



## OVERCOMING HEALTH DISPARITIES IN THE BAY AREA: FOCUS ON HIV & HCV

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### ABSTRACT 01: PATIENT MISUNDERSTANDING OF HIV AND HEPATITIS C TESTING IN AN EMERGENCY DEPARTMENT WITH AN INTEGRATED PUBLIC HEALTH SCREENING PROGRAM

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**BACKGROUND:** To minimize barriers and promote sustainability, experts have emphasized a streamlined and integrated approach to ED Public Health Screening (PHS). With this in mind, we implemented an ED PHS program using existing resources to perform triage nurse HIV and Hepatitis C (HCV) screening, as well as physician-initiated testing. Little is known, however, regarding the patient experience with such a program where the details of PHS may escape patient attention, particularly their understanding of whether testing was performed. The objective of the study was to determine how often patients accurately report if they were tested or not for HIV and/or HCV during their ED visit.

**METHODS:** This 2-month cross-sectional survey study enrolled a convenience sample of patients at the conclusion of their ED visit. Patients reported the details of their experience with HIV and/or HCV testing, specifically whether or not they were tested, who offered them testing, and if they received their results. Responses were then compared to basic visit level and demographic data recorded in the electronic medical record. Descriptive statistics were used to determine if patients were able to accurately report if they were tested or not for HIV and/or HCV.

**RESULTS:** A total of 492 patients participated in the study, of which 98 completed HIV testing and 56 completed HCV testing. Among 73 patients who reported being tested for HIV, 22 (30%) were not actually tested, and of the 419 patients who reported not being tested for HIV, 47 (11%) were tested without their knowledge. Among 50 patients who reported being tested for HCV, 20 (40%) were not actually tested, and of the 442 patients who reported not being tested for HCV, 26 (6%) were tested without their knowledge. Only 5 of the 98 HIV-tested patients (5%) and 4 of the 56 HCV-tested patients (7%) reported being told their results, and 8 reported being disclosed an HIV or HCV result when no testing was performed.

**CONCLUSIONS:** A large proportion of ED patients who passed through our PHS program misunderstood whether or not testing was performed. Implications of such misunderstanding may pose medico-legal risks, lead to false reassurances, promote high-risk behaviors, and influence future test acceptance. Strategies to improve patient understanding of integrated PHS processes require attention.

### ABSTRACT 02: IDENTIFYING THE COMPLEX CARE AND TREATMENT NEEDS OF AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN AND WOMEN (AAMSMW) AND WHO ARE LIVING WITH HIV: LESSONS FROM BRUTHAS COHORT

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**BACKGROUND:** Little is known about how AAMSMW who are secretive about their same sex desire contend with an HIV positive diagnosis. There is a dearth of research regarding AAMSMW practices regarding HIV status disclosure, and their ability to access and maintain HIV-related health care and treatment adherence. It is possible that AAMSMW who are living with HIV may experience barriers to seeking regular care and staying adherent to medications.

**METHODS:** From February 2011-May 2014, we recruited 400 AAMSMW in the San Francisco Bay Area to be enrolled in our Randomized Controlled Trial testing the Bruthas Project, an HIV prevention intervention specifically designed for AAMSMW. At baseline we administered a behavioral survey assessing: demographics, homelessness, employment, history of incarceration, HIV disclosure practices, care and treatment adherence. A total of N=52 men reported living with HIV at intake. To learn more about their experiences, we recruited a sub-sample of N=25 to participate in qualitative interviews, which were conducted between May-October 2014. Topics included: current living situation, diagnosis story, disclosure practices, experiences of accessing and maintaining care and treatment, and HIV-related stigma. Recordings were transcribed and coded. The team met weekly to analyze data and compare experiences across interview participants, with analytic memos being produced after each session.

**RESULTS:** Both qualitative and quantitative data indicated that men had high levels of structural vulnerability and experienced barriers to maintaining regular care and treatment adherence. At baseline, 40% were homeless in the past year, 85% had been incarcerated in their lifetimes, and 80% were currently unemployed. Concerns around meeting material needs were echoed in qualitative interviews, where men described difficulties of maintaining affordable housing, the inadequacy of disability payments, and frustration over their inability to gain formal employment. Pursuing opportunities in the informal economy (“hustling”) was reported as a reason for missing medical appointments. Although many participants recognized the benefit of remaining adherent to HIV medications, it was hard for men to attain perfect adherence. Some qualitative participants stopped taking medications due to debilitating side effects that they simply wanted a “break” from. Others felt that HIV medications interfered with medications they were taking to treat other diseases or conditions such as diabetes, cardiovascular disease, cancer, and low kidney function.



Irregular adherence was born out in rates of reported viral suppression in the quantitative data. Despite the fact that 85% of participants reported that they see a medical provider “regularly,” clinical outcomes were mixed. 51% reported having undetectable Viral Loads, 8% had detectable but less than 300 copies, 8% had between 300 and 1000 copies, 11% had between 1000 and 9,999 copies, and 2% had above 10,000 copies, while 20% didn’t know their Viral Load.

**CONCLUSIONS:** A holistic approach to HIV health for AAMSMW would translate to better outcomes for men living with HIV, where a goal of viral suppression must also include attending to their basic social and economic support needs. Recognizing the influence of factors such as poverty and the presence of co-morbidities on maintaining HIV care and treatment adherence is essential to developing robust interventions for this population.

### ABSTRACT 03: A CONVERGENCE OF RISK: THE ASSOCIATION BETWEEN HOMELESSNESS, FOOD INSECURITY, AND HIV BEHAVIORS IN OAKLAND, CA

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**BACKGROUND:** Homeless individuals experience a disturbingly high prevalence of both HIV/AIDS and food insecurity, and yet despite this confluence of risk, the strength of the association between homelessness, HIV risk behaviors, and food insecurity remains unclear. To address this gap, we analyzed data from 291 African American adults living in Oakland who were participating in a study of HIV testing and counseling. We determined the association between homelessness and 1) food insecurity; and 2) engagement in risky behaviors in the last 12 months.

**METHODS:** The present study represents a secondary analysis of data collected as part of a study to increase demand for HIV testing and counseling (HTC) among African American adults. Participants were recruited for HTC via respondent driven sampling (RDS) with financial incentives between March 2011 and February 2012 at four community agencies that offer client-initiated HTC in Oakland, CA. The study began with an initial group of 48 HIV-negative and HIV-positive “seeds” who then recruited peers to join the study, called “network associates” (n= 243), who were eligible to recruit others until study end. After HIV testing, participants completed a face-to-face interviewer-administered survey, which included questions on homelessness, food insecurity, sexual history, high-risk sexual behaviors, and injection drug use.

**RESULTS:** Of the 291 participants, the mean age was 47 years (range: 30-65), 186 (64%) were male, and 206 (71%) participants reported ever being homeless. Of those, 112

(54%) were homeless within the past year, while the remaining 94 (46%) had been homeless more than 12 months before the study. Overall, 149 (51%) of the 291 participants were food insecure, and 178 (61%) reported one or more high-risk behaviors and were classified as high-risk. Overall, those who had ever been homeless were more likely to report high-risk behaviors in the past 12 months ( $PR_a=1.27$ , 95% CI: 0.89, 1.80) and twice as likely to experience food insecurity ( $PR_a=2.12$ , 95% CI: 1.37, 3.27) compared those who had not been homeless. Furthermore, among those that had a history of homelessness, those who had been homeless in the past 12 months were more likely to report risk behaviors ( $PR_a=1.26$ , 95% CI: 0.87, 1.77) and food insecurity ( $PR_a=1.75$ , 95% CI: 1.19, 2.58) and compared to those who had not been recently homeless.

**CONCLUSIONS:** These data indicate the association between homelessness, food insecurity, and HIV risk, suggesting the importance of considering homelessness status in HIV/AIDS and food and nutrition interventions. Our findings also have important implications for homelessness prevention and support programs, given how homelessness can impact HIV risk. Considering that recently homeless individuals were more likely to be at high-risk for HIV acquisition than those not recently homeless, identifying the recently homeless and comprehensively addressing their HIV prevention needs, including risk reduction counseling, condom provision, STD treatment, and harm reduction, is of critical importance in preventing and mitigating HIV-related risk behaviors.

