

Development, Implementation, and Preliminary Outcome Evaluation of an Integrated Substance Use Disorders and HIV Prevention Program

Adrienne Gilmore-Thomas¹, Kiana Adams-Baker², E. Charli Washington³, Jane Hamilton⁴, Mandy Hill⁵, & Angela M. Heads⁶

Abstract

Several decades of research have demonstrated the connections among mental health conditions, substance use and HIV risk. To make optimal progress towards reducing risk of HIV transmission and other sexually transmitted infections among individuals with problematic substance use, it is important to address sexual health in conjunction with substance use disorders treatment. The HEARTS program proposed to integrate substance use and mental health disorders treatment and HIV prevention services with an overarching goal of increasing access to substance use disorders treatment and increasing the number of individuals who are aware of their HIV and HCV status. This article provides information on the development and implementation of the HEARTS program, preliminary outcomes, and lessons learned.

Keywords: Substance use disorders treatment, HIV prevention, program development, integrated treatment

1. Introduction

Despite promising reductions in the numbers of new cases of human immunodeficiency virus (HIV) in the last two decades, the continued disproportionate negative health impact of HIV and hepatitis C (HCV) among women, people with problematic substance use, members of racial and ethnic minority groups, and individuals who identify as a sexual or gender minority is evidence that prevention efforts and effective treatments are not having the intended impact for all who could benefit. Several decades of research have demonstrated the connections among mental health conditions, substance use and HIV risk. Individuals with mental health disorders have increased susceptibility for HIV sometimes due to specific mental health symptoms such as hypersexuality associated with Bipolar Disorder (Hobkirk et al., 2015; Remien et al., 2019). However, many other individuals with mental health conditions experience greater susceptibility to HIV infection due to a complex combination of indirect factors such as alcohol or other drug use during sex, disinhibition and impulsivity often associated with trauma, and sex exchange due to financial instability (Pandor et al., 2015).

Similarly, substance use can place people at increased susceptibility for HIV and HCV through direct and indirect transmission routes. HIV and HCV can be transmitted by sharing contaminated drug injection equipment and engaging in high risk sexual behaviors. According to the Centers for Disease Control and Prevention (CDC), syringe sharing is the primary route of transmission for HCV and is the second highest transmission route for HIV (CDC, 2020). There is also a large body of literature establishing non-injection drug use as a risk factor for

¹UTHealth Science Center at Houston, 1941 East Road, Suite 1250B, Houston, TX 77054 States

²UTHealth Science Center at Houston, 1941 East Road, Suite 1250B, Houston, TX 77054 States

³UTHealth Science Center at Houston, 1941 East Road, Suite 1250B, Houston, TX 77054 States

⁴UTHealth Science Center at Houston, 1941 East Road, Suite 1204, Houston, TX 77054 States

⁵UTHealth Science Center at Houston, 6431 Fannin St., Suite J1L-475G, Houston, TX 77030 States

⁶UTHealth Science Center at Houston, 1941 East Road, Suite 1316, Houston, TX 77054 States

*Corresponding Author : Adrienne.GilmoreThomas@uth.tmc.edu

P: 713-486-2736

F: 713-486-2618

HIV and HCV due to condomless sexual behavior with individuals of unknown HIV status, sex selling and sex purchasing, sex while under the influence of alcohol or other drugs, and coerced sex (Cavazos-Rehg et al., 2009; Lathan et al., 2021; Nurutdinova et al., 2011).

To make optimal progress towards reducing risk of HIV transmission and other sexually transmitted infections among individuals with problematic substance use, it is important to address sexual health in conjunction with substance use disorders treatment. Researchers have called for the integration of HIV risk reduction interventions into addiction treatment with an equal focus on substance use and sexual risk and the addition of skills training (Copenhaver et al., 2007). This paper describes the development of a program designed to engage underserved adults in treatment for substance use disorders while receiving HIV prevention services in a large urban community in the southern United States. This article will focus on two principal issues: 1) challenges confronted in implementing the protocol and 2) preliminary evaluation of outcomes.

1.1 Rationale for a Multidisciplinary Approach

According to the National Institute on Drug Abuse, the primary components of an effective substance use disorders treatment program include intake assessment, treatment plan development, behavioral therapy/counseling, clinical case management, pharmacotherapy, monitoring of substance use, continuing care, and self-help or peer recovery groups (National Institutes of Drug Abuse, 2018). The provision of adjunctive services such as family/child care services, transportation assistance, mental health services, HIV/AIDS services, etc. are based on individual needs and preferences. A combination of therapies and other services to better meet the needs of the client is recommended to increase treatment engagement and improve outcomes (See Figure 1).

Figure 1. Integrated Treatment Model



Therefore, this program assembled a multidisciplinary team to provide HEARTS' services. The team included psychologists, counselors, addiction physicians, nurses, risk reduction specialists from minority serving community-based organizations, and a health services researcher with training in public health. This team collaborated to develop a comprehensive treatment program to address the unique needs of the population of focus.

2. HEARTS

The HIV Education, Awareness, and Referral and Treatment for Substance Use Disorders (HEARTS) program was created in response to a notice of funding opportunity issued by the Substance Abuse and Mental Health Services Administration (SAMHSA) in 2017. The program proposed to integrate substance use and mental health disorders treatment and HIV prevention services with an overarching goal of decreasing the incidence of substance use and HIV diagnoses by increasing access to substance use disorders treatment and increasing the number of individuals who are aware of their HIV and HCV status.

