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CFAR Substance Use Research Core (SURC) Faculty Publication and New Awards Digest

New research on HIV and substance use by our SURC faculty.

If you have any other publications or awards, please send them toNatalia Gnatienko to include in the next publication digest!

Please remember to cite CFAR support (P30AI042853) on your future publications!

Visit the SURC webpage

Relevant Funding Announcements

RFA-DA-25-020: Ending the Epidemic: New Models of Integrated HIV/AIDS, Addiction, and Primary Care Services (R34 Clinical Trial optional)

RFA-DA-25-019: Ending the Epidemic: New Models of Integrated HIV/AIDS, Addiction, and Primary Care Services (R01 Clinical Trial required)

View more NIDA funding opportunities at the intersection of HIV and substance use here.

Please let us know if you are interested in pursuing these opportunities!

New Publications

Post-traumatic stress disorder and risky opioid use among persons living with HIV and chronic pain. *AIDS Care*. 2023 Aug;35(8):1173-1180. Epub 2021 Feb 4. PMCID: PMC8333265.
Bhatraju E, Liebschutz JM, Lodi S, Forman LS, Lira MC, Kim TW, Colasanti J, Del Rio C, **Samet JH**, Tsui JI.

Persons with HIV (PWH) experience chronic pain and Post-Traumatic Stress Disorder (PTSD) at higher rates than the general population, and more often receive opioid medications to treat chronic pain. A known association exists between PTSD and substance use disorders, but less is known about the relationship between PTSD and risky

opioid use among PWH taking prescribed opioid medications. In this observational study of PWH on long-term opioid medications for pain we examined associations between PTSD symptom severity based on the Post Traumatic Stress Disorder Checklist for DSM-5 (PCL-5, response range 0-80) and the following outcomes: 1) risk for opioid misuse (COMM score ≥13); 2) risky alcohol use (AUDIT score ≥8); 3) concurrent benzodiazepine prescription; and 4) morphine equivalent dose. Among 166 patients, 38 (23%) had a PCL-5 score over 38, indicating high PTSD symptom burden. Higher PCL-5 score (per 10 point difference) was associated with increased odds of opioid misuse (aOR 1.55; 95%CI: 1.31-1.83) and risky drinking (aOR: 1.28;1.07-1.52). No significant association was observed between PCL-5 score and benzodiazepine prescriptions or morphine equivalent dose. These findings suggest that when addressing alcohol and opioid use in PWH on long term opioid therapy, attention to PTSD symptoms is especially important given the higher risk for risky alcohol and opioid use among patients with this common comorbid condition.

The impacts of COVID-19 on structural inequities faced by people living with HIV who inject drugs: a qualitative study in St. Petersburg, Russia. *Int J Drug Policy*. 2023 Jul;117:104060. Epub 2023 May 15. PMCID: PMC10183634.
Carroll JJ, Rossi SL, Vetrova MV, Blokhina E, Sereda Y, Lioznov D, Luoma J, Kiriazova T, **Lunze K**.

Background: People who inject drugs (PWID) living with HIV may be disproportionately impacted by pandemic restrictions. This study qualitatively explored the impacts of the SARS-CoV-2 pandemic on PWID with HIV in St. Petersburg, Russia.
Methods: In March and April 2021, we conducted remote, semi-structured interviews with PWID with HIV, health care providers, and harm reductionists.
Results: We interviewed 25 PWID with HIV (aged 28-56 years, 46% female) and 11 providers. The pandemic exacerbated economic and psychological challenges experienced by PWID with HIV. Simultaneously, barriers to HIV care access, ART prescription refill and dispensing and police violence, which hindered the health and safety of PWID with HIV, were themselves hindered from normal operations by the pandemic, significantly reducing these burdens.
Conclusion: Pandemic responses should account for the unique vulnerabilities of PWID with HIV to avoid worsening the structural violence they already experience. Wherever the pandemic decreased structural barriers, such as institutional, administrative, and bureaucratic challenges and state violence enacted by police and other elements of the criminal justice system, such changes should be protected.

