross-sectional, survey-based study measured how women of childbearing age (N=108) in an inpatient residential treatment report their demand for and access to reproductive health care, their pregnancy intention, contraceptive utilization and preference for integrating reproductive health care with their current SUD treatment milieu. **Results**: Eighty-five percent of the women interviewed expressed a desire to prevent pregnancy in the next year, although only one-third (33.6%) were using a form of contraception during the time of the study. Sixty-nine percent of women reported a preference for the integration of contraceptive care and their SUD treatment. If cost was not an issue, 28.7% of women would prefer a long acting reversible contraceptive (LARC) and 40.7% would prefer either injectables, oral contraceptive pills or patches. Integrating services will increase overall uptake of all methods of contraception. **Conclusions:** The findings of this study suggest that integrating contraceptive care with SUD treatment will be received well by most women, however individual preferences should be assessed before any intervention is implemented. It is important to elicit patient preference and respond to the stated preferences with affordable or no cost access to contraception. These practice changes stand to improve the health outcomes for women and children associated with unintended pregnancy in the context of SUD.

A Glance to What Works: Long-term Practices in the Work Routine of Professionals Who Attended a Training on Alcohol and Other Drugs

Liz Paola Domingues, MSc; Danilo Locatelli, MSc; André Bedendo, PhD; Ana Regina Noto, PhD - Universidade Federal de Sao Paulo

Background: Staff attending training programs on alcohol and other drugs usually struggle to implement the course knowledge in routine. Studies have identified several aspects jeopardize its implementation. Despite that, qualitative evaluations of the successful experiences might be helpful to improve future practices. **Objective**: this study aimed to present the most relevant strategies used for the implementation of new practices in the work

routine among professionals who attended a training on alcohol and other drugs in Sao Paulo, Brazil. **Methodology**: from 2010 to 2016 Brazilian policy on drugs supported the development of Regional Reference Centers (CRR's), which were responsible for offering training on alcohol and other drugs to professionals from public institutions (health, education, social work, justice, and security). In 2016 a CRR located at Federal University of Sao Paulo offered 40 hours length face-to-face courses to 483 professionals. After a year, 28 professionals were drawn and participated in semi-structured interviews. Data were collected until theoretical saturation. **Results**: Long-term implemented practices had three common aspects: first, they worked in conjunction with other staff. Successful practices were built in accordance with all team members and partnership with other services. Second, the service managers were supportive of the practices and worked closely with their teams. Finally, most successful practices were centered on the needs of drug users, providing a wide range of activity options to serve them. The participants reported that the success of their practices may be observed not only in substance use aspects but in the quality of life improvement as a whole. **Conclusion:** The most long-term successful practices implemented by professionals were supported by their leaders, collaborated with other services, and offered a menu of options to address the patients' needs.

Operationalizing a Substance Use Disorder Resource Collaborative During a Global Pandemic
Amanda Graveson, MS; Rachel Lockard, MPH; Kelsey Priest, PhD, MPH; Patrick Brown, BS; Honora Englander, MD - Oregon Health and Science University

Background: When the ripple effects of COVID-19 were felt in our community, it became clear that chronically marginalized populations would be disproportionately affected. While hospitals prepared for a potential surge, local safety-net programs scrambled to maintain services. Members of the Oregon Health and Science University inpatient addiction consult service, the Improve Addiction Care Team (IMPACT), recognized that treatment organizations were limiting operations which impacted discharge planning. This need inspired the formation of Oregon Substance Use Disorder Resources Collaborative (ORSUD). **Objectives:** ORSUD's founding mission is to support state-wide SUD service providers and organizations by creating and collating resources that serve people with SUDs and those who use drugs. **Methods:** We implemented two goals: 1) collecting and disseminating operational and capacity changes of local addiction care services to the broader treatment community; and 2) identifying and addressing immediate resource needs for local safety-net programs. To achieve these aims we created a treatment provider and organization list-serve (n = 101 participants), which includes a daily survey capturing service capacity changes and organizational needs (operational since March 18, 2020). We also created a website to centralize and highlight local organizational needs to facilitate publicly-sourced contributions (e.g., donations, online registries). **Results:** This data collection allows ORSUD to maintain a public-facing 35-page resource document with service capacity information on over 140 programs and additional resources (e.g., health insurance, housing, online recovery resources). Many organizational representatives indicate an ongoing need for support, and the team continues to meet these needs through crowdsourcing funds and supplies, warm-hand-offs to other volunteer organizations, and through future projects. **Conclusion:** ORSUD was initially created to support local safety-net organizations who serve people with SUDs during COVID-19. In the future, our projects will extend beyond this context as we continue to adapt to community needs. This includes identifying low-barrier buprenorphine providers and mapping buprenorphine availability across the state. The current crisis exposes persistent barriers to providing services to people with SUDs, as well as fragmentation among health, addiction, and social service organizations. ORSUD was created to fill in these structural gaps, with the intent to meet community needs now and into the future.

Cannabis Use, Attitudes, and Diversion Among Adolescents and Young Adults Presenting for Substance Use Treatment Following Medical Cannabis Legalization in Massachusetts
Maddie O'Connell, MPH; Sharon Levy, MD, MPH; Lydia A. Shrier, MD, MPH; Sion K. Harris, PhD - Division of Adolescent/Young Adult Medicine, Boston Children's Hospital

