

Substance Abuse and Human Development



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Introduction

Substance abuse is one of the most pervasive health issues in today's society. More people are affected by the short and long term implications of tobacco, alcohol, and illicit drug use than any other preventable behavior.ⁱ Substance abuse disorders are not only a heavy burden on our economy, but also on our healthcare system. One in four of the 2 million deaths in America are attributable to substance abuse.ⁱⁱ Each year, over 40 million people are affected by serious illnesses or injury as a result of substance abuse.ⁱⁱⁱ The intricate web of addiction is not only psychological, but also creates behavioral reliance.^{iv} Substance dependencies are chronic disorders and those affected are prone to relapsing; there is no quick fix to overcoming alcohol, tobacco, and illicit drug addiction. The effects of substance abuse are not individualistic but are rather broad reaching – it affects siblings, children, one's family, friends and the community at large. The trickle down effect of substance dependency results in violence, abuse, stunted economic productivity, and direct and indirect healthcare ramifications. Drug related deaths have more than doubled since the 1980s.^v Trends in alcohol consumption, tobacco, and illicit drug use have gained momentum in particular periods over time and both public tolerance and perception has shifted. An estimated 7.1% Americans aged 12 and older are current illicit drug users.^{vi} The percentages of illicit drug users between the ages of eighth, 10th and 12th graders has dropped, as specified in the 2006 Monitoring the Future (MTF) survey.^{vii} However, this survey also found that the use of non-medical psychotherapeutics (prescription drugs) is at an all-time high.

Substance abuse does not take on a particular shape or size. Addiction does not discriminate against any cohorts; it can affect anyone. The "War on Drugs" has been supported as a solution for many years, but has not chipped away at the core of the issue but rather provided a surface solution to an ongoing problem. The United States operates one of the largest criminal systems in the world, housing 2 million of the 8 million criminals worldwide.^{viii} A quarter of the prison mates in America are withheld for nonviolent criminal drug offenses.^{ix}

Moreover, there is a large gap in our current medical system for providing services to those with substance abuse disorders. Many substance users are also often

diagnosed with mental health conditions. However, the medical system is limited in providing integrated care or case management for individuals who present co-occurring symptoms. Those who present both mental and substance abuse disorders often have to seek out separate care for each. In addition, many rehabilitation centers hold to a zero tolerance policy. One must ask, is this the right approach given the cycle of addiction? In addition, there also exists a gap between number of available treatment slots and those seeking treatment.^x Integrated frameworks must be fused with our medical system to provide those needing support with resources to overcome addiction. The large divide between what the medical community knows and what is being done on the front lines in the centers and agencies continues to grow.^{xi} This paper will first explore substance abuse, then delve into a discussion of costs associated to substance abuse disorders, and conclude with possible solutions.

Manifestations and Causes of Substance Abuse Disorder

Despite the magnitude of research, the exact risks that lead to substance dependencies are unclear. Possible determinants include environmental stresses, drug pharmacology, peer pressure, emotional distress, anxiety, depression, genetic predispositions, and self-medication.^{xii} Contributing variables include drug availability in addition to perceptions of risk and effects. Many psychosocial and social factors influence health risk behaviors and decisions.^{xiii} Moreover, risk factors and rates of dependence vary at different life stages. Substance use varies by age, as depicted in Figure 1.1 and 1.2. Over half of American teenagers have tried an illicit drug by the end of high school.^{xiv} Adolescent substance abuse serves as predictor of other risky behaviors such as multiple sexual partners and low condom use that also translate to negative health outcomes.^{xv} In addition, strong predictors of substance abuse among young adolescents include factors such as disinterest, the lack of commitment to school and peer pressure susceptibility which hold true for Caucasian and African American girls and boys.^{xvi}