Prescribe to save lives: an intervention to increase naloxone prescribing among HIV clinicians. *J Addict Med*. 2023 Jun 6. Epub ahead of print.
Friedmann PD, Jawa R, Wilson D, Ramsey SE, Hoskinson R Jr, McKenzie M, **Walley AY**, Green TC, Bratberg J, **Rich JD**.

Objectives: Overdose is a major cause of preventable death among persons living with HIV. This study aimed to increase HIV clinicians' naloxone prescribing, which can reduce overdose mortality.
Methods: We enrolled 22 Ryan White-funded HIV practices and implemented onsite, peer-to-peer training, posttraining academic detailing, and pharmacy peer-to-peer contact around naloxone prescribing in a nonrandomized stepped wedge design. Human immunodeficiency virus clinicians completed surveys to assess attitudes toward prescribing naloxone at preintervention and 6 and 12 months postintervention. Aggregated electronic health record data measured the number of patients with HIV prescribed and the number of HIV clinicians prescribing naloxone by site over the study period. Models controlled for calendar time and clustering of repeated measures among individuals and sites.
Results: Of 122 clinicians, 119 (98%) completed a baseline survey, 111 (91%) a 6-month survey, and 93 (76%) a 12-month survey. The intervention was associated with increases in self-reported "high likelihood" to prescribe naloxone (odds ratio [OR], 4.1 [1.7-9.4]; P = 0.001). Of 22 sites, 18 (82%) provided usable electronic health record data that demonstrated a postintervention increase in the total number of clinicians who prescribed naloxone (incidence rate ratio, 2.9 [1.1-7.6]; P = 0.03) and no significant effects on sites having at least one clinician who prescribed naloxone (OR, 4.1 [0.7-23.8]; P = 0.11). The

overall proportion of all HIV patients prescribed naloxone modestly increased from 0.97% to 1.6% (OR, 2.2 [0.7-6.8]; P = 0.16).
Conclusion: On-site, practice-based, peer-to-peer training with posttraining academic detailing was a modestly effective strategy to increase HIV clinicians' prescribing of naloxone.

A study protocol for Project I-Test: a cluster randomized controlled trial of a practice coaching intervention to increase HIV testing in substance use treatment programs. *Res Sq* [Preprint]. 2023 Jun 28:rs.3.rs-3059783. PMCID: PMC10350190.
Frimpong JA, Parish C, Feaster DJ, Gooden LK, Matheson T, Haynes L, Linas BP, **Assoumou SA**, Tross S, Kyle T, Nelson CM, Liguori TK, Toussaint O, Siegel K, Annane D, Metsch LR.

Background: People with substance use disorders are vulnerable to acquiring HIV. Testing is fundamental to diagnosis, treatment, and prevention; however, in the past decade, there has been a decline in the number of substance use disorder (SUD) treatment programs offering on-site HIV testing. Fewer than half of SUDs in the United States offer on-site HIV testing. In addition, nearly a quarter of newly diagnosed cases have AIDS at the time of diagnosis. Lack of testing is one of the main reasons that annual HIV incidences have remained constant over time. Integration of HIV testing with testing for HCV, an infection prevalent among persons vulnerable to HIV infection, and in settings where they receive health services, including opioid treatment programs (OTPs), is of great public health importance.
Methods/Design: In this 3-arm cluster-RCT of opioid use disorders treatment programs, we test the effect of two evidence-based "practice coaching" (PC) interventions on: the provision and sustained implementation of on-site HIV testing, on-site HIV/HCV testing, and linkage to care. Using the National Survey of Substance Abuse Treatment Services data available from SAMHSA, 51 sites are randomly assigned to one of the three conditions: practice coach facilitated structured conversations around implementing change, with provision of resources and documents to support the implementation of (1) HIV testing only, or (2) HIV/HCV testing, and (3) a control condition that provides a package with information only. We collect quantitative (e,g., HIV and HCV testing at six-month-long intervals) and qualitative site data near the time of randomization, and again approximately 7-12 months after randomization.
Discussion: Innovative and comprehensive approaches that facilitate and promote the adoption and sustainability of HIV and HCV testing in opioid treatment programs are important for addressing and reducing HIV and HCV infection rates. This study is one of the first to test organizational approaches (practice coaching) to increase HIV and HIV/HCV testing and linkage to care among individuals receiving treatment for opioid use disorder. The study may provide valuable insight and knowledge on the multiple levels of intervention that, if integrated, may better position OTPs to improve and sustain testing practices and improve population health.

