

TEXAS HIV PLAN 2012-2014

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EXECUTIVE SUMMARY

An estimated 4,400 Texans are infected with HIV every year; at the end of 2010, there were 65,077 Texans diagnosed and living with HIV. Advancements in treatment of HIV have increased the quality and length of life for people living with HIV. The decrease in deaths from HIV, coupled with the consistent number of new infections, has resulted in a 5% annual increase in the number of Texans diagnosed and living with HIV [1].

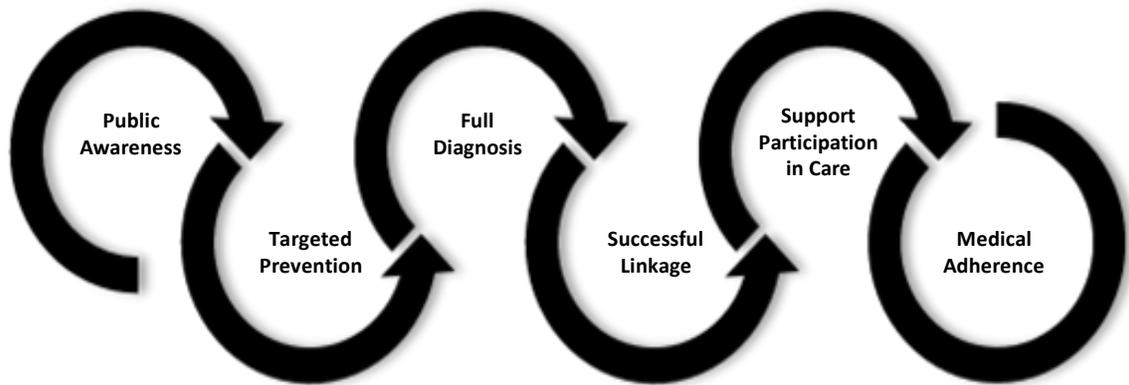
Although new diagnoses have remained stable for several years, not all race/ethnicities are impacted equally. Between 2004 and 2010 diagnosed living cases among Hispanics and Blacks grew by 50% and 39% respectively. Gay men and other men who have sex with men (MSM) continue to bear the largest impact of HIV, representing over half of the diagnosed living cases in Texas [1].

That the estimated rate of new infections has remained relatively stable while the number of living cases has grown by 36% demonstrates that treatment and prevention in Texas has been fairly successful. However, if Texas is to effectively reduce the number of new infections, new strategies must be developed.

The Texas HIV Plan reflects the Texas Department of State Health Services (DSHS) belief that a comprehensive approach, based on public health principles, will most effectively reduce the number of new HIV infections. The plan is based on the Continuum of Care developed by the Health Resources and Services Administration (HRSA). The HRSA continuum encompasses the range of possible engagement in care, beginning with individuals who are not aware of their HIV status and spanning a range of engagement levels and ending with people living with HIV who are fully engaged in medical care [2].

DSHS expanded the HRSA continuum and developed the Texas spectrum of HIV engagement. The Texas spectrum broadens the HRSA continuum, beginning with addressing the need for prevention activities for uninfected populations and concluding by addressing the need for increased adherence to medical regimens for people living with HIV. The overarching goal of the Texas HIV Plan is to reduce new HIV infections in Texas and is founded on two strategies; decrease risk behaviors that put people at risk for HIV infection and decrease the likelihood of infection if someone is exposed by reducing the amount of virus present in communities.

Texas HIV Spectrum of HIV Engagement



The DSHS spectrum is organized around the following six domains and serves as the foundation for efforts to reduce HIV infections in Texas.

- **Encourage HIV awareness and ensure that information is available to the general public**
- **Realize full access to HIV prevention efforts for epidemiologically based risk groups**
- **Diagnosis of everyone infected with HIV**
- **Ensure that everyone diagnosed with HIV is successfully linked to systems of care**
- **Ensure that those diagnosed with HIV are fully supported in maintaining enrollment in systems of care**
- **Ensure that individuals infected with HIV are adherent to medical care regimens**

Implementation of the plan will require a comprehensive response coordinated across many different organizations and individuals. The purpose of this plan is to prioritize actions and coordinate the application of resources across individuals and organizations that serve populations infected or affected by HIV. By understanding specific actions as being part of this broad spectrum of engagement, individuals and organizations can maximize their response by connecting with others who may be engaged in similar or complementary actions.

Lastly, the Texas HIV Plan recognizes that an individual's decisions and actions are influenced by their social circles, the cities in which they live, the institutions and people they come into contact with, and the policies or systems that apply to their lives [3]. This plan requires that organizations and individuals responsible for providing HIV prevention and services acknowledge and develop strategies that address the range of socio-ecologic factors that put people at risk for becoming infected or inhibit adherence by those who are living with HIV.

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INTRODUCTION

HIV is a preventable disease and each prevented infection means one more person who will not suffer the emotional and physical effects of HIV disease. Current strategies to prevent and treat HIV have resulted in a relatively contained epidemic. Still, roughly 4,400 Texans are estimated to be infected every year. If Texas is to push passed the plateau in new cases and effectively reduce new infections, a comprehensive strategy that addresses how and why the virus is spread is necessary.

HIV in Texas

At the end of 2010, 65,077 people were diagnosed and living with HIV in Texas; a 36% increase in the number of Texans diagnosed and living with HIV over the past 7 years. In large part, this increase is a result of advancements in treatment which have resulted in improved health outcomes and longer lives for people with HIV. Successful treatment has reduced the HIV mortality rate in Texas from 7.0 deaths per 100,000 in 2002 to 5.7 deaths per 100,000 between 2002 and 2008.

While the number of diagnosed living cases of HIV increases steadily by 5% annually, not all race/ethnicities are impacted equally. Between 2004 and 2010, diagnosed living cases among Hispanics grew by 50%, and among Blacks by 39%. The rate of Black Texans living with HIV continues to be four times greater than that of Whites or Hispanics.

Of diagnosed living cases of HIV, the most common exposure groups are men who have sex with men (55%), heterosexuals (24%) and injection drug users (14%). The proportion of living cases for these groups has not significantly changed since 2004.

The number of people diagnosed and living with HIV are not evenly distributed across Texas. Most cases are found in the larger urban centers of the state. The Houston and Dallas Eligible Metropolitan Areas (EMA), as defined by the Health Resources and Services Administration (HRSA), account for over half the diagnosed living cases. Outside of these two areas, the three HRSA designated Transitional Grant Areas (TGA), Austin, Fort Worth and San Antonio, account for an additional 20% of cases. East Texas and the Texas-Mexico border area contain similar proportions of cases (6%-7%) as seen in the three TGA.

The racial/ethnic profiles of people living with HIV vary across the different areas. In Houston and East Texas, the greatest number of living cases is among Blacks; in the San Antonio and US-Mexico border area the majority of cases are Hispanic; and in the remaining areas of the state the largest number of cases is among Whites. What does not vary, is that in every area, the rates for Black populations are two to five times higher than the rates for Whites or Hispanics.

For the last seven years, the number of new HIV diagnoses in Texas has remained largely stable, averaging 4,180 Texans diagnosed each year. Blacks have both the highest number and highest rate of new diagnoses each year. The 2010 rate of new diagnoses in Blacks (60.8 per 100,000) is over six times higher than the rate in Whites (9.1 per 100,000) and over four times higher than the rate in Hispanics (13.5 per 100,000).

During this same seven year period, there was a 57% increase in the rate of new diagnoses among teens and young adults ages 13-24 and a 38% decrease in the rate among adults ages 35-44. MSM cases outnumber all other categories and their proportion increased from 53.9% in 2004 to 61.3% in 2010¹.

The relatively stable rate of new infections at the same time that the number of people living with HIV has grown by 36% demonstrates that treatment and prevention efforts in Texas have had moderate success in controlling the spread of HIV. However, the lack of further decreases in new infections means that Texas has reached a plateau. Moving past this state of containment of HIV and effectively reducing the number of new infections requires a new strategy.

New Strategy

In the beginning of the HIV epidemic, ignorance and fear resulted in extraordinary stigmatization and discrimination against people living with HIV. As a result, HIV became exceptional compared to other diseases and standard public health responses to disease control were not applied [1].

Although HIV stigma continues to be an important issue that affects HIV prevention and treatment, it is no longer as pervasive as it was in the early days of the epidemic. New information continues to become available regarding HIV biology and transmission. Tremendous advancements have been made in the treatment of HIV. Effectively treating someone infected with HIV not only increases their survival but also decreases their likelihood of infecting someone else [2, 3, 4]. Test to treat strategies are based on this fact and offer a significant strategy to stopping the spread of HIV. However, for this strategy to be effective, individuals must be diagnosed, consistently engaged in care and adherent to their medical regimen.