Background: Cannabis is the second most commonly used drug among youth, and the leading misused drug for youth entering substance use treatment. Among youth already using cannabis, legalization of medical cannabis may influence cannabis-related attitudes and behaviors, including increasing access through use of someone else's medical cannabis (diversion). **Objective**: To examine cannabis-related attitudes and behaviors (including diverted cannabis use) over five years following medical cannabis legalization in cannabis-using youth, who may be particularly sensitive to more liberal cannabis policies. Additionally, we investigated characteristics of youth who did vs. did not use diverted medical cannabis. **Methods:** Data were collected in Boston from 2013 (when medical cannabis legislation took effect in MA) to 2017 (when recreational cannabis use became legal in MA). Cannabis-using youth (age 13-24) presenting to an outpatient adolescent substance use treatment program (ASUTP) or recruited for a cannabis intervention study from an adolescent medicine practice (AMP) completed a confidential survey on demographic characteristics, and cannabis use behaviors and attitudes, including perceived risk of harm, accessibility, potency, and legal repercussions. We used multiple logistic regression to analyze changes in attitudes and behaviors over five years versus the reference year (2013), controlling for demographics. We used chi-square to compare demographic and cannabis-related characteristics of youth reporting use of someone else's medical cannabis versus those who did not. **Results**: The sample included 317 youth (ASUTP n=247, AMP n=70; 2013 n=67, 2014 n=67, 2015 n=77, 2016-2017 n=106). Mean+SD age was 17.9+2.5 years, 32% were female, 62% were White non-Hispanic, and 71% had college-graduate parents. Cannabis attitudes and use frequency did not significantly change over time. In 2016-2017, 42.9% of youth reported using someone else's medical cannabis, versus 14.9% in 2013 (aOR 4.21, 95% CI 1.72, 10.28). Youth using diverted medical cannabis were younger at cannabis use initiation ($p=0.03$) and had higher likelihood of reporting riding with a driver, or driving themselves, after cannabis use (both $p<0.005$). **Conclusion**: Among at-risk youth in MA, use of diverted medical cannabis increased over the years following medical cannabis legalization, and those using diverted medical cannabis reported higher risk for cannabis-related traffic injury.

State Recovery Programs for Pharmacists and Students with Substance Use Disorders: A Nation-Wide Survey Investigating Program Policies, Methods, and Treatment Options

Emerald O'Rourke, PharmD; Jeffrey Paul Bratberg, PharmD - University of Rhode Island College of Pharmacy

Background: Increased access to controlled substances, perceptions of invincibility, shame, inadequate education on addiction, and stressful work environments all contribute to a higher prevalence of substance use disorder (SUD) diagnoses among pharmacy personnel. The specific resources offered by state substance use recovery programs for pharmacy students and practicing pharmacists have not been investigated. **Objectives:** Survey pharmacist recovery programs to categorize the standards of care for treating pharmacy professionals with SUD and the use, acceptance, and limitations of medication for opioid use disorder (MOUD). **Methods**: The study was IRB-approved as exempt research. Contact information for the 48 state recovery programs was gathered using the USA Pharmacy Recovery Network, a study that compiled contact information for pharmacy recovery programs, and web-based searches. An electronic survey (Qualtrics, Inc, Provo, Utah) was emailed to each program. The survey collected types of personnel and students served, enrollment criteria, client monitoring and testing procedures, recovery process information, harm reduction, and the inclusion and perception of MOUD use. **Results**: Of the 48 pharmacy recovery programs identified, 19 programs engaged in the survey. Programs serving pharmacy personnel only comprised 39% (n=7) of respondents while the remaining 61% served a variety of other professions. The majority of programs served students, with 10% (n=2) not allowing student enrollees. Harm reduction interventions were rarely used, with 56% (n=10) of recovery programs providing no harm reduction tools to their participants. Acceptance and use of MOUD were assessed using a Likert scale (highly encouraged, encouraged, offered, discouraged, highly discouraged). Methadone was discouraged or highly discouraged by 83% (n=10) of pharmacist recovery programs, buprenorphine by 45% (n=5), and naltrexone by 23% (n=3). **Conclusions**: Access to harm reduction tools and medications for opioid use disorder within pharmacist state recovery programs is insufficient. Acceptance of MOUD and non-abstinence-based therapy is lacking among recovery programs, which may be due to a lack of support, state board requirements, and policy and procedures. Overall, there was substantial variation between state recovery

programs, highlighting the need to standardize programs and use evidence-based, first-line, mortality- and morbidity-reducing MOUD.

Pharmacy Student's Knowledge, Skills and Attitudes Related to the Use of Cannabis

Shawn Riser Taylor, PharmD, CPP, CDCES; Ryan E. Owens, PharmD, BCPS; Antoine Al-Achi, BS (Pharmacy), MPharm, MS, PhD, CT (ASCP) - Wingate University School of Pharmacy

Background: With cannabis products gaining popularity and pharmacists assuming roles in the dispensing of medical cannabis in several states, pharmacists must be well versed in the clinical utility and legal considerations of cannabis. **Objective**: The purpose of this research was to assesses pharmacy student's knowledge, skills and attitudes pertaining to cannabis use. **Methods**: A questionnaire was developed utilizing an instrument of a similar study assessing licensed providers and adapted for pharmacy students. Questions evaluated the student's clinical and legal knowledge of cannabis as well as their attitudes and skills related to dispensing and providing counseling on it. The questionnaire was distributed prior to a lecture series on cannabis in a complementary and alternative medicine course and included topics on legal, efficacy and safety considerations of the drug. The same questionnaire was re-distributed one week after completion of the content delivery. Statistical analysis was performed using a Chi-square test unless Fisher's Exact test was more applicable. Statistical significance was based on a p value of <0.05. **Results:** The questionnaire was completed by 92% of students enrolled in the course (n=82). The majority of students were found to support the use of cannabis to treat anxiety, chemo-induced nausea and vomiting, multiple forms of pain, epilepsy, PTSD and multiple sclerosis despite having concerns related to the consistency in quality, federal regulations, abuse potential, and evidence of therapeutic benefit. Two-thirds of the students lacked confidence in the ability to provide counseling for the use of cannabis-containing products. The most drastic change from pre- to post-survey related to the controlled substance classification of cannabis with only 54% of students answering accurately compared to 95%, respectively ($p<0.0001$). **Conclusions:** Despite many concerns identified, most pharmacy students do support the use of cannabis and would dispense it to patients. More education and training is warranted to improve comfort of pharmacy students to provide counseling on cannabis.

