Houston Area Comprehensive HIV Prevention and Care Services Plan

2017 - 2021

Capturing the community's vision for an ideal system of HIV prevention and care for the Houston Area

Funding acknowledgment:
The development of this document was made possible by funding from the Ryan White HIV/AIDS Treatment Extension Act of 2009. This publication was also supported by Cooperative Agreement Number 1U62PS003672.01 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Disclaimer:
This document was developed from October 2015 to July 2016 and submitted to the Health Resources and Services Administration (HRSA) HIV/AIDS Bureau (HAB) and to the Centers for Disease Control and Prevention (CDC) Prevention Program Branch (PPB) on September 30, 2016. Its contents reflect the information and data that were available during that timeframe. New information and data on the topics addressed in this document may have become available since the time of publication. Moreover, activities put forth in this document may have been completed or altered during implementation.

Suggested citation:
The Houston Area Ryan White Planning Council and The Houston HIV Prevention Community Planning Group. Houston Area Comprehensive HIV Prevention and Care Services Plan (2017 – 2021). September 30, 2016.

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Contributors

This document is the result of countless hours of participation and effort by members of the Houston Area community who are committed to improving the system of HIV prevention and care. Individuals who contributed their time and expertise include people at risk for and living with HIV, consumers of HIV prevention and care services, providers of HIV prevention and care services, providers of other health, public health, and social services in the Houston Area, and other concerned stakeholders and community members. The diversity of the Houston Area community in terms of geography, age, sex, race/ethnicity, sexual orientation, gender identity, and socio-economic circumstance is well reflected in this list as well. Many volunteered their time while others were compensated by their agencies to provide subject matter expertise or administrative support to the process. They are listed below.

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Agency Participation

The development of this document was informed by the experience and expertise of a diverse cross-section of health, public health, and social services agencies from the Houston Area, including those that provide HIV prevention and care services. The list of participating agencies includes representation from all sectors and from several non-traditional partners, some of whom had never before participated in HIV prevention and care services planning in the Houston Area. There are funded and non-funded HIV prevention and care services providers on this list, providers of other health, public health, and social services, Federally Qualified Health Centers (FQHCs) and hospital systems, various task forces and coalitions dedicated to advocating on behalf of people at risk for or living with HIV/AIDS, and the two local HIV Planning Bodies, under whose leadership this document was developed. They are listed below:

- AIDS Education and Training Center
- AIDS Foundation Houston
- African American State of Emergency Task Force
- Area Agency on Aging, Houston-Galveston Area Council
- Association for the Advancement of Mexican-Americans, Inc.
- Baylor College of Medicine
- Baylor Teen Health Clinic
- Bee Busy, Inc.
- Catholic Charities
- Change Happens!
- Community Development Advisory Council
- Community Health Choice, Inc.
- Dr. Gorden E. Crofoot's Office
- END (End New Diagnoses) HIV/AIDS Houston
- Harris County Precinct One
- Harris County Public Health, Ryan White Grant Administration
- Harris Health System
- HEB Pharmacy
- Hepatitis C Task Force
- Heterosexual HIV Awareness Task Force
- HIV and Aging Coalition
- Houston Area Ryan White Planning Council
- Houston Area Community Services, Inc.
- Houston Health Department, Bureau of HIV/STD and Viral Hepatitis Prevention
- Houston Health Department, Bureau of Epidemiology
- Houston HIV Prevention Community Planning Group
- Houston Medical Monitoring Project
- Houston Metropolitan Chamber of Commerce
- Houston Regional HIV/AIDS Resource Group, Inc.
- Houston Independent School District
- Just A Touch of H.E.L.P., Inc.
- Latino HIV Task Force
- Legacy Community Health Services, Inc.
- Living Without Limits Living Large, Inc.
- M-Pact (the MSM Task Force)
- Nehemiah Helping Hands Project
- Planned Parenthood Gulf Coast, Inc.
- Positive Women's Network
- Rice University Center for Engaged Research & Collaborative Learning
- Ryan White Part C Urban
- Ryan White Part D
- Saint Hope Foundation
- Saint John's Church, AIDS Ministry
- Serving the Incarcerated and Recently Released Partnership of Greater Houston
- Texas Children's Hospital
- Texas Department of State Health Services
- Texas HIV/AIDS Coalition
- Texas HIV Medication Program Advisory Committee
- Thomas Street Health Center
- Transgender Foundation of America
- University of Houston
- University of Houston School of Social Work
- University of Texas Health Science Center
- Urban AIDS Ministry
- Youth Task Force

September 22, 2016

Dear Project Officers, Colleagues, and Community Members:

Together, the Houston HIV Prevention Community Planning Group (CPG) and the Houston Area HIV Services Ryan White Planning Council (RWPC) are pleased to announce that both planning bodies **concur** with the following submission of the 2017-2021 Comprehensive Plan for HIV Prevention and Care Services in response to the guidance set forth for health departments and HIV planning groups funded by the CDC's Division of HIV/AIDS Prevention (DHAP) and HRSA's HIV/AIDS Bureau (HAB) for the development of an Integrated HIV Prevention and Care Plan.

The 2017-2021 Comprehensive Plan for HIV Prevention and Care Services is a collaborative project of the Houston Health Department - Bureau of HIV/STD & Viral Hepatitis Prevention, CPG, RWPC and Office of Support, Harris County Public Health - Ryan White Grant Administration, and the Houston Regional HIV/AIDS Resource Group, Inc. The Plan represents coordination across multiple funding streams and programs, including DHAP funding for HIV prevention services in Houston/Harris County; HAB Ryan White Program Part A funding for HIV care and treatment services in the Houston Eligible Metropolitan Area (EMA); and HAB Ryan White Program Part B and Texas Department of State Health Services State HIV Services funding for HIV care and treatment services in the Houston Health Service Delivery Area (HSDA). Moreover, the Plan encompasses cooperative planning within the Houston Area HIV prevention and care system, and between the local HIV system and other local, state, and national health and social service sectors.

Membership from both planning bodies represented a majority of participants on the Comprehensive Plan Leadership Team and Workgroups responsible for providing development guidance and review of the Plan, and will continue participation throughout implementation and monitoring of the Plan. Both planning bodies reviewed the Plan submission to the CDC and HRSA in August 2016 to verify that it describes how programmatic activities and resources are to be allocated to the most disproportionately affected populations and geographical areas that bear the greatest burden of HIV disease. The planning bodies **concur** that the Plan submission fulfills the requirements put forth by the Funding Opportunity Announcement PS12-1201 and the Ryan White HIV/AIDS Program legislation and program guidance.

The signatures below confirm the concurrence of CPG and RWPC with the 2017-2021 Comprehensive Plan for HIV Prevention and Care Services.

Sincerely,

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Community Co-Chair

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Houston Area HIV Services Ryan White Planning Council

Vision

The greater Houston area will become a community with an enhanced system of HIV prevention and care. New HIV infections will be reduced to zero. Should new HIV infections occur, every person, regardless of sex, race, color, ethnicity, national origin, age, familial status, marital status, military status, religion, disability, sexual orientation, genetic information, gender identity, pregnancy, or socio-economic circumstance, will have unfettered access to high-quality, life-extending care, free of stigma and discrimination.

Mission

The mission of the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan is to work in partnership with the community to provide an effective system of HIV prevention and care services that best meets the needs of populations living with, affected by, or at risk for HIV.

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Executive Summary

The mission of the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan (2017 Comprehensive Plan) is to work in partnership with the community to provide an effective system of HIV prevention and care services that best meets the needs of populations living with, affected by, or at risk for HIV.

The purpose of the 2017 Comprehensive Plan is to: (1) identify HIV prevention and care needs, existing resources, barriers, and gaps within the Houston Area; (2) outline a specific, measurable, achievable, realistic and time-phased (SMART) Integrated HIV Prevention and Care Plan designed to leverage existing and/or new resources and partnerships to meet HIV prevention and care needs, remove barriers, and bridge gaps; and (3) describe the process by which implementation of the Integrated HIV Prevention and Care Plan will be measured, evaluated, and adjusted to best meet the needs of people living with or at-risk for HIV in the Houston Area.

The 2017 Comprehensive Plan for HIV Prevention and Care Services is a collaborative project of Houston Health Department - Bureau of HIV/STD & Viral Hepatitis Prevention, the Houston HIV Prevention Community Planning Group, the Ryan White Planning Council & Office of Support, Harris County Public Health - Ryan White Grant Administration, and the Houston Regional HIV/AIDS Resource Group, Inc.

The plan is intended for use by local HIV planning bodies, Administrative Agents and grantees, providers of HIV prevention and care services, both new and established community partners, and other decision makers as they respond to the needs of people living with or at-risk for HIV over the next five years. The plan is organized into three sections summarized below.

Section I: Statewide Coordinated Statement of Need/Needs Assessment - HIV prevention and care services are provided in the Houston Area throughout three distinctly defined service areas:

- *The Houston Metropolitan Statistical Area (MSA)* includes Harris County and the cities of Houston, Baytown, and Sugarland, TX. The Centers for Disease Control and Prevention's (CDC) HIV prevention funding and activities are administered in in the MSA.
- *The Houston Eligible Metropolitan Area (EMA)* is the geographic service area defined by the Health Resources and Services Administration (HRSA) for the Ryan White HIV/AIDS Program Part A and Minority AIDS Initiative (MAI). It includes Chambers, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties.
- *The Houston Health Services Delivery Area (HSDA)* includes the six counties of the Houston EMA plus four additional counties: Austin, Colorado, Walker, and Wharton. The Houston Regional HIV/AIDS Resource Group (TRG) administers TDSHS Ryan White HIV/AIDS Program Part B and State of Texas HIV care services funding and activities in the HSDA. Epidemiologic data for the HSDA are provided by TDSHS.

Together, the Houston MSA, EMA, and HSDA cover 9,415 square miles of southeast Texas, or 3.5 percent of the entire state, and are home to more than 6.1 million residents, the vast majority of whom (74%) reside in Houston/Harris County (U.S. Census Bureau, 2015).

There were 22,551 people living with HIV (PLWH) in Houston/Harris County by the end of 2013, and 26,041 PLWH in the Houston EMA by the end of 2015. In 2014, 1,288 new HIV diagnoses were reported among people aged 15 or older in Houston/Harris County. Since 2004, the rate of *new* HIV diagnoses in the Houston Area has remained relatively constant, though in 2014, 4 out of 5 new HIV diagnoses were among males, and 43% of the newly reported male cases were African American. The rate of new HIV diagnoses in African American men was 4.6 times the rate of white men, and 2.8 times that of Hispanic men. African American women were newly diagnosed with HIV at a rate 21.1 times that of white women and 5.8 times that of Hispanic women. Among males, men who have sex with men (MSM) was the largest risk category, with 90% of all newly diagnosed cases among whites and Hispanics and approximately 80% among African Americans being categorized as MSM. The two age groups with the highest rate of new HIV diagnoses were the age groups 15-24 and 25-34. African Americans 15-24 years of age had an HIV diagnosis rate 7.6 times that of whites. Similarly, the rate in African Americans 55 years or older was 7.7 times that of their white counterparts. It is further estimated that an additional 5,448 people in the Houston EMA are currently HIV-positive but unaware of their status, and that 6,333 individuals *are* aware of their HIV-positive status, but are not in HIV care.

The **Houston EMA HIV Care Continuum** (HCC) describes community-wide access and service gaps in HIV medical care. In 2014, 75% of all diagnosed PLWH had evidence of HIV medical care (met need), 61% were retained in care, and 55% reached viral suppression by their last viral load test of the year. Among new diagnoses, 80% were linked to HIV medical care within 3 months. Younger adults had lower percentages of retention and viral suppression compared to older adult age groups, and youth and young adults (13-24 years old) had the lowest proportion of newly diagnosed PLWH who were linked within three months of diagnosis, compared to older adults. Females had a higher proportion of individuals with met need and retention in care than males, but had a lower proportion who were virally suppressed. The proportion of newly diagnosed female PLWH linked to care within the first three months after diagnosis was higher than that for males. When birth sex and race/ethnicity groups were evaluated together, Hispanic and Black (non-Hispanic) PLWH had the lowest proportion of individuals with evidence of met need, retention in care, and viral suppression among males. Among females, White (non-Hispanic) and Black (non-Hispanic) PLWH had the lowest proportion of individuals with evidence of retention in care and viral suppression. Overall, Black (non-Hispanic) males living with HIV had the lowest proportion of individuals in each HCC stage across all birth sex and race/ethnicity groups.

Although MSM had higher numbers of PLWH than the other risk groups, the proportion of diagnosed MSM living with HIV show met need and retention in care similar to those observed for all risk groups. MSM had a higher proportion of diagnosed PLWH who reached viral suppression, but a lower proportion of newly diagnosed PLWH who were successfully linked to care within three months of initial diagnosis. Injection drug users (IDU) exhibited the lowest proportions of both met need and viral suppression compared to other risk factor categories.

The Houston Health Department, Harris County Public Health, and The Houston Regional HIV/AIDS Resource Group designed and conducted a survey of the **financial and human resource capacity** of agencies in the Houston Area. Across the 17 agencies surveyed, the total

amount of current fiscal year HIV funding reported was approximately $55.7 million. Of the total HIV funding received within the Houston Area, the highest percentages were Ryan White Part A, CDC, and urban HOPWA funding, while the lowest percentages were rural HOPWA, Ryan White Part F and AETC sub-contracted from another agency, and Community Development Block Grant.

The Houston Area maintains approximately 486 full-time employees (FTEs) to direct HIV care and prevention services. The service with the most FTEs was administration, with about 80 FTEs, followed by HIV medical care (72 FTEs), linkage to HIV medical care (67 FTEs), and HIV testing (51 FTEs). The latter three services also contain the most diverse portfolio of workforce categories, with numerous personnel representing the wide range of skills needed to manage these services and maximize their delivery to the communities in need. Despite the large number of FTEs representing the total workforce capacity, it requires a significant amount of dedication and support to execute the extensive HIV services available in the Houston Area, each of which require regular monitoring and evaluation to ensure the community's needs are being met. Furthermore, new services are being introduced as former ones are being adapted to best serve the targeted populations most at-risk or in-need of assistance, necessitating a dynamic workforce that is flexible and capable of expansion.

The HIV services with the fewest FTEs, with 1 FTE or less, total, were capacity building for HIV services, condom distribution, health insurance premium and cost sharing assistance for HIV-positive individuals, HIV advocacy, insurance navigation for HIV-positive individuals, linkage to substance abuse/mental health services, patient navigation to any service regardless of HIV status, program promotion, research projects for HIV-positive persons, and translation services for HIV-positive persons. The workforce categories with the fewest FTEs, with 1 FTE or less, total, were patient advocate, physical therapist, physician assistant, psychiatrist, public affairs specialist and translator.

As the service needs, gaps, and barriers among people living with HIV (PLWH) and high-risk individuals who are HIV-negative or status unaware can vary greatly, two separate but aligned **needs assessment** surveys are conducted in the Houston Area sampling 1) all people who live in Houston/Harris County, and 2) all PLWH in the Houston EMA or HSDA. Among all people living in Houston/Harris County, HIV prevention service needs and gaps included but were not limited to:

1. Additional HIV testing and social marketing activities to increase awareness of the importance of testing and that reduce stigma, including social meeting marketing;
2. Availability of free or reduced-cost HIV testing and formatting of HIV testing messages for easier and widespread promotion
3. Testing services provided in multiple languages;
4. Substance abuse and risk reduction services provided concurrently with HIV prevention and care services, particularly to address the prevention needs of people with anonymous sex partners; and
5. Increased PrEP promotion and education.

Barriers to HIV prevention services included but were not limited to:

1. Social, structural and client-specific barriers like stigma and discrimination, cultural resistance to sexual and gender related topics, low educational attainment, poverty, and lack of health care coverage, and the geographic size of the Houston Area;
2. Texas policy barriers like sexual and reproductive health policies, the ban on syringe exchange programs, and the non-expansion of Medicaid;
3. Health department barriers like need that has outpaced dedicated HIV funding, no general city revenues dedicated to HIV services, incomplete surveillance reporting for clinical trials, and lack of informatics funding;
4. Program barriers such as multiple data systems managed by varied entities and lack of HIV screening for Harris County Jail inmate released prior to the 14 day intake medical assessment or upon release; and
5. Provider barriers and increased stakeholder representation due to the size and complexity of the Houston medical system.

Among PLWH in the Houston EMA or HSDA, the most needed HIV care services were primary care, followed by case management, local medication assistance, and oral health care. Primary care had the highest need ranking of any core medical service, while transportation received the highest need ranking of any support service. Needed services that are currently not funded through Ryan White in the Houston Area included food bank, emergency financial assistance, housing-related services and support groups. PLWH in the Houston EMA also indicated that they needed employment assistance and job training, vision hardware/glasses, and services for partner Prevention needs for PLWH identified were increased screening for other sexually transmitted infections, PrEP and PrEP resource awareness, and consistent condom use education and promotion that address HIV reinfection/superinfection.

Barrier to HIV care services most often related to:
1. Service education and awareness issues;
2. Wait-related issues (particularly for oral health care and housing services)
3. Interactions with staff;
4. Eligibility issues; and
5. Administrative issues.

General system and social barriers to HIV care services included:
1. Experiencing stigma, violence, and poverty;
2. Health care coverage issues, including the absence of Medicaid expansion in the State of Texas and coverage gaps;
3. Substance use, co-morbid health conditions, diagnosed and undiagnosed co-morbid mental health conditions; and
4. Housing instability and lack of transportation.

Primary data systems used in the Houston Area are the Enhanced HIV/AIDS Reporting System (eHARS) the Sexually Transmitted Disease Management Information System (STD*MIS), Evaluation Web, the Electronic Client-Level Integrated Prevention System (ECLIPS), the Houston Electronic Disease Surveillance System (HEDSS), the AIDS Regional Information and Evaluation System (ARIES), and the Centralized Patient Care Data Management System (CPCDMS). The Houston Area is uniquely challenged in that HIV prevention and HIV care

services are not administered by the same government agency and, as such, data for care and prevention are managed by separate entities, limiting the ability of any agency to access and analyze data across systems.

Section II: Integrated HIV Prevention and Care Plan – Since creation of the last Houston Area Comprehensive HIV & Care Services Plan (2012-14, extended through 2016), changes in local initiatives like End New Diagnoses Houston, advances such as Treatment as Prevention (TasP) and pre-exposure prophylaxis (PrEP), and implementation of the Affordable Care Act (ACA) have necessitate creation of a new plan to identify specific strategies to *sustain, scale-up, shift* (in terms of new priorities or needs), or *shore-up* the HIV prevention and care services system.

The vision for this process is that the *"greater Houston area will become a community with an enhanced system of HIV prevention and care. New HIV infections will be reduced to zero. Should new HIV infections occur, every person, regardless of sex, race, color, ethnicity, national origin, age, familial status, marital status, military status, religion, disability, sexual orientation, genetic information, gender identity, pregnancy, or socio-economic circumstance, will have unfettered access to high-quality, life-extending care, free of stigma and discrimination.*

To make progress toward this vision, several influences must be addressed including: resources or resource distribution that do not meet need, continued disparities in HIV infection, the presence of co-occurring conditions and behavioral health concerns among PLWH, and overall community education, awareness, and mobilization around Houston Area HIV-related issues.

In light of these factors, the Houston Area has identified six NHAS-aligned six overall goals for the HIV prevention and care services system over the next five years:

1. Increase community mobilization around HIV in the greater Houston Area *(aligned with NHAS 2020 Goal 1: Reducing New HIV Infections and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic)*;
2. Prevent and reduce new HIV infections *(aligned with NHAS 2020 Goal 1: Reducing New HIV Infections)*;
3. Ensure that all people living with or at risk for HIV have access to early and continuous HIV prevention and care services*; (aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV)*;
4. Reduce the effect of co-occurring conditions that hinder HIV prevention behaviors and adherence to care *(aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV and Goal 3: Reducing HIV-related Disparities and Health Inequities)*;
5. Reduce disparities in the Houston Area HIV epidemic and address the needs of vulnerable populations *(aligned with NHAS 2020 Goal 3: Reducing HIV-related Disparities and Health Inequities)*; and
6. Increase community knowledge around HIV in the greater Houston area *(aligned with NHAS 2020 Goal 1: Reducing New HIV Infections, Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV, and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic).*

There are several high impact solutions for achieving system wide improvements in HIV prevention and care services in the Houston Area, including structural interventions such as policy change, HIV testing, engagement and retention in continuous HIV care, technology, and improved coordination of effort among current and new partners. These solutions and others have been incorporated into four strategies:

1. *Strategy for HIV Prevention and Early Identification*
2. *Strategy to Bridge Gaps in Care and Reach the Out of Care*
3. *Strategy to Address the Needs of Special Populations*
4. *Strategy to Improve Coordination of Effort*

Each strategy includes goals, solutions aligned with NHAS goal steps, benchmarks, and SMART activities to be conducted over the next five years to make progress toward long-range goals.

Section III: Monitoring and Improvement – Regular communication between responsible parties, local HIV planning bodies, and the Houston HIV community on progress toward the vision and goals of the 2017 Comprehensive Plan will be accomplished through real-time quarterly activities monitoring and annual benchmark and activities evaluation of 2017 Compressive Plan. Long-range progress will be measured by the extent to which the following System Objectives are accomplished the following by 2021:

1. Reduce the number of new HIV infections diagnosed in the Houston Area by at least 25% from 1,386 (2014) to ≤1,004;
2. Maintain and, if possible, increase the percentage of individuals with a positive HIV test result identified through targeted HIV testing who are informed of their positive HIV status, beginning at 93.8% (2014);
3. Increase the proportion of newly-diagnosed individuals linked to clinical HIV care within one month of their HIV diagnosis to at least 85% from 66% (2015);

4.1 Decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year by 25% from 25.9% (2014) to 19.4% ;

4.2 Decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year among Hispanic and Latino men age 35 and up by 25% from 36.0% (2014) to 27.0%;

5. Increase the percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart) from 75.0 % (2014) to at least 90.0%;
6. Increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period) from 60.0% (2015) to at least 90.0%;
7. Maintain, and if possible, increase the proportion of Ryan White HIV/AIDS Program clients who are virally suppressed from 80.4% (2014) to at least 90.0%;
8. Increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed from 57.0% (2015) to at least 80.0% (NHAS 2020 Indicator 6: Increase the percentage of persons with diagnosed HIV infection who are virally suppressed to at least 80%); and
9. Increase the number of gay and bisexual men of color and women of color receiving pre-exposure prophylaxis (PrEP) education each year (baseline to be developed) to at least 2,000.

Section I: Statewide Coordinated Statement of Need/Needs Assessment

A. Epidemiologic Overview

Geographical Regions of the Houston Area

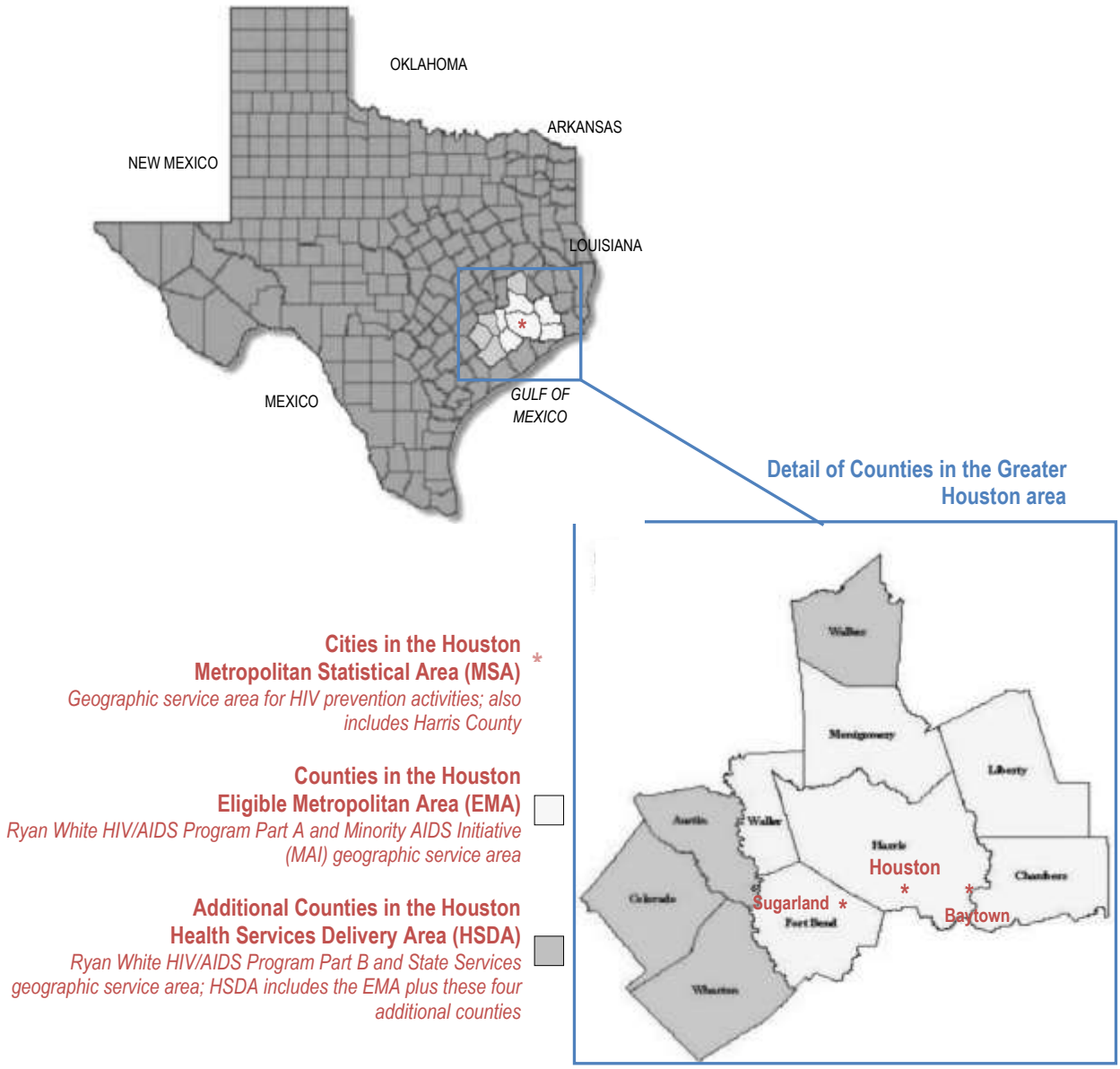
HIV prevention and care services are provided in the Houston Area throughout three distinctly defined service areas (**Figure 1**):

- *The Houston Metropolitan Statistical Area (MSA)* includes Harris County and the cities of Houston, Baytown, and Sugarland, TX. The Houston Health Department (HHD) administers the Centers for Disease Control and Prevention's (CDC) HIV prevention funding and activities in the MSA, while prevention activities outside the MSA but within the Houston Area are funded and administered by the Texas Department of State Health Services (TDSHS) Region 6/5 South. HHD is responsible for HIV surveillance across the City of Houston and Harris County.
- *The Houston Eligible Metropolitan Area (EMA)* is the geographic service area defined by the Health Resources and Services Administration (HRSA) for the Ryan White HIV/AIDS Program Part A and Minority AIDS Initiative (MAI). It includes Chambers, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties. Harris County Public Health Ryan White Grant Administration (RWGA) administers HRSA/HAB Ryan White HIV/AIDS Program Part A and MAI HIV care services funding and activities in the EMA. Epidemiologic data for the EMA are provided by TDSHS.
- *The Houston Health Services Delivery Area (HSDA)* includes the six counties of the Houston EMA plus four additional counties: Austin, Colorado, Walker, and Wharton. The Houston Regional HIV/AIDS Resource Group (TRG) administers TDSHS Ryan White HIV/AIDS Program Part B and State of Texas HIV care services funding and activities in the HSDA. Epidemiologic data for the HSDA are provided by TDSHS.

Together, the Houston MSA, EMA, and HSDA cover 9,415 square miles of southeast Texas, or 3.5 percent of the entire state, and are home to more than 6.1 million residents, the vast majority of whom (74%) reside in Houston/Harris County (U.S. Census Bureau, 2015). As of 2013, 92% of all diagnosed people living with HIV (PLWH) in the Houston EMA and a majority of those in the Houston HSDA resided in Houston/Harris County. For this reason, much of the epidemiologic data presented below for Houston/Harris County are considered representative of the larger areas, unless otherwise noted.

Harris County is located in southeast Texas and encompasses 1,777 square miles. It is the third most populous county in the United States, with an estimated 4.44 million residents (U.S. Census Bureau, 2014). Most residents live within the county's 34 municipalities with over two million residents living within the City of Houston, the fourth largest city in the U.S. While most of the City of Houston lies within Harris County, Houston also extends slightly into Fort Bend County to the southwest and Montgomery County to the north.

***Figure 1*: Greater Houston area Geographic Service Designations for HIV Prevention and Care**



Socio-demographic Characteristics

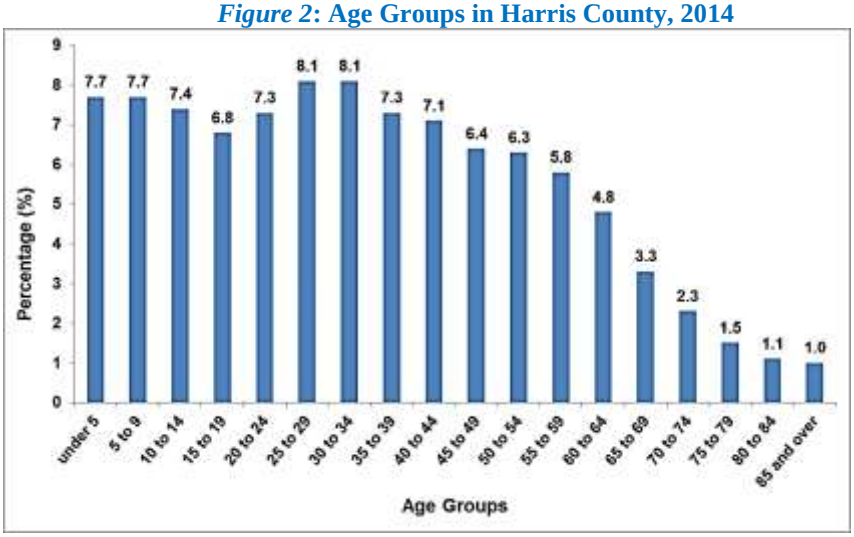
Demographic Characteristics of the Houston Area Population

Harris County is racially and ethnically diverse. In 2014, Hispanics, African Americans and other minority race/ethnicity groups combined accounted for 68.7% of the total population (**Table 1**). Whites made up 31.3% of Harris County residents, which was lower than the percentage of whites in Texas (43.4%) and in the U.S. (61.9%) in 2014. The median age of the Harris County population (33 years of age) was younger than that of Texas (34.3 years of age) and the U.S. population (37.7 years of age). In Harris County, 43.3% of the population was between the ages of 25 to 54 years (**Figure 2**).

The Houston EMA is similarly diverse; in 2015 Hispanics, African Americans, and other

race/ethnicity groups combined accounted for 63.7% of the total population. In 2015, 42.6% of the population in the Houston EMA was between the ages of 25 to 54 years.

***Figure 2*: Age Groups in Harris County, 2014**



Source: U.S. Census Bureau, 2014 ACS 1-Year Estimates.

Socioeconomic Characteristics of the Houston Area Population

Compared to the U.S. and Texas, fewer Harris County residents aged 25 and older had a high school diploma or its equivalent. In 2014, 79.8% of Harris County residents age 25 and older were high school graduates, compared to 82.2% in Texas and 86.9% in the U.S (**Table 1**). However, the percentage of residents who had attained a bachelor's degree or higher education was 29.7% in Harris County, which is similar to the U.S. (30.1%) and slightly higher than Texas (27.8%).

In 2014, an estimated 17.4% of Harris County residents were living below the federal poverty level, compared to 17.2% in Texas and 15.5% nationally. However, fewer children aged less than 18 years lived below the federal poverty line in Harris County (21.7%), compared to Texas (24.6%) and the nation overall (25.7%) (**Table 1**).

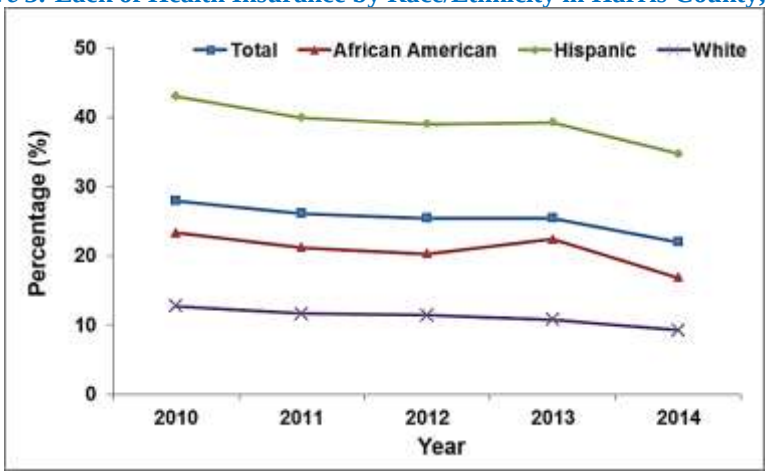
Among the county's population aged 18-64 years in 2014, 29.0% did not have health insurance coverage, compared to 25.7% in Texas and 16.3% nationally (**Table 1**). Proportions of health insurance coverage differ among racial/ethnic groups in Harris County. In 2014, the uninsured proportion among whites was approximately 9%, while the uninsured proportion was 1.8 times and 3.8 times higher among African Americans and Hispanics, respectively (**Figure 3**).

Table 1: **Comparison of Population Characteristics in Harris County, Texas and U.S., 2014**

	Harris County	Texas	U.S.
Total population	4,441,370	26,956,958	318,857,056
Race/Ethnicity			
White	31.3%	43.4%	61.9%
African American	18.6%	11.7%	12.3%
American Indian and Alaska Native	0.2%	0.2%	0.7%
Asian	6.6%	4.3%	5.2%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.2%
Some other races alone	0.2%	0.1%	0.2%
Two or more races	1.3%	1.6%	2.2%
Hispanic (includes all races)	41.8%	38.6%	17.3%
Sex and Age			
Median Age (years)	33.0	34.3	37.7
Persons under 5 years	7.7%	7.2%	6.2%
Persons under 18 years	27.1%	26.4%	23.1%
Persons 65 years and over	9.2%	11.5%	14.5%
Female	50.2%	50.3%	50.8%
Male	49.8%	49.7%	49.2%
Education among Population 25 years and Over			
Percent high school graduate or higher	79.8%	82.2%	86.9%
Percent bachelor's degree or higher	29.7%	27.8%	30.1%
Poverty			
Persons below poverty level (all age groups)	17.4%	17.2%	15.5%
Persons below poverty level (children under 18 years)	21.7%	24.6%	25.7%
Health Insurance Status			
%Persons without health insurance (all age groups)	22.0%	19.1%	11.7%
%Persons without health insurance (18 - 64 years)	29.0%	25.7%	16.3%

Source: U.S. Census Bureau, 2014 ACS 1-Year Estimates.

Figure 3: **Lack of Health Insurance by Race/Ethnicity in Harris County, 2014**



Source: U.S. Census Bureau, 2014 ACS 1-Year Estimates.

Demographic and Socioeconomic Characteristics of People Living with HIV Diagnosis (PLWH) in the Houston Area

Table 2 shows the number, percentage, and rate of reported cases of PLWH in Houston/Harris County at the end of 2013 by sub-population. As of the end of 2013, there were 22,551 PLWH in Houston/Harris County. The number of male PLWH was three times that of female PLWH. The rates of PLWH (per 100,000 population) were 780 and 261 in males and females, respectively. Half of PLWH were African Americans in Houston/Harris County, even though only 18.6% of the total population in Harris County was African American. The rate of African Americans living with HIV, 1,400 per 100,000 population, was approximately four times that of both whites and Hispanics. Rates of HIV infection in whites, African Americans and Hispanics in Houston/Harris County were higher than those in Texas (TDSHS, 2013). At the end of 2013, 49.2% of the PLWH were aged 45 years or older, and 45.0% were 25-44 years old. The highest rate of PLWH by age was in the 40-44 age group (996 per 100,000 population). By transmission risk, 54.1% of the living cases were attributed to men who have sex with men (MSM) exposure, 30% due to heterosexual exposure, 10% due to intravenous drug use (IDU) exposure, and 6% due to other exposures including perinatal, MSM/IDU or other risks.

