

2019 URBAN ARCH ANNUAL MEETING



Uganda Russia Boston Alcohol Network for
Alcohol Research Collaboration on HIV/AIDS

Program Booklet
April 10, 2019

Table of Contents

Annual Meeting Agenda	2
About URBAN ARCH	
ARCH II Main Grants	3
URBAN ARCH II Data Collected in	
Cohort Baseline Questionnaires	4
ARCH II Clinical Values & Samples Collected	5
Affiliated Studies	6
ARCH I Main Grants	7
Team Bios	8-25
Past Year Grant Submissions & Awards	26
URBAN ARCH K Awards	27
2018 URBAN ARCH Conference Abstracts	28
2018 URBAN ARCH Papers	29-33



URBAN ARCH Annual Meeting

801 Massachusetts Ave., Boston, MA 02118

The **objectives** of the URBAN ARCH Annual Meeting are to bring together URBAN ARCH investigators, staff, and collaborators to do the following:

- Update the Scientific Advisory Panel and receive feedback on progress and challenges
- Discuss emerging issues at the intersection of HIV and alcohol research to identify future research directions
- Examine URBAN ARCH data in collaboration with external investigators
- Engage trainees in HIV and alcohol research domestically and internationally

WEDNESDAY, APRIL 10 | ROOM 2128

8:30 - 9:00	Continental Breakfast Available	Room 2117	All attendees
9:15 - 9:30	Welcome & Introductions		Jeffrey Samet
9:30 - 10:15	URBAN ARCH Overview and Study Updates		Jeffrey Samet, Debbie Cheng
10:15 - 10:30	BREAK		
10:30 - 12:00	Cohort Breakout Sessions		
	Russia Cohort	Room 2128A	Jeffrey Samet, Matthew Freiberg
	Uganda Cohort	Room 2128B	Judith Hahn
	Boston Cohort	Room 2117	Rich Saitz
12:00 - 12:15	GROUP PHOTO	Crosstown lobby	All attendees
12:15 - 1:00	LUNCH		All attendees
1:00 - 2:00	Future Directions of HIV/Alcohol Research Discussion		Kendall Bryant (introduction) Ken Freedberg (facilitator) Seth Kalichman (conclusion)
2:00 - 2:30	Closing Remarks		Jeffrey Samet
2:30	ADJOURN OPEN MEETING / TRANSITION TO CLOSED MEETING		

We will be posting PowerPoint presentations on our website (urbanarch.org) after the meeting.

Don't forget to fill out your evaluation and pass it in to Carly Bridden or Jules Canfield!



Uganda Russia Boston Alcohol Network for
Alcohol Research Collaboration on HIV/AIDS

Contact

Jeffrey Samet (Consortium PI): jsamet@bu.edu
Carly Bridden (Administrative Director):
carly.briden@bmc.org - (617) 414-5768
urbanarch.org

2nd funding period (2016–2021)

The **Uganda Russia Boston Alcohol Network for Alcohol Research Collaboration on HIV/AIDS (URBAN ARCH)** Consortium was initially funded by NIAAA in September 2011 to carry out cohort and intervention studies to address gaps in our understanding about HIV and alcohol. The central goal of the URBAN ARCH Consortium is to examine the consequences of alcohol use on comorbidities among people living with HIV, including tuberculosis (TB), cardiovascular disease, and falls so as to increase availability of treatments and improve outcomes. The Consortium studies build upon three existing HIV-infected cohorts from Boston, Uganda, and Russia with distinctive strengths and well-characterized alcohol consumption patterns. The three cohorts are integrated in terms of characteristics and common measures, which has allowed for the evolution of cross-cohort studies. Moreover, samples collected from all three cohorts are stored in a centralized repository for future use.

Administrative Coordinating (Admin) Core – URBAN ARCH Consortium

U24AA020778 (JH Samet)

The Administrative Coordinating Core ensures that the scientific and programmatic goals of the URBAN ARCH Consortium are achieved with high quality and timeliness. The Admin Core oversees the data and sample repository and encourages collaboration with investigators within and outside the Consortium.

Biostatistics and Data Management (BDM) Core – URBAN ARCH Consortium

U24AA020779 (DM Cheng)

The principal objectives of the Biostatistics and Data Management Core are to provide active statistical collaboration in the design and analysis of each individual study and to develop and maintain an integrated, centralized data management system that may be used by all studies within the URBAN ARCH Consortium.

Uganda Cohort – TB Preventive Therapy for HIV-infected Alcohol Users in Uganda: An Evaluation of Safety, Tolerability, and Adherence

U01AA020776 (JA Hahn)

Alcohol Drinkers' Exposure to Preventive Therapy for TB (ADEPTT) will examine the safety and tolerability of tuberculosis (TB) preventive therapy for HIV-infected drinkers. The study (n=300) will also estimate the level of adherence to TB preventive therapy overall, by month on therapy and by drinking level, and determine whether the clinical benefits of TB preventive therapy outweigh toxicity risks for HIV infected drinkers in resource-limited settings.

Russia Cohort – Targeting HIV-Comorbidities with Pharmacotherapy to Reduce Alcohol and Tobacco Use in HIV-infected Russians

U01AA020780 (JH Samet/
MS Freiberg/HA Tindle)

The **Studying Partial-agonists for Ethanol and Tobacco Elimination in Russians with HIV (St PETER HIV)** study, a randomized controlled trial (n=400), will compare the effects of varenicline, cytisine, and nicotine replacement therapy to reduce alcohol use and craving, smoking, and inflammation and risk for cardiovascular disease among people living with HIV.

Boston Cohort – Alcohol and HIV-associated Comorbidity and Complications: Frailty, Functional Impairment, Falls, and Fractures (The 4F Study)

U01AA020784 (R Saitz)

The **4F study** (n=400) will test the associations between alcohol (and illicit drugs and polypharmacy), falls, and fractures and whether frailty mediates these associations in people living with HIV infection as well as develop and pilot test the feasibility of a falls prevention intervention.



URBAN ARCH II Data Collected in All Cohort Baseline Questionnaires

Measure/Variable
Demographics
Gender
Date of birth or Age
Education
Marital status
Partner HIV status*
Housing
Incarceration
Employment
HIV & HCV
HIV diagnosis date†
HCV testing and treatment†
OI history† ‡
HIV transmission risk categorization‡
HIV symptom index
ART use†
Alcohol Use
Recent alcohol use/TLFB
Recent alcohol use/AUDIT-C*
Alcohol use disorder
Alcohol consequences‡
Other Substance Use
Drug use history
Tobacco use
Other tobacco/nicotine
Physical Health
VR-12 health survey
Healthcare utilization
TB testing and treatment
Falls
Mental Health
Depressive Symptoms (CES-D) (past week)
Social Support Scale

*Boston ARCH/4F does not collect.

†Boston ARCH/4F collects from medical record.

‡Uganda ARCH/ADEPTT does not collect.



URBAN ARCH Clinical Values and Samples Collected at Baseline or Screening Uganda (ADEPTT), Russia (St PETER), and Boston (4F Study)

Tests Conducted	ADEPTT	St PETER	4F Study
HIV & Hepatitis			
CD4	X	X	X
Hep B	X		X
HCV Ab		X	X
HIV Antibody or Rapid HIV Test	X	X	X
HIV Viral Load	X	X	X
Heart, Kidney, Liver, & Lung Function			
AST/ALT	X	X	X
Blood Pressure	X	X	
Cholesterol		X	
CO		X	
Confirmatory TB (sputum)	X		
eGFR (creatinine)	X	X	X
HS CRP		X	
Substance Use			
BAC		X	X
Nicotine Metabolites (urine)		X	
PEth	X		
Other Clinical Values			
CBC	X		X
Height	X	X	X
Hemoglobin		X	X
Platelets		X	X
Pregnancy (urine)	X	X	
Weight	X	X	X
Samples for Storage			
Hair	X		
Heparin Plasma and PBMCs		X	
Plasma	X	X	
Saliva			X
Serum		X	
Whole Blood	Dried Blood Spots	Dried Blood Spots 5ml Tube	



Uganda Russia Boston Alcohol Network for
Alcohol Research Collaboration on HIV/AIDS

Contact

Jeffrey Samet (Consortium PI): jsamet@bu.edu
Carly Bridden (Administrative Director):
carly.briden@bmc.org - (617) 414-5768
urbanarch.org

URBAN ARCH Affiliated Studies Funded Since 2017

Since 2017, seven new grants were awarded by NIH to the **Uganda Russia Boston Alcohol Network for Alcohol Research Collaboration on HIV/AIDS (URBAN ARCH)** Consortium that will extend the scope of our HIV/alcohol research and allow for new work examining comorbidities that are common among people living with HIV. These studies will advance URBAN ARCH's mission to conduct interdisciplinary research aimed at understanding how alcohol use impacts people living with HIV and to develop interventions to reduce alcohol use as well as alcohol and HIV-related consequences in this population.

Mobile Technology to Extend Clinic-Based Counseling For HIV+s in Uganda

U01AA024990 (JA Hahn)

4/1/17–3/31/21

This study is a randomized control trial (n=270) that aims to conduct formative work to adapt an existing brief alcohol intervention and develop two-way tailored mobile phone based messages as booster sessions, with the goal of reducing unhealthy drinking and increasing viral suppression in persons with HIV in Uganda.

1/2 Alcohol Associated Comorbidities and Microbiome Evaluation in HIV (ACME HIV)

U01AA026222 (MS Freiberg / SS Barve)

8/1/17–7/31/22

The goal of this study (n=200) is to determine if alcohol consumption changes the type of bacteria that are present in the gut. It will then determine if these changes in the bacteria of the gut are associated with changes in gut leakiness, levels of inflammation in the blood, and changes in the structure and function of the heart. This study will enroll a subset of St PETER HIV trial participants.

St PETER HIV-Alcohol, Protein Biomarkers and Cardiovascular Disease Risk Alcohol and Tobacco Use in HIV-infected Russians

R01AA025859 (JH Samet / MS Freiberg)

9/15/17–8/31/20

This study (n=360) will assess whether heavier alcohol use is associated with increased trimethylamine N-oxide (TMAO), and subsequently whether increased TMAO levels are associated with subclinical measures and biomarkers of heart failure. A subset of St PETER HIV trial participants will be asked to participate.

Internet-Based Video Conferencing to Address Alcohol Use and Pain Among Heavy Drinkers in HIV-Care

UH2AA026192 (T Palfai)

9/15/17–8/31/19

The goal of this study (n=12 in the UH2 phase, n=8 in the UH3 phase) is to develop a novel, integrated behavioral approach to reduce heavy drinking and chronic pain among patients in HIV-care, delivered via internet-based videoconferencing. A subset of Boston ARCH participants will be asked to participate.

Interventions to Reduce Alcohol Use and Increase Adherence to TB Preventive Therapy Among HIV/TB Co-infected Drinkers (DIPT 1/2)

U01AA026223 (JA Hahn)

9/15/17–8/31/22

The goal of this study (n=800) is to test an intervention in the Uganda ARCH cohort in which participants will receive a reward for reduced alcohol intake and for adherence to INH treatment, in order to see whether this will reduce alcohol use and increase adherence to TB preventative therapy.

Pilot Study of Opioid-receptor Antagonists to Reduce Pain and Inflammation Among HIV-Infected Persons with Alcohol Problems

UH2AA026193 (JH Samet / J Tsui)

9/20/17–8/31/19

This study (n=16 in UH2 phase, n=45 in UH3 phase) will pilot test novel pharmacotherapies (opioid receptor antagonists) to improve chronic pain among HIV-infected heavy drinkers, and will explore the hypothesis that the mechanism of action for improving pain is through decreased inflammation. A subset of Russia ARCH participants will be asked to participate.

Effect of Opioid Use Disorder on HIV Latent Reservoirs and Immune Dysfunction Assessed by Single-Cell Transcriptomics

R61DA047032 (C Cheng / A Henderson)

8/15/18–5/31/21

This study (n=80) will specifically address how opioid abuse alters the immune response in HIV patients and with this can directly contribute to hidden reservoirs of HIV. Successful completion of these studies will provide insights into potential strategies for treating HIV in this growing population of HIV patients.