### ABSTRACT 04: HERDING BIRDS – THE RECRUITMENT AND RETENTION OF A HIGHLY DISENFRANCHISED POPULATION

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**BACKGROUND:** People who inject drugs (PWID) are commonly excluded from participation in clinical trials of biomedical interventions. Assumptions about poor health and non-adherent behavior contribute to their omission. However, including PWID in clinical research is necessary to identify optimal hepatitis C virus (HCV) prevention interventions. The Vaccination Is Prevention (VIP) Study is a placebo-controlled randomized clinical trial testing the safety, efficacy, and immunogenicity of a HCV preventive vaccine among PWID in San Francisco and Baltimore. At enrollment, participants are aged 18-45, HCV- and HIV-negative and have injected drugs in the last 90 days. Subjects are randomized to receive experimental vaccine or placebo, and are followed for up to 29 months for adverse event monitoring, health and immunological outcomes. We describe the recruitment and retention methods utilized by the San Francisco site, and draw conclusions on their success.



**METHODS:** The enrollment goal for the two study sites is 450 participants over 4 years. The San Francisco research site is located in the Tenderloin, a low-income neighborhood with high numbers of PWID. An aggressive outreach plan was developed to guide recruitment of the study population, strategically targeting neighborhoods frequented by PWID. Two outreach workers conduct street-based recruitment of new study participants 15 hours/week. They have established a street presence where PWID congregate and provide study information, referrals, safer injection supplies and hygiene kits. A toll-free phone number with 24-hour staffing allows potential participants to screen at any time. If enrolled, detailed contact information is collected, including address, email, phone number, social media and family contacts. Participants are queried about where they spend their time, and social services they access. With permission, photographs are taken. All information is stored on a secure database. Participants receive study reminders by street contact, cell phone, text messages, or social media. Recruitment and retention numbers are reviewed weekly, documented on spread sheets, and used to inform staff of participant status, including drug treatment or incarceration.

**RESULTS:** The VIP Study began enrolling in March 2012 and is expected to complete in 2016. To date we have seen 80% retention over the course of the study. Incarceration, relocation, and involvement in residential drug treatment programs are the primary reasons for early withdrawal from study participation.

**CONCLUSIONS:** Our work demonstrates that PWID can be successfully enrolled and retained in a demanding clinical trial requiring multiple study visits over a long period of time. While significant staff time is spent on retention activities including street searches, phone calls, social media contact, and home visits, participants report enjoying frequent contact with VIP staff. Participants develop a sense of responsibility to VIP, demonstrate reliability, and take their research participation seriously. Despite being a highly mobile, hard-to-reach population that often is reluctant to access medical care, PWID in VIP have demonstrated the ability to adhere to a placebo-controlled randomized vaccine study protocol. Our methods offer a successful recruiting and retention framework for PWID involvement in future studies.

#### **ABSTRACT 05: STRUCTURAL BARRIERS TO VOCATIONAL REHABILITATION OUTCOMES WITH HIV-POSITIVE PERSONS**

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**BACKGROUND:** HIV-positive persons experience employment-related difficulties that contribute to poverty and exacerbate HIV-related health disparities. This qualitative

study sought to describe structural barriers that HIV-positive persons encounter to achieving their vocational rehabilitation goals. Specifically, we examined whether and how pursuing vocational rehabilitation goals may differ for those who are receiving disability benefits (i.e., SSI/SSDI) compared to individuals who are not receiving disability benefits.

**METHODS:** We recruited 108 participants from a vocational rehabilitation program serving HIV-positive persons. From this larger cohort, 22 participants were purposively sampled based on time since HIV diagnosis and self-reported social standing for a qualitative sub-study focused on exploring the process of navigating rehabilitation goals. We employed a grounded theory approach to develop themes relevant to the study and utilized Atlas.ti to analyze transcripts of qualitative interviews conducted at baseline.

**RESULTS:** Of the 22 participants, sixteen were male, five female, and one male-to-female transgender. Eleven were Caucasian, four African American, four Hispanic/Latino, and three of multicultural heritage. Their mean age was 43 years and mean time since HIV diagnosis was 13 years. Ten were receiving SSI/SSDI benefits whereas 12 were not. We focused on themes delving into: (1) structural barriers; (2) social stigma related to living with HIV; and (3) basic needs and prioritizing. We found that participants who were not receiving SSI/SSDI benefits were subject to bureaucratic hurdles that often prevented them from qualifying for these benefits, promoting a stronger sense of urgency to re-join the workforce. Those who were not receiving SSI/SSDI benefits also commonly described anticipated stigma related to living with HIV, rather than experienced stigma. On the other hand, the participants receiving SSI/SSDI benefits more often described instances of experienced stigma from different levels of society, which coupled with stringent bureaucratic barriers to workforce re-entry made them more dependent on these disability benefits.

**CONCLUSIONS:** Findings highlight the unique structural, social, and contextual factors that influence the pursuit of vocational rehabilitation among HIV-positive persons. Tailored approaches are needed to support the delivery of vocational rehabilitation services to HIV-positive persons as a function of whether they are currently receiving SSI/SSDI benefits.

#### **ABSTRACT 06: FIGHTING HIV STIGMA THROUGH PHOTOVOICE: AN INNOVATIVE TOOL FOR PATIENT EDUCATION AND EMPOWERMENT**

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**BACKGROUND:** Although in recent years there have been great advances in the fight against the HIV epidemic, many people living with HIV continue to be adversely affected by HIV stigma, which in turn has tremendous implications for health disparities. We created a unique arts and advocacy project to give HIV patients and their families a safe space to





share their experiences and gain confidence to fight stigma in their communities. Photovoice is a creative, community-based action method that utilizes digital photography with an aim to raise awareness and promote group empowerment, reflection and advocacy. Photovoice puts cameras in the hands of community members and gives them a chance to show through their eyes what they feel are the most important issues through their photos. This project provided a safe space for HIV patients and their families to reflect and share their personal narratives relating to their experiences living with HIV, by sharing and discussing photos that they took with digital cameras provided by the project.

**METHODS:** We piloted a month-long series of Photovoice/health education sessions with the objective of providing a safe space for HIV patients and their families to share experiences and personal narratives relating to HIV through Photovoice. We recruited a small group of current and former patients at Family Health Center's Family HIV Clinic and Positive Health Program/BAPAC at San Francisco General Hospital to participate in Photovoice sessions at the Family Health Center.

The sessions included introductory digital photography didactics, sharing of personal narratives in a group setting, group discussion about HIV-related health topics, and health education through the use of patient-centered educational brochures on the topics of promoting health in sero-different partnerships and disclosing HIV status to children and partners.

**RESULTS:** Common themes that arose from the group's collective photos and accompanying narratives include: struggling with and finding ways of coping with HIV stigma, recovering from addiction, overcoming the myriad of social challenges to maintaining good health, and finding sources of ongoing encouragement and support in their communities. By the conclusion of the sessions, all patients expressed improved confidence and self-efficacy in fighting HIV stigma, as well as improved emotional wellbeing and empowerment from sharing experiences with other group members. The project culminated with an exhibition of the participant's photos at a community art gallery.

**CONCLUSIONS:** Photovoice proved to be an empowering method for patients to share experiences, participate in peer education, and contribute overall to the fight against HIV stigma and health disparities. The patients involved in this project have since participated in several awareness-raising events targeted at educating health providers and community members about the experience of living with HIV. These events range from speaking on expert HIV panels to of audiences of over 100 health providers, to online virtual townhall meetings. Based on the success of this pilot project, and using feedback provided by our patients, we are working on creating a group-based curriculum centered on caring for

HIV-positive families with plans to initiate family/group HIV care at the Family Health Center.

#### ABSTRACT 07: PILOTING HEPATITIS C TREATMENT IN THE MISSION DISTRICT

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**BACKGROUND:** In the US, current Hepatitis C Virus (HCV) treatments have cure rates upwards of 90%, however only 5-6% of chronic HCV-positive individuals have been successfully treated to cure. Individuals with chronic HCV often face multiple barriers to attaining treatment. In San Francisco access to HCV treatment is limited especially for those with active substance use or untreated mental illness. The objective of our HCV pilot is to provide a multidisciplinary treatment program, in a primary care setting, which aims to increase treatment access while evaluating cost effectiveness, sustainability, patient experience and quality outcomes.