Table 2: **PLWH in Houston/Harris County at the end of 2013, by Key Sub-populations**

	Houston/Harris County				Texas			
	Cases	%	Rate*	Relative Rate*	Cases	%	Rate*	Relative Rate*
Total	22,551	100%	520.0	-	76,621	100%	298.8	-
Sex								
Female	5,682	25.2%	261.3	1.0	16,699	21.8%	129.3	1.0
Male	16,869	74.8%	780.3	3.0	59,922	78.2%	471	3.6
Race/Ethnicity								
White	4,643	20.6%	337.3	1.0	21,838	28.5%	186.7	1.0
African American	11,179	49.6%	1399.7	4.2	28,682	37.4%	944	5.1
Hispanic	5,901	26.2%	327.2	1.0	23,018	30.0%	236.5	1.3
Other	828	3.7%	231.3	0.7	3,083	4.0%	-	-
Age (as of 12/31/13)								
0 - 9 yrs	41	0.2%	6.0	0.0	129	0.2%	3.3	0.0
10 - 14 yrs	48	0.2%	15.2	0.0	180	0.2%	8.3	0.0
15 - 19 yrs	178	0.8%	59.3	0.2	526	0.7%	28	0.2
20 - 24 yrs	1,051	4.7%	330.9	1.0	3,356	4.4%	178.9	1.0
25 - 29 yrs	1,862	8.3%	530.9	1.6	6,198	8.1%	330.2	1.8
30 - 34 yrs	2,386	10.6%	684.5	2.1	7,803	10.2%	429.4	2.4
35 - 39 yrs	2,775	12.3%	903.0	2.7	8,936	11.7%	511.1	2.9
40 - 44 yrs	3,120	13.8%	996.6	3.0	10,755	14.0%	615.7	3.4
45 yrs and over	11,090	49.2%	793.3	2.4	38,758	50.6%	435.9	2.4
Mode of Exposure**								
MSM	12,193.6	54.1%						
IDU	2,246.6	10.0%						
MSM/IDU	1,055.1	4.7%						
Heterosexual	6,763.7	30.0%						
Perinatal	237.0	1.1%						
Other	55.0	0.2%						

Source: Houston/Harris County data were from the Texas eHARS, 2015; Texas data were from 2013 Texas STD and HIV Epidemiologic Profile (TDSHS, 2013)

**: Rate was the number of cases per 100,000 population in each subgroup. Population data were from the 2013 ACS 1-year estimates. Relative rate was the ratio of rates using assigned groups in each key sub-population, i.e., female, white, and 20-24 years group, as reference groups.*

***: Mode of Exposure: Patients with no risk reported were re-categorized into standard categories using CDC's multiple imputation program (McDavid et al., 2008). "Other" was the group with modes of exposure excluding MSM, IDU, MSM/IDU, heterosexual, and perinatal risks.*

As of 2015, there were 26,041 PLWH in the Houston EMA, 74.8% of which were male (TDSHS, 2016). The prevalence rates for PLWH (per 100,000 population) was 658 among males, compared to 219 for females and 437 for the Houston EMA as a whole. African Americans accounted for 48.8% of diagnosed PLWH in the Houston EMA and had a prevalence rate of 1,211 per 100,000 population, even though African Americans comprise only 17.6% of the total Houston EMA population. Comparatively whites and Hispanics living in the Houston EMA in 2015 had prevalence rates of 247 and 312 per 100,000 population respectively. In 2015, people age 45 and older accounted for 53.0% of all PLWH in the Houston EMA, and had a prevalence rate of 968 per 100,000 population, higher than any other age group. Men who have Sex with Men (MSM) accounted for 55.7% of PLWH in the Houston EMA, followed by 29.9% for heterosexual exposure, and 9.0 % due to IDU exposure.

Socioeconomic data below for PLWH living in Houston/Harris County were derived from the Houston Medical Monitoring Project (HMMP). The Medical Monitoring Project (MMP) is a nationwide CDC-funded supplemental HIV surveillance system that is designed to produce nationally representative estimates of behavioral and clinical characteristics of adult PLWH receiving medical care in the United States and Puerto Rico. The purpose of the HMMP is to produce population-based estimates of characteristics of PLWH receiving medical care in Houston/Harris County.

Sociodemographic characteristics of HMMP participants between 2009 and 2013, during the 12 months prior to the MMP interview are displayed in **Table 3**. Among participants, 78.8% graduated from high school or higher. The median self-reported income level of participants was between $10,000 and $12,499 annually. However, it should be noted that many participants preferred not to report their income level. Of those reporting their income level, 51.8% were at or below poverty level, and 35.6% did not have health insurance.

Table 3: **Socio-demographic characterics of HMMP participants, 2009-2013**

	Weighted Frequency	Percent	95% Confidence Interval
Education			
<High School	2524	22.2	18.9-25.6
High School diploma or equivalent	3166	27.9	24.7-31.1
>High School	5661	49.9	45.1-54.7
Income			
$0-$4,999	492	13.3	9.0-17.6
$5,000-$9,999	1155	31.2	24.8-37.6
$10,000-$12,499*	840	22.7	17.3-28.0
$12,500-$14,999	418	11.3	7.0-15.6
$15,000-$19,999	362	9.8	5.7-13.9
$20,000+	437	11.8	6.7-16.8
Poverty level			
Above Poverty Level	4312	48.2	43.7-52.8
At or below poverty level	4626	51.8	47.2-56.3
Health Insurance Status			
Uninsured	4043	35.6	32.1-39.1
Insured	7307	64.4	60.9-67.9
Gender			
Male	7947	70.0	66.2-73.7
Female	3180	28.0	24.3-31.7
Transgender	233	2.1	1.1-3.0

Source: Houston Medical Monitoring Project, 2009-2013.
**: Median income level*

The TDSHS provided socioeconomic data for PLWH living in the Houston EMA in 2015 that was derived from multiple sources, including Kaiser Family Foundation estimates based on the Census Bureau's March 2014 Current Population Survey (CPS: Annual Social and Economic Supplements), National Alliance to End Homelessness 2009 estimates, and 2015 *Texas Tribune* study "Texas' Rate of Uninsured Falls applied to the diagnosed proportion living in the Houston EMA." It is estimated that, as of 2015, 1,016 or 3.9% of PLWH in the Houston EMA were experiencing homelessness, 6,406 or 24.6% were uninsured, and 17% had annual income levels at or below 100% of the federal poverty level (TDSHS, 2016).

Demographic and Socioeconomic Characteristics of New Diagnoses in the Houston Area
In 2014, 1,288 new HIV diagnoses were reported among the population aged 15 or older in Houston/Harris County. Approximately 4 out of 5 new HIV diagnoses were among males and 43% of the newly reported male cases were African American (**Table 4**). The rate of new HIV diagnoses in African American men was 4.6 times the rate of white men, and 2.8 times that of Hispanic men. African American women were newly diagnosed with HIV at a rate 21.1 times that of white women and 5.8 times that of Hispanic women. Among males, MSM was by far the largest risk category with 90% of all newly diagnosed cases among whites and Hispanics and approximately 80% among African Americans being categorized as MSM. The two age groups with the highest rate of new HIV diagnoses were the age groups 15-24 and 25-34. African Americans 15-24 years of age had an HIV diagnosis rate 7.6 times that of whites. Similarly, the rate in African Americans 55 years or older was 7.7 times that of their white counterparts.

In 2015, 1,345 new HIV diagnoses were reported in the Houston EMA, occurring predominately among males (77.6%), individuals who were African American (47.8%) or Hispanic (33.8%), and people ages 13-24 (24.1%) and 25-34 (34.9%), and who had MSM transmission risk (65.8%) (TDSHS, 2016). When compared to the HIV diagnosis rate in 2015 for the Houston EMA as a whole (23 per 100,000 population), disproportionate impact was observed among males (35 per 100,000 population), African Americans (61 per 100,000 population), and people ages 13 – 24 (32 per 100,000 population), 25 – 34 (51 per 100,000 population), and 35 – 44 (31 per 100,000).

Of all new diagnoses in the Houston EMA in 2015, 274 or 20% also received an HIV stage 3 (formerly AIDS) diagnosis within 3 months. Populations disproportionately impacted by late/concurrent diagnoses in the Houston EMA in 2015 include Hispanic females age 35 – 44 (50%), Hispanic females age 55 and older (55%), Hispanic males age 35 – 44 (41%), Hispanic males age 55 and older (59%), and African American males age 35-54 (36%).

Table 4: New HIV Diagnoses in Houston/Harris County by Race/Ethnicity, 2014

	White				African American				Hispanic				Total		
	Number**	%	Rate*	Relative Rate*	Number**	%	Rate*	Relative Rate*	Number**	%	Rate*	Relative Rate*	Number**	%	Rate*
Total	180	100.0%	13	1.0	624	100.0%	74	5.7	438	100.0%	24	1.8	1288	100.0%	29
Sex															
Male	166	92.2%	24	1.0	435	69.6%	110	4.6	375	85.0%	40	1.6	1012	78.3%	46
Female	14	7.8%	2	1.0	189	30.4%	42	21.0	63	15.0%	7	3.6	276	21.7%	13
Age Group															
0-14 yrs	**				**				**				**		
15-24 yrs	26	14.4%	18	1.0	180	28.8%	135	7.6	113	25.8%	37	2.1	331	25.7%	53
25-34 yrs	58	32.2%	28	1.0	199	31.9%	145	5.1	152	34.7%	49	1.7	426	33.1%	59
35-44 yrs	50	27.8%	28	1.0	121	19.4%	103	3.7	103	23.5%	36	1.3	284	22.0%	45
45-54 yrs	32	17.8%	16	1.0	84	13.5%	80	5.1	54	12.3%	26	1.6	175	13.6%	31
55 yrs and over	14	7.8%	3	1.0	40	6.4%	25	7.7	16	3.7%	8	2.3	72	5.6%	8
Mode of Exposure* **															
MSM	147.9	82.2%			352.5	56.5%			337.7	76.6%			868.9	67.2%	
IDU	6.6	3.7%			40.6	6.5%			13.8	3.1%			62.5	4.8%	
Heterosexual	15.9	8.8%			217.0	34.8%			81.4	18.5%			327.0	25.3%	
Other	9.6	5.3%			13.9	2.2%			5.1	1.8%			29.6	2.7%	
%MSM in Male***		89.1%				80.8%				90.1%				85.8%	

Source: Texas eHARS, 2015.

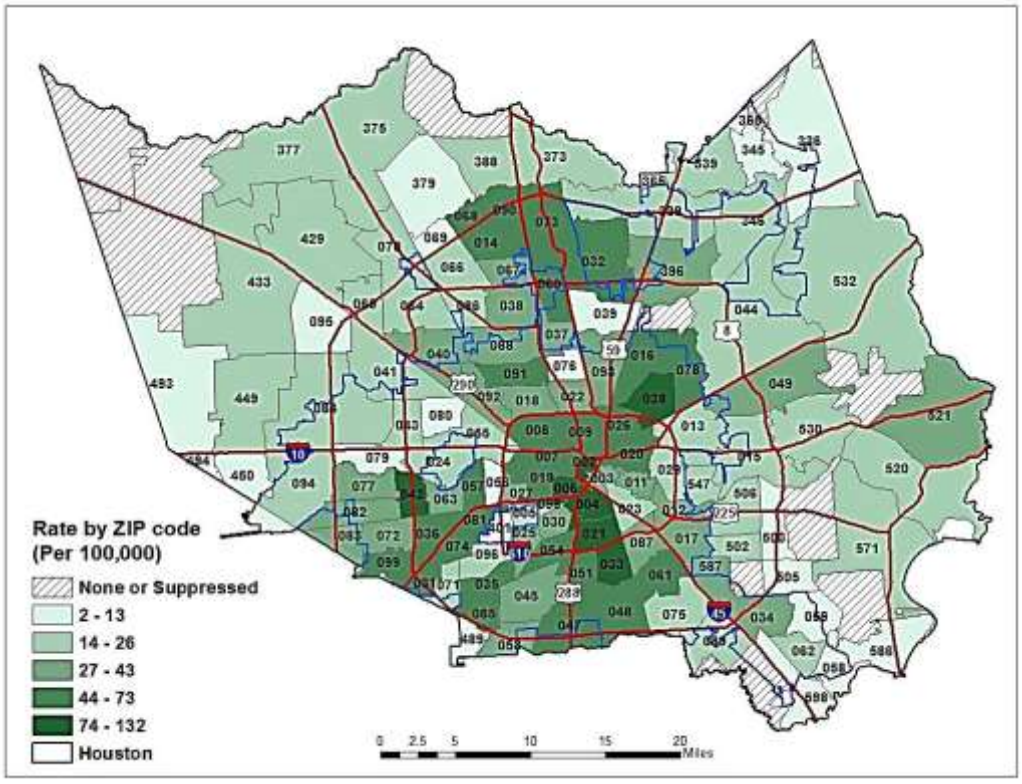
**: Rate was calculated as the number of cases per 100,000 population in each subgroup. Rates in total or gender groups were calculated based on population of all age groups. Population data were from 2014 ACS 1-year estimates. Relative rate is the ratio of rates using White group in each key sub-population as reference groups.*

***: The numbers in the group "0-14 years" were suppressed to protect confidentiality of patients. All numbers in rows of "Total," "Sex," and "Mode of Exposure" did not include the suppressed values from the age groups. Data from other race/ethnicity groups, including Asian, Pacific Islander, American Indian, multiracial and others were not shown. All values in columns of "Total" were data from all race/ethnicity groups.*

****: Patients with no risk reported were re-categorized into standard categories using CDC's multiple imputation program (McDavid et al, 2008). Percentage of MSM within males was shown. "Other" was the group with modes of exposure excluding MSM, IDU, and heterosexual risks.*

Figure 4 shows the geographic distribution of new HIV diagnoses by ZIP codes in Harris County. ZIP codes with the highest rates of new HIV diagnoses were located primarily in central and northern Houston/Harris County.

***Figure 4*: Rates of New HIV Diagnoses by ZIP Code in Houston/Harris County, 2014**



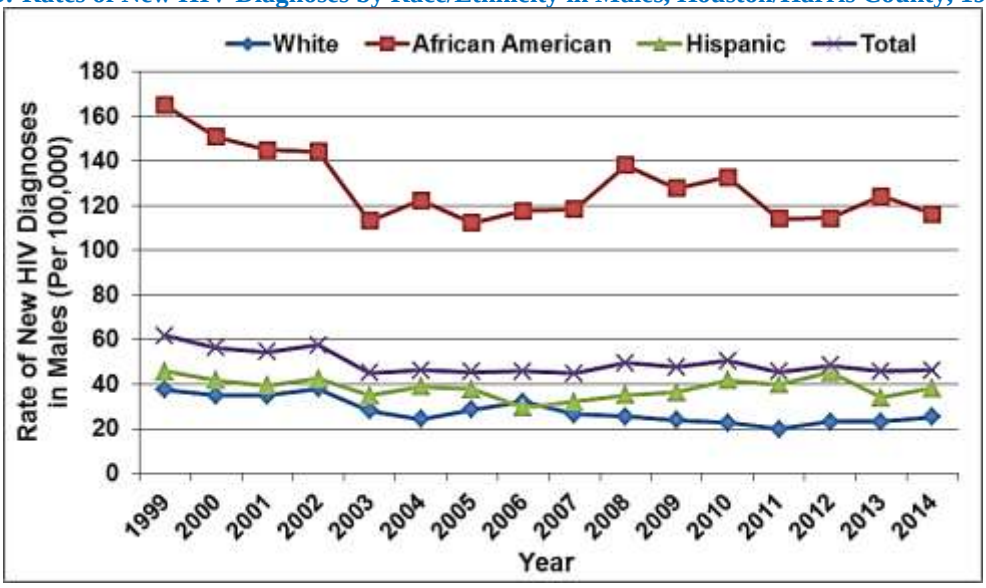
Source: Texas eHARS, 2015. The number of new HIV diagnoses included all cases diagnosed in 2014 with address at HIV diagnosis within Houston/Harris County and reported to eHARS by 7/26/2015. The population data was based on the 2010 US Census. The rates by ZIP code were grouped by quintiles and shown in the map. ZIP codes were labeled using the last three digits only (e.g., 77002 was labeled as "002"). ZIP codes with less than five cases were suppressed to protect patients' confidentiality.

Demographic Characteristics of Persons with New HIV Diagnoses in the Houston Area

As shown in **Table 4**, among all populations in Houston/Harris County, persons newly diagnosed with HIV infection in 2014 were more likely to be male, African American, aged 25-44 years, and with MSM transmission risk. Among both males and females, African Americans had the highest rates of new diagnoses. Among all age groups, African Americans between the ages of 25-34 years had the highest rate of new diagnoses, with African Americans in the age groups 15-24 years and 55 years and over having approximately 7.6 times the rates of whites within the same age groups. MSM is the major transmission risk among all males.

The rates of new HIV diagnoses in males remained relatively constant after 2004 in Houston/Harris County (**Figure 5**), which was consistent with trends in the U.S. (Ortblad et al., 2013). The rate of new HIV diagnoses in African American males decreased from 1999 to 2003, and remained relatively constant after 2003.

Figure 5: **Rates of New HIV Diagnoses by Race/Ethnicity in Males, Houston/Harris County, 1999-2014**

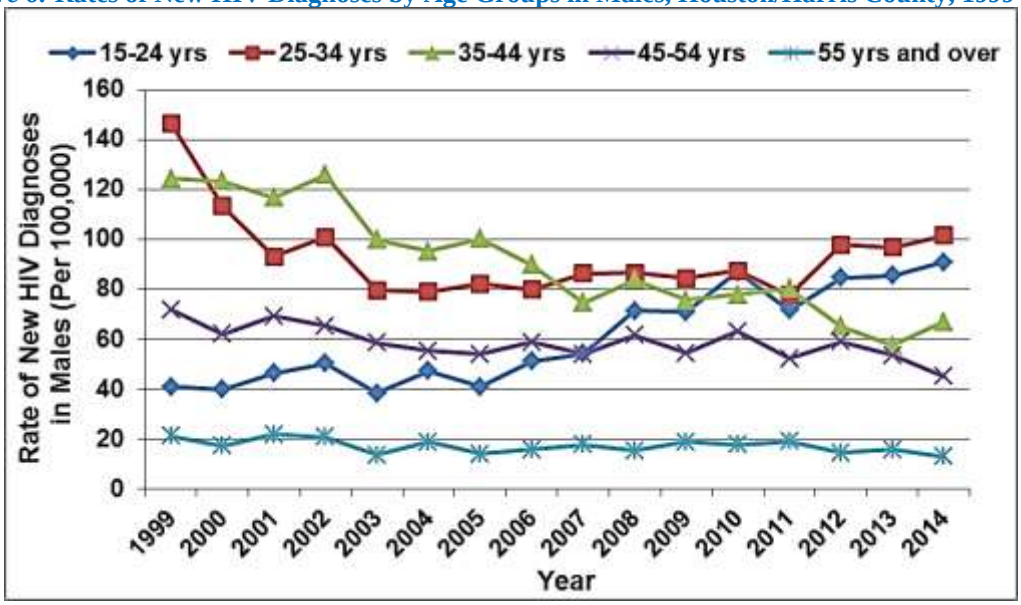


Source: Texas eHARS, 2015.

The rate of new HIV diagnoses among young males 15-24 years doubled from 1999 through 2014 (**Figure 6**). The rate in the age group 25-34 years decreased from 1999 to 2003 by about 45% and slightly increased from 2004 to 2014. The age group 35-44 years had decreasing rates from 1999 to 2014, while the rate in groups 45 or older remained relatively stable over the years.

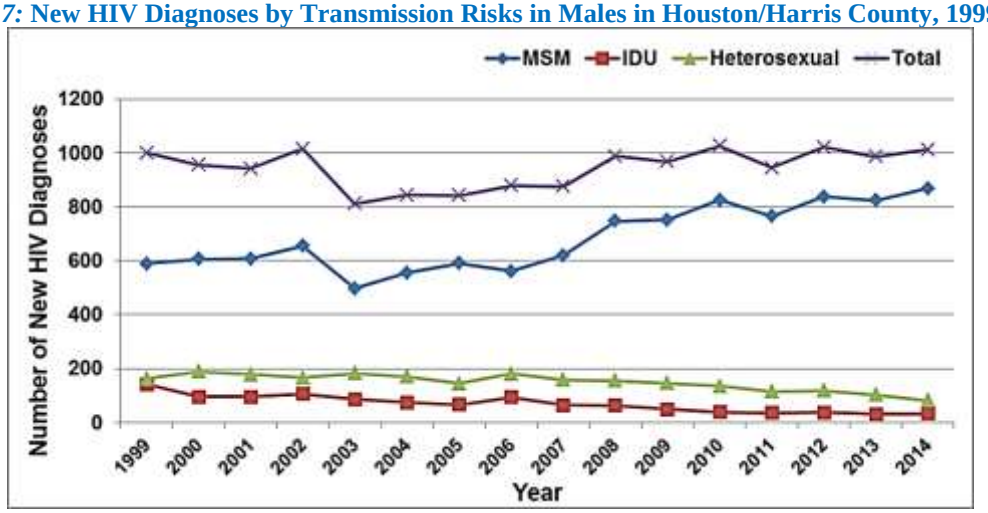
In males, the number of new HIV diagnoses among MSM increased 75% from 2003 to 2014 in Houston/Harris County, while new diagnoses among IDU and heterosexuals slightly decreased starting in 2006 (**Figure 7**).

Figure 6: **Rates of New HIV Diagnoses by Age Groups in Males, Houston/Harris County, 1999-2014**



Source: Texas eHARS, 2015.

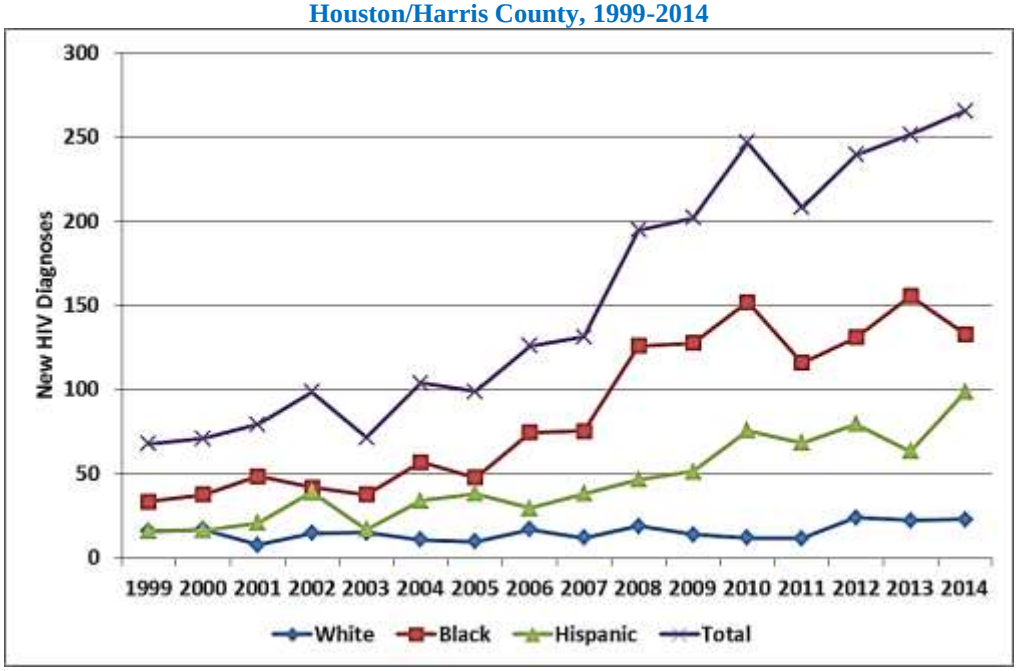
Figure 7: **New HIV Diagnoses by Transmission Risks in Males in Houston/Harris County, 1999-2014**



Source: Texas eHARS, 2015. Patients with no risk reported were re-categorized by using CDC's multiple imputation or risk program.(McDavid et al., 2008)

In African Americans and Hispanics the number of new HIV diagnoses among young MSM (13-24 years old) doubled from 1999 to 2014. In whites, the numbers of new diagnoses among young MSM increased slightly from 1999 to 2014. Among all race/ethnicities, the number of new HIV diagnoses in young MSM increased from 2003 to 2014 in Houston/Harris County (**Figure 8**).

Figure 8: **New HIV Diagnoses by Race in Young (13-24 Years) Men Who Have Sex with Men in Houston/Harris County, 1999-2014**



Source: Texas eHARS, 2015. Patients with no risk reported were re-categorized by using CDC's multiple imputation or risk program (McDavid et al., 2008).

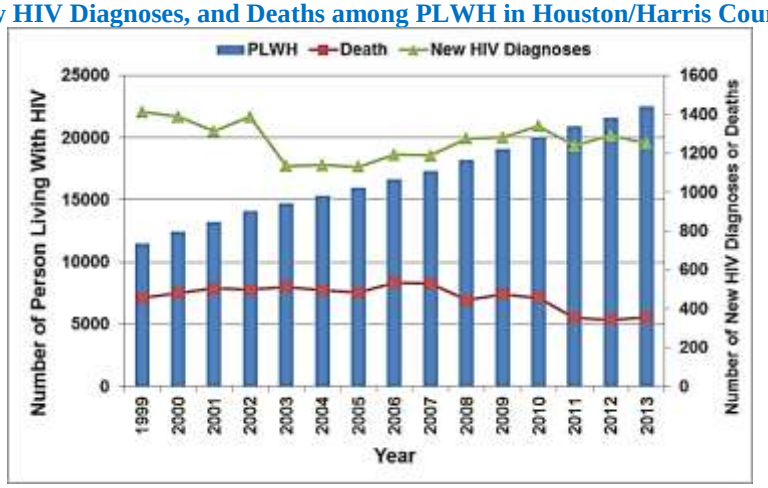
HIV Burden in the Houston Area

Trends in New HIV Diagnoses, PLWH, and Persons at Higher Risk for HIV Infection in the Houston Area

In 1999, HIV became a reportable condition in the state of Texas. **Figure 9** shows the number of persons living with diagnosed HIV (PLWH), new HIV diagnoses, and deaths among PLWH in Houston/Harris County from 1999 to 2013. The number of PLWH serves only as an estimate of the prevalence rate of HIV, since it was computed from reported cases and does not include people infected but undiagnosed or unreported. The CDC estimated that 17.8% of persons living with HIV infection in Texas were undiagnosed in 2012 and the percentage of undiagnosed HIV has dropped modestly from 2008 to 2012 (Hall et al., 2015).

The number of new HIV diagnoses decreased from 1999 to 2003, and gradually increased from 2003 to 2010 in Houston/Harris County (**Figure 4**). There was a steady increase in the number of PLWH, resulting in a growing number of people at risk for transmitting HIV and requiring HIV treatment. The number of deaths each year was much lower than the number of new diagnoses of HIV, resulting in a continuous increase in the number of PLWH.

Figure 9: **PLWH, New HIV Diagnoses, and Deaths among PLWH in Houston/Harris County, 1999 - 2013**



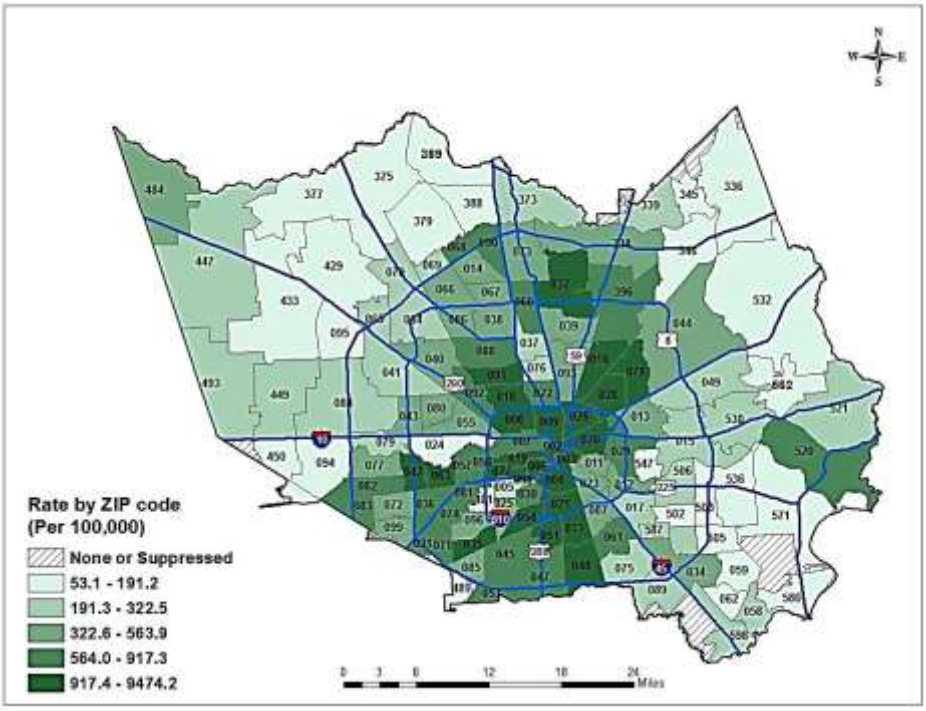
Source: Texas eHARS, 2015. For each PLWH, the jurisdiction was determined by the residence at the end of each year. For each new HIV diagnosis, the jurisdiction was determined by the HIV diagnosis address. For each death among PLWH, the jurisdiction was determined by the residence at death. If the residence at death was not available, the jurisdiction was determined by the most recent residence close to death.

As shown in **Table 2**, by the end of 2013, there were 22,551 PLWH in Houston/Harris County. The rate of PLWH in Houston/Harris County was 520 per 100,000 population, which was higher than the rate in Texas (299 per 100,000 population) (TDSHS, 2014) and in the U.S. (353 per 100,000 population) (*MMWR*; 2014). In 2015, the HIV prevalence rate for the Houston EMA was 437 per 100,000, higher than the state of Texas (301 per 100,000 population) that year.

Prevalence rates (per 100,000 population) for Houston/Harris County in 2013 were 780 and 261 in males and females, respectively. Both rates were higher than the rates in Texas. The rate of PLWH among African Americans was 1399.7 per 100,000 population, which was 1.5 times the rate among African Americans in Texas as a whole. The rates of PLWH among whites and Hispanics in Houston/Harris County were higher than those among Whites and Hispanics in Texas. All rates of PLWH for each age group shown in **Table 2** in Houston/Harris County were approximately 1.6-2.1 times the rates in Texas.

The burden of HIV disease by neighborhood is mapped in **Figure 10**, which shows rates of PLWH by ZIP codes in Houston/Harris County for 2014. HIV cases were not evenly distributed across Houston/Harris County. In 2013, the top 20% of ZIP codes with higher prevalence rates were located in central, south, and southwest Houston/Harris County.

Figure 10: **PLWH by ZIP Code in Houston/Harris County, 2013**



Source: Texas eHARS, 2015. The number of PLWH includes all cases diagnosed earlier than 12/31/2013 with address at 12/31/2013 residing in Houston/Harris County and reported to the Texas eHARS through 7/26/2015. The population data was based on the 2010 US Census. The rates by ZIP code were grouped by quintiles and shown in the map. ZIP codes were labeled using the last three digits only (e.g., 77002 was labeled as "002"). ZIP codes with less than five cases were suppressed to protect patients' confidentiality.

According to the CDC revised case definition, AIDS is now classified as the third stage of HIV infection (CDC NCHHSTP Atlas, 2015). Compared with HIV stages 1 and 2, stage 3 patients have severely weakened immune systems and are more likely to have certain types of infections and cancers, such as pneumocystis pneumonia (PCP), Kaposi sarcoma, wasting syndrome, memory impairment, and tuberculosis. **Table 5** summarizes new diagnoses of stage 3 HIV among those residing in Houston/Harris County in 2014 by key sub-populations.

Table 5: New Stage 3 HIV (AIDS) Diagnoses in Houston/Harris County by Race/Ethnicity, 2014

	White				African American				Hispanic				Total		
	Number **	%	Rate*	Relative Rate*	Number **	%	Rate*	Relative Rate*	Number **	%	Rate*	Relative Rate*	Number **	%	Rate*
Total	84	100.0%	6	1.0	296	100.0%	47	7.7	171	100.0%	11	1.8	571	100.0%	16
Sex															
Male	69	82.1%	11	1.0	199	67.2%	50	4.8	134	78.4%	14	1.3	415	72.7%	19
Female	15	17.9%	2	1.0	97	32.8%	22	10.1	37	21.6%	4	1.9	156	27.3%	7
Age Group															
0-14 yrs	**				**				**				**		
15-24 yrs	**		3	1.0	27	9.1%	20	7.5	19	11.1%	6	2.3	52	9.1%	9
25-34 yrs	20	23.8%	10	1.0	84	28.4%	61	6.3	59	34.5%	19	2.0	167	29.2%	23
35-44 yrs	28	33.3%	16	1.0	75	25.3%	64	4.1	43	25.1%	15	1.0	152	26.6%	24
45-54 yrs	21	25.0%	10	1.0	62	20.9%	59	5.7	31	18.1%	15	1.4	118	20.7%	21
55 yrs and over	15	17.9%	3	1.0	48	16.2%	30	8.6	19	11.1%	9	2.6	82	14.4%	9
Mode of Exposure* **															
MSM	58.0	65.9%			118.3	40.0%			109.9	64.3%			298.6	52.3%	
Heterosexual	9.5	10.8%			124.4	42.0%			50.0	29.2%			190.2	33.3%	
Other	16.5	18.8%			53.3	18.0%			11.1	6.5%			82.2	14.4%	
%MSM in Male***		84.1%				59.4%				82.0%				72.0%	

Source: Texas eHARS, 2015.

**: Rate was calculated as the number of cases per 100,000 population in each subgroup. Rates in total and gender groups were calculated based on population at all age groups. Population data were from 2014 ACS 1-year estimates. Relative Rate was the ratio of rates using White group in each key sub-population as reference groups.*

***: The numbers were suppressed in the group "0-14 years" and "15-24 years" in White to protect confidentiality of patients. All numbers in the row of "Total", "Sex" and "Mode of Exposure" did not include the suppressed value from the age groups. Data for other race/ethnicity group, including Asian, Pacific Islander, American Indian, multiracial and others were not shown. All values in columns of "Total" were data from all race/ethnicity groups.*

****: Patient with no risk reported were re-categorized into standard categories using CDC's multiple imputation program (McDavid et al., 2008). Percentage of MSM within males was shown. "Other" was the group with mode of exposure excluding MSM, IDU, and heterosexual risks.*

In 2014, 571 new stage 3 HIV diagnoses were made in Houston/Harris County. Approximately half of these new cases were African American. Among males, the rate of new stage 3 diagnoses in African Americans was 4.8 times that of whites and 3.6 times that of Hispanics. African American females were newly diagnosed with stage 3 HIV at a rate 10.1 times that of white females and 5.2 times that of Hispanic females. Among males, MSM was the largest risk category, comprising 84.1% of stage 3 diagnoses in whites and Hispanics and 59.4% in African Americans. The highest rates of new stage 3 diagnoses were in the age group 35-44 years for whites and African Americans, and the age group 25-34 for Hispanics. African Americans age 55 and older had a stage 3 diagnosis rate 8.6 times that of whites.

The Houston EMA , with 589 new HIV stage 3 diagnoses in 2015, shares a burden of new HIV stage 3 diagnoses similar to that of Houston/Harris County (TDSHS, 2016). While the rate of new HIV stage 3 diagnoses for the EMA as a whole in 2015 was 10 per 100,000 population, disproportionate impact was observed among males (15 per 100,000 population), African Americans (29 per 100,000 population), ages 25-34 (18 per 100,000 population), ages 35-44 (20 per 100,000 population), and ages 45-54 (17 per 100,000 population). Transmission risks with the highest proportion of new HIV stage 3 diagnoses in the Houston EMA in 2015 were MSM (54.3%) and heterosexual exposure (33.4%) . Of all new HIV stage 3 diagnoses in the Houston EMA in 2015, 274 or 46.5% received their HIV stage 3 diagnosis within 3 months of the initial HIV diagnosis, indicating late or concurrent diagnosis. Populations disproportionately affected by late/concurrent diagnoses in the Houston EMA in 2015 include Hispanic females age 35 – 44 (50%), Hispanic females age 55 and older (55%), Hispanic males age 35 – 44 (41%), Hispanic males age 55 and older (59%), and African American males age 35-54 (36%).

Mortality rate refers to the number of deaths due to a specific disease that occur among the total number of people living with that disease. In the case of HIV, however, death may be due to HIV as well as other causes. Reporting of deaths among PLWH requires additional data cleaning procedures to confirm the presence of HIV disease. Therefore, HIV mortality data are delayed by an additional reporting calendar year. Key findings in mortality in Houston/Harris County from 2013 are shown in **Table 6.**

In 2013, there were 357 total deaths among PLWH in Houston/Harris County, among which 297 were deaths among people living with stage 3 HIV. The HIV mortality rate was 10.7 deaths per 100,000 population. In males, the HIV mortality rate was 16.2 deaths per 100,000 population, which was 3 times the mortality rate in females in Houston/Harris County.

African Americans had the highest HIV mortality rate in Houston/Harris County in 2013 (31.6 deaths per 100,000 population), which was 4.6 times the rate for whites and 6.7 times the rate for Hispanic and other races. The HIV/AIDS mortality rate was highest among the age group 45-54 years (20.8 deaths per 100,000 population) that year, which was 6.3 times the rate for those aged 15-34 years. By transmission risk, 34% of deaths were among those with MSM exposure, 24% with heterosexual exposure, 16% with IDU exposure, 7% with MSM/IDU exposure, and 19% due to other exposures including no identified risk and no reported risk.

In summary, the HIV mortality rates in Houston/Harris County were higher among males, African Americans, the 45-54 age group, and the MSM exposure group.

Table 6: **Deaths among Adolescents and Adults with HIV in Houston/Harris County by Key Sub-populations 2013**

	HIV, Stage 3 (AIDS) Deaths**			HIV deaths**		
	Number	%	Rate	Number	%	Rate
Total	297	100.0%	8.9	357	100.0%	10.7
Sex						
Male	218	73.4%	13.2	267	74.8%	16.2
Female	79	26.6%	4.7	90	25.2%	5.3
Race/ethnicity						
White	64	21.5%	5.5	79	22.1%	6.8
African American	172	57.9%	26.3	207	58.0%	31.6
Hispanic or others	61	20.5%	4.0	71	19.9%	4.7
Age at Death						
15 - 34 yrs	37	12.5%	2.8	44	12.3%	3.3
35 - 44 yrs	59	19.9%	9.5	75	21.0%	12.1
45 - 54 yrs	100	33.7%	17.9	116	32.5%	20.8
55 and over	101	34.0%	12.0	122	34.2%	14.5
Mode of Exposure*						
MSM	99	33.3%		120	33.6%	
IDU	48	16.2%		57	16.0%	
MSM/IDU	21	7.1%		26	7.3%	
Heterosexual	75	25.3%		86	24.1%	
Others	54	18.2%		68	19.0%	

Source: Houston/Harris County Data were from the Texas eHARS, 2015. Rates in the table were expressed as deaths per 100,000 population (15 years and over). For each patient, the jurisdiction was determined by residence at death. If the residence at death was not available in the Texas eHARS, jurisdiction was determined by the most recent address close to the patient's death date.