The HEARTS program convened an advisory board comprised of staff from the HEARTS program and two community based organizations delivering HIV prevention and case management services to key populations in the community. The advisory board included mental health and substance use disorders providers, medical staff, HIV prevention specialists, housing providers, case managers and individuals with lived experiences of substance use and HIV. The purpose of the initial advisory board meetings was to facilitate program planning, including developing assessment materials, identifying recruitment strategies, and finalizing the evidence based interventions to be delivered through the program. Members of the advisory board were key in approving the data collection procedures, developing the HIV testing and quality assurance protocol, suggesting HIV prevention

interventions, and establishing additional community partnerships. The evidence-based interventions and practices selected for the project were chosen based on proven effectiveness and adaptability to the populations of interest.

2.1 Clinical Services

The HEARTS program offers a multimodal treatment approach that includes multidisciplinary interventions tailored to the client's specific needs. The services offered include substance use counseling, risk reduction services, case management, and medications for addictions treatment (MAT) to address the psychological, behavioral, and biological factors that lead to increased spread of HIV and HCV in vulnerable communities. To address risk of acquiring and/or transmitting these viruses, the service providers each had a role in providing this integrated treatment.

2.1.1 Counseling for substance use disorders

HEARTS counselors are encouraged to use an evidence-informed approach to treating SUDs. Evidence-informed treatment modalities do not require strict adherence to the manualized structure, but instead can be adapted to meet the unique needs of the population served (Nevo & Slonim-Nevo, 2011). Applying an evidence-informed approach involves integrating research evidence and practitioner knowledge, which enables the therapist to customize treatment to the client's needs. Counselors are trained in evidence-based programs that address co-occurring substance use and mental health disorders and are also provided training in the appropriate adaptation of the treatment approach. Training is provided initially by a licensed psychologist and licensed professional counselor supervisor and weekly peer supervision meetings provide a platform for therapists to consult regarding implementation and adaptation. Treatment modalities most commonly used to guide treatment include motivational interviewing (MI), individual cognitive behavior therapy (CBI), Seeking Safety (SS), and medication for addictions treatment (MAT) (McHugh et al., 2010; Miller & Rollnick, 2012; Najavits, 2002; Wakeman, 2017).

2.1.2. HIV prevention services

HIV prevention services include risk reduction counseling, HIV/HCV testing, and hepatitis A and B vaccinations. Risk reduction counseling for HIV and HCV is an evidence-based approach that incorporates techniques and management principles to reduce the likelihood of a risky event and/or the negative consequences of such an event as it relates to HIV and HCV transmission (Kalichman et al., 2005). Interventions suggested and offered by risk reduction specialists address psychosocial needs (e.g., mental health, substance abuse, or housing) that interfere with optimal risk reduction behaviors. The goal of risk reduction counseling is to help clients identify their behaviors and find supportive recommendations to decrease their susceptibility to HIV/HCV transmission.

The primary components of risk reduction counseling are 1) incorporation of a risk assessment to identify behaviors associated with sexual health and substance use, 2) administering HIV/HCV testing with results provided the same day, and 3) tailoring recommendations for HIV/HCV prevention, and linkage to care for HIV/HCV treatment (Corwin et al., 2013).

Risk reduction counseling incorporates strategies including Motivational Interviewing to help participants to understand their reasons for and readiness to change behaviors to improve their health (Miller & Rollnick, 2012). The HEARTS program utilizes the Rapid HIV/Hepatitis Testing (RHHT) survey, a risk assessment required by the Substance Abuse and Mental Health Services Administration (SAMHSA) that is completed during the pretest counseling session.

2.1.3. HIV/HCV Testing

The HEARTS program uses rapid screening tests that have been granted Clinical Laboratory Improvement Amendment waivers by the Food and Drug Administration (FDA). An oral test that utilizes a mouth swab is used to test for HCV. For HIV, a third generation rapid test is administered. In the event, a screening yields a reactive (positive) result for HIV, a certified phlebotomist or nurse practitioner performs a venipuncture blood draw and the sample is submitted to the local health department for confirmatory testing. Clients found to be preliminary positive for HIV receive additional counseling and are immediately linked to services at a local health clinic or health provider who will initiate appropriate diagnostic assessments and treatment. Clients with a non-reactive HIV result will receive risk reduction counseling and, when appropriate, are referred to community partners for an evaluation to determine whether pre-exposure prophylaxis (PrEP) is an appropriate biomedical prevention tool.

2.1.4 Hepatitis A/B Vaccination

People with problematic substance use are also more susceptible to contracting the Hepatitis A (HAV) and Hepatitis B viruses (HBV) by route of injection, poor housing or unhygienic conditions, and the higher probability of being jailed or incarcerated (Lugoboni et al., 2009). The WHO and the American Association for the Study of Liver Diseases recommend HAV/HBV vaccinations for people using illicit drugs, with or without chronic HCV infection (Lugoboni et al., 2009). HAV/HBV vaccination is strongly recommended for clients living with HIV, especially those with co-infection of HCV. A combined HAV/HBV vaccine has been developed and found safe for adults with substance use disorders with a schedule of 0, 1, and 6 months (Centers for Disease Control and Prevention, 2021; Lugoboni et al., 2009). Vaccinating adults with substance use disorders for HAV and HBV, specifically those who inject drugs, against hepatitis may help to create a stronger pro-health attitude leading to a reduction in HCV and HIV risk behavior. Surprisingly, few substance use treatment programs provide HAV/HBV vaccinations or HCV screening despite CDC recommendations (Bini et al., 2012).