**METHODS:** The setting for this pilot is at Mission Neighborhood Health Center (MNHC), a federally qualified health center located in the Mission District of San Francisco. MNHC serves over 13,000 low-income, predominantly Latino individuals. MNHC currently has at least 91 active patients who are HCV mono-infected and 35 HCV/HIV mono-infected patients; 60% of whom are homeless or marginally housed, 43% with substance abuse disorder and 21% with alcohol abuse. The program, which began in April 2014, offers primary care for up to 30 HCV infected patients utilizing the successful multi-disciplinary model previously reserved for persons living with HIV. In addition to specialized medical care, this model provides outreach coordination, health education, case management, substance abuse counseling and treatment access and adherence support. Initial data collection includes patient demographics, HCV risk factors and HCV treatment history. Participants are then tracked on their participation in HCV education, initial laboratory and ultrasound work-up, initial HCV medical evaluation, and psychosocial assessment. Time to treatment readiness and initiation from initial HCV medical visit is also measured. Once treatment is initiated, self-reported treatment adherence is monitored on a weekly basis. Early treatment response (EVR) at 4 weeks after treatment initiation, end of treatment response (ETR) and sustained virologic response (SVR) 12 weeks after treatment completion are measured to assess treatment efficacy.

**RESULTS:** As of January 2015, 24 participants had been enrolled in the program by the Outreach Coordinator. All of these participants received formal HCV education and 23 had received psychosocial assessment. Twenty-two of these participants had received initial HCV medical evaluation; 17



had completed initial HCV laboratory workup and ultrasounds; 8 had received HCV treatment with a weekly self-report of >95% treatment adherence (3 patients awaiting treatment prior authorization); and 5 had successfully completed HCV treatment with an efficacious ETR. SVR data is still pending.

**CONCLUSIONS:** Offering HCV treatment in a multidisciplinary, primary care setting has proved to be an effective means of treating HCV in the community served by MNHC. The provision of HCV education provides patients with motivation towards treatment readiness, while the case management evaluation and support addresses psychosocial barriers to treatment. Treatment access and adherence support has proven essential to accessing medications due to the burdensome prior authorization process and for ensuring adherence to a costly treatment regimen that holds the risk of treatment failure. The cost-effectiveness and financial sustainability of this integrated model of providing HCV treatment are still to be determined.

#### **ABSTRACT 08: THE HOPE OF HEP C FREE CALIFORNIA HINGES ON TREATING PEOPLE WHO USE DRUGS**

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**BACKGROUND:** On the 25th anniversary of the identification of the hepatitis C virus, we are on the verge of eliminating hepatitis C through large-scale testing efforts and the availability of new medications that can cure over 90% of people living with the virus. Elimination of the virus requires a “cure as prevention” paradigm. The promise of eliminating hepatitis C cannot be realized unless people who use drugs have access to hepatitis C treatment, because the majority of new hepatitis C infections are transmitted through shared drug injection equipment. The new hepatitis C medications are expensive and payers, like state Medicaid programs, have expressed much concern over the high price of the medications in relation to program budgets. In an effort to combat costs, throughout the country, state Medicaid programs are developing treatment utilization policies for the new hepatitis C medications that limit access to new medications, many of which include prohibitions on treating people use drug unless they engage in abstinence and/or drug treatment. Many of these abstinence and/or drug treatment requirements are not necessarily grounded in evidence-based practice about how to treat hepatitis C in active drug users but are instead based on stigma.

**METHODS:** We reviewed California’s Medi-Cal utilization policy with respect to individuals who use drugs and/or who have other substance use disorders and compared it to an analysis of other state Medicaid program policies.

**RESULTS:** California’s Medi-Cal policy with respect to individuals who use drugs is similar to many other states and,

we believe, violates the Patient Protection & Affordable Care Act.

**CONCLUSIONS:** We will describe strategies to advocate for greater access to treatment for this population and provide an up-to-date summary of activities in-progress with Medi-Cal.

#### **ABSTRACT 09: SCREENING AND TREATMENT FOR HIV IN HIV CO-INFECTED PATIENTS IN PRIMARY CARE**

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**BACKGROUND:** Hepatitis C Virus (HCV) is the most common etiology of liver disease in the United States (US) and has emerged as a principal source of non-AIDS related mortality in HIV positive populations. With the availability of expanded treatments for HCV it is important to screen HIV-positive individuals in order to identify who could benefit from these treatments. Delivering HCV treatment at HIV care sites may be more feasible than transferring co-infected patients to hepatology. Our goal was to evaluate one HIV primary care clinic’s readiness to implement HCV treatment within HIV primary care setting.

**METHODS:** Twenty-three months of patient level data were extracted from electronic medical records during January 1, 2013 – November 30, 2014. Both demographic (age, gender, race) and clinical (CD4, HIV viral load (VL), cardiovascular disease (CVD), diabetes (DM), renal disease, depression, smoking, and substance abuse) data were collected. Our analyses of the data included: (1) determining the proportion of patients who had an HCV antibody (ab) test drawn; (2) identifying demographic and clinical differences between patients whose HCV ab tests were drawn from those who were not; and (3) comparing differences based on HCV ab test results. Statistical analyses included Chi-Square and analysis of variance.

**RESULTS:** Mean age of clinic patients (N=800) was 50.77 years ( $\pm 10.014$ ), male majority (79.1%), Caucasian (55.8%), African American (22.4%), Hispanic (8.1%), Asian (5.7%) and Other (7.9%). A small majority (54.7%) of clinic patients had an HCV antibody test drawn within the last 23 months. There were no statistically significant differences in age, race or gender between patients who had a HCV ab test drawn and those who had not. Statistically significant clinical differences were observed for the following: patients who had an HCV ab test drawn were more likely to be smokers (65.8%;  $p < 0.0001$ ), active substance users (72%;  $p < 0.0001$ ), and have a detectable HIV VL (66.9%;  $p = 0.002$ ). Of the 438 patients who had a HCV ab test drawn, 36.3% were HCV positive. Demographic (age, gender, race,) and clinical (smoking, substance abuse) characteristics were statistically different



among patients who were HCV ab positive test and those who were HCV ab negative. HCV ab positive patients were older with a mean age of 53.39 years ( $\pm 8.077$ ) than HCV ab negative patients with a mean age of 49.79 years ( $\pm 11.016$ ;  $p < 0.0001$ ). A total of 49% women compared to 32.4% men ( $p = 0.003$ ) tested positive for HCV ab. Additional statistically significant differences included: African Americans (47.4%;  $p < 0.0001$ ) and Caucasians (36.5%;  $p < 0.0001$ ) had higher prevalence of positive HCV ab test compared to Hispanics (3.3%), and HCV ab positive tests were more prevalent in patients who smoked tobacco (51.9%;  $p < 0.0001$ ) and used substances (49.4%;  $p = 0.006$ ) compared to those who did not smoke or use substances (29.8% and 33.1%, respectively).

**CONCLUSIONS:** In a university based outpatient HIV specialty clinic a high prevalence of HCV ab tests were not drawn within the last 23 months. Patients who reported current smoking and substance abuse with a detectable HIV VL were more likely to have a HCV ab test drawn. Patients who were HCV ab positive were more likely to be female than male, not Hispanic, older, smoke tobacco, and active substance users. The data collected from this study will be used to gain a greater understanding of HCV screening and treatment needs and eligibility within an HIV primary care setting. As the Affordable Care Act is implemented, innovative models to address screening and treatment of illness will be prioritized in primary care settings, including HIV primary care.

#### ABSTRACT 10: USING TWITTER AS A SURVEY OF ALCOHOL USE IN THE S.F. BAY AREA

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**BACKGROUND:** There are geographic disparities in excessive alcohol consumption, a key driver of HIV transmission and premature mortality, in the San Francisco Bay Area. Understanding spatial and temporal trends in alcohol use could help tailor public health interventions to these neighborhoods and reduce alcohol-related health disparities. But currently, there is no real-time, population-based surveillance for alcohol use. Twitter is a popular micro-blogging service through which individuals can share 140 character messages or “tweets” with followers. Mining tweets can provide a snapshot of the public’s actions and researchers have used Twitter as a surveillance tool for disease outbreaks. Since many Twitter users publically tweet about their activities, we examined whether Twitter could serve as a population-based approach to examine alcohol use trends in the S.F. Bay Area. We hypothesized that there would be certain temporal and spatial variations in alcohol-related tweets. To test our hypothesis, we sought to determine whether such tweets were greater in use on weekends compared to weekdays, and surged on holidays and festivals (i.e. July 4<sup>th</sup> and Gay Pride) compared to non-holiday periods. We also tested whether tweets about

alcohol were more concentrated in areas associated with drinking (i.e. bars) compared to other locations.