Uganda Russia Boston Alcohol Network for
Alcohol Research Collaboration on HIV/AIDS

Contact

Jeffrey Samet (Consortium PI): jsamet@bu.edu
Carly Bridden (Administrative Director):
carly.briden@bmc.org - (617) 414-5768
urbanarch.org

Initial funding period (2011–2016)

The **Uganda Russia Boston Alcohol Network for Alcohol Research Collaboration on HIV/AIDS (URBAN ARCH)** Consortium was funded by NIAAA in September 2011 to carry out cohort and intervention studies to address gaps in our understanding about HIV and alcohol. The central goal of the URBAN ARCH Consortium is to examine the consequences of alcohol on HIV disease and to mitigate its harmful effects. The Consortium studies build upon three existing HIV-infected cohorts from Boston, Uganda, and Russia with distinctive strengths and well-characterized alcohol consumption patterns. The three cohorts are integrated in terms of characteristics and common measures, which will allow evolution of cross-cohort studies. Moreover, samples collected from all three cohorts are stored in a centralized repository for future use.

Administrative Coordinating Core – URBAN ARCH Consortium

U24AA020778 (JH Samet)

The Administrative Coordinating Core ensured that the scientific and programmatic goals of the URBAN ARCH Consortium were achieved with high quality and timeliness. The Admin Core oversaw the data and sample repository and encouraged collaboration with investigators within and outside the Consortium.

Biostatistics and Data Management (BDM) Core – URBAN ARCH Consortium

U24AA020779 (DM Cheng)

The principal objectives of the Biostatistics and Data Management Core were to provide active statistical collaboration in the design and analysis of each individual study and to develop and maintain an integrated, centralized data management system that may be used by all studies within the URBAN ARCH Consortium.

Impact of Heavy Alcohol Use on Pre-ART HIV Disease – Uganda ARCH Cohort

U01AA020776 (JA Hahn)

This was a 484-person prospective cohort study to determine the effect of heavy alcohol consumption (self-report and PEth) on HIV disease progression (i.e., CD4) prior to the start of antiretroviral therapy in Mbarara, Uganda.

Alcohol and Zinc Impact on Inflammatory Markers in HIV Disease - Russia ARCH Cohort

U01AA020780 (JH Samet)

The Russia ARCH Cohort examined a cohort of 400 HIV-infected, ART-naïve Russians with a spectrum of alcohol use to determine alcohol's impact on biomarkers reflecting microbial translocation.

Zinc for HIV Disease among Alcohol Users – An RCT in the Russia ARCH Cohort

U01AA021989 (MS Freiberg/JH Samet)

This double-blinded randomized controlled trial assessed the efficacy of zinc supplementation vs. placebo on improving markers of mortality, HIV disease progression, acute MI risk, microbial translocation, and inflammation among 250 HIV-infected Russians, who were ART-naïve at enrollment and had a recent history of heavy drinking.

Addressing Alcohol/HIV Consequences in Substance Dependence – Boston ARCH Cohort

U01AA020784 (R Saitz)

The Boston ARCH Cohort (n=250) aimed to accurately characterize alcohol use and consequences in people with HIV infection affected by multiple substances and looked prospectively at impact on bone health.

URBAN ARCH Scientific Advisory Panel

Kenneth A. Freedberg, MD, MSc

*Director, Medical Practice Evaluation Center
Massachusetts General Hospital
Director, Program in Epidemiology and Outcomes Research
Harvard University Center for AIDS Research
Professor of Medicine, Harvard Medical School*
kfreedberg@mgh.harvard.edu



Kenneth A. Freedberg is Professor of Medicine at Harvard Medical School and Massachusetts General Hospital (MGH) and Director of the Medical Practice Evaluation Center at MGH. He also directs the Program in Epidemiology and Outcomes Research at the Harvard University Center for AIDS Research. His research interests focus on HIV and TB, as well as other chronic diseases (including substance use disorders, cardiovascular disease, and genomics and precision medicine). His focus is on clinical outcomes and health policy, using the methods of cost-effectiveness analysis, clinical epidemiology, and implementation science. His current research efforts are in the United States, as well as in India, France, Spain, Estonia, Brazil, South Africa, Côte d'Ivoire, Zimbabwe, Botswana, and Mozambique, as well as with multiple clinical trials groups. His NIH-funded research examines clinical policies for antiretroviral use, HIV testing, laboratory management, PrEP, and HIV/TB co-infection. His group has a particular interest in informing guidelines in individual countries and across regions in both well-resourced and more resource-limited settings.

Victor Hesselbrock, PhD

*Professor of Psychiatry and Vice Chair of Department of Psychiatry
Endowed Chair in Addiction Studies, Health Net, Inc.
Senior Associate Dean of Research, UCONN School of Medicine
CICATS Associate Director and Chief Scientific Officer
University of Connecticut Health Center*
hesselbrock@uchc.edu



Victor Hesselbrock holds the Physicians' Health Services Endowed Chair in Addiction Studies and is Principal Investigator and Scientific Director of the Department's NIAAA-funded Alcohol Research Center. A member of the Department since 1978, Dr. Hesselbrock has developed a program of research focused on the identification of psychological and biological factors that contribute to the susceptibility for developing alcohol problems, including dependence. His current projects include a study of the deviance-proneness model of alcoholism vulnerability, a study of alcohol dependence phenotypes among Alaskan Natives, and two studies related to the genetics of substance dependence. These include being a co-PI for the Collaborative Study on the Genetics of Alcoholism (COGA) and being an investigator in multi-site studies of the genetics of cocaine and opiate dependence. Dr. Hesselbrock also is chairperson of the Scientific Advisory Committee of the Medical School's General Clinical Research Center. He serves as an associate editor for *Alcoholism: Clinical & Experimental Research*, is an assistant editor for *Addiction*, and is on the editorial boards of several other addictions journals. He has also served on, and chaired, several NIH study sections and is a former member of the National Advisory Council of the National Institute on Alcoholism and Alcohol Abuse (NIAAA) and the NIH Council of Councils. Dr. Hesselbrock is a past President of the Research Society on Alcoholism (RSA).

Amy Justice, MD, MSc, PhD

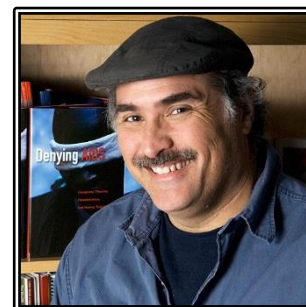
Professor of Medicine, Yale School of Medicine
Section Chief, West Haven VA Healthcare System
amy.justice2@med.va.gov



Amy Justice is Professor of Medicine and Public Health at Yale University, a Clinical Epidemiologist, and Health Services Researcher. She has developed multiple large scale national cohorts based on data from the Veterans Affairs Healthcare System Electronic Medical Record, strategically enhanced with external data including National Death Index and CMS, patient completed surveys, DNA and tissue repositories, and stored pathology samples. The oldest and best known of her cohorts is the Veterans Aging Cohort Study (VACS), an ongoing, longitudinal study of >150,000 United States veterans with and without HIV infection continuously funded by the NIAAA since 1996. She has developed and validated widely used indices including a prognostic index, the VACS Index, and a patient reported symptom index, the HIV Symptom Index.

Seth Kalichman, PhD

Professor of Psychology
University of Connecticut
seth.k@uconn.edu



Seth Kalichman dedicates his research to preventing the spread of HIV/AIDS and caring for those affected by the HIV epidemic. His research is focused in the southern United States and South Africa. His work has been continuously and exclusively funded by the National Institutes of Health since 1992. He was previously on the faculties of Loyola University of Chicago, Georgia State University, and the Medical College of Wisconsin where he worked under the direction of Jeffrey A. Kelly to help establish the Center for AIDS Intervention Research (CAIR). He is currently the director of the Southeast HIV and AIDS Research and Evaluation (SHARE) Project, a research program within the AIDS Survival Project in Atlanta, Georgia. His research in South Africa is in collaboration with the Human Sciences Research Council. Professor Kalichman serves on NIH grant review panels, has over 200 peer-reviewed journal articles, and has authored and edited five books in the area of HIV/AIDS prevention and care services, including *Positive Prevention*, recently published by Springer. He is also the current editor of the bimonthly journal *AIDS and Behavior*. Professor Kalichman was the recipient of the 1997 Early Career Award in Health Psychology from the American Psychological Association and the 2005 Distinguished Scientist Award from the Society for Behavioral Medicine.

Mimi Kim, ScD

Professor of Epidemiology and Population Health
Albert Einstein School of Medicine
mikim@aecom.yu.edu



Mimi Kim is Professor of Epidemiology and Population Health and Head of the Division of Biostatistics at the Albert Einstein College of Medicine. She is also Director of the Biostatistics Shared Resource of the Institute of Clinical and Translational Research, and Director of the Center for Quantitative Sciences. Her methodologic research interests include statistical methods for the design and analysis of clinical trials, adjustment for exposure measurement error in epidemiologic and clinical studies, and the analysis of multivariate and interval-censored survival data. She is a Fellow of the American Statistical Association, on the American Statistical Association Council of Chapters Governing Board, and is a member of the Medical and Scientific Advisory Council of the Lupus Foundation of America.

URBAN ARCH Principal Investigators

Jeffrey Samet, MD, MA, MPH

Principal Investigator, URBAN ARCH, Russia ARCH Cohort

Chief, Section of General Internal Medicine, Boston Medical Center

John Noble, MD Professor in General Internal Medicine and Professor of Community Health Science

Boston University Schools of Medicine and Public Health

jsamet@bu.edu



Jeffrey Samet is the John Noble, MD Professor in General Internal Medicine and Professor of Public Health at Boston University and a practicing primary care physician at Boston Medical Center, with expertise treating substance use disorders in general healthcare settings and researching the impact of substance use on HIV infection. He is Chief of General Internal Medicine at Boston University School of Medicine/Boston Medical Center and Vice Chair for Public Health in the Department of Medicine. He is Editor-in-Chief of the journal *Addiction Science & Clinical Practice*. He is Principal Investigator of the NIAAA Alcohol-HIV Consortium, URBAN ARCH, several NIAAA and NIDA studies as well as two NIDA R25 grants to advance physician addiction education and research: the Clinical Addiction Research and Education (CARE) program and the Research in Addiction Medicine Scholars (RAMS) program advancing research careers for addiction subspecialty physicians. He is Co-Director of the Providence/Boston Center for AIDS Research (CFAR) Substance Use Research Core. His international HIV work has occurred predominantly in Russia but also in India, Uganda, Ukraine, and Vietnam.

Debbie Cheng, ScD

Principal Investigator, Biostatistics and Data Management Core

Professor of Biostatistics

Boston University School of Public Health

dmcheng@bu.edu



Debbie Cheng is a Professor of Biostatistics at the Boston University School of Public Health. Her research interests include longitudinal data analyses and the design and analysis of clinical trials. She collaborates on several clinical trials and observational studies in the areas of substance abuse and HIV research. Dr. Cheng is Principal Investigator of the Biostatistics and Data Management Core for the URBAN ARCH Consortium. She also Co-Directs the Biostatistics Core for the Providence/Boston Center for AIDS Research (CFAR). She has extensive experience working with clinical investigators, trainees, and students on study design, statistical analyses, interpretation of results, and the development of manuscripts. Dr. Cheng has been an instructor for courses in the design and conduct of clinical trials as well as statistical computing.

Matthew Freiberg, MD, MSc

Principal Investigator, Russia ARCH Cohort

Director, Vanderbilt Center for Clinical Cardiovascular outcomes REsearch And Trials Evaluation (V-CREATE)

Professor of Medicine

Vanderbilt University Medical Center

matthew.s.freiberg@vanderbilt.edu



Matthew Freiberg is an internal medicine physician and cardiovascular epidemiologist. In 2014, he joined Vanderbilt as an Associate Professor of Medicine in the Division of Cardiovascular Medicine, director of the Vanderbilt Center for Clinical Cardiovascular Outcomes Research and Trials Evaluation (V-CREATE), and a West End Home Foundation Scholar. He completed postgraduate training as a resident at University of Chicago Hospitals and fellowships at Boston University and with the Framingham Heart Study. His research interests include the impact of HIV, inflammation, altered immunity, and alcohol use on cardiovascular outcomes. He is also an expert in utilizing big data for clinical research initiatives. In addition to being an URBAN ARCH investigator, Dr. Freiberg has been a Veterans Aging Cohort Study (VACS) investigator for nearly 10 years. His current NIH grant portfolio includes two trials in the URBAN ARCH Russia Cohort and four R01s and one R56 in the VACS.