The HEARTS program utilizes the combination HAV/HBV vaccine. A certified phlebotomist or nurse practitioner administers the vaccine to clients who elect to receive the vaccination. Each client reviews and signs a Texas Department of State Health Service Vaccine Information Sheet prior to injection. The Risk Reduction Specialist is responsible for documenting and scheduling clients for the following one month and six-month vaccine dosages.

2.2 Case Management

A key component of this program is an integration of case management services starting at the first contact. Linkages can be made by the mental health professionals and risk reduction specialists based on the services needed. For example, some individuals may need resources for mental health treatment that includes psychotropic medications, inpatient hospitalization due to serious mental illness, or support when following through to receiving these services. Other clients may need access to community support groups, housing, food, and employment. There are many agencies that also assist the underserved with managing their mental and medical health care needs. Assistance and support with obtaining health insurance, medication management, transportation to appointments, and vocational readiness are also provided by different community-based organizations with whom clients are linked. This program's intentional inclusion of community-based organizations as key stakeholders has facilitated referrals and linkage to services not provided internally.

2.3 Medication for Addictions Treatment (MAT)

MAT is an evidence-based pharmacotherapy approach that uses FDA-approved medications to address tobacco, alcohol, and opioid use disorders. HEARTS increases access to these medications by including addiction specialists with prescriptive authority on the team. Medication for opioid use disorders includes buprenorphine, naltrexone and methadone. Buprenorphine has proven safe and effective for individuals receiving antiretroviral treatment for HIV (Gruber & McCance-Katz, 2010). This treatment program increases access to buprenorphine as part of an integrative treatment approach for clients who present with an opioid use disorder. HEARTS can provide medications for a limited number of participants for a brief period of time. Staff then provide additional support by helping clients to enroll in a government medical assistance program that includes prescription coverage for substance use disorders. By providing the medication for a brief period of time while this process is completed, the HEARTS program can remove a barrier to access for some clients.

2.4 Service Providers

The efforts of psychologists, counselors, addiction specialists, public health practitioners, and risk reduction specialists are combined to assist the program's clients. Psychologists and counselors conduct the intake assessment, provide substance use counseling, and case management services. Risk reduction specialists provide HIV and HCV education, screenings, and counseling. The specialists are also responsible for linkage to care for medical treatment when necessary. They are also intricately involved in case management services and assist with housing support, applications for disability, insurance or other available no-cost or low-cost health care services. The addiction specialist provides medical oversight and provides prescriptions for medications for addiction treatment for individuals who may benefit.

2.5 Staff Development

All providers are trained in cultural competence to ensure the highest quality of care is provided to racial/ethnic, sexual and gender minorities. All personnel play a role in promoting safer sex practices. Specific trainings developed for this group of personnel were informed by an evaluation of provider's knowledge, HIV related stigma, knowledge and awareness of HCV, and the relationship between HIV/HCV and substance use.

The counselors were supported as they learned to engage clients in a discussion of their substance use and sexual behaviors. The providers met with risk reduction specialists to support clients living with HIV and HCV to provide care that addressed the physical and social aspects of substance use.

Additionally, counseling staff were trained in various evidence based interventions including Acceptance and Commitment Therapy, Compassion Focused therapy, Seeking Safety and Motivational Interviewing (Beaumont & Hollins Martin, 2015; Hayes et al., 2011; Miller & Rollnick, 2012; Najavits, 2002). All providers, including risk reduction specialists and nurses are trained in motivational interviewing. It is especially suited for the setting due to its brevity and effectiveness for overcoming resistance and helping clients initiate change throughout the therapeutic process. Group supervision is peer led and is held weekly. Counselors also meet individually with a licensed psychologist or licensed professional counselor supervisor once per week to ensure intervention fidelity, and high quality evidence informed service provision.

3. Procedures For Program Implementation

3.1 Recruitment

Clients were recruited through newspaper advertisements and flyers distributed at locations by community-based organizations and medical and mental health providers. Direct referrals are also received through a referral network established specifically for this program. The network initially included an inpatient mental health treatment facility, two local emergency departments, and two community-based organizations (CBOs) providing services within underserved African American and Hispanic communities. Over the duration of five years, the network grew to include other CBOs including residential programs for individuals with medical and/or mental health conditions and organizations serving young adults who are experiencing homelessness or are unstably housed.

In order to increase recruitment and extend reach into the population of interest, a social media campaign was initiated at the end of the first year of the program. This social media marketing campaign was developed to reach young adults 18-35 years old and addresses stigma related to substance use, HIV, and HCV. Topics identified as important to the community are posted on several platforms (i.e., Facebook, Instagram, and Twitter). This program identified trends within the community and incorporated those within the marketing strategy. Social media engagement increases opportunities to inform followers of risks associated with substance use in a more conversationalist manner. It is also important to note that traffic to the social media platforms is somewhat driven by promoting the sites during community events and through a local radio station with a large following of racial/ethnic minority residents to increase engagement.