Figure 1.1: Past Month Illicit Drug Use by Age, 2003^{xvii}

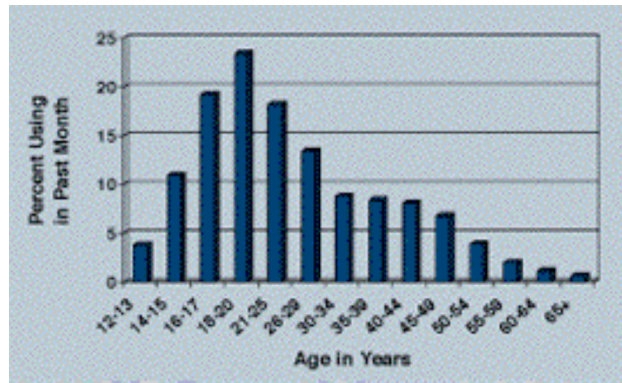
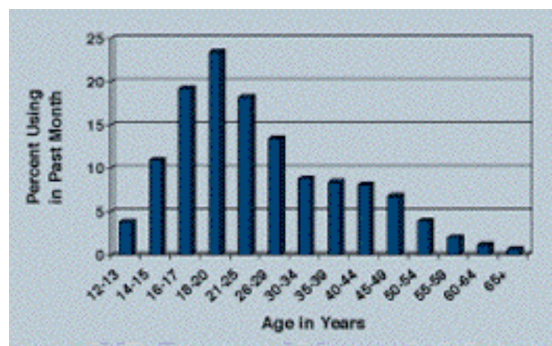


Figure 1.2: Past Month Cigarette Use by Age, 2003^{xviii}



The socializing power of peers correlates with likelihoods of influence and shifts in behavior.^{xix} Adolescents are highly influenced by what they see and the environment in which they grow up. Environmental factors influence the social attitudes of adolescents and are expressed differently by each adolescent.^{xx} Parent permissiveness, discipline, and control impact the relationship adults have with their children. Caucasians who are economically disadvantaged and come from single parent homes are more likely than African Americans of the same demographics to use substances. School involvement is often referenced as a protective variable to drug use; recent findings have concluded that there exists a strong relationship between after school activities and less substance use for female adolescents.^{xxi} Group involvement has the potential to serve as a foundation for positive outcomes. However, it can also be a source of internal peer pressure spurred by the need to feel accepted; this parallels the ideology behind the Bandura's Social

Cognitive Theory. The Social Cognitive Theory develops the principle that observing particular skills can increase one's self-awareness and behavior for performing specific tasks. In addition to this, it suggests people derive their beliefs about what kind of behavior is typical and appropriate.^{xxii} One's environment and peers can play a large role in influencing alcohol, tobacco, and illicit drug use.

Substance abuse disorders are more prevalent among particular low-income, racial, and ethnic subgroups. Level of education and age of drop out are strongly correlated to illicit drug and tobacco use and heavy alcohol consumption. In addition, men and women that lack health insurance, are unemployed, unmarried, and/or have less than 9 to 11 years of education have relatively high prevalence rates of illicit drug use.^{xxiii} Another determinant of drug abuse is child abuse which leads to later substance dependency; two thirds of those in treatment facilities have disclosed that they were physically or sexually abused as children.^{xxv} Drug abuse is twice as common among non-high school graduates between the ages of 26 to 34 as college degree holders of the same age range.^{xxvi} The gender differences in substance abuse trends have narrowed more recently; rates among 12 to 17 year olds alcohol, cigarette, and illicit drug use have historically been similar.^{xxvii} Though gender disparities are limited, there exists a usage difference across races. For example, in the 12 to 17 year old cohort, whites and Hispanics are more likely to use alcohol than African Americans, whites are more likely to use tobacco than both Hispanics and African Americans, and whites and Hispanics are more likely to use any illicit drugs than African Americans.^{xxviii} African Americans, across all ages, are more likely than whites and Hispanics to use any illicit drug, tobacco, and marijuana. There exists a large racial disparity and economic differences among those completing publicly funded alcohol and drug treatment programs.^{xxix} In addition, co-morbidity exists between neuropsychological disorders and substance abuse; forcing treatment programs to recognize both diagnosis.^{xxx}

Moreover, substance abuse is very common among welfare recipients; however its true prevalence is hard to estimate because it is a covert behavior that is often underreported. Recent statistical findings exploring substance use among this cohort has varied significantly, from 6.6 to 37 percent among welfare recipients.^{xxxi} Substance abuse prevalence among this cohort is noteworthy because it poses as platform for dependence