ReACH2Gether: iterative development of a couples-based intervention to reduce alcohol use among sexual minority men living with HIV and their partners. *AIDS Behav*. 2023 Aug 7. doi: 10.1007/s10461-023-04148-3. Epub ahead of print. PMID: 37548795.
Gamarel KE, Durst A, Zelaya DG, van den Berg JJ, Souza T, Johnson MO, Wu E, **Monti PM**, **Kahler CW**.

Unhealthy alcohol use, which encompasses heavy episodic drinking to alcohol use disorder, has been identified as a modifiable barrier to optimal HIV care continuum outcomes. Despite the demonstrated efficacy of couples-based interventions for addressing unhealthy alcohol use, there are no existing couples-based alcohol interventions designed specifically for people living with HIV. This study presents the development and refinement of a three-session couples-based motivational intervention (ReACH2Gether) to address unhealthy alcohol use among a sample of 17 sexual minority men living with HIV and their partners living in the United States. To increase potential population reach, the intervention was delivered entirely remotely. Throughout an original and a modified version, results indicated that the ReACH2Gether intervention was acceptable and there were no reports of intimate partner violence or adverse events.

Session engagement and retention were high. In pre-post-test analyses, the ReACH2Gether intervention showed trends in reducing Alcohol Use Disorder Identification Test scores and increasing relationship-promoting dynamics, such as positive support behaviors and goal congruence around alcohol use. Results support the need for continued work to evaluate the ReACH2Gether intervention.

Efficacy of alcohol reduction interventions among people with HIV as evaluated by self-report and a phosphatidylethanol (PEth) outcome: protocol for a systematic review and individual participant data meta-analysis. *BMJ Open*. 2023 Jun 6;13(6):e070713. PMCID: PMC10254608.
Kane JC, Allen I, Fatch R, Scheffler A, Emenyonu N, Puryear SB, Chirayil P, **So-Armah K**, **Kahler CW**, Magidson JF, Conroy AA, Edelman EJ, Woolf-King S, Parry C, Kiene SM, Chamie G, Adong J, Go VF, Cook RL, Muyindike W, Morojele N, Blokhina E, Krupitsky E, Fiellin DA, Hahn JA.

Introduction: Unhealthy alcohol use is associated with a range of adverse outcomes among people with HIV (PWH). Testing the efficacy and promoting the availability of effective interventions to address unhealthy alcohol use among PWH is thus a priority. Alcohol use outcomes in intervention studies are often measured by self-report alone, which can lead to spurious results due to information biases (eg, social desirability). Measuring alcohol outcomes objectively through biomarkers, such as phosphatidylethanol (PEth), in addition to self-report has potential to improve the validity of intervention studies. This protocol outlines the methods for a systematic review and individual participant data meta-analysis that will estimate the efficacy of interventions to reduce alcohol use as measured by a combined categorical self-report/PEth variable among PWH and compare these estimates to those generated when alcohol is measured by self-report or PEth alone.
Methods and analysis: We will include randomised controlled trials that: (A) tested an alcohol intervention (behavioural and/or pharmacological), (B) enrolled participants 15 years or older with HIV; (C) included both PEth and self-report measurements, (D) completed data collection by 31 August 2023. We will contact principal investigators of eligible studies to inquire about their willingness to contribute data. The primary outcome variable will be a combined self-report/PEth alcohol categorical variable. Secondary outcomes will include PEth alone, self-report alone and HIV viral suppression. We will use a two-step meta-analysis and random effects modelling to estimate pooled treatment effects; I2 will be calculated to evaluate heterogeneity. Secondary and sensitivity analyses will explore treatment effects in adjusted models and within subgroups. Funnel plots will be used to explore publication bias.
Ethics and dissemination: The study will be conducted with deidentified data from completed randomised controlled trials and will be considered exempt from additional ethical approval. Results will be disseminated through peer-reviewed publications and international scientific meetings.