From Bus Pass to Recovery Class: A Peer Mentor's Role in Wellness as Part of an Inpatient Addiction Consult Service

Sarika Gurnani, BS; Yoel Benarroch, BS; Theresa Rolley, CARC; Zoe M. Weinstein, MD, MS - Boston University School of Medicine

Background: Peer mentors are individuals with lived experience who can empower and engage patients with substance use disorders by addressing overall wellness and psychosocial barriers to treatment. However, there is variability between the role of a peer mentor and what services they provide across different treatment settings. **Objective**: To describe the services provided by a peer mentor in an urban safety-net hospital's addiction consult service, and how these services map onto the Substance Abuse and Mental Health Services Administration's (SAMHSA) 8 Dimensions of Wellness. **Methods**: This was a retrospective cohort study of all hospitalized patients seen by the addiction consult peer mentor from January 2019 to June 2019. Services provided were coded into at least one of nine possible categories, with multiple services allowed within a single encounter. Services were coded uniformly based on content analysis. After coding was complete, the categories were compared to SAMHSA's 8 Dimensions of Wellness. **Results**: Across 286 encounters with patients, the peer mentor offered 616 total services. The most common service was general counseling (33.9%), which included listening support, advice on physical and mental wellness, self-acceptance, coping skills, and discussion of interpersonal relationships. Other frequent services included recovery support (e.g., sobriety discussion/maintenance; 21.7%), providing Narcotics Anonymous or Alcoholics Anonymous resources (17.1%) or performing a pre-discharge check in (13.3%). Less frequent services included housing support (e.g., residential referrals; 4.1%), post-discharge follow up (3.1%), harm reduction/naloxone education (2.9%), instrumental needs (e.g., bus passes, clothes; 1.8%), and other (2.1%). Seven of SAMHSA's 8 Dimensions of

Wellness (social, physical, intellectual, emotional, spiritual, environmental, and financial) were covered by the peer mentor; only the occupational dimension was not covered. **Conclusions:** The peer mentor provided a wide range of services for patients centered on recovery from substance use disorders in addition to the patient's overall health, goals, and interests. Their comprehensive approach is also reflected by the incorporation of seven of SAMHSA's 8 Dimensions of Wellness into patient encounters.

Childhood Trauma as Barrier to Engagement in Residential Substance Use Disorder Treatment

Rebecca Carden, DNP; Elizabeth Morse, DNP, FNP-BC, MPH; David Phillippi, PhD; Brian Wind, PhD - Belmont University

Background: The relationship between a history of childhood trauma and lifetime risk for poor outcomes and substance use disorder (SUD) is well established. However, there are gaps in the literature assessing if childhood trauma hinders patient engagement in SUD treatment. Specifically, there is little research to evaluate if a history of adverse childhood experiences (ACEs) is associated with patients leaving treatment against medical advice (AMA). **Objective**: The purpose of this study was to assess if there is a relationship between high ACE scores and leaving treatment AMA for those in residential SUD treatment. **Methods**: Data were extracted from the electronic health records of all patients seeking treatment for SUD at one of six trauma-informed residential SUD treatment centers in the Southeastern United States. Records were included in the analysis after an audit of both intake and discharge summaries for complete ACE questionnaires and all required demographic variables (N=382). After data extraction, total ACE scores were dichotomized into low (ACE<4) and high (ACE>4) levels of trauma. Logistic repression models were used to examine associations between ACE scores and leaving treatment AMA while adjusting for covariates. **Results**: High ACE scores were present in 46.6% of patients in the sample, and 25.9% of participants left treatment AMA. Of those who left AMA, 47.5% had a high ACE score, 59.6% used opiates, and 59.6% were male. Logistic regression models showed no association between leaving treatment AMA and a high ACE score (p= .098). The covariate, opiate use, was significantly found to be associated with leaving treatment AMA (p= .006). **Conclusion:** This is the only study to date that has assessed the relationship between ACE scores and leaving SUD treatment AMA. Although, there were high rates of childhood trauma among this sample, it was not found to be statistically associated with leaving treatment. More research is needed to understand the complexities faced in treating those with SUD and trauma.

Characteristics of Inpatients Hospitalized for Substance Use Disorder Who Received Osteopathic Manipulative Treatment From 7/1/2016-6/30/2017

Alisa M. Cleary, DO; E. Katherine Nenninger, MD; Kinna Thakarar, DO; David Keller, DO - Maine Medical Center - Portland, ME

Background: Inpatient hospitalization is often an opportunity to start medication and treatment for opiate use disorder (MOUD). At our hospital, a multidisciplinary "IMAT" (integrated medication assisted treatment) team is available to facilitate substance use disorder treatment and services. In addition, consultation services for osteopathic manipulative medicine (OMM) are available. Osteopathic manipulative treatment (OMT) can play an important role in the overall healing and well-being of an individual. This non-invasive, hands on approach can improve patient comfort, promote recovery, and potentially reduce length of stay in hospitalized patients. **Objectives:** The objective in this analysis was to describe demographics of IMAT patients who received a consultation request for OMT. We also aimed to identify areas of need and opportunities for practice improvement in the area of hospital based osteopathic manipulative medicine. **Methods:** A retrospective chart review was conducted on inpatients at a tertiary care hospital in Portland Maine and included hospitalized patients seen by the IMAT consult service between 7/1/2016 and 6/30/2017. Data was directly abstracted from electronic medical records. Descriptive analysis was performed using Microsoft Excel and Stata IC64. **Results:** A total of 145 patients with substance use disorder were seen by the IMAT service during their hospitalization. Thirty four (23.4%) patients received an OMM consult. Musculoskeletal complaint of some

type was the primary reason for consultation request. Back pain was the most frequent (35%). Among those seen, 55% had one visit, 20.6% had 2, and 14.7% had 3 visits. Sixty seven percent (97/145) were hospitalized for infectious process, 44% required some type of surgery to treat an infectious complication. There were 52 out of the 145 patients who were seen by the acute pain management service; 34/52 (65%) of those seen did not receive OMM consults. **Conclusions:** Given the prevalence of musculoskeletal complaints in patients seen by the OMM service, these results suggest that OMT may be a valuable service to offer those who are hospitalized for consequences related to their drug use and have concurrent pain. Additional research is warranted to determine if OMT helps reduce length of stay, facilitate treatment for addiction, and improve patient outcomes.