on government assistance. Prolonged dependence on assistance and poverty exacerbate substance use and mental health issues. Additionally, those who are less educated are less likely to seek mental health and substance abuse treatment and services.^{xxxii} A fair number of people with substance abuse disorders that seek treatment often lack the resources to access these facilities; cost of treatment and the lack of insurance coverage are cited as one of the leading reasons for not seeking care.^{xxxiii} For women specifically, there are often gender specific barriers including childcare responsibilities and the fear of losing custody of their children that serve as inhibitors to service utilization.^{xxxiv} Frequent users of cocaine, heroin, and other illicit drugs (excluding marijuana) often suffer from concurrent chronic mental health disorders.^{xxxv} Homeless women and substance abusing mothers have higher co-occurring rates of mental health disorders such as depression, schizophrenia, and bipolar disorders with substance use than any other cohort.^{xxxvi} Moreover, in the Women's Employment Study (WES), which examines the barriers to employment for welfare recipients, found that one in five respondents who suffer from co-occurring substance abuse and mental health disorders received care in the previous 12 months.^{xxxvii}

In addition to the various contributing determinants of substance dependency, the American criminal system is heavily saturated with those suffering from substance abuse disorders. Drug related offenses include arrests related to 1. Drug possession, distribution, and/or sales, 2. Offenses related to drug activity such as burglary to support their dependency, and 3. Drug abusers lifestyle predispositions that may introduce other criminal activities.^{xxxviii} A jail survey conducted in 2002 estimated substance abuse among incarcerated men and women to be 52% of women and 44% of men. At the time of the offense, 49.7% were under the influence of alcohol and/or drugs. As depicted in Figure 1.3, substance use manifests itself in a preponderance of violence, property, drug and public-order offenses.^{xxxix} Of those who were under the influence at the time of the crime, 70.9% fell under the criteria of substance dependents.^{xl} As seen in Figure 1.1 and 1.2, the trend in drug use decreases with age; young adults and adolescents are more vulnerable than any other age group. In 2000, a survey conducted among juvenile offenders found that 56% of boys and 40% of girls tested positive for substance use at the

time of arrest.^{xli} The criminal system houses more individuals with mental health conditions and substance abuse needs than psychiatric hospitals in our communities.^{xlii}

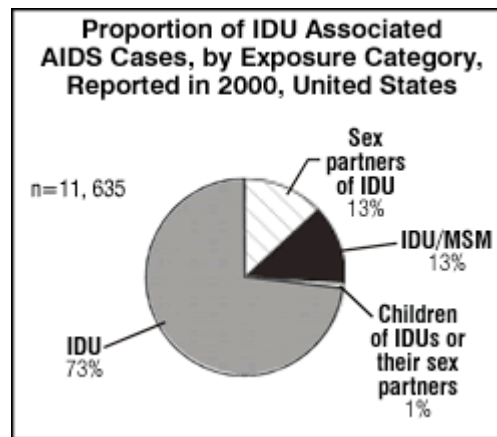
Figure 1.3: Prior alcohol or drug use at time of offense among adult convicted jail inmates, by type of offense, 2002^{xliii}

Most serious offense	Estimated number of inmates	Used at time of offense		
		Alcohol	Drugs	Alcohol or drugs
Total^a	440,570	33.3%	28.8%	49.7%
Violent offenses	96,359	37.6	21.8%	47.2%
Homicide	5,967	41.6	20.0	47.4
Sexual assault ^b	13,252	37.2	13.5	42.2
Robbery	18,826	37.6	39.9	55.8
Assault	50,226	39.7	18.2	47.5
Property offenses	112,895	28.5%	32.5%	46.8%
Burglary	29,767	32.6	40.8	55.1
Larceny/theft	33,691	29.0	32.0	47.3
Motor vehicle theft	9,414	35.4	39.8	54.5
Fraud	22,817	21.5	27.9	38.6
Drug offenses	112,447	22.4%	43.2%	51.7%
Possession	48,823	19.9	45.9	51.4
Trafficking	56,574	24.8	40.7	51.8
Public-order offenses	83,193	26.2%	19.5%	37.0%
Weapons	9,218	35.3	36.8	55.7
Other public-order ^c	73,975	25.1	17.4	34.6

^aIncludes offenses not shown.
^bIncludes rape and other sexual assault.
^cExcludes DWI/DUI.

HIV/AIDS, hepatitis, and substance abuse are also strongly correlated. Injection drug use (IDU) is a mode of transmission of HIV. Figure 1.4 illustrates the proportion of IDU associated with AIDS cases by exposure category.^{xliv} IDU has directly and indirectly accounted for more than 36% of AIDS cases in America. Though the rate of transmission through IDU has slowed down, in 2000, it was associated with 28% of new AIDS cases.^{xlvxlv} This further illustrates the relationship between substance abuse disorders and its association with other risky behaviors.