The HEARTS program is housed in the same building as an addiction research center. Due to this close proximity and an established process, many participants are referred to HEARTS from the research center if they are excluded from participating in a study due to not meeting eligibility criteria and are interested in receiving treatment for their substance use disorder. Additionally, the research center provides the HEARTS program with contact information for participants who express an interest in receiving treatment for a substance use disorder and have agreed to be contacted. HEARTS program staff contact these individuals by phone to provide information on the program, complete an initial screening, and schedule them for a telehealth or in person intake appointment.

Program staff confirm that all potential clients meet the inclusion criteria for the HEARTS program (18 years and older and reporting current problematic substance use or a history of substance use). Participants are typically scheduled for an intake assessment within five business days.

3.2 Intake Assessment

The first appointment, the intake assessment, is completed in-person or virtually by counselors. The comprehensive intake assessment was designed to gather information on substance use, psychiatric diagnosis, trauma history, case management needs, HIV knowledge, and risk behaviors. The intake assessment includes an interview, self-report measures, and a risk assessment. The intake assessment consists of two structured interviews.

3.2.1 Structured Interview - CSAT GPRA Client Outcome Measures for Discretionary Programs

The program is funded by the SAMHSA and requires that a standardized assessment tool be administered to all clients in accordance with the Government Performance Results and Modernization Act of 2010 (GPRA).

The GPRA is a tool that allows SAMHSA to track progress of federally funded programs in meeting goals, improving outcomes, and is used to monitor and manage grantee performance. Data collected include demographics (i.e., gender, race, ethnicity), family and living conditions, education, employment, and income, criminogenic factors (i.e., parole, probation, awaiting charges, trial, or sentencing, and how many times committed a crime in the past 30 days), current mental health and physical problems (current and past mental health disorders, frequency of attending medical treatment in the past 30 days), and social connectedness (i.e., frequency of support groups, interaction with persons who are supportive, and satisfaction with personal relationships).

3.2.2 Structured Interview - M.I.N.I International Neuropsychiatric Interview (M.I.N.I)

Clients are also administered the M.I.N.I. (Sheehan et al., 1998). The M.I.N.I. was designed as a brief structured interview to assess for the presence of symptoms consistent with major psychiatric disorders according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2022). Validation and reliability studies have shown that the M.I.N.I. has acceptable validity and reliability (Sheehan et al., 1998). Additionally, clients complete several self-report questionnaires that provide information about substance use, mental health, and trauma experiences to inform treatment.

3.3 Service Coordination

If the client would like to participate in substance use counseling, they were assigned a counselor who further assessed the client's needs. Clients who expressed interest in receiving HIV/HCV testing or HAV/HBV vaccine met with the risk reduction specialist. For individual treatment planning, relevant diagnostic information was obtained from self-report measures and the two structured interviews mentioned previously (i.e., GPRA and M.I.N.I.). Based on information obtained in the intake, the client participated in one of the evidence-based counseling services. Formal treatment goals are formulated using Shared Decision Making approaches to empower clients (Elwyn et al., 2012).

4. Program Outcomes

The program evaluation is designed to measure the extent to which the program decreases substance use and HIV risk, reduces disparities, and increases access to care within the population of focus. The program evaluator collects data to report performance measures that include abstinence from use, housing status, employment status, criminal justice system involvement, access to services, retention in services, and social connectedness. Additionally, to examine and improve program quality, the program evaluator examines performance measurement data, client satisfaction data and key informant interview data.

Follow-up data collection occurs six months after the intake date. The purpose of the HEARTS follow-up is to assess clients' behavioral and psychosocial changes. The SAMHSA data management system generates a report of clients who are due for their follow up interview. There is a three month window to complete the follow up. The standard practice is for the counselor who has rapport with the client complete the follow-up. The project coordinator monitors the follow-up schedule and informs the counselors when the client is due for a follow-up interview. Counselors are encouraged to attempt contact with the client via phone or email on a weekly basis throughout the follow-up window.

4.1 Results

As of 2022, HEARTS received 576 referrals and provided services to 46% (n=320) of those referred. See Table 1 for a summary of services provided to participants enrolled in the HEARTS program.

Table 1. Services Provided

Services		age
Individual Counseling	63	1.26
HIV Testing	2	4.89
HCV Testing	4	8.72

Since the program's inception, 320 adults completed the intake assessment. Clients enrolled in the program, were 60.8% male and 1.5% transgender. African Americans represented the majority at 52.1%, 38.8% White, and 20.2% Hispanic. Most adults were 25-44 years old (44%) and 45 years and older (40%). See Table 2

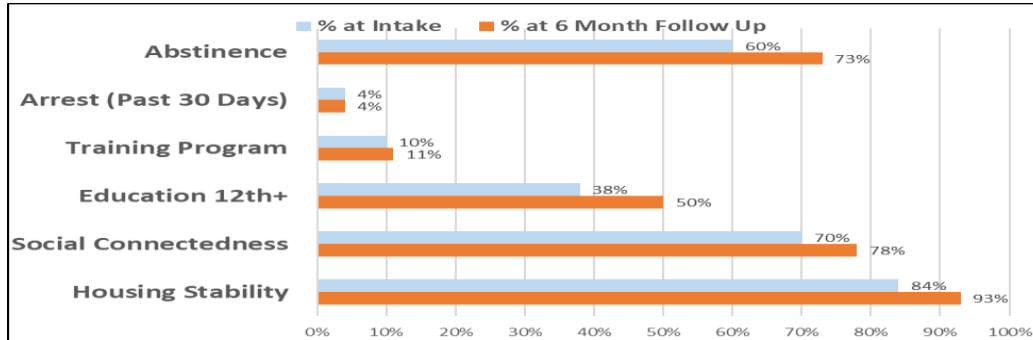
for additional information on demographic characteristics. Outcomes are based on information obtained from the GPRA. Descriptive statistics were used to analyze the data.