Judith Hahn, PhD, MA

Principal Investigator, Uganda ARCH Cohort

Professor in Residence

University of California, San Francisco

judy.hahn@ucsf.edu

Judith Hahn is a Professor in Residence in the Department of Epidemiology & Biostatistics at the University of California, San Francisco. She is an epidemiologist with extensive experience studying the behavioral and biological intersections of substance use and infectious diseases. Her work focuses on the impact of alcohol use on HIV outcomes in low resource settings, primarily in East Africa. She has led several domestic and international NIH-funded studies, and published over 100 peer-reviewed manuscripts. Dr. Hahn is a pioneer in the use of biological markers as objective measures for alcohol use. She is the PI of the Uganda URBAN ARCH U01 study, a large collaborative study to examine the safety and cost-benefit ratios of using isoniazid to prevent active tuberculosis (TB) among HIV/TB co-infected people with alcohol use. She is also leading studies to examine cost-effective interventions that leverage mobile phones and tablets to reduce the harm associated with heavy alcohol use. She is also the PI of the DIPT study to examine whether incentives can reduce drinking and increase adherence for people who are drinkers and co-infected with HIV and TB in Uganda. Dr. Hahn is a committed teacher and mentor, and has an NIH K24 award to support her mentoring.

**Richard Saitz, MD, MPH, FACP, DFASAM**

Principal Investigator, Boston ARCH Cohort

Chair, Department of Community Health Sciences; Professor of Community Health Sciences and Medicine

Boston University Schools of Public Health and Medicine

rsaitz@bu.edu

Richard Saitz is a general internist, primary care physician, and addiction medicine specialist. He is associate editor of JAMA, Editor-in-Chief of *Journal of Addiction Medicine*, Section Editor and sole author of key chapters in *UpToDate* on unhealthy substance use, an editor of the ASAM *Principles of Addiction Medicine* textbook, Editor Emeritus of *Addiction Science & Clinical Practice*, and author of over two hundred peer-reviewed publications. He was also Director of Boston Medical Center's Clinical Addiction Research and Education (CARE) Unit for over a decade. His primary areas of expertise supported by NIH, RWJF, and SAMHSA are screening and brief intervention, integrating substance-related and general health care, improving the quality of care for people with unhealthy substance use, particularly in general health settings, and basing care on science.

**Hilary Tindle, MD, MPH**

Principal Investigator, Russia ARCH Cohort

Associate Professor of Medicine and the William Anderson Spickard, Jr., MD Chair in Medicine

Division of Internal Medicine & Public Health and Vanderbilt Ingram Cancer Center (VICC)

Vanderbilt University School of Medicine

hilary.tindle@vanderbilt.edu

Hilary Tindle is a physician scientist, Associate Professor of Medicine, and William Anderson Spickard, Jr., MD Chair in Medicine at Vanderbilt University Medical Center. Dr. Tindle has served or is serving as a leader for five NIH-sponsored randomized controlled trials for smoking cessation. Clinically, Dr. Tindle directs an inpatient Tobacco Treatment Service (TTS) based on the Ottawa and Massachusetts General Hospital models as well as an NCI Cancer Moonshot Initiative to reduce tobacco use among cancer patients at the Vanderbilt Ingram Cancer Center. She is on the Board Directors for the North American Quitline Consortium (NAQC) to support widespread treatment of tobacco use via tobacco quitlines and serves as a standing member of the NIH Study Section Interventions to Prevent and Treat Addictions. Since 2015 she has contributed to the NCCN Smoking Cessation Guidelines for cancer patients, and in 2014 and 2019 was a contributing author to the Surgeon General's Reports on smoking and tobacco use.

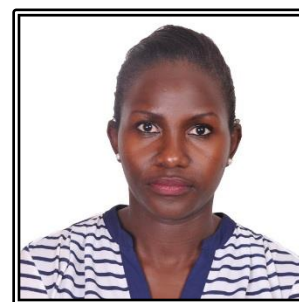


URBAN ARCH Co-Investigators and Staff

Julian Adong

Medical Officer, MUST Grants Office
Mbarara University, Republic of Uganda
adongjulian@gmail.com

Julian Adong is an HIV research clinician at the Mbarara University of Science and Technology (MUST). She has been providing HIV and tuberculosis clinical care at the Immune Suppression Syndrome (ISS) Clinic of Mbarara University since 2010 and is currently also enrolled in the pediatrics residency program at MUST. She has been a junior researcher/investigator with URBAN ARCH since 2012. Her past work has involved a study looking at the interaction between alcohol and HIV disease progression, and she is now currently involved in studies looking at interventions to prevent tuberculosis among HIV positive patients who consume alcohol - all led by Judy Hahn. She contributes to protocol writing and implementation of the studies, as well as dissemination of study results. Her interests are studies that address substance use among adolescents and young people living with HIV in Africa.



Trevor Baker, MS

Project Coordinator, Administrative Coordinating Core
Boston Medical Center
trevor.baker@bmc.org

Trevor Baker is a Project Coordinator in the Clinical Addiction Research and Education (CARE) Unit at Boston Medical Center. He has worked closely with Carly Bridden and Jules Canfield to provide project and administrative support within the URBAN ARCH Administrative Core since November 2018. Prior to joining Boston Medical Center, Trevor received a Master of Science in Global Health from the University of Notre Dame. As part of his capstone thesis project at Notre Dame, Trevor spent 8 weeks in Belize working as a Research Assistant with the Ministry of Health on a quantitative, GIS-focused project assessing the community level risk for transmission of Dengue and Zika viruses.



Shirish Barve, PhD

Principal Investigator, Russia ACME Study
Professor of Medicine, University of Louisville
shirish.barve@louisville.edu

Shirish Barve is a Professor of Medicine at the University of Louisville, in the Division of Gastroenterology, Hepatology & Nutrition. His research focuses on understanding alcohol-induced gut microbial dysbiosis/gut-barrier dysfunction and their role in the pathogenic alterations of the gut-liver-brain axis, the contribution of alcohol-induced peripheral endotoxemia and systemic inflammation in the development of neuroinflammation, and the potential of gut-dysbiosis/barrier dysfunction as a target for the development of effective treatment strategies for alcoholic liver disease and neuroinflammation. He and Dr. Freiberg are multiple PIs for the Alcohol Associated Comorbidities and Microbiome Evaluation in HIV study (ACME HIV).



Sally Bendiks, MPH

Research Project Manager, Russia ARCH Cohort

Boston Medical Center

sally.bendiks@bmc.org

Sally Bendiks is a Research Project Manager in the Clinical Addiction Research and Education (CARE) Unit at Boston Medical Center. She works closely with Dr. Samet and Natalia Gnatienko to manage NIH-funded research activities focused on HIV and substance use in St. Petersburg, Russia. She received her MPH from the Boston University School of Public Health and has been a part of the CARE Unit since 2015.

**Elena A. Blokhina, MD, PhD**

Co-Investigator, Russia ARCH Cohort

Deputy Director, Valdman Institute of Pharmacology

First St. Petersburg Pavlov State Medical University, Russian Federation

blokhinaelena@gmail.com

Elena Blokhina is the Deputy Director of the Valdman Institute of Pharmacology at First Pavlov State Medical University in St. Petersburg Russia; she is also an addiction psychiatrist at the Pavlov Outpatient Center. She has been coordinating and managing NIH-funded research activities at Pavlov since 2008. Her primary focus is with clinical trials studying new medications for alcoholism, opioid dependence, and behavioral interventions to reduce HIV risky behavior. She currently serves as the Site Coordinator on the NIAAA-funded St. PETER HIV trial; and the NIDA-funded LINC trial (Linking Russian Narcology & HIV Care to Enhance Treatment, Retention & Outcomes – Part II). She works closely with principal investigators to develop and implement clinical trials; supervises all intervention, assessment, and data entry staff; communicates with laboratories and clinical sites in Russia and coordinates the exchange of information with co-investigators in the US and Russia via weekly research meetings.

**Carly Bridden, MA, MPH**

Administrative Director, Administrative Coordinating Core

Clinical Research Director, CARE Unit

Boston Medical Center

carly.briden@bmc.org

Carly Bridden is the Clinical Research Director in the Clinical Addiction Research and Education (CARE) Unit at Boston Medical Center. She has been coordinating and managing NIH-funded research activities in the CARE Unit since 2003. Her primary focus is with studies that investigate the relationship between HIV infection and substance use domestically and internationally. She currently serves as the Administrative Director of the NIH-funded URBAN ARCH HIV/alcohol research consortium and Core Manager for the Providence/Boston Center for AIDS Research (CFAR) Substance Use Research Core (SURC). She works closely with principal investigators to develop and implement clinical trials as well as connect investigators and trainees to each other to facilitate the development of mentoring relationships and collaborative research projects. She is also involved with NIH-funded clinical research training programs for physicians. Carly welcomes you all to the 2019 URBAN ARCH Annual Meeting!



Jules Canfield, MPH

Program Manager, Administrative Coordinating Core

Boston Medical Center

jules.canfield@bmc.org

Jules Canfield is a Program Manager in the Clinical Addiction Research and Education (CARE) Unit at Boston Medical Center. They have been providing project and administrative support to URBAN ARCH through the Administrative Coordinating (Admin) Core for over four years. They also manage the Research in Addiction Medicine Scholars (RAMS) Program, which aims to develop skills in addiction medicine research among physicians from accredited addiction medicine and addiction psychiatry fellowship programs. Prior to joining Boston Medical Center, Jules was an Administrative Assistant at Tufts University's John Hancock Research Center on Physical Activity, Nutrition, and Obesity Prevention and then went on to receive their MPH from the Boston University School of Public Health in 2014. Jules has also served as a volunteer, intern, and on the Board of Directors at the Bisexual Resource Center (BRC), where they have worked extensively on bisexual health-related initiatives.



Natalie Chichetto, PhD, MSW

Postdoctoral Research Fellow

Vanderbilt University Medical Center

natalie.chichetto@vumc.org

Natalie Chichetto is a 2nd year Postdoctoral Research Fellow at Vanderbilt University Medical Center mentoring under Drs. Freiberg and Tindle. She is a formally trained social worker and epidemiologist in the areas of alcohol use and cardiovascular diseases among high risk populations, with a focus on persons living with HIV (PLWH). Her primary focus as an epidemiologist is investigating the health implications of common behavioral syndemics, particularly concurrent unhealthy alcohol use, cigarette smoking, and depressive symptoms. Her primary career goal is to improve cardiovascular disease and other non-AIDS related conditions associated with behavioral health conditions among PLWH. She is specifically interested in bridging the gap between mechanistic research and implementation science by focusing on biologically-informed pathways (e.g., the gut microbiome) for interventions to reduce inflammation, and by extension end organ disease (e.g., CVD) in those with syndemic behavioral conditions. She has recently submitted a K12 application (PI Freiberg V-SCHoLARS) utilizing VACS and ACME HIV data to investigate the longitudinal associations between concurrent unhealthy alcohol use, smoking, and depressive symptoms and CVD outcomes, characteristics of the gut microbiome and biomarkers of gut permeability, systemic inflammation, and coagulation.



Jasmin Choi, MSW

Research Study Assistant

Boston University School of Public Health, Community Health Sciences Department

jasminc@bu.edu

Jasmin Choi is a Research Study Assistant in the Boston ARCH 4F (Frailty, Functional impairment, Falls, and Fractures) Study as part of URBAN ARCH. She has been supporting the team and contributing to research efforts since 2017. Jasmin holds a Master's degree in Social Work (MSW) and is completing her Master's degree in Public Health (MPH). Previously, Jasmin worked as a substance use counselor by advocating and providing direct services to formerly incarcerated individuals with dual diagnosis of mental illness and substance use disorder.



Alexandra Chretien*Research Study Assistant**Boston University School of Public Health, Community Health Sciences Department*achretie@bu.edu

Alexandra Chretien is a Research Study Assistant in the Boston ARCH 4F (Frailty, Functional impairment, Falls, and Fractures) Research Study, as part of URBAN ARCH. She has been contributing to research efforts since 2018 by aiding in recruitment, administering the research assessments, and assisting with various other administrative duties. Alexandra is also currently a student at Boston University School of Public Health where she is completing her Master's in Public Health (MPH) with a certificate in Biostatistics and Epidemiology.