Figure 1.4: Proportion of intervenes drug use associated with AIDS cases by exposure category as reported in 2000 in the United States^{xlvi}



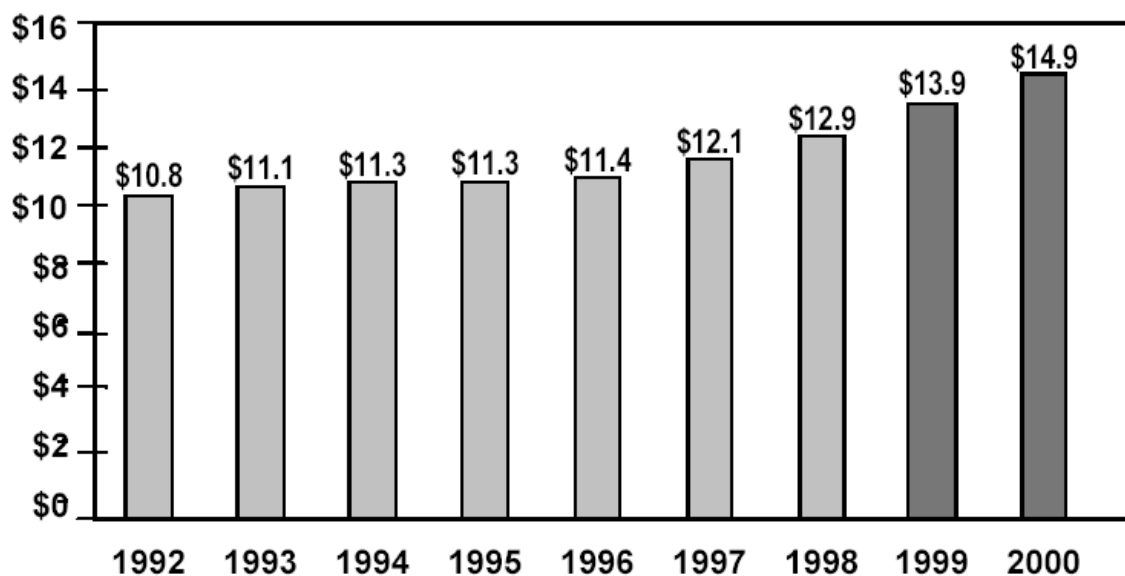
The Price Tag of Substance Abuse on Society

Between 1992 and 1998, the overall costs of drug abuse rose about 6.9% annually.^{xlvi} The social costs of substance abuse are astronomical and are estimated to be well over \$414 billion; each substance's economic cost has its own price tag. This number is conservative in its calculation of the burden substance abuse places on the healthcare system; it is difficult to account for both the direct and indirect costs of substance abuse on healthcare due to the complexity of human anatomy and thresholds of exposure as they relate to associated risk factors. Moreover, substance abuse has long-term implications on one's brain and other functionalities. Focusing on the components of this approximation, the economic cost of alcohol abuse is estimated to be \$166.5 million, drug abuse \$109.9 million, and tobacco use \$138 billion, respectively.^{xlvi} The composition of each of these estimates is different. Though estimates vary, they attempt to capture the estimation of illness - defined as the value of lost productivity due to illness or injury, deaths – defined as the value of lost productivity due to premature death, medical – defined as health care expenditures for treatment services, other related costs – include motor vehicle crashes, fire destruction, and social welfare administration, and lastly crime which include both the direct and indirect costs of crime.

The cost of alcohol abuse is attributable to illness (46%), deaths (21%), medical (12%), crime (9%), special conditions (1%), and other related costs (11%).^{li} ^{lii} Moreover, the estimation for smoking can be stratified into three categories: medical (58%), death (36%), and illness (6%).^{liii} Tobacco use presents itself as an associated risk factor for a roster of medical conditions. It is estimated that over the next 20 years, Medicare will spend over \$ 800 billion on treating smoking related illnesses.^{liv}

The cost of drug abuse is comprised of crime (58%), illness (16%), deaths (15%), medical (7%), and special conditions (4%).^{lv} ^{lvi} Zooming in on the costs of drug abuse, Figure 1.5 captures the upward trend of health care spending as they relate to illicit drug use. More than half of all emergency room visits for drug misuse and abuse involved multiple drugs and/or alcohol.^{lvii} Hospital emergency room visits can be stratified by drug association: 28% attributable to cocaine, 26% to alcohol, 20% marijuana, 10% heroin, 10% stimulants, 17% non-medical use of anti-anxiety medications, and 17% pain relievers.^{lviii} By providing integrated and comprehensive substance abuse treatment, the costs and stress associated with substance abuse disorders on the healthcare system can be minimized.