Table 2. Demographics

Age		
18-24	9	5.31
25-34	7	0.94
35-44	6	3.75
45-54	1	9.06
55-64	6	7.5
65+	1	.44
Gender		
Male	87	8.44
Female	25	9.06
Transgender		.19
Other		31
Ethnicity		
Hispanic	0	1.88
Race		
Black/African American	75	4.69
Asian		.56
Indian American	4	.38
Native Hawaiian		31
White	36	2.5

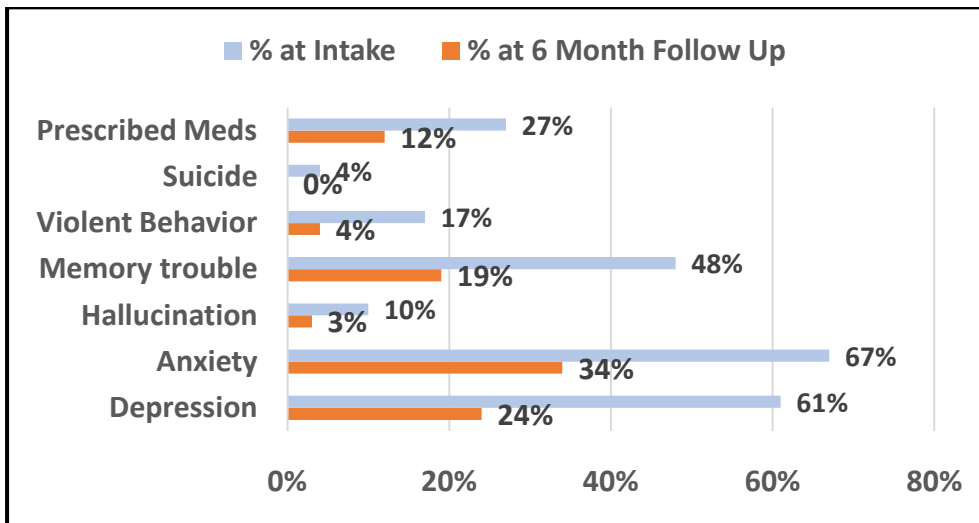
Figure 2 depicts the measures of individual social factors. At the time of intake, abstinence was reported by 60% (n = 192) of clients enrolled into the program. Abstinence was reported by 73% (n = 78) of those who completed the six-month follow-up. Of those interviewed at the six-month follow-up (n = 107), 93% reported being in stable housing compared to 84% of those who completed the intake (n = 270). The program supported people as they sought stable housing, and several of these people were included in the follow-up. Of those completing the six-month follow-up, 50% reported being employed. More people reported feeling socially connected, as they reported having interaction with family or friends who are supportive of their recovery.

Figure 2. Social Outcome Measures



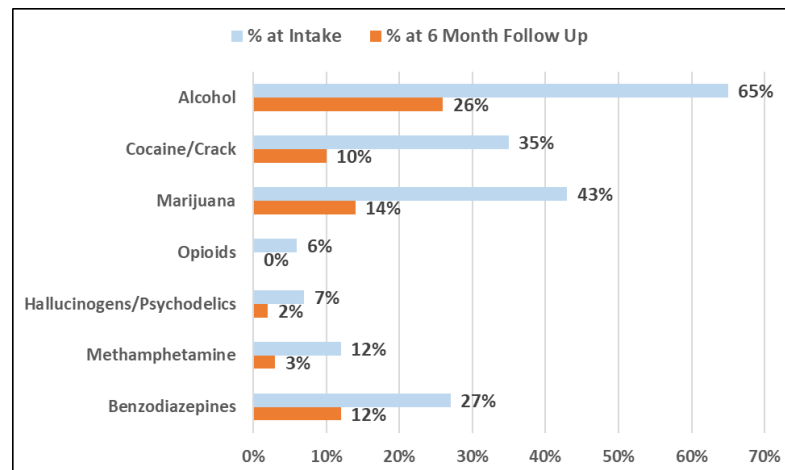
Mental health outcomes (Figure 3) were determined by asking each person, how many days in the past 30 did they experience the mental health symptom. All symptoms were reduced at the six-month follow-up. Additionally, participants were asked how many of the past 30 days were they prescribed medications for a psychiatric condition. In the 30 days prior to completing the follow up, fewer participants reported having a current prescription for medication to treat a psychiatric condition.