"Baby Steps" Towards Harm Reduction in Traditional Substance Use Treatment in the Midwest

Alex Duello, MPH; Bridget Coffey, MSW, MA; Claire A. Wood, PhD; Rachel P. Winograd, PhD - University of Missouri St. Louis - Missouri Institute of Mental Health

Background: Historically, harm reduction principles have not been accepted at substance use treatment agencies that place a strong emphasis on abstinence. Despite progress towards low-barrier treatment models in large cities on the East and West Coasts, change has been slow in the Midwest. In 2017, Missouri utilized federal opioid-focused funds to implement a Medication First, low-barrier treatment approach with principles centered in harm reduction in the state's publicly funded treatment system. **Objective**: The purpose of this study was to gain a better understanding of the barriers and successes that publicly-funded SUD treatment agencies encountered implementing the Medication First model in Missouri. One specific focus of the study was to identify areas in which harm reduction has been embraced as well as areas for improvement as compared with harm reduction principles from the Harm Reduction Coalition. **Methods**: Researchers conducted 21 semi-structured, in-person interviews with individuals from seven treatment agencies. Researchers used purposeful sampling to recruit participants, which included both staff at treatment agencies and individuals who received treatment through the grant. Researchers used Atlas.TI software to code and analyze data. **Results**: Results suggest agencies made gains integrating harm reduction principles into their practice through their implementation of a low-barrier treatment approach. The understanding that the cessation of all drug use need not be the goal of interventions was underscored by participants' discussion of increased trust between patients and providers. Specifically, some participants reported an increased ability to have honest conversations about ongoing drug use with their treatment providers without fear of retribution or being discharged. The increased acceptance and distribution of naloxone is another example in which harm reduction principles have been integrated into treatment since 2017. However, other participants, particularly those who were no longer enrolled in a treatment program, described experiences antithetical to harm reduction principles (e.g., feeling judged by their treatment provider, being forced to participate in services they did not want, involuntary tapers of medication). **Conclusion**: Although there has been some movement towards incorporating harm reduction principles, ongoing efforts are needed to increase traditional substance use treatment providers' philosophical and clinical alignment with a harm reduction framework.

Discrimination and DSM-5 Psychiatric and Substance Use Disorders among US Sexual Minorities

Carol J Boyd, PhD; Erin Kahle, PhD; Philip T Veliz, PhD; Sean Esteban McCabe, PhD - University of Michigan School of Nursing

Background: Two-thirds of sexual minorities in the US have experienced sexual minority discrimination. It has been proposed that this form of discrimination has a negative impact on mental health and substance use. **Objective**:We conducted structural equation modeling to better understand the pathways among past-year sexual orientation discrimination, psychiatric disorders, and substance use disorder (SUD). **Methods:** Data were from the 2012-2013 National Epidemiological Survey on Alcohol and Related Conditions-III (NESARC-III). Sample included those who responded to questions regarding sexual minority discrimination (n=3,494), including those who identified as (1) heterosexual and reported past-year same-sex attraction or behavior (n=2,060), (2) identified as gay/lesbian (n=583), (3) identified as bisexual (n=560), or (4) identified as 'not

sure' (n=189). Past-year Diagnostic and Statistical Manual of Mental Disorders (DSM-5) SUD severity was assessed with the Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-5), which asked about 11 symptoms that were used to operationalize DSM-5 criteria for SUD severity. Past-year DSM-5 psychiatric disorders included mood, anxiety, trauma-related, eating, and personality disorder diagnoses using 18 indicators to determine a DSM-5 disorder. Sexual minority related discrimination was based on the Experiences with Discrimination scale. **Results:** The full multivariate model simultaneously assessed the latent factors for SUD severity and psychiatric disorders (Model 1). In order to determine if sexual orientation discrimination was a key predictor of either SUD severity or psychiatric disorders, we removed the direct paths separately between sexual orientation discrimination and SUD severity (Model 2) and sexual orientation discrimination and psychiatric disorders (Model 3). We found that removing the direct path between sexual orientation discrimination and psychiatric disorders significantly altered the model fit ($\Delta \chi 2 = 12.238$, $p<.001$). When the direct path between sexual orientation discrimination and SUD severity was removed, the model fit did not significantly change ($\Delta \chi 2 = 3.510$, $p=.061$). **Conclusions**: Our findings provide evidence for a direct pathway between sexual minority related discrimination and psychiatric disorders among sexual minority adults. Moreover, sexual minority related discrimination was only found to be indirectly associated with SUD severity via psychiatric disorders. We found that sexual identity was neither an independent predictor of psychiatric disorders nor SUD.

History of Alcohol-Related Treatment and Intent to Reduce Alcohol Use Among People Living with HIV in Florida

Rebecca J Fisk, MPH; Gladys Ibanez, PhD; Babette Brumback, PhD; Robert L Cook, MD, MPH -Department of Epidemiology, University of Florida, Gainesville, FL

Background: Among people living with HIV (PLWH), alcohol use is associated with lower engagement in care, suboptimal antiretroviral therapy adherence, and failure to achieve viral suppression: key steps in the HIV care continuum. Many alcohol treatment options exist with varying effectiveness. Understanding current interest in reducing alcohol use and past treatment of PLWH may help inform development of future interventions to link people to care or update existing alcohol-related treatment. **Objective**: This study seeks to describe the history of treatment and interest in reducing alcohol use among PLWH in the Florida Cohort. **Methods**: The Florida Cohort recruited from clinic- and community-based settings from 2014-2018. Participants who ever drank were included (n=823). Topics included current alcohol use, views on changing their use, and experiences with alcohol treatment. At-risk drinking was assessed using a modified AUDIT-C and defined as a score of ≥3 for women and ≥4 for men. Relationship among current use, treatment, and interest in cutting back were assessed using Chi Square tests. **Results**: The sample was largely male (66%) and Non-Hispanic Black (55%), with a mean age of 46.3 and 13 years since HIV diagnosis. At baseline, 38% met at-risk drinking criteria and 21% were abstinent in the past year. Overall, 29% had ever received alcohol-related treatment, 24% went to Alcoholics Anonymous (AA), 12% went to counseling, and 4% used medication. A minority (15%) had used multiple treatments. Among those still using alcohol, 49% reported actively cutting back, 12% were interested but not actively cutting back, and 33% reported they were not interested in cutting back. Compared to moderate drinking, current at-risk drinking was associated with actively cutting back (46% vs. 53%, $p<0.0001$), interest in cutting back (8% vs. 15%, $p<0.0001$), and ever being in treatment (20% vs. 41%, $p<0.0001$). **Conclusions:** Past experience with alcohol treatment, especially AA, was common. Most of those currently drinking were trying to cut back or considering it and may be open to alcohol-related treatment. However more information on intent to undergo treatment and treatment acceptability and perceived effectiveness is needed.