**: "Others" in mode of exposure was the group excluding MSM, heterosexual risks, IDU and MSM/IDU. Patients with no risk reported were not re-categorized by using CDC's multiple imputation program.*

***: Death numbers reported in this table are deaths of persons with diagnosed HIV infection or with infection classified as stage 3 (AIDS) regardless of the cause of death.*

Indicators of Risk for HIV Infection in the Houston Area

Information in this section is drawn from results of the National HIV Behavioral Surveillance System (NHBS), Youth Risk Behavioral Surveillance System (YRBSS), and Behavioral Risk Factor Surveillance System (BRFSS).

Sexual Behaviors

Sexual Risk Behaviors and Education Among Youth

The YRBSS is a national school-based survey conducted by the CDC and states, with local education and health agencies conducting surveys. Sexual behaviors related to HIV infection are one of the health-risk behavior categories in the YRBSS survey. **Table 7** shows the sexual behaviors that are related to HIV infection or education in Houston from 2007 to 2013. Data from Texas and the U.S. in 2013 are included for comparison.

Among Houston high school students, the percentage of currently sexually active students slightly decreased from 35.2% in 2007 to 31.4% in 2013, less than the percentage in Texas (32.8%) and the U.S. (34.0%) in 2013. The percentage of currently sexually active high school students in Houston reporting no condom use during last sexual intercourse increased from 36.6% in 2007 to 44.3% in 2013, which was slightly lower than the percentage in Texas as whole (47.1%), but higher than that of the U.S. (40.9%). In terms of education about HIV, the percentage of Houston students never taught in school about HIV infection increased from 21.3% in 2007 to 31.7% in 2013. The percentage in Houston was much higher than that in Texas (1.5 times) and in the U.S. (2 times).

Table 7: **Sexual Risk Behaviors in High School Students in Houston, Texas, and U.S.**

	Houston, TX			Texas	US
	2007	2011	2013	2013	2013
Were currently sexually active(sexual intercourse with at least one person during the 3 months before the survey)	35.2 (31.8-38.8) 1,498*	35.4 (31.9-39.1) 1,776	31.4 (27.6-35.3) 1,358	32.8 (29.5–36.4) 2843	34.0 (31.6-36.5) 12,876
Did not use a condom (during last sexual intercourse among students who were currently sexually active)	36.6 (31.7-41.9) 513	40.5 (36.0-45.3) 552	44.3 (39.7-49.1) 383	47.1 (43.7–50.6) 908	40.9 (38.1-43.7) 4,565
Were never taught in school about AIDS or HIV infection	21.3 (18.5-24.3) 1,729	25.4 (23.0-28.0) 2,000	31.7 (28.6-34.9) 1,555	20.6 (17.9–23.6) 3,071	14.7 (12.6-17.0) 13,223

Source: Youth Risk Behavioral Surveillance System (YRBSS), High School Youth Risk Behavior Survey, https://nccd.cdc.gov/youthonline/App/Default.aspx, accessed on May 27, 2016.
**: Percentage, confidence Interval, cell size.*

Sexual Risk Behaviors Among Adults

The BRFSS is the nation's premier system of health surveys that collect data about U.S. residents regarding their health-related risk behavior and events among adults, including questions related to sexual risk behaviors.

In 2012 in the Houston-Woodlands-Sugar Land MSA, 3.3% of respondents had engaged in HIV-related sexual risk behaviors such as using intravenous drugs, having a history of sexually

transmitted diseases (STDs), engaging in sex work, and having unprotected sex in the past year (**Table 8**). The percentage of people who engaged in sexual risk behaviors was higher among males, African Americans, age group 18-29 years, high school graduates, persons with incomes less than $25,000, unemployed, uninsured, unmarried, and those with limitation. In this case, "limitation" is defined as someone who self-reports that they are limited because of a physical, mental, or emotional problem or someone who had any health problem that requires use of special equipment (e.g., cane, wheelchair, special bed, telephone for the hearing-impaired).

In 2014 in the Houston-Woodlands-Sugar Land MSA, 63.0% of respondents had never had an HIV test before. The percentage was similar to that of Texas (63.5%) and lower than that of the U.S. (65.9%) (CDC BRFSS, 2016): The percentage of no HIV testing was much higher in males (69.9%) than in females (56.7%). After those ages 65 years or older, the age groups with the highest percentage of never testing for HIV included those 18-29 years and 45-64 years. Populations with some college, income between $25,000 and $49,999 annually, unemployed, insured, unmarried, and those without limitations were less likely to have had an HIV test.

Table 8: **Sexual Risk Behaviors in the Houston-Woodlands-Sugar Land MSA**

	Have Engaged in Sexual Risk Behaviors*			Never Had HIV test**		
	N***	%	95% CI	N***	%	95% CI
Total	925	3.3	2.1-5.1	1679	63.0	59.1-66.8
Gender						
Female	509	3.2	1.5-6.4	987	56.7	51.2-62.1
Male	416	3.5	2.1-5.9	692	69.9	64.4-74.9
Race/Ethnicity						
White	491	3.1	1.7-5.3	1026	71.9	67.0-76.3
African American	120	4.2	1.5-11.3	208	44.5	33.8-55.8
Hispanic	234	3.5	1.4-8.3	318	61.3	54.1-68.0
Other only/Multiracial	55	3.2	0.8-12	81	69.1	52.8-81.7
Age Group						
18-29 years	128	7.7	3.5-15.9	147	63.2	52.4-72.9
30-44 years	235	3.4	1.6-7.3	306	53.6	46.1-61.0
45-64 years	352	1.3	0.6-3.1	639	63.2	56.7-69.3
65+ years	204	2.9	1.1-7.5	563	78.5	70.6-84.8
Education						
Less than High School	122	3.7	1.5-8.9	196	62.7	52.7-71.7
High School Graduates	225	6.7	3.5-12.6	403	61.8	53.4-69.5
Some College	206	1.7	0.5-5.5	417	65.4	58.0-72.1
College Graduate	371	1.6	0.7-3.8	663	61.6	55.1-67.7
Income Level						
Less than $25, 000	257	5.1	2.6-9.2	408	58.1	50.6-65.2
$25,000-$49,999	165	4.5	1.4-13.5	302	67.3	57.7-75.6
$50,000 or more	389	1.9	0.9-4.1	714	63.4	57.3-69.1
Employment						
Employed	513	3.3	2.0-5.4	815	61.7	56.4-66.6
Not employed	404	3.4	1.6-7.3	858	64.3	58.1-70.0
Insurance Status						
Insured	694	2.3	1.1-4.6	1413	64.3	59.9-68.5
Not Insured	225	5.7	3.3-9.7	256	58.8	50.3-66.8
Marital Status						
Married	495	1.9	1.0-3.6	935	62.5	57.2-67.5
Not Married	430	4.9	2.8-8.6	738	63.5	57.5-69.1
Limitation Status						
Has Limitation	204	5.1	1.8-14.0	426	59	50.6-66.9
No Limitation	716	2.9	1.9-4.5	1240	63.8	59.3-68.0

Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), http://healthdata.TDSHS.texas.gov/HealthRisks/BRFSS, accessed on May 27, 2016.
Note: Limitation is "Yes" to one of the following: Are you limited in any way in any activities because of physical, mental, or emotional problems? Do you now have any health problem that requires you to use special equipment,

such as a cane, wheelchair, a special bed, or a special telephone?
**: Response "Yes" to the question: Do any of the situations apply to you – used intravenous drugs, were treated for a sexually transmitted disease, gave/received money or drugs in exchange for sex, or had anal sex without a condom in the past year? Data were from 2012 survey.*
***: Response "No" to the question: Have you ever been tested for HIV? Data were from 2014 survey.*
****: The sample size includes all survey respondents except those with missing, 'don't know', or 'refused' answers.*

Among High-Risk Populations

The NHBS was established to monitor select behaviors that put people at risk for HIV infection. NHBS targets three high-risk populations for HIV: MSM, IDU, and heterosexuals at increased risk of HIV infection based on certain eligibility criteria for each specific NHBS cycle. The behavior risk factors for HIV of each high-risk population are presented in this section. It is important to note the testing rate might be higher in high-risk populations than in the general population.

Among Heterosexuals

Tables 9 and **10** present high-risk behaviors among heterosexuals (HET) during the three assessment cycles conducted among this population in Houston.
Table 9 shows that over the cycle periods, there was a decrease in number of males who had unprotected vaginal sex (UVS) with both main and casual partners in the past 12 months. The number of males who did not know the HIV status of their last sex partner increased over the cycle periods, from 44.0% to 61.9%. Although showing a slight decrease, the use of alcohol and drugs during their most recent sexual encounter continues to be consistently high among study participants during the cycle periods. Testing rates in this male population seemed to be increasing over time, from 76.2% to 82.6%.

***Table 9:* HET High-risk Behaviors in Males by Survey Cycle, Houston/Harris County**

High-risk Behaviors in Males	HET1 2006	HET2 2010	HET3 2013
UVS* with main female partner in past 12 months	53.4%	45.5%	39.6%
UAS** with main female partner in past 12 months	4.5%	9.0%	7.8%
UVS with casual female partner in past 12 months	8.8%	7.6%	6.7%
UAS with casual female partner in past 12 months	1.9%	6.9%	2.7%
Use of alcohol and drugs during the last sex	65.3%	55.9%	53.7%
Did not know HIV status of last sex partner	44.0%	55.2%	61.9%
Ever tested for HIV	76.2%	78.0%	82.6%

Source: NHBS HET 2006, 2010, and 2013
**UVS: Unprotected vaginal sex **UAS: Unprotected anal sex*
****Main partner - a person you have sex with and who you feel committed to above anyone else. This is a partner you would call your girlfriend/boyfriend, wife/husband, significant other, or life partner.*
*****Casual partner - a person you have sex with but do not feel committed to or don't know very well.*

High rates of UVS among high-risk heterosexual females with their main male partners continued during the 12 months prior to the survey. Although rates for ever being tested were increasingly high, from 82.9% to 90.0%, the rates for not knowing the HIV status of the last sex partner were also high, ranging from 47.5% - 61.9%. The use of alcohol and drugs during their most recent sexual encounter continued to be a high-risk behavior throughout the cycle periods (> 40%).

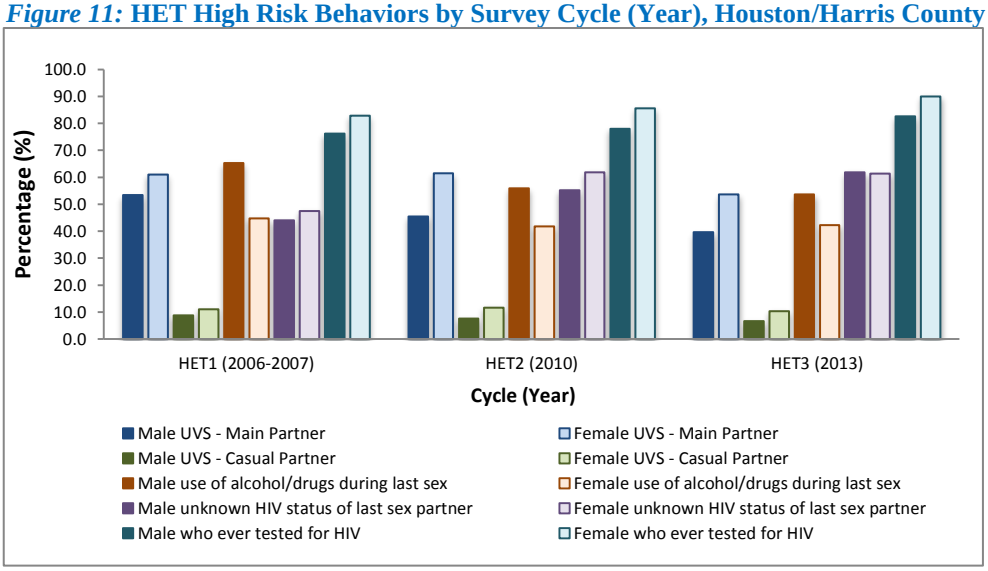
Figure 11 presents high-risk behaviors reported by heterosexual males and females who participated in NHBS-HET (cycles 1, 2 and 3). Overall, females continued higher rates of UVS in the previous 12 months with their main and casual partners when compared to males. The use of alcohol and drugs during their most recent sexual encounter was persistently higher in males. The proportions of females who were unaware of the HIV status of their last sex partner were slightly higher than that of males for the years 2007 and 2010, but lower in 2013. Although the rates for ever being tested among the HET males and females increased over time, females tended to be tested more often than males did.

Table 10: **HET High-risk Behaviors in Females by Survey Cycle, Houston/Harris County**

High-risk Behaviors in Females	HET1 2006	HET2 2010	HET3 2013
UVS with main male partner in past 12 months	61.0%	61.5%	53.7%
UAS with main male partner in past 12 months	7.8%	17.7%	14.7%
UVS with casual male partner in past 12 months	11.1%	11.7%	10.3%
UAS with casual male partner in past 12 months	0.68%	6.4%	5.9%
Use of alcohol and drugs during the last sex	44.8%	41.8%	42.3%
Did not know HIV status of last sex partner	47.5%	61.9%	61.4%
Ever tested for HIV	82.9%	85.6%	90.0%

Source: NHBS HET 2006, 2010, and 2013
***UVS:** Unprotected vaginal sex* ****UAS:** Unprotected anal sex*
*******Main partner** - a person you have sex with and who you feel committed to above anyone else. This is a partner you would call your girlfriend/boyfriend, wife/husband, significant other, or life partner.*
********Casual partner** - a person you have sex with but do not feel committed to or don't know very well.*

Figure 11: **HET High Risk Behaviors by Survey Cycle (Year), Houston/Harris County**



Source: NHBS HET 2006, 2010, and 2013

<u>Among IDU</u>

High-risk behaviors reported among IDU during the three completed cycles of NHBS-IDU are displayed in **Table 11**. Sharing of injection equipment comprised one of the major drug-related risk behaviors for current injectors (people who have injected non-prescribed drugs in the past 12

months). The results indicate a slight decrease in the proportions of participants involved in these risk behaviors during IDU Cycle 3 (2012) when compared to the previous IDU Cycle 2 in 2009. The proportions of IDU who reported being unaware of the HIV status of their last injecting partner were considered high, ranging from 37.6% to 55.1%, with no clear pattern identified. However, the HIV testing rates increased consistently from 76.0% in IDU Cycle 1 (2005) to 92.5% in IDU Cycle 3 (2012).

Table 11: **IDU High-risk Behaviors by Survey Cycle, Houston/Harris County**

High-risk Behaviors	IDU Cycle 1 2005	IDU Cycle 2 2009	IDU Cycle 3 2012
Shared injection equipment in past 12 months - last IDU partner	33.7%	57.2%	35.3%
Divided drugs with same syringe in past 12 months - last IDU partner	51.1%	28.3%	17.8%
Shared syringe in the past 12 months - last IDU partner	45.5%	28.5%	17.8%
Did not know HIV status of last injecting partner	37.6%	55.1%	37.6%
Ever tested for HIV	76.0%	89.6%	92.5%

Source: NHBS IDU 2005, 2009, and 2012

Among MSM

Table 12 presents high-risk behaviors reported by MSM during the four cycle periods conducted among MSM in Houston. The data shows that more than 25% of MSM had unprotected anal sex (UAS) with their main partner in the past 12 months. MSM participants showed higher rates of unprotected sex when they engaged in anal insertive sex compared to anal receptive sex. In general, nearly 30% of MSM were unaware of the HIV status of their last sex partner. Almost half of the time in all MSM cycles, alcohol and/or drugs were used during their most recent sexual encounter. Consistently throughout each cycle, very high rates of ever being tested for HIV have been reported among MSM participants.

Table 12: **MSM High-risk Behaviors by Survey Cycle, Houston/Harris County**

High-risk Behaviors	MSM Cycle 1 2004	MSM Cycle 2 2008	MSM Cycle 3 2011	MSM Cycle 4 2014
UAS* with main partner** in past 12 months	26.7%	26.4%	28.2%	26.1%
UAS with casual partner*** in past 12 months	0.6%	7.3%	5.0%	5.9%
UAS with main partner at last sex (insertive)	24.3%	23.7%	23.8%	22.8%
UAS with main partner at last sex (receptive)	18.2%	15.3%	18.8%	18.6%
Use of alcohol and drugs during the last sex	--	45.3%	49.9%	47.3%
Did not know HIV status of last sex partner	---	28.7%	36.1%	34.2%
Ever tested for HIV	95.8%	93.1%	90.8%	93.2%

Source: NHBS MSM 2004, 2008,201, and 2014
***UAS** - unprotected anal sex*
*****Main partner** - a person you have sex with and who you feel committed to above anyone else. This is a partner you would call your girlfriend/boyfriend, wife/husband, significant other, or life partner.*
******Casual partner** - a person you have sex with but do not feel committed to or don't know very well.*

HIV Testing in High-Risk Populations

Targeted HIV testing is an ongoing role of health departments funded by the CDC for HIV prevention. This testing is targeted to high-risk populations and, in Houston/Harris County, is conducted primarily by community-based organizations. Target populations are selected by the health department and community planning groups using data on the subpopulations identified at most risk for new HIV diagnoses.

Among all targeted MSM populations, 6.0% had positive test results in either a previous or current HIV test. At the time of testing, 3.5% of MSM had their first positive test result (new positive, **Table 13**). The all positive percentage was higher in MSM of all ages (6.0%) than that of youth (5.3%). The rates of new positivity were similar at all ages and youth. All positive rates are much higher in all MSM (around 5%) compared to the heterosexual group (less than 1%). Similarly, new positive rates in MSM are higher than those in the heterosexual group. Conclusions based on the data for MSM/IDU are unreliable due to the small sample size.

Table 13: **HIV testing within a high-risk population in Houston/Harris County, 2015**

	Tested (N)	All positive* (N)	All positive* (%)	New positive * (N)	New positive* (%)
MSM					
Male (All Ages)	2,837	169	6.0%	98	3.5%
Male (13-24 yrs)	1,423	76	5.3%	51	3.6%
Transgender**	126	5	4.0%	2	1.6%
Heterosexual					
Female (All Ages)	1,784	13	0.7%	9	0.5%
Female (13-24 yrs)	605	6	1.0%	2	0.3%
Transgender	5				
Male (All Ages)	2,135	22	1.0%	10	0.5%
Male (13-24 yrs)	501	4	0.8%	1	0.2%
MSM/IDU					
Male (All Ages)	26	2	7.7%	2	7.7%
Male (13-24 yrs)	7	1	14.3%	1	14.3%
Transgender**	3				
IDU					
Female (All Ages)	27				
Female (13-24 yrs)	13				
Male (All Ages)	20				
Male (13-24 yrs)	4				
No Identified Risk					
Transgender**	12				

**All positive refers to those who had a positive test result at or before the testing. New positive refers to those who had the first ever positive test result.*

***Transgender is assigned in the system if the person's current gender is male to female or female to male.*

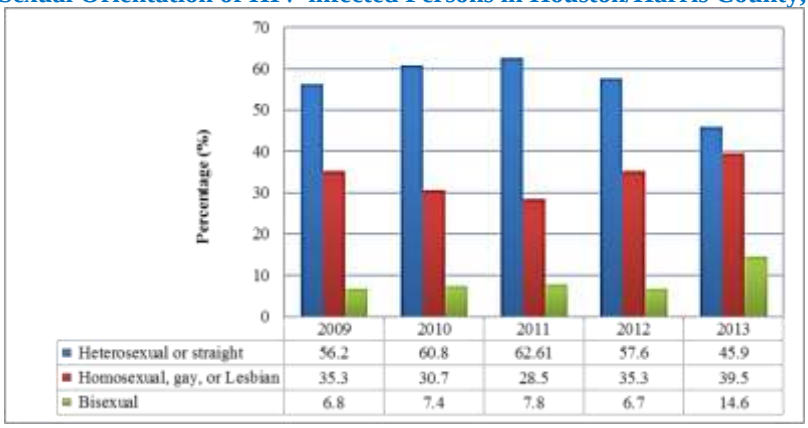
Indicators of High Risk Among PLWH

Estimation of sexual behaviors, clinical outcomes, use of prevention services, needs for HIV care and prevention services among PLWH were derived from the HMMP and data provided by the TDSHS for preparation of the FY17 Ryan White Program Part A grant application in August 2016.

Sexual Orientation and Gender Identity

The sexual orientation of participants the HMMP surveyed between 2009 and 2013 is displayed in **Figure 12**. Proportionally, heterosexuals were highest with a range of 45.9-62.6%, followed by homosexual, gay, or lesbian (28.5-39.5%) and bisexuals (6.7-14.6%). However, decreasing and increasing trends among heterosexuals and homosexuals, gays, or lesbians, respectively, were noted between 2011 and 2013 project cycles. Among participants surveyed between 2009 and 2013, 70% were male, 38% were female and 2% were transgender (**Table 3**).

Figure 12: **Sexual Orientation of HIV-infected Persons in Houston/Harris County, 2009-2013.**



	2009	2010	2011	2012	2013
Heterosexual or straight	56.2	60.8	62.61	57.6	45.9
Homosexual, gay, or Lesbian	35.3	30.7	28.5	35.3	39.5
Bisexual	6.8	7.4	7.8	6.7	14.6

Source: Houston Medical Monitoring Project, 2009-2013

Clinical Outcomes

Table 14 indicates time since HIV diagnosis, stage of HIV disease, and current antiretroviral therapy status among HIV-diagnosed persons in Houston/Harris County participating in the HMMP from 2009-2013. On average, the majority of participants (51.3%) in HMMP were diagnosed 10 or more years ago, followed by those diagnosed 5-9 years ago (27.5%) and less than 5 years (21.8%) ago. There was an increasing trend in the proportion of HIV patients taking antiretroviral therapy (ART) in Houston/Harris County with a range from 82.7% in 2009 to 94.9% in 2013. Based on the CDC surveillance classification of HIV disease stages, on average, 9.7% of the participants were at Stage I (No AIDS, CD4+ T-lymphocyte count ≥500 cells/µL or CD4% ≥29); 19.0% were at Stage II (No AIDS, CD4+ T-lymphocyte count 200-499 cells/µL or CD4% = 14 to <29); and 71.4% were at Stage 3 (Clinical AIDS or CD4+ T-lymphocyte count <200 cells/µL or CD4% <14) (Table 14).

Table 15 presents the geometric mean CD4+ T-lymphocyte count and most recent HIV viral load detectability status of HMMP participants from 2009-2013. Proportion of participants with a CD4 count of 500 or more cells/µL ranged from 38.6% in 2009 to 57.2% in 2012. The trends in CD4 count categories generally fluctuated across the period as follows: 4.8%-14.4% (*0-199 Cells/µL*); 9.8%-23.8% (*200-349 Cells/µL*) and 15.9%-22.8% (*350-499 Cells/µL*). On average, 67.6% of participants had undetectable viral loads based on their most recent HIV viral loads (**Table 15**).

The year 2009 recorded the lowest proportion of patients with undetectable viral loads (55.6%) compared to the highest proportion (78.9%) obtained during the 2012 cycle.

Table 14: **Time since HIV Diagnosis, Stage of Disease and Current Antiretroviral Therapy Status among HIV-Infected Persons in Houston/Harris County, Texas, 2009-2013.**

Characteristic	2009		2010		2011		2012		2013	
	N	Weighted % (95% CI)	N	Weighted % (95% CI)	N	Weighted % (95% CI)	N	Weighted % (95% CI)	N	Weighted % (95% CI)
Time Since HIV diagnosis										
<5 years	41	28.1 (21.0-35.2)	39	24.3 (17.3-31.3	54	27.5 (21.3-33.7)	51	29.1 (22.0-36.2)	42	25.6 (19.2-32.0)
5-9 years	27	19.8 (12.9-26.6)	26	16.8 (10.7-22.8)	57	28.5 (22.2-34.9)	43	17.74 (12.85-22.62)	60	26.0 (20.2-31.8)
≥ 10 years	71	52.1 (43.59-60.62)	94	58.9 (50.8-67.1)	90	44.0 (36.5-51.4)	128	53.2 (46.2-60.2)	116	48.5 (42.0-55.0)
Currently Taking ART										
Yes	118	82.7 (76.2-89.2)	140	88.5 (84.1-93.1)	179	90.1 (85.6-94.4)	208	93.6 (90.1-96.7)	207	94.9 (91.9-98.1)
No	23	17.3 (10.8-23.9)	17	11.5 (6.9-16.1)	20	10.0 (5.6-14.4)	13	6.5 (3.0-9.9)	11	5.1 (2.0-8.1)
Stage of HIV Disease[+]										
Stage I: No AIDS, CD4+ T-lymphocyte count ≥500 cells/µL (or CD4% ≥29)	14	11.9 (5.4-18.3)	16	10.4 (5.9-14.9)	13	6.6 (3.2-10.1)	21	10.1 (5.9-14.1)	21	9.7 (5.8-13.6)
Stage II: No AIDS, CD4+ T-lymphocyte count 200-499 cells/µL (or CD4% = 14 to <29)	21	17.0 (9.6-24.4)	25	16.1 (10.3-21.6)	37	18.6 (13.4-23.9)	41	19.3 (14.0-24.6)	48	23.8 (17.8-29.8)
Stage III: Clinical AIDS or CD4+ T-lymphocyte count <200 cells/µL (or CD4% <14)	104	71.1 (63.8-78.5)	118	73.7 (67.1-80.3)	151	74.8 (68.9-80.6)	159	70.7 (64.9-76.6)	149	66.5 (60.1-73.1)

+ Based on CDC surveillance classification; Percentages may not sum up to 100 due to rounding and/or suppressed figures

Source: Houston Medical Monitoring Project, 2009-2013

Table 15: **Geometric Mean CD4+ T-lymphocyte Count and Most Recent HIV Viral Load Detectability Status among HIV-Infected Persons in Houston/Harris County, Texas, 2009-2013.**

Characteristics	2009		2010		2011		2012		2013	
	N	Weighted % (95% CI)	N	Weighted % (95% CI)	N	Weighted % (95% CI)	N	Weighted % (95% CI)	N	Weighted % (95% CI)
Geometric mean CD4+ T-lymphocyte count (cells/µL)										
0-199	27	22.1 (14.4-29.5)	18	12.8 (7.2-18.4)	27	15.0 (9.4-20.6)	11	4.8 (2.1-7.6)	22	11.7 (6.9-16.5)
200-349	31	23.8 (16.2-31.3)	29	20.7 (12.7-28.7)	36	18.7 (13.2-24.3)	37	18.2 (13.3-23.2)	19	9.8 (5.6-14.1)
350-499	19	15.9 (9.0-22.8)	28	19.8 (12.7-26.9)	40	21.7 (15.5-28.0)	41	19.7 (13.8-25.6)	44	22.8 (16.4-29.2)
≥ 500	44	38.6 (29.7-47.1)	66	46.7 (38.7-54.8)	82	44.5 (36.3-52.7)	122	57.2 (50.6-63.9)	108	55.6 (48.3-63.0)
Most recent HIV viral load und etectable or <= 200 copies/mL										
HIV viral load undetectable or ≤200 copies/ml	80	55.6 (46.2-64.6)	107	66.5 (59.4-73.6)	133	65.8 (59.3-72.4)	176	78.9 (73.7-84.2)	160	72.2 (66.2-78.3)
HIV viral load detectable, >200 copies/ml or Missing/unknown	61	44.4 (35.4-53.4)	52	33.5 (26.4-40.6)	68	34.2 (27.6-40.7)	46	21.1 (15.8-26.3)	58	27.8 (21.7-33.9)

Percentages may not sum up to 100 due to rounding and/or suppressed figures.
Source: Houston Medical Monitoring Project, 2009-2013

While 57% of diagnosed PLWH in the Houston EMA in 2015 achieved viral suppression, proportions of viral suppression below the EMA level were observed among African Americans (53%); ages 13-24 (46%), 25-34 (50%), and 35-44 (56%); IDU (53%), MSM/IDU (54%), heterosexual (56%), and pediatric (49%) transmission risk categories; and those diagnosed in 2015 (42%) or between 2006 and 2010 (56%) (TDSHS, 2016).

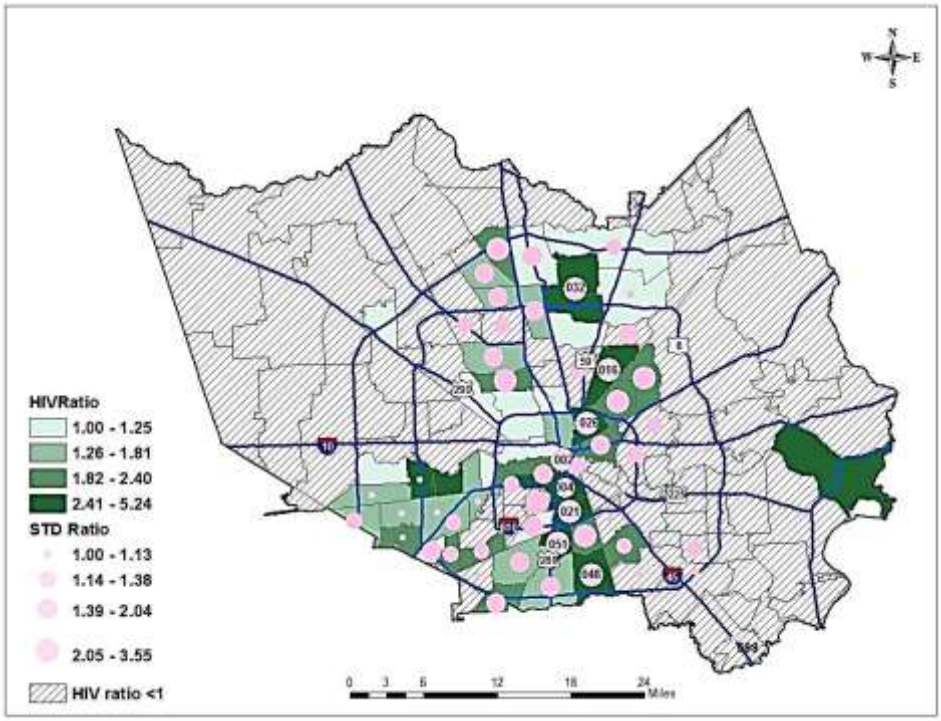
Comorbidity

People living with HIV are more likely to be co-infected with other sexually transmitted infections as well as with hepatitis B, hepatitis C and tuberculosis. Commonly occurring sexually transmitted infections (STIs) among PLWH are syphilis, gonorrhea, and chlamydia. Undiagnosed and untreated STIs may cause long-term health consequences such as reproductive health issues, fetal and perinatal health problems, cancer, and even death (Healthy People 2020). STIs have been proven to facilitate the sexual transmission of HIV infection (Wasserheit, 1992; Hayes et al., 1995). Improved treatment of STIs may reduce the HIV incidence rate (Grosskurth, 1995).

Co-infection with STD

Figure 13 shows both HIV and STI diagnosis rates by ZIP code. Eight ZIP codes labeled in the figure had both the highest HIV and highest STI diagnosis rates within the region, which may suggest a higher possibility of having HIV and STI coinfection. Most of the eight ZIP codes were in the central Houston area, with a few in south and north Houston.

Figure 13: **HIV and STI Diagnoses in Houston/Harris County, 2014**

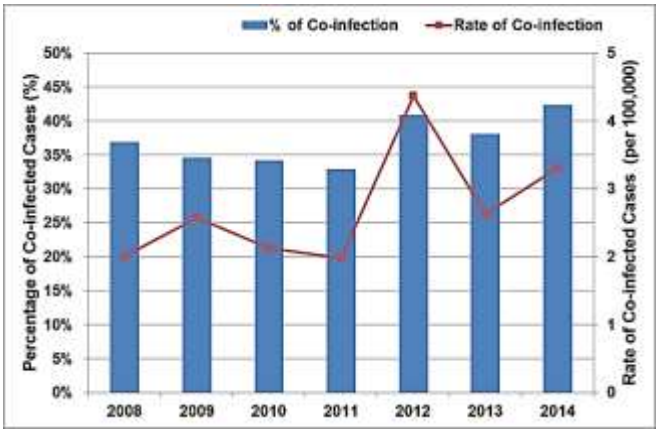


*Source: HIV data were from Texas eHARS, 2015. STI data were from STD*MIS. The HIV ratio was the ratio of HIV diagnosis rate by each ZIP code relative to the HIV background rate, which was the HIV diagnosis rate in Houston/Harris County in 2014 (29.1 per 100,000 population). The STI ratio was the ratio of STI diagnosis rate by each ZIP code relative to the STI background rate, which was the STI diagnosis rate in Houston/Harris County in 2014 (725.6 per 100,000 population). STI included primary and secondary syphilis, chlamydia, and gonorrhea. ZIP codes with less than 5 case counts or with rates less than the background rate were suppressed. ZIP codes with both the highest (top 25%) STI diagnosis rates and highest (top 25%) HIV diagnosis rates were labeled using the last three digits only (e.g. 77002 was labeled as "002").*

In 2014 (CDC Sexually Transmitted Disease Surveillance, 2015), Harris County ranked 9th highest in reported cases of primary and secondary syphilis among all counties in the U.S. The percentage reported with infectious syphilis and HIV co-infection cases is, on average, 37.1% each year in Houston/Harris County. The highest co-infection rate was in 2012 and the lowest rate was in 2011 (**Figure 14**).

A total of 756 syphilis cases at all stages were co-infected with HIV in 2014, a rate of 17.0 co-infected people for every 100,000 population in Houston/Harris County. One hundred and forty-seven cases of infectious syphilis were reported to be co-infected with HIV during the year 2014 in Houston/Harris County, with a rate of 3.3 co-infections per 100,000 population (**Table 16**). The majority were between the ages of 25 and 34 (40.8%), African American (48.3%), and MSM (91.2%).

Figure 14: **Proportion and Rate of Cases with HIV and Infectious Syphilis in Houston/Harris County, 2008 - 2014**



Source: Data reflect estimates based on interview data by Disease Intervention Specialists (DIS), health department staff that attempt to conduct partner notification/elicitation on all new syphilis cases. Population data were based on ACS 1- year estimate in each year.

Table 16: **Syphilis Cases Co-infected with HIV in Houston/Harris County by Key Sub-populations, 2014**

	HIV & Infectious Syphilis			HIV & All Syphilis		
	Cases	**%**	**Rate**	**Cases**	**%**	**Rate**
Total Co-infected Cases	147	100.0%	3.3	756	100.0%	17.0
Sex						
Male	142	96.6%	6.4	728	96.3%	32.9
Female	5	3.4%	0.2	28	3.7%	1.3
Race/Ethnicity						
White	26	17.7%	1.9	147	19.4%	10.6
African American	71	48.3%	8.4	367	48.5%	43.3
Hispanic/Latino	44	29.9%	2.4	224	29.6%	12.1
Other/Unknown	6	4.1%	1.7	18	2.4%	5.2
Age at Diagnosis						
15-24 yrs	32	21.8%	5.1	121	16.0%	19.3
25-34 yrs	60	40.8%	8.4	293	38.8%	40.8
35-44 yrs	32	21.8%	5.0	175	23.2%	27.4
45-54 yrs	16	10.9%	2.8	121	16.0%	21.4
55 yrs and over	7	4.8%	0.8	45	6.0%	5.1
HIV Transmission Risk						
MSM	134	91.2%		667	88.2%	
Non-MSM	13	8.8%		89	11.8%	

Source: Data reflect estimates based on interview data by Disease Intervention Specialists (DIS), health department staff that attempt to conduct partner notification/elicitation on all new syphilis cases. Population data were based on 2014 ACS 1- year estimate.

Co-infection with Viral Hepatitis

Based on available surveillance data, a total of 117 HIV-infected individuals in Houston/Harris County were diagnosed with Hepatitis B or C in either 2012 or 2013, including 14 cases of Hepatitis B and 103 cases of Hepatitis C. Among PLWH in this area in 2013, 0.5% were co-infected with either Hepatitis B or C in 2012 or 2013. It is known that these conditions are underreported to the health department; therefore, the percentage of co-infection in PLWH is

likely much higher than displayed here.

Most of Houston/Harris County PLWH with Hepatitis B or C co-infection were male, African American, and aged 45 years and older (**Table 17**). Although most of the co-infected cases have a reported transmission risk of MSM, IDU was also reported in almost 25% of the co-infected cases. These results are consistent with the research on Hepatitis transmission, specifically Hepatitis C, which is more effectively transmitted through exposure to blood than sexual contact (Clausen, 2014).

Table 17: **PLWH Co-infected with Hepatitis B or C in Houston/Harris County by Key Sub-population, 2012-2013**

	Number	%
Total co-infected cases	117	100%
Sex		
Male	91	77.8%
Female	26	22.2%
Race/Ethnicity		
White	27	23.1%
African American	65	55.6%
Hispanic	20	17.1%
Other/Unknown	5	4.3%
Age at Diagnosis		
13 - 34 yrs	15	12.8%
35 - 44 yrs	28	23.9%
45 - 54 yrs	36	30.8%
55 and over	38	32.5%
Transmission Risk		
MSM	49	41.9%
IDU	29	24.8%
MSM/IDU	7	6.0%
Heterosexual	16	13.7%
Other/Unknown	16	13.7%

Source: HIV data were from Texas eHARS, 2015. Hepatitis B and C data were from the Houston Electronic Surveillance System, 2015. Patients with no risk reported were not re-categorized into standard categories using CDC's multiple imputation program.

Co-infection with Tuberculosis

In 2013, 22 tuberculosis (TB) cases were diagnosed in Houston/Harris County patients with HIV, regardless of stage 3 HIV status (**Table 18**). Among those with co-infection, 59.1% were male, 36.4% were African American, and 54.5% were Hispanic. Among the 22,551 PLWH in Houston/Harris County in 2013, 629 individuals (2.9%) had a past or present diagnosis of TB by the end of 2013. Among those, 77.4% were male. By race/ethnicity, 51.8% were African American and 34.0% were Hispanic.