Figure 1.5: Healthcare Costs, 1992 – 2000 (in billions of dollars)^{lix}

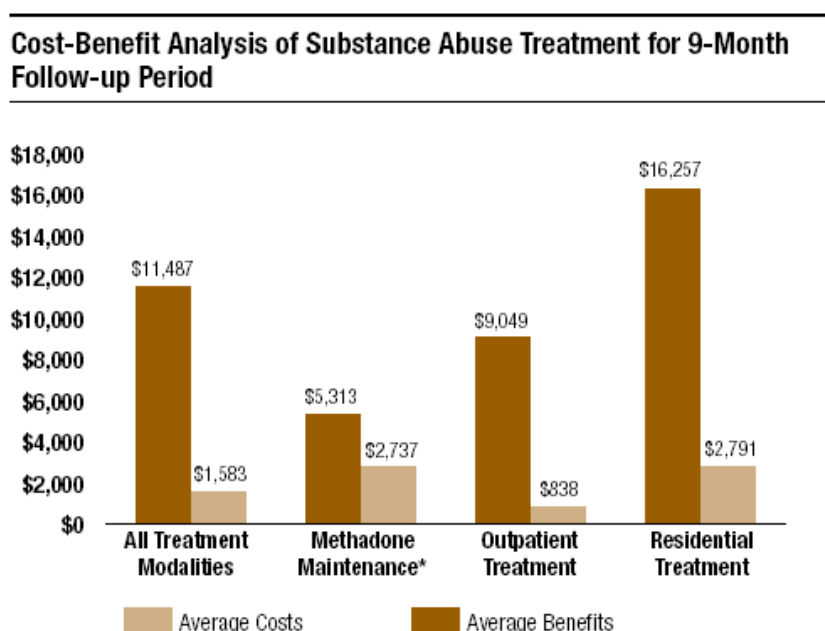


The Solution

Architecting an integrated solution for treating substance abuse must be achieved through a multi-pronged approach. The solution lies within devising a system that increases cost effectiveness, reduces disparities, improves access and clinical outcomes, while enhancing patient centeredness. In doing so, the current system would be able to tailor treatment to the needs of the patients rather than providing a generic, dictated amount of care. This framework must also bridge the gap between substance abuse and mental health services. By decreasing fragmentation and encouraging case management, one would be building upon a cost-containment strategy that best serves the patient and minimizes their need to “double dip” into the healthcare.^{lx} In addition, those with substance abuse disorders are also prone to relapse due to the chronic nature of the disorder.

The vast majority of people receive treatment in outpatient facilities. Although intensity of addiction determines treatment necessity, relapse drops dramatically among residential and inpatient programs in comparison to outpatient services.^{lxi} Nevertheless, change needs to occur on several different fronts to combat the incidence and prevalence of substance abuse. A recent analysis by the Robert Wood Johnson Foundation estimated that for every \$1 invested on treatment produces a \$7 gain in economic and social benefits. As shown in Figure 1.6, on average treatment costs \$1,583 and has an average benefit of \$11,487. Total costs attributed to drug related offenses decreased by \$7,500 per person treated, productivity gains of \$3,400 per person treated, and a \$200 reduction in cost per related emergency room visits. The benefits of both the outpatient and residential treatments outweigh the costs and were found to be 6:1 for the former and 11:1 for the latter.^{lxii} Investments in expansion of services, strengthening the current infrastructure, and transitioning processes to a patient-centered approach will not only benefit, but also provide our society with a strong foundation to chip away at prevalence of substance abuse.

Figure 1.6: Cost Benefit Analysis of Substance Abuse Treatment for 9-month Follow-up Period^{lxiii}



* Result for methadone maintenance was not statistically significant.