The Health Resources and Services Administration (HRSA) developed the continuum below to describe engagement in care for people living with HIV. The continuum encompasses the range of possible engagement in care levels, from those who are unaware of their HIV status to those who are fully engaged in HIV medical care [5].

¹ All data on HIV in Texas are from the 2010 Texas Integrated Epidemiologic Profile. For a full description of HIV in Texas, the profile is available for download at <http://www.dshs.state.tx.us/hivstd/reports/default.shtm>

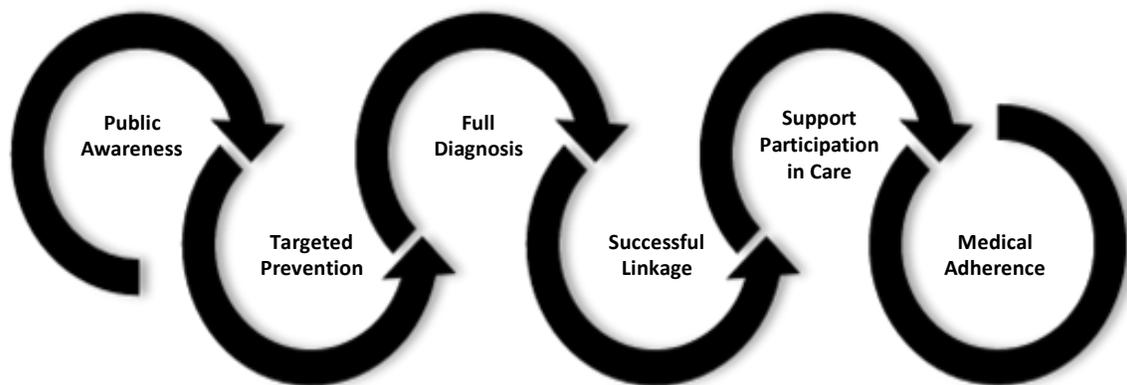
HRSA Continuum of Care

Not in Care			In Care		
Unaware of HIV Status (not tested or never received results)	Know HIV Status (not referred to care or didn't keep referral)	May Be Receiving Other Medical Care But Not HIV Care	Entered HIV Primary Medical Care But Dropped Out (lost to follow-up)	In and Out of HIV Care or Infrequent User	Fully Engaged in HIV Primary Medical Care

Using this continuum, Gardner et al. estimated the number of Americans who are infected (1,106,400), diagnosed (874,056), linked to care (655,542), retained in care (437,028), need antiretroviral therapy (349,622), on therapy (262,217) and have an undetectable viral load (209,773). They conclude that a 90% increase in the number of individuals in each stage of engagement will result in increased viral suppression. However, for maximum impact, improvements must be made in all stages of the continuum simultaneously. Improvement in any single stage of the continuum will have minimal population based impact [6].

Based on the HRSA continuum and the work of Gardner et al, the Texas Department of State Health Services (DSHS) HIV/STD Prevention and Care Branch has developed an expanded spectrum of HIV engagement which includes stages of engagement that address prevention for people who are uninfected and improved adherence for people living with HIV. The overarching goal of the Texas HIV Plan is to reduce new HIV infections in Texas and is founded on two strategies; decrease risk behaviors that put people at risk for HIV infection and decrease the likelihood of infection if someone is exposed by reducing the amount of virus present in communities.

Texas Spectrum of HIV Engagement



The DSHS spectrum is organized around the following six domains and is intended to serve as the foundation for addressing HIV in Texas.

Encourage HIV awareness and ensure that information is available to the general public

In 2011, only 40% of Americans reported that they saw, heard or read something about HIV in America [7]. As a result, many people do not have adequate knowledge about HIV risk behaviors. This lack of knowledge fuels both the spread of new infections and HIV related stigma. Increasing exposure to accurate information about HIV will increase awareness in the general public and decrease HIV related stigma [8].

Realize full access to HIV prevention efforts for epidemiologically based risk groups

Based on epidemiologic information, those most at risk for being infected with HIV in Texas are:

- Black gay men and other Black men who have sex with men;
- All gay men and men who have sex with men;
- Black heterosexual women who have sex with partners who are infected with HIV;
- Injection drug users;
- Black heterosexual men who have sex with partners who are infected with HIV; and
- Transgender individuals.

Increasing the number of people in these populations who access effective prevention programs and adhere to prevention strategies will decrease the number of people who are exposed to HIV through risk behaviors.

Diagnosis of everyone infected with HIV

Based on the Centers for Disease Control and Prevention estimate, roughly 17,300 Texans are infected with HIV and do not know it [9]. These undiagnosed individuals are living without life extending treatment. Undiagnosed individuals continue to engage in risk behaviors and may account for 50% to 70% of new infections [10]. Diagnosing everyone infected with HIV in Texas will increase long term health outcomes and reduce new infections.

Ensure that everyone diagnosed with HIV is successfully linked to systems of care

In 2010, roughly one in four newly diagnosed individuals in Texas was not successfully linked into care. Successful linkage ensures that each individual is established in a supportive care system, that their HIV disease is being monitored and that antiretroviral therapy is initiated.

Ensure that those diagnosed with HIV are fully supported in maintaining enrollment in systems of care

HIV affects the most vulnerable and disenfranchised individuals and communities. One in four HIV infected individuals may also have an untreated mental health or substance use problem [11]. Only 56% of Texans living with HIV had uninterrupted care during 2007 to 2010. Providing support to a person in care means assisting them in navigating systems, addressing mental health and substance abuse issues, consistently meeting basic needs such as food and housing, and dealing with stigma and other negative social issues [12].

Ensure that individuals infected with HIV are adherent to medical care regimens

Successful treatment of HIV results in higher CD4 counts and reduced viral load among people living with HIV. Successful results are influenced by the number of clinical visits a person keeps and the percentage of prescribed medications that they take as directed [13, 14]. In addition to increasing the life span of people living with HIV, successful treatment reduces the collective amount of virus present in a community, thereby reducing the likelihood of uninfected individuals becoming infected if they are exposed through participation in risk behaviors.

Comprehensive and Coordinated

HIV is a stigmatized disease and involves behaviors that many people, organizations and institutions find difficult to address. As a result, people are reluctant to talk about HIV or view prevention within the schema of wellness; responsibility for prevention has been relegated to HIV specific programs. To achieve the domains and priorities outlined in this plan, minimize the duplication or omission of efforts and reduce HIV infections in Texas, a comprehensive and coordinated response across many different agencies, organizations and individuals will be required. The reasons that people engage in risk behaviors or do not engage in care are complex and addressing these issues will require activities conducted in concert with the understanding that each activity conducted will impact future infections.

The purpose of this plan is to prioritize actions and coordinate the application of resources across individuals and organizations that serve populations infected or affected by HIV in order to achieve this comprehensive and coordinated response across all domains in the Texas spectrum. By understanding an individual's or organization's actions as being part of this spectrum of engagement, the individual or organization can maximize their resources and activities by connecting with others who may be engaged in the same or complementary actions.

Multiple levels of action: individuals, environments, systems

People are affected by the environments and systems that surround them. Efforts to engage people infected with HIV into care or to prevent uninfected people from becoming infected have traditionally focused on individuals and individual behaviors. While these strategies can be effective, they are also limiting. An individual's decisions and actions are influenced by their social networks, the cities

in which they live, the institutions and people they come in contact with and the policies or systems that apply to their lives [15]. To achieve the domains and priorities outlined in this plan, actions are required at all levels of the socio-ecological framework. Individual behaviors will continue to be addressed but they must be understood in the context of the environments and systems surrounding them. The contextual issues that influence risk behaviors must be acknowledged and addressed if progress is to be made in treating and preventing HIV.

Generative

This plan is intended to create generative processes that identify new connections and actions across Texas. Generative processes build on developing new connections and lessons learned from ongoing actions. By implementing this plan, DSHS asks that partners who serve people infected and affected by HIV consider their role and activities within the context of the plan spectrum and across the socio-ecologic model. Continued assessment and consideration of actions and roles in this context will result in new strategies and connections that amplify efforts to treat and prevent HIV.

This plan does not identify or mandate specific actions or interventions. The HIV epidemic in Texas occurs in various communities and is influenced by the environmental and cultural issues of those communities. For any specific action or intervention to be effective these local conditions must be considered.

Evaluating our progress

Evaluating the ambitious goal of reducing HIV infections across Texas by the application of primary prevention and treatment strategies requires the use of broad population based metrics. DSHS has established a set of population based metrics that will be applied to evaluating progress toward each plan domain and the overarching goal of reduced new HIV infections. These metrics include monitoring:

- number of at risk individuals who access prevention interventions;
- number of new diagnoses;
- percentage of diagnosed individuals linked to care;
- percentage of people retained in care;
- percentage of people who are out of care;
- percentage of people who are prescribed antiretroviral therapy;
- viral load measurements; and
- estimations of new infections.