**METHODS:** Using the Twitter Application Programming Interface, we collected 1% of all public, geo-tagged tweets that originated from the Bay Area from June 6<sup>th</sup> to July 30<sup>th</sup>, 2013. In total, we collected 667,000 tweets from users who voluntarily added GPS coordinates to their tweets. We used STATA version 12.1 to keep tweets with one or more alcohol-related keywords, such as “shwasted” or “buzzed,” which we obtained from a prior analysis. Two team members (NK, MD) independently read the tweets kept by STATA to confirm that they were alcohol-related. The final result was a set of 3,416 tweets. Our team generated an “epidemic curve” by plotting the frequency of tweets each day during the data collection period. We then used Esri ArcGIS to plot each tweet’s GPS coordinates and create heat maps.

**RESULTS:** Our “epidemic curve” shows that the number of alcohol tweets is higher during the weekends (average: 150.7 tweets/day) than that during the weekdays (average: 104.6 tweets/day). Festivals and national holidays, such as Gay Pride and Independence Day, had a higher number of alcohol tweets (average: 214.7 tweets/day) than non-holiday weekends. The number of alcohol tweets follows a consistent, cyclical pattern with tweets slowly rising as the weekend approaches and declining starting on Monday. Geospatial analysis reveals clustering in the Market Street corridor and in the Castro district—the location of many bars and Pride-associated festivities.

**CONCLUSIONS:** Our results suggest that researchers can use Twitter to track self-reported alcohol use and related behavioral risk activities, data that is upstream of alcohol related morbidity and mortality data. Understanding temporal and spatial trends in self-reported risk behavior and their associations with documented alcohol and HIV related health disparities will facilitate the development of tailored interventions to disproportionately affected areas.

#### ABSTRACT 11: THE POLICY IMPLICATIONS OF DIFFERENCES IN HIV-POSITIVE CALIFORNIAN’S CAPACITY TO ACCESS AND MAINTAIN PRIVATE HEALTH INSURANCE THROUGH THE ASSISTANCE OF CALIFORNIA’S OFFICE OF AIDS HEALTH INSURANCE PREMIUM PAYMENT PROGRAM (OA-HIPP)

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**BACKGROUND:** California’s Office of AIDS created the Health Insurance Premium Payment (OA-HIPP) program in anticipation of the enrollment of many people living with HIV (PLHIV) in private insurance under the Affordable Care Act (ACA). The program helps offset the costs of insurance





premiums for moderate-income PLHIV, and has become a vital tool HIV-positive Californians use to establish and maintain comprehensive healthcare coverage. In light of this crucial role, we examined the barriers and facilitators to an optimally-functioning OA-HIPP program in collaboration with our community partners, Project Inform and the San Francisco AIDS Foundation.

**METHODS:** Using a semi-structured interview guide that covered perceived strengths and weaknesses of the program and recommendations for improvement, we interviewed 22 participants between March and June, 2014. Our sample included enrollment workers throughout the State, public health department workers, and an advocate with national-level knowledge of premium payment plans. Interviews were recorded, transcribed, and cleaned to remove identifying information. The study team developed a codebook to organize qualitative data into discrete themes using Dedoose, an online analytic software program. We compared the data across participant types, viewed the frequency of code application and code co-occurrence, and extracted excerpts for deeper analysis. All study participants provided verbal consent and the Committee on Human Research reviewed and approved the protocol.

**RESULTS:** The OA-HIPP program is hampered by administrative challenges at the State and insurer level and does not yet function optimally. While many consumers have indeed accessed more affordable coverage through OA-HIPP participation, program issues often require participating consumers to be health insurance literate, committed to monitoring their insurance closely, and able to actively pursue resolution of issues in order to ensure they remain enrolled in coverage. Participation can therefore be very challenging for consumers who lack the ability or resources to meet these responsibilities. In several cases, we found that consumers had experienced disruptions in their insurance coverage as a result of administrative issues with OA-HIPP. Higher-functioning consumers were more equipped to identify and address issues before coverage was lost. Enrollment workers are expected to support consumer participation and manage issues but in practice, may not always have the capacity to support lower-functioning consumers to the degree that is needed to help them successfully maintain coverage. Many enrollment workers manage OA-HIPP participation alongside increased benefits counseling demands resulting from ACA implementation and changes to the AIDS Drug Assistance Program (ADAP) and other programs. Caseloads may also be large, in part because most consumers work with an enrollment worker regardless of their ability to self-manage; the program makes self-management available but does not actively support it.

**CONCLUSIONS:** Further collaboration between OA-HIPP's stakeholders is needed to reduce the administrative and monitoring burden of this program, especially to allow

greater opportunity for enrollment workers to educate and empower consumers as stewards of their coverage, and to support lower-functioning consumers' coverage maintenance. Program policies and procedures, including staffing and self-management support, should better reflect both differences in consumers' needs and the growing demands of financial benefits counseling.

#### **ABSTRACT 12: CRIMINAL JUSTICE INVOLVEMENT, HIV, HCV, AND HEALTH AMONG PEOPLE WHO INJECT DRUGS AND SMOKE CRACK COCAINE IN OAKLAND, CA 2011-2013**

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**BACKGROUND:** People who inject drugs or smoke crack cocaine are disproportionately affected by HIV and HCV. They are also more likely than people who do not use illicit drugs to be involved in the criminal justice system. Community supervision, including probation and parole, can have positive and negative health effects. We conducted an NIMH-funded community-based study of people who inject drugs or smoke crack cocaine in part to learn more about the prevalence of criminal justice involvement, HIV, HCV, and other health concerns.

**METHODS:** We used targeted sampling methods to recruit people who inject drugs or smoke crack cocaine in the communities in Oakland, California between 2011 and 2013 (N=2,094). Every research participant was interviewed using a computer-assisted personal interview on lap-top computers and was tested for antibodies to HIV.

**RESULTS:** The sample was 58% male and 88% African American. Criminal justice involvement in their lifetime was reported by 94% of the sample, including 92% in jail, 44% in prison, 79% on probation, and 42% on parole. Criminal justice involvement in the past year was reported by 47%, including 30% in jail, 3% in prison, 28% on probation, and 10% on parole. HIV testing was reported by 85% ever and 19% in the past 6 months. Having shared syringes or had unprotected sex in the past 6 months did not increase the likelihood of having been HIV tested. Under four percent tested HIV antibody positive in our study. HCV testing was reported by 63%, of whom 32% reported they had tested HCV antibody positive. Among women, those who were in community supervision in the past year (26%) were more likely to have been HIV tested in the past 6 months (Adjusted Odds Ratio=1.6; 95% confidence interval=1.1, 2.6). However, only 29% of women in community supervision reported such HIV testing.



**CONCLUSIONS:** There is a need for more community-based HIV and HCV testing among people who use illicit drugs. Probation could be a good place to provide linkage to case management and HIV treatment.

### ABSTRACT 13: THE CONTINUUM OF HIV CARE IN ALAMEDA COUNTY, CALIFORNIA

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**BACKGROUND:** In Alameda County—a large, diverse county in the San Francisco Bay Area with among the largest HIV epidemics in the state— there has been growing interest in characterizing the local HIV care continuum. To address the interest among community stakeholders and to inform our local planning for HIV prevention and care, we set about estimating linkage, retention, and virologic suppression among those diagnosed and living with HIV in Alameda County.

**METHODS:** Routinely collected HIV surveillance data were analyzed, with CD4 and viral load laboratory tests used as proxies for HIV care visits. Timely linkage to care—defined as an HIV care visit within 90 days of diagnosis—was estimated among Alameda County residents newly diagnosed with HIV (at any stage) between 2010 and 2012. A sensitivity analysis was performed which excluded labs ordered on the date of diagnosis. Two measures of retention in care in 2013—(1) any evidence of care (1+ visit) and (2) retention in continuous care (2+ visits 90+ days apart)—were estimated among people presumed living in Alameda County with HIV (PLHIV) for all of 2013. Virologic status was estimated among this same group, with virologic suppression defined as most recent viral load (VL) <200 copies/ml and undetectable defined as VL ≤75 copies/ml. All analyses were stratified by sex, age, and race/ethnicity.

**RESULTS:** Among 669 residents newly diagnosed with HIV, median time to linkage was between 6.5 and 20.5 days. With laboratory results ordered on the date of diagnosis included in estimates of linkage, 82.5% of newly diagnosed cases were linked to care within 90 days of diagnosis. However, *excluding* labs done on the date of diagnosis, only 70.4% of newly diagnosed cases in Alameda County were linked. Among 5,370 PLHIV in 2013, we found that although 70% had at least one HIV care visit in 2013, only 44.5% were retained in continuous care. Of those same 5,370 PLHIV, 55.7% were virally suppressed at most recent VL test in 2013, with 96.8% of these being undetectable. Stratified analyses showed differences in all measures by all the major demographic variables.