Table 18: **PLWH Co-infected with Tuberculosis in Houston/Harris County by Key Sub-population, 2013**

	TB cases diagnosed in 2013 in PLWH		PLWH in 2013 having TB diagnoses by Dec 31, 2013	
	Number	**%**	**Number**	**%**
Total	22	100.0%	629	100.0%
Sex				
Male	13	59.1%	487	77.4%
Female	9	40.9%	142	22.6%
Race				
White	0	0.0%	60	9.5%
African American	8	36.4%	326	51.8%
Hispanic	12	54.5%	214	34.0%
Multi/Other	2	9.1%	29	4.6%
Transmission Risk**				
MSM	7.1	32.3%	220.9	35.1%
IDU or MSM/IDU	5.3	24.1%	190.3	30.3%
Heterosexual	9.6	43.6%	210.8	33.5%
Other	0.0	0.0	7	1.1%

Source: Texas eHARS, 2015.

**: Patients with no risk reported were re-categorized into standard categories using the CDC's multiple imputation program (McDavid et al., 2008).*

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Section I: Statewide Coordinated Statement of Need/Needs Assessment

B. Houston Area HIV Care Continuum

Houston EMA HIV Care Continuum

The HIV Care Continuum (HCC) is a model used to assess community-wide access and service gaps in HIV medical care. Beginning with initial HIV diagnoses, the HCC shows progression toward met need and retention in care, with the ultimate goal of viral suppression. Ideally, the HCC describes a seamless system of HIV prevention and care services, in which people living with HIV (PLWH) receive the full benefit of HIV treatment by being diagnosed, linked to care, retained in care, and taking HIV medications as prescribed to achieve viral suppression. Interventions such as expanded testing and earlier treatment can slow the HIV epidemic and full engagement of PLWH in care with viral suppression has been shown to greatly reduce risk of HIV transmission and support both longer lifespans and better health outcomes for PLWH (Bradley et al., 2014).

The Houston Eligible Metropolitan Area (EMA) HCC describes community-wide access and service gaps for Harris, Fort Bend, Waller, Montgomery, Liberty and Chambers counties created from data reported to the Texas Department of State Health Services (TDSHS)
Data were obtained by request to TDSHS, as the Department has access to surveillance and care data for the state of Texas as well as access to the most varied sources of data for establishing evidence of care (e.g., private payer data). At the time of request, the TDSHS was unable to release an estimate of the number of people living with undiagnosed HIV; therefore, the Houston EMA HCC is a diagnosis-based continuum. The Houston Health Department (HHD) is currently in the process of evaluating several methodologies for producing a local estimate of the number of undiagnosed/unaware PLWH that may be applied to a Houston Continuum in the future.

An on-going challenge in developing and utilizing the HCC model is the availability of local and state data on antiretroviral therapy (ART) use. Though many jurisdictions incorporate ART use into their local HCC, these data are not available at the Houston EMA level. While ART prescription data are available for Ryan White Program Parts A and B clients through the Ryan White Grant Administration's (RWGA) Centralized Patient Care Data Management System (CPCDMS), there is currently no method for collecting ART prescription data for PLWH in the Houston EMA who are not served through the Ryan White program. Of the 24,979 diagnosed PLWH in the Houston EMA in 2014, roughly half (12,329) received services as unduplicated Ryan White program clients, indicating that the other half of the HIV diagnosed population in the Houston EMA would not be accurately represented in any HCC stage using data derived only from CPCDMS.

While TDSHS has attempted measurement of ART use by collecting data available through the AIDS Regional Information and Evaluation System (ARIES), Medicaid, and 3rd party payers, these data have proven insufficient to establish an accurate count of PLWH prescribed ART. The Ryan White program has attempted to estimate the number of PLWH in the Houston EMA prescribed ART as the number of PLWH retained in HIV care multiplied by the percentage prescribed ART in the CDC's Medical Monitoring Project (MMP), though this methodology is

inconsistent with the methodology used to calculate engagement percentages in the remaining stages of the care continuum. As an alternative to applying national estimates to raw local data, the Houston EMA HCC utilizes actual diagnosis-based frequencies from TDSHS for each stage of the continuum, and omits the measure "prescribed ART" in favor of viral suppression as an indicator of medication adherence and the ultimate goal of progression along the HCC. The HHD Bureau of Epidemiology created the Houston EMA HCC, 2012-2014 in alignment with the omission of "prescribed ART". The majority of the measures utilized completely align with the methodology also employed and recommended by TDSHS; however, the Houston EMA HCC measure of retention favors the definition presented in the Integrated Guidance from CDC/HRSA over a different definition created by TDSHS.

Each stage of the Houston EMA HCC is depicted as a percentage of living diagnosed PLWH who live in the Houston EMA. The Continuum reflects the number of PLWH who have been diagnosed ("HIV diagnosed"); and among the diagnosed, the numbers and proportions of PLWH with records of engagement in HIV care ("Met need"), retention in care ("Retained in care"), and viral suppression ("Virally suppressed") within a calendar year (**Table 1**). Although retention in care is a significant factor for PLWH to achieve viral suppression, the 'Virally suppressed' bar presented also includes those PLWH in the Houston EMA whose most recent viral load test of the calendar year was <200 copies/mL but who did not have evidence of retention in care. **Figure 1** presents the Houston EMA HCC for the 2012, 2013, and 2014 calendar years, and indicates that the proportions of diagnosed PLWH with evidence of met need, retention in care, and viral suppression have consistently increased since 2012.

Table 1: **Houston EMA HIV Care Continuum Measures**

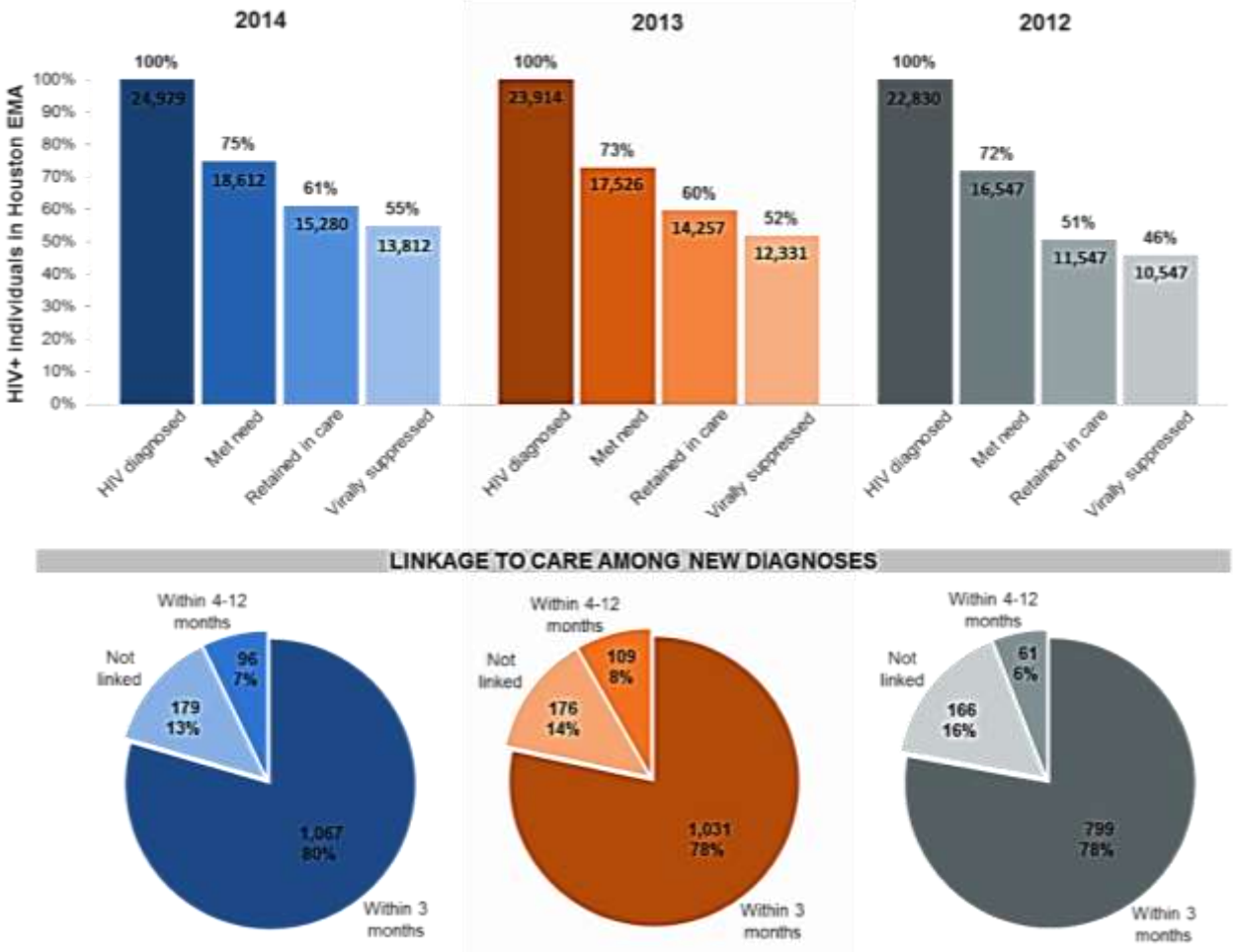
Measure	Description	Data sources
HIV diagnosed	No. of persons diagnosed and living with HIV (PLWH) residing in Houston EMA through end of year (alive)	Texas eHARS data
Met need	No. (%) of PLWH in Houston EMA with met need (at least one: medical visit, ART prescription, or CD4/VL test) in year.	Texas Department of State Health Services HIV Unmet Need Project (incl. eHARS, ELR, ARIES, ADAP, Medicaid, private payer data)*
Linkage to care (pie chart)	No. (%) of **newly diagnosed** PLWH in Houston EMA who were linked to medical care ("Met need") within N months of their HIV diagnosis	
Retained in care	No. (%) of PLWH in Houston EMA with at least 2 medical visits, ART prescriptions, or CD4/VL tests in year, at least 3 months apart	
Virally suppressed	No. (%) of PLWH in Houston EMA whose last viral load test of the year was <200 copies/mL	Texas ELRs, ARIES labs, ADAP labs

**eHARS: Enhanced HIV/AIDS Reporting System, ELR: electronic lab report, ARIES: AIDS Regional Information and Evaluation System, ADAP: AIDS Drug Assistance Program.*

Linking newly diagnosed individuals into HIV medical care as quickly as possible following initial diagnosis is an essential step to improved health outcomes. In the Houston EMA HCC, initial linkage to HIV medical care ("Linkage to care") is presented separately as the proportion of *newly* diagnosed PLWH in the Houston EMA who were successfully linked to medical care within three months or within one year after diagnosis. **Figure 1** indicates that between 2012 and

2014, there has been an overall increase in the proportions of newly diagnosed PLWH who were linked within the first three months and the first year of diagnosis.

Figure 1: **Houston EMA HIV Care Continuum, 2012-2014**



Source: Bureau of Epidemiology and Bureau of HIV/STD and Viral Hepatitis Prevention, Houston Health Department, 2016

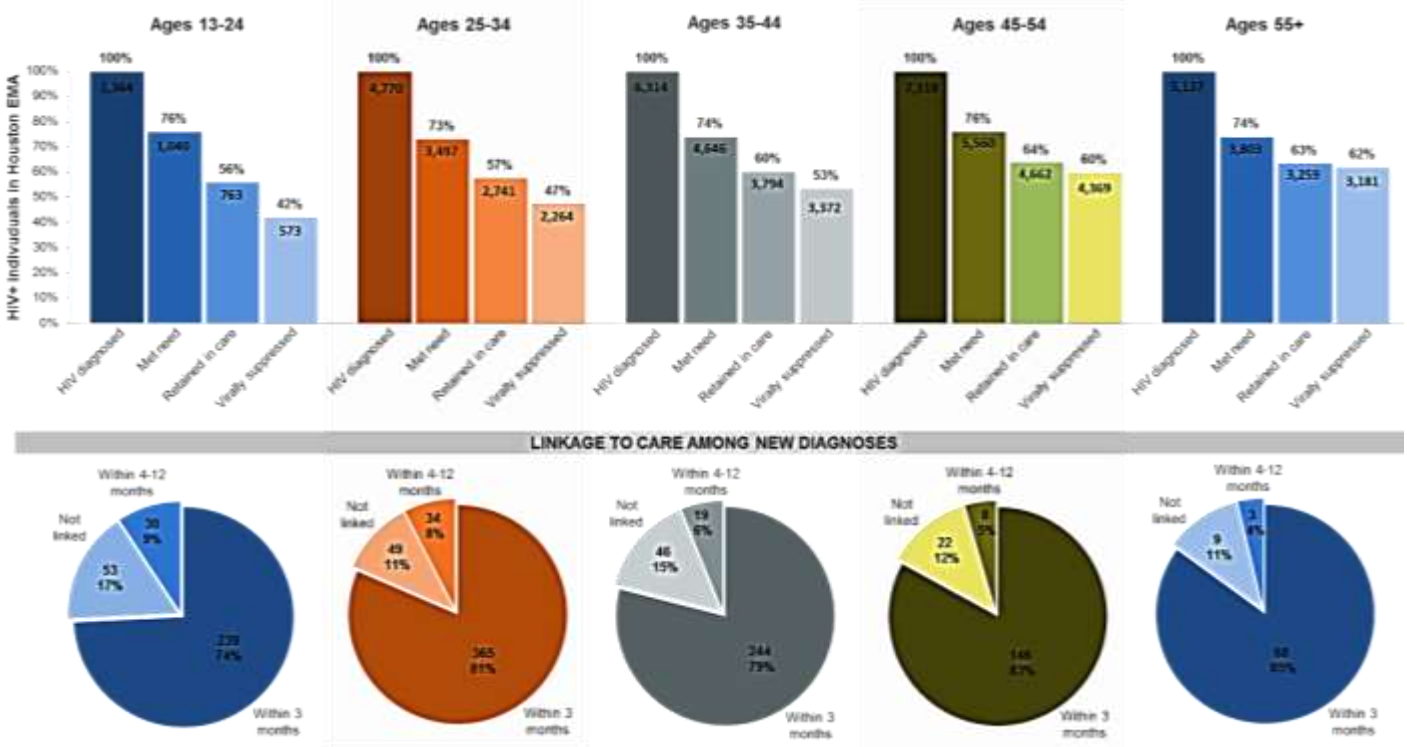
Disparities in Engagement among Key Populations

Multiple versions of the HCC have been created to illustrate engagement disparities and service gaps that key populations encounter in the Houston EMA.

<u>Age</u>

Figure 2 presents an HCC for each of five age groups in 2014. Comparison indicates that younger adults had lower percentages of retention and viral suppression compared to older adult age groups. Youth and young adults (13-24 years old) also had the lowest proportion of newly diagnosed PLWH who were linked within three months of diagnosis, compared to older adults.

Figure 2: **Houston EMA HIV Care Continuum by Age Groups, 2014**

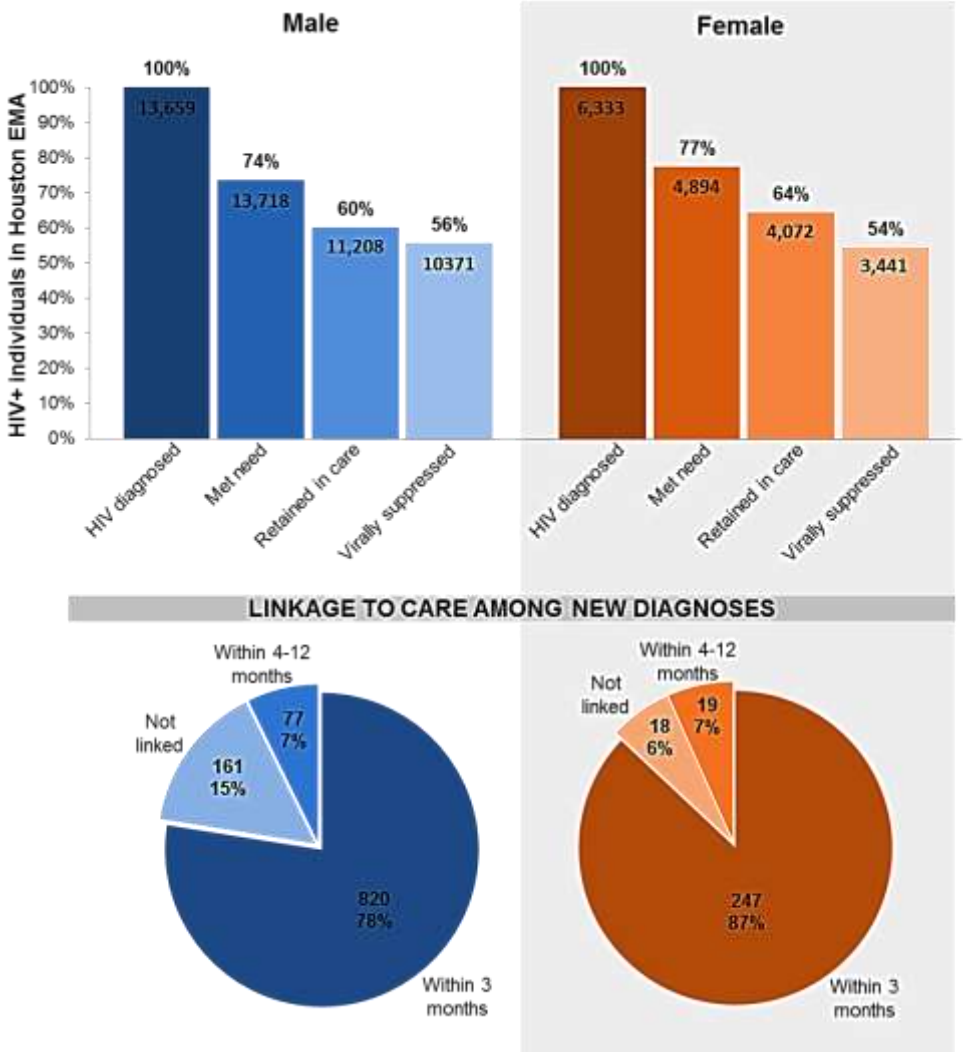


Source: Bureau of Epidemiology and Bureau of HIV/STD and Viral Hepatitis Prevention, Houston Health Department, 2016

Sex at Birth & Race/Ethnicity

Females living with HIV in the Houston EMA in 2014 had a higher proportion of individuals with met need and retention in care than males living with HIV, although females had a smaller proportion who were virally suppressed (**Figure 3**). The proportion of newly diagnosed female PLWH linked to care within the first three months after diagnosis was higher among females than males.

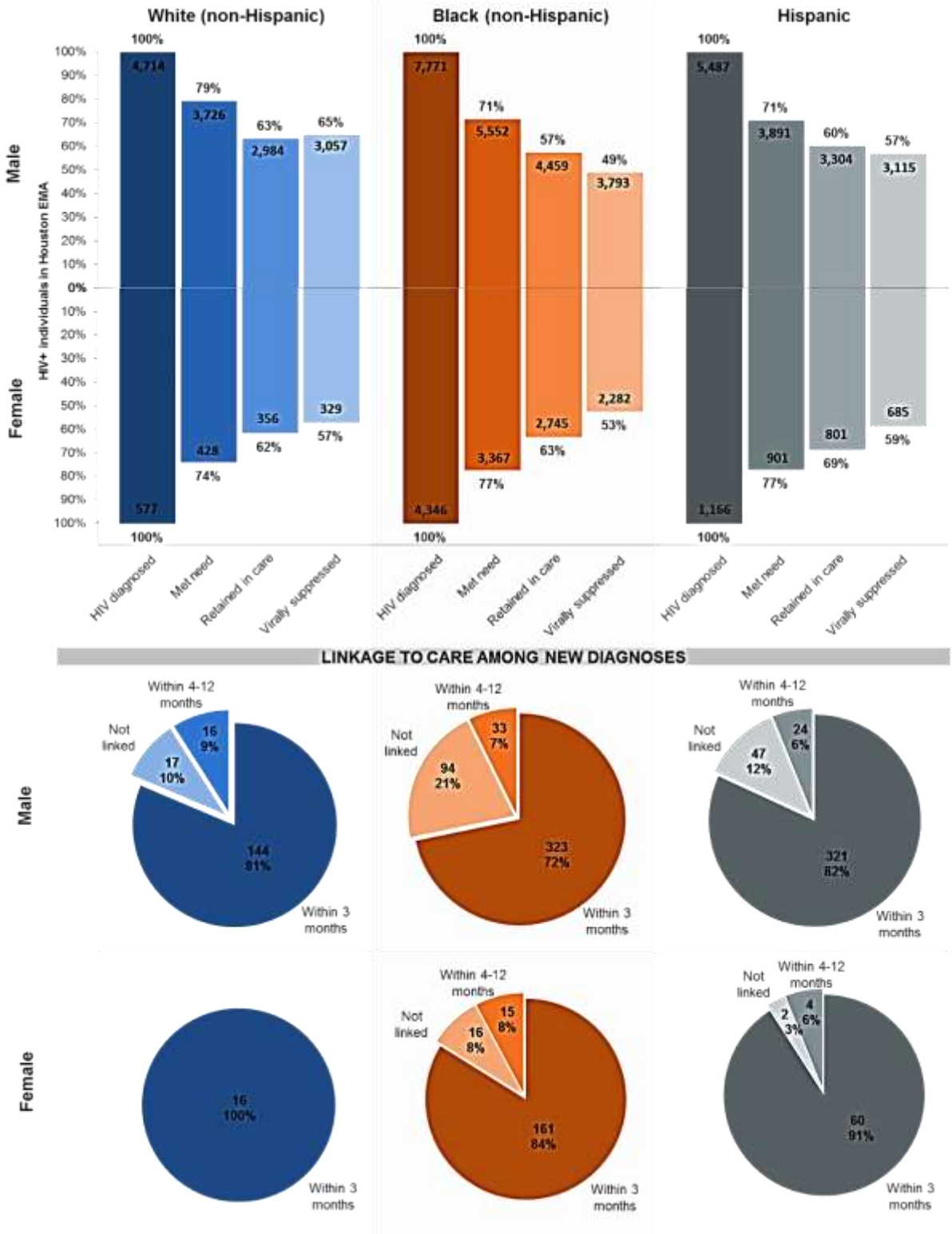
Figure 3: **Houston EMA HIV Care Continuum by Sex at Birth, 2014**



Source: Bureau of Epidemiology and Bureau of HIV/STD and Viral Hepatitis Prevention, Houston Health Department, 2016

When birth sex and race/ethnicity groups are evaluated together, comparison of each HCC indicates that Hispanic and Black (non-Hispanic) PLWH had the lowest proportion of individuals with evidence of met need, retention in care, and viral suppression among males in 2014 (**Figure 4**). Among females, White (non-Hispanic) and Black (non-Hispanic) PLWH had the lowest proportion of individuals with evidence of retention in care and viral suppression in 2014 (**Figure 4).** Overall, Black (non-Hispanic) males living with HIV had the lowest proportion of individuals in each care continuum stage across all birth sex and race/ethnicity groups.

Figure 4: Houston EMA HIV Care Continuum by Sex at Birth and Race/Ethnicity, 2014

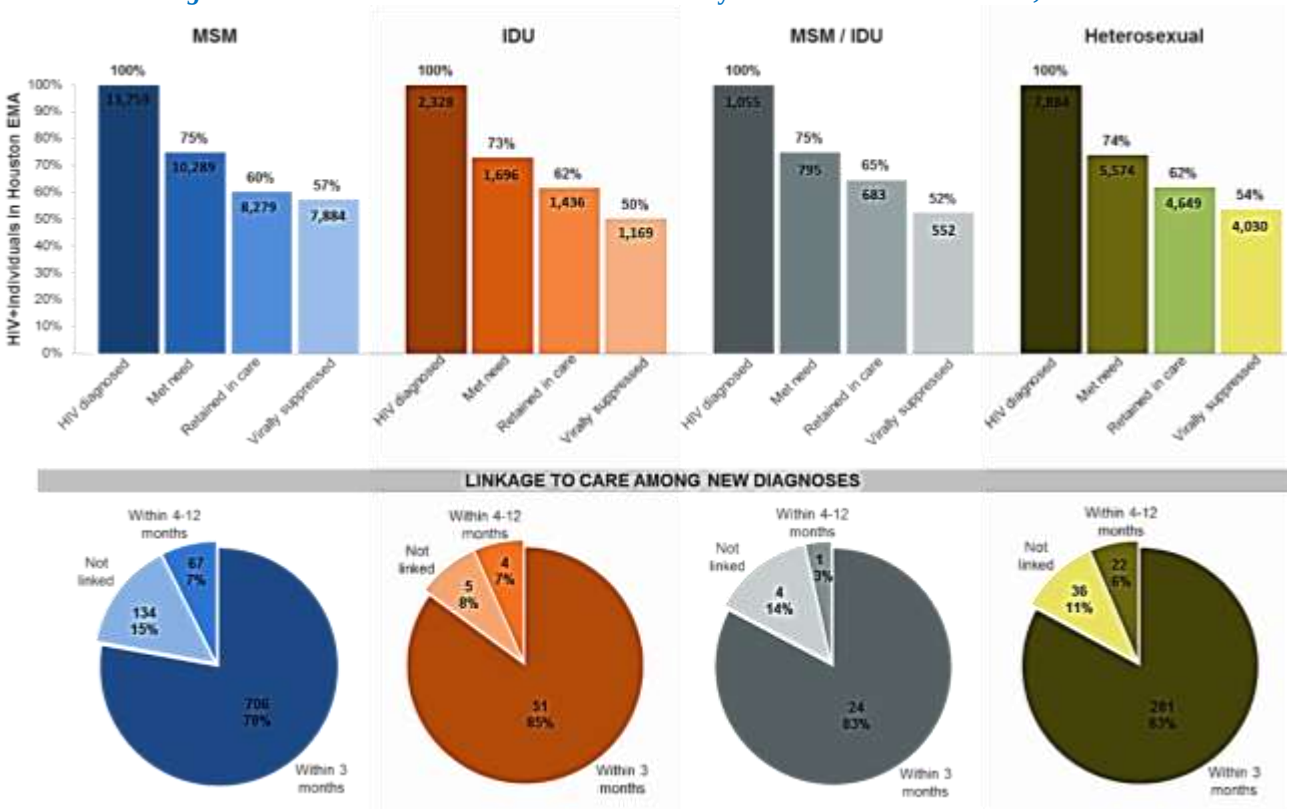


Source: Bureau of Epidemiology and Bureau of HIV/STD and Viral Hepatitis Prevention, Houston Health Department, 2016

Transmission Risk Factor

Transmission risk factors that are associated with increased risk of HIV exposure and transmission include Men who have Sex with Men (MSM), injection drug use (IDU), MSM who also practice IDU (MSM/IDU) and heterosexual exposure. An HCC was created for each of these transmission risk factor groups. Comparison indicates that, although MSM have higher numbers of PLWH than the other risk groups, the proportion of diagnosed MSM living with HIV show evidence of met need and retention in care similar to those observed for other risk groups (**Figure 5**). This group also has a higher proportion of diagnosed PLWH who are virally suppressed, but a lower proportion of newly diagnosed PLWH who were successfully linked to care within three months of initial diagnosis. In 2014, those with IDU as a primary transmission risk factor exhibited the lowest proportions of both met need and viral suppression.

Figure 5: **Houston EMA HIV Care Continuum by Transmission Risk Factor, 2014**



Source: Bureau of Epidemiology and Bureau of HIV/STD and Viral Hepatitis Prevention, Houston Health Department, 2016

Disparities among Other Key Populations

It is important to note that available data used to construct each version of the Houston EMA HCC do not portray the need for activities to increase testing, linkage, retention, ART access, and viral suppression among many other at-risk key populations such as those who are transgender or gender non-conforming, intersex, experiencing homelessness, or those recently released from incarceration. 2017-2021 Houston Area Comprehensive HIV Prevention and Care Services Plan (2017 Comprehensive Plan) activities designed to provide targeted interventions to populations traditionally not represented in epidemiologic or surveillance data may be found in Section II.A.

Utilization of the Houston EMA HIV Care Continuum

The Houston EMA HCC is used in developing and evaluating local planning objectives in the 2017 Comprehensive Plan and the FY17 Early Identification of Individuals with HIV/AIDS (EIIHA) strategy. Implementation objectives, goals, and benchmarks in the 2017 Comprehensive Plan that promote engagement at each stage of the HCC are described in Section II.A. HCC information is also incorporated into the process to design and create local service definitions for Ryan White funded HIV care services categories referred to as the *How to Best Meet the Need* process. In particular, the local HCC reviewed during the FY 17 *How to Best Meet the Need* process prompted the creation of two new workgroups to address service design and provision for PLWH who are out of care (unmet need) and retention in care among young MSM of color. The Houston EMA HCC is used to inform RWPC special studies, with studies examining unmet need, determinants of HIV care, and engagement in the HCC slated for priority consideration in 2017. Development and maintenance of the local HCC has fostered coordination of effort through the creation and maintenance of partnerships spanning the continuum, particularly between the HHD Bureau of HIV/STD & Viral Hepatitis Prevention (HHD/HIV) and Bureau of Epidemiology, RWGA, The Houston Regional HIV/AIDS Resource Group (TRG), RWPC and the Council's Office of Support, Houston HIV Prevention Community Planning Group (CPG), and several service provider agencies throughout the Houston Area. The Houston EMA HCC is also shared throughout the greater Houston Area community for use in grant writing, community outreach, and education. Each year, the local HCC is updated and shared through the Comprehensive Plan portal of the RWPC website.

References:

1. Bradley H, Hall HI, Wolitski R, Van Handel M, Stone A, LaFlam M, Skarbinski J, Higa, D, Prejean J, Frazier E, Patel R, Huang P, An Q, Song R, Tang T, Valleroy L. Vital Signs: HIV Diagnosis, Care, and Treatment Among Persons Living with HIV — United States, 2011. *MMWR.* 2014; 63(47): 1113-1117.

Section I: Statewide Coordinated Statement of Need/Needs Assessment

C. Financial and Human Resources Inventory

HIV Prevention and Care Services and Interactions between Funding Sources

A description of the greater Houston area geographic service designations for HIV prevention and care services is available at the beginning of Section I.A. This section provides a narrative and graphic description of the Houston Metropolitan Statistical Area (MSA), the Houston Eligible Metropolitan Area (EMA), and the Houston Health Service Delivery Area (HSDA) referenced below.

HIV Prevention Services in the Houston Area

The Centers for Disease Control and Prevention (CDC) supports HIV prevention and intervention activities within the Houston Metropolitan Statistical Area (MSA) through cooperative agreements with the Houston Health Department (HHD) and the Texas Department of State Health Services (TDSHS) (**Figure 1**). The Houston MSA includes Harris County and the cities of Houston, Baytown, and Sugarland. HHD contracts with direct service community-based organizations (CBOs) to provide HIV Counseling, Testing, and Referral (CTR), Comprehensive Risk Counseling Services (CRCS), and Health Education/Risk Reduction (HE/RR) using Effective Behavioral Interventions (EBIs) to high-risk populations. The HHD also contracts with local hospital systems to provide routine, opt-out HIV testing in emergency departments. The HHD serves as an administrative agent to these contracted agencies, providing monitoring, evaluation, capacity building, and technical assistance. The HHD Training Unit is dedicated to enhancing the knowledge and skills of the contracted agencies. The following is an overview of these core HIV prevention and intervention services:

- **HIV Counseling, Testing, and Referral (CTR).** The HHD provides confidential name-based and anonymous HIV Counseling, Testing, and Referral (CTR) services in both clinical and non-traditional settings. Testing is provided at the HHD Family Planning, Maternity, and STD Clinics as well as at the Harris County Jail and Harris County Juvenile Detention Center, through a mobile testing unit, and at an annual mass testing event each summer. The HHD also supports routine, non-targeted, opt-out HIV screening in local emergency departments, community health centers, and Federally-Qualified Health Centers (FQHCs) through the Expanded Testing Initiative (ETI). All HHD-supported targeted testing uses Protocol Based Prevention Counseling (PBC). The TDSHS developed PBC as a guided pre- and post-test counseling method based on proven effective individual-level behavioral interventions developed by the CDC. Although PBC is no longer used by TDSHS, the HHD continues to use and support PBC. Laboratory functions for HIV targeted testing are provided through the HHD Bureau of Laboratory Services.
- **Disease Intervention Specialists (DIS) and Partner Services.** As the local health jurisdiction for Houston and Harris County, all diagnoses and laboratory evidence of chlamydia, gonorrhea, syphilis, HIV, and Stage 3 HIV (AIDS) is reported to the HHD. HHD Disease Intervention Specialists (DIS) investigate all newly-reported cases of both syphilis and HIV for public health follow-up. This includes results notification when applicable, prevention counseling, and Partner Counseling and Referral Services (PCRS) for sex partners.

The needle-sharing partners of newly-reported cases of HIV also receive PCRS. Service Linkage Workers (SLW) engage individuals who have previously been diagnosed with HIV (not newly diagnosed) but have evidence of a new sexually transmitted disease to ensure access to both HIV medical care and treatment of the newly detected STD.

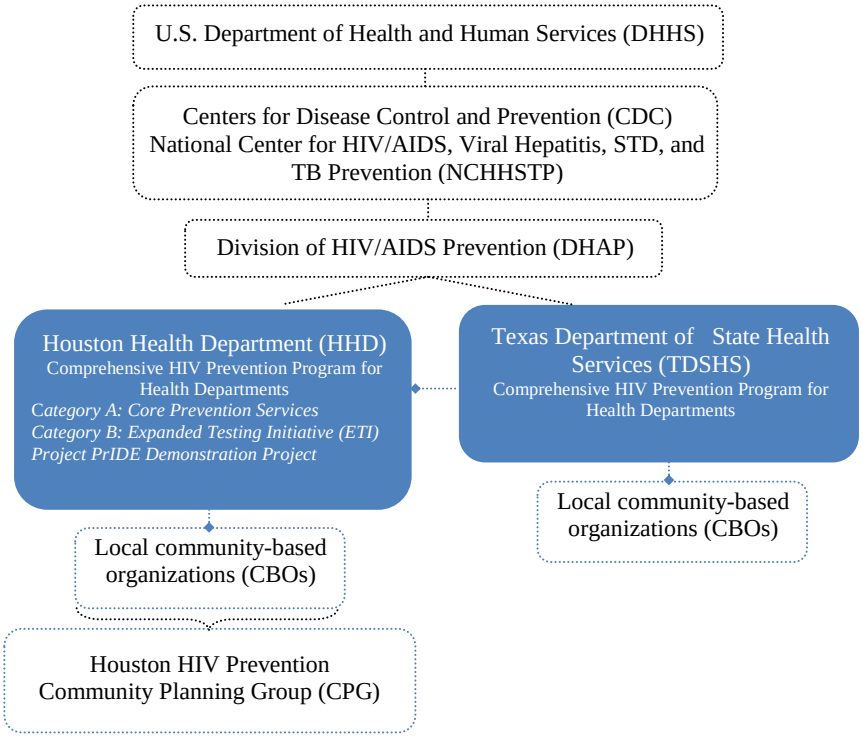
- **Health Education and Risk Reduction (HE/RR)**. The HHD supports implementation of Effective Behavioral Interventions (EBIs) at the individual-, group-, and community-levels, targeting high-risk HIV-negative individuals as well as PLWH and their partners. These interventions include a school-based HIV/STD prevention curriculum for grades 7 – 8, as well as an intervention targeted to incarcerated individuals and/or individuals recently released from a correctional institution. Current EBIs include: (1) Healthy Relationship and (2) Community PROMISE. The HHD also operates an HIV/STD information "warmline" and coordinates mass condom distribution efforts with traditional and non-traditional community stakeholders such as bars, record stores, beauty salons, barber shops, and other local businesses. Male, female, and specialty condoms as well as dental dams and lubricant are included in these distribution efforts.
- **Social Marketing and Media**. The HHD conducts community-wide social marketing and media campaigns designed to modify HIV testing and risk reduction behaviors, correct misperceptions and misinformation about HIV in the community, and reduce stigma and discrimination against PLWH. Campaign strategies include brochures, posters, billboards, transit advertisements, radio advertisements, and branded promotional items. The HHD also participates in national HIV awareness days and commemorations such as World AIDS Day and exhibits at various community-wide events and health fairs.
- **Community Mobilization**. Using geographic mapping of HIV and STD diagnoses, the HHD has identified specific zip codes in the Houston Area with the greatest HIV/STD morbidity and has targeted them for intensive prevention and intervention activities (see benchmarks in Section II.B). The SAFER Initiative (Strategic AIDS/HIV Focused Emergency Response Initiative) aims to mobilize local residents, leaders, business owners, and elected officials in these local neighborhoods around HIV prevention, testing, and linkage to care. The HHD also supports the prevention and testing activities of community-based Task Forces focused on specific high-risk populations.
- **Pre-Exposure Prophylaxis (PrEP) Coordination.** In 2015, the HHD Bureau of HIV/STD and Viral Hepatitis launched a three-year CDC-funded PrEP and Data to Care demonstration project known as Project PrIDE. The PrEP component of this project aims to increase awareness and uptake of PrEP among men who have sex with men, transgender individuals, and people of color by tailoring and implementing activities for consumers, providers, and the local public health workforce. With a diversity of partnerships, the HHD also serves as facilitator to ensure PrEP activities are coordinated across agencies throughout Houston/Harris County. Key activities the HHD will implement include developing a robust social marketing campaign, a PrEP provider toolkit, and trainings. The HHD hosts a PrEP Provider Advisory Group of known local PrEP providers to discuss Project PrIDE plans and provide support for new and interested PrEP medical providers.
- **Service Linkage**. The HHD is funded by the Ryan White HIV/AIDS Program (RWHAP), the 1115 Texas Medicaid Healthcare Transformation Waiver, and the Centers for Disease Control and Prevention (CDC) to employ Service Linkage Workers (SLW) who connect newly diagnosed PLWH and out-of-care individuals to primary HIV medical care. SLWs at the HHD are also cross-trained in disease investigation and can provide abbreviated partner

services with referral to a DIS. SLWs provide referrals to non-HIV related services as well, such as those for co-morbid conditions, mental health concerns, and support services including housing, food, employment, transportation, and child care. As the second component of the three-year support demonstration project ("Project PrIDE"), the HHD uses surveillance data to identify PLWH who do not have evidence of HIV medical care in the last 12 months. SLWs then attempt to locate and re-engage or re-link them back into HIV medical care.