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ENCOURAGE HIV AWARENESS AND ENSURE THAT INFORMATION IS AVAILABLE TO THE GENERAL PUBLIC

Over the last two decades, despite growing numbers of persons living with HIV, America's awareness and sense of urgency about HIV has significantly declined. In 1987, 68% of Americans reported HIV as the most urgent health problem facing the country. In 2011, only 7% reported the same sense of urgency regarding HIV [1]. Even in communities with the highest rates of HIV, only 10% of those surveyed felt that HIV was the nation's most urgent health care problem [2]. This may be due in part to the decline in exposure to information about HIV that has also occurred. In 2004, 70% of Americans said they saw, heard or read something about the domestic HIV epidemic compared to only 40% in 2011 [1].

The result of this decline in information and urgency is problematic. Thirty years into the HIV epidemic, misinformation regarding HIV continues. Roughly one in four Americans in a 2011 survey believed that HIV can be transmitted from sharing a drinking glass, 16% believed the virus can be transmitted from a shared toilet seat and 12% from swimming in a pool with a person infected with HIV[1]. A study of heterosexual men and women found that one third of the men and almost half the women believed that a man can become infected through unprotected sex with an uninfected male partner [3].

The behaviors that put people at risk for HIV are difficult for people, organizations and institutions to discuss. Sex is a taboo subject for many people in the United States and sexual relationships between men have stirred national debate. The topic of injection drug use is often limited to discussions of criminalization. In 2006, four in ten Americans agreed with the statement "In general, it's people's own fault if they get AIDS". This represents only a 10% decrease in the percentage of people who agreed with this statement in 1987 [4].

Attitudes and ignorance about transmission have fostered HIV stigma and discrimination against those who are infected. Nearly one out of two people questioned in 2011 reported being uncomfortable having their food prepared by a person infected with HIV. Lack of accurate knowledge about HIV risk incites these negative attitudes toward people infected with HIV. People who answered transmission questions correctly were twice as likely to report they were comfortable having a meal prepared by someone with HIV [1].

Lack of knowledge about HIV may also lead individuals to underestimate their risk and be unwilling to test or receive treatment. Young gay men may engage in high

risk behaviors because they were never appropriately informed about how HIV is transmitted [5]. These young men may not be reached through traditional HIV prevention efforts because they may not be open about their sexuality and may not attend gay venues where formal outreach and HIV education traditionally occur. Increasing information available to the general public will reach these young men and other at risk individuals earlier than formal HIV prevention programs are able to.

Additionally, increasing the public's knowledge of HIV and HIV risk behaviors may decrease HIV related stigma. As noted above, individuals with inadequate information are more likely to hold stigmatizing beliefs about people infected with HIV. Pervasive HIV stigma also prevents people at risk for being infected from getting an HIV test [6].

The National HIV/AIDS Strategy, released in 2009, promotes the need to educate all Americans about HIV in order to prevent new infections [7]. The priority that follows will guide individuals, organizations and communities in actions intended to increase awareness of HIV in the general public.

Engage multiple sectors of society to increase access to medically accurate information appropriate to age and development

HIV is a stigmatized disease resulting in responsibility for providing education and information often being relegated to HIV specific programs. These programs lack the funding and reach to effectively educate the entire population on the risks of HIV. If we are to achieve this goal, the responsibility for providing this information must be shared across a wider range of individuals, institutions and organizations many of whom may not identify HIV as being within their scope of activities.

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REALIZE FULL ACCESS TO HIV PREVENTION EFFORTS FOR EPIDEMIOLOGICALLY BASED RISK GROUPS

HIV is most commonly transmitted through unprotected sex with an HIV positive partner or through sharing needles used for injecting drugs. These represent the behaviors that put individuals at risk for HIV infection. However, individual risk cannot explain completely why individuals in some communities are at higher risk of becoming infected with HIV. The prevalence of HIV in social and sexual networks also plays a role. Black gay men do not engage in more frequent risk behavior than white or Latino gay men [1,2,3,4] yet rates of infection among Black gay men are significantly higher. Black gay men are more likely to choose another Black gay man as a sexual partner, and as a result of higher HIV infection rates among Black gay men, are more likely to encounter an HIV infected partner [5].

Complex relationships between individuals and environments increase the risk of HIV infection for people in higher risk population. Epidemiologic data does not reflect the complexity of these relationships but it does offer a clear indication of which populations are currently most impacted as a result. At risk populations are most commonly defined by race/ethnicity, age, mode of exposure or a combination of these categories. The populations at greatest risk in Texas, based on epidemiological data, are:

- Black gay men and other Black men who have sex with men;
- All other gay men and other men who have sex with men;
- Black heterosexual women who have sex with partners who are infected with HIV;
- Injection drug users;
- Black heterosexual men who have sex with partners who are infected with HIV; and
- Transgender individuals

Within these populations several other issues increase risk of HIV infection; youth ages 13 to 24, homeless individuals, incarcerated or recently released individuals, sex workers, individuals with an STD and/or Hepatitis C, individuals with mental health issues and individuals with substance abuse issues are at increased risk of infection [6].

Primary prevention efforts traditionally involve the use of behavioral change interventions which provide tools for changing risk behaviors and/or factors that shape risk behaviors. These interventions are intended to create sustained behavior change for people at high risk for HIV infection. The Centers for Disease Control and Prevention's Compendium of Evidence Based HIV Behavioral Interventions lists 74

such interventions as being effective in reducing HIV risk behaviors [7]. These include individual, group and community level interventions.

If Texas is to successfully reduce the spread of HIV, we must ensure that all individuals within these risk groups have access to and are engaged in prevention activities that successfully reduce risk behaviors. The priorities that follow will guide individuals, organizations and communities in ensuring access to prevention services.

Focus on those most at risk

Successful interventions must engage individuals at highest risk of HIV infection. In Texas, this means that interventions must be focused on:

- Black gay men and other Black men who have sex with men;
- All other gay men and other men who have sex with men;
- Black heterosexual women who have sex with partners who are infected with HIV;
- Injection drug users;
- Black heterosexual men who have sex with partners who are infected with HIV; and
- Transgender individuals

Locating and engaging individuals in these populations may be difficult.

Homophobia causes many gay men and other men who have sex with men to hide their behavior from their families and communities. This confounds efforts to engage these men in HIV prevention interventions.

Organizations responsible for providing prevention interventions may also create barriers for individuals in these high risk populations. Negative organizational identities and attitudes toward these populations or the behaviors that put individuals in the populations at risk may prevent individuals from seeking out or participating in prevention interventions. For these interventions to successfully decrease risk behaviors in high risk populations, strategies to remove barriers and engage individuals from these populations must be implemented.

Conduct Interventions with adequate reach

Many current HIV prevention interventions are time and staff intensive. Some require participants to engage in multiple sessions over time which becomes a barrier and limits the number of individuals able to participate. As a result, individuals at risk of HIV may not be exposed to these interventions. MSM, for example, are now reporting fewer encounters with organized HIV prevention efforts than ten years ago [8]. For interventions to have a broad impact within a risk group, providers must implement interventions in ways that maximize the number of individuals with high risk behaviors that participate.

Conduct prevention activities relevant to the population and context in which they live.

Traditionally, HIV prevention interventions have largely promote strict reliance on condoms as the most viable way to reduce risk for HIV and other STDs. Today's reality calls for more complex approaches to meet people where they are in their understanding and negotiation of risk. As a result of antiretroviral therapy, gay men and other men who have sex with men have developed their own HIV risk reduction strategies beyond condoms [8,9,10]. A sexual harm reduction approach that provides accurate information better enables men who have sex with men and individuals in other risk groups to develop individual risk reduction strategies that are effective in their lives.

Acknowledge and address environmental and systems issues that affect choices made by populations at highest risk

While individual and group level interventions are effective, behavior occurs within a context. HIV disproportionately affects individuals and groups that are marginalized within the broader community. Issues such as poverty, incarceration, education and discrimination affect individual's behavioral choices. To fully impact the spread of HIV the environmental and systems issues that influence or drive risk behaviors must be addressed.

Engage in focused social marketing campaigns

Social marketing campaigns have been shown to be effective across a number of health related issues [11]. The advantages of utilizing social marketing campaigns to decrease HIV risk behavior are their potential scale and cost effectiveness. The commercial marketing strategies which are used in social marketing help to reduce stigma and normalize lower risk behaviors.