**CONCLUSIONS:** Although current estimates leave considerable room for improvement in engaging our PLHIV in

care at all stages along the continuum, particularly retention, the initial estimates are encouraging in that they compare favorably with national and state numbers. Although methodological differences in the construction of care cascades may limit comparisons to those produced in other jurisdictions, this analysis will allow ongoing monitoring of our progress toward facilitating access to HIV care in Alameda County.

### ABSTRACT 14: ACCEPTABILITY OF A MOBILE PHONE BASED HEPATITIS C INTERVENTION AT AN URBAN COMMUNITY SOCIAL SERVICES CENTER

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**BACKGROUND:** The homeless population is at high risk for hepatitis C virus (HCV) infection, with recent reports of infection ranging from 17% to 44%. Due to a lack of HCV knowledge, and significant barriers to screening and treatment, many people do not know that they are infected and are at risk of infecting others. Mobile phones are emerging as a tool to address individual and structural-level barriers in the prevention and management of infectious diseases, including for HIV and other STDs. However, it is unclear if homeless and economically disadvantaged people attending a community social services center possess the devices and service plans to take advantage of interventions delivered via mobile phones. The goal of this study was to assess mobile phone ownership, use, and acceptability of text messaging to promote linkage to HCV evaluation and treatment among people visiting an urban community social services center.

**METHODS:** One hundred persons at an urban community social services center were recruited from the center's health clinic waiting room by trained research assistants. A brief 25-item survey was administered to assess: a) mobile phone ownership and use; b) acceptability of text messaging to encourage HCV testing, encourage engagement in HCV risk behavior screening, and notify patients of HCV evaluation and treatment appointments; and c) concerns about privacy.

**RESULTS:** Survey participants averaged 49 years of age, with 66% male, 53% African American, 21% White and 11% Hispanic. Eighty-five percent owned a mobile phone, and 52% owned a smartphone. However, only 35% of participants reported owning a smartphone with an unlimited data plan. Thirty-six percent of phone owners changed their mobile phone number at least once in the past year and 59% had been without cell phone service at least once in the past year. Ninety-six percent of participants indicated they felt comfortable receiving text messages encouraging them to get tested for HCV, to participate in an HCV risk behavior screening, or to notify them about scheduled HCV clinic appointments.



**CONCLUSIONS:** The findings from this study indicate that clients receiving social services at an urban community center are receptive to receiving text messages focusing on HCV disease. However, low ownership rates of smartphones with unlimited data plans suggests that smartphone applications may not be a suitable means of communicating health information to poor and underserved populations. A more realistic option may be to use the text messaging feature of mobile phones for intervention delivery. Interventionists should be sensitive to potential barriers related to the use of mobile phones for intervention delivery including device ownership and service plans, interruptions in service, and frequency of changing mobile phone numbers.

#### **ABSTRACT 15: NURSING BARRIERS WITH IMPLEMENTATION OF A PUBLIC HEALTH SCREENING PROGRAM IN AN URBAN EMERGENCY DEPARTMENT**

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**BACKGROUND:** In April 2014, we implemented an ED Public Health Screening (PHS) program that integrated triage nurse rapid HIV and Hepatitis C (HCV) screening into standard care. Program success and sustainability is highly dependent on nursing staff participation. Little is known, however, how nurses perceive integrating PHS into ED care. The objective of this study was to determine nursing satisfaction with the PHS program and to identify potential barriers to implementation.

**METHODS:** Six months after the PHS program implementation a survey (SurveyMonkey, Inc) was emailed to all registered nurses (full/part-time and per-diem). The survey asked: demographic information, nurse participation, satisfaction, attitudes, and barriers. The primary outcome was satisfaction, and secondary outcomes were nursing attitudes and perceived barriers to implementation.

**RESULTS:** Surveys were sent to 153 nurses and 65 were returned (42%). Of the 65 nurses that responded, 16 (25%) did not staff triage and 49 (75%) staffed both the ED and triage. The majority of nurses felt that PHS “benefited the entire community” (96%; 54/56) and agreed that screening “improved overall ED care” (80%; 45/56). Just over half of nurses were satisfied with the program (57%; 32/56). Triage nurses reported several barriers with PHS. Many were “uncomfortable asking” patients about their HIV (39%, 17/44), HCV (34%, 15/44), and injection drug use (45%, 20/44) status. They were also frequently “uncomfortable offering” HIV (23%, 10/44) and HCV (26%, 11/43) screening. Many triage nurses also felt that integration of PHS at triage “did not work well” (25%, 11/44). Seventy-two percent (31/43) of triage nurses felt that PHS “interfered with triage efficiency” and 41% (18/44) of all nurses felt that PHS

“adversely affected ED flow.” The main reasons triage nurses did not offer HIV and HCV screening included: language barriers (HIV 24%, 11/45; HCV 24%, 10/42), lack of privacy (HIV 22%, 10/45; HCV 12%, 5/42), patient ineligibility (HIV 20%, 9/45; HCV 29%, 12/42), and being too busy (HIV 16%, 7/45; HCV 19%, 8/42).

**CONCLUSIONS:** Although ED nurses support the concept of PHS and its community benefits, execution at triage is met with substantial staff barriers and dissatisfaction. Such barriers to implementation may influence program compliance and sustainability.

#### **ABSTRACT 16: DIFFERENCES IN RESPONSE TO ANTIRETROVIRAL THERAPY BY SEX AND HEPATITIS C INFECTION STATUS**

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**BACKGROUND:** HIV/HCV-coinfected individuals are considered a priority population for HCV treatment due to more rapid liver disease progression. However, it is unclear if there are subgroups of HIV/HCV-coinfected individuals at particular risk of the negative effects of HCV infection on HIV-associated outcomes. One such subgroup may be biological sex. The natural history of HCV infection varies by sex, with increased viral clearance and slower progression of liver disease in women compared with men. Sex may also modify the response to antiretroviral therapy (ART) among HIV-infected individuals, with some studies suggesting that women have superior virologic, immunologic, and clinical outcomes compared with men. However, despite evidence of sex differences in both the course of HCV disease and the response to ART among HIV-infected individuals, there have been no studies examining HIV-associated outcomes with respect to both sex and HCV status over time.

**METHODS:** We conducted a cohort study of HIV-infected adults initiating combination ART in Kaiser Permanente (KP) California during 1996-2011. We used piecewise linear regression with generalized estimating equations to assess changes in CD4 count by sex and HCV status over five years. As a sensitivity analysis, we analyzed change in CD4 count including only women who were postmenopausal ( $\geq 50$  years of age) to exclude a possible protective effect of estrogen on the immune system. We then used Cox regression to estimate hazard ratios (HR) by sex and HCV status for HIV RNA  $< 500$  copies/mL over one year, and for AIDS and death over the follow-up period. Adjusted models included variables for age, race/ethnicity, calendar era, KP region, prior ART use, HIV-transmission risk factor, years known to be



HIV-infected, drug/alcohol abuse, smoking, baseline HIV RNA level, and baseline CD4 count (AIDS and death models only), with interaction terms to assess differences across sex strata.

**RESULTS:** Among 12,865 subjects, there were 154 HIV/HCV-coinfected women, 1,000 HIV/HCV-coinfected men, 1,088 HIV-monoinfected women, and 10,623 HIV-monoinfected men. CD4 increases were slower in the first year for HIV/HCV-coinfected women (75 cells/ $\mu$ L) and men (70 cells/ $\mu$ L) compared with HIV-monoinfected women (145 cells/ $\mu$ L) and men (120 cells/ $\mu$ L;  $P < 0.001$ ). After five years, women had higher CD4 counts than men in both HIV-monoinfected (598 vs. 562 cells/ $\mu$ L,  $P = 0.003$ ) and HIV/HCV-coinfected individuals (567 vs. 509 cells/ $\mu$ L,  $P = 0.003$ ). Results were similar when including only postmenopausal women. Regardless of sex, HIV/HCV coinfection was not independently associated with AIDS (HR 1.1, 95% CI: 0.9-1.3) or achieving HIV RNA  $< 500$  copies/mL (HR 1.0, 95% CI: 0.9-1.1). However, HIV/HCV coinfection was independently associated with 40% higher mortality (95% confidence interval [CI]: 1.2-1.6), an association that was largely driven by liver-related deaths (HR 6.0, 95% CI: 3.9-9.0) and did not vary by sex ( $P_{int} = 0.28$ ).