**Robert L. Cook, MD, MPH***Professor of Epidemiology and Medicine**University of Florida, College of Public Health and Health Professions and College of Medicine**Director, Southern HIV & Alcohol Research Consortium (SHARC) and SHARC Center for Translational HIV Research*cookrl@ufl.edu

Robert L. Cook is Professor of Epidemiology and Medicine, and the Director of the Southern HIV & Alcohol Research Consortium, supported by NIAAA. Dr. Cook leads several NIH-funded projects taking place in Florida, including both observational and intervention research related to alcohol and HIV. Dr. Cook is MPI of a T32 training program related to alcohol and HIV at the University of Florida, PI of a NIDA-funded project examining marijuana and HIV, leader of a Florida Stigma Working Group, and MPI on several projects examining connections between the gut microbiome, liver and systemic inflammation, and the brain. Specifically, he is MPI with Dr. Barve for the 2/2 ACME project studying the gut microbiome, alcohol and HIV in Florida, which is a companion project to the ACME project led by URBAN ARCH investigators in Russia.

**Peggy Doyle, PhD***Co-Investigator, Russia ARCH Cohort**Assistant Professor of Pathology and Laboratory Medicine**Larner College of Medicine**University of Vermont*margaret.doyle@uvm.edu

Peggy Doyle is an Assistant Professor of Pathology and Laboratory Medicine in the Larner College of Medicine at the University of Vermont. As part of the larger Laboratory for Clinical Biochemistry Research (LCBR), which serves as a repository and core lab for major population studies such as the Multi-Ethnic Study of Atherosclerosis (MESA), Cardiovascular Health Study (CHS), REasons for Geographic And Racial Differences in Stroke (REGARDS), Jackson Heart Study (JHS), and Veterans Aging Cohort Study Biomarker Cohort (VACS), she directs the cellular immunology lab. Her primary research interests are in the role of innate and adaptive immune cells in inflammation and how they affect disease initiation and progression. As a biochemist, she wants to go beyond simple associations and look at mechanisms that may affect cell levels, from circulating proteins (cytokines, chemokines, adipokines), to bacterial and viral infections, to circulating extracellular nucleic acids and finally, modifiable effects such as diet, exercise, sleep, and stress.



Nneka Emenyonu, DrPH, MPH

*Project Director, Uganda ARCH Cohort
Infectious Diseases, San Francisco General Hospital
University of California, San Francisco*
nneka.emenyonu@ucsf.edu



Nneka Emenyonu has been directing large longitudinal cohort studies in Uganda since 2004, including the BREATH Study (R01 AA018641) and Uganda URBAN ARCH Uganda (ADEPT) Study (U01 AA020776). From 2004–2010, she lived in Mbarara, where she helped launch the UCSF-Mbarara University of Science and Technology research collaboration. She has a DrPH from UNC Chapel Hill, MPH from Johns Hopkins Bloomberg School of Public Health, and BA in Biology from Oberlin College. Besides public health and Africa, Nneka is passionate about her family, especially her two daughters: Osa (17 years) and Zara (3 years).

Emily Epstein, MPH

*Research Programs Manager
Vanderbilt Center for Clinical Cardiovascular Outcomes Research and Trials Evaluation (V-CREATE)*
emily.s.epstein@vumc.org



Emily Epstein, MPH is the Research Programs Manager of the Vanderbilt Center for Clinical Cardiovascular Outcomes Research and Trials Evaluation (V-CREATE) directed by Dr. Freiberg. She has worked with Dr. Freiberg to coordinate NIH-funded research activities focused on HIV and Cardiovascular Disease since 2016. She was the Project Coordinator for the NHLBI-funded Immune Function and the Risk of Cardiovascular Disease Among HIV Infected and Uninfected Veterans study. She now serves as the administrative director of V-CREATE and works closely with principal investigators to prepare grant proposals, implement research studies, and facilitate collaborative research projects including the URBAN ARCH, ACME HIV, and TMAO studies as well as the Vanderbilt Scholars in HIV and Heart, Lung, Blood, and Sleep Research (V-SCHOLARS) K12 training program.

Robin Fatch, MPH

*Data Manager, Uganda ARCH Cohort
Statistician, Infectious Diseases, Department of Medicine
University of California, San Francisco*
robin.fatch@ucsf.edu



Robin Fatch is a Statistician and Data Manager at the University of California San Francisco, and is currently part of the URBAN ARCH ADEPTT team. She has been working on research studies focused on substance use and infectious diseases since 2009, with a focus on alcohol use and HIV. Robin works closely with local and international team members to ensure quality data collection, and to analyze data for publication and presentation.

Monica Gandhi, MD, MPH

Co-Investigator, Uganda ARCH Cohort

Professor of Medicine, University of California San Francisco

Associate Division Chief of the Division of HIV, Infectious Diseases, and Global Medicine

San Francisco General Hospital

monica.gandhi@ucsf.edu



Monica Gandhi is a Professor of Medicine and Associate Chief in the Division of HIV, Infectious Diseases, and Global Medicine at the University of California, San Francisco (UCSF). She is also the Medical Director of the HIV/AIDS Clinic ("Ward 86") at San Francisco General Hospital. Research efforts have focused on HIV/AIDS in U.S. women and investigating objective methods to measure antiretroviral adherence and exposure in HIV treatment and prevention settings, such as determining drug levels in hair samples. Recent work has expanded to measuring adherence to anti-TB drugs in the context of latent and active TB infection. Dr. Gandhi also has an interest in HIV education and mentorship and is co-director of the UCSF CFAR Mentoring Program at UCSF.

Simone Gill, PhD, OT, OTR

Associate Professor

Boston University School of Medicine

simvgill@bu.edu



Simone Gill is the Acting Program Director for the PhD in Rehabilitation Sciences, the Director of the Motor Development Laboratory, and an Associate Professor for the Boston University School of Medicine. Dr. Gill investigates how individuals' bodies and environmental demands influence walking and motor functioning across the lifespan. She uses a variety of methods to examine how children and adults modify their walking patterns to navigate through the environment. Dr. Gill will provide her falls expertise to help in developing a pilot falls prevention intervention as part of the Boston ARCH 4F study.

Natalia Gnatienko, MPH

Senior Research Manager, Russia ARCH Cohort

Boston Medical Center

natalia.gnatienko@bmc.org



Natalia Gnatienko manages Dr. Samet's portfolio of Russia studies that address HIV and substance use (Russia ARCH, LINC-II, St PETER, TMAO) and works with internal and external investigators to coordinate NIH grant applications with a focus on studies with international components. She has been a part of the Clinical Addiction Research and Education (CARE) Unit at Boston Medical Center for the last 8.5 years.

Timothy Heeren, PhD*Biostatistician, Biostatistics and Data Management Core**Professor of Biostatistics**Boston University School of Public Health*tch@bu.edu

Timothy Heeren is a Professor of Biostatistics who earned his PhD in Mathematics (Statistics) from Boston University, and has been on the faculty of the School of Public Health since 1981. Dr. Heeren has developed and taught both introductory and advanced applied biostatistics methods courses at the School of Public Health. Currently, he alternates between teaching the core biostatistics course and the more advanced Statistical Methods in Epidemiology. Dr. Heeren's research interests are in applied biostatistics, observational studies, behavioral trials, regression models, and complex survey design. His current applied research includes serving as biostatistician on three longitudinal cohort studies examining: the consequences of in-utero cocaine and other substance exposure on child development through the early adulthood, cognitive functioning of extremely low gestational age infants at age 10, and how factors measured at birth predicted age 10 functioning, and the health consequences of care giving for the elderly. Dr. Heeren is the senior biostatistician for the Boston ARCH Cohort.

Karen Jacobson, MD, MPH*Co-Investigator, Uganda ARCH Cohort**Assistant Professor of Medicine**Boston University School of Medicine*karen.jacobson@bmc.org

Karen Jacobson is an Assistant Professor of Medicine in the Section of Infectious Diseases, Boston University School of Medicine, with a secondary appointment in the Department of Epidemiology, Boston University School of Public Health. Her research focuses on the epidemiology of tuberculosis (TB) and drug resistant TB, including identification of social, biological, and economic determinants of and risk factors for drug resistance and approaches for improving TB outcomes in resource-limited settings. She has established a highly productive collaboration with researchers at Stellenbosch University in Cape Town, South Africa, investigating the drivers of drug resistance in the Western Cape Province of South Africa (both cohort and spatial epi approaches) and working to identify potentially modifiable factors. Dr. Jacobson is the PI of a prospective study investigating the causal mechanisms underlying the deleterious effects of problem alcohol use on TB treatment outcomes, including effects independent of adherence and specifically impact on TB drug levels.

Susie Kim, MPH, MSW*Senior Research Project Manager**Boston University School of Public Health, Community Health Sciences Department*susiekim@bu.edu

Susie Kim is a Senior Research Project Manager in the Department of Community Health Sciences at the Boston University School of Public Health. She has been working on Dr. Saitz's research team on NIAAA-funded studies since 2015. Susie is the Project Manager for the Boston ARCH Cohort and the Alcohol Disorder hOsPital Treatment (ADOPT) Study, a comparative effectiveness RCT of injectable vs. oral naltrexone in hospitalized adults with alcohol use disorder.

Theresa W. Kim, MD*Assistant Professor of Medicine**Boston Medical Center*theresa.kim@bmc.org

Theresa W. Kim is a general internist in the Clinical Addiction Research Education (CARE) program at Boston Medical Center. She is also a member of the Boston Health Care for the Homeless Program HIV team providing shelter-based primary and HIV care. She is unique among faculty in the BMC Section of General Internal Medicine with NIH-funded addiction research training, board certification in internal and addiction medicine, and credentialing by the American Academy of HIV. As site-PI or co-Investigator, she has conducted NIAAA, NIDA, SAMHSA, and VA-funded studies of models of integrated addiction care in primary care settings. She has also received NIH funding for her research on alcohol and opioids on poor bone health. Recently, she led the effort to receive funding to examine repetitive opioid overdose, cognitive impairment, and the moderating role of lifetime alcohol consumption in the 4F cohort.

Evgeny Krupitsky, MD, PhD, DMSci*Co-Investigator for Russia ARCH Cohort Subcontract**Chief, Lab of Clinical Pharmacology of Addictions, Pavlov State Medical University**Chief, Department of Addictions, St. Petersburg Bekhterev Psychoneurological Research Institute,**Russian Federation*kruenator@gmail.com

Evgeny Krupitsky is a Vice-Director for Research and a Chief of the Department of Addictions at St. Petersburg Bekhterev Research Psychoneurological Institute and a Chief of the Laboratory of Clinical Psychopharmacology of Addictions at St. Petersburg State Pavlov Medical University, Russia. Since 2006, he also holds a position of Adjunct Professor of Psychiatry at the Department of Psychiatry, University of Pennsylvania. Dr. Krupitsky received several national and international awards including European College of Neuropsychopharmacology Fellowship Award (1997), Heffter Research Institute Award for Outstanding Research in Hallucinogens (2000), Award of the Government of Russian Federation for Outstanding Research in Medicine (2005), and National Institute Drug Abuse (NIDA) Award for Excellence in International Leadership. Dr. Krupitsky published many papers in international psychiatric journals and is also an author of several chapters in the international manuals and two books on the treatment of alcoholism and addictions published in Russian. Dr. Krupitsky has been a Co-PI on several NIDA and NIAAA grants.

Benjamin P. Linas, MD, MPH*Co-Investigator, Uganda ARCH Cohort**Assistant Professor of Medicine and Epidemiology, Boston University School of Medicine**Director, HIV Epidemiology and Outcomes Research Unit, Section of Infectious Diseases**Boston Medical Center*benjamin.linas@bmc.org

Ben Linas is a physician scientist dedicated to improving the health of vulnerable persons living with HIV and HCV infections. He is also an HIV and HCV provider at the Boston Medical Center infectious diseases practice, where he provides primary care and sub-specialty management of HIV, HCV, and HIV/HCV co-infected patients. His research investigates the comparative- and cost-effectiveness of interventions to identify and treat HIV and HCV. He employs methods of simulation modeling, clinical epidemiology, and clinical economics with the aim of maximizing the benefits of evolving therapies in the “real-world,” where diagnostics and therapy are rapidly evolving, resources are constrained, and the best methods for managing infected individuals are not certain.