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COMPLETE DIAGNOSIS OF EVERYONE INFECTED WITH HIV

Before an individual infected with HIV can benefit from treatment they must first be aware of their HIV infection. The Centers for Disease Control and Prevention estimate that as many as 21% of people infected with HIV are not aware of their infection [1]. Using this estimate, roughly 17,300 Texans are not aware they are infected with HIV. These undiagnosed individuals are living without effective treatment which shortens their lives and promotes further transmission of HIV. In addition, roughly one third of Texans living with HIV receive an AIDS diagnosis within one year of their HIV diagnosis meaning they are diagnosed late in their disease progression.

Diagnosing individuals with HIV allows them to be linked to the life saving benefits of treatment. There is also evidence that people diagnosed with HIV reduce their risk behaviors compared to those who are unaware or uninfected [2,3]. It is estimated that diagnosing everyone who is infected with HIV would reduce new infections by 31% annually [4]. The National HIV/AIDS Strategy has established the goal of reducing new HIV infections by increasing the percentage of people who know they are infected with HIV from 79% to 90% nationally by 2015[5].

In Texas, over 700,000 HIV tests are conducted annually and result in roughly 4,000 new diagnoses [6]. HIV testing occurs in numerous settings including primary care offices, hospital emergency rooms, STD clinics and through outreach and clinic based targeted testing programs. The following priorities are intended to move Texas closer to the goal of diagnosing everyone who is infected with HIV.

Effectively identify and test individuals in populations at highest risk

The populations at greatest risk in Texas, based on epidemiological data, are:

- Black gay men and other Black men who have sex with men;
- All other gay men and other men who have sex with men;
- Black heterosexual women who have sex with partners who are infected with HIV;
- Injection drug users;
- Black heterosexual men who have sex with partners who are infected with HIV; and
- Transgender individuals

In 2009, targeted testing programs charged with identifying and testing those most at risk for HIV resulted in 463 new diagnoses or a 1.1% positivity rate. Efforts to increase the ability of organizations providing targeted testing to identify and test

those most at risk must be made in order to diagnosis of everyone infected with HIV in Texas [6].

Ensure that the social networks of infected persons are offered testing and counseling

People newly diagnosed with HIV are likely to socialize with others who are at risk of becoming infected with HIV. Social networking strategies utilize people diagnosed with HIV to identify others that are at a high risk of being infected with HIV. In a CDC demonstration project using social networking strategies, approximately 6% of people identified and tested were newly diagnosed with HIV [7].

Expand routine testing programs in all health care settings

Many people do not consider themselves at risk for HIV or are unwilling to admit their risk [8,9]. As a result they do not seek out testing. Routine testing programs conduct HIV testing as part of regular medical care and, as a result, are more likely to identify these people when they access care for other health issues. The CDC guidelines for routine testing recommends that all patients in health care settings be tested for HIV and that persons at high risk be tested at least annually [10].

Address stigma issues that prevent testing

Many people hold negative beliefs toward people at risk for HIV and people infected with HIV. These negative beliefs manifest as discrimination and stigmatizing behaviors [11]. As a result, some people may avoid testing because they do not want to find out they are HIV infected and be the focus of this stigma. Others may feel that simply getting tested may cause them to be stigmatized and so avoid testing [12]. Strategies to reduce general HIV stigma will remove these barriers.

Use new testing technologies to make systems more effective

Advances in HIV testing technologies continue to evolve. Fourth generation tests that identify infection earlier than previous methods, easier to use rapid testing and new methods of confirmatory testing all have implications for diagnosing HIV infections. Identifying new technologies such as these and effectively pairing them with testing strategies where they will be most effective will increase the number of new HIV diagnoses.

Address social norms that inhibit health care seeking behavior.

Many individuals do not seek medical care for HIV or other illnesses until they are symptomatic. For testing strategies to be used effectively to diagnose people infected with HIV, those individuals must seek out testing or come into contact with testing while seeking other health care. Strategies to educate and change social norms toward seeking health care will impact the entire spectrum of HIV.

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ENSURE THAT EVERYONE DIAGNOSED WITH HIV IS SUCCESSFULLY LINKED TO SYSTEMS OF CARE

Although HIV is now a manageable chronic disease, at first diagnosis most people experience fear, loss and despair. They describe being overwhelmed by their diagnosis and unsure of their future [1]. It is usually at the time of diagnosis that they are offered information, encouragement and a referral to another agency or department for ongoing care and support. Many times, after the diagnosis and referral they are left unsupported until they arrive at their first appointment with a case manager or clinician. This traditional version of linking someone to HIV medical care can result in many individuals falling between the cracks and not receiving life sustaining care until they become symptomatic and seek out assistance.

In 2010, roughly 1 in 4 Texans newly diagnosed with HIV were not successfully linked into care and as a result did not receive medical care. Across all newly diagnosed individuals, those least likely to be successfully linked to systems of care were males (particularly Black males), Blacks (particularly Black MSM and Black IDU), young people between 13 and 24, IDU and MSM/IDU, and individuals diagnosed from the Houston region. While Black men and women had both the largest numbers and highest rates of new infections, they were 28% less likely to be linked to care than Whites [2].

Successful linkage to medical care is important for both the individuals who are living with HIV and the communities in which they live and socialize. Successful linkage ensures that each individual is established in a supportive care system, that their HIV disease is being monitored and that antiretroviral therapy (ART) is initiated when deemed appropriate by their medical provider.

Engaging HIV infected individuals in treatment has prevention benefits as well. Increasing the number of individuals linked into care and successfully treating their HIV infection results in a reduced viral load for the individual and for the community. The resulting reduction in viral load is associated with decreases in new infections within communities [3].

Individuals who are not successfully linked to care when they are diagnosed experience significant delays in treating their HIV infection, resulting in decreased long-term health outcomes and increased likelihood of death [4,5,6]. In a study of previously out of care individuals accessing care in hospitals in Boston and Providence, 39% of people in the study entered care more than 1 year after their diagnosis and that 32% experienced delays of more than 2 years [7]. Additionally,

late entry into care increases the associated costs of care. Late entry into care can increase the mean medical cost by as much as \$64,040 compared to those that enter care early [8].

The reasons for not entering care are complex. Barriers to care may be personal, systems related or environmental [9]. Personal barriers such as feeling healthy, concerns about privacy and denial of their infection are common. One study found that 72% of individuals reported these types of personal barriers were the main reason they did not access care [10].

At the system level, people report not entering care because of cost, because they do not know how to navigate care systems, or were not successfully linked to care because the organization that diagnosed their infection did not have strong relationships with care providers [9]. Successful linkage is higher at facilities that both diagnose and treat HIV [10, 11]. Environmental barriers may include legal issues such as immigration status or community norms that discourage accessing health care [9].

Reducing HIV infections in Texas must include successfully treating those who are infected. Treatment, particularly early treatment, increases both the length and quality of life for Texans living with HIV. For this strategy to be effective, we must increase the number of individuals who are successfully linked into supportive care systems that include quality medical care. The National HIV/AIDS Strategy defines successful linkage to care as evidence of clinical care within three months of HIV diagnosis and sets a target of 85% of people newly diagnosed with HIV to be successfully linked by 2015 [12]. In 2010, only 69% of newly diagnosed Texans were linked to medical care within three months of their diagnosis with an additional 7% linked between 4 and 12 months after diagnosis [2].

The following priorities will guide the efforts of individuals and organizations in increasing the number of newly diagnosed Texans who are successfully linked into care.

Create and monitor linkage systems that are client centered

Linkage systems not only create access to medical care for people infected with HIV but also help to quickly identify acute barriers that may prevent individuals from following through with medical care. People are less likely to prioritize medical care if they are struggling with meeting basic needs such as food or housing. Limited access to food, clothing or housing as well as lack of transportation or the inability to leave work for medical appointments significantly decrease the odds of accessing care [13].

Successful linkage also depends on the ability of providers to address newly diagnosed people's acceptance of their diagnosis and readiness to enter treatment. Many people hold negative beliefs about health care systems or have cultural norms

that cause them to resist seeking medical treatment. Models that focus on addressing individual client barriers combined with rapid linkage to support services to decrease those barriers will most effectively increase linkage to care in Texas.

Additionally, while linkage systems should support all newly diagnosed individuals in accessing care there should be special emphasis on individuals who are identified as being at greatest risk of failing to be successfully linked to care. Using data from both national and state profiles, systems can identify these most at risk individuals and provide additional supports.

Create approaches to locate and link HIV infected individuals who know their status but are not in care

In addition to strengthening linkage systems to ensure that newly diagnosed individuals are enrolled in care, Texas must also focus on finding and engaging individuals who have previously been diagnosed but are not currently in care. In 2010, 33% of individuals diagnosed with HIV were not receiving medical care for their infection.