**CONCLUSIONS:** After five years, women attain higher CD4 counts than men regardless of HCV status, with HIV/HCV-coinfected men achieving the lowest CD4 counts. HIV/HCV-coinfected men and women have slower CD4 recovery after starting ART and have increased mortality compared with HIV-monoinfected men and women. HCV infection should be aggressively treated in HIV/HCV-coinfected adults, regardless of sex.

#### **ABSTRACT 17: PILOT STUDY TO DESCRIBE THE SUBSTANCE USE EXPERIENCES OF HIV-POSITIVE YOUNG BLACK MEN WHO HAVE SEX WITH MEN (MSM) BETWEEN THE AGES 18-29 IN SAN FRANCISCO**

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**BACKGROUND:** The prevalence of HIV among young Black men who have sex with men (MSM) is three to four times higher than white MSM. Young black MSM are run-aways and homeless, forcing them to survive on the streets by becoming sex workers, engaging in unprotected anal intercourse because either they or their partner is under the influence of drugs or alcohol. Previous studies cite crack cocaine use, sex while high on crack cocaine, marijuana and alcohol, or sharing needles for injection drugs as strongly associated with HIV infection among young black MSM.

**METHODS:** The goal of this qualitative study is to offer insight about the range of factors and enhance our understanding about the role that substance use plays in the lives of HIV-positive young Black MSM. Surprisingly, the results of this study do not draw the same conclusions as previously cited studies with HIV-positive young Black MSM in other cities. Participants will identify contributing risk factors for acquiring

HIV/AIDS among young Black MSM as well as describe and explain the significance of substance use among this population.

**RESULTS:** The themes that emerged from the coding of this qualitative narrative study describe an across-case experiential trajectory with a summary of the significant experiences of this population, contributing to the limited body of knowledge currently available about family, relocation, relationships, methamphetamine prevalence and access, testing positive for HIV and willpower, coping and the sense of hope. This information will contribute to the development of prevention education strategies specifically tailored to this population that address issues surrounding substance abuse in HIV transmission. A) Family and includes issues with being stigmatized due to their sexual orientation along with rejection, judgment, discrimination, and lack of acceptance and early exposure to drugs and sex in the family. B) Relocation to San Francisco, they talk about HIV, being homeless and the theme of survival, needing money for meet their basic needs including food and housing so they can have a place to sleep and shower. C) Relationships, which include feelings of abandonment, alone, lonely, and the need to find a community and have a sense of belonging. D) Methamphetamine exposure, prevalence, and access happening among their newfound community and peer pressure to do the drug, using it for emotional numbing so that they can deal with their circumstances. They discover the sexual enhancement benefit and this leads them to engage in high risk behaviors such as URAI. E) Testing positive for HIV, describing as a sense of relief and something they are not surprised about; there is a resignation about eventually being HIV infected. F) Willpower, coping, and a sense of hope for their future.

**CONCLUSIONS:** Clinicians and researchers in all academic and practice settings will encounter HIV-positive young Black men and need to understand the prevalence of HIV/AIDS among this population as well as the importance of making a thorough sexual health and risk behavior assessment. It appears that the high exposure, prevalence, and access of methamphetamine in San Francisco among the predominantly White MSM population has had an impact on these young Black men.

#### **ABSTRACT 18: SOCIAL, STRUCTURAL AND BEHAVIORAL DETERMINANTS OF OVERALL HEALTH STATUS AMONG HIV-INFECTED UNSTABLY HOUSED MEN**

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**BACKGROUND:** Previous studies indicate multiple influences on the overall health of HIV-infected persons; however, few assess longitudinal changes in social and structural barriers





that are disproportionately found in impoverished populations. The aims of the current study were to determine the extent to which changing risks effect the physical and mental health status of HIV-infected homeless and unstably housed men over time and empirically rank risk exposures by their level of influence.

**METHODS:** Between 2002 and 2008, a cohort of 288 HIV+ homeless and unstably housed men was recruited and followed over time. Marginal structural models were used to estimate the population-level effects of behavioral, social and structural factors on physical and mental health status (measured by the SF36) and targeted variable importance (tVIM) was used to empirically rank factors by their influence.

**RESULTS:** The population was 60% non-Caucasian and the median age was 41 years; 67% of study participants reported recent drug use and 20% reported recent street homelessness. At baseline, the median CD4 cell count was 349 cells/ $\mu$ l and 18% of eligible persons (CD4<350) took antiretroviral therapy. Median follow-up time was 15 months per person. After adjusting for confounding, and in order of their influence, the three factors with the strongest negative effects on overall physical health were unmet subsistence needs (difficulty finding shelter, food, clothing, a place to wash or a bathroom), not having a close friend/confidant and drug use. The three factors with the strongest negative effects on overall mental health were unmet subsistence needs, Caucasian race and no reported source of instrumental support. ART adherence  $\geq$ 90% ranked 5<sup>th</sup> for its positive influence on mental health and viral load ranked 5<sup>th</sup> for its negative influence on physical health.

**CONCLUSIONS:** The inability to meet shelter, food and hygiene needs was the most powerful predictor of poor physical and mental health among homeless and unstably housed HIV-infected men in an urban setting. These findings are consistent with our work regarding the mental, physical and gynecological health of unstably housed HIV-infected women. Impoverished persons will not fully benefit from advances in HIV medicine until social and structural barriers are overcome.

#### **ABSTRACT 19: CHARACTERISTICS AND PREDICTORS OF NALOXONE RECIPIENTS, REFILLERS, AND REVERSALS IN A COMMUNITY-BASED NALOXONE DISTRIBUTION PROGRAM**

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**BACKGROUND:** Drug overdose is the leading cause of injury death among U.S. adults, and substance users at risk of

overdose—particularly persons who inject drugs (PWID)—are also at increased risk for HIV and HCV. In San Francisco, 13.7% of PWID have HIV and 30% are unaware of their infection; 26% of opioid overdose decedents known to be in primary care were HIV-positive. Moreover, PWID in San Francisco are disproportionately impacted by HCV. The prevalence of HCV for PWID is 60% while incidence is estimated at 27 per 100 person-years, which is significantly higher than the rate for the general US Population. Fatal and non-fatal overdoses are more common among HIV-positive substance users, and overdose is a leading source of non-HIV related mortality among persons with HIV. Furthermore, overdose has been repeatedly and independently associated with drug-related HIV risk behaviors, including sharing syringes and other injection equipment. Although some behaviors that increase risk for overdose and HIV are distinct, riskier substance use patterns—including more frequent, public, and polydrug use—have been associated with both HIV risk and overdose. Community naloxone distribution is a key strategy in reducing opioid overdose mortality, especially among PWID at risk for HIV. Since 2003, the Harm Reduction Coalition has provided overdose education and take-home naloxone kits at needle and syringe exchange programs in San Francisco through a community-based program called “The Drug Overdose Prevention and Education (DOPE) Project.” We sought to investigate the predictors of participant engagement with naloxone programs and utilization of naloxone within non-clinical settings in the community.

**METHODS:** We conducted an analysis of 2010-2013 data from The DOPE Project. Participant (N=2500) and reversal (N=702) characteristics were assessed and predictors of participant refills and reversals were examined using multivariable logistic regression.

**RESULTS:** African American [AOR=0.60(95%CI=0.44-0.83)] and Latino [AOR=0.65 (0.43-1.00)] participants had lower odds of obtaining a naloxone refill. Conversely, those who had witnessed an overdose [AOR=2.06 (1.58-2.68)] or used heroin [AOR=2.05 (1.63-2.57)], other opioids [AOR=1.30 (1.03-1.64)], or methamphetamine [AOR=1.67 (1.35-2.07)] had higher odds of obtaining a refill. African American participants [AOR=0.52 (0.32-0.84)] had lower odds of reporting an overdose reversal while those who had witnessed an overdose [AOR=2.56 (1.68-3.92)] or used heroin [AOR=2.49 (1.81-3.42)] or methamphetamine [AOR=1.65 (1.23-2.23)] had higher odds of reporting a reversal.

**CONCLUSIONS:** Naloxone recipients who had witnessed an overdose or reported active use of opioids or methamphetamine were more likely to obtain refills and report using naloxone to reverse an overdose, suggesting that the community members most likely to engage with a naloxone program and utilize naloxone to reverse an overdose are active drug users. Participants of color had less engagement with the program, suggesting that cultural





barriers should be addressed in efforts to reduce overdose mortality and reduce disparities in access to naloxone. Community distribution of naloxone is an important strategy in reducing morbidity and mortality among substance users infected with and at risk for infection with HIV and HCV.