Dmitry Lioznov, MD, PhD, DMSci

Co-Investigator, Russia ARCH Cohort

Deputy Director for Research, Research Institute of Influenza

Head of Department of Infectious Diseases and Epidemiology, Pavlov First State Medical University, St. Petersburg, Russian Federation

dlionov@yandex.ru



Dmitry Lioznov is the Deputy Director for Research at the Research Institute of Influenza, and Head of Department of Infectious Diseases and Epidemiology at Pavlov First State Medical University, St. Petersburg, Russia. He has been the Principal Investigator or Co-Investigator in numerous international projects supported by the NIH, NIH/Fogarty International Center, World AIDS Foundation, UNICEF, Ford Foundation, the AIDS Foundation East-West (AFEW), and the American Red Cross. He serves on the editorial boards of three infectious disease journals. He is Executive Secretary of the 6th Conference on HIV/AIDS in Eastern Europe and Central Asia (April 18-20, 2018, Moscow, Russia). His academic mission and research efforts focus on the interactions of HIV/AIDS, drug and alcohol use, and co-infections such as viral hepatitis, STIs, and tuberculosis. He is also involved in research in other areas of infectious diseases: herpes virus infection, food-borne infections, and respiratory infections including in non-HIV immunocompromised patients.

Sara Lodi, MSc, PhD

Biostatistician, Biostatistics and Data Management Core

Assistant Professor of Biostatistics

Boston University School of Public Health

slodi@bu.edu



Sara Lodi is an Assistant Professor of Biostatistics at the Boston University School of Public Health. She obtained her PhD in Medical Statistics at the London School of Hygiene and Tropical Medicine, UK in 2009. Her research focuses on clinical epidemiology and comparative effectiveness research using routinely collected health data, particularly in the area of HIV. Methodologically, she focuses on statistical techniques for causal inference to estimate effects of interventions along the HIV continuum of care. She has published many articles on behalf of large international collaborations of HIV cohorts such as CASCADE, COHERE, and the HIV-CAUSAL Collaboration.

Stephanie Loomer, MSc

Research Coordinator

Boston University School of Public Health, Community Health Sciences Department

sjt@bu.edu



Stephanie Loomer is a Research Coordinator in the Community Health Sciences Department of Boston University School of Public Health. She works with Dr. Saitz on the Boston ARCH 4F (Frailty, Functional impairment, Falls, and Fractures) study as part of URBAN ARCH and on the Alcohol Disorder hosPital Treatment (ADOPT) study. Stephanie has a Master's degree in Medical Anthropology (MSc) and previously provided support for research related to pharmacogenomics and cancer care.

Karsten Lunze, MD, MPH, DrPH*Assistant Professor of Medicine**Boston University School of Medicine*lunze@bu.edu

Karsten Lunze, Assistant Professor at Boston University and Director of Global Health in the section of GIM at Boston Medical Center, conducts research globally on individual and structural risk environments of people with addictions and other HIV key populations. He leads the CARE Unit's summer student research program. His NIDA K99 and CFAR Developmental projects in Eastern Europe have explored stigma related to substance use, HIV, TB, and other conditions among marginalized populations. Karsten has worked on HIV risk projects and mixed-methods studies on health and human rights with Russia ARCH. Based on this work, the team is currently implementing and evaluating a stigma intervention for people who inject drugs in St. Petersburg (SCRIPT study).

Tiana Mason*Research Study Assistant**Boston University School of Public Health, Community Health Sciences Department*tjmason@bu.edu

Tiana Mason has recently joined the School of Public Health as a Research Study Assistant in Boston ARCH 4F (Frailty, Functional impairment, Falls, and Fractures) as part of URBAN ARCH. She received her BS in behavioral neuroscience from Northeastern University in 2017. Previously, Tiana worked as a mental health associate at Arbour Psychiatric hospital where she was assigned to the dual diagnosis unit to work with patients receiving care for acute mental illnesses comorbid with substance use.

Seville Meli, MPH*Director of Research Operations, Boston ARCH Cohort**Boston University School of Public Health, Community Health Sciences Department*seville@bu.edu

Seville Meli is the Director of Research Operations in the Department of Community Health Sciences at the Boston University School of Public Health. She has significant experience implementing large NIAAA- and NIDA-supported research studies in clinical settings and has been working with Drs. Saitz and Samet for over 17 years. Seville has successfully recruited, trained and managed study teams to implement protocols specifically tailored to participants using alcohol and other drugs in clinical settings. Seville's experience includes: a large NIDA- and NIAAA-supported randomized trial in the primary care setting for people with substance dependence, a large cohort of people with HIV infection and alcohol problems, and studies of alcohol and drug use in HIV in Russia, with all teams achieving high rates of follow-up. Seville supports the operations of the Boston ARCH research team by assisting with staff training and quality improvement initiatives. She also supports and oversees development of analyses and reporting of results, including abstract preparation and manuscript development.

Winnie Muyindike, MBChB, MMED*Co-Investigator, Uganda ARCH Cohort**Director of Immune Suppression Syndrome Clinic**Mbarara University of Science and Technology, Republic of Uganda*wmuyindike@gmail.com

Winnie Muyindike is an experienced physician and Lecturer of Medicine and has been the director of the Immune Suppression Syndrome (ISS) Clinic at the Mbarara University of Science and Technology (MUST) Regional Referral Hospital for the past five years. Her experiences as a physician and ISS clinic director have contributed to several NIH-funded research projects on which she has served as co-Investigator. In her capacity as Principal Investigator of the MUST subcontract for the R01 and U01 studies, BREATH and ADEPT respectively, she has made important contributions to study design, protocol development, and questionnaire development. Dr. Muyindike has been working with researchers from UCSF for many years and enjoys a collaborative and rewarding working relationship with Dr. Hahn.

Sarah Rossi*Research Assistant, Russia ARCH Cohort**Boston Medical Center*sarah.rossi@bmc.org

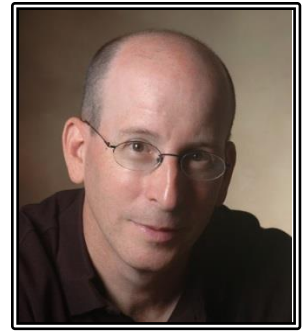
Sarah Rossi is a Research Assistant in the Clinical Addiction Research and Education (CARE) Unit at Boston Medical Center. She has been assisting with NIH-funded research activities focused on HIV infection and substance use in St. Petersburg, Russia since 2018. She currently serves as the Research Assistant on the NIAAA-funded Studying Partial-agonists for Ethanol and Tobacco Elimination in Russians with HIV (St PETER HIV) study; St. PETER HIV-Alcohol, Protein Biomarkers and Cardiovascular Disease Risk (TMAO) study; and Pilot Study of Opioid-Receptor Antagonists to Reduce Pain and Inflammation Among HIV-Infected Persons with Alcohol Problems (PETER PAIN). She also serves as the Research Assistant on the NIDA-funded Linking Infectious and Narcology Care-II (LINC-II) study; as well as the newly funded Effect of Opioid Use Disorder on HIV Latent Reservoirs and Immune Dysfunction Assessed by Single-cell Transcriptomics (HIV Latency) and Stigma, Risk Behaviors and Health Care among HIV-infected Russian People Who Inject Drugs (SCRIPT).

Kaku So-Armah, PhD*Assistant Professor**Boston University School of Medicine*kaku@bu.edu

Kaku So-Armah is an Assistant Professor at the Boston University School of Medicine. His training is in epidemiology and his doctoral research focused on the role of co-morbid diseases and immunologic alterations in HIV-related cardiovascular disease (CVD) risk. He is currently studying the intersection of liver injury and CVD among HIV infected and uninfected people thanks to a K01 career development grant from the National Heart Lung and Blood Institute (NHLBI). He previously received a research supplement from the National Institutes of Alcohol Abuse and Alcoholism (NIAAA) to study the impact of liver injury on innate and adaptive immune dysfunction in HIV. Cohorts he works with include URBAN ARCH and the Veterans Aging Cohort Study (VACS). His long-term goal is to translate our growing understanding of the mechanisms of excess HIV-related CVD risk into effective, sustainable CVD risk reduction strategies for HIV populations in resource-limited settings.

Michael Stein, MD

Co-Investigator, Russia ARCH Cohort
Professor and Chair of Health Law, Policy & Management
Boston University School of Public Health
mdstein@bu.edu



Michael Stein is a Professor and Chair of the Department of Health Law, Policy, & Management at Boston University School of Public Health. He is also a physician and health services researcher. Over the past two decades, Dr. Stein has worked at the intersection of behavioral medicine and primary care. His outcomes research has moved between substance use disorders and HIV/AIDS, sleep and pain, mental health disorders, and the determinants of risk-taking, and he has published nearly 300 scientific journal articles. Dr. Stein graduated from Harvard College and received his medical degree from Columbia College of Physicians & Surgeons. After medical residency at New England Medical Center, he completed a National Research Service Award Fellowship at Brown University.

Ve Truong

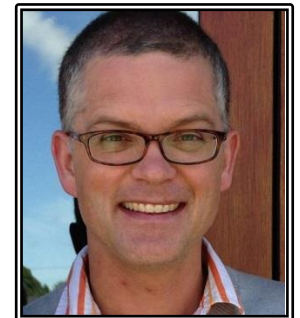
Research Coordinator, Russia ARCH Cohort
Boston Medical Center
ve.truong@bmc.org



Ve Truong is a Project Coordinator in the Section of General Internal Medicine at Boston Medical Center. She provides research support to Russia ARCH and has been working with the Clinical Addiction Research and Education (CARE) Unit since 2015. She also coordinates and manages other research studies that focus on smoking, diabetes, and HCV.

Alexander Y. Walley, MD, MSc

Co-Investigator, Boston ARCH Cohort
Associate Professor of Medicine
Boston University School of Medicine
alexander.walley@bmc.org



Alexander Y. Walley is an Associate Professor of Medicine at Boston University School of Medicine and a general internist and addiction medicine specialist at Boston Medical Center. He is the director of the Boston University Addiction Medicine Fellowship program, which trains addiction medicine specialist physicians. He founded the Inpatient Addiction Consult Service in 2015 and is the associate director of the Faster Paths addiction urgent care center at Boston Medical Center. He does clinical and research-related work on the medical complications of substance use, specifically HIV and overdose. He is the medical director for the Massachusetts Department of Public Health's Opioid Overdose Prevention Pilot Program. He is a co-investigator on the HERMITAGE, Boston ARCH, and 4F studies within the URBAN ARCH Consortium.

Michael Winter, MPH

Statistical Programming Manager, Biostatistics and Data Management Core
Associate Director, Statistical Programming, BUSPH Data Coordinating Center
Boston University School of Public Health
mwinter@bu.edu



Michael Winter is the Associate Director of Statistical Programming of the Data Coordinating Center at the Boston University School of Public Health, and he has over 25 years of experience in data management, statistical programming, and statistical analysis in the area of public health research. In addition, he was a senior statistical analyst in the Data Management and Statistics Core of the NIAAA funded Youth Alcohol Prevention Center at the Boston University School of Public Health from 2004–2006, and Associate Director of the Core from 2006–2010. Mr. Winter has a long history of collaborating as a statistical analyst or data manager with many of the investigators of the URBAN ARCH Consortium.

Tatiana Yaroslavtseva, MD

Site Project Manager, Russia ARCH Cohort
Scientific Secretary, Valdman Institute of Pharmacology, Russian Federation
tatianayaroslavtseva@gmail.com



Tatiana Yaroslavtseva has held the position of Scientific Secretary at Valdman Institute of Pharmacology, St. Petersburg Pavlov State Medical University, Russia since 2011. She gained clinician experience in the treatment of patients with drug and alcohol dependence when she was working at the Saint-Petersburg City Addiction Hospital, Intensive Care Department for five years as an addiction psychiatrist. She participated in four collaborative studies with Boston University as a researcher and coordinator for “Alcohol Research Collaboration on HIV/AIDS: Russia Cohort”. Now she is a project coordinator for the current study “Studying Partial agonists for Ethanol and Tobacco Elimination in Russians with HIV (St PETER HIV)” and “Effect of Opioid Use Disorder on HIV Latent Reservoirs and Immune Dysfunction Assessed by Single-cell Transcriptomics (HIV Latency).”