Innovative programs that have been successful at treating substance abuse include services provided by Samaritan Village Inc. and the Outreach Project. Samaritan Village serves over 1,500 clients daily and is one of the largest programs in the nation. This entity offers a roster of services that allow it to provide clients with integrated care. Treatment settings include 7 drug-free residential treatment facility (including a New York City Men's Shelter, a free-standing family care center and a community outreach program), drug-free outpatient treatment, methadone-to-abstinence treatment, and special needs services that address HIV/AIDs and Hepatitis C, domestic violence and sexual abuse, post traumatic stress disorder, learning disabilities, and mental health. Samaritan Village also provides a Veterans program, drug treatment alternatives to prison, alternatives to prison and parole relapse prevention services. Residential programs also offer crisis counseling, individual and group counseling, discharge planning, relapse prevention, substance abuse lectures, vocational rehabilitation, family counseling, re-entry program, educational program, medical services, urine testing and after care follow up.

In addition, Samaritan provides coordinated care through its contracted services for medical care with Project Samaritan Health Services and on-site primary care services, diagnostic and treatment Centers. Ambulatory treatment is available to those individuals who are not in need of residential care and receive comprehensive treatment while remaining in the community. Comprehensive treatment includes individual, group and family counseling in addition to medical services, urine testing, crisis counseling, aftercare follow-up, discharge planning, HIV education and counseling, and vocational rehabilitation. This entity also has a strong referral streams coupled by a breadth of outreach capabilities, and is heavily active in the community. Samaritan's approach to combating alcohol and substance addiction provides innovative, quality treatment and re-empowers clients.

The Outreach Project provides substance abuse services that include adolescent residential, adolescent outpatient, intensive day services for women and women with children, services for HIV positive individuals and their families, and adult outpatient services that provide bilingual treatment, a program for hearing impaired individuals, and a dual-focus program. Heavy emphasis is placed on training the staff and others through the Outreach Training Institute to effect change. In addition, many of the Outreach Projects program objectives focus on providing services to each unique individual and catering to their needs rather than approaching each case in a uniform fashion.

Highlighting two of Outreach Projects programs, the adolescent residential and outpatient program, both provide youth with the tools to overcome addiction and gain self-reliance. Adolescent residential treatment services include a strong educational component, on-site assessment services, individualized treatment plans, individual and group therapy, intensive family therapy services, support services for siblings, educational seminars, computer lab and training, HIV education and prevention, anger management therapy, sobriety maintenance activities, vocational and educational counseling, recreation and leisure time counseling, creative art therapy, discharge planning and continuing care services. The framework for adolescent treatment is based upon a self-help model paralleled by a family systems approach that encourages youth to confront their issues. Upon completion of the residential program, individuals transition to outpatient services. The adolescent outpatient services offer on-site assessment

services, individualized and group therapy, family therapy, educational seminars, sobriety maintenance programs, vocational counseling, and recreation and leisure time counseling. Outpatient length of treatment varies upon severity and need. Through their integrated strategy and program flexibility, the Outreach Project provides its patients with the treatment and resources needed to conquer their dependency while meeting their needs with a menu of services that lend themselves to a diverse patient mix.

Treatment needs must be readily accessible to those that want to seek care but cannot afford it; multiple courses may be needed to achieve an addiction free lifestyle.^{lxiv} Ten percent of current substance abuse treatment need is being met by the current patchwork of services.^{lxv} An obstacle in seeking treatment includes the lack of resources to pay for services. Facilities with managed care contracts have increased over the last ten years; however the uninsured and underinsured face hardships in seeking care and often forego treatment.^{lxvi} Not only should allowances be made for facilities that provide services to those who need but cannot afford it, but the private and public insurance frameworks must also incorporate benefits that include provide both comprehensive mental health and substance abuse treatment. Opponents of funding substance abuse treatment often believe that a solution lies within increased enforcement of current drug policies. Others believe that it is not up to them to deal with substance abuse issues because it does not “involve” them, ignoring the need for change. In addition, some believe that those with substance abuse disorders cannot change because it is a mental condition that intervention cannot solve. Opponents of funding substance abuse treatment must recognize the direct and indirect costs placed on society that can be reduced. Substance abuse is an ever pressing chronic health issue in our society. Architecting a multi-faceted solution must involve a public-private partnership to overcome the obstacles our current system faces and increase service utilization among those seeking care.

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