**ABSTRACT 20: “AS IF THEY’RE NOT DYING”: LESSONS LEARNED FROM THE CLINICAL TREATMENT OF AIDS PATIENTS IN 1983**

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**BACKGROUND:** It has always been difficult to predict the timing of death. Biomedicine, today, openly struggles with this task. The Institutes of Medicine’s 2014 report on the end of life, end *Dying in America* asserts, “Humility about the inability to predict the actual time of death is an important attribute for the health care professional regardless of discipline or area of expertise.” Such humility is important for the sake of avoiding the deception of patients, so that patients can make informed healthcare decisions—for example, electing aggressive treatment versus opting for palliative care. It is not only the timing of death that might inform a patient’s end of life decisions, but moreover, the question of whether or not the patient is even *dying* will affect these decisions. And just like the timing of death, the status of being terminal or “dying” is difficult to recognize or define. Central to this research project is an interest in how the unpredictability of death fosters aggressive and disconcerting treatment experiences systematically—and perhaps excessively.

**METHODS:** This project is based on primary data—a series of interviews with San Franciscan physicians that my mentor Barbara Koenig and her colleague, Jessica Muller, conducted in 1983. In these interviews, physicians-in-training were asked about the issue of end-of-life treatment and death; furthermore, the physicians were asked to think about how HIV had influenced their understandings of their own medical abilities and responsibilities as healthcare professionals. Due to the urgency of the epidemic, which captured much anthropological attention, the data were not fully exploited, but they now have historical value.

**RESULTS:** Patients diagnosed with incurable diseases are more likely to endure aggressive, uncomfortable, and protracted end-of-life experiences—despite having the opportunity to plan for a more comfortable palliative arrangement.

**CONCLUSIONS:** The interviews reflect the difficulties intrinsic to recognizing a terminal patient, and biomedicine’s own cultural signifiers that inform this recognition. The concept of terminality—and the process by which a physician comes to recognize that a patient is terminal—is informed by an array of social and ecological features that are external to the patient himself or herself, including but not limited to: (1) technological materials that are available for use in

treatment, (2) clinical discourse about the frontiers of biomedical research and development, and (3) moral and political ideologies about “good death.” The upshot is a phenomenological assessment of how the patient’s end-of-life experience is mediated by these social and ecological features, and the extent to which these features can undermine as well as fortify biomedicine’s commitment to patient-centered care.

**ABSTRACT 21: “I AM NOT A MAN”: DISAGGREGATING TRANSGENDER WOMEN FROM MSM IN PREP RESEARCH IS IMPERATIVE TO IMPROVE HIV PREVENTION EFFORTS**

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**BACKGROUND:** Transgender women (‘transwomen’) are at disproportionate risk of acquiring HIV. Pre-exposure prophylaxis (PrEP) represents the first efficacious biomedical HIV prevention approach. However, a subanalysis of the iPrEx data revealed zero efficacy among transwomen in the trial. Furthermore, transwomen are excluded or underrepresented in PrEP research, often aggregated with MSM without consideration for their unique positions within sociocultural contexts. This study examined culturally specific facilitators and barriers to PrEP acceptability among urban transwomen at risk for HIV.

**METHODS:** In collaboration with the TRANS:THRIVE program of the Asian & Pacific Islander Wellness Center, we conducted 3 focus groups and 9 individual interviews with transwomen (total N=30) in San Francisco focused on their knowledge of, interest in, and concerns about PrEP for HIV prevention. Transcripts were analyzed for common themes; a team of researchers applied analytic codes using Atlas.ti.

**RESULTS:** Due to negative experiences with healthcare providers and healthcare settings, ability to obtain PrEP from a trans-friendly provider (particularly the same trusted provider that prescribes their hormones) was cited as essential to PrEP uptake and adherence. While knowledge of PrEP was low, interest was relatively high. Participants noted that use of PrEP could address several aspects of transwomen’s lives that increase their HIV risk, including sex work and low power to negotiate safer sex. Barriers to PrEP use included concerns about interactions with hormones, managing multiple medications, potential side effects, and avoidance of medical settings.

**CONCLUSIONS:** Findings underscore an urgent need to disaggregate transwomen from MSM in HIV prevention strategies, emphasizing several trans-specific facilitators and concerns to inform dissemination of PrEP among urban transwomen. Ongoing failure to consider positions of transwomen’s bodies and sexualities within fraught



sociocultural contexts, including medical settings, has limited the effectiveness of HIV prevention efforts to mitigate disparate risk among this highly vulnerable and unique group.

#### **ABSTRACT 22: REDUCED ACCESS TO GENDER AFFIRMATION IS ASSOCIATED WITH INCREASED DRUG, ALCOHOL, AND HORMONE ABUSE AMONG TRANSGENDER WOMEN**

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**BACKGROUND:** Transgender women are highly marginalized in the U.S., experiencing pervasive stigma and discrimination and reporting disproportionate levels of depression, trauma, and substance abuse. The Model of Gender Affirmation provides a framework for conceptualizing health disparities among trans women of color and theorizes that the high levels of substance abuse and misuse of hormones observed among transgender women can be partly accounted for by psychiatric distress that results from social oppression and a low levels of interpersonal and internalized affirmation of their gender identity.

**METHODS:** The current study represents the first quantitative exploration of the Model of Gender Affirmation, utilizing data from a cross-sectional study of 150 adult transgender women in the San Francisco Bay Area. We examined multivariable relationships between social oppression, psychiatric distress, external and internal gender affirmation, and substance abuse using generalized structural equation modeling (GSEM).

**RESULTS:** Our analysis revealed a significant direct effect of social oppression on both psychiatric distress and external gender affirmation, such that increased levels of reported social oppression led to higher levels of psychiatric distress and decreased levels of external gender affirmation. Psychiatric distress in turn had significant direct effects on internalized gender affirmation as well as the number of drugs used and the number of alcoholic drinks consumed in the past 30 days. Internalized gender affirmation was significantly associated with the number of drugs used, number of alcoholic drinks consumed, as well as hormone misuse (i.e. using more hormones than prescribed) in the past 30 days.

**CONCLUSIONS:** This study provides quantitative support for the Model of Gender Affirmation in that gender affirmation processes (both internal and external) mediated the relationships between social oppression and substance misuse in this sample of transgender women. Interventions aimed at improving mental health and decreasing substance abuse among transgender women should consider strategies to increase their access to gender affirmation.

#### **ABSTRACT 23: GEOSPATIAL ANALYSIS OF HIV PREVALENCE & POPULATION CHARACTERISTICS IN SANTA CLARA COUNTY**

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**BACKGROUND:** Geographic information systems is a powerful tool that was utilized to identify, map out, and analyze high cluster areas of HIV cases within Santa Clara County (SCC). We sought to identify areas that had the highest rate of HIV-infections as compared to neighboring areas. We also mapped out areas with suboptimal virologic suppression.

**METHODS:** The study population consisted of all persons diagnosed with HIV-infection between January 2013 through November 2014, residing in SCC, having at least one clinical visit during this time period, and receiving their care at the PACE Clinic. Through a retrospective EMR chart review, we defined current age, age at diagnosis, current sex, primary language, race/ethnicity, household income, current ART regimen, current housing status, federal poverty level, mode of HIV transmission, and frequency of clinical visits in 2013 and 2014. Residential addresses for all patients meeting the inclusion criteria were imported to ArcGIS 9.3 for geocoding. A spatial scan model developed by Kulldorff et al. was utilized to locate census tracts that fell in areas with the highest HIV prevalence, but also identified the number and location of the spatial clusters with the highest significance. Adjusted and unadjusted regression models to assess the relationship between predictor and outcome variables were also employed.

**RESULTS:** A total of 1251 persons were included in the study and out of these individuals, 38 (3.0%) had an invalid address data, and were excluded from subsequent analyses. Among the 1213 persons included in the subsequent analyses, 82% were male, 42% Hispanic, 55.5% MSM, 94.8% had stable housing, and 52.1% were at or below the poverty line. The median age was 47 years, with a range of 20 to 80 years of age. Ryan White (30.8%) and MediCal (34%) were the highest utilized insurance providers. Out of the persons included in the analyses, 241 (19.86%) were not VL suppressed (VL  $\geq$  200). The ART regimen was divided into five different classes and out of all VL suppressed persons (972), the highest number/percentage (360/37%) were on NNRTIs; in comparison, out of all the VL non-suppressed persons (241), the highest utilized class of ARTs were the PIs (129/53.5%). Out of the identified clusters only two were statistically significant and included in our analysis. These two clusters combined accounted for 45% of all the HIV cases from the PACE Clinic. Cluster one and cluster two both had an HIV prevalence rate of 0.20% compared to the 0.044% prevalence rate seen for the non-clustered cases. Cluster one was located near and around the downtown San Jose area while cluster two was primarily in West San Jose.