Edwin Zvartau, MD, PhD, DMSci

Co-Investigator, Russia ARCH Cohort
Head, Department of Clinical Pharmacology & Evidence-Based Med
Research Director, Valdman Institute of Pharmacology
Pavlov State Medical University, Russian Federation
zvartau@gmail.com



Edwin Zvartau is a pharmacologist with a strong background in pharmacology of pain and addiction. He also has extensive research experience, having served as PI and Project Director (PD) in conducting preclinical and clinical trials of new medications for alcoholism and addictions and behavioral interventions to reduce HIV risky behavior; and has acted as leading PI and supervisor for FTIH and bioequivalent trials at Pavlov State Medical University. Since 1998, he has collaborated with Dr. Krupitsky as PI and PD on projects with NIH Institutes (NIDA, NIAAA, NIAID, NIA) and US universities and hospitals (Penn, Yale, Boston Medical Center, Baylor College of Medicine). Additionally, Dr. Zvartau served as PI for several phase II and III clinical trials of medications for acute and chronic pain syndromes.

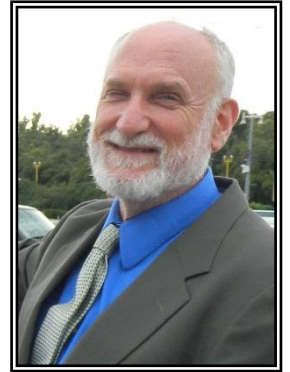
National Institute on Alcohol Abuse and Alcoholism (NIAAA) Scientific Collaborator

Kendall Bryant, PhD

Director, HIV/AIDS Research, National Institute on Alcohol Abuse and Alcoholism

Scientific Collaborator, Consortiums for HIV/AIDS and Alcohol Research Translation (CHAART)

kbryant@mail.nih.gov



Kendall Bryant is currently the National Institute on Alcohol Abuse and Alcoholism (NIAAA) Director for Alcohol and HIV/AIDS Research and the Scientific Collaborator for the Consortiums for HIV/AIDS and Alcohol Research Translation (CHAART), within the NIAAA. He coordinates a comprehensive behavioral and biomedical research plan in collaboration with the NIAAA divisions, teams, and individual staff members and with NIH representatives of other institutes and through the Office of AIDS Research. He has contributed to a wide range of publications, reports, and strategic plans on the role of alcohol misuse in HIV infection and treatment, including those by the NIH AIDS Strategic Plan, the AIDS National Plan, and in the Surgeon General's Report. His current research focuses on development and testing of interventions in complex medical decision frameworks for treating patients with comorbid disease. In the past, he was also the Program Director at NIAAA for Psychological and Behavioral Research including Brief Screening and Intervention Research, Behavioral Genetics, and Longitudinal Methodological Research. He has published and edited volumes of research and provided multiple Requests for Applications (RFA, PA) that stress the development of theory-driven preventive interventions delivered to universal, selective, and targeted populations, reflecting the application of new methods in studying the efficacy, effectiveness, and diffusion of existing alcohol and HIV interventions.



URBAN ARCH Grant Submissions & Awards

March 2018 – March 2019

Awarded

Engaging Young People who Inject Drugs into HCV and HIV Care (Assoumou)

K23DA044085

Boston Medical Center

Awarded May 2018

This K23 will use the ADAPT-ITT framework to modify strengths-based case management (SBCM), an evidence-based linkage to care intervention, to address the needs of PWID aged 18 to 30 tested for HCV and HIV at a detoxification center.

HIV Latent Reservoirs and Immune Dysfunction in HIV-Positive Opioid Users as Assessed by Single-Cell

Transcriptomics (Cheng/Henderson)

R61DA047032

Boston University

Awarded August 2018

This study will specifically address how opioid abuse alters the immune response in HIV patients and with this can directly contribute to hidden reservoirs of HIV. Successful completion of these studies will provide insights into potential strategies for treating HIV in this growing population of HIV patients.

Stigma, Risk Behaviors and Health Care among HIV-infected Russian People who Inject Drugs (Lunze)

R00DA041245

Boston Medical Center

Awarded September 2018

This transition-to-independence award will investigate the role of double stigma related to HIV and substance use among HIV-infected people with addictions and its relations to health and health care.

Under Review

Hippocampal and Prefrontal Cortex Volume Loss, Neurocognitive Impairment and Non-fatal Overdose in a Cohort of HIV-infected Adults with Opioid Use Disorder (Saitz)

Boston University

Submitted March 2019

This supplemental award to the Boston ARCH 4F Study will examine the association between non-fatal recurrent opioid overdoses and hippocampal and prefrontal area volume differences; neurocognitive functioning; regional blood flow; and white matter integrity.

URBAN ARCH K Grants Awarded

September 2013 – May 2018

Engaging Young People who Inject Drugs into HCV and HIV Care (Assoumou)

K23DA044085

Boston Medical Center

5/1/18–4/30/23

Primary Mentor: Samet

This K23 will use the ADAPT-ITT framework to modify strengths-based case management (SBCM), an evidence-based linkage to care intervention, to address the needs of PWID aged 18 to 30 tested for HCV and HIV at a detoxification center.

Implementing Pre-Exposure Prophylaxis for HIV Prevention among People Who Inject Drugs (Bazzi)

K01DA043412

Boston University School of Public Health

4/1/17–3/31/22

Primary Mentors: Saitz & Drainoni

The objectives of this K01 are to 1) identify the modifiable determinants of PrEP access and utilization among HIV-uninfected PWID and key informants, and 2) develop a manualized intervention to improve PrEP uptake and adherence among PWID attending a community-based syringe exchange program.

Novel Mechanisms Driving Excess Atherosclerotic Cardiovascular Disease Risk in the Context of HIV: The Role of Liver Injury (So-Armah)

K01HL134147

Boston Medical Center

8/01/16–7/31/21

Primary Mentor: Samet

This K01 seeks to understand whether the excess risk for heart disease is caused by the high levels of liver injury often seen in HIV. Identifying the role that liver injury plays may have important implications for the ability to predict who is at increased risk for developing heart disease and finding effective ways to reduce this risk.

Stigma, Risk Behaviors and Health Care Among HIV-Infected Russian People Who Inject Drugs (Lunze)

K99DA041245

Boston Medical Center

6/01/16–5/31/18

Primary Mentor: Samet

In this pilot study, SCRIPT (Stigma Coping to Reduce HIV risks and Improve substance use Prevention and Treatment) data was examined to determine factors affecting double stigma and its role in substance use and health care utilization among HIV-infected PWID in Russia.

Training in Research Program on Alcohol Use by Persons-with-or-at-Risk for HIV (Hahn)

K24AA022586

University of California San Francisco

9/15/13–8/31/19

The objective of this K24 was to mentor investigators from University of California San Francisco (UCSF) and Uganda in patient-oriented alcohol/HIV research.

Alcohol Epidemiology and Pilot Intervention to Reduce Alcohol, IPV and HIV in Women in Uganda (Wagman)

K01AA024068

University of California San Diego

8/20/15–7/31/20

Primary Mentor: Hahn

The purpose of this career development award is to research women with co-morbid alcohol use disorders and intimate partner violence (IPV) victimization, at risk for acquiring HIV (or already infected), and pilot test an HIV clinic-based alcohol and IPV reduction intervention.

Alcohol Use and High Risk Behavior Among HIV-Positive Men (Woolf-King)

K01AA021671

University of California San Francisco

9/06/13–8/31/18

Primary Mentor: Hahn

The goal of this study was to gain a better understanding of the relationship between event-level alcohol use and high-risk behavior among HIV-positive drinkers. These findings will help to develop a behavioral HIV prevention intervention.

2018 URBAN ARCH Conference Presentations

Barocas J, So-Armah K, Cheng DM, Lioznov D, Baum M, Gallagher K, Fuster D, Gnatienko N, Krupitsky E, Freiberg M, Samet JH. Zinc deficiency and advanced liver fibrosis among HIV/HCV co-infected persons in Russia. IDWeek Conference; San Francisco, CA.

Freiberg M, Gnatienko N, Cheng D, Blokhina E, Coleman S, Doyle M, Briden C, So-Armah K, Bendiks S, Tracy R, Bryant KJ, Krupitsky E, Samet JH. Zinc to reduce mortality and CVD risk and HIV disease progression in Russian drinkers. Conference on Retroviruses and Opportunistic Infections; Boston MA.

Fuster D, So-Armah K, Cheng D, Coleman S, Gnatienko N, Lioznov D, Krupitsky E, Freiberg M, Samet JH. Recent cannabis use and advanced liver fibrosis among HIV-infected heavy drinkers. College on Problems of Drug Dependence; San Diego, CA.

Kekibiina A, Woolf-King SE, Emenyonu NI, Fatch R, Rose C, Muyindike WR, Hahn JA. Digital health screening in HIV infected persons in Uganda to increase alcohol reporting. Research Society on Alcoholism; San Diego, CA.

Kholodnaya A, So-Armah K, Cheng D, Gnatienko N, Patts G, Samet J, Freiberg M, Lioznov D. Assessment of monocyte activation and systemic inflammation markers in HIV-positive opioid users. HIV Drug Therapy; Glasgow, United Kingdom.

Lunze K, Lodi S, Gnatienko N, Lloyd-Travaglini C, Bendiks S, Vetrova M, Toussova O, Bushara N, Blokhina E, Ekstrand M, Luoma J, Krupitsky E, Lioznov D, Samet JH. Determinants of HIV and substance use stigma among people with a history of substance use who are living with HIV in Russia. International AIDS Conference; Amsterdam, Netherlands.

Muyindike WR, Fatch R, Cheng D, Emenyonu N, Ngabirano C, Adong J, Linas B, Jacobson KR, Hahn JA. Tuberculin skin test response among HIV-infected alcohol users on antiretrovirals in Uganda. Research Society on Alcoholism; San Diego, CA.

Palatkin V, Yaroslavlseva T, Blokhina E, Krupitsky E, Verbitskaya E, Zvartau E, Gnatienko N, Walley AY, Gross R, Samet JH, Woody G. Fatal overdose in recently detoxified Russian HIV-positive persons with opioid use disorder: the role of naltrexone in prevention. European College of Neuropsychopharmacology Congress, Barcelona, Spain.

Pitpitan EV, Lunze K, Cheng D, Blokhina E, Lioznov D, Gnatienko N, Quinn E, Krupitsky E, Raj E, Samet JH. Psychosocial syndemics among HIV-positive people who inject drugs in Russia. Society of Behavioral Medicine; New Orleans, LA

So-Armah K, Freiberg M, Cheng D, Patts G, Ma Y, White L, Tracy R, Doyle M, Gnatienko N, Lioznov D, Bryant K, Krupitsky E, Samet JH. Change in alcohol consumption and change in inflammatory biomarkers in HIV+ drinkers. Research Society on Alcoholism; San Diego, CA.

Toussova O, Vetrova M, Blokhina E, Bushara N, Bendiks S, Gnatienko N, Krupitsky E, Lioznov D, Samet JH, Lunze K. Double stigma among HIV-positive people who inject drugs in Russia and HIV care: A qualitative study. College on Problems of Drug Dependence; San Diego, CA.

Vetrova MV, Lunze K, Cheng DM, Lloyd-Travaglini C, Blokhina E, Bendiks S, Gnatienko N, Luoma J, Krupitsky E, Lioznov D, Samet JH. Double stigma among HIV-positive people who inject drugs in Russia and health care outcomes. College on Problems of Drug Dependence; San Diego, CA.

Wagman J, Matsuzaki M, Gnatienko N, Metsch LR, Del Rio C, Delaney J, Dong X, Kahana S, Crane H, Altice F, Lucas G, Mehta S, El-Sadr W, Quan V, Springer S, Tsui J, Samet JH. Associations between hazardous alcohol use, antiretroviral receipt and viral suppression in HIV-positive people who inject drugs in the U.S., India, Russia, Vietnam. Research Society on Alcoholism; San Diego, CA.