Environmental Scan of Opioid-Related Activities in Academic Pharmacy

Lynette R. Bradley-Baker, PhD, RPh; Matt Cipriani, MLS; Dorothy Farrell, PhD; Thomas Maggio, MBA; Jeffrey P. Bratberg, PharmD, FAPhA; Andria F. Church, PharmD, BCPS, BCPP; Sara E. Dugan, PharmD; Thomas S. Franko, PharmD; Otito F. Iwuchukwu, PhD, RPh; Cynthia P. Koh-Knox Sharp, PharmD; Talia Puzantian, PharmD, BCPP; Jilla Sabeti, PhD; Daniel J. Ventricelli, MPH, PharmD - American Association of Colleges of Pharmacy

Background: There has been widespread interest in how colleges and schools of pharmacy are responding to the opioid overdose crisis in their communities, but until recently there was no comprehensive or national source of information about this response. In July 2018, the American Association of Colleges of Pharmacy (AACP), the national organization for pharmacy education, undertook a survey of its institutional members to develop such a resource. **Objective**: The purpose of this study was to draw a cohesive picture of the efforts of pharmacy schools to address the opioid overdose crisis. **Methods:** AACP created a survey for its institutional members to report their opioid overdose crisis-related activities, with an initial call for responses in July 2018. AACP staff members reviewed submissions and continuously developed and refined categories and tags to classify submitted activities. A volunteer committee comprised of members of the AACP Substance Use Disorder Special Interest Group (SIG) helped develop the categorization methodology, define categories and tags and followed-up with non-responding colleges and schools. Five broad categories were defined, and activities were further assigned descriptive tags. Each activity was independently categorized and tagged by two separate AACP staff members; mismatches were resolved by consensus. Category and tag definitions and the assignment of categories and tags to each activity were reviewed by the SIG volunteers. The database remains open, with ongoing submissions of new and updated activities from schools. **Results**: To date, 110 schools have submitted a total of 461 activities. Activities are categorized as Advocacy (3%), Education (66%), Service (24%), Practice (7%) and Research (25%.) 21% of activities are assigned to more than one category. 59 tags have been defined to capture essential features of activities, such as target audience, intervention type, and research topic. **Conclusions**: Academy pharmacy is broadly addressing the opioid overdose crisis in their communities. AACP can support schools by increasing awareness of and support for their efforts among external stakeholders, to garner needed resources for advanced training and support for policy changes that would enable pharmacists to play a greater role in harm reduction.

Injunctive Norms and Self-Regulation as Predictors of Drinking Behaviors in College Students

Megan M. Risi, MA; Christina T. Schulz, MA; Coral L. Shuster, MA; Robert G. Laforge, ScD – University of Rhode Island

Background: Injunctive norms are described as the perceived acceptability of others when engaging in a specific behavior. Perceived injunctive norms regarding alcohol consumption have been found to predict alcohol use, alcohol-related consequences, and alcohol dependency symptoms. There is additional support for the association between self-regulation and alcohol consumption, with increased self-regulation predicting decreases in heavy drinking episodes and alcohol-related consequences. **Objective**: The present study examines the relations between three measures of alcohol consumption (average weekly drinks, heavy episodic drinking, and maximum number of drinks in a single occasion), self-regulation related to alcohol consumption, and peer injunctive norms regarding alcohol use. **Method:** Participants were 732 incoming college freshmen, recruited to test the efficacy of a brief motivational intervention and parent-based intervention in an effort to reduce alcohol consumption and consequences. Path analyses were used to model the relations of injunctive norms and self-regulation on three measures of alcohol consumption (average weekly drinks, heavy episodic drinking, and maximum number of drinks), separately. **Results:** Perceived injunctive norms were significantly associated with average weekly drinks, heavy episodic drinking, and maximum number of drinks. Similarly, self-regulation was significantly associated with average weekly drinks and max drinks, but not heavy episodic drinking. **Conclusion**: As expected, student perceptions of injunctive norms were associated with increased levels of alcohol consumption. What is still not very well understood is the association between self-regulation and alcohol consumption. Although previous literature has indicated self-regulation is often associated with

decreased consumption, our sample indicated self-regulation is associated with increased consumption. Future research is needed to better understand these relations and how they change over time.

Poly-Substance Use in the Context of Vaping Among College Students: Implications for Prevention and Risk Reduction

Jessica Samuolis, PhD; Kerry Morgan, PhD; Anna Greer, PhD; Gabrielle Diaz, BS; Kyle Elimanco, BS - Sacred Heart University

Background: Examining poly-substance use in the context of vaping is important for understanding and intervening to reduce or prevent vaping. **Objective**: To examine college students' vaping behavior as it relates to their Tetrahydrocannabinol (THC) use in vape devices and their alcohol use. **Methods**: We used purposive and snowball sampling to recruit 1229 college students from a university in the northeastern US to complete a vaping questionnaire (response rate=25%). The questionnaire invited students to indicate: their vape use status (vaped in prior 30 days, vaped but not in prior 30 days, never vaped); whether or not they use THC in their vape device (yes/no); and if they use alcohol when they vape (only vape when drinking, only vape when not drinking, vape when drinking and not drinking). We analyzed the data in SPSS using descriptive, chi square, and independent t-test statistics. **Results**: Student respondents were mostly white (81.1%), females (67.3%) with an average age of 19.73 years (SD=1.39). Almost 41% of respondents reported past 30-day vape use; 26.8% reported vaping but not in the past 30-days. Over half (53.5%) of students reported vaping both when drinking and not drinking; 12% reported only vaping when drinking. A greater percentage of nonwhite (40.3%) than white (34.0%) students ($X2=11.705$, $df=2$, $p=.003$) as well as female (41.2%) than male (23.9%) students ($X =26.053$, $df=2$, $p<.001$) reported vaping only when drinking. One-fourth (24.6%) of students reporting using THC in their vape device. No associations were identified between THC use in vape devices and student demographic characteristics ($p>.05$). **Conclusions**: Opportunities exist to reduce the prevalence of vaping on college campuses by targeting student populations, such as women and nonwhite students, who were more likely to vape only when drinking. College health professionals should identify strategies to bolster students' understanding of the health risks of both vaping and poly-substance use. Additional research is needed to better understand THC use in vape devices among college students.