Figure 3. Mental Health Outcomes



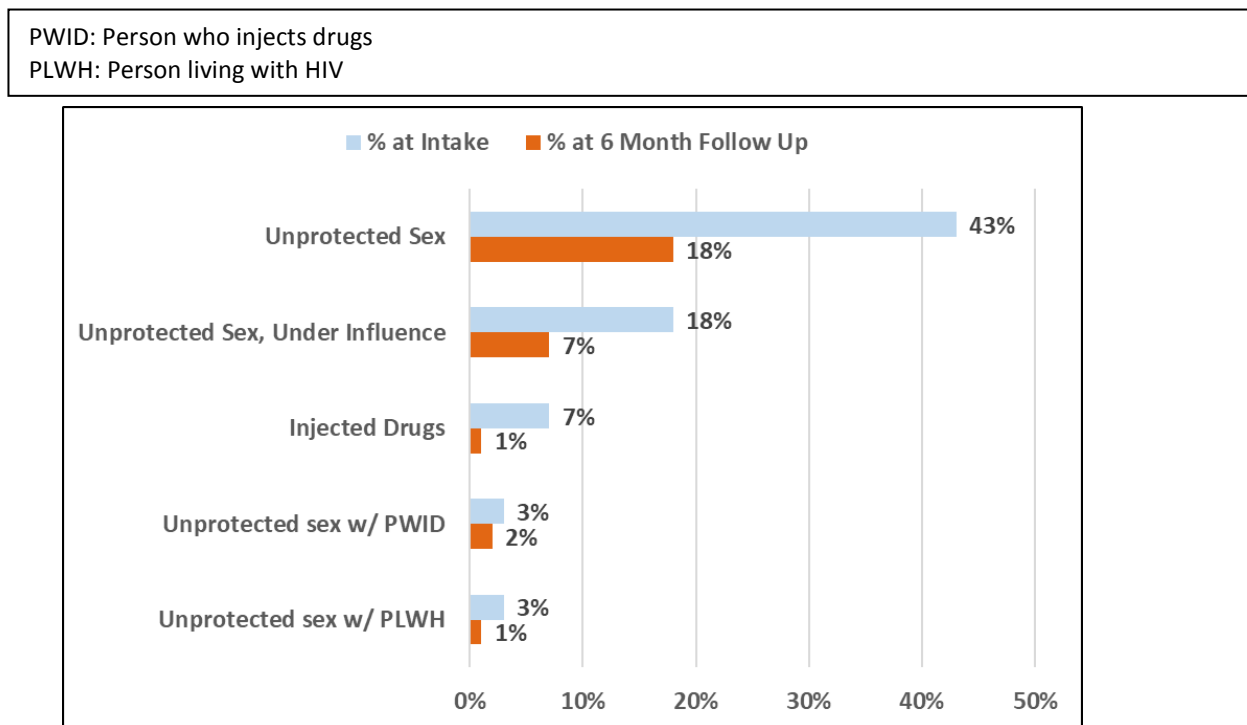
Substance use (Figure4) (specifically, alcohol, cocaine/crack, and marijuana)was also decreased at the six-month follow-up. The opiate category included reported use of heroin (n = 12) and/or nonmedical use of prescription opioids (n = 7). Of those who initially reported use of opioids, less than 1% reported continuing to use.

Figure 4. Substance Use Outcomes



At intake 43% of those who completed the intake engaged in unprotected sex; whereas, at the six-month follow-up only 18% reported having engaged in unprotected sex. Eighteen percent reported having sex while under the influence of a substance 30 days prior to the intake. This number was reduced to 7% of those interviewed at the six-month follow-up. High risk sexual encounters were also reported at intake, as 3% reported engaging in unprotected sex with a person who injects drugs and/or a person living with HIV. This number was reduced to 1% at six-month follow-up.

Figure 5. Risky Behavior Outcomes



5. Discussion

5.1 Lessons Learned

5.1.1. Expanded Community Based Partnerships

In 2020, at the start of the COVID-19 pandemic, the number of individuals served annually decreased to 59 (annual target goal = 80), and fell even farther in 2021 to 39. The initial decline was largely due to facilities being shut down at the beginning of the pandemic and a reluctance to return for treatment services as the pandemic continued to negatively impact the community.

In 2022, HEARTS rebounded and provided services to 44 people in the first two quarters. Individuals enrolled in the program after 2022, requested additional case management services. As the program continued, it became evident that it was important to establish new community partnerships to continue spreading the word about services and to respond to the increased need for services in addition to substance use disorders treatment and HIV prevention. HEARTS now partners with five community-based organizations (CBO) that provide a variety of services. One example is a partnership that provides employment services. This organization has helped HEARTS clients successfully obtain employment and secure housing.

5.1.2 Level of care considerations

This program was developed as an outpatient program intended to increase access to substance use disorders and co-occurring mental health disorders treatment for adults who are susceptible to acquiring or transmitting HIV and HCV or who are otherwise impacted by HIV. Another lesson learned was the importance of access to inpatient psychiatric treatment. The use of illicit substances may result in the presence of psychotic symptoms and severe mood disturbance that warrants immediate psychiatric intervention. Ensuring clients were transported from our facility to inpatient treatment was not initially addressed. Subsequently, arrangements are

now in place to ensure transportation to an inpatient psychiatric facility for clients who need a more intensive level of treatment.

5.1.3. Expansion of evidence based interventions and treatment modalities

The program originally provided three evidence based psychotherapy interventions. Recognizing the unique needs of our participants and the expertise of our counselors, additional evidence based interventions such as Acceptance and Commitment Therapy (ACT) were provided. This was kicked off with several counselors and the project director attending an intensive ACT training.

Additionally, the COVID-19 pandemic forced the program to consider alternative service delivery modalities. Participants now have the option of engaging with therapists and risk reduction specialists in office or virtually using video conferencing.