2018 URBAN ARCH Papers

Adong J, Lindan C, Fatch R, Emenyonu NI, Muyindike WR, Ngabirano C, Winter MR, Lloyd-Travaglini C, Samet JH, Cheng DM, Hahn JA. **The relationship between spirituality/religiousness and unhealthy alcohol use among HIV-infected adults in southwestern Uganda.** *AIDS Behav.* 2018;22(6):1802-1813. PMCID: PMC5708153.

HIV and alcohol use are two serious and co-existing problems in sub-Saharan Africa. We examined the relationship between spirituality and/or religiousness (SR) and unhealthy alcohol use among treatment-naïve HIV-infected adults attending the HIV clinic in Mbarara, Uganda. Unhealthy alcohol was defined as having either an alcohol use disorders identification test-consumption score of ≥ 4 for men or ≥ 3 for women, or having a phosphatidylethanol level of ≥ 50 ng/ml based on analysis of dried bloodspot specimens. Of the 447 participants, 67.8% were female; the median age was 32 years (interquartile range [IQR] 27-40). About half reported being Protestant (49.2%), 35.1% Catholic, and 9.2% Muslim. The median SR score was high (103 [IQR 89-107]); 43.3% drank at unhealthy levels. Higher SR scores were associated with lower odds of unhealthy drinking (adjusted odds ratio [aOR]: 0.83 per standard deviation [SD] increase; 95% confidence interval [CI] 0.66-1.03). The "religious behavior" SR subscale was significantly associated with unhealthy alcohol use (aOR: 0.72 per SD increase; 95% CI 0.58-0.88). Religious institutions, which facilitate expression of religious behavior, may be helpful in promoting and maintaining lower levels of alcohol use.

Coleman SM, Gnatienco N, Lloyd-Travaglini CA, Winter MR, Briden C, Blokhina E, Lioznov D, Adong J, Samet JH, Hahn JA. **False positive HIV diagnoses: Lessons from Ugandan and Russian research cohorts.** *HIV Clin Trials.* 2018;19(1):15-22. PMCID: PMC5949866.

METHODS: Russian participants with documented HIV and ART-naïve status were recruited between 2012 and 2015 from clinical and non-clinical sites in St. Petersburg. Participants in Uganda were recruited from Mbarara Regional Referral Hospital from 2011 to 2014 with documented HIV infection via rapid diagnostic testing and recorded ART-naïve in the clinic database. HIV viral load testing of baseline samples was performed; the lower limit of detection was 500 copies/mL in Russia and 40 in Uganda. Due to an unexpectedly high proportion of participants with undetectable viremia, additional tests were performed: enzyme-linked immunosorbent assay HIV testing and testing for ART.

RESULTS: In Russia, 16% (58/360) had undetectable viremia; 3% (9/360) re-tested HIV-seronegative and 4% (13/360) tested positive for ART. In Uganda 11% (55/482) had undetectable viremia; 5% (26/482) re-tested HIV-seronegative, while <1% (4/482) tested positive for ART.

CONCLUSIONS: In both Russia & Uganda, undetectable viremia was much higher than would be expected for an HIV-infected ART-naïve cohort. Misclassification of study participants was due to misdiagnosis of HIV with rapid diagnostic testing and inaccurate accounting of ART use. Confirmatory HIV testing could improve accuracy of participants meeting entry criteria for HIV infection as might increased scrutiny of medication use in an ART-naïve cohort.

Forman LS, Patts GJ, Coleman SM, Blokhina E, Lu J, Yaroslavtseva T, Gnatienco N, Krupitsky E, Samet JH, Chaisson CE. **Use of an android phone application for automated text messages in international settings: a case study in an HIV clinical trial in St. Petersburg, Russia.** *Clin Trials.* 2018;15(1):36-43. PMCID: PMC5794610.

METHODS: To gauge technical capabilities for international projects, we developed SMSMessenger, an automated Android application that uses a US server to send medication reminders to participants in a clinical trial in St. Petersburg, Russia (Zinc for HIV disease among alcohol users-a randomized controlled trial in the Russia Alcohol Research Collaboration on HIV/AIDS cohort). The application is downloaded once onto an Android study phone. When it is time for the text message reminders to be sent, study personnel access the application on a local phone, which in turn accesses the existing clinical trial database hosted on a US web server. The application retrieves a list of participants with the following information: phone number, whether a message should be received at that time, and the appropriate text of the message. The application is capable of storing multiple outgoing messages. With a few clicks, text messages are sent to study participants who can reply directly to the message. Study staff can check the local phone for incoming messages. The SMSMessenger application uses an existing clinical trial database and is able to receive real-time updates. All communications between the application and server are encrypted, and phone numbers are stored in a secure database behind a firewall. No sensitive data are stored on the phone, as outgoing messages are sent through the application and not by messaging features on the phone itself. Messages are sent simultaneously to study participants, which reduces the burden on local study staff. Costs and setup are minimal. The only local requirements are an Android phone and data plan.

CONCLUSION: The SMSMessenger technology could be modified to be applied anywhere in the world, in any language, script, or alphabet, and for many different purposes. The novel application of this existing low-cost technology can improve the usefulness of text messaging in advancing the goals of international clinical trials.

Freiman JM, Jacobson KR, Muyindike WR, Horsburgh CR, Ellner JJ, Hahn JA, Linas BP. **Isoniazid preventive therapy for people with HIV who are heavy alcohol drinkers in high TB-/HIV-burden countries: A risk–benefit analysis.** *J Acquir Immune Defic Syndr.* 2018;77(4):405-412. PMID: PMC5825241.

METHODS: We developed a Markov simulation model to compare ART alone to ART with either 6 or 36 months of IPT for heavy drinking PLHIV enrolling in care in Brazil, India, and Uganda. Outcomes included nonfatal toxicity, fatal toxicity, life expectancy, TB cases, and TB death.

RESULTS: In this simulation, 6 months of IPT + ART (IPT6) extended life expectancy over both ART alone and 36 months of IPT + ART (IPT36) in India and Uganda, but ART alone dominated in Brazil in 51.5% of simulations. Toxicity occurred in 160/1000 persons on IPT6 and 415/1000 persons on IPT36, with fatal toxicity in 8/1000 on IPT6 and 21/1000 on IPT36. Sensitivity analyses favored IPT6 in India and Uganda with high toxicity thresholds.

CONCLUSIONS: The benefits of IPT for heavy drinkers outweighed its risks in India and Uganda when given for a 6-month course. The toxicity/efficacy trade-off was less in Brazil where TB incidence is lower. IPT6 resulted in fatal toxicity in 8/1000 people, whereas even higher toxicities of IPT36 negated its benefits in all countries. Data to better characterize IPT toxicity among HIV-infected drinkers are needed to improve guidance.

Gnatienko N, Freiberg MS, Blokhina E, Yaroslavtseva T, Briden C, Cheng DM, Chaisson CE, Lioznov D, Bendiks S, Koerbel G, Coleman SM, Krupitsky E, Samet JH. **Design of a randomized controlled trial of zinc supplementation to improve markers of mortality and HIV disease progression in HIV-positive drinkers in St. Petersburg, Russia.** *HIV Clin Trials.* 2018;19(3):101-111. PMID: PMC5957784.

Russia continues to have an uncontrolled HIV epidemic and its per capita alcohol consumption is among the highest in the world. Alcohol use among HIV-positive individuals is common and is associated with worse clinical outcomes. Alcohol use and HIV each lead to microbial translocation, which in turn results in inflammation. Zinc supplementation holds potential for lowering levels of biomarkers of inflammation, possibly as a consequence of its impact on intestinal permeability. This paper describes the protocol of a double-blinded randomized placebo-controlled trial of zinc supplementation in St. Petersburg, Russia. Methods Participants (n = 254) were recruited between October 2013 and June 2015 from HIV and addiction clinical care sites, and non-clinical sites in St. Petersburg, Russia. Participants were randomly assigned, to receive either zinc (15 mg for men; 12 mg for women) or placebo, daily for 18 months. The following outcomes were assessed at 6, 12, and 18 months: (1) mortality risk (primary outcome at 18 months); (2) HIV disease progression; (3) cardiovascular risk; and (4) microbial translocation and inflammation. Adherence was assessed using direct (riboflavin) and indirect (pill count, self-report) measures. Given the limited effectiveness of current interventions to reduce alcohol use, zinc supplementation merits testing as a simple, low-cost intervention to mitigate the consequences of alcohol use in HIV-positive persons despite ongoing drinking.

Gnatienko N, Wagman JA, Cheng DM, Bazzi AR, Raj A, Blokhina E, Tousseva O, Forman LS, Lioznov D, Briden C, Sullivan M, Bryant K, Samet JH, Tsui JI. **Serodiscordant partnerships and opportunities for pre-exposure prophylaxis among partners of women and men living with HIV in St. Petersburg, Russia.** *PLoS One.* 2018;13(11). PMID: PMC6239322.

SETTING: Secondary analyses of an observational cohort study of PLWH who have ever injected drugs in St. Petersburg, Russia.

METHODS: Primary outcomes were 1) being partnered and 2) being in a serodiscordant partnership. The main independent variable was gender. Multivariable GEE logistic regression models were fit for binary outcomes, adjusted for age, income, education, and recent opioid use. Descriptive analyses were performed for partners' HIV status, substance use, sex risk behaviors, and awareness of PrEP for a subset of participants.

RESULTS: At baseline, 50% (147/296) reported being in a partnership, and of those, 35% were in a serodiscordant partnership. After adjustment, women had significantly higher odds of being partnered compared to men (aOR = 3.12; 95% CI: 1.77, 5.51), but there were no significant gender differences in the odds of being in a serodiscordant partnership (aOR = 0.58; 95% CI: 0.27, 1.24). Among a sub-sample of participants queried (n = 56), 25% were aware of PrEP for prevention of sexual HIV transmission and 14% for prevention of injection-related transmission.

CONCLUSION: Although half of our sample were partnered and one third of these partnerships were serodiscordant, PrEP awareness was low. Substantial opportunities for HIV prevention exist among PLWH who have ever injected drugs in Russia and their HIV-negative partners. Given the high proportion of HIV-negative partners among this ART-naïve sample, efforts to address the associated inherent risks, such as couples-based interventions, are needed to increase condom use, PrEP awareness, or uptake of other HIV-prevention modalities (e.g., ART for the HIV-positive partner).

Hahn JA, Cheng DM, Emenyonu NI, Lloyd-Travaglini C, Fatch R, Shade SB, Ngabirano C, Adong J, Bryant K, Muyindike WR, Samet JH. **Alcohol use and HIV disease progression in an antiretroviral naïve cohort.** *J Acquir Immune Defic Syndr.* 2018;77(5):492-501. PMID: PMC5844835.

METHODS: We conducted a prospective cohort study of the impact of unhealthy alcohol use on CD4 cell count among HIV-infected persons in southwestern Uganda not yet eligible for antiretroviral treatment (ART). Unhealthy alcohol consumption was 3-month Alcohol Use Disorders Identification Test - Consumption (AUDIT-C) positive (≥ 3 for women, ≥ 4 for men) and/or phosphatidylethanol (PEth - an alcohol biomarker) ≥ 50 ng/ml, modeled as a time-dependent variable in a linear mixed effects model of CD4 count.

RESULTS: At baseline, 43% of the 446 participants were drinking at unhealthy levels and the median CD4 cell count was 550 cells/mm (Interquartile Range [IQR] 416-685). The estimated CD4 cell count decline per year was -14.5 cells/mm (95% Confidence Interval [CI]: -38.6 to 9.5) for unhealthy drinking vs. -24.0 cells/mm (95% CI: -43.6 to -4.5) for refraining from unhealthy drinking, with no significant difference in decline by unhealthy alcohol use (p-value 0.54), adjusting for age, sex, religion, time since HIV diagnosis, and HIV viral load. Additional analyses exploring alternative alcohol measures, participant subgroups, and time-dependent confounding, yielded similar findings.

CONCLUSION: Unhealthy alcohol use had no apparent impact on the short-term rate of CD4 count decline among HIV-infected ART naïve individuals in Uganda, using biological markers to augment self-report and examining disease progression prior to ART initiation to avoid unmeasured confounding due to misclassification of ART adherence.