- **Jurisdictional HIV Prevention Planning.** Recipients of federal HIV prevention funds are required to have in place a prevention planning process that includes the development of a jurisdictional HIV prevention plan and the establishment of a local HIV planning body. The HHD coordinates the local prevention planning body known as the Houston HIV Prevention Community Planning Group (CPG). An elected community member and an appointed HHD staff person co-chair the CPG.

In addition to HHD activities, TDSHS directly contracts with community-based organizations (CBOs) in the Houston Area to provide core HIV prevention and intervention services, including Counseling, Testing, and Referral (CTR), condom distribution, community mobilization, and Effective Behavioral Interventions (EBIs). Similarly, TDSHS contracts local agencies to provide routine opt-out HIV testing.

Figure 1: **Structure of HIV Prevention Services in the Houston Area**



HIV Care Services in the Houston Area

The Health Resources and Services Administration (HRSA) HIV/AIDS Bureau (HAB) supports HIV care and support services in the Houston Area through the RWHAP, the largest federally funded HIV/AIDS-specific program in the country. The RWHAP is an "umbrella" program

administered in a series of Parts distributed according to geographic service areas, populations, and purposes:

- **Part A** formula and supplemental funds for HIV care and support services are extended to Eligible Metropolitan Areas (EMAs) (geographic regions with more than 2,000 total reported HIV stage 3 cases over the most recent five year period) and Transitional Grant Areas (TGAs) (geographic regions with 1,000 – 1,999 reported HIV stage 3 cases over the most recent five year period). The Houston EMA includes the six counties of Chambers, Fort Bend, Harris, Liberty, Montgomery, and Waller.
- **Part B** funding, including the AIDS Drug Assistance Program (ADAP), is extended to all 50 states and territories. The TDSHS awards Part B and State of Texas HIV Services funding to regional HIV Administrative Service Areas (HASA). Within each HASA, this funding is distributed to smaller Health Services Delivery Areas (HSDA). The East Texas HASA contains the Houston HSDA. This HSDA includes the six counties of the Houston EMA plus the four additional counties of Austin, Colorado, Walker, and Wharton.
- **Part C** provides funds directly to public and private organizations for early intervention services and capacity development and planning.
- **Part D** provides funds directly to public and private organizations for services to women, infants, children, and youth living with HIV.
- **Part F** provides funds for the following special initiatives: AIDS Education and Training Centers (AETC); Dental Programs; and Special Projects of National Significance (SPNS) for demonstration or research projects benefiting HIV/AIDS services.

The overall intent of the RWHAP is to ensure the provision of Core Medical and Support Services, which are HRSA defined, for the management of HIV disease. HRSA-defined Core Medical and Support Services are as follows:

Core Medical Services

1. Outpatient/ambulatory Medical Services (including Vision Care)
2. AIDS Drug Assistance Program (ADAP)
3. Local Pharmaceutical Assistance Program (LPAP)
4. Early Intervention Services
5. Health Insurance Premium and Cost-Sharing Assistance
6. Home and Community-Based Health Services
7. Home Health Care
8. Hospice Services
9. Medical Case Management
10. Medical Nutritional Therapy
11. Mental Health Services
12. Oral Health Care
13. Substance Abuse Services Outpatient

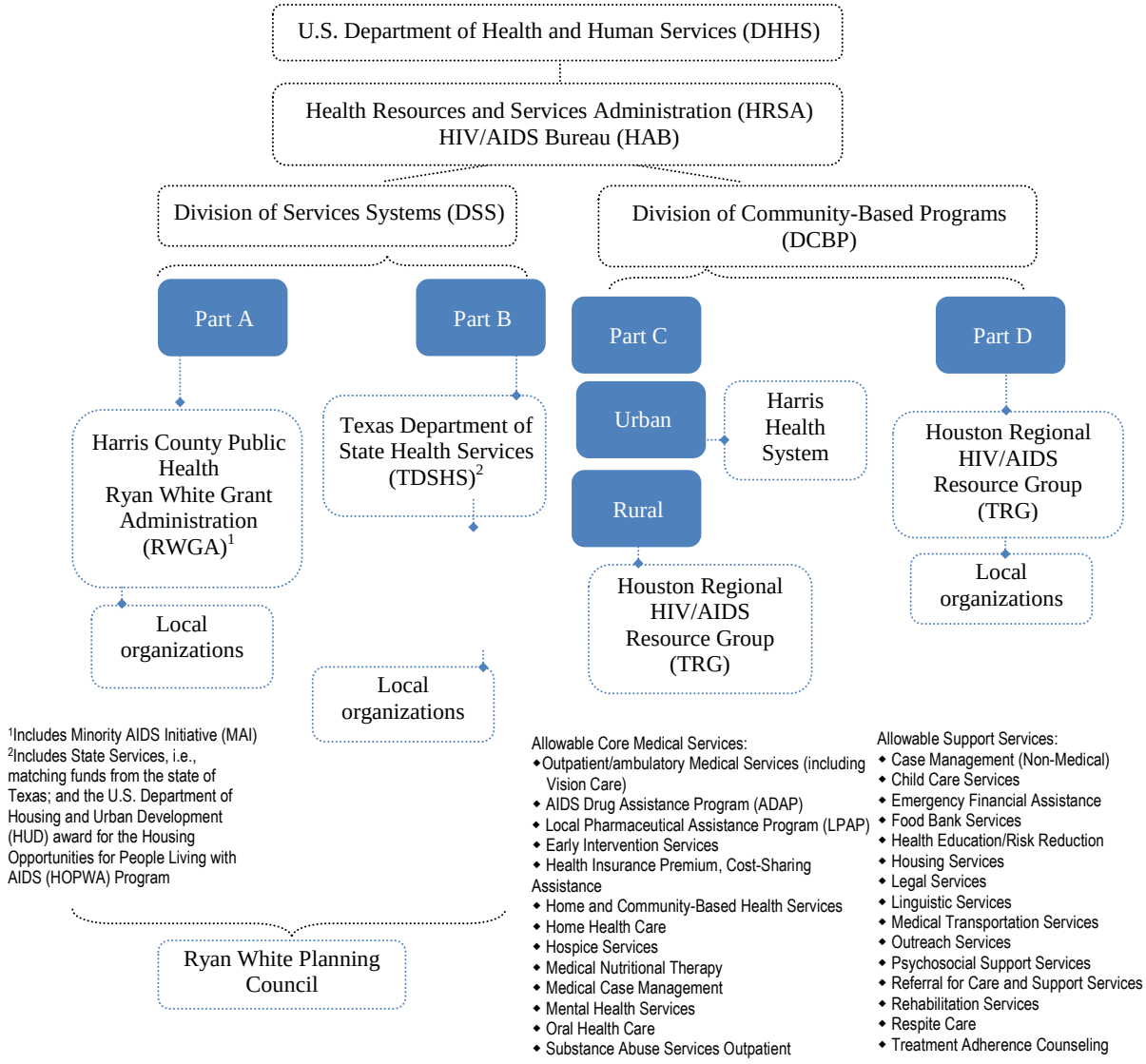
Support Services

1. Case Management (Non-Medical)
2. Child Care Services
3. Emergency Financial Assistance (EFA)
4. Food Bank Services
5. Health Education/Risk Reduction
6. Housing Services
7. Legal Services
8. Linguistic Services
9. Medical Transportation Services
10. Outreach Services
11. Psychosocial Support Services
12. Referral for Health Care and Supportive Services
13. Rehabilitation Services
14. Respite Care
15. Treatment Adherence Counseling

Administrators of the RWHAP funds collaborate with PLWH and service consumers via the local HIV planning body to determine which of the above HSRA-defined services will be provided in a geographic service area along with funding levels and population focus.

For both the Houston EMA and Houston HSDA, a combination of public and non-profit Houston Area agencies serve as either directly funded providers of Core Medical and Support Services, or as directly or competitively funded Administrative Agents that contract with direct providers of Core Medical and Support Services (**Figure 2**).

***Figure 2*: Structure of HIV Care Services in the Houston Area**



- **<u>Part A (RW/A) and the Minority AIDS Initiative (MAI)</u>** are administered by the Ryan White Grant Administration (RWGA) of Harris County Public Health for the Houston EMA. The RWGA is a directly funded HRSA/HAB Recipient and serves as the Administrative Agent (AA) for Part A and MAI funds. RWGA contracts with local organizations to provide

direct services. *Services currently funded by Part A include: outpatient/ambulatory medical services (including vision care), local pharmaceutical assistance program (LPAP),non-medical case management (service linkage workers), hospice services, medical and clinical case management, medical nutritional therapy, medical transportation services, oral health care, and outpatient substance abuse services. MAI funds support outpatient/ambulatory medical services targeted to African American and Hispanic/Latino(a) PLWH.*

- **Part B (RW/B), AIDS Drug Assistance Program (ADAP)** is administered statewide by TDSHS. Remaining **Part B base** funds are administered by The Houston Regional HIV/AIDS Resource Group, Inc. (TRG) for the Houston HSDA. TRG serves as the AA for Part B funds and contracts with local organizations to provide direct services. *Services currently funded by Part B include: health insurance premium and cost-sharing assistance, home and community-based health services, and oral health care.*
- **Part C (RW/C), Urban** is administered by the Harris Health System (for Harris County) and **Part C, Rural** by TRG (for non-Harris County) both as directly-funded, direct service providers. *Services currently funded by Part C Urban include outpatient/ambulatory medical services, substance abuse, medical case management, and non-medical case management; and, by Part C Rural, a Rural Primary Care Network for services in outpatient/ambulatory medical services, medical nutrition therapy, local pharmaceutical assistance program (LPAP), oral health care, and medical case management.*
- **Part D (RW/D)** is administered by TRG for the Houston Area as a directly funded HRSA HAB Recipient. TRG serves as the AA for Part D funds and contracts with local organizations to provide direct services. Harris Health System is also a directly funded RW/D recipient. *Services currently funded by Part D include: Core Medical and Support Services targeted to women, infants, children, and youth living with HIV/AIDS.*
- **Part F (RW/F), AIDS Education and Training Center (AETC).** The Harris Health System serves as the local performance site for AETC.

The Houston Area also receives state of Texas matching funds for Core Medical and Support Services. This funding, commonly referred to as **State Services funds**, are administered by TDSHS, which then delegates the funds to their Part B AAs for administration in local HSDAs (see above). TRG is the AA for State Services funds for the Houston HSDA and contracts with local organizations to provide direct services. *Services currently funded by State Services include: health insurance premium and cost-sharing assistance, hospice services, linguistic services, and mental health services.* State Services funds are also used for *early intervention services* in the Harris County Jail for the purpose of linking HIV positive individuals released from the jail system into HIV care upon re-entry into the community.

The Houston Area has tailored other RWHAP service categories in order to increase service delivery effectiveness and better meet the needs of people living with HIV. For example, using Part A funds, several essential high priority Core Medical and Support Services are combined into "bundled" contracts with local FQHCs and the Harris Health System's Thomas Street Health Center. These comprehensive bundled health services contracts include Outpatient/ambulatory Medical services, LPAP, Medical Case Management and Service Linkage services (see below), and thereby create true medical homes for consumers. The Houston area has also adapted the RWHAP Case Management (Non-Medical) service category for the purpose of linking the newly diagnosed into primary HIV medical care. Defined locally as Community-Based (Non-Medical) Case Management, services provided under this category are referred to as Service Linkage, and

Service Linkage Workers (SLW) and are often co-located at HIV testing sites in addition to being included in the bundled, medical home contracts described above. Other RWHAP Core Medical services are also often co-located at funded provider sites, such as outpatient Mental Health and Substance Abuse Treatment Services, as many clients are in need of one or both services concurrently.

The Houston Area RWHAP Part A also supports the HRSA initiative, EIIHA, *Early Identification of Individuals with HIV/AIDS*, designed to amplify local efforts to identify individuals who are unaware of their positive HIV status and link them into HIV primary care. The Houston Area EIIHA Strategy is a collaboration with other RWHAP Parts and HIV prevention, and includes planned efforts for HIV testing, public health follow-up, and linkage and referral of newly diagnosed individuals to HIV primary care.

Other HIV-related Programs in the Houston Area

In addition to the HIV-*specific* prevention and care services programs described above, the Houston Area system also includes programs targeting people living with HIV for *non*-HIV prevention and care needs as well as overall reproductive and sexual health promotion programs targeting populations at high risk for HIV, other STDs, and unintended pregnancy:

- **Housing Opportunities for Persons with AIDS (HOPWA)**. The U.S. Department of Housing and Urban Development (HUD) provides funds to the City of Houston Housing and Community Development Department to serve as the Administrative Agent for HOPWA in the Houston Eligible Metropolitan Statistical Area (EMSA). The Houston EMSA consists of the cities of Houston, Baytown, and Pasadena, TX; and the counties of Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, San Jacinto, and Waller. Current Houston Area HOPWA services include: Community Residences (CR), Short-Term Rent, Mortgage, and Utility Assistance (STRMU) for up to 21 weeks, Tenant-Based Rental Assistance (TBRA) for 12 to 24 months, and Support Services. Additional HOPWA funds are awarded to TDSHS, which contracts them locally to the Houston Regional HIV/AIDS Resource Group, Inc. (TRG).
- **STD and Viral Hepatitis Prevention**. The Centers for Disease Control and Prevention (CDC) supports prevention and intervention activities for non-HIV STDs in the state of Texas through a cooperative agreement with TDSHS, which, in turn, contracts with the HHD for activities in Houston and Harris County. Core STD prevention activities include STD testing and treatment, disease investigation services, surveillance, and syphilis elimination. All activities are implemented with community input, specifically through collaboration with public and private providers. Through funding obtained from Gilead Sciences, the HHD has responded to identified gaps in local HCV service provision by expanding laboratory infrastructure to support HCV confirmatory testing; thereby, serving as a local public health authority for disease reporting in support of active disease intervention and service linkage for HCV positive individuals. The overarching goal is to link the identified patients into necessary medical care and ongoing educational support services.
- **School District HIV, STD, and Unintended Pregnancy Prevention**. The Houston Independent School District (HISD) is one of 17 local education agencies directly funded by the CDC's Division of Adolescent and School Health to conduct HIV, STD, and unintended pregnancy prevention activities with students. The HISD program includes the Youth Risk Behavior Survey (YRBS), which assesses middle and high school student behaviors related to

sexual activity, implementation of an HISD-developed HIV prevention curriculum in middle and high schools, HIV prevention professional development for educators, and student engagement activities, including an annual HIV Prevention Parent/Teen Health Summit.

- **Texas Department of Criminal Justice (TDCJ)**. The Texas Department of Criminal Justice operates TCOOMI, the Texas Correctional Office on Offenders with Medical or Mental Impairments. In addition to providing HIV care and treatment to HIV positive individuals in the Texas prison system, TCOOMI also assists offenders pre- and post-release with continuity of HIV care, including discharge planning, assistance with application to the AIDS Drug Assistance Program (ADAP), coordination with local AIDS-service providers, and re-entry case management through a voluntary re-entry and integration program.

The Houston Area HIV Planning Bodies

Houston Area HIV prevention and care services are supported by two local HIV planning bodies, one for HIV prevention and one for HIV care, treatment, and support services. Together, they ensure the opportunity for extensive collaboration and consultation with the community, stakeholders, and consumers on the use of HIV prevention and care funds:

- *The Houston HIV Prevention Community Planning Group (CPG)* is a volunteer body of up to 35 members selected to represent the demographics of the Houston Area HIV epidemic. The CPG is responsible for prioritizing populations and interventions for Houston Area HIV prevention activities funded by the Centers for Disease Control and Prevention (CDC); and
- *The Houston Area HIV Services Ryan White Planning Council (RWPC)*, an up to 40-person body appointed by the Harris County Judge, who serves as the CEO for the Houston Area RWHAP Part A and MAI. The RWPC is responsible for prioritizing and allocating funds for HIV care, treatment, and support services provided under Part A and MAI as well as for making recommendations regarding services provided under Part B and State Services, the HIV care, treatment, and support funds from the State of Texas.

Membership on both planning bodies includes people living with HIV, consumers of HIV prevention and care services, representatives from populations most impacted by the local HIV epidemic, representatives from local organizations, and subject matter experts. For the RWPC in particular, a certain number of voting member positions is reserved for representatives from organizations funded through non-RWHAP sources. These entities participate equally with RWHAP-funded organizations in annual planning body processes. As a result, the RWPC provides a mechanism for RWHAP-funded care and services to interact with *non*-RWHAP-funded care and services for the purpose of ensuring effective implementation of the 2017 Comprehensive Plan.

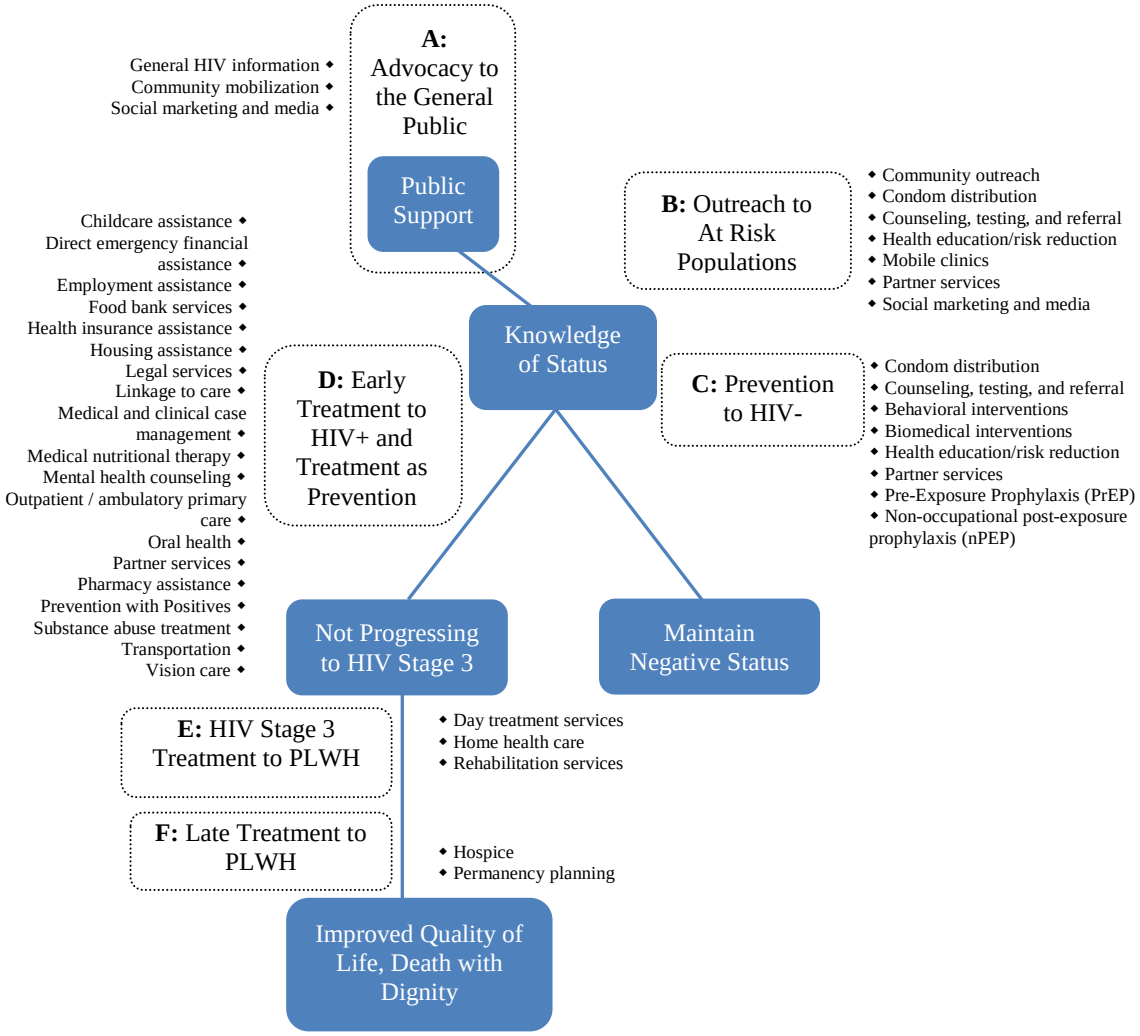
To ensure that people living with HIV and consumers are serving on local planning bodies, Ryan White Part A supports an annual training program unique to the Houston Area called Project LEAP (Learning, Empowerment, Advocacy, and Participation). Project LEAP teaches PLWH, consumers, and affected others the knowledge, skills, and abilities needed to serve on the CPG or RWPC.

The CPG also coordinates opportunities for enhanced community involvement in local HIV planning through Task Forces focused on populations most impacted by the Houston Area HIV epidemic. Current Task Forces include: *African American State of Emergency Task Force*

(AASOE), Hepatitis C Task Force, Latino HIV Task Force, M-Pact (the MSM Task Force), Sexually Transmitted Infection Community Coalition, Urban AIDS Ministry, and Youth Task Force.

Together, CPG and RWPC provide the opportunity for extensive collaboration and consultation with the community on the effective implementation of services. The major components of this system and how they interact are pictured below (**Figure 3**).

***Figure 3*: Model of the Interactions between HIV Prevention and Care Services in the Houston Area**



Description of Key Interactions in the Houston Area

- The Ryan White Planning Council communicates and collaborates with other Ryan White and non-Ryan White programs in the EMA to ensure that services are coordinated and cost-effective, and that Ryan White is the payer of last resort. The mechanisms used for ensuring the availability of services, reducing duplication of services and bringing into care status-unaware individuals and status-aware individuals who are not presently in care are anchored

by the established linkages between the RWPC, RWGA and other HIV programs. These linkages include cross-membership on planning bodies, Letters of Agreement with other planning bodies for joint planning efforts (e.g. integrated HIV Prevention and Care Comprehensive Plans), standardized practice procedures (i.e. implementation of standardized system-wide case manager training), an EMA-wide *Quality Management Plan* and use of the Centralized Patient Care Data Management System (CPCDMS) client level data system by all RW/A, MAI, RW/B and RW/C-funded providers in the EMA. RWPC-mandated policies exist that specifically require RWPC committees to review and consider all HIV-related funding in the Houston area when planning services and determining allocations. Current RWPC membership includes representatives from RW/C, RW/D, HOPWA and the State RW/B and Medicaid Programs. These members ensure that the most current award information from each respective funding stream is available to the RWPC. During the joint training for the annual *How to Best Meet the Need* service design process and priority setting and allocations processes, these members make presentations and facilitate discussion about maximizing the coordination and accessibility of care. The RW/A- funded Harris Health System (HHS) serves as the local performance site for AETC, provides clinician training, and informs the RWPC about AETC activities. Information related to RW and non-RW funding sources is included in RW committee meeting packets, reviewed during the *How to Best Meet the Need* and priority and allocations processes, and stored in notebooks that staff maintain, making the information accessible from meeting to meeting.

Below are specific ways that HIV prevention and care services funding sources interact with other programs in the jurisdiction:

- Medicaid - In the Houston Area, the majority of PLWH enrolled in Medicaid participate in a managed care program (STAR+PLUS). RW funds serve to fill the gaps in Medicaid-approved services. For example, RW/A provides funding for health services not covered by Medicaid and offers support services that complement Medicaid services such as medication compliance education and MCM. In addition, the EMA augments services that do not meet established treatment standards, such as vision care, and provides services to clients who are ineligible for Medicaid or are in the process of applying for eligibility. The RWPC reviews the number of clients eligible for Medicaid and the services covered by Medicaid during the training described above. A major area of concern is the decision by State government to decline the opportunity for Medicaid expansion under the Affordable Care Act (ACA). Notwithstanding the EMA's efforts to enroll ACA Marketplace-eligible PLWH into Qualified Health Plans, the State's decision decline Medicaid expansion requires the EMA to continue to fund primary medical care and medication assistance to ensure continued access to these essential services for low income uninsured PLWH.
- Medicare/Medicare Part D - The RWPC carefully reviews the estimated number of Medicare-eligible PLWH in determining allocations. The CPCDMS data system provides data on the number of current clients who report being eligible for Medicare. Historically, the largest impact of Medicare-eligible clients on Houston's RW-funded programs has been in the local drug assistance category. For those PLWH who are ineligible for either Medicaid or Medicare, RW/A fills a major gap in prescription drug coverage. Clients ineligible for the State ADAP, or who may need necessary HIV-related medications not on the ADAP formulary rely on the EMA's LPAP to obtain needed medications.

- State Child Health Insurance Program (SCHIP) - Although Texas has one of the highest percentages of uninsured children in the nation, almost all HIV+ children in the EMA who receive care through one of two local clinics that specialize in HIV/AIDS pediatric primary care are insured through either Medicaid or SCHIP. These children rely upon RW/A funding for case management services.
- Health Insurance Marketplace Qualified Health Plans – During the first open enrollment period of the Marketplace plans, the Houston EMA had 28 silver plan options available. All RW/A-funded medical case managers and SLW are trained as Certified Application Counselors to provide information on ACA and RW insurance affordability programs to ensure that RW/A funds are the payer of last resort.
- Veterans Affairs Programs (VA) - Houston is the site of a comprehensive VA Medical Center that treats veterans living with HIV. A RW/A-funded medical case manager is based out of the center's HIV specialty clinic, linking RW-eligible clients receiving primary medical care to essential community-based health and support services not provided by the VA system.
- Housing Opportunities for Persons with HIV/AIDS Programs (HOPWA) – HOPWA is administered locally by the City of Houston's Housing and Community Development Department. The HOPWA Administrator is a member of the Planning Council and regularly provides financial updates
- CDC Prevention Program – RW/A works closely with the administrators of the HHD, a directly funded CDC prevention recipient. Three representatives from the HIV Prevention CPG are members of the RWPC. Throughout the planning processes, these representatives provide invaluable information regarding trends in the local epidemic. Representatives of the CPG and RWPC co-chaired the 2017 Comprehensive Plan Leadership Team. Additionally, RW/A-funded Case Management programs are co-located at sites where clients learn their HIV status.
- Services for Women and Children – The RWPC regards the Special Supplemental Food Program for Women, Infants and Children (WIC) as an opportunity for HIV+ women, infants and children to access the RW system of care. Clinics throughout the EMA that work with WIC clients refer eligible individuals to Part A services.
- Other State and Local Social Service Programs – There are no widespread General Assistance or Vocational Rehabilitation programs administered by the State or City. Because most RW-eligible clients do not meet eligibility for the State's limited electronic food stamp system, it is not extensively considered during the planning process. A RWPC member from TDSHS keeps members informed of issues regarding this program.
- Local, State and Federal Public Health Programs – The other primary Federal Public Health programs in the EMA are FQHCs. Currently, four RW/A and MAI-funded community-based Primary Medical providers in the EMA are FQHCs. These providers are located in high prevalence areas within the EMA and all four participate in Ryan White planning processes. Harris Health System (HHS), formerly known as Harris County Hospital District, operates Thomas Street Health Center (TSHC), a freestanding Patient-Centered Medical Home dedicated exclusively to HIV care, as well as a dozen community-based outpatient health centers that refer HIV-positive patients to TSHC for needed care. Through local tax dollars, HHS provides more than $10 million annually in uncompensated outpatient primary medical care services to low income PLWH.

- Local and Federal Substance Abuse and Mental Health Treatment Services – Texas meets the threshold for substance abuse services funding for PLWH from Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA directly funds a RW mental health agency, facilitating further integration of substance abuse and mental health treatment within the RW system of care. For FY16, RWPC allocated $300,000 in State Services funds to mental health services. Representatives from substance abuse and mental health treatment agencies serving PLWH actively participate on the RWPC. RW/C funds are also allocated to substance abuse and mental health services (see **Appendix 2**).
- Other Ryan White funding (Parts B, C, D, and F) - The EMA seamlessly integrates local RW/A, MAI, RW/B, RW/C and RW/D funding into the local HIV Care Continuum (HCC) through several mechanisms. RW/A, MAI, RW/B and State Services funds are all prioritized by the RWPC in a single comprehensive Priority & Allocations process. The local RW/C and D recipient is Thomas Street Health Center, a county outpatient facility which opened in 1990 as the first, and one of the nation's largest, dedicated stand-alone HIV outpatient clinics. A physician on staff is a member of the RWPC and brings HIV clinical knowledge and expertise to the table by giving medical updates at each monthly Council meeting. The Houston Regional HIV/AIDS Resource Group is another recipient of RW/C and D and uses its funding to serve areas outside of Harris County. Resource Group staff actively participates in annual planning processes. MAI funding has been integrated into the RWPC's comprehensive annual priorities and allocations process since 2000, thereby ensuring that MAI funding complements overall allocations and facilitates access to high quality primary medical care services by historically underserved populations. All MAI-funded service priorities are also funded with Part A funds. Currently, HHS is participating in the multi-site *Special Projects of National Significance (SPNS) – Building a Medical Home for Multiply Diagnosed HIV-positive Homeless.*

Jurisdictional HIV Resources Inventory

Introduction

According to the Kaiser Family Foundation, Texas received $244,109,830 in combined Housing Opportunities for Persons with AIDS (HOPWA), Substance Abuse and Mental Health Services Administration (SAMHSA), Ryan White Program, and Centers for Disease Control and Prevention (CDC) HIV/AIDS funding in 2015 (**Table 1**) (KFF, 2016). Although this amounts to approximately 7.5% of the total U.S. funding from these sources, Texas represented almost 11% of new diagnoses in 2014 (CDC, 2015; KFF, 2016). In the U.S., approximately $3,300 of federal HIV/AIDS grant funding was awarded per person living with HIV (PLWH). There was a large range of funding per PLWH by state ($2,369 to $8,264), and Texas ranked in the bottom ten states at $2,836 per PLWH (KFF 2016). The Houston, Texas Metropolitan Statistical Area (MSA) ranks 11th in the nation in rate of new HIV diagnoses and has over 25,000 residents living with HIV (CDC, 2015). Given the high burden of HIV in the Houston Area, it is imperative that HIV prevention and care planning be conducted with an understanding of the funding received in the Houston Area. Similarly, comprehension of the HIV workforce capacity assists in determination of potential gaps in effectively delivering services.

While many websites exist to identify the flow of federal HIV funding into individual states, funds are rarely stratified down to the MSA, HSDA, EMA, or County level. Therefore,

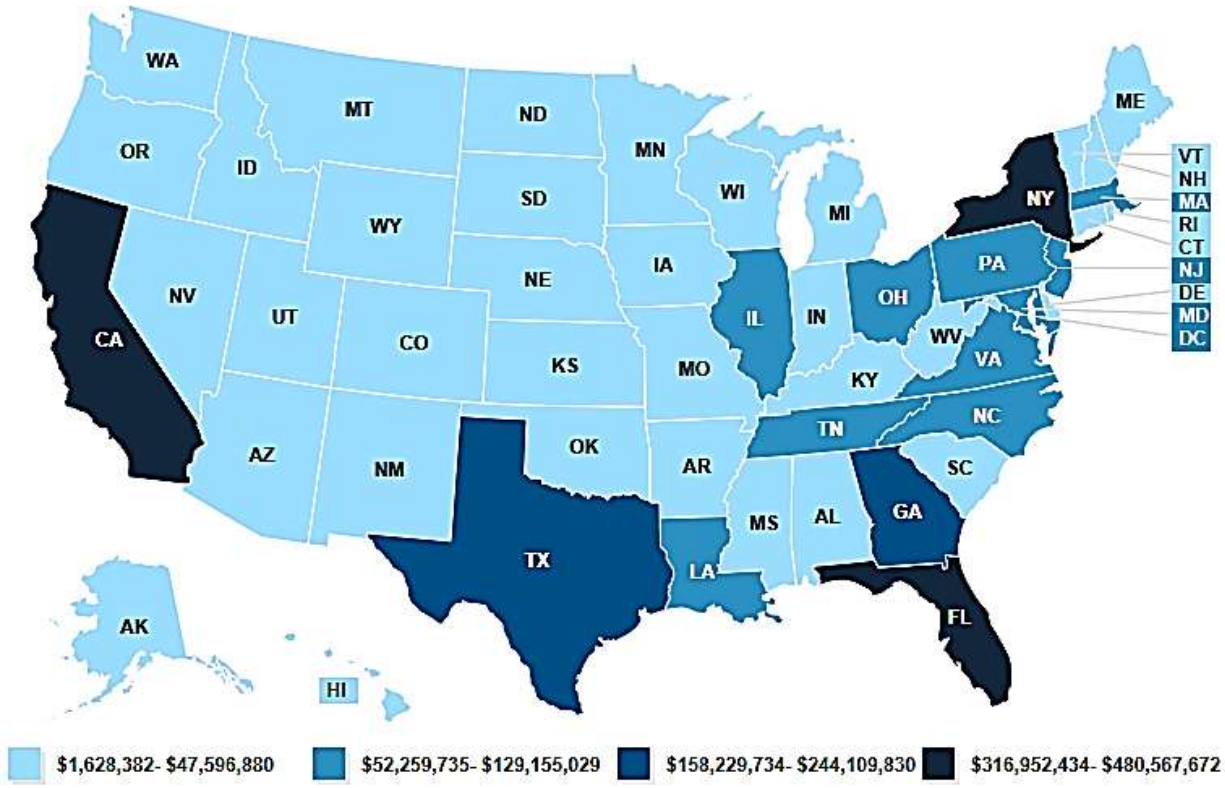
administrative agencies in the Houston Area collaborated to conduct a survey of the financial and human resource capacity of local agencies.

Table 1: **HIV Funding by Source (Fiscal Year 2015), Texas**

Source	Amount
CDC HIV/AIDS Funding	$36,889,059
HOPWA	$22,638,359
SAMHSA	$9,951,049
Ryan White Program	$174,631,363
Total	$244,109,830

Source: Kaiser Family Foundation, 2016

Figure 1**: HIV Funding by State (Fiscal Year 2015), United States**



Source: Kaiser Family Foundation, 2016

Methodology

The Houston Health Department, Harris County Public Health, and The Houston Regional HIV/AIDS Resource Group designed and conducted a survey of the financial and human resource capacity of agencies in the Houston Area. These agencies were past or current HIV prevention and care contractors, along with administrative agencies of prevention and care funding. Invitation letters from the Chief of the Bureau of HIV/STD and Viral Hepatitis Prevention at the Houston Health Department and the Program Manager of Ryan White Grant Administration at Harris County Public Health were mailed electronically to an Executive at each agency to request

participation. Once an invitation was accepted, the questions and survey layout were provided to the agency, encouraging them to prepare for the questions ahead of time and bring their budgets to the meeting. The interview length was largely dependent on the total number of sources of funding the agency received for HIV prevention, care, and supportive services. Interview length ranged between 45 minutes to 4 hours.

A total of 17 agencies that were listed as top priority by prevention and care administrative agencies were invited to participate in an in-person interview. Of those invited, all 17 (100%) participated in the survey. The survey was conducted confidentially; therefore agency names are detached from funding amounts in all published reports. The survey was administered by a range of one to five Houston Health Department staff members who visited each agency's office to collect data. A tool was created online using Survey Gizmo to guide the interviewer(s) through each question. Data was input into both Survey Gizmo and Microsoft Excel. A projector was used at each agency so that the agency's representative(s) could view the recorded answers and review them for error or additional input. For one agency, the survey was completed using a combination of the telephone and an online application for screen sharing (Zoom). Although this interview was not conducted in-person, the interviewer shared his computer screen via the Internet so that the agency's representative(s) could view the answers that were input. As necessary, categories of services and job titles reported by the agencies were re-categorized into broader categories for analysis purposes. Analysis was completed using Microsoft Excel.

<u>Survey Questions:</u>
The following questions were asked of each participating agency:

1. What organization do you represent?
2. For the latest year of data you have available, what sources of funding did your agency receive for HIV prevention and/or HIV care services? Select all that apply.
    - Agencies were asked to report on the sources of funding they received in the current year which aligned with either budget years of 2015-2016 or 2016-2017.
    - STD-specific funding was also included if received by the agency.
3. What budget year(s) will you be discussing with us in this survey (e.g., July 1, 2015- June 30, 2016)?
    - Every agency was able to provide data on the current cycle of each funding source which either spanned from 2015-2016 or 2016-2017.
4. Please tell us what dollar amount ($) of the funding you receive from <each funding source> is utilized for the categories below.
    - Categories included: contractual, equipment, indirect, personnel (including fringe), supplies, travel, and other.
5. Please tell us what percent (%) of the funding you receive from <each funding source> is utilized for the services below.
    - When estimating the amount dedicated to each service from each funding source, dollars contracted and subcontracted out were excluded because those services were not directly provided by the agency. Furthermore, an agency receiving a subcontract was often interviewed as a survey participant, risking a double count of these funds.

- During the interview, a revised total funding amount was calculated for each agency by funding source. Utilizing the responses provided in question four, the revised total was equivalent to the total funding minus the contractual amount.
- Using the revised total for each funding source, the interviewers assisted each agency to calculate estimates of dollar amounts devoted to each prevention or care service.

6. Utilizing your funding from <each funding source>, please tell us the number of FTEs that provide each service below.
    - FTEs= full-time employees. Part-time employees were designated by the number of hours worked (e.g., 20 hours/week= 0.5 FTE).
    - Temporary staff was not included in this count.

Re-categorization and Verification Process:

Re-categorization of service categories:

- Dental services included both general dentistry and prosthodontics.
- HIV testing captured all methods of testing, including CTR and routine testing.
- Mental health services included all mental health services (i.e., both psychiatry and counseling).
- Pharmaceutical assistance included both assistance with ADAP and LPAP.
- Program promotion included social marketing.