5.1.4. Participant tracking and continued engagement after treatment

The purpose of the HEARTS follow-up assessment, which is completed at 6 months post intake, is to assess behavioral and psychosocial changes of clients occurring after program enrollment. SAMHSA's Performance Accountability and Reporting System (SPARS) provides a notification of follow up due dates for all enrolled participants. There is a three month window, beginning five months after the intake date and ending eight months after the intake date. The project coordinator was tasked with the responsibility of reaching out to all clients. As the program grew, the program made the decision to involve counselors in the process as they would have established a rapport and may be better able to identify the best methods of contacting participants. To increase the likelihood that inactive clients would participate in the follow-up, the client is sent an email or phone call at least once per week throughout the follow up window. We have learned the following about tracking and engaging this population

- Using multiple means of communicating and communicating more frequently increases the likelihood of successfully reaching a participant for follow up.
- When leaving messages, it is important to include key information such as the expected duration of the interview and a reminder that an incentive (gift card) is offered for completing the interview.

5.1.5. Flexibility is needed in the ways that risk reduction services are offered

In the early stages of the COVID-19 pandemic, interest in receiving HIV and HCV testing decreased. This decline is consistent with research reporting declines in testing for various sexually transmitted infections (STIs) during this time period (Chang et al., 2022; Lescure et al., 2023). Although the number of individuals who chose to participate in services increased in 2022 with the widespread availability of vaccinations for COVID-19 and more people feeling comfortable with attending clinic, the numbers of individuals agreeing to be tested did not rebound to pre-pandemic levels. To address this, HEARTS began at-home HIV testing. Clients who elect to receive counseling services virtually have the option to receive an At Home HIV Test Kit delivered to their residence. The Risk Reduction Specialist facilitates a testing session through Zoom. This allows for proper testing technique and an immediate support if the test is positive. At Home HIV test kits include safer sex kits and sexual health education material. The At Home HIV Test Kits are mailed using USPS two-day shipping. To date, 15 tests have been completed.

5.1.5. Full Staff Training in HIV and Prevention Services

To achieve the full benefit of HIV and other STI prevention efforts, it is necessary that all staff have a good understanding of transmission routes, prevention strategies, and how to best communicate with participants. Training and technical assistance was provided to all risk reduction specialists and treatment providers so that they would have a better understanding of the need for hepatitis screenings and vaccinations. One challenge the program faced was getting clients in for the second and third dose of the vaccination. Despite the efforts of the counselors and the risk reduction specialists to maintain contact after administration of the first dose, several of the clients were only administered the initial dose.

As part of ongoing efforts to understand the needs of clients and staff, surveys were periodically administered. Results of a staff survey indicated a lack of knowledge of HIV prevention among some of the staff who were not directly involved with HIV testing. Therefore, training was provided in HIV/HCV prevention and the importance of offering HIV/HCV testing to all clients (including those who initially refused the screening at intake). Training counselors also had the following advantages:

- Counselors and other program staff who have established rapport with clients can re-visit the discussion of HIV/HCV risk and testing with clients who initially did not believe they were at risk.
- Training counselors in providing support to individuals when they screened positive was critical to having the client follow-through on the linkage to medical care.
- Counseling also provided an opportunity to identify barriers and possible solutions to help the client follow through on the referral.

6. Conclusions

This program was developed based on SAMHSA and the National Institutes of Drug Abuse (NIDA) recommendations to address substance use disorders and co-occurring mental health disorders for adults who are more susceptible to acquiring HIV/HCV, those living with HIV and/or HCV, and individuals who are in other ways impacted by HIV (National Institutes of Drug Abuse, 2018; Substance Abuse Mental Health Services Administration, 2020). This article provided information about the evidence-based practices that are most likely to be successful when working with racial/ethnic, sexual, and gender minorities.

We believe the impact and implications of this program are numerous. First, this program has provided information on the utility and impact of an integrated multidisciplinary approach to addressing substance use disorders. Second, the project has shown preliminarily that it will increase clients' awareness and ability to manage their mental and physical health needs. Third, the program teaches clients how to self-advocate and get connected with community resources to fulfill other needs (i.e., housing, food, and employment). Finally, the public health implications include reducing new HIV and hepatitis diagnoses in the community, as well as more members of underserved populations being given access to treatment and support they need. Investment in a multidisciplinary approach to substance use treatment will improve the continuity of care and improve physical and mental health outcomes for clients.

Acknowledgements:

Gratitude and appreciation goes to Donald W. Flake, Jr. for his support with this project.