Risk of HIV viral rebound in the era of universal treatment in a multicenter sample of persons with HIV in primary care. *Open Forum Infect Dis*. 2023 May 10;10(6):ofad257. PMCID: PMC10284343.
Liu T, Chambers LC, Hansen B, Bazerman LB, Cachay ER, Christopoulos K, **Drainoni ML**, Gillani FS, Mayer KH, Moore RD, Rana A, Beckwith CG.

Background: Antiretroviral therapy (ART) is recommended for people with HIV (PWH), irrespective of CD4 cell count, to improve their health and reduce the risk of transmission to sexual partners through long-term viral suppression. We identified risk factors for viral rebound among patients with a period of stable viral suppression to inform counseling and monitoring.
Methods: We conducted a multisite, retrospective study of PWH with a 2-year period of sustained viral suppression in the United States using the Centers for AIDS Research Network of Integrated Clinical Systems cohort. We used multivariable logistic regression to identify characteristics independently associated with any viral rebound (viral load [VL] ≥200 copies/mL) and sustained viral rebound (VL ≥200 copies/mL followed by a VL that was also ≥200 copies/mL within 6 months), within 2 years of follow-up.
Results: Among 3496 eligible patients with a 2-year period of sustained viral suppression,

most (90%) continued to have viral suppression over 2 additional years; 10% experienced viral rebound, and 4% experienced sustained viral rebound. In multivariable analyses, Black race, current smoking, integrase strand transfer inhibitor use, and 5- to 9-year duration of ART were positively associated, and being age ≥50 years was negatively associated, with any viral rebound. Only current smoking and 5- to 9-year (vs 2- to 4-year) duration of ART were positively associated, and being age ≥60 years was negatively associated, with sustained viral rebound.
Conclusions: Most people retained in clinical care and with HIV viral suppression on ART will have persistent viral suppression. However, some patients may benefit from additional treatment adherence support.

An acceptance-based, intersectional stigma coping intervention for people with HIV who inject drugs-a randomized clinical trial. *Lancet Reg Health Eur*. 2023 Mar 20;28:100611. PMCID: PMC10173263.
Luoma JB, Rossi SL, Sereda Y, Pavlov N, Toussova O, Vetrova M, Bendiks S, Kiriazova T, Krupitsky E, Lioznov D, Blokhina E, Lodi S, **Lunze K**.

Background: People with HIV who inject drugs experience intersecting forms of stigma that adversely impact care access. This RCT aimed to evaluate effects of a behavioral intersectional stigma coping intervention on stigma and care utilization.
Methods: We recruited 100 participants with HIV and past-30-day injection drug use at a non-governmental harm reduction organization in St. Petersburg, Russia, and randomized them 1:2 to receive usual services only or an additional intervention of three weekly 2-h group sessions. Primary outcomes were change in HIV and substance use stigma scores at one month after randomization. Secondary outcomes were initiation of antiretroviral treatment (ART), substance use care utilization, and changes in frequency of past-30-days drug injection at six months. The trial was registered as NCT03695393 at clinicaltrials.gov.
Findings: Participant median age was 38.1 years, 49% were female. Comparing 67 intervention and 33 control group participants recruited October 2019-September 2020, the adjusted mean difference (AMD) in change in HIV and substance use stigma scores one month after baseline were 0.40, (95% CI: -0.14 to 0.93, p = 0.14) and -2.18 (95% CI: -4.87 to 0.52, p = 0.11), respectively. More intervention participants than control participants initiated ART (n = 13, 20% vs n = 1, 3%, proportion difference 0.17, 95% CI: 0.05-0.29, p = 0.01) and utilized substance use care (n = 15, 23% vs n = 2, 6%, proportion difference 0.17, 95% CI: 0.03-0.31, p = 0.02). The adjusted median difference in change in injecting drug use frequency 6 months after baseline was -3.33, 95% CI: -8.51 to 1.84, p = 0.21). Five not intervention-related serious adverse events (7.5%) occurred in the intervention group, one (3.0%) serious adverse event in the control group.
Interpretation: This brief stigma-coping intervention did not change stigma manifestations or drug use behaviors in people with HIV and injection drug use. However, it seemed to reduce stigma's impact as an HIV and substance use care barrier.