Kim TW, Walley AY, Ventura AS, Patts GJ, Heeren TC, Lerner GB, Mauricio N, Saitz R. **Polypharmacy and risk of falls and fractures for patients with HIV infection and substance dependence.** *AIDS Care.* 2018;30(2):150-159. PMID: PMC5977400.

Although people with HIV infection (PLWH) are at higher risk of polypharmacy and substance use, there is limited knowledge about potential harms associated with polypharmacy such as falls and fractures in this population. The study objective was to determine whether polypharmacy, as measured by the number and type of medication, is associated with falls and fractures among PLWH and DSM-IV substance dependence in the past year or ever injection drug use (IDU). We identified the number of medications by electronic medical record review in the following categories: (i) systemically active, (ii) non-antiretroviral (non-ARV), (iii) sedating, (iv) non-sedating as well as any opioid medication and any non-opioid sedating medication. Outcomes were self-reported (1) fall/accident requiring medical attention and (2) fracture in the previous year. Separate logistic regression models were fitted for medications in each category and each outcome. Among 250 participants, the odds of a fall requiring medical attention were higher with each additional medication overall (odds ratio [OR] 1.12, 95% Confidence Interval [CI] = 1.05, 1.18), each additional non-ARV medication (OR 1.13, 95%CI = 1.06, 1.20), each additional sedating medication (OR 1.36, 95%CI = 1.14, 1.62), and a non-opioid sedating medication (OR 2.89, 95%CI = 1.06, 7.85) but not with an additional non-sedating medication or opioid medication. In receiver operating characteristic (ROC) curve analyses, optimal cutoffs for predicting falls were: ≥ 8 overall and ≥ 2 sedating medications. Odds ratios for fracture in the previous year were OR 1.05, 95%CI = 0.97, 1.13 for each additional medication overall and OR 1.11, 95%CI = 0.89, 1.38 for each additional sedating medication. In PLWH and substance dependence or ever IDU, a higher number of medications was associated with greater odds of having a fall requiring medical attention. The association appeared to be driven largely by sedating medications. Future studies should determine if reducing such polypharmacy, particularly sedating medications, lowers the risk of falls.

Lasser KE, Lunze K, Cheng DM, Blokhina E, Walley AY, Tindle HA, Quinn E, Gnatenko N, Krupitsky E, Samet JH. **Depression and smoking characteristics among HIV-positive smokers in Russia: A cross-sectional study.** *PLoS One.* 2018 6;13(2). PMID: PMC5800551.

METHODS: We performed a cross-sectional secondary data analysis of a cohort of HIV-positive regular smokers with a history of substance use disorders recruited in St. Petersburg, Russia in 2012-2015. The primary outcome was heavy smoking, defined as smoking > 20 cigarettes per day. Nicotine dependence (moderate-very high) was a secondary outcome. The main independent variable was a high level of depressive symptoms in the past 7 days (defined as CES-D ≥ 24). We used multivariable logistic regression to examine associations between depressive symptoms and the outcomes, controlling for age, sex, education, income, running out of money for housing/food, injection drug use, and alcohol use measured by the AUDIT.

RESULTS: Among 309 regular smokers, 79 participants (25.6%) had high levels of depressive symptoms, and 65 participants (21.0%) were heavy smokers. High levels of depressive symptoms were not significantly associated with heavy smoking (adjusted odds ratio [aOR] 1.50, 95% CI 0.78-2.89) or with moderate-very high levels of nicotine dependence (aOR 1.35, 95% CI 0.75-2.41).

CONCLUSIONS: This study did not detect an association between depressive symptoms and smoking outcomes among HIV-positive regular smokers in Russia.

Lorkiewicz SA, Ventura AS, Heeren TC, Winter MR, Walley AY, Sullivan M, Samet JH, Saitz R. **Lifetime marijuana and alcohol use, and cognitive dysfunction in people with human immunodeficiency virus infection.** *Subst Abus.* 2018;39(1):116-123. PMID: PMC5979270.

METHODS: Some 215 HIV-infected adults with Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) substance dependence or ever injection drug use were studied. In adjusted cross-sectional regression analyses associations were assessed between current marijuana use, current heavy alcohol use, lifetime marijuana use, lifetime alcohol use, duration of heavy alcohol use (the independent variables), and 3 measures of cognitive dysfunction (dependent variables): both the (i) memory and (ii) attention domains from the Montreal Cognitive Assessment (MoCA) and the (iii) 4-item cognitive function scale (CF4) from the Medical Outcomes Study HIV Health Survey (MOS-HIV). Analyses were adjusted for demographics, primary language, depressive symptoms, anxiety, comorbidities, antiretroviral therapy, hepatitis C virus (ever), duration of HIV infection (years), HIV-viral load (log copies/mL), CD4 cell count, lifetime and recent cocaine use, and recent illicit and prescribed opioid use.

RESULTS: Current marijuana use was significantly and negatively associated with the MOS-HIV CF4 score (adjusted mean difference = -0.40, $P = .01$). Current marijuana use was not significantly associated with either MoCA score. Lifetime marijuana use and current heavy and lifetime alcohol use and duration of heavy alcohol use were not associated with any measure of cognitive dysfunction.

CONCLUSION: Current marijuana use was associated with one measure of cognitive dysfunction, but there was not a consistent pattern of association with lifetime marijuana use or alcohol use and measures of cognitive dysfunction. Understanding the mechanism by which marijuana, with and without alcohol, are associated with worse cognition warrants larger, longer studies with more precise and diverse measurements of cognitive function.

Saitz R, Mesic A, Ventura AS, Winter MR, Heeren TC, Sullivan MM, Walley AY, Patts GJ, Meli SM, Holick MF, Kim TW, Bryant KJ, Samet JH. **Alcohol consumption and bone mineral density in people with HIV and substance use disorder: A prospective cohort study.** *Alcohol Clin Exp Res.* 2018. [Epub ahead of print]. PMID: PMC6281811.

METHODS: We conducted a 3.5-year prospective cohort study of 250 PLWH with substance use disorder or ever injection drug use. Annual alcohol consumption was measured as a mean of grams per day of alcohol, mean number of heavy drinking days per month, mean number of days abstinent per month, and any heavy drinking, using the 30-day Timeline Followback method twice each year. The primary outcome was annual change in BMD measured each year by dual energy X-ray absorptiometry in grams per square centimeter (g/cm^2) at the femoral neck. Additional dependent variables included annual change in total hip and lumbar spine BMD, $>6\%$ annual decrease in BMD at any site, and incident fractures in the past year. Regression models adjusted for relevant covariates.

RESULTS: The median age of participants was 50 years. The median duration of HIV infection was 16.5 years and the mean time since antiretroviral therapy initiation was 12.3 years. At study entry, 67% of participants met criteria for low BMD (46% low bone mass, 21% osteoporosis). Median follow-up was 24 months. We found no significant associations between any measure of alcohol consumption and changes in BMD (g/cm^2) at the femoral neck (adjusted β for g/d of alcohol = -0.0032, $p = 0.7487$), total hip, or lumbar spine. There was no significant association between any measure of alcohol consumption and $>6\%$ annual decrease in BMD at any site, or incident fractures.

CONCLUSIONS: In this sample of PLWH and substance use disorders or ever injection drug use, we detected no association between any of the alcohol measures used in the study and changes in BMD or incident fractures.

Wagman JA, Samet JH, Cheng DM, Gnatienco N, Raj A, Blokhina E, Toussova O, Forman LS, Lioznov D, Tsui JI. **Female gender and HIV transmission risk behaviors among people living with HIV who have used injection drugs in St. Petersburg, Russia.** *AIDS Behav.* 2018;22(9):2830-2839. PMID: PMC6128669.

Among persons who inject drugs, women have a higher HIV prevalence (than men) in many settings. Understanding how gender affects risk for infection among HIV-negative, and transmission among HIV-positive people who currently or previously injected drugs is key to designing effective prevention and treatment programs. We analyzed data from 291 persons living with HIV who had ever injected drugs. Participants were drawn from the Russia Alcohol Research Collaboration on HIV/AIDS cohort (2012-2015) to examine associations between female gender and HIV transmission risk. Primary outcomes were sharing drug injecting equipment (e.g., needle/syringes) and condomless sex. Secondary outcomes were alcohol use before sharing drug injecting equipment; before condomless sex; and both sharing drug injecting equipment and condomless sex. Logistic regression models assessed associations between gender and outcomes, controlling for demographics, partner HIV status and use of antiretroviral treatment. Female gender was not significantly associated with sharing drug injecting equipment [$aOR = 1.45$, 95% confidence interval (CI) 0.85-2.46, p value = 0.18] but was associated with condomless sex ($aOR = 1.91$, 95% CI 1.12-3.23, $p = 0.02$) in adjusted models. Female gender was not significantly associated with any secondary outcomes. Better understanding of risky sex and drug use behaviors among people who currently or previously injected drugs can support the design of effective gender-tailored HIV prevention interventions.

West BS, Cheng DM, Toussova O, Blokhina E, Gnatienko N, Liu K, Samet JH, Raj A. **Contraceptive use among HIV-infected females with history of injection drug use in St. Petersburg, Russia.** *AIDS Behav.* 2018;22(6):1787-1791. PMID: PMC5960422.

Limited research examines family planning for HIV-infected women with a history of injection drug use. We describe modern contraceptive use and its association with heavy drinking and recent injection for HIV-infected females in St. Petersburg, Russia (N = 49): 22.4% (n = 11) used traditional methods and 30.6% (n = 15) reported modern contraceptive use, which consisted primarily of condoms (26.5%, n = 13). Over 63% (n = 31) had an abortion. Observed associations for heavy alcohol use (AOR = 2.36, CI = 0.53, 12.41) and recent injection drug use (AOR = 2.88, CI = 0.60, 16.92) were clinically notable, but not statistically significant. Prioritizing family planning for HIV-infected women with a history of substance use is urgently needed.

Woolf-King SE, Fatch R, Cheng DM, Muyindike W, Ngabirano C, Kekibiina A, Emenyonu N, Hahn JA. **Alcohol use and unprotected sex among HIV-Infected Ugandan adults: Findings from an event-level study.** *Arch Sex Behav.* 2018;47(7):1937-948. PMID: PMC2607502.

While alcohol is a known risk factor for HIV infection in sub-Saharan Africa (SSA), studies designed to investigate the temporal relationship between alcohol use and unprotected sex are lacking. The purpose of this study was to determine whether alcohol used at the time of a sexual event is associated with unprotected sex at that same event. Data for this study were collected as part of two longitudinal studies of HIV-infected Ugandan adults. A structured questionnaire was administered at regularly scheduled cohort study visits in order to assess the circumstances (e.g., alcohol use, partner type) of the most recent sexual event (MRSE). Generalized estimating equation logistic regression models were used to examine the association between alcohol use (by the participant, the sexual partner, or both the participant and the partner) and the odds of unprotected sex at the sexual event while controlling for participant gender, age, months since HIV diagnosis, unhealthy alcohol use in the prior 3 months, partner type, and HIV status of partner. A total of 627 sexually active participants (57% women) reported 1817 sexual events. Of these events, 19% involved alcohol use and 53% were unprotected. Alcohol use by one's sexual partner (aOR 1.70; 95% CI 1.14, 2.54) or by both partners (aOR 1.78; 95% CI 1.07, 2.98) during the MRSE significantly increased the odds of unprotected sex at that same event. These results add to the growing event-level literature in SSA and support a temporal association between alcohol used prior to a sexual event and subsequent unprotected sex.

For a more comprehensive list of published URBAN ARCH papers, please visit the Publications page on the URBAN ARCH website: www.urbanarch.org/publications



NOTES

How to connect with URBAN ARCH

Visit us online at www.urbanarch.org



Subscribe to our quarterly newsletter on our website to stay updated on URBAN ARCH activities

For inquiries:

Carly Briden, MA, MPH
Administrative Director
URBAN ARCH Admin Core
801 Massachusetts Ave, 2nd Floor
Boston, MA 02118
carly.briden@bmc.org

PowerPoint presentations will be available on our website (urbanarch.org) after the meeting.



Uganda Russia Boston Alcohol Network for
Alcohol Research Collaboration on HIV/AIDS