Use technology that supports linkage to care

There have been many advances in the use of electronic health records in the recent past. National strategies for improving the health of Americans call on increased use of electronic data to coordinate care. The ability to refer an HIV infected individual to care, send reminders of medical care appointments and monitor whether that person attends their appointments is increasingly possible through these new technologies. Electronic systems may also help to reduce barriers to care by sharing basic eligibility information such as proof of status or residency in order to speed enrollment in care.

Address social norms that inhibit seeking health care

People may not seek preventative health care and may forgo medical care if their condition is not making them feel sick or if other needs seem to be more pressing. For example, common reasons for not seeking HIV treatment include not feeling sick and family/work responsibilities. Strategies to educate and change social norms toward seeking health care will impact the entire spectrum of HIV engagement.

Address the stigma that prevents HIV infected individuals from seeking medical care

HIV stigma is well documented and compounded by negative attitudes toward HIV infection routes [14]. HIV infected individuals who perceive that they are or may be stigmatized by their community or medical provider, are less likely to engage in medical care [15,16]. People who are newly diagnosed often feel isolated and lack the support systems that other people living with HIV have developed making them particularly sensitive to rejection or stigmatizing attitudes. Strategies to address

stigma will reduce this barrier and may increase the number of HIV infected individuals seeking medical care.

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ENSURE THAT PEOPLE LIVING WITH HIV MAINTAIN ENROLLMENT IN CARE SYSTEMS

Once linkage systems address acute barriers to accessing care, long term chronic issues, such as substance abuse, mental health issues and housing, must be identified and solutions must be developed. Stabilizing a person in care means ensuring they continue to be engaged in medical care and often requires providing assistance navigating systems, addressing mental health and substance abuse issues, consistently meeting basic needs such as food and housing, and dealing with stigma or other negative social issues [1].

HIV affects the most vulnerable and disenfranchised individuals and communities. Up to a quarter of people infected with HIV may also have a mental health or substance abuse problem that requires treatment [2], both of which are associated with loss to follow up in medical care [3]. For people living with HIV, higher unmet support service needs and unstable housing are also associated with loss to care [1]. Assisting a person infected with HIV to address these issues is difficult and resources are often scarce.

Maintaining consistent engagement in care is vital to the success of HIV treatment. Patients out of care for even 3 months during their first year of therapy have been found to have worse survival rates, lower CD4 counts, higher viral loads and more comorbid conditions than those with consistent care [4].

In Texas, 67% of people infected with HIV accessed medical care but only 56% of people infected with HIV had uninterrupted care between 2007 and 2010. Those more likely to not be maintained in care include males (particularly Black males), Black and other racial/ethnic minority groups, people between 13 and 44 years old, IDU and MSM/IDU and individuals with a history of tuberculosis [5].

The reasons people with HIV drop out of care are similar to the reasons people fail to link to care. Struggles with meeting basic needs, mental health issues, substance use and financial barriers are frequently cited reasons for leaving HIV medical care. One issue that stands out when examining why people with HIV are not maintained in care is the relationship between the medical provider and the individual. If a person with HIV does not feel connected to their provider, that they are being treated as a disease and not a person, or that their needs or desires for treatment are not being heard, they are less likely to maintain their HIV care [6]. Important factors for sustaining engagement in care, according to a qualitative study of people living with HIV, are acceptance of HIV diagnosis, coping with substance use and mental health issues, coping with HIV related stigma, a positive relationship with a

health care provider, the availability of an external support system, and the ability to navigate practical barriers to care [7].

Reducing new HIV infections in Texas by treating those who are infected requires that people who are diagnosed and linked to care are supported in maintaining their enrollment in care. Maintaining people living with HIV in care requires addressing the systems issues, such as quality and availability of care, that lead individuals to leave care systems. The following priorities will guide the efforts of individuals and organizations in increasing the number of people with HIV who are consistently maintained in medical care.

Ensure that care systems include access to supportive services

Multiple studies have shown that individuals who receive ancillary services are maintained in care at significantly higher rates than those who do not [8,9,10,11,12]. In the past, people living with HIV and the organizations that support them have relied on HIV-specific funding programs, like the Ryan White Program, to provide funding for these supportive services. Continued reliance on HIV specific funding programs is problematic for several reasons. To ensure access to supportive services, care systems must include a diverse system of service organizations in order to maintain people living with HIV in care.

Create mechanisms to identify and respond to individuals at risk of dropping out of care

Some individual characteristics increase the likelihood that a person will fail to be maintained in systems of care, such as unstable housing, having a high number of unmet support service needs, a history of substance abuse are indicators that a person may fall out of care [13]. Biological markers such as higher CD4 counts and detectable viral loads may also indicate a person is likely to leave care [14]. Systems that support maintenance in care should develop methods to use these and other warning signs to initiate greater support in order to prevent people from being lost to care.

Increase the number of providers that treat HIV

Current HIV providers struggle to meet the medical care needs of the increasing population of people living with HIV. A 2010 national survey found that almost 80% of HIV specialists were carrying an annual caseload of more than 200 HIV infected patients [15]. Many areas in Texas rely on a single medical provider to care for all of the people living with HIV in the area. Strategies to expand the number of medical providers who treat HIV must be identified in order to effectively maintain people living with HIV in medical care systems.

Address the stigma that prevents HIV infected individuals from maintaining their HIV care

Negative attitudes toward people living with HIV are persistent and create stigma which has been shown to be a barrier to accessing and adhering to medical care

[16]. Stigmatizing attitudes have also been found among medical providers. These provider attitudes create particularly strong barriers to care that may result in a person developing distrust for medical providers in general [17]. The distrust not only causes them to initially leave care but may be a long term barrier to re-engaging that person into care systems. Strategies that address provider attitudes and societal views of HIV should be developed to remove these barriers.

Address social norms that inhibit seeking health care

People often will forgo medical care if their condition is not making them feel sick or if other needs seem to be more pressing. For example, common reasons for not seeking HIV treatment include not feeling sick and family or work responsibilities. Strategies to educate and change social norms toward seeking health care will have the potential to positively impact the entire spectrum of HIV engagement.

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ENSURE THAT INDIVIDUALS INFECTED WITH HIV ARE ADHERENT TO MEDICAL CARE REGIMENS

Individuals may be enrolled and maintained in care but may not be fully adherent to their medical regimen. Successful treatment of someone living with HIV is affected by the number of clinical visits they keep and the percentage of prescribed medication that is taken correctly [1,2] and results in higher CD4 counts and reduced viral load. For a person infected with HIV to realize the full benefits of treatment, they must adhere to their treatment regimen, meaning they must consistently maintain their clinical visits and take all medications as prescribed.

Successful treatment of HIV has resulted in a significant increase in the life spans of people living with HIV. A 2008 study found that mortality rates for people infected with HIV are becoming more similar to the general population and that HIV infected individuals are increasingly more likely to die from something other than HIV [3]. In Texas, HIV related deaths continue to decrease. Between 2002 and 2008 the mortality rate among HIV cases in Texas decreased from 7.0 to 5.7 deaths per 100,000 per year [4].

In addition to increasing the life span of people living with HIV, successful treatment has been shown to reduce new HIV infections [5]. Successfully reducing the viral load in individuals with HIV reduces the collective amount of virus present in a community thereby reducing the likelihood that a person who is not infected with HIV will contract the virus if exposed.

Newly released treatment guidelines recommend antiretroviral therapy for all individuals infected with HIV. These guidelines also recommend tests to measure CD4 and viral load every 3 to 6 months highlighting the importance of ongoing clinical follow-up.

Maintaining people infected with HIV in systems of care is the first step to achieving adherence. The inability to adhere to what are often complex medical regimens is often due to lack of consistent access to basic needs such as housing or food. At the same time, access to basic needs does not guarantee adherence to a medical regimen. A meta-analysis of North American studies on adherence to antiretroviral therapy estimated that only 55% of the 17,573 people achieved an adequate adherence level [6]. Of people living with HIV in Texas who are receiving care supported through public funds, only 72% had evidence of two or more medical visits in 2011 and only 61% of those had evidence of 2 or more lab tests to measure CD4 cell counts. Additionally, 33% of people with an AIDS diagnosis in Texas did not have evidence of a prescription for antiretroviral therapy and only 21% of

people living with HIV received an assessment or counseling regarding adherence to their treatment [4].

If Texas is to increase the health outcomes of people living with HIV and benefit from the preventive effects of HIV treatment, more people infected with HIV must be prescribed and remain adherent to antiretroviral therapies. The following priorities will guide efforts of individuals and organizations in increasing the number of Texans living with HIV who are adherent to their medical regimens.