Process Evaluation Results of a Multi-Year, Multi-Pronged, Interdisciplinary Approach to Opioid Misuse Prevention on a University Campus

Jessica Samuolis, PhD; Victoria Osborne-Leute, PhD, MSW; Janice Kessler, LCSW; Kerry Morgan, PhD - Sacred Heart University

Background: College students are at risk for prescription drug misuse, particularly the misuse of opioids. Comprehensive prevention strategies are needed to prevent this public health issue. **Objective**: Process evaluation results of a multi-year, multi-pronged, interdisciplinary approach to opioid misuse prevention on a college campus will be reviewed. Specifically, process data collected across three years of opioid misuse prevention programming focused on 1) assessing risk, 2) increasing knowledge and awareness of misuse, 3) increasing knowledge of and access to resources, 4) reducing access to opioids, 5) encouraging curriculum infusion, 6) reducing stigma and building support, 7) implementing peer-to-peer programming, and 8) providing interdisciplinary professional development, will be reviewed. **Methods**: A campus-wide survey on drug use behaviors and attitudes was implemented online in year one of the project to assess risk and to inform the development of prevention strategies. Prevention strategies were based on the above objectives and included activities such as the distribution of educational materials, workshops with professionals, presentations by guest speakers who shared clinical and personal experience with opioid misuse, 'lunch and learns' with faculty and staff, education on safe medication disposal practices, among other initiatives. Process data was collected for the prevention activities that were implemented throughout the three years, which included data on attendance, outreach results, the dissemination of materials, feedback from workshops, and qualitative findings regarding feasibility. **Results**: Survey results (N=711) indicated very low rates of opioid misuse, however the data

revealed the existence of other risk factors, such as the use of other substances and attitudes toward substance use. Process data collected yielded informative findings regarding increased knowledge, which strategies were most successful, and how to best promote the prevention activities in this context. Additionally, the process results from interactive presentations were extremely positive and highlighted the importance of this prevention approach. **Conclusions:** Multi-pronged prevention strategies to prevent opioid misuse developed out of inter-disciplinary collaboration can increase knowledge, are well-received, and are highly feasible in the college context.

Associations of Marijuana Use, Use Frequency, and Cannabis Use Disorder with Ambulatory Care Utilization and Screenings For Substance Use in Ambulatory Settings

John Moore, MSW; Diana DiNitto, PhD - The University of Texas at Austin

Background: Frequent marijuana users and those with cannabis use disorder (CUD) underutilize substance use treatment. Ambulatory care settings are widely accessed and provide screening, brief intervention, and/or referral to treatment (SBIRT) for substance use. SBIRT's effectiveness in reducing substance use in ambulatory care settings has been investigated. Less is known about whether marijuana use, use frequency, and CUD are related to ambulatory care use or receiving substance use screening in ambulatory settings. **Objective**: This study examined associations of marijuana use, use frequency, and CUD with (1) ambulatory care use and (2) receiving substance use screening in ambulatory care settings. **Methods**: Data came from the 2015-2018 National Survey on Drug Use and Health (N=171,766 aged 18+). Multivariable logistic regression models were used to examine (1) whether past-year marijuana users and non-users differed in (a) use of any past-year ambulatory care and (b) receiving substance use screening in ambulatory settings, and (2) whether among past-year marijuana users, more frequent use and CUD were associated with receiving (a) any past-year ambulatory care and (b) substance use screening in ambulatory settings. Covariates included clinical and sociodemographic characteristics. **Results**: Ambulatory care use did not differ between marijuana users and non-users, but users had higher odds of receiving substance use screening (AOR=1.29, 95% CI=1.23-1.36). Among marijuana users, compared to those who used on 1-10 days, those who used on 100-299 days (AOR = 0.76, 95% CI=0.68-0.85) and 300+ days (AOR=0.67, 95% CI=0.59-0.76) had lower odds of ambulatory care use, but of those who used ambulatory care, 100-299 and 300+ day users had higher odds of receiving substance use screening (AOR=1.17, 95% CI=1.05-1.31 and AOR=1.25, 95% CI=1.09-1.42, respectively). Marijuana users with CUD had higher odds of ambulatory care use than those without CUD (AOR=1.25, 95% CI=1.10-1.41), but they did not differ in the odds of receiving screening. **Conclusions**: Findings suggest that frequent marijuana users may need encouragement to seek ambulatory care, which may increase the number screened for substance use. Greater efforts may be needed to ensure that those with CUD receive substance use screening in ambulatory care settings.

Development of a Dynamic Reference Database For Use on Inpatient Addiction Medicine Consult Services

Evan Dov Gale, MD; Jeanette Tetrault, MD; Melissa Weimer, DO, MCR, FASAM - Yale Program in Addiction Medicine

Background: Almost one quarter of hospitalized patients have a substance use disorder (SUD) that contributes to their hospitalization. Despite this, initiation of evidence-based medication treatments for SUD remains low in the hospital setting. Inpatient addiction medicine consult services (AMCS) are well-positioned to address this treatment need. A structured, evidence-based curricula focused on primary literature would support the work and learning of addiction medicine fellows rotating in this setting. The reference database must be dynamic to reduce the risk that it will become outdated. **Objectives:** Develop a dynamic database of evidence-based literature and clinical decision support tools for fellows and other trainees rotating on AMCS**. Methods:** Several data management servers were reviewed. Airtable, a dynamic, online database manager was chosen for its ease of searchability and open access. The database was initially populated selected peer reviewed articles

from a larger library of addiction medicine topics. Additional literature was searched from Google Scholar and PubMed based on clinical questions from one year of inpatient consultation. PDFs of each article were added to the database along with summary information including study design, study population, methods, and results. Each article was assigned key words to assist with future searches. The database was presented to the Yale Program in Addiction Medicine and qualitative feedback was collected. **Results:** A living database of literature relevant to an AMCS was developed and received positively. Reviewers appreciated the ease of searchability, the ability to store full copies of the original source, and the summary information provided. Suggestions for improvement included adding evidence grading to all entries, using platform functions such as color coding to highlight the grading of each source, and exploring whether user data can be gathered to help evaluate database effectiveness. **Conclusions:** It is feasible to develop a dynamic database of key literature for an AMCS. The ability to house the literature in one easily searchable database where it can be quickly reviewed without interrupting the flow of a workday make it an innovative addition to inpatient curricula for addiction medicine fellows. Adding evidence grading to sources may increase utility of the database and would help identify gaps in research.