**CONCLUSIONS:** Persons with sub-optimal VL-suppression were clustered in the inner city areas, with diverse socioeconomic characteristics. With such visual description of HIV cases in SCC, we will be able to better address and deliver quality health services to this at-risk population. Ultimately, this work will support the design and implementation of clinical and public health interventions that would benefit this priority population.

#### **ABSTRACT 24: REACHING WOMEN THROUGH THEIR HIV-POSITIVE MALE PARTNERS: THE PRO MEN INITIATIVE**

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**BACKGROUND:** PRO Men (Positive Reproductive Outcomes for Men) is an initiative of BAPAC (Bay Area Perinatal AIDS Center) and based at San Francisco General Hospital's (SFGH) Ward 86 HIV Clinic. PRO Men is aimed at the approximately 500 HIV-positive men who have sex with women receiving care at Ward 86 HIV Clinic. PRO Men aims to help men determine their reproductive health intentions and to support clinicians integrating reproductive health care into the primary care setting. The PRO Men initiative was launched in 2012 with the collaboration expanding in 2013 to include SFGH's Family HIV Clinic based in The Family Health Center, a federally qualified health center. Because of the close coordination between BAPAC, Ward 86 HIV Clinic and Family HIV Clinic, female partners of HIV-positive men are able receive prompt, expert clinical care around their sexual and reproductive health decisions including pre-exposure prophylaxis (PrEP) and contraception. Many HIV-positive men in the PRO Men initiative report a desire a family but also say they've never been asked by their providers whether they want to have a child. Their HIV-negative female partners report stigma from family, friends and medical providers around their goals to conceive.

**METHODS:** During the PRO MEN pilot year, we led focus groups with HIV-positive men who have sex with women to determine their experiences and beliefs about HIV prevention and transmission, family planning and safer conception options. Additionally, thought leader interviews were conducted with experts on safer conception, family planning, HIV transmission, adherence and disclosure. Calls to UCSF's National Perinatal HIV Hotline highlighted clinicians' questions and consultation needs. From these experiences, we identified themes and developed a video script as well as patient and provider tools on contraception, safer conception options and lowering HIV sexual transmission. Monthly PRO Men support groups launched in 2013, additional videos were produced and in collaboration with the San Francisco AIDS Education and Training Center a three-hour provider education event was held. An unanticipated benefit of promoting the PRO Men support group is the increased one-

on-one conversations with patients who reveal questions related to their own sexual or reproductive health.

**RESULTS:** During 2014, 44 men sought a one-on-one visit with the PRO Men nurse yielding 73 total visits. Additionally, seven men brought their HIV-negative female partner for a couple visit. Another seven women attended clinic for a one-on-one partner visit with the PRO Men nurse. A total of 13 women were referred for HIV-testing and screening for pre-exposure prophylaxis. Forty providers sought 54 consultations.

**CONCLUSIONS:** We are at an incredible time of promise in the HIV epidemic with the knowledge needed to eliminate sexual HIV transmission. Supporting men living with HIV in achieving their sexual and reproductive health goals is an integrated treatment and prevention strategy. The PRO Men approach provides a unique opportunity to reach HIV-uninfected partners of HIV-positive men. The PRO Men model for integrating sexual and reproductive health care into the primary care setting an opportunity to reframe the story from one of risk reduction and permission to a story of possibility and hope.

#### **ABSTRACT 25: RAPID HEPATITIS C SCREENING AND DIAGNOSTIC TESTING IN AN URBAN EMERGENCY DEPARTMENT**

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**BACKGROUND:** In accordance with national recommendations, we implemented an ED Public Health Screening (PHS) program incorporating universal HIV and targeted risk-based Hepatitis C (HCV) screening, as well as physician diagnostic testing, into standard ED processes. The objective of our study was to describe the first 6 months experience with the HCV testing portion of our ED PHS program.

**METHODS:** Triage nurses were instructed to offer HCV screening to medically stable adult patients who were either born between 1945-65 (birth cohort) or who reported injection drug use (IDU). Clinicians could order diagnostic HCV testing at their discretion. Consent was opt-out and verbal, blood was obtained using nursing staff, and rapid tests were processed in the hospital laboratory. Laboratory, demographic, and visit level data were downloaded directly from the electronic medical record, while follow up and disclosure data was determined on chart review by the study. Descriptive statistics were used in data analysis and for the primary outcome of HCV prevalence.

**RESULTS:** During the 6-month study period, there were 41,203 ED visits made by 26,634 unique patients, and 2,605 were tested for HCV. The Table shows the HCV prevalence among unique patients who completed screening and



diagnostic testing. Of the 267 HCV antibody positive patients, 87 (33%) were disclosed their results during the ED visit; and 208 (78%) had confirmatory RNA testing performed, of which 145 (70%) were positive. Follow-up at the HCV clinic was successful for 32 of the 145 (22%) confirmed positive patients.

are unaware of their HCV status. Before the Affordable Care Act, most Myanmar immigrants do not have health insurance. Additionally, many choose to ignore preventive behaviors such as testing for HCV and they are not aware of the local testing services available. Identification of HCV Infection can prevent costly conditions such as end-stage liver disease and cancer in this disenfranchised population. The aim of the study was to examine the perceived barriers to screening for HCV by the Bay Area Myanmar community.

**Table.** HCV prevalence among unique patients who had screening and diagnostic testing

Cohort	Prevalence Screened** % (No. Positive/ No. Screened)	Prevalence Diagnostic*** % (No. Positive/ No. Tested)	Prevalence Total % (No. Positive/ No. Tested)
Overall n=26,634	9.2% (186/2,029)	14.1% (81/576)	10.2% (267/2,605)
<b>Risk Group</b>			
Birth Cohort (no IDU) n=8,209	8.4% (96/1,144)	24.4% (47/193)	10.7% (143/1,337)
IDU n=739	37.7% (75/199)	76.2% (16/21)	41.4% (91/220)
No Risk* n=18,066	2.3% (16/689)	5.8% (21/363)	3.5% (37/1,052)
*Outside birth cohort and no IDU			
**Unique patients who underwent HCV screening one or more times			
***Unique patients who underwent diagnostic HCV testing one or more times			

**CONCLUSIONS:** During this integrated ED PHS program, the prevalence of HCV antibody positivity was found to be high across all groups tested, including those outside of the high-risk cohorts. Diagnostic testing yielded a higher percentage of HCV diagnoses, but screening identified 70% of those found to be HCV positive. Challenges encountered with HCV screening included result disclosure, confirmatory testing, and linkage to care.

#### ABSTRACT 26: PERCEIVED BARRIERS TO HCV TESTING BY FIRST-GENERATION MYANMAR IMMIGRANTS

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**BACKGROUND:** Myanmar has a high rate of HCV infection and the routes of transmission include blood transfusion, intravenous drug use, tattooing or piercing, vertical transmission and sexual contact. The prevalence of HCV infection among Myanmar immigrants has yet to be determined and may reflect the prevalence in their country of origin. There are many refugees and asylees in the Bay Area Myanmar community. This community is vulnerable, underserved and underrepresented. Most Myanmar families are recent arrivals with less than 5 years in this country and most speak only Burmese at home. Many in the community

**METHODS:** A cross-sectional survey was done between January-March 2014. First generation Myanmar immigrants who reside in the Bay Area (ages 18-65) were asked to answer an open-ended questionnaire on possible barriers to testing for HCV. ATLAS.ti was used for thematic analysis of responses. WinPepi version 11.25 was used for descriptive analysis.

**RESULTS:** A total of 124 persons (male = 74, female = 50, mean age 36 years, standard deviation  $\pm$  8.4 years) participated in the voluntary survey. The perceived barriers were language difficulties (45%), unaware of the testing services (21%), do not feel the need to get tested (10%), unable to take time off from work (8%), lack of trust in health providers (5%), lack of insurance (5%), stigma (3%), fear of test and treatments (2%) and lack of transportation (1%).

**CONCLUSIONS:** Based on the results, outreach programs in Myanmar language with the help of Myanmar health professionals and translators can promote testing for HCV. Health communication messages and information on health resources such as Medi-Cal in Myanmar language are urgently needed. This study can also help in designing future interventions. Infected individuals can benefit from referral to care and treatment and prevent further transmissions. More studies may be done to confirm the findings.