Ensure access to medication

The lifetime cost of HIV care is estimated at \$618,900, 73% of which is antiretroviral medications [7]. This represents a substantial barrier to accessing medication for a population that is largely living at or below the federal poverty guideline. Strategies must be developed that ensure that everyone who is living with HIV has access to life saving medications.

Create a focus on adherence that includes clients, clinicians and supportive services providers

Adherence education is most effectively conducted by clinicians of medical case managers who work with people living with HIV, however increasing the awareness of adherence issues across all providers that may come into contact with a person living with HIV is important. Often, providers of support services, such as food or housing do not realize their services actually support a person's ability to adhere to their medical regimen. By increasing these providers awareness of the importance of adherence and their role in supporting adherence to medical regimens, people at risk of non-adherence may be identified and service specific strategies to support adherence may be created.

Use technologies to monitor and support adherence

The use of technology to support adherence is not new. Early in the HIV epidemic, programs were using technology, such as beepers, as medication reminders for people living with HIV. Technologic improvements in personal devices and in medical records should be explored to determine their best use in monitoring adherence, alerting providers when someone is at risk of non-adherence and assisting people living with HIV in maintaining their adherence.

Address the stigma that prevents individuals infected with HIV from adhering to treatment

Negative attitudes toward people living with HIV are persistent and create stigma that has been shown to be a barrier to accessing and adhering to medical care [8]. People infected with HIV may miss medication doses because they do not want to be seen taking their medication. They may also miss medical appointments because they are afraid of being seen entering a known HIV treatment facility. Strategies that address stigma should be developed in order to promote adherence to HIV treatment regimens.

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TOWARD IMPLEMENTATION

The National HIV Strategy encourages the development of statewide HIV plans that coordinate planning, resources and activities. Texas is a large state with a diverse set of cultures, environments and systems that influence individuals' choices to reduce risk behavior, seek out testing or engage in medical care. These socio-ecologic factors vary across communities and require locally developed responses to be most effective,

The Texas HIV Plan provides a generative framework that allows individual, organizational and community responses to HIV to be coordinated with local, regional and statewide activities. This plan does not prescribe specific activities as a means of achieving narrowly defined goals or objectives, but instead offers paths to achieving the domains and priorities as a means to lowering HIV infections in Texas. These paths are intended to inform and guide locally developed action to provide services to HIV infected and affected communities.

Appropriate implementation of this plan will required thoughtful coordination across many different programs. The traditional response to coordination across HIV programs has been the examination of funding to ensure services are provided without gaps and that duplication of efforts are eliminated. While coordination of funds is vital, this type of coordination alone will not meet the goal of this plan. A more mindful and recurring engagement between partners is necessary; one that is focused not only on the allocation of funds but also on maximizing the impact of activities in order to create change at a population level. This will require examination of how services are provided, who is best suited to provide those services, what relationships can amplify those activities and how those activities are impacting individual, environmental and systems factors that influence HIV relevant behaviors.

DSHS plans to conduct formal and informal engagements with partners to discuss this plan and the framework it sets forth. These engagements will allow DSHS to continuously evaluate the ideas described in the plan, generate refinements and examine strategies. This process will aid DSHS and partners in developing meaningful implementation plans that impact HIV in Texas.

EVALUATION

Evaluating Implementation

Evaluation of the plan's implementation will utilize developmental evaluation methods. Developmental evaluation allows for exploration and innovation while maintaining the broader goal of the plan. This type of evaluation is particularly useful when addressing the complexity of large social change issues. As individuals and organizations engage with the strategies laid out in the Texas HIV plan, DSHS expects that refinement of the priorities will continue and that new and novel solutions will be generated. Developmental evaluation does not require strict fidelity to specific actions or responses but instead allows and evaluates innovation as an ongoing process. New innovations are evaluated and adjusted based on their impact on achieving the broader goals. This type of evaluation is particularly useful when addressing the complexity of large social change issues.

Evaluating Success

The Texas HIV Plan creates broad pathways to achieving each of the spectrum domains and progress is best evaluated through the use of population based measures. Not all of the population based measures that follow are fully developed or operationalized. DSHS is committed to continuous work toward fully developing meaningful measures that provide feedback on efforts to achieve the domains and priorities of this plan.

Evaluating access to and engagement in prevention activities by individuals at highest risk of HIV infection

The National HIV Behavioral Surveillance System (NHBS) monitors risk behavior among broad based high risk populations (men who have sex with men, injection drug users and high risk heterosexuals). NHBS annually rotates data collection on each risk population and collects information on risk behaviors, HIV testing history and exposure or use of prevention services. Although only two locations in Texas are included in NHBS data collection (Dallas and Houston), these two cities represent over half of the living cases and new diagnoses in Texas. Dallas NHBS data is collected by DSHS while Houston data is collected by the Houston Health Department. NHBS data from Houston is not yet available for DSHS to analyze. Ongoing discussions between these organizations will provide access to this data in the future which, when combined with data from Dallas will allow for a clearer understanding of access to and use of prevention activities.

What follows is a summary of current NHBS data from Dallas. By comparing the data below with data collected in future iterations of NHBS, DSHS will be able to

determine progress in ensuring that high risk populations have access to and are utilizing prevention activities.

NHBS data from 969 high risk heterosexuals were collected in 2007.

Exposure to Prevention Activities

187 participants stated they had received some sort of HIV prevention activity in the previous 12 months

14% received free condoms

6% engaged in a one on one discussion about HIV prevention

2% participated in a formal group discussion about HIV prevention

Risk Behaviors

76.8% of male participants who had a main partner had engaged in unprotected sex with that partner

67.0% of male participants who had a casual partner had engaged in unprotected sex

86% of male participants that had exchanged sex for money or drugs with a female partner had engaged in unprotected sex

87.7% of female participants that had a main partner had engaged in unprotected sex with that partner

80.6% of female participants that had a casual partner had engaged in unprotected sex

82.5% of female participants that had exchanged sex for money or drugs had engaged in unprotected sex

HIV Testing

Of the 965 participants tested for HIV, 1% were HIV positive and none of the HIV positive individuals were aware of their infection.

NHBS data on MSM were collected from 418 individuals in 2008.

Exposure to Prevention Activities

42% reported receiving free condoms

Of this 42%, 16% reported not using the condoms they received

9% received individual HIV counseling

2% participated in formal group discussion regarding HIV prevention

Risk Behaviors

61% of participants reported unprotected anal sex with main partners in the previous 12 months

46% of participants reported unprotected anal sex with a casual partner in the previous 12 months

46% of participants reported unprotected anal sex in exchange for money or drugs

HIV Testing

461 participants were tested for HIV. 26% tested positive. Among the 119 positive persons, 54% were unaware of their HIV positive status.

83% reported having ever been tested for HIV
17% had never been tested
31% had at least one test and 22% had three to four tests.

NHBS data from 621 injection drug users were collected in 2009.

Exposure to prevention

249 persons reported they had been offered a free prevention product (condoms, sterile needles, or cooking equipment)

172 persons reported that they used the free prevention products they received

82 participants had engaged in a one on one discussion of ways to prevent HIV transmission

41 participants had been involved in a group discussion on ways to prevent HIV transmission

420 reported ever participating in a drug or alcohol treatment program

267 reported participating in a drug or alcohol treatment program within the past 12 months

Risk Factors

75% reported they had not always used a sterile needle to inject in the past year

Of participants that responded to each question:

60% shared a needle with someone

95% shared some type of injection equipment

88% divided their drugs using a syringe someone else had previously used

Of participants that responded to sexual risk questions:

86% of male participants engaged in unprotected sex with their main female partner

75% of male participants engaged in unprotected sex with their female casual partner

HIV Testing

Of the 620 participants tested for HIV, 2% (12) were HIV positive and 42%(5) of these HIV positive individuals were unaware of their infection.