References

- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders: DSM-5-TR* (5th edition, text revision. ed.). American Psychiatric Association Publishing.
- Beaumont, E., & Hollins Martin, C. (2015). A narrative review exploring the effectiveness of Compassion-Focused Therapy. *Counselling Psychology Review, 30*(1), 21-32.
- Bini, E. J., Kritz, S., Brown Jr, L. S., Robinson, J., Calsyn, D., Alderson, D., Tracy, K., McAuliffe, P., Smith, C., & Rotrosen, J. (2012). Hepatitis B virus and hepatitis C virus services offered by substance abuse treatment programs in the United States. *Journal of Substance Abuse Treatment, 42*(4), 438-445.
- Cavazos-Rehg, P. A., Spitznagel, E. L., Schootman, M., Strickland, J. R., Afful, S. E., Cottler, L. B., & Bierut, L. J. (2009). Risky sexual behaviors and sexually transmitted diseases: A comparison study of cocaine-dependent individuals in treatment versus a community-matched sample. *AIDS Patient Care and STDs, 23*(9), 727-734.
- Centers for Disease Control and Prevention. (2020). HIV Infection Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs—National HIV Behavioral Surveillance: Injection Drug Use, 23 U.S. Cities, 2018. HIV Surveillance Special Report 24. <http://www.cdc.gov/hiv/library/reports/hivsurveillance.html>. Published February 2020.
- Centers for Disease Control and Prevention. (2021). National Viral Hepatitis Progress Report.
- Chang, J. J., Chen, Q., Dionne-Odom, J., Hechter, R. C., & Bruxvoort, K. J. (2022, Dec 1). Changes in Testing and Diagnoses of Sexually Transmitted Infections and HIV During the COVID-19 Pandemic. *Sexually Transmitted Disease, 49*(12), 851-854. <https://doi.org/10.1097/olq.0000000000001639>
- Copenhaver, M. M., Lee, I.-C., & Margolin, A. (2007). Successfully integrating an HIV risk reduction intervention into a community-based substance abuse treatment program. *The American Journal of Drug and Alcohol Abuse, 33*(1), 109-120.
- Corwin, M., Bradley-Springer, L., & Cook, P. (2013). *HIV Risk Assessment & HIV Risk Reduction: A Quick Reference Guide for Care Providers*. Mountain Plains AIDS Education and Training Center. https://aidsetc.org/sites/default/files/resources_files/etres-307.pdf

- Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P., Cording, E., Tomson, D., Dodd, C., & Rollnick, S. (2012). Shared decision making: A model for clinical practice. *Journal of General Internal Medicine, 27*, 1361-1367.
- Gruber, V. A., & McCance-Katz, E. F. (2010). Methadone, buprenorphine, and street drug interactions with antiretroviral medications. *Current HIV/AIDS Reports, 7*, 152-160.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change*. Guilford Press.
- Hobkirk, A. L., Towe, S. L., Lion, R., & Meade, C. S. (2015). Primary and secondary HIV prevention among persons with severe mental illness: Recent findings. *Current HIV/AIDS Reports, 12*(4), 406-412.
- Kalichman, S. C., Cain, D., Weinhardt, L., Benotsch, E., Presser, K., Zweben, A., Bjodstrup, B., & Swain, G. R. (2005). Experimental components analysis of brief theory-based HIV/AIDS risk-reduction counseling for sexually transmitted infection patients. *Health Psychology, 24*(2), 198.
- Lathan, E. C., Hong, J. H., Heads, A. M., Borgogna, N. C., & Schmitz, J. M. (2021). Prevalence and correlates of sex selling and sex purchasing among adults seeking treatment for cocaine use disorder. *Substance Use & Misuse, 56*(14), 2229-2241.
- Lescure, T. N., Stewart, J., Sperring, H., Ruiz-Mercado, G., & Taylor, J. L. (2023, Apr). Impact of COVID-19 on Sexually Transmitted Infection and HIV Screening at an Urban Safety-Net Hospital. *AIDS Patient Care STDS, 37*(4), 199-204. <https://doi.org/10.1089/apc.2022.0220>
- Lugoboni, F., Quaglio, G., Civitelli, P., & Mezzelani, P. (2009). Bloodborne viral hepatitis infections among drug users: The role of vaccination. *International Journal of Environmental Research and Public Health, 6*(1), 400-413.
- McHugh, R. K., Hearon, B. A., & Otto, M. W. (2010). Cognitive behavioral therapy for substance use disorders. *Psychiatric Clinics, 33*(3), 511-525.
- Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change*. Guilford press.
- Najavits, L. (2002). *Seeking safety: A treatment manual for PTSD and substance abuse*. Guilford Publications.
- National Institutes of Drug Abuse. (2018). Principles of drug addiction treatment: A research-based guide. *CreateSpace Independent Publishing Platform*. Retrieved from: <https://nida.nih.gov/sites/default/files/675-principles-of-drug-addiction-treatment-a-research-based-guide-third-edition.pdf>
- Nevo, I., & Slonim-Nevo, V. (2011). The myth of evidence-based practice: Towards evidence-informed practice. *British Journal of Social Work, 41*(6), 1176-1197.
- Nurutdinova, D., Abdallah, A. B., Bradford, S., O'Leary, C. C., & Cottler, L. B. (2011). Risk factors associated with Hepatitis C among female substance users enrolled in community-based HIV prevention studies. *BMC Research Notes, 4*, 1-9.
- Pandor, A., Kaltenthaler, E., Higgins, A., Lorimer, K., Smith, S., Wylie, K., & Wong, R. (2015). Sexual health risk reduction interventions for people with severe mental illness: A systematic review. *BMC Public Health, 15*, 1-13.
- Remien, R. H., Stirratt, M. J., Nguyen, N., Robbins, R. N., Pala, A. N., & Mellins, C. A. (2019). Mental health and HIV/AIDS: The need for an integrated response. *AIDS (London, England), 33*(9), 1411.
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (MINI): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry, 59*(20), 22-33.
- Substance Abuse Mental Health Services Administration. (2020). *Substance Use Disorder Treatment for People with Co-occurring Disorders*. Substance Abuse and Mental Health Services Administration. https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP20-02-01-004_Final_508.pdf
- Wakeman, S. E. (2017). Medications for addiction treatment: Changing language to improve care. *Journal of Addiction Medicine, 11*(1), 1-2.