Re-categorization of job titles:

- Clinical support included clinic assistants, medical technicians, medical assistants, and certified nursing assistants.
- Coordinators that were "program" or "project" coordinators or were coordinating service delivery were classified as "Coordinator (Programmatic)". Coordinators of administrative functions, such as human resources, data, or quality assurance were classified as "Coordinator". The Supervisor/Manager positions followed the same distinction.
- Dietitian and nutritionists were collapsed into one category.
- Director/executive staff included chiefs, directors, vice presidents, and presidents.
- Facilities staff included building engineers and maintenance personnel (such as those providing the maintenance for client housing).
- The following categories were combined: health educators, outreach workers, HIV testers, and risk reduction specialists.
    - The role of "community health workers (CHWs)" varied by agency. Some focused primarily on CTR and outreach, while others link and refer clients or conduct eligibility. Therefore, CHWs were re-classified to categories based on the role description provided by the agency.
- Non-clinical support included: human resources staff members, accountants, data analysis and quality assurance staff members (e.g., data assistants, analysts), information technology staff members, grants management/billing, health planners, and administrative support (e.g., administrative assistants, office clerks).

Verification Process: Administrative agencies were also engaged to clarify and, as needed, correct any discrepancies in an agency's reported funding source. Specifically, administrative agencies assisted in designating the *direct* funder of the agency versus the originator of the funds (e.g.,

SAMHSA, CDC, HUD). This analysis did not include all agencies that pass through funds between the originator and the participating agency, such as the Texas Department of State Health Services.

Limitations:

Jurisdiction: Agencies were asked to limit their discussion to only funding applied to the Houston HSDA, however, some funding (e.g., HOPWA) may have been captured that covers parts of the Houston Area that are not contained in the HSDA.

Funding: Larger agencies reported that other funding sources support their HIV prevention and care services that they were not able to fully describe herein. They typically received funding to support services from Medicaid, Medicare, private insurance, self-pay and overall revenue of the agency. Despite these additional sources of funding, there are substantial costs that are often uncompensated. For example, one major health system shared data demonstrating that $15,549,882 for medical care service provision to PLWH were uncompensated in their last fiscal year. Given the lack of Medicaid expansion in Texas, we expect this will continue to be a strain on the resources of healthcare agencies in the Houston Area.

Funding- administration: If an indirect rate was applied by the agency, administrative costs were equal to the indirect dollars received. If an indirect rate was not applied, administrative costs were equal to all personnel costs (including fringe) that were administrative in nature. For the purposes of this survey, administrative personnel were defined as those that do not provide direct services or do not supervise someone who provides direct services. As a limitation of this survey, we acknowledge that this methodology underestimates the true administrative cost. If an agency was unable to factor out administrative staff, but had an estimate of administrative costs, the estimate they defined as "administrative cost" was utilized. For Ryan White sources of funding, clinical quality management (CQM) allocations were counted as administrative costs.

Funding- contractual: As described in the survey questions section above, dollars contracted out were excluded from analysis due to the possibility of duplicative representation in the data. However, some contracted agencies may have not been interviewed and that funding would not be captured herein. This is especially true for those providing an administrative service, such as a company contracted to provide financial services.

Service category- HIV testing: For those agencies conducting counseling, testing, and referral (CTR), HIV testing usually also includes syphilis testing, HIV education, linkage to HIV medical care, and PrEP education. CTR was captured in the service of "HIV testing" and agencies were unable to break out how much of the CTR funding was spent on education vs. testing vs. linkage for positives vs. PrEP education/referral. Therefore, both the funding and FTEs for the categories of linkage to care, education for positives and negatives, and PrEP are likely underestimated.

Service category- Clinical case management (for substance abuse/mental health): At least one agency combined substance abuse treatment and clinical case management services into one category. Therefore, this may have resulted in underestimates in both funding and FTEs for clinical case management.

Job titles: A challenge in the categorization of staff titles was that multiple roles and responsibilities were often held by numerous staff members, especially at smaller agencies. For example, a staff person may primarily perform data analysis but also provide HIV testing as needed. There were several instances of Executive Directors providing direct services as well. In these cases, the staff person was categorized by the duty they primarily perform.

- It should be noted that one agency was unable to provide the number of FTEs supported by their funding source "Multiple Sources" (collapsed category of 28 sources of private funding).

Job titles- linkage: There may be some overlap in the functions of service linkage workers, patient navigators, eligibility staff, care coordinators, and case managers. There is, at times, even overlap with those performing HIV testing as they may also perform linkage to services. In the categories we have presented, we attempted to distinguish linkage that primarily focused on HIV care (service linkage workers) versus linkage to all kinds of services (patient navigators/linkage to services). However, it should be noted that service linkage workers also link HIV-positive persons to many services, such as transportation and mental health/substance abuse services. In the Houston Area, there is ongoing conversation and reiteration of role distinction between case managers and service linkage workers at biannual joint trainings with frontline staff funded by Ryan White Grants Administration and the Houston Health Department.

<u>Future Improvements</u>

Although many major HIV prevention and care providers were captured in this survey, this work could be expanded to capture all HOPWA and SAMHSA grantees, private providers that may not be recipients of local/state/federal funding, and those organizations receiving research funding (e.g., those receiving funding from the National Institutes of Health).

Ideally the service categories described the service being provided; therefore the category of "HIV evidence-based intervention" should have been further broken out (likely re-allocated between HIV health education and HIV testing).

In future iterations, we also recommend additional specificity in capture of administrative capacity. It would be informative to describe administration by categories, such as: human resources, information technology, data analysis/management, and quality assurance. Similarly, it is recommended that the "contractual" funding category be split into those awarded a subcontract to provide a direct service versus those acting as a contractor performing tasks on behalf of the agency.

Results: Funding

In the current fiscal year, the total amount of HIV funding reported by the 17 agencies sampled was approximately $55.7 million (see Funding Source Tables in **Appendix 3**). The sources of funding reported in **Tables 2** and **3** represent the *direct* funder, not the originator of funding. Of the total funding received within the Houston Area, the highest percentage, 27.05%, was HCPH (RW Part A) followed by 16.06% from the CDC and 11.50% from HOPWA. The lowest percentage, 0.05%, was received from TRG (HOPWA) followed by 0.14% from Other Agency (RW Part F, AETC) and 0.35% from HHD (CDBG – Community Development Block Grant).

Linkage to substance abuse/mental health services and translation services for HIV-positive persons were services that agencies reported FTEs (Workforce Capacity Tables) but no funding allocation (Funding Source Tables in **Appendix 3**). Aside from the HIV services with 0 funding dollars, the least funded were financial assistance/services for HIV-positive ($5,000), food assistance/services for HIV-positive ($15,063), HIV advocacy ($65,000), patient navigation to any service regardless of HIV status ($48,650), research projects for HIV-positive ($30,484), and substance abuse services for HIV-positive ($48,280). Each of these services received less than $100,000 total. The most funded were administration ($11,150,070), dental services for HIV-positive ($1,883,791), health insurance premium and cost sharing assistance for HIV-positive ($2,119,683), HIV medical care ($9,706,694), HIV testing ($4,155,405), housing assistance/services for HIV-positive ($7,666,817), HPV vaccinations ($1,048,569), linkage to HIV medical care ($3,966,101), medical case management for HIV-positive ($2,538,848), and partner services ($2,699,562). Each of these services received greater than $1 million in funding. The most well-funded HIV services, when factored together, impact all steps of the HCC, suggesting that funding is distributed in a manner that addresses the overall needs of the community.

Although the results of the survey above are very informative, they are limited to 17 major agencies in the Houston Area. An annual analysis is also conducted by Harris County Public Health to estimate HIV Care and Prevention funding. This information is collected from publically available federal award notices, TDSHS allocations, and self-reports by Harris County Public Health contractors (see **Appendix 2**). Additionally, by obtaining data from administrative agencies, we were able to capture the following funding that was either not self-reported by agencies interviewed or awarded to agencies not captured in our survey (**Table 2**). Further details on these funding sources could be captured in the future should the participant pool be expanded.

***Table 2*: Additional Current (2015-2016) HIV Funding (not captured in survey), Houston Area**

Source	Funding Amount	Services Provided
CDC	$225,000	Routine HIV testing
CDC	$199,175	HIV testing, linkage to HIV medical care
TDSHS, State Services*	$1,043,312	Health insurance premium and cost sharing assistance for HIV+
TDSHS, State Services*	$166,211	HIV early intervention services, HIV testing, linkage to HIV medical care, discharge planning
HOPWA, HUD	$1,226,990	Housing and supportive services for persons with chemical addiction and/or alcohol dependency
HOPWA, HUD	$982,628	Short-term rent, mortgage, utility assistance, and tenant-based rental assistance program with supportive services
HOPWA, HUD	$530,758	Short-term rent, mortgage, utility assistance, and community residence with supportive services
HOPWA, HUD	$440,015	Short-term rent, mortgage, utility assistance, and tenant-based rental assistance program with supportive services
HOPWA, HUD	$348,975	Childcare facility, community residence, and supportive services
HOPWA, HUD	$215,000	Supportive services program including assistance for eligibility and case management
HOPWA, HUD	$175,000	Supportive services job training program
HOPWA, HUD	$150,000	Counsel and advice on civil law matters including housing, family law, public benefits, disability, employment, and discrimination
HOPWA, HUD	$144,551	Childcare and early childhood education to homeless children, case management/education to parents/caretakers
HOPWA, HUD	$141,364	Community residence and supportive services targeting homeless veterans
RW Part A, HRSA*	$203,587	Primary care, medical case management, linkage to HIV medical care for pediatrics
RW Part A, HRSA*	$80,025	Medical case management for veterans
RW Part D, HRSA*	$292,327	HIV medical care, mental health services, transportation, medical case management, linkage to HIV medical care
RW Part D, HRSA*	$35,000	Medical case management, HIV medical care
SAMHSA	$159,321	HIV testing
SAMHSA	$100,000	HIV early intervention case management

**These funding amounts were subsequently captured in the "HIV Funding by Origin" analysis presented herein.*

Supplemental Analysis: An additional analysis was performed to indicate the original source of funding where known (**Table 3**). By obtaining data from the local HIV prevention and care administrative agencies, we were able to capture approximately $1.8 million of the funding missed in the self-reported responses that were displayed in "**Table 2: Additional HIV Funding**". In this analysis, no contractual amounts were excluded. Therefore, the over $63 million captured below revealed funding to agencies outside of the 17 surveyed, including

agencies contracted for administrative functions. However, following this methodology, duplication of funding can occur when the same funding is reported by both a surveyed administrative agency and by a surveyed recipient. Deduplication of funding was manually conducted to ensure funds were not double-counted.

The results below in **Table 3** demonstrate the lack of **local** investment in HIV prevention and care services in the Houston Area. This barrier has especially limited innovation to pilot new projects where funding opportunities may not yet exist.

Table 3: HIV Funding by Origin, Houston Area

Funding Source	Funding Amount	Percent of Total (%)
CDC	$16,576,706	26.30%
CMS	$367,627	0.58%
Gilead Sciences, Inc.	$841,142	1.33%
HRSA	$23,405,339	37.14%
HUD	$8,401,830	13.33%
Multiple Sources*	$7,398,727	11.74%
Other	$2,082,190	3.30%
SAMHSA	$3,953,808	6.27%
Total	**$63,027,369**	**100.00%**

**Multiple sources may include a combination of other sources listed that were reported together, such as HRSA + TDSHS + HUD. All funding from TDSHS (State Services) is included in this category.*

Results: HIV Workforce Capacity

The Houston Area maintains approximately 486 full-time employees (FTEs) to direct HIV care and prevention services (see Workforce Capacity Tables in **Appendix 4**). The HIV service with the most FTEs is administration, with about 80 FTEs, followed by HIV medical care (72 FTEs), linkage to HIV medical care (67 FTEs), and HIV testing (51 FTEs). The latter three services also contain the most diverse portfolio of workforce categories, with numerous personnel representing the wide range of skills needed to manage these services and maximize their delivery to the communities in need. The workforce categories represent generalized personnel titles grouped by the similarity of their job descriptions, and the categories with the highest number of FTEs are non-clinical support, with about 93 FTEs, followed by health educators/outreach workers/risk-reduction specialists/HIV testers (68 FTEs) and service linkage workers (52 FTEs). Despite the large number of FTEs representing the total workforce capacity, it requires a significant amount of dedication and support to execute the extensive HIV services available in the Houston Area, each of which require regular monitoring and evaluation to ensure the community's needs are being met. Furthermore, new services are being introduced as former ones are being adapted to best serve the targeted populations most at-risk or in-need of assistance, necessitating a dynamic workforce that is flexible and capable of expansion. It should be noted that the large number of administrative staff is likely due to the collapse of multiple functions into this category, such as accounting, data management and analysis, human resources, and information technology. Additionally, 3 of 17 (17.6%) of the survey participants were administrative agencies.

The HIV services with the fewest FTEs, with 1 FTE or less, total, were capacity building for HIV services, condom distribution, health insurance premium and cost sharing assistance for HIV-

positive individuals, HIV advocacy, insurance navigation for HIV-positive individuals, linkage to substance abuse/mental health services, patient navigation to any service regardless of HIV status, program promotion, research projects for HIV-positive persons, and translation services for HIV-positive persons. The workforce categories with the fewest FTEs, with 1 FTE or less, total, were patient advocate, physical therapist, physician assistant, psychiatrist, public affairs specialist and translator. Additionally, financial assistance/services for HIV+ and food assistance/services for HIV+ were services that agencies reported providing (**Appendix 3**) but had 0 FTEs reported (not shown in Workforce Capacity Tables). More support might be essential to execute these services and categories, and addressing these needs may prove difficult without expanding capacity. Individual organizations must also properly evaluate their own business structures and collaborate with other partners to ensure the workforce capacity is operating efficiently and effectively. Assessments of the workforce size and scope, such as those presented herein, should be regularly evaluated against community needs assessments to ensure consistent alignment between capacity and service demand. An area for close observation and further study is clinical capacity in HIV medical care. A recent study by HRSA found that, nationally, a shortage of 502 HIV clinicians was expected by 2015 (Gilman et al., 2016).

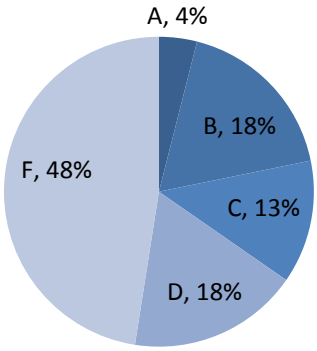
In addition to workforce capacity as described by number and type of workers, the Black AIDS Institute completed a survey of the HIV workforce in 2014 that assessed knowledge and attitudes (Black AIDS Institute, 2015). Nationally, over 3600 respondents were included from 44 states, the District of Columbia and U.S. territories. The survey, which was conducted in partnership with several key organizations (e.g., CDC), showed that the national workforce is relatively young, with 43% of the workforce in the 18-34 age range. People of color made up 57% of the participants. Men made up slightly more of the respondents (54%) than women. Sixteen percent were currently living with HIV, and about a third identified as LGBT.

Resounding themes of the Black AIDS Institute's report were 1) a lack of knowledge among the workforce on science and treatment issues and 2) knowledge varied by subpopulation. Black and Latino respondents scored lower as did workers from smaller organizations, from community-based organizations, from the South, and those with less education. Those who were LGBT, HIV-positive, or had worked in the field longer performed better on the survey. Overall, the average score of respondents was 63%. This resulted in a national overall grade of "D" on issues related to HIV and science. Survey results also showed that respondents were more likely to answer basic science questions compared to questions relating to HIV treatment (average scores of 76% and 56% respectively). Survey participants especially performed poorly in answering questions about clinical/biomedical interventions with an average score of 46%.

Survey participants in Houston (n=120) were substantially older (28% were 55+ years of age), had greater experience in the field of HIV (30% with 16+ years) and consisted of more women than the nation overall. The percent of HIV-positive participants were similar between Houston and the U.S. Educational levels were more polarized in Houston with more participants at both the lower and higher levels of educational achievement. In comparison to national results, the Houston Area scored the same grade ("D") on HIV knowledge with an average score of 61%. In addition, participants in Houston and those in the nation overall scored similarly to questions on basic HIV knowledge and terminology (72% and 73% respectively). Compared to all respondents, the Houston workforce scored slightly higher on HIV treatment questions (56%

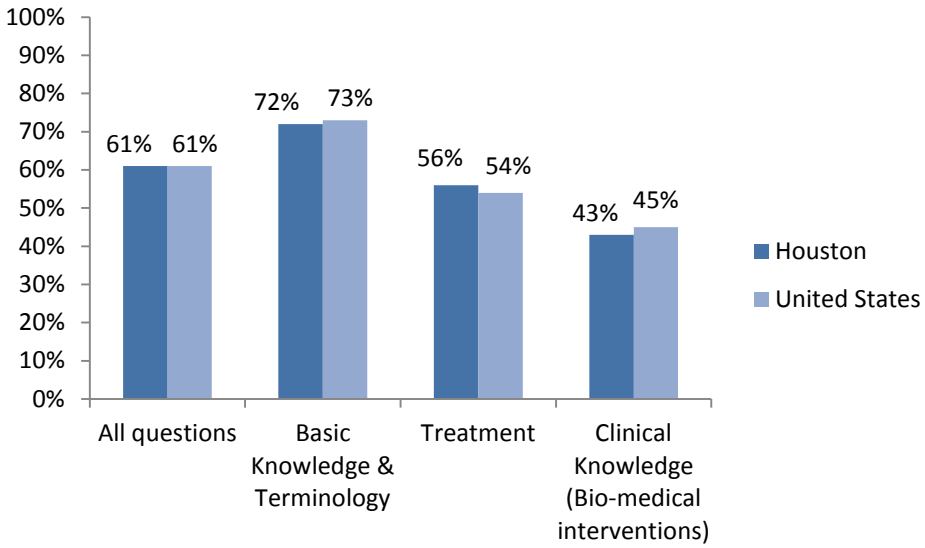
versus 54%) and slightly lower on clinical knowledge of bio-medical interventions (43% versus 45%) (**Figures 2** and **3**).

Figure 2. Grade Distribution of Houston Respondents



Source: Black AIDS Institute, 2015

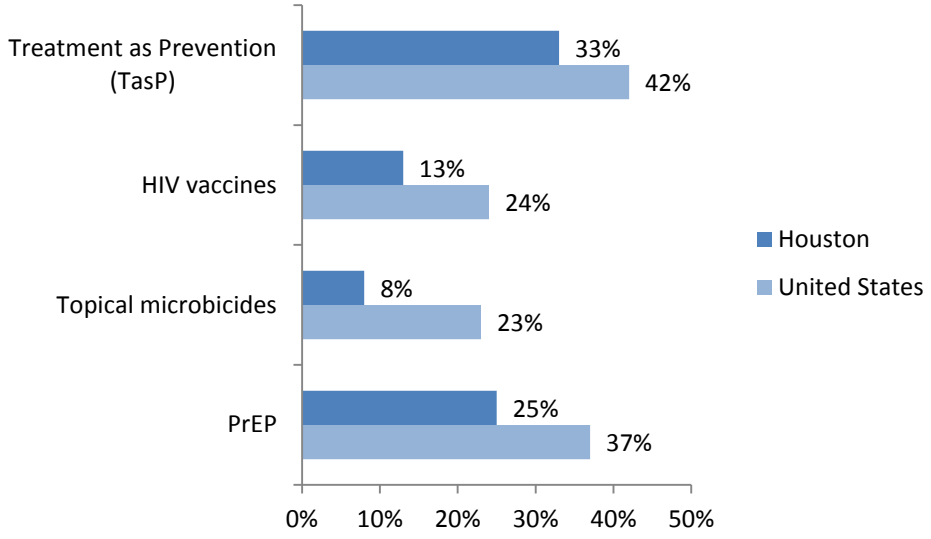
Figure 3. Average Percent Correct by Question Category



Source: Black AIDS Institute, 2015

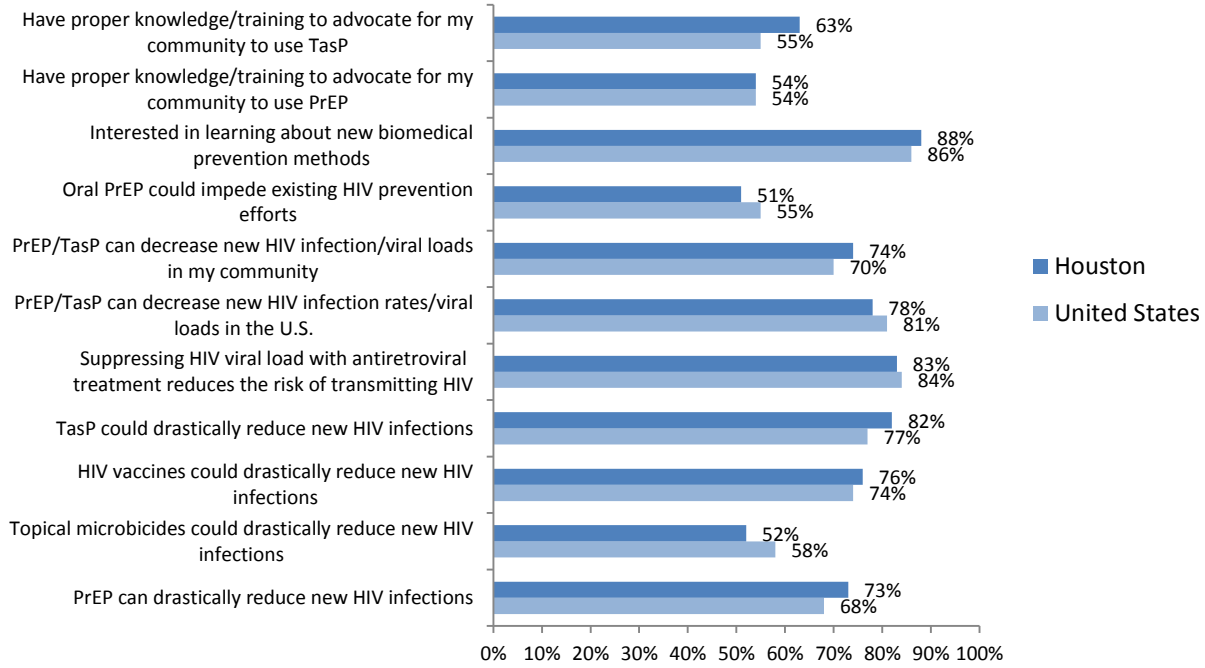
While workforce knowledge scores are troubling, perhaps a finding of more concern is the lack of belief in, and familiarity with, key prevention interventions (**Figures 4** and **5**). In order to translate the scientific and therapeutic advances in HIV into practice, the workforce must not only be robust, but also be knowledgeable and able to "play a central role in educating community members, motivating them to access care, and assisting them in navigating a rapidly evolving health care landscape." (Black AIDS Institute, 2015).

Figure 4. Familiarity with Bio-Medical Interventions



Note: Percent rated "Extremely Familiar" or "Very Familiar" with intervention
Source: Black AIDS Institute, 2015

Figure 5. Belief in Bio-Medical Interventions



Note: Percent rated "Strongly Agree" or "Somewhat Agree"
Source: Black AIDS Institute, 2015

Needed Resources

The Houston Health Department utilizes the following strategies to obtain needed HV prevention resources: 1) seek out and apply for new sources of funding, 2) ensure deduplication of effort by coordinating services in the jurisdiction, 3) collaborate with other agencies for funding

opportunities and new initiatives, 4) expand areas for revenue generation (e.g., third party billing), and 5) solicit in-kind technical assistance from local researchers. Below are some examples of how the HHD has tackled the task of confronting and closing service gaps:
The results of the latest Prevention Needs Assessment presented in this Plan (Section II.D.) revealed that over 35% of the Houstonians sampled reported never having been tested for HIV. The Houston Health Department provides capacity building and technical assistance opportunities for agencies in the jurisdiction to scale up HIV testing, especially by seeking reimbursement that can support this activity. Health department STD clinics have also taken steps to implement third party billing for HIV/STD testing and services which will ultimately increase revenue and the ability to sustain and expand services.

Historically, there has not been sufficient funding to broadly blanket the community with social marketing campaigns. This is evident by the 30% of Prevention Needs Assessment respondents that reported they had not received any HIV or STD prevention messages in the past 12 months. Furthermore, knowledge of PrEP remains low in the Houston community. Of those who responded, 59% of needs assessment participants had never heard of PrEP. Beginning prior to receipt of any PrEP-specific funding, the HHD acted as a convener of a PrEP Advisory Council where providers could share best practices and collaborate, often reducing the burden on new providers and saving time and resources. The HHD was awarded funding for PrEP scale-up starting in 2015. Harnessing this new capacity, the HHD is currently in the process of implementing extensive social marketing campaigns focused specifically on both PrEP and treatment as prevention.

For priority activities identified by the planning bodies, HIV Prevention and Care administrative agencies often collaborate on new funding opportunities to secure the capacity necessary to address needs. A recent example has been Houston's creation and scale-up of Data to Care activities. In the first joint Integrated HIV Prevention & Care Services Plan released in 2012, the community prioritized re-linkage to care efforts. At that time, there were at least 26 service linkage workers helping newly diagnosed people with HIV, but none were dedicated to re-linkage. Harris County Public Health (HCPH) and the Houston Health Department (HHD) co-wrote a grant application in 2012 to secure funding from the Merck Foundation for re-linkage to care utilizing surveillance and care data (2012-2015). In 2016, the HHD succeeded in expanding this program with funding for three years from the CDC.

When new prevention interventions or a shift in priorities has been identified, the HHD has actively sought ways to support these activities. If funding opportunities are not yet available, the HHD partners with local researchers, community-based organizations, and other agencies to accomplish new tasks. In doing this, the jurisdiction is able to pilot new initiatives and is better prepared when new funding opportunities do arise. In addition to seeking out new direct funding opportunities, the HHD partners with local researchers to secure enhanced expertise in some specialties, such as mathematical modeling. The HHD is often able to leverage existing staff for collaboration on research projects while gaining the advanced expertise of researchers to advise and provide new insight.

Acknowledgements

The authors would like to thank the following for their invaluable support in the writing of the financial and human resources inventory section: all agencies that graciously participated in the survey of resources, Melody Barr (Deputy Assistant Director of Public Services/Public Facilities, City of Houston Housing and Community Development Department), Jesse Carter (Texas Department of State Health Services), Benjamin Sabedra (Harris Health System), Nancy Miertschin (Harris Health System), Kellie Watkins (Staff Analyst, Houston Health Department), Yen Nong (Public Health Investigator Specialist, Houston Health Department), Richlyn Yond (Surveillance Investigator, Houston Health Department), Truc Pham (Epidemiologist, Houston Health Department), Sha'Terra Johnson-Fairley (Health Planner, Houston Regional HIV/AIDS Resource Group, Inc.), Carin Martin (Program Manager, Ryan White Grant Administration, Harris County Public Health), and Marlene McNeese (Chief- Bureau of HIV/STD and Viral Hepatitis Prevention, Houston Health Department).

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Section I: Statewide Coordinated Statement of Need/Needs Assessment

D. Assessing Needs, Gaps, and Barriers

Needs Assessment Processes in the Houston Area

As the service needs, gaps, and barriers among people living with HIV (PLWH) and high-risk individuals who are HIV-negative or status unaware can vary greatly, two separate but aligned needs assessment surveys are conducted in the Houston Area sampling 1) all people who live in Houston/Harris County, and 2) all PLWH in the Houston EMA (Harris, Fort Bend, Waller, Montgomery, Liberty, or Chambers counties) or HSDA (EMA counties and Wharton, Colorado, Austin, and Walker counties). The former is the Houston HIV Prevention Needs Assessment, contracted by the Houston Health Department (HHD) Bureau of HIV/STD and Viral Hepatitis Prevention. The latter process is the Houston HIV Care Services Needs Assessment administered by the Ryan White Planning Council (RWPC) Office of Support with tangible reinforcements provided by The Houston Regional HIV/AIDS Resource Group (TRG), as well as help and guidance from stakeholders and consumers developing the survey tool, sampling strategy and goals, analysis strategy, and providing input throughout data collection, analysis, and creation of the final Houston HIV Care Services Needs Assessment Report.

Needs Assessment Process for People At-Risk for HIV

In 2016, the Houston HIV Prevention Needs Assessment process was developed to assist with identifying the HIV prevention needs of people at-risk for HIV. The HHD adapted tools from past prevention and care needs assessment surveys to create the 2016 Houston HIV Prevention Needs Assessment survey tool. Previous survey tools were heavily vetted and approved by the Houston HIV Prevention Community Planning Group (CPG) and RWPC respectively. Questions in the 2016 Houston HIV Prevention Needs Assessment designed to collect demographic information and prevention needs of PLWH were aligned with the 2016 Houston HIV Care Services Needs Assessment survey tool.

An independent contractor was hired to recruit participants to complete the anonymous online survey using multiple databases containing email addresses of Houston/Harris County residents. To ensure that those at higher risk were represented, surveillance data was utilized to construct a sampling plan that targeted those most at-risk for HIV by race/ethnicity, birth sex, age, and transmission risk factor. The survey tool was tailored to gauge the specific needs of the Houston/Harris County community, including individuals living with HIV and those at-risk for HIV. It assessed potential barriers to HIV prevention services and medical care, HIV awareness and stigma, risk behaviors, satisfaction with prevention services, and basic sociodemographic information.

The survey was conducted from July – August 2016 using the Survey Monkey platform. The HHD created and approved all questions and survey structure (i.e., skip logic), while the contractor built the survey online and collected all responses. The survey was administered in three waves of recruitment. A local database was first utilized to distribute 20,000 email invitations, but resulted in low yield, eliciting less than 200 participants. Local community groups were then engaged to assist in online survey distribution which increased the number surveys by

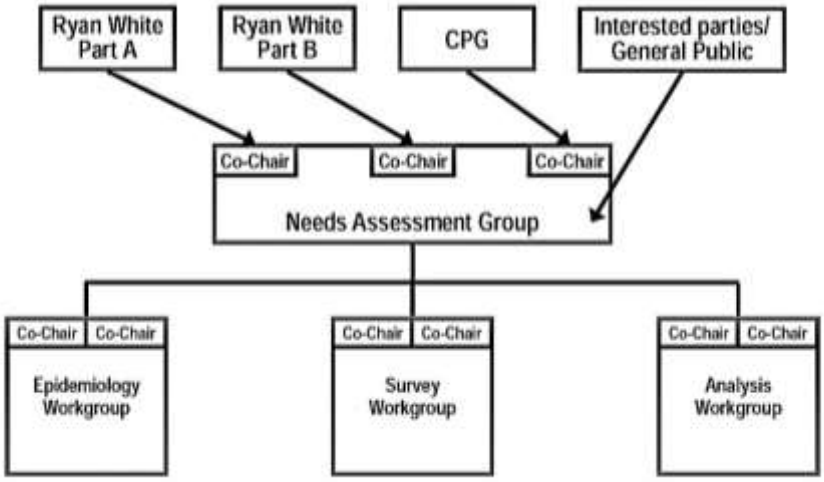
another 113 participants. Subsequently, another database of email addresses was used to distribute 953,416 emails which yielded the remaining participants for a total of 797 survey responses collected.

Using a general email database to solicit responses to a behavioral HIV/STD survey presented a number of unique challenges. Most email addresses within databases available for purchase or rent were work-related, which may have interfered with the number of responses received. Attempts were made by the contractor to identify personal email addresses to generate more diverse responses. Monolingual Spanish speaking survey participants were not adequately represented as the survey was not translated into Spanish. The survey did not target adolescents or teens. Survey responses were solicited from the general Houston Area population, with definitions provided throughout the survey to explain any terms that may have been unknown outside of the HIV community. Due to the use of email addresses and electronic survey, responses from the homeless and those persons dealing with substance abuse issues who either did not have access to an email account or computers are missing in the data collection.

Needs Assessment Process for PLWH

Every three years, the Houston HIV Care Services Needs Assessment process begins with formation of the Needs Assessment Group (NAG) and Workgroups (**Figure 1**). Though meetings occur in space provided by Harris County Public Health with administrative support, guidance and refreshments furnished by the RWPC Office of Support, the Houston HIV Care Services Needs Assessment process is directed by three co-chairs representing Ryan White Program Part A, Ryan White Program Part B, and the Houston HIV Prevention Community Planning Group, along with consumers, stakeholders, interested parties, and the general public that comprise NAG membership.

***Figure 1*: Houston HIV Care Services Needs Assessment Group (NAG) Structure**



NAG functions as a steering committee for the Houston HIV Care Services Needs Assessment process. It adopts membership requirements, voting rules, and quorum guidelines, sets survey concepts for each needs assessment cycle, and reviews and makes recommendations on products the NAG Workgroups create. The NAG membership for the 2016 Houston HIV Care Services Needs Assessment included 18 self-disclosed PLWH; stakeholders from the county hospital

district, Houston Area private hospitals, HHD, TRG, federally qualified health centers (FQHCs), community-based organizations, and the Texas Department of State Health Services (TDSHS); and representatives from local groups and HIV task forces including the African American State of Emergency Task Force, Texas Black Women's Initiative, the new Houston chapter of the Positive Women's Network, Latino HIV Task Force, Pos713 HIV support group, Transgender Foundation of America, M-Pact (MSM task force), Youth Task Force, HIV and Aging Task Force, Heterosexual HIV Awareness Task Force, Living Without Limits Living Large Inc. heterosexual HIV support group, and the Texas HIV Syndicate.

The NAG Workgroups guide distinct aspects of the Houston HIV Care Services Needs Assessment process and create products for NAG review as well as use in survey development, data collection, and analysis. The Epidemiology Workgroup is comprised of both consumers and subject matter experts such as local and state health department staff, and is tasked with creation of the jurisdictional Epidemiologic Profile as well as setting the sampling frame for the Needs Assessment process based on the local epidemic. The Survey Workgroup revises the survey tool from the former Houston HIV Care Services Needs Assessment cycle to reflect changes in terminology, technology, HRSA/HAB guidance, and local, state, and national planning priorities. The Survey Workgroup is also tasked with ensuring alignment with the Houston HIV Prevention Needs Assessment on questions that assess prevention service knowledge, needs, gaps, and barriers. The Analysis Workgroup reviews and provides recommendations on the Qualitative Analysis Codebook used to classify open-response questions, discusses and updates principles for data analysis, provides input on data weighting, and develops domains for organization of the Houston HIV Care Services Needs Assessment Report.

The most recent cycle of the Houston HIV Care Services Needs Assessment process began in October 2015 when NAG met to set meeting guidelines, review findings from the 2014 Houston HIV Care Services Needs Assessment, and develop key concepts for the 2016 Houston HIV Care Services Needs Assessment. These included streamlining the survey tool and process; focusing on service utilization, needs, accessibility and barriers; collecting both qualitative & quantitative data on service barriers; and continuing efforts to survey the out of care population. Other areas of focus identified were assessing the needs of long-term survivors/those aging with HIV and increasing efforts to identify waitlist and wait time-related service barriers.

The Epidemiology Workgroup met in December 2015 to develop the 2016 Survey Sampling Principles and Plan. Following review of 2014 epidemiologic data for the Houston EMA, the Epidemiology Workgroup approved a desired sample size of 587-1,024 based on a diagnosed population of 24,979 PLWH, with a confidence interval of 95% and confidence levels of 3% and 4%, respectively. The Epidemiology Workgroup also determined that approximately 92% of surveys should be collected from Harris County residents, and the remaining 8% should be collected from PLWH in the outer EMA/HSDA counties; 25% should be out of care based on the Houston EMA unmet need estimate; ranges for survey participants per demographic category should be based on the proportion of current total prevalence for the Houston EMA (including transmission risk), and efforts should be undertaken to over-sample historically underrepresented or high-risk populations including rural PLWH, the out of care, unstably housed, injection drug users (IDU), MSM, recently released from incarceration, and transgender individuals.

The Survey Workgroup met throughout November and December 2015 to develop the 2016 Houston HIV Care Services Needs Assessment survey tool and align relevant questions with the Houston HIV Prevention Needs Assessment also slated for completion in 2016. The 2014 Houston HIV Care Services Needs Assessment survey tool contained 75 questions and required up to 45 minutes for participants to complete. To reduce respondent fatigue, increase the amount of time participants could dedicate to providing detailed accounts of service barriers, and ensure results from the 2016 Houston HIV Care Services Needs Assessment process would be available for completion of the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan (2017 Comprehensive Plan), the 2016 survey tool was streamlined to 45 questions and took approximately 15-20 minutes for participants to complete. The Survey Workgroup reformatted the section of the tool that assessed needs, gaps, and barriers encountered for particular services. Participants were provided with a description of each Ryan White-funded service category in the Houston HSDA, as well as housing services and food bank, and were asked to indicate whether they knew that the service was available, whether that particular service was easily available if needed and, if not easily available, encouraged to write a brief description of barriers encountered in pursuit of the service. Questions formatted to align with the Houston HIV Prevention Needs Assessment included all questions assessing demographic and socioeconomic characteristics; recent testing, diagnosis and treatment history for chlamydia, syphilis, and gonorrhea; recent receipt of information about preventing HIV transmission; PrEP awareness including awareness of PrEP resources; and awareness of HIV status of recent sex partners, recent condom use, motivations for not using a condom during sexual encounters, and practices surrounding discussion of HIV status with new sex partners.

Following completion of the 2016 Sampling Plan and survey tool (**Appendix 5**) and receipt of tangible reinforcements furnished by TRG, RWPC Office of Support staff worked with local FQHCs and other HIV clinics, community-based organizations, HIV housing apartment complexes, TDSHS Region 6/5 South staff, and support groups to advertise the 2016 Houston HIV Care Services Needs Assessment. Between January and early June 2016, RWPC Office of Support staff and interns collected 507 valid surveys. Staff calculated the new margin of error for this sample size as 4.31%, compared to 4% for the original minimum sample size, and verified with a statistician that this would have no bearing on generalizability of findings. Select characteristics for participants in the 2016 Houston HIV Care Services Needs Assessment are provided in **Table 1**.

***Table 1*: Select Participant Characteristics, Houston HIV Care Services Needs Assessment, 2016**

	No.	%		No.	%		No.	%
County of residence			Age range (median: 50-54)			Sex at birth		
Harris	464	93.4%	13 to 17	1	0.2%	Male	341	67.3%
Fort Bend	21	4.2%	18 to 24	17	3.4%	Female	166	37.7%
Liberty	1	0.2%	25 to 49	219	43.2%	Intersex	0	-
Montgomery	6	1.2%	50 to 54	123	24.3%	Transgender	20	3.9%
Other	5	1.0%	55 to 64	133	26.2%	Currently pregnant	1	0.2%
			≥65	14	2.8%			
			Seniors (≥50)	270	53.3%			
Primary race/ethnicity			Sexual orientation			Health insurance		
White	60	11.8%	Heterosexual	274	54.0%	Private insurance	53	8.6%
African American/Black	318	62.7%	Gay/Lesbian	171	33.7%	Medicaid/Medicare	307	49.8%
Hispanic/Latino	121	23.9%	Bisexual	39	7.7%	Harris Health System	146	23.7%
Asian American	5	1.0%	Other	23	4.5%	Ryan White	105	17.0%
Other/Multiracial	3	0.6%	MSM	216	42.6%	None	6	1.0%
Immigration status			Yearly income (average: $9,380)			Special Populations		
Born in the U.S.	427	84.6%	Federal Poverty Level (FPL)			Unstable Housing	142	28.0%
Citizen > 5 years	33	6.5%	Below 100%	278	78.8%	Injection drug users (IDU)	8	1.6%
Citizen < 5 years	4	0.8%	100%	45	12.7%	Men who have sex with men (MSM)	216	42.6%
Undocumented	10	2.0%	150%	13	3.7%	Not retained in care (last 6 months)	4	0.8%
Prefer not to answer	22	4.4%	200%	10	2.8%	Recently released from incarceration	41	8.1%
Other	9	1.8%	250%	2	0.6%	Rural (non-Harris County resident)	33	6.4%
			≥300%	5	1.4%	Transgender	20	3.9%

Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)

The Analysis Workgroup met throughout May and June 2016 to review the Qualitative Analysis Codebook developed to classify types of service barriers encountered and identify domains and special analyses to be included in the 2016 Houston HIV Care Services Needs Assessment Report. The Analysis Workgroup also voted to statistically weight data for sex at birth, primary race/ethnicity, and age range based on a three-level stratification of HIV prevalence in the Houston EMA in 2014. All data presented regarding HIV care service needs, gaps, and barriers are derived from the weighted sample data. All HIV care service tables and figures are taken from the 2016 Houston HIV Care Services Needs Assessment Report document, for which approval is anticipated in November 2016.

Service Needs and Gaps

Service Needs and Gaps for People At-Risk for HIV

The total sample (N=797) included 396 black or African American participants (49.7%) and 498 males (62.5%). Those between 35 to 44 years old (n=240, 30.1%) and those with a post-secondary degree (n=437, 54.8%) were most represented. Although the highest percentage of respondents reported having private insurance (n=199, 25.0%), an almost equal percentage reported self-pay (n=178, 22.3%) followed by Medicaid/Medicare coverage (n=112, 14.1%). It is important to note that there was a large percentage (n=340, 42.7%) of non-response for health insurance status. The majority of the participants were employed in some capacity, either full-time, part-time, or temporary, contractual or other work, with almost half of the sample stating a

monthly household income of at least $6,000 or greater (n=349, 43.8%), and even more participants reported living in a house or apartment paid for by self (n=635, 79.7%).

Transportation has consistently been a known limitation to fluid mobility within the Houston Area given its significant geographic spread and limited public transportation system, often creating a barrier to accessing HIV care because of the difficulties in navigating this distance. For the sample population, the majority reported owning a vehicle (n=487, 61.1%) while 236 respondents reported relying on public transportation (29.6%). However, 12 participants in the sample reported having no transportation available to them (1.5%) (**Table 2**).

Table 2: **Demographics of Needs Assessment Participants (N=797)**

Description	No. (%)	Description	No. (%)
Birth sex		**Employment status**	
Male	498 (62.5%)	Full-time employment	302 (37.9%)
Female	245 (30.7%)	Part-time employment	192 (24.1%)
Intersex	13 (1.6%)	Temporary, contractual, or other work	162 (20.3%)
No response	41 (5.1%)	Student	26 (3.3%)
Race/Ethnicity		Retired	18 (2.3%)
Black or African American	396 (49.7%)	Disabled	48 (6.0%)
Hispanic	267 (33.5%)	Unemployed	16 (2.0%)
White	57 (7.2%)	No response	33 (4.1%)
Other/Multiracial	77 (9.7%)	**Household monthly income**	
Age Group		< $1000	34 (4.3%)
<18	8 (1.0%)	$1000-$1999	15 (1.9%)
18-24	188 (23.6%)	$2000-$2999	72 (9.0%)
25-34	175 (22.0%)	$3000-$3999	89 (11.2%)
35-44	240 (30.1%)	$4000-$4999	45 (5.6%)
45-54	110 (13.8%)	$5000-$5999	135 (16.9%)
55+	76 (9.5%)	$6000+	349 (43.8%)
Education		No response	58 (7.3%)
Post-secondary degree	437 (54.8%)	**Housing status**	
Technical/vocational degree	44 (5.5%)	House/apartment paid by self	635 (79.7%)
High school diploma	188 (23.6%)	House/apartment paid by other	87 (10.9%)
GED	63 (7.9%)	Subsidized housing	38 (4.8%)
Less than high school	59 (7.4%)	Stay with others	12 (1.5%)
No response	6 (0.8%)	No response	25 (3.1%)
Health Insurance		**Transportation**	
Private insurance	199 (25.0%)	Own vehicle	487 (61.1%)
Medicaid/Medicare	112 (14.1%)	Public transportation	236 (29.6%)
Harris Health System	60 (7.5%)	No transportation	12 (1.5%)
COBRA	67 (8.4%)	No response	62 (7.8%)
VA	11 (1.4%)		
Ryan White only	38 (4.8%)		
Self-pay	178 (22.3%)		
No response	340 (42.7%)		

Source: 2016 Houston HIV Prevention Services Needs Assessment

Of the total sample population, 493 identified as a man in their current gender identity or expression, with about 253 reporting woman and 5 reporting part-time as man and part-time as woman. Forty-six participants provided no response, total, for current gender identities or expression. About 473 participants reported a birth sex of male and a current gender identity of man (59.3%). Of those with a current gender identity or expression of man, 350 persons reported a sexual orientation of gay (43.9%), with the next highest percentage identifying as straight/heterosexual (n=121, 15.2%) followed by bisexual (n=20, 2.5%) and pansexual (n=1,

0.1%). There were 8 responses (1.0%) from intersex individuals who identify as men. A category for men who have sex with men (MSM) was created by combining bisexual, gay, and pansexual participants who identify as men for their current gender identity into a single category.

About 226 participants reported a birth sex of female and a current gender identify of woman (28.4%). Of those with a current gender identity or expression of woman, 198 persons reported a sexual orientation as straight/heterosexual (24.8%), with the next highest percentage identify as bisexual (n=27, 3.4%) followed by lesbian (n=12, 1.5%) and gay (n=11, 1.4%). One participant identified as pansexual (0.1%). There were 5 responses (0.6%) from intersex individuals who identify as women.

Five participants reported a current gender identity as part-time as man and part-time as woman. Of these, 3 had a birth sex of male and 2 had a birth sex of female. All 5 of these participants identified as straight/heterosexual (**Table 3**).

Table 3: **Current Gender Identity/Expression of Participants**

	Current gender identity/expression - No. (% of total participants)			
	Man	**Woman**	**Part-time as Man, Part time as Woman**	**No response**
Total	493 (61.9%)	253 (31.7%)	5 (0.6%)	46 (5.8%)
By birth sex				
Male	473 (59.3%)	22 (2.8%)	3 (0.4%)	0 (0.0%)
Female	0 (0.0%)	226 (28.4%)	2 (0.3%)	17 (2.1%)
Intersex	8 (1.0%)	5 (0.6%)	0 (0.0%)	0 (0.0%)
No response	12 (1.5%)	0 (0.0%)	0 (0.0%)	29 (3.6%)
By sexual orientation				
Straight/Heterosexual	121 (15.2%)	198 (24.8%)	5 (0.6%)	19 (2.4%)
Bisexual	20 (2.5%)*	27 (3.4%)	0 (0.0%)	0 (0.0%)
Gay	350 (43.9%)*	11 (1.4%)	0 (0.0%)	7 (0.9%)
Pansexual†	1 (0.1%)*	1 (0.1%)	0 (0.0%)	0 (0.0%)
Lesbian	0 (0.0%)	12 (1.5%)	0 (0.0%)	0 (0.0%)
No response	1 (0.1%)	4 (0.5%)	0 (0.0%)	20 (2.5%)

* MSM consists of bisexual, gay, and pansexual participants who identify as men for their current gender identity.
† *Pansexual* is defined as someone who feels sexual attraction toward people of all sexes and genders.

Source: 2016 Houston HIV Prevention Services Needs Assessment

HIV status was collected by participant self-report of the result of their last HIV test. Participants indicated that 179 were positive for HIV (22.5%) while 153 were negative (19.2%). However, 281 reported never having tested for HIV (35.3%) while 90 reported having not received their test results (11.3%). **Given the high percent reporting never having been tested, a potential need in the Houston Area is additional HIV testing (35.3%) and social marketing to increase awareness of the importance of testing (Table 4).**

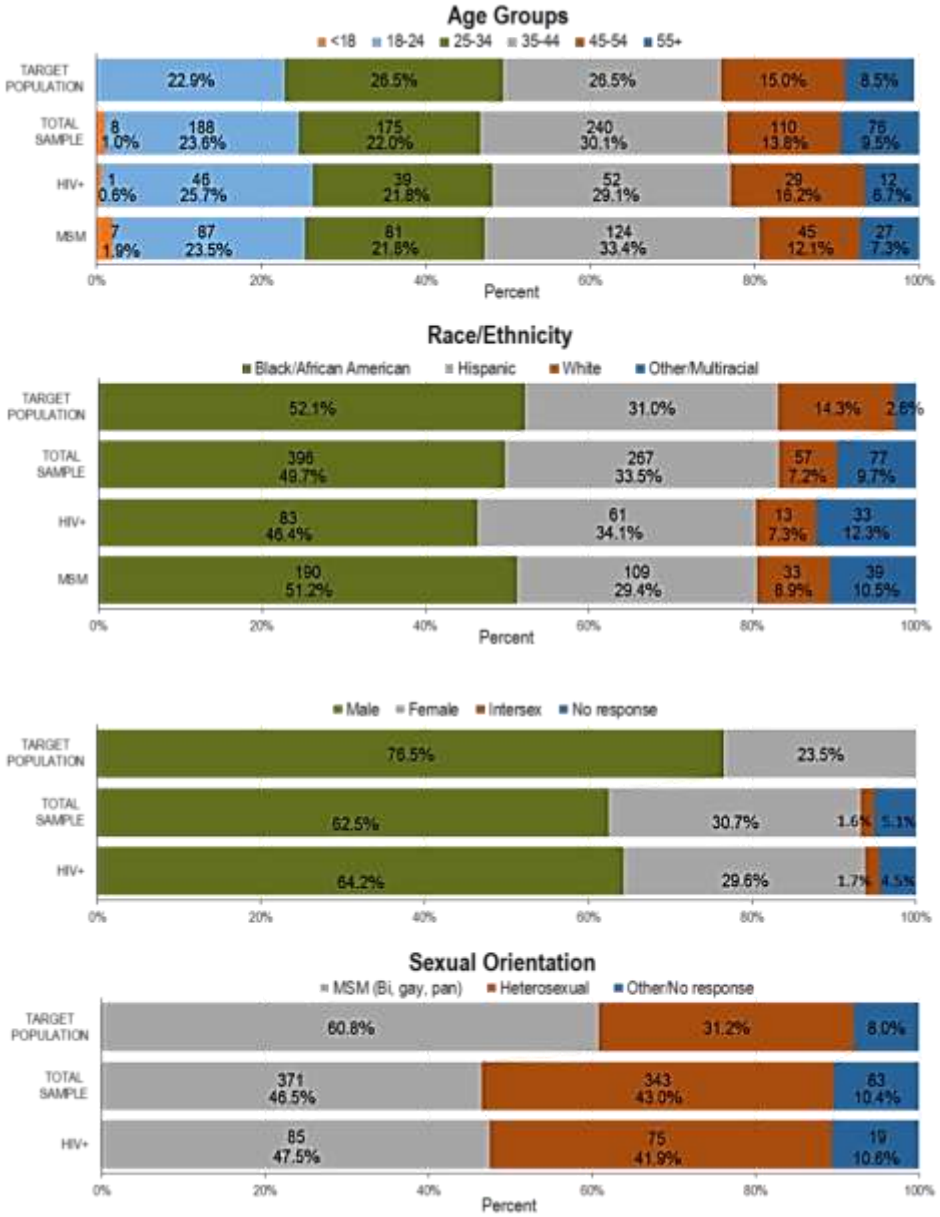
Table 4: **HIV Status of Participants**

Self-reported result of last HIV test	No. (%)
Positive	179 (22.5%)
Negative	153 (19.2%)
Did not get test results	90 (11.3%)
Did not remember test results	72 (9.0%)
Have not tested for HIV	281 (35.3%)
Indeterminate or unclear	21 (2.6%)
No response	1 (0.1%)

Source: 2016 Houston HIV Prevention Services Needs Assessment

There is some potential bias in these results due to a possible reluctance to disclose HIV status given lingering stigma, despite the anonymity of the survey. However, the sample population, including the sub-sample of HIV-positive persons and MSM, was reflective of the demographic spread among the targeted population (**Figure 2**).

Figure 2: **Needs Assessment Participants Compared to HIV Positive Population in Houston/Harris County (Target Population)**



Source: 2016 Houston HIV Prevention Services Needs Assessment

All sexual activity survey questions focused on the past three months to reduce recall bias and other potential barriers to reporting. The majority of the participants (n=698, 87.6%) indicated that they had oral, vaginal, or anal sex within the past three months compared to 12.3% respondents stating they had not (n=98). When assessing risk factors, 341 participants stated they had sex while drunk or high more than half the time (42.8%) while 157 persons reported about half the time (19.7%). A total of 73 participants reported having had sex while always drunk or high (9.2%).

A large number of participants failed to respond to inquiries regarding the number of sex partners within the last three months (n=258, 32.4%) and the number of sex partners they didn't know

within the last three months (n=505, 63.4%). However, most of the persons providing a response for the total number of sex partners within the last three months reported 1-2 partners (n=337, 42.3%) while 120 participants reported 3-7 partners (15.1%). Seventy-eight persons reported 8-13 partners (9.8%) with a few reporting greater than 13 partners (n=4, 0.5%). When considering the number of partners within the last three months that they did not know, 268 participants had 1-2 partners (33.6%) while 13 had 3-7 partners (1.6%) and 10 had 8-13 partners (1.3%).

Comparatively, among only those participants self-reporting as HIV positive, 89.9% had oral, vaginal, or anal sex within the past three months (n=161). Although 10.1% did not respond, 34.6% of the HIV-positive persons who responded had sex while drunk or high more than half the time (n=62). Eighty-two HIV-positive persons had sex with 1-2 partners (45.8%) and 64 had sex with 1-2 partners (35.8%) they did not know. Among only those participants self-reporting as MSM, 88.7% had oral, vaginal, or anal sex within the past three months (n=329). Excluding non-response (11.3%), 44.7% of the MSM respondents had sex while drunk or high more than half the time (n=166). Approximately 44% of respondents (n=164) had sex with 1-2 partners and 130 had sex with 1-2 partners (35.0%) they did not know. When viewing the risk factor responses across the total population and sub-populations, the responses were relatively similar, indicating that risk behaviors were consistent across these categories (**Table 5**). **These findings emphasize the importance of substance abuse and risk reduction services, especially provided concurrently with HIV prevention and care services. Continued work is needed to address the prevention needs of those engaging in anonymous sex.**

Table 5: **Sexual Activity of Participants in Past Three Months – No. (%) of Participants**

	Total sample	HIV+	MSM
Had oral, vaginal, or anal sex			
Yes	698 (87.6%)	161 (89.9%)	329 (88.7%)
No	98 (12.3%)	18 (10.1%)	42 (11.3%)
No response	1 (0.1%)	-	-
Had sex while drunk or high			
Always	73 (9.2%)	25 (14.0%)	33 (8.9%)
More than half the time	341 (42.8%)	62 (34.6%)	166 (44.7%)
About half the time	157 (19.7%)	39 (21.8%)	72 (19.4%)
Less than half the time	90 (11.3%)	22 (12.3%)	45 (12.1%)
Never	36 (4.5%)	13 (7.3%)	13 (3.5%)
No response	100 (12.5%)	18 (10.1%)	42 (11.3%)
Had sex with N number of partners			
1-2 partners	337 (42.3%)	82 (45.8%)	164 (44.2%)
3-7 partners	120 (15.1%)	24 (13.4%)	52 (14.0%)
8-13 partners	78 (9.8%)	14 (7.8%)	40 (10.8%)
>13 partners	4 (0.5%)	1 (0.6%)	2 (0.5%)
No response	258 (32.4%)	58 (32.4%)	113 (30.5%)
Had sex with N number of partners that they didn't know			
0 partners	3 (0.4%)	1 (0.6%)	0 (0.0%)
1-2 partners	268 (33.6%)	64 (35.8%)	130 (35.0%)
3-7 partners	13 (1.6%)	1 (0.6%)	8 (2.2%)
8-13 partners	10 (1.3%)	2 (1.1%)	5 (1.3%)
>13 partners	1 (0.1%)	1 (0.6%)	1 (0.3%)
No response	505 (63.4%)	109 (60.9%)	228 (61.5%)

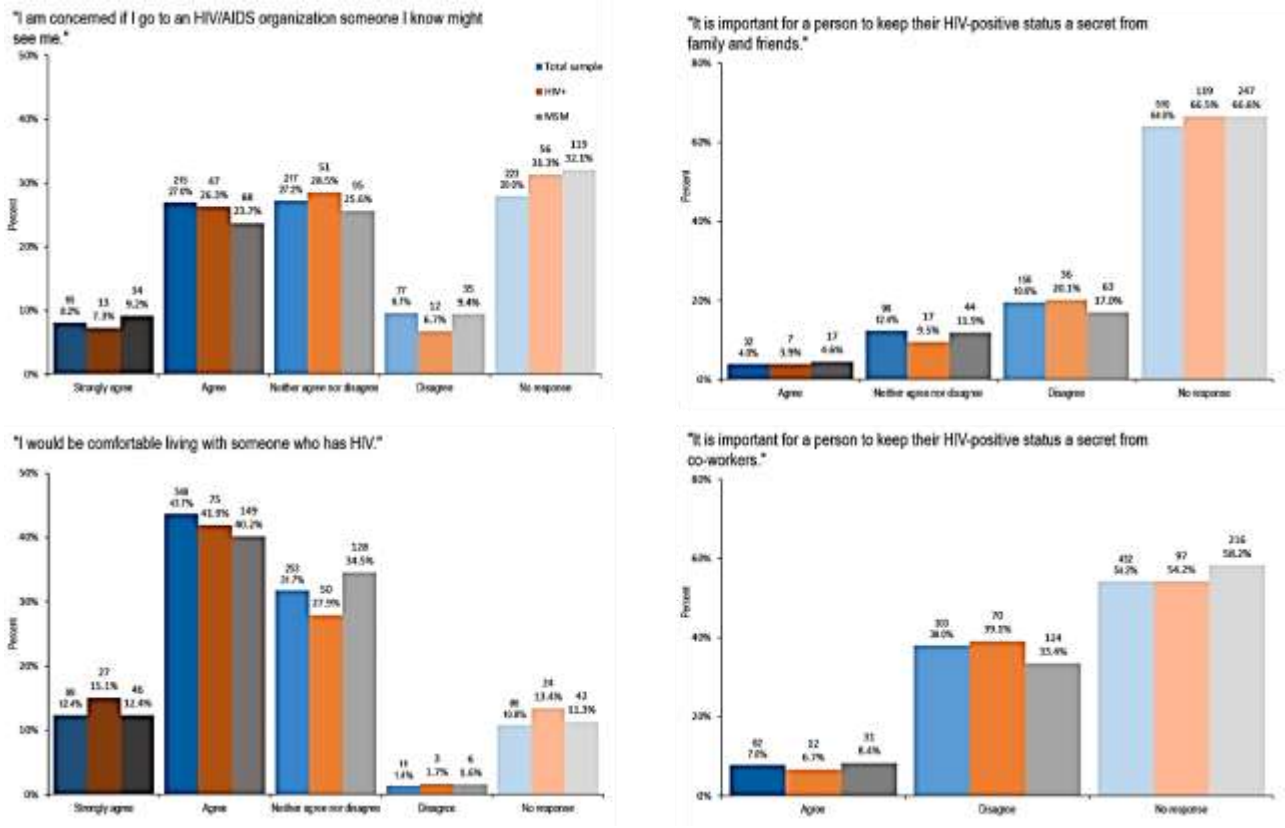
Source: 2016 Houston HIV Prevention Services Needs Assessment

There was a large number of no-response for questions on social attitudes about HIV, possibly due to survey fatigue or a reluctance to address the social stigma surrounding HIV. Given the data available and excluding non-response, participant responses for total sample population and HIV sub-population and MSM sub-population were relatively equal for most social attitudes except for "I would be comfortable living with someone who has HIV." For this question, population groups similarly reported they strongly agreed with the statement, highest among the HIV-positive sub-population (n=27, 15.1%), and that they agreed with the statement, ranging from 40.2% to 43.7%. The largest variation in response between population groups was for those reporting they neither agreed nor disagreed with "I would be comfortable living with someone with HIV," which was highest for MSM (34.5%) and lowest for HIV-positive (27.9%). However, few among all population groups stated they disagreed with the statement, the highest which was among HIV-positive (1.7%) and MSM (1.6%).

Each population similarly reported that they agreed with the statement "I am concerned if I go to an HIV/AIDS organization someone I know might see me," with responses per population group ranging within 23-27%. These results indicate that **there remains some concern about identifying with HIV/AIDS, perhaps because of negatively-associated HIV attitudes and beliefs that create social barriers to accessing medical care.** However, a slightly higher percentage, ranging from 25-29% among population groups, reported they neither agreed nor disagreed with the statement.

Despite lower numbers of responses for "It is important for a person to keep their HIV-positive status a secret from family and friends," the population groups similarly indicated that they disagreed with this statement with less than 5% among all population categories reporting they strongly agreed with the statement. However, it is important for HIV providers and agencies to consider these concerns because **patient anonymity and confidentiality is still a significant concern, emphasizing the need to continue reducing social stigma while protecting patient's identities.** Of those who responded, most population groups indicated that they disagreed with "It is important for a person to keep their HIV-positive status a secret from co-workers," ranging from 30-40%. Nevertheless, there are some lingering concerns with disclosing HIV status among coworkers, especially considering the historic perception that an individual's HIV status might affect their employment or insurance status, as exemplified by the response among some of these populations indicating they agreed with the statement, although it was less than 10% (**Figure 3**).

Figure 3: **Social Attitudes Among Participants About HIV.**

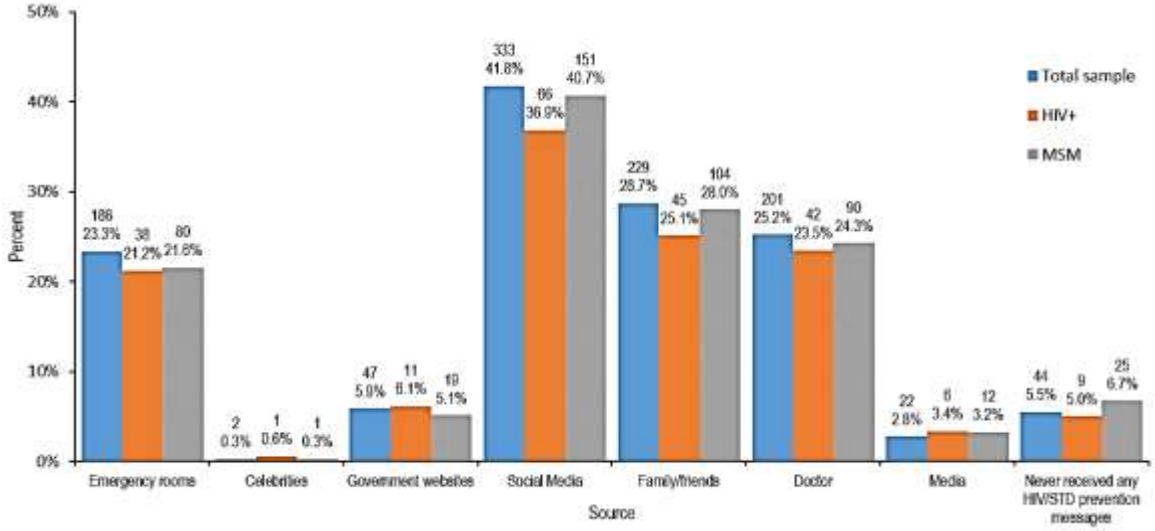


Source: 2016 Houston HIV Prevention Services Needs Assessment

<u>HIV and STD Prevention Messages</u>

Of the total sample, 69.8% (n=556) reported having received HIV or STD prevention messages in the past 12 months. This included 69.8% (n=125) of the HIV-positive participants and 69.8% (n=268) of the MSM participants. In contrast, 30.1% (n=240) of the total sample, 30.2% (n=125) of the HIV-positive participants, and 27.8% (n=103) of the MSM participants reported that they had <u>not</u> received any HIV or STD prevention messages in the past 12 months. The majority among all population categories indicated they received these prevention messages from social media followed by family/friends, the doctor, and emergency rooms (**Figure 4**). These responses are extremely important when considering the larger context of community outreach. The Houston Area receives limited funding for direct marketing for the strict purpose of increasing and spreading social awareness, education, and knowledge about the myriad HIV/STD prevention programs and campaigns available to the public. Without these messages, a large number of persons within the targeted populations that might benefit from this exposure fail to connect with these outreach attempts, thereby possibly decreasing the overall community health and potential public health impact. Furthermore, these results indicate that **there is a remarkable opportunity for expansion and placement of social marketing within certain facets of the population to maximize prevention efforts.** Social media plays a significant role in communicating with the public. Additionally, family and friends, providers, and health offices play a meaningful and possibly key role in permeating important information and prevention messages among all populations.

Figure 4: **HIV/STD Prevention Message Sources that Participants Report Paying Most Attention To.**



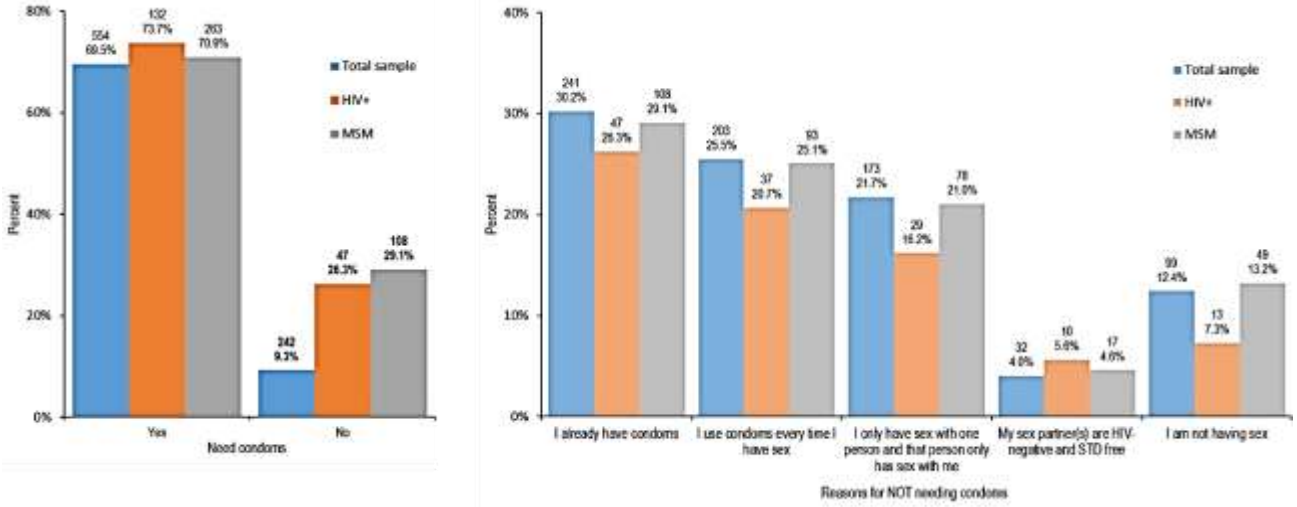
Source: 2016 Houston HIV Prevention Services Needs Assessment

HIV Prevention Services

The following sections address specific HIV prevention services available in Houston/Harris County. Participants were asked to provide a range of responses regarding their needs, current service utilization, and potential improvements for the purposes of guiding public health activities.

Condoms

Figure 5: **Reported Condom Need Among Participants**



Source: 2016 Houston HIV Prevention Services Needs Assessment

Almost 70% (n=554) of survey participants reported that they needed condoms. Among HIV-positive individuals, about 74% (n=132) reported needing condoms and among MSM about 71% (n=263) reported needing condoms. Of those that reported not needing condoms, some of the most prevalent reasons for why participants did not need this HIV and STD prevention method

included: I already have condoms (n=241, 30.2%), I use condoms every time I have sex (203, 25.5%), I only have sex with one person and that person only has sex with me (n=173, 21.7%), I am not having sex (n=99, 12.4%), and my sex partner(s) are HIV-negative and STD free (n=32, 4%) (**Figure 5**).

Table 6: **Condom Use Among Participants by Reported Need – No. (% of Group Total by Need*) of Participants**

		Need condoms			Don't need condoms		
		Total sample	**HIV+**	**MSM**	**Total sample**	**HIV+**	**MSM**
Total*		**554**	**132**	**263**	**242**	**47**	**108**
Used condoms in past 12 months							
	Yes	413 (74.5%)	104 (78.8%)	191 (72.6%)	175 (72.3%)	36 (76.6%)	82 (75.9%)
	No	141 (25.5%)	28 (21.2%)	72 (27.4%)	67 (27.7%)	11 (23.4%)	26 (24.1%)
Would use condoms if they were free							
	Yes	274 (49.5%)	71 (53.8%)	122 (46.4%)	114 (47.1%)	23 (48.9%)	52 (48.1%)
	No	200 (36.1%)	61 (46.2%)	141 (53.6%)	128 (52.9%)	24 (51.1%)	56 (51.9%)

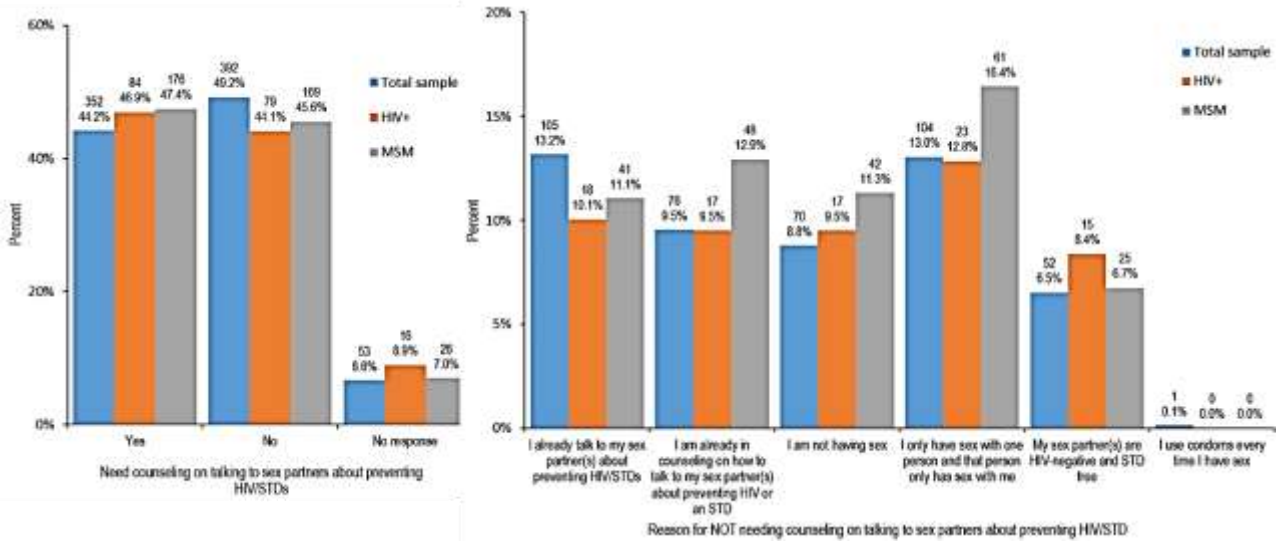
Source: 2016 Houston HIV Prevention Services Needs Assessment

Of the 554 participants who reported needing condoms, almost 75% (n=413) did use condoms in the past 12 months. Among the 132 HIV-positive individuals who reported needing condoms, 78.8% (n=104) did use condoms in the past 12 months and among the 263 MSM who reported needing condoms, 72.6% (n=191) did use condoms in the past 12 months. Of those who reported not needing condoms, about 72% (n=175) did, however, use condoms in the past 12 months.

Overall, it appears that condom need and condom use are both high. This can be attributed to the fact that the survey participants need condoms because they are using condoms. For those who said they do not need it, it appears that they had their own condoms. However, further analysis is needed to determine the top sources of condoms (i.e., purchased versus obtained for free) (**Table 6**).

HIV/STD Counseling

Figure 6: **Reported Need for Counseling on Talking to Partners about HIV/STD Prevention Among Participants**



Source: 2016 Houston HIV Prevention Services Needs Assessment

Of the total number of participants that answered whether or not they needed counseling on talking to sex partner(s) about preventing HIV/STDs, 44.2% (n=352) reported needing the counseling. Among individuals who were HIV-positive and among MSM, 46.9% (n=84) and 47.4% (n=176), respectively, reported needing counseling on talking to sex partners about preventing HIV/STDs. Of those who reported not needing counseling on talking to sex partners about preventing HIV/STDs, the following reasons were most often chosen as to why counseling was not needed: I already talk to my sex partners about preventing HIV/STDs, I am already in counseling on how to talk to my sex partner(s) about preventing HIV/STDs, I am not having sex, I only have sex with one person and that person only has sex with me, and my sex partners are HIV-negative and STD free.

Among the MSM population, the reason most often reported was "I only have sex with one person and that person only has sex with me" (n=61, 16.4%) followed by "I am already in counseling on how to talk to my sex partner(s) about preventing HIV/STDs" (n=48, 12.9%). Despite a lower response of those already in counseling, it is indicative that this service is being utilized by target populations and serving the community (**Figure 6**).

Table 7: **Partner Counseling about Preventing STD/HIV Among Participants by Reported Need – No. (% of Group Total by Need*) of Participants**

	Need counseling to talk with partner about preventing STD/HIV			Don't need counseling to talk with partner about preventing STD/HIV		
	Total sample	**HIV+**	**MSM**	**Total sample**	**HIV+**	**MSM**
Total*	**352**	**84**	**176**	**392**	**79**	**169**
Got counseling to talk with partner about preventing STD/HIV in past 12 months						
Yes	143 (40.6%)	29 (34.5%)	72 (40.9%)	128 (32.7%)	26 (32.9%)	58 (34.3%)
No	209 (59.4%)	55 (65.5%)	104 (59.1%)	264 (67.3%)	53 (67.1%)	111 (65.7%)
Would get counseling to talk with partner about preventing STD/HIV if offered for free						
Yes	44 (12.5%)	11 (13.1%)	22 (12.5%)	37 (9.4%)	9 (11.4%)	16 (9.5%)
No	90 (25.6%)	22 (26.2%)	46 (26.1%)	94 (24.0%)	17 (21.5%)	37 (21.9%)

Source: 2016 Houston HIV Prevention Services Needs Assessment

It can also be noted that only one participant chose "l use condoms every time I have sex" as the reason to why the participant did not need counseling on talking to sex partner(s) about preventing HIV/STDs. Furthermore, of the 352 participants who reported that they needed counseling to talk to partner(s) about preventing HIV/STDs, 40.6% (n=143) actually got counseling. Among individuals who were HIV-positive and among MSM, 34.5% (n=29) and 40.9% (n=72), respectively, actually got counseling who reported needing it. For those that indicated they need counseling, almost 26% (n=90) would still not get counseling if it were offered for free. Although an adequate proportion of those needing counseling received the service, there is still a sufficient gap. **Furthermore, considering 26% still would not use the service if it was offered without a monetary charge, more efforts among HIV prevention and care public health entities are needed to address this discrepancy** (**Table 7**)**.**

Table 8: **Improvements to Partner Counseling about Preventing STD/HIV – No. (% of Group Total by Need*) of Participants**

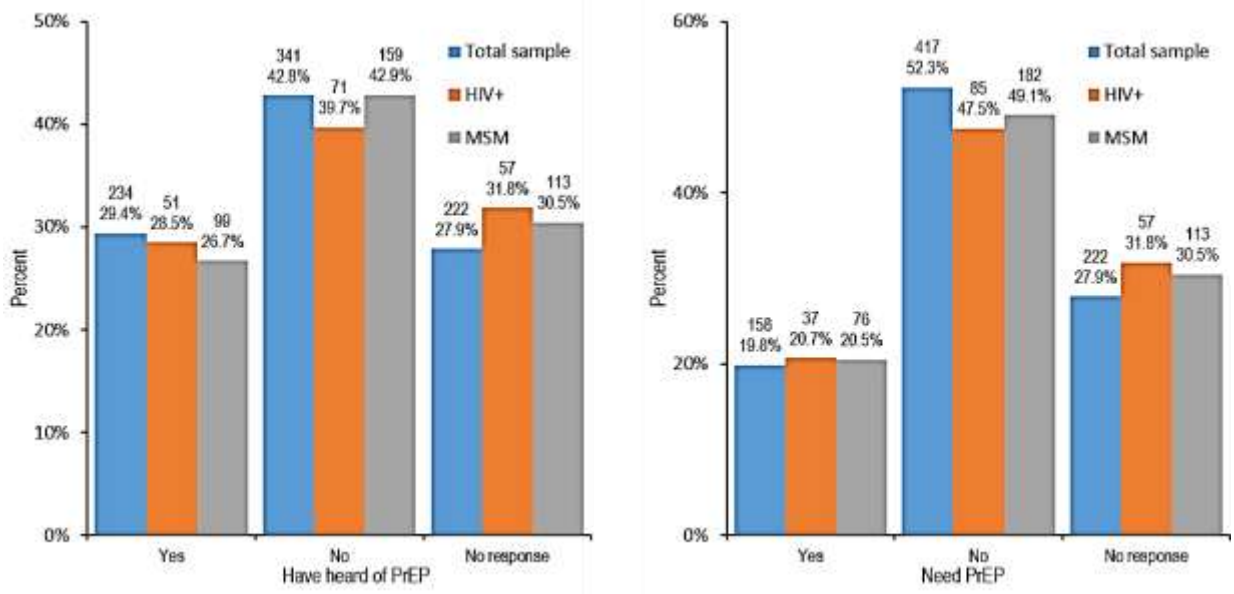
	Total sample	**HIV+**	**MSM**
Total* that got counseling to talk with partner about preventing STD/HIV in past 12 months	**271**	**55**	**130**
Improvements to service indicated by those who got counseling			
Wait time at the agency to see counselor	50 (18.5%)	12 (21.8%)	26 (20.0%)
Locations for counseling	22 (8.1%)	5 (9.1%)	11 (8.5%)
Times/Days for counseling	25 (9.2%)	7 (12.7%)	11 (8.5%)
Insurance/Health plan coverage for counseling	42 (15.5%)	10 (18.2%)	26 (20.0%)
Knowledge and experience of counselor	53 (19.6%)	6 (10.9%)	24 (18.5%)
Attitude of counselor	1 (0.4%)	-	1 (0.8%)
Ability of counselor to speak my language	4 (1.5%)	1 (1.8%)	3 (2.3%)

Source: 2016 Houston HIV Prevention Services Needs Assessment

Of those who received counseling on talking to a partner about preventing HIV/STDs, the responses most often chosen when asked about possible improvements to this service were knowledge and experience of counselor (n=53, 19.6%) followed by wait time at the agency to see counselor (n=50, 18.5%) and insurance/health plan coverage for counseling (42, 15.5%). These data pinpoint specific areas that may improve the structure and delivery of HIV/STD counseling, either among individual agencies or in collaboration with public health stakeholders within the Houston Area overall (**Table 8**).

Pre-exposure Prophylaxis (PrEP)

Figure 7: **Reported Knowledge and Need for Pre-exposure Prophylaxis (PrEP) Among Participants**



Source: 2016 Houston HIV Prevention Services Needs Assessment

PrEP is a relatively new HIV prevention method, and there has been a significant push among public health officials to spread awareness, knowledge, and to improve access to PrEP among all communities. Despite these efforts, **the majority of participants reported having not heard of PrEP.** When non-responses are not considered, **59.3% of the respondents had not heard of PrEP**. Awareness was lowest for those individuals who are HIV-positive (n=71, 39.7%) and relatively equal for the total sample (n=341, 42.8%) and MSM (n=159, 42.9%). Although it might seem like PrEP awareness is less relevant for persons already infected with HIV, given that PrEP can only be utilized by HIV-negative persons, **it is important that HIV-positive persons be able to talk to their partners about the possibility of PrEP and be aware of its availability as a prevention tool.** Despite the higher number among all population groups that had never heard of PrEP, there was still a substantial percentage indicating they had heard of PrEP, ranging from 26.7% to 29.4% across each population group. The lowest percentage was among MSM (26.7%), a key population that might benefit greatly from PrEP uptake, but the differences in percentages were still relatively low, indicating that PrEP messages are circulating accordingly across different communities.

There was a relatively equal percentage among all population groups stating they needed PrEP. However, roughly 50% across the total, HIV-positive, and MSM populations stated they did not need PrEP (**Figure 7**). Given previous responses about sexual activity and other risk behaviors, it is possible that these populations could still qualify for and benefit from PrEP, implying that **more promotion and education of PrEP is needed.**

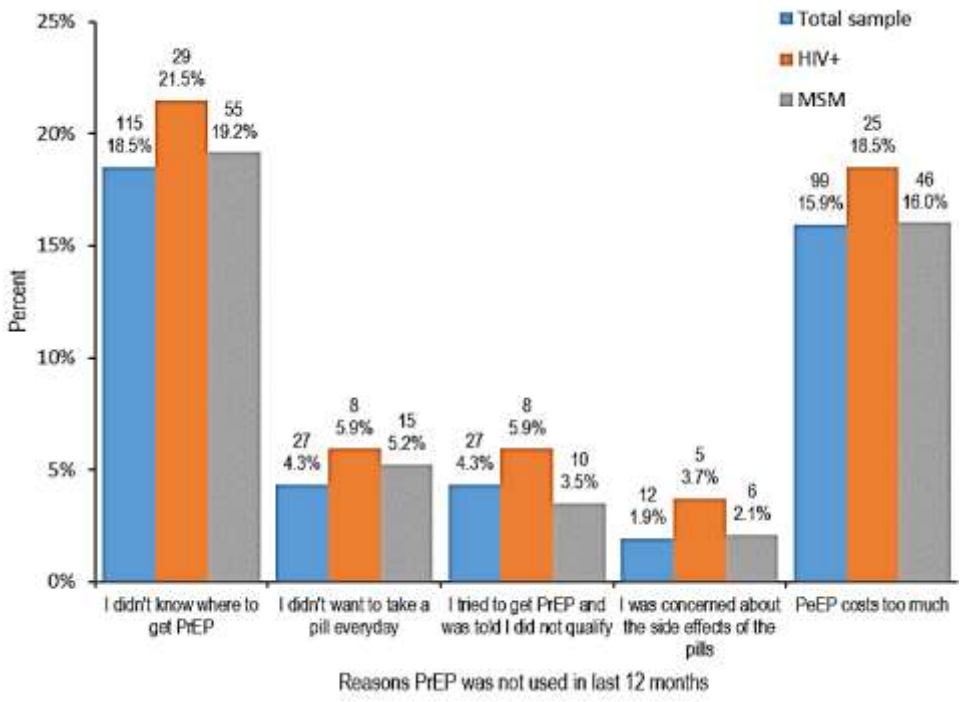
Table 9: **PrEP Use Among Participants by Reported Need – No. (% of Group Total by Need*) of Participants**

	Need PrEP			Don't Need PrEP		
	Total sample	**HIV+**	**MSM**	**Total sample**	**HIV+**	**MSM**
Total	**158**	**37**	**76**	**417**	**85**	**182**
Used PrEP in past 12 months						
Yes	-	-	-	112 (26.9%)	23 (27.1%)	56 (30.8%)
No	158 (100.0%)	37 (100.0%)	76 (100.0%)	305 (73.1%)	62 (72.9%)	126 (69.2%)
Would use PrEP if they were available in Houston for free or was covered by insurance						
Extremely likely	19 (12.0%)	5 (13.5%)	8 (10.5%)	52 (12.5%)	9 (10.6%)	17 (9.3%)
Likely	18 (11.4%)	6 (16.2%)	8 (10.5%)	68 (16.3%)	16 (18.8%)	29 (15.9%)
Neutral	84 (53.2%)	16 (43.2%)	40 (52.6%)	219 (52.5%)	46 (54.1%)	101 (55.5%)
Unlikely	22 (13.9%)	5 (13.5%)	12 (15.8%)	59 (14.1%)	11 (12.9%)	27 (14.8%)
Extremely unlikely	15 (9.5%)	5 (13.5%)	8 (10.5%)	19 (4.6%)	3 (3.5%)	8 (4.4%)

Source: 2016 Houston HIV Prevention Services Needs Assessment

A notable portion of each population group reported having used PrEP in the past 12 months, such that 112 of the total sample used it (19.5%). Specifically, a total of 23 of HIV-positive persons (18.9% of HIV-positive persons respondents) and 56 MSM (21.7% of MSM respondents) sampled reported use of PrEP in the past 12 months. All participants, regardless of need, reported on their likelihood of using PrEP if it was available for free or covered by insurance. The majority of respondents stated they were neutral (i.e., neither likely nor unlikely to use PrEP if it was available for free or covered by insurance), even among the portions of each population groups that responded they needed PrEP. Across both "need" and "don't need" categories, almost all population groups responded similarly, with about an equal percentage being extremely likely or likely to use PrEP as those extremely unlikely or unlikely to use PrEP (**Table 9**).

Figure 8: **Reasons PrEP Was Not Used by Participants – No. (% of Group Total Who Reported Not Using PrEP) of Participants**

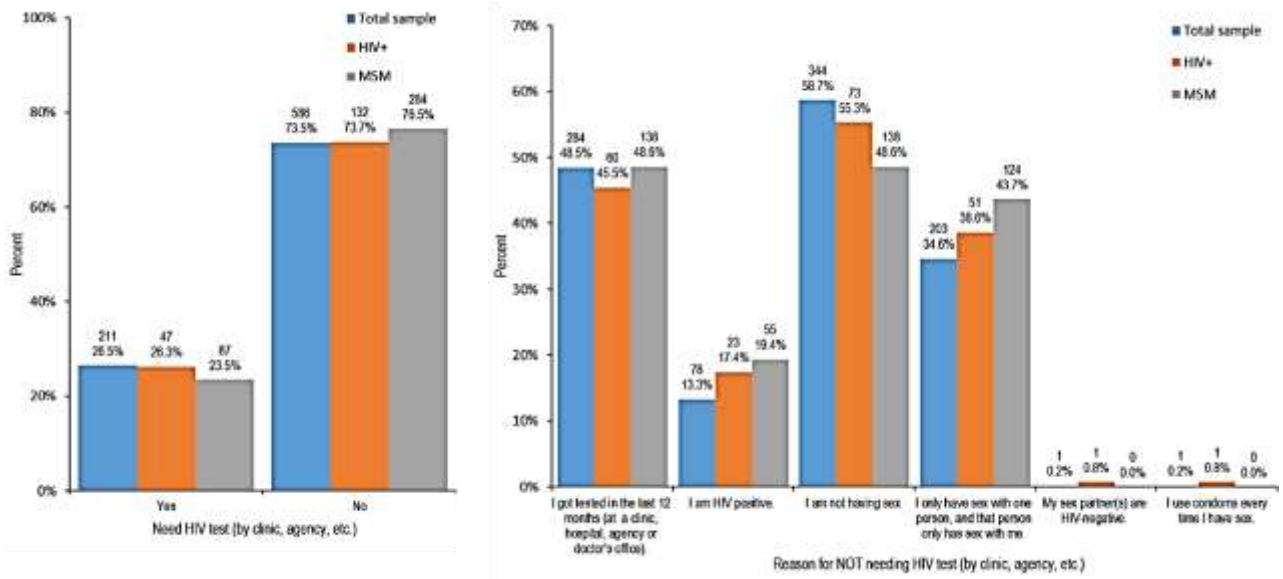


Source: 2016 Houston HIV Prevention Services Needs Assessment

The **top reasons PrEP was not used by participants was that PrEP costs too much and/or they didn't know where to get PrEP.** When developing and launching PrEP campaigns, either in the community or among health agencies, these are factors to consider in order to maximize PrEP education and enrollment (**Figure 8**).

HIV Testing

Figure 9: **Reported Need for HIV Testing (at Clinic, Agency, etc.) Among Participants**



Source: 2016 Houston HIV Prevention Services Needs Assessment

An overwhelming number of survey participants (n=586, 73.5%) reported not needing an HIV test. The reasons that were most reported were: I got tested in the last 12 months (n=284, 48.5), I am not having sex (n=344, 58.7%), I only have sex with one person and that person only has sex with me (n=203, 34.6%), I am HIV positive (n=78, 13.3%). It should be noted that very few participants reported the reason for not needing an HIV test being they have an HIV-negative partner (n=1, 0.2%) or they use condoms every time they have sex (n=1, 0.2%). These data indicate that our sample population, across all groups, primarily reported not needing an HIV test because they already received an HIV test within the past 12 months. However, from our initial demographic questions, we found that over 35% of the entire group of participants had not ever tested for HIV indicating there is still need for additional testing. Other reasons for not needing a test were perceived and reported low risk (**Figure 9**).

Table 10: **Reported HIV Testing (at Clinic, Agency, etc.) Among Participants by Reported Need – No. (% of Group Total by Need*) of Participants**

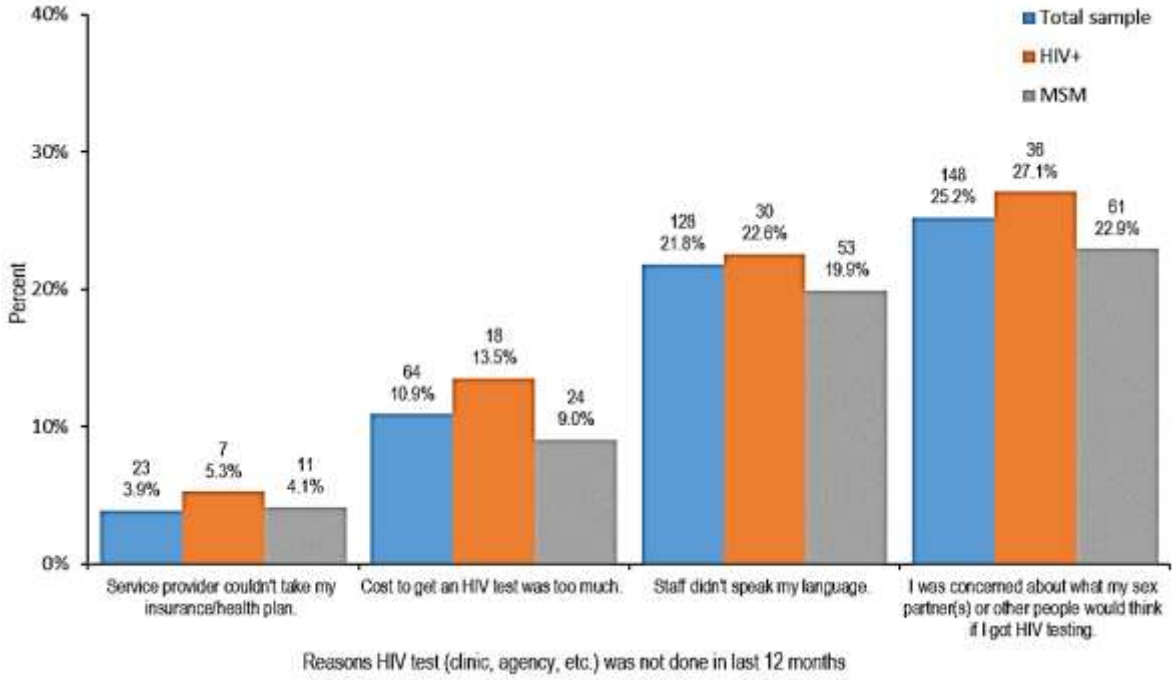
	Need HIV test			Don't need HIV test		
	Total sample	**HIV+**	**MSM**	**Total sample**	**HIV+**	**MSM**
Total*	**211**	**47**	**87**	**586**	**132**	**284**
Got an HIV test (at a clinic, agency, etc.) in past 12 months						
Yes	-	-	-	210 (35.8%)	46 (34.8%)	105 (37.0%)
No	211 (100%)	47 (100%)	87 (100%)	376 (64.2%)	86 (65.2%)	179 (63.0%)
Would get HIV testing (at clinic, agency, etc.) if offered for free						
Yes	91 (43.1%)	18 (38.3%)	38 (43.7%)	170 (29.0%)	44 (33.3%)	86 (30.3%)
No	120 (56.9%)	29 (61.7%)	49 (56.3%)	416 (71.0%)	88 (66.7%)	198 (69.7%)

Source: 2016 Houston HIV Prevention Services Needs Assessment

Of the participants that reported needing an HIV test, none of them (n=0, 0%) got an HIV test in the past 12 months. However, **if the test was offered for free, about 43% (n=91) would get an HIV test.** Given the breadth of HIV testing locations, availability, and promotion by public health stakeholders already occurring within the Houston Area, it is possible that this remaining gap between need and access is cost. Increasing the availability of free or reduced-cost HIV testing, coupled with improving the format of HIV testing messages for easier and widespread promotion, might reduce this remaining gap. However, it is also possible that this is only a perceived gap due to a lack of awareness regarding where a free or low-cost test may be obtained.

Of the participants who reported they did not need an HIV test, 35.8% received an HIV test (n=210) and 29% of those participants would get an HIV test if it was offered for free (n=170), re-emphasizing the importance of reducing costs (**Table 10**).

Figure 10: Reasons HIV Test (by Clinic, Agency, etc.) Was Not Done by Participants – No. (% of Group Total Who Reported Not Getting HIV Test) of Participants

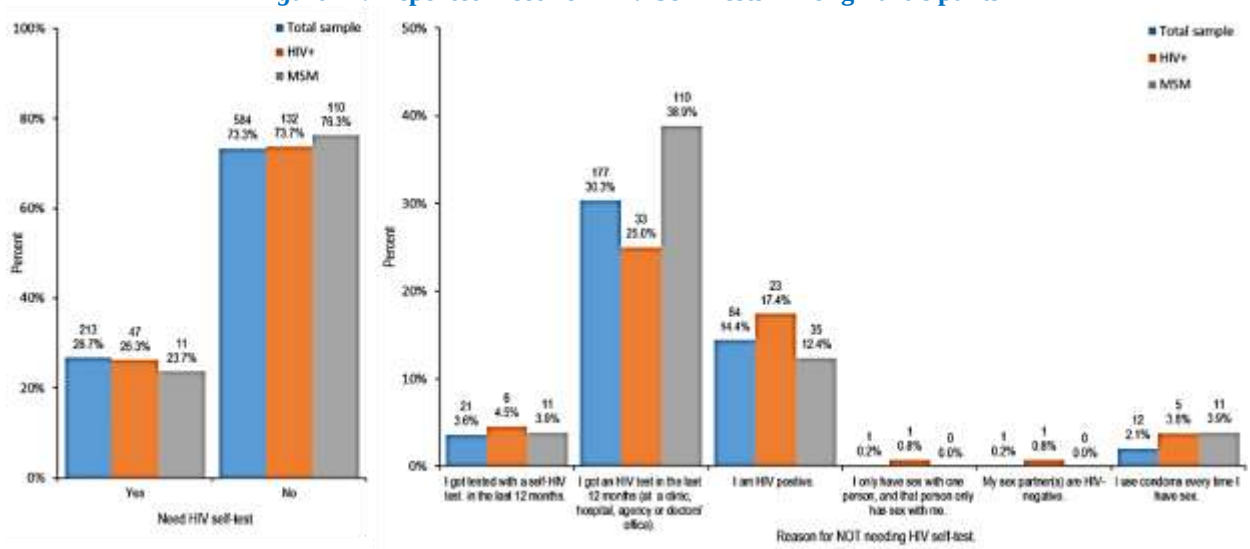


Source: 2016 Houston HIV Prevention Services Needs Assessment

Of those participants who did not get an HIV test in the last 12 months, some of the reasons include: I was concerned what my sex partner(s) or other people would think if I got HIV testing (n=148, 25.2%), Staff did not speak my language (n=128, 21.8%), Cost to get an HIV test was too much (n=64, 10.9%), and service provider couldn't take my insurance/health plan (n=23, 3.9%) (**Figure 10**). It appears that perceived perception from partner(s) and/or family and friends is a concern among survey participants and is a barrier to them getting tested for HIV. Reducing this barrier involves addressing social stigmas and perhaps increasing the availability of support groups and insurance navigation, ensuring that individuals at-risk for HIV can access a trusted provider. **Ensuring that services are offered in multiple languages is a high priority as this was reported as a substantial barrier to testing.**

HIV Self-Testing

Figure 11: **Reported Need for HIV Self-Tests Among Participants**



Source: 2016 Houston HIV Prevention Services Needs Assessment

HIV self-testing is a lesser known tool that may or may not serve a significant role in HIV prevention within the Houston Area. Participants were assessed for their usage and need for self-testing. Responses for need were relatively the same percentages across all population groups. The total sample, HIV-positive, and MSM populations reported that they did not need an HIV self-test, with percentages ranging from 73% to 77%. However, about 213 of the total sample reported needing an HIV self-test (26.7%), while 47 HIV-positive (26.3%) and 11 MSM (23.7%) reported needing an HIV self-test. The top reason that a population group did not need an HIV test was because they reported they had an HIV test in the last 12 months (at a clinic, hospital, agency, or doctor's office). The highest percentage for this response was found among MSM (n=110, 38.9%). The next highest reasons for not needing an HIV self-test, although lower than 5% across all population groups, were because the participants stated they had administered a self-HIV test in the last 12 months, implying that some usage of these tests is already in effect and could be expanded through public health efforts, or they used condoms every time they have sex, so these participants might perceive themselves to not be at risk for HIV and consequently not needing to take an HIV self-test (**Figure 11**).

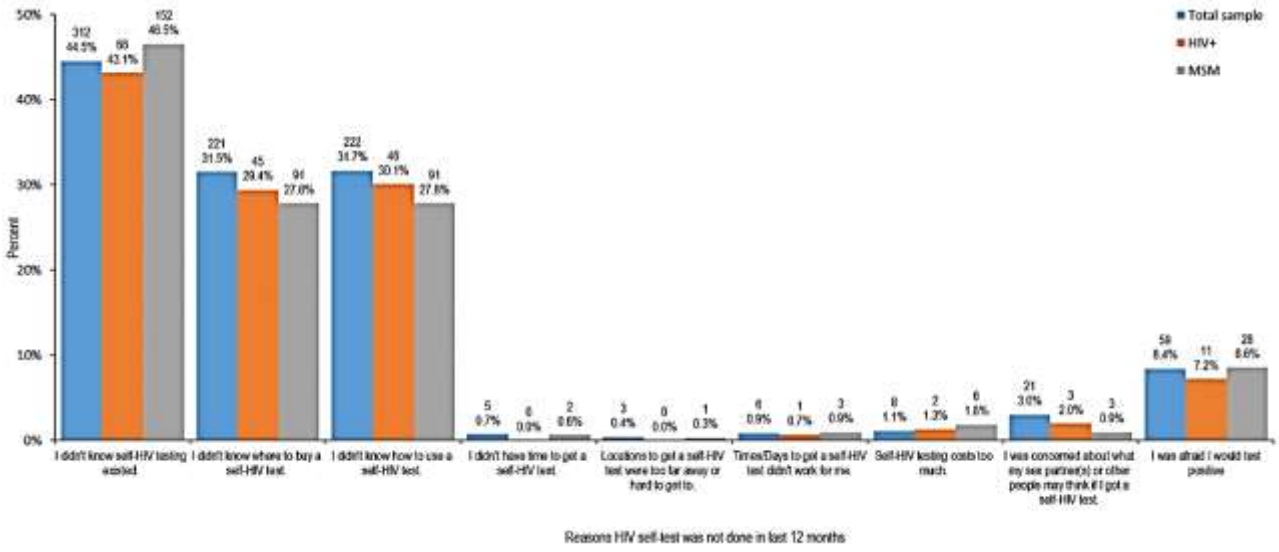
Table 11: **Reported HIV Self-Testing Among Participants by Reported Need – No. (% of Group Total by Need*) of Participants**

	Need HIV self-test			Don't need HIV self-test		
	Total sample	**HIV+**	**MSM**	**Total sample**	**HIV+**	**MSM**
Total*	**213**	**47**	**88**	**584**	**132**	**283**
Did an HIV self-test in past 12 months						
Yes	6 (2.8%)	-	1 (1.1%)	37 (6.3%)	11 (8.3%)	17 (6.0%)
No	192 (90.1%)	47 (100.0%)	76 (86.4%)	509 (87.2%)	110 (83.3%)	251 (88.7%)
Would use HIV self-test if offered for free						
Yes	169 (79.3%)	36 (76.6%)	64 (72.7%)	2 (0.3%)	-	2 (0.7%)
No	44 (20.7%)	11 (23.4%)	24 (27.3%)	582 (99.7%)	132 (100.0%)	281 (99.3%)

Source: 2016 Houston HIV Prevention Services Needs Assessment

Most participants that needed an HIV self-test had not used an HIV self-test in the past 12 months. However, high percentages among all population groups indicated they would use one if it was offered for free. Of those needing an HIV self-test, 169 (79.3%) of the total population, 36 (76.6%) of HIV-positive, and 64 (72.7%) of MSM would use an HIV self-test if it was offered for free. Most participants that did not need an HIV self-test had not used an HIV self-test in the past 12 months. Furthermore, of those not needing an HIV self-test, few respondents across all population groups would use an HIV self-test if offered for free, indicating that cost might not be a significant barrier if the population does not already feel they need an HIV self-test (**Table 11**).

Figure 12: **Reasons HIV Self-Test Was Not Done by Participants – No. (% of Group Total Who Reported Not Doing HIV Self- Test) of Participants**



Source: 2016 Houston HIV Prevention Services Needs Assessment

Among those participants who reported not using an HIV self-test, the vast majority of respondents across all population groups stated the reason for not using an HIV self-test was because **they didn't know self-HIV testing existed followed by a roughly equal number of participants stating they didn't know where to buy a self-HIV test or they didn't know how to use a self-HIV test.**

The only other reason for not using an HIV self-test that had a meaningful number of respondents was "I was afraid I would test positive." Despite being lower than 10% across all population categories, this

reason for not administering a self HIV-test is important for consideration because a person will need a medical support system to guide them into care, which will not typically be available in the setting where they self-test. Before designing HIV prevention programs around self-testing to promote its usage, health professionals should consider this potential barrier since a fear of testing positive remains a concern among certain populations, possibly making individuals resistant to its use (**Figure 12**).

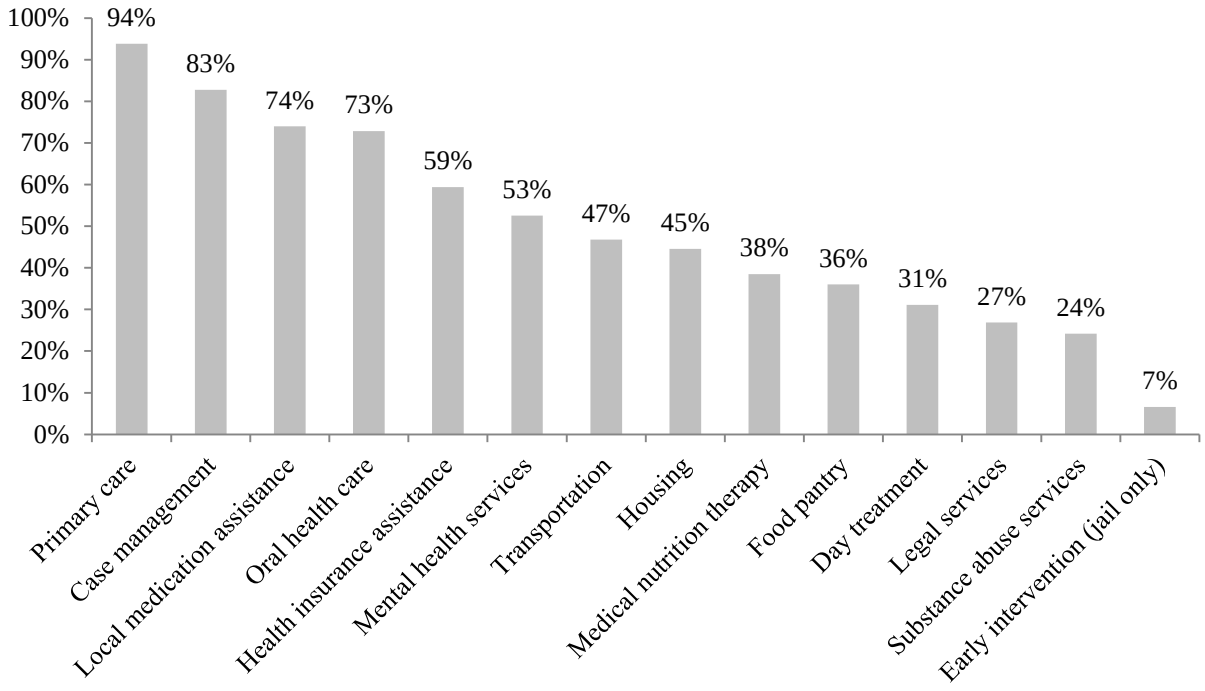
Service Needs for People Living with HIV

HIV Care Service Needs for PLWH

In 2016, 15 HIV core medical and support services were funded through the Houston Area Ryan White HIV/AIDS Program, and housing services were provided through the local HOPWA program. Though no longer funded through the Houston Area Ryan White Program, Food Pantry was also assessed. Participants of the 2016 Houston Area HIV needs assessment were asked to indicate which funded services they needed in the past 12 months.

All funded services except hospice and linguistics were analyzed and received a ranking of need (**Figure 14**). At 94%, primary care was the most needed funded service in the Houston Area, followed by case management at 83%, local medication assistance at 74%, and oral health care at 73%. Primary care had the highest need ranking of any core medical service, while transportation received the highest need ranking of any support service. Compared to the last Houston Area HIV Care Services Needs Assessment conducted in 2014, need ranking increased for many core medical services, and decreased for most support services. The percent of needs assessment participants reporting need for a particular service decreased the most for food pantry, housing, and medical nutrition therapy, while the percent of those indicating a need for health insurance assistance increased 12 percentage points from 2014, the most of any service measured.

***Figure 14*: Ranking of HIV Care Services in the Houston Area, By Need, 2016**



Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)
Definition: Percent of needs assessment participants stating they needed the service in the past 12 months, regardless of service accessibility.

HIV Prevention Service Needs for PLWH

Several 2016 Houston HIV Care Services Needs Assessment survey questions aligned with the HHD's Houston HIV Prevention Needs Assessment, particularly those intended to assess HIV prevention needs among PLWH to prevent transmission to others and support PLWH well-being. When asked about testing, diagnosis, and treatment for chlamydia, gonorrhea, and syphilis in the past six months, most participants indicated that they had not been tested recently (57%, 57%, and 59%, respectively). Among those who had been tested, 13% were diagnosed with chlamydia, 14% with gonorrhea, and 24% with syphilis. Among those who were both tested and diagnosed with an STI, all reported having been treated.

Participants were asked if they had received any information in the past 12 months about preventing HIV transmission. Sixty-seven (67%) reported receiving prevention information, primarily from a doctor or clinic. When asked if they had ever heard of PrEP, 56% of participants were PrEP aware (**Table 13**). However, only 34% of all participants and 31% of those who had heard of PrEP prior to being surveyed knew where someone who is HIV-negative could go to access PrEP resources. This may indicate that, while community saturation of PrEP as a topic has been substantial, more work may be necessary to ensure PLWH in the Houston Area are aware of PrEP resources in their community to refer partners and friends.

***Table 13*: Crosstabulation of PrEP Awareness with PrEP Resource Awareness among PLWH in the Houston Area, 2016**

	"Do you know where a person who does not have HIV can go to get on PrEP?"		**Total**
"Have you heard about PrEP before?"	**Yes**	**No**	
Yes	156 (31%)	126 (25%)	**282 (56%)**
No	13 (3%)	179 (36%)	**192 (38%)**
Don't Remember	3 (0.6%)	25 (5%)	**28 (6%)**
Total	**172 (34%)**	**330 (66%)**	**502**

Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)

When asked about their own behavior and motivations for behavioral risk reduction, the greatest proportion of participants (37%) indicated that they had not had sex in the past six months. Twenty-six percent (26%) indicated that they had at least one sexual partner who was HIV positive, 23% reported that they had at least one sexual partner who was presumably HIV negative, and 11% reported that they did not know the HIV status of at least one sexual partner. Participants consistently reported using condoms "every time", "most of the time", "about half the time", and "rarely" with little variation based on sex act (**Table 14**). The greatest proportion of participants reported never using condoms when both receiving and performing oral sex in the past six months (23% for both). This was followed by 10% of participants reporting never using condoms for anal receptive and anal insertive sex, and 9% reporting never using condoms for vaginal sex in the past six months. Only 31% of participants reported discussing their positive HIV status with new sex partners.

***Table 14*: Reported Condom Use among PLWH in the Houston Area, 2016**

	Every time	**Most of the time**	**About half of the time**	**Rarely**	**Never**	**N/A, I didn't do this**
Oral sex (receiving)	17%	5%	2%	4%	23%	12%
Oral sex (performing)	15%	5%	3%	4%	23%	13%
Vaginal sex	17%	5%	1%	2%	9%	28%
Anal sex (receptive)	15%	6%	2%	4%	10%	27%
Anal sex, (insertive)	15%	5%	3%	3%	10%	26%

Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)

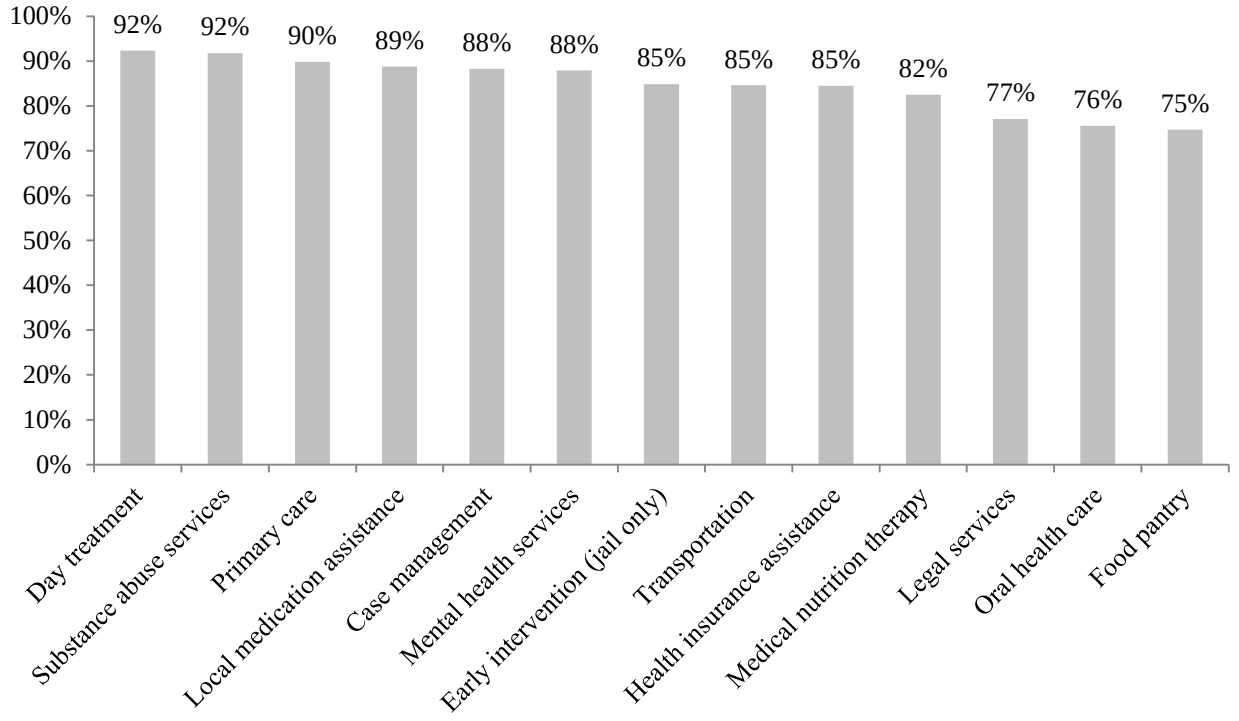
When inconsistent condom use was reported, participants were asked about their motivation for not using a condom. The most common reasons participants cited for not using condoms were only having one sexual partner (25%), having a sexual partner who was already HIV positive as well (13%), self-reported undetectable viral load (8%), disliking condoms (6%), discomfort with using condoms (4%), and getting caught up in the moment (4%).

HIV Care Service Gaps for PLWH

Participants in the 2016 Houston HIV Care Services Needs Assessment were asked to indicate if each of the services they needed in the past 12 months was easy or difficult for them to access. If difficulty was reported, participants were then asked to provide a brief description of the barrier experienced.

All funded services except hospice and linguistics were analyzed and received a ranking of accessibility (**Figure 15**). The two most accessible services were day treatment and substance abuse services at 92% ease of access, followed by primary care at 90% and local medication assistance at 89%. Day treatment had the highest accessibility ranking of any core medical service, while transportation received the highest accessibility ranking of any support service. Compared to the 2014 needs assessment, reported accessibility increased for each service category, with an average increase of 9 percentage points. The greatest increase in percent of participants reporting ease of access was observed in early intervention services, while transportation experienced the lowest increase in accessibility. The percent of needs assessment participants reporting need for a particular service decreased the most for food pantry, housing, and medical nutrition therapy, while the percent of those indicating a need for health insurance assistance increased 12 percentage points from 2014, the most of any service measured.

***Figure 15*: Ranking of HIV Care Services in the Houston Area, By Accessibility, 2016**



Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)
Definition: Of needs assessment participants stating they needed the service in the past 12 months, the percent stating it was easy to access the service.

Reported service need and accessibility were analyzed by participant demographic and other characteristics, revealing the presence of potential disparities in access and service gaps for each service category assessed. For sex at birth, a greater proportion of females than males found case management, food pantry, housing, legal services, local HIV medication assistance, mental health services, oral health care, primary HIV medical care, substance abuse services and