86% reported having ever been tested for HIV

50% had 1-2 tests in the past two years

Evaluation of progress toward complete diagnoses of everyone infected with HIV in Texas

Evaluation of the progress toward complete diagnoses of everyone infected with HIV is currently limited. Developing an estimate for the number of people who are infected with HIV but have not yet been diagnosed is difficult and inexact. Currently, this estimate is calculated using the Centers for Disease Control and Prevention's (CDC) estimated back calculation methodology. To calculate the undiagnosed estimate, the CDC's national proportion of undiagnosed HIV estimate (21%) is applied to the number of diagnosed living cases in an area. The calculation uses the formula :

$$\frac{.21}{(.79)} \times (\text{diagnosed living}) = (\text{estimated undiagnosed})$$

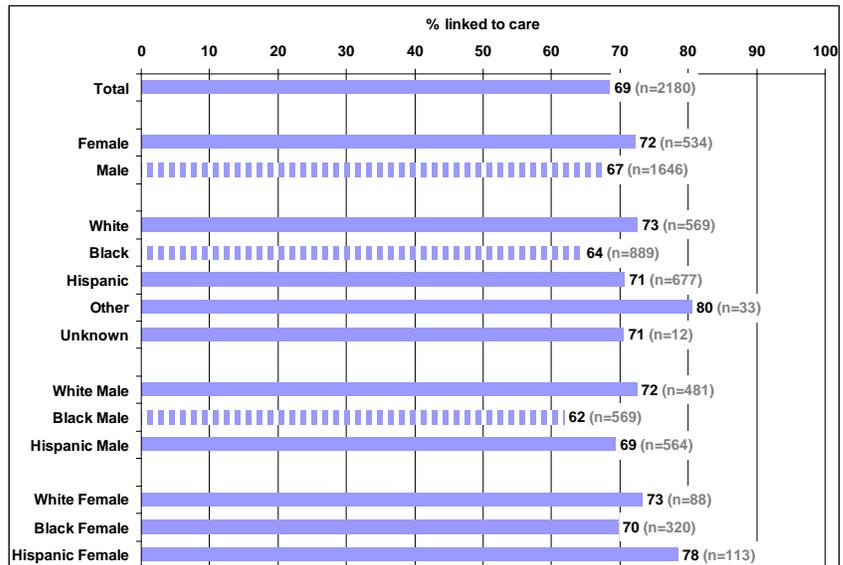
This formula is problematic because efforts to increase testing, and therefore reduce the number of undiagnosed individuals, results in an increased number of diagnosed living cases. As the number of diagnosed living cases increases (in Texas this is a 5% annual increase), the estimated number of undiagnosed individuals will also increase. Using this methodology makes evaluating achievement in reducing the number of undiagnosed cases impossible.

DSHS is currently exploring the development of other methods of calculating the impact of testing programs and other activities intended to promote HIV diagnosis on the number of undiagnosed individuals. Exploration of the use of HIV incidence data (estimated new infections) and new diagnosis data in combination may provide a better understanding of progress toward the goal of achieving complete diagnoses of everyone infected with HIV in Texas.

Evaluating progress toward successfully linking everyone diagnosed with HIV into systems of care

Successful linkage to care is defined as evidence of clinical care (evidence of a CD4 count, viral load test, antiretroviral therapy, or outpatient/ambulatory medical care visit) within three months of HIV diagnosis. To evaluate linkage to care, DSHS divides the number of newly diagnosed people who are successfully linked to care within three months by the total number of newly diagnosed people in a given year.

Percent of Newly HIV Diagnosed Individuals Linked Into Care Within Three Months of Diagnosis by Sex and Race, 2010.

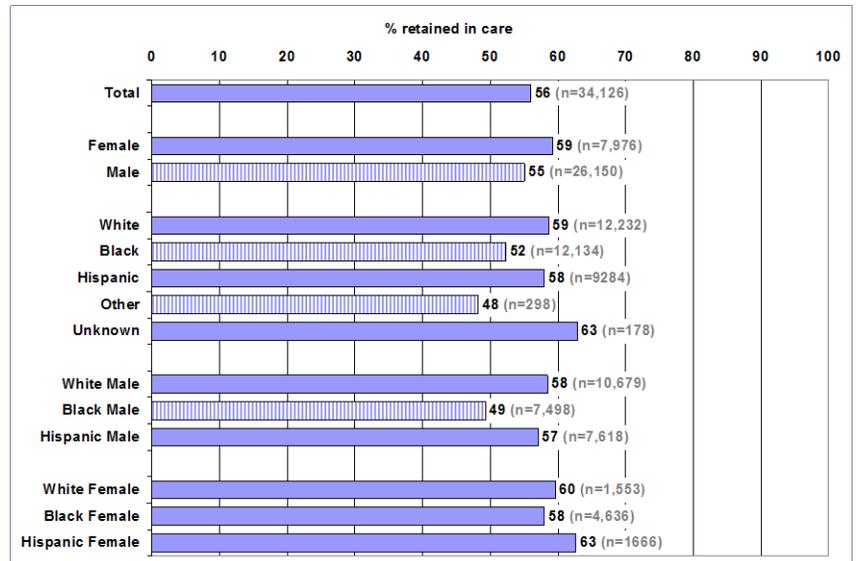


Data Source: Texas eHARS data as of July 2011 and HIV Services Unmet Need Project.

Evaluating progress toward maintaining people living with HIV in systems of care

To evaluate success in maintaining enrollment in medical care, DSHS will monitor retention in care rates. Retention in care is calculated by dividing the number of people living with HIV in a given year with evidence HIV related medical care by the number of people living with HIV in the previous 4 years. People living with HIV with evidence of HIV related medical care consecutively for the previous 3 years or 2 years are also considered to be retained in care. In terms of these to latter groups, the measure captures retention in care for people living with HIV who came into care after the start of the previous 4 years because they were a new diagnosis or they were previously out of care.

Percent of PLWH Retained in HIV-Related Care by Sex and Race/Ethnicity, 2007-2010



Data Source: Texas eHARS data as of July 2011 and HIV Services Unmet Need Project.

Evaluating progress toward full adherence to medical care for people living with HIV

DSHS has not yet developed an adequate method to evaluate the number of people living with HIV who are adherent to their medical regimen. Adherence encompasses attending all medical care appointments as well as, when prescribed, taking antiretroviral therapy as directed. Available data that may be used for this measure include Texas HIV Medication Program (THMP), Texas' AIDS Drug Assistance Program, prescription data and medical visits data in the AIDS Regional Information and Evaluation System (ARIES). Using prescription refill data from THMP may serve as a proxy measure for evaluating adherence to an antiretroviral therapy regimen but does not accurately reflect at what level an individual actually took their medication as directed. It will not reflect the number of missed doses. Similarly, using medical visit data in ARIES does not provide a clear picture of adherence to medical visit schedules. ARIES will reflect the number of appointments an individual actually attended but not the number medical appointments that an individual missed.

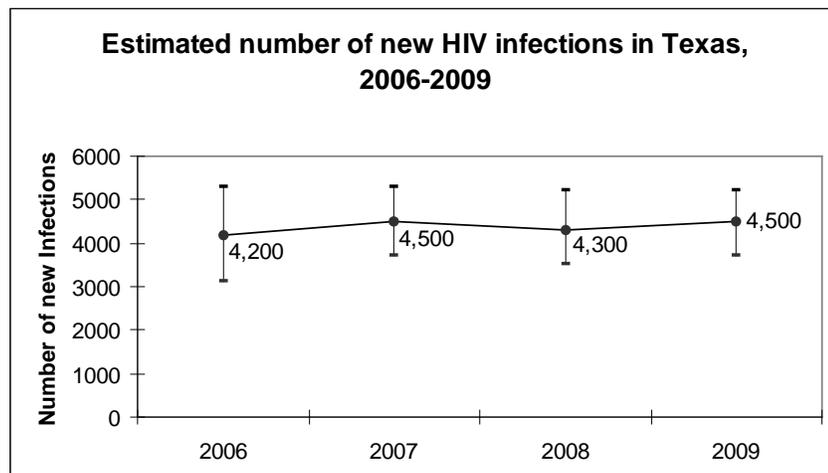
DSHS is also examining methods that will evaluate viral load data at a population level. Calculating the proportion of diagnosed people living with HIV who have a viral load below the level of detection is problematic. Currently, viral load data is

not complete and DSHS has ongoing efforts to increase reporting of this data. Developing an adequate method of determining viral load at a population level is important to the evaluation of this plan because reducing the amount of virus present in communities is the basis of using treatment to prevent HIV. Reduced viral load requires enrollment in and adherence to care for most people living with HIV which means that an adequate measure of viral load may also serve as a proxy for adherence to medical regimens.

Evaluating the progress toward reducing the number of new HIV infections in Texas

To evaluate the overall impact of this plan on reducing new infections in Texas, DSHS will monitor HIV incidence estimates. HIV incidence estimates are based on the methodology developed by the CDC that combines results from a laboratory test which indicate recent or long-term infections on a population level with testing and treatment history from newly diagnosed HIV cases.

Estimated HIV infections displayed include the 95% confidence interval. The confidence interval is the range of values in which the estimated incidence number will fall 95% of the time (i.e. 19 times out of 20)



APPENDICES

APPENDIX A
USE OF RYAN WHITE PART B FUNDS

RYAN WHITE PART B IMPLEMENTATION

The Texas Department of State Health Services intends to conduct a series of engagements with partners (including Ryan White Part A, Part C, Part D and Part F partners) to discuss the framework and ideas described in this plan. These discussions will further refine the plan and will result in the development of an implementation plan that outlines long term strategic activities to achieve the goals of the plan.