Comparing Substance Use Risk Profiles Across Clinical Settings: Implications For Screening, Brief Intervention, and Treatment

Michael A. Lawson, PhD; Shanna McIntosh, MS; David L. Albright, PhD; Jennifer Smith, MSW - School of Social Work, University of Alabama

Background: The purpose of this research is to analyze how substance use and mental health risks present themselves among different sub-populations of patients who "screen in" for SBIRT services. The setting for the study is an SBIRT program serving low-income, Federally Qualified Health Centers (FQHC) as well as Public Healht Clinics in the Southeastern United States. **Materials and Methods**: Latent Class Analysis (LCA) was used to model different profiles of substance use and mental health risk/difficulty among 950 patients with qualifying DAST-10 or Audit scores. These models were estimated using the DAST-10, the Audit, and the PHQ-9 for depression. In addition, patient age, race/ethnic status, and sex (as a binary) were analyzed for their association with each risk profile. **Findings**: Median age=36 (range 19 to 72), 51% women 36% white, 63% African American. LCA yielded three characteristically different risk profiles among patients with qualifying AUDIT/DAST-10 scores at each site. These profiles included (1) a "Drugs Only" class (70%) comprised of patients who screened-in for brief intervention; (2) a "Dual Vulnerability" (25%) class, included patients who engaged in regular binge drinking and had DAST-10 scores that qualified them for brief intervention; and (3) "Severe Vulnerability" class (5%), was indicated by severe alcohol abuse, related behavioral difficulty, depression, and qualifying DAST-10 scores. Significantly, the data indicated that the percentage of clients assigned to each profile was relatively invariant across settings of care. Specifically, the models estimated that more clients belonged to the "Drugs Only" profile at participating Public Health Clinics that at FQHC's, but these differences were not statistically significant. Perhaps surprisingly, there were no significant social-demographic predictors of Risk Profile membership among patients who attended Public Health facilities in the Counties served by the SBIRT program. **Conclusions**: Developing appropriate identification and treatment strategies for low-income clients continues to pose unique challenges for healthcare workers working in primary care settings. The risk profiles identified in this research offer promise for the development of more generalized training modules for supporting brief intervention and treatment in primary care.

A Systematic Review of Patient and Provider Perspectives of Medications for Treatment of Opioid Use Disorder

Katharine Cioe, BS; Breanne E. Biondi, MPH; Rebecca Easly, BA; Amanda Simard, BS; Xiao Zheng; Sandra A. Springer, MD - Frank H. Netter School of Medicine at Quinnipiac University

Background: The opioid epidemic is a public health crisis. Medications for Opioid Use Disorder

(MOUD) include: 1) buprenorphine, 2) methadone, and 3) extended-release naltrexone (XRNTX). Patient and provider perspectives of MOUD are important to investigate since these factors can influence prescription, retention, and recovery. **Objective**: The aim of this systematic review is to disentangle the opinions about these medications to understand how patient and provider beliefs may impact the choice of MOUD and the efficacy of addiction treatment. **Methods**: This systematic review focused on patient and provider perceptions of MOUD. The Review eligibility criteria included: inclusion of the outcome of interest, in English, and involving persons ≥ 18 years. PubMed database search yielded 1692 results; 154 articles were included in the final review. **Results:** There were 63 articles about buprenorphine, 115 articles about methadone, and 16 about naltrexone. Misinformation and stigma associated with MOUD were common patient themes. Providers reported a lack of training and resources as barriers to MOUD. **Conclusions:** This review suggests that there exists significant misinformation regarding MOUD from patients. Due to the severity of the opioid epidemic, it is essential that we consider the effects of patient and provider perspectives on treatment for OUD, including the effects on the type of MOUD prescribed, patient retention and adherence, and ultimately the number treated for OUD that will aid in curbing the opioid epidemic.

A Survey of Emergency Department Nurses' Attitudes and Perceptions Toward Working With Individuals Who Use Drugs

Samantha Blakemore, MPH; Matthew Heerema, BA; Alicia Ventura, MPH; Justin Alves, RN, ACRN, CARN; Charmaine Lastimoso, MPH, MSN, NP-C; Kristin Wason, MSN, NP-C, CARN; Colleen LaBelle, MSN, RN-BC, CARN - Department of Medicine, Boston Medical Center and Boston University School of Medicine, Boston, MA, USA; Grayken Center for Addiction, Boston Medical Center, Boston, MA, USA

Background: The expansion of addiction treatment in emergency departments (ED) improves outcomes for people who use drugs (PWUD). Support from staff initiating medication for addiction treatment (MAT) in the ED has been variable. This may be due to negative attitudes toward PWUD and inadequate knowledge of addiction. **Objective**: To measure ED nurses' attitudes, commitment, and stigma toward PWUD prior to an addiction training, to inform future educational curriculum development. **Methods**: ED nurses who participated in an addiction training between September and December 2019 were sent an anonymous survey via email following registration. The survey consisted of two validated instruments: the Drug and Drug Problems Perceptions Questionnaire (DDPPQ) and the Attitudes to Mental Illness Questionnaire (AMIQ). The DDPPQ consists of 22 items on a 7-point Likert scale (1=strongly agree to 7=strongly disagree), possible score 22-154, lower scores indicate more positive therapeutic commitment in caring for PWUD; and five subscales (possible score 1-7): role adequacy, role support, job satisfaction, professional self-esteem, and role legitimacy. The AMIQ measures stigma related to a vignette of an injection drug user. Total possible scores range from -10 to 10; higher scores indicate more positive attitudes. For each instrument, the distribution of scores and descriptive statistics were analyzed. **Results**: Twenty-one trainings were conducted; 535 clinicians participated. The survey was completed by 309 clinicians resulting in a 58% response rate. The median DDPPQ score was 78 (range 24-114). The median score for each subscale was: 3.00 (support, legitimacy and self-esteem), 3.5 (satisfaction), and 3.57 (adequacy). The median AMIQ score was -4 (range -10-4). **Discussion**: Participants' responses varied broadly with regard to role adequacy, support, satisfaction, self-esteem, and legitimacy, with the median for each falling in the neutral range. The median score for the AMIQ was -4 indicating substantial negative attitudes toward the vignette character. This was an unexpected finding given the median score of the DDPPQ which indicated more positive therapeutic commitment in caring for PWUD. Research should assess if the AMIQ is an appropriate instrument for this population. Educational programs for ED nurses should consider a wide variation of baseline attitudes and perceptions toward PWUD.

Potential Effects of the Negative Bias Towards Patients with Heavy Alcohol Use among Medical Residents

Erin M. Portillo, BS; Brianna N. Holcomb; Sandra Oviedo-Ramirez, PhD; Stormy Monks, PhD, MPH, CHES; Michael Parsa, MD, FAAEM, FACEP; Craig Field, PhD, MPH - The University of Texas at El Paso

Background: Physician attitudes towards patients with alcohol use problems may influence their attitude toward patients, willingness to treat them and their expectations of treatment adherence. If true, this may negatively influence their treatment of patients with heavy alcohol use and their health outcomes. Therefore, it is essential to understand how patients with alcohol use history are perceived by healthcare professionals and the way that their treatment is impacted. **Objective:** Determine whether medical residents have more negative attitudes toward patients with alcohol problems, less willingness to treat them and lower expectations for treatment outcome. **Methods:** Emergency Medicine residents from a local medical school were randomly assigned to one of two case study conditions and asked to evaluate individual cases detailing the unique history of two fictitious patients one with heavy drinking and one without. Participants were evaluated the two vignettes using Perceptions of and Willingness to treat patients, the Medical Condition Regard Scale and Attitudes Towards Alcoholism and Alcoholics Questionnaire. **Results**: The sample consisted of 36 residents; the majority were male (77.8%) and non-Hispanic/Latino (83.3%). There was a significant difference in psychological adjustment scores for alcohol use vignette (M=3.67, SD=.69) and no alcohol use vignette (M=3.17, SD= .64); t(34)=2.26, p = 0.030. There were no significant differences in interpersonal responsiveness, willingness to treat. **Conclusions:** Medical residents may not have more negative attitudes toward patients with alcohol problems, be less willing to treat them or expect poorer outcomes. However, they may anticipate lower psychological functioning among patients who drink too much. This expectation may lead to greater awareness of the psychological influences on heavy drinking, assessment and referral for treatment to address any problems with psychological functioning.

The Feasibility of an Opioid Overdose Educational Training Program for Recovery Coaches in Washington D.C.

Leilani Attilio, DNP, NP-C[1]; Erin Athey, DNP, FNP-BC[2]; Kate Malliarakis, PhD, ANP-BC[2] – 1. Community Health Care Clinic, Tacoma, Washington; 2. The George Washington University School of Nursing, Washington D.C.

Background: The alarming opioid overdoses prompted Washington D.C. to pass legislation to curb fatalities and create a strategic plan calling for a 50 percent reduction in overdose deaths by 2020. **Objective**: To assess the feasibility of implementing an overdose prevention educational training program for recovery coaches. **Methods**: The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care guided the program creation and integration of the evidence-based practice into the community-based organization. The Iowa Model's Implementation Strategies for Evidence-based Practice was utilized for planning and adoption of the overdose prevention educational training program. The overdose prevention educational training program was adapted from SAMHSA's Opioid Overdose Toolkit. A post-then pre-paper survey was administered after the overdose prevention educational training to a convenience sample of recovery coaches. The Opioid Overdose Knowledge Scale and the Opioid Overdose Attitude Scale evaluated knowledge and attitudes and a paired t-test evaluated changes. Nine-month follow-up was conducted. **Results**: A needs assessment of the community-based organization was done. A partnership with a local pharmacy was established for naloxone home delivery. A workflow from training to naloxone delivery was developed with recovery coaches. Eight participants were enrolled in the 30-min educational training program. There was a general trend on the survey towards improvement in knowledge. Recovery coaches received a one-page, laminated training aid for field use to train clients on overdose recognition and response. A share drive was created to enter program outputs including number of people trained, number of naloxone kits delivered, and number of self-report reversals. Despite no data entered into the share drive, nine-month follow-up revealed recovery coaches trained 65 clients using the one-page, laminated training aid and was the basis for training. **Conclusions**: It is feasible to implement the educational training program. Acceptability and demand for the program was strong. Re-training on workflow would further assist in sustainability. Barriers to broader implementation included recovery coach and leadership turnover and inconvenient staff meeting times. The modest sample size limited generalizability and reliability. Future implementation should consider integrating this training program as part of recovery coach certification and new employee orientation.

Perceived Stigma Among Patients With Substance Use Disorder and HIV Who Received Integrated Care in Vietnam

Nguyen Thu Trang, PhD (c); Dinh Thi Thanh Thuy; Nguyen Thu Hang; Andrew Edsall; Kim Hoffman, PhD; Gavin Bart, MD, PhD; P. Todd Korthuis, MD, MPH; Le Minh Giang, MD, PhD - Hanoi Medical University

Background: Integration of opioid use disorder (OUD) and HIV care is a patient-centered treatment model for improving care quality and access, especially in low resource environments. However, stigma can be a barrier to accessing treatment among people with OUD in HIV care settings. **Objective**: This study investigates patient perspectives and experiences related to stigma encountered while seeking integrated care for HIV and OUD in Vietnam. **Methods**: We conducted face-to-face qualitative interviews with people living with HIV and OUD enrolled in the BRAVO study comparing HIV clinic-based buprenorphine versus HIV clinic care with methadone referral in four HIV clinics in Vietnam. Both treatment models required directly observed buprenorphine or methadone treatment, per Vietnam treatment guidelines. Participants were interviewed at baseline (n=44) and 12 months following enrolment (n=26). Interviews probed patient experiences accessing care, including barriers such as HIV and OUD stigma. Digitally recorded interviews were professionally transcribed, coded in Vietnamese, and analyzed using thematic analysis with a semantic perspective. **Results**: Patient concerns about HIV stigma appeared to outweigh SUD stigma among patients seeking HIV/OUD treatment. Patients referred for daily methadone treatment and visited the HIV clinic only once a month for HIV care felt more assured about their HIV status being confidential than patients receiving integrated buprenorphine treatment that required daily or every-other-day dosing at the HIV clinic. Patients coped with potential HIV stigma by strategically timing their clinic visits to avoid encountering acquaintances, developing cover stories to explain why they were at the HIV clinic, or insisting on switching to methadone treatment to avoid being seen as receiving HIV services. While provider stigma existed, it did not translate into outright discrimination and did not seem to interfere with patients' acceptance of integrated care. **Conclusion**: HIV services must ensure confidentiality and privacy for patients to participate in integrated HIV/OUD treatment. As integrated HIV/OUD care expands in in Vietnam, take-home medications could minimize the risk of exposing patients to potential HIV stigma, and improve uptake of buprenorphine treatment. The experience of patients in Vietnam may be useful to other countries attempting to integrate HIV and OUD services.