In the short term, DSHS has ensured that the use of Ryan White Part B funds are in line with and support the domains and priorities outlined in this plan.

Linking people diagnosed with HIV to systems of care

Texas Part B funds are supporting early intervention services (\$150,905) which link newly diagnosed individuals into care systems, and outreach services (\$67,127) designed to locate people living with HIV who are not enrolled in medical care and link them to care systems.

Maintaining enrollment in systems of care

Roughly one half of people living with HIV in Texas who are enrolled in care rely on funds managed by the Texas Department of State Health Services HIV/STD Prevention and Care Program to support their medical care. Texas Part B funds are allocated to support outpatient ambulatory medical care (\$5,951,561) for these individuals. Excluding funds supporting ADAP and administration, this investment in medical care accounts for one third of Part B funds in Texas.

Part B funds are also allocated to support health insurance premium and cost sharing assistance programs (\$1,526,977) to assist individuals in maintaining medical care by ensuring that they are able to maintain their enrollment in health insurance programs. Part B funds are used to support oral health care (\$2,834,257), medical nutrition therapy (\$104,500), home health care (\$1,000) and home and community based health services (\$267,700). These programs support maintenance in care by meeting the additional health care needs of people living with HIV in Texas.

Untreated mental health and substance abuse issues are significant barriers to maintaining enrollment in care for people living with HIV. Part B funds in Texas are allocated to support mental health services (\$309,768), psychosocial support services (\$26,689) and outpatient substance abuse services (\$76,770).

Meeting the basic needs of people living with HIV is essential in maintaining their enrollment in systems of care. Texas Part B funds are allocated to emergency financial assistance (\$61,560), food bank/home-delivered meals (\$184,890), legal services (\$20,000), housing services (\$1,496) and medical transportation (\$303,879).

Maintaining people living with HIV in care often requires coordination across multiple providers and assisting individuals in navigating complex systems to access services. Part B funds in Texas are allocated to medical (\$1,416,122) and non-medical (\$1,416,122) case management services for this purpose.

Supporting adherence to medical regimens

The costs of HIV medications are a barrier to many people living with HIV. Texas Part B funds support local AIDS pharmaceutical assistance programs (\$1,079,162) the AIDS Drug Assistance Program (\$57,710,398) to ensure that access to medication.

APPENDIX B
SCSN

STATEWIDE COORDINATED STATEMENT OF NEED

STATEWIDE CROSSCUTTING ISSUES

Out of Care

Approximately one out of every three Texans living with HIV did not receive HIV related treatment in 2010. Treatment for people living with HIV improves health and extends life. Treatment also reduces further transmission by reducing the amount of virus in a community. Although the estimated percentage of people living with HIV has declined slightly from 2007 (38%) to 2010 (33%) the estimated number of people living with HIV who are not in medical care has remained stable (21,351 and 21,553 respectively). Males are more likely to have unmet need and among males, Black, Hispanic and other racial/ethnic groups are more likely to have unmet need.

Undiagnosed / Late diagnosis

The Centers for Disease Control and Prevention estimates that as many as 21% of people infected with HIV are not aware of their infection. Using the CDC estimate, there are roughly 17,000 people living without effective treatment for their infection, which shortens their lives and promotes further transmission. While increasing the number of people with HIV who are aware of their infections is critical, it is also important to consider when in the course of infection they are diagnosed. Late diagnosis is defined as a case with an initial HIV diagnosis and an AIDS diagnosis that occur within a 12 month period. Roughly 1/3 of new HIV diagnoses in Texas are late diagnoses.

Limited resources for an increasing population of people living with HIV

The number of people living with HIV in Texas increased by 16% between 2007 and 2010 while funding to support programs that provide care for these people has remained relatively level. Maintaining people living with HIV in systems of care requires that their basic needs such as access to food are met. Funding for support services such as food bank are being reduced in order to meet the rising medical care needs of this growing population. At the same time, other public programs that meet these basic needs are reaching their capacity.

Mental Health and Substance Abuse

Approximately 25% of people living with HIV may have an untreated mental health or substance abuse problem both of which are associated with loss to follow up in medical care. A study commissioned by DSHS in 2010 found that significant barriers to accessing mental health and substance abuse programs exist across Texas. The study found limited treatment options that address HIV and mental health or substance abuse issues.

Provider Capacity

The number of Texans living with HIV increased by 16% between 2007 and 2010 while the number of providers who treat HIV has remained relatively level. Many of these medical providers are operating at near capacity and some areas of Texas are dependent on single providers to care for everyone living with HIV in that area. The Affordable Care Act will increase the demand for HIV medical care as more people living with HIV will have access to programs like Medicaid. The current care system will not be able to meet this expanded need for care.

Maintenance in care / Adherence to Care

Almost one in four Texans move in and out of care from one year to the next. Inconsistent participation in care negatively affects adherence to medical regimens which in turn decreases the health outcome for these people.

Patient Protection and Affordable Care Act (PPACA)

PPACA will have transformative effects on the delivery of HIV care services. Roughly half of people living with HIV in Texas who are engaged in care, rely on Ryan White and Texas general revenue funds to pay for their medical care. PPACA will open new payer sources to support these individuals medical care. Although the large providers of HIV medical care in Texas are equipped to manage the complexity of third party billing, adjusting to changes in revenue may create issues for these programs. However, not all the services or activities that people living with HIV rely on may be reimbursable through the new payer systems and many providers of non-medical services will not be eligible to bill these new payers even if their services are reimbursable.

CLIENT IDENTIFIED NEEDS

The Texas Department of State Health Services divides the state into 7 regions in order to effectively assess and plan for the needs of people living with HIV. People living with HIV in each region are surveyed in order to determine which services are most need and used. Based on these regional assessments, the most frequently identified needs for people in care (defined as having had a CD4, viral load, antiretroviral therapy prescription or HIV related medical visit in the previous 12 months) and for people out of care are listed below.

In Care	Out of Care
Core Medical Services Health Insurance Medical Case Management Medication Assistance Mental Health Counseling Nutritional Counseling OAMC Oral Health Care Specialty Care	Core Medical Services Early Intervention Services Health Insurance Medical Case Management Medication Assistance Mental Health Therapy OAMC Oral Health Care Specialty Care

Vision	
Support Services Case Management – Non Medical Emergency Financial Assistance Food Bank Housing Transportation	Support Services Case Management – Non Medical Emergency Financial Assistance Food Bank Housing Transportation

While not every region conducts assessments on special populations of people living with HIV, data on the needs of IDU, Recently Released, and Transgender people living with HIV were assessed in some regions.

Based on regional assessments that did examine the needs of special populations of people living with HIV, the following were identified as the most frequently needed services and barriers to accessing services.

IDU	Recently Released	Transgender
Needs Housing Emergency Financial Assistance Oral Health Care Food Bank	Needs Housing Medication Assistance navigating systems of care Medical Case management	Needs Mental health counseling focused on transgender issues Housing Medical care – including access to hormone therapy and physicians who understand drug interactions with ART Substance Abuse Treatment
Barriers Limited access to residential treatment Concerns over disclosure of status at treatment centers	Barriers Recidivism	Barriers Substance use Survival Sex Violence Stigma

APPENDIX C
PLAN DEVELOPMENT PROCESS

PLAN DEVELOPMENT

The Texas HIV Plan was developed with input from individuals and organizations responsible for the prevention and treatment of HIV across Texas. In the summer of 2011, DSHS convened a meeting of Ryan White partners that included representation from Part A, Part C, Part D and Part F programs. Over 75 people participated, including consumers from Part A planning councils, AETC representatives, prevention programs and national experts. During this meeting, DSHS provided an updated overview of HIV in Texas and the opportunities for Ryan White Programs in the coming years. Participants engaged in facilitated discussions on the future of HIV treatment, integration and regional planning. Information taken from this meeting assisted DSHS in forming the initial plan for the Texas spectrum of HIV engagement and the priorities that would be listed under each domain.

Additional input on the development of the plan included presenting the spectrum and priorities to the Texas Community Planning Group which is responsible for statewide HIV prevention planning in Texas. The spectrum was also presented to a meeting of individuals responsible for HIV care services planning in Texas. These individuals are responsible for planning for Ryan White Part A and B programs in Texas. Feedback from these meetings assisted DSHS in further refining the spectrum of engagement and the priority statements under each domain.

Final input on the Texas HIV Plan was taken during a meeting, convened by DSHS, in March of 2012. During this meeting, DSHS presented and discussed the spectrum of engagement and the priorities with representatives from Ryan White Part A, Part C, Part D and Part F programs. Also in attendance were representatives from planning councils, the Texas Community Planning Group, Texas Medicaid, and national experts. The resulting feedback was used to further refine and clarify the spectrum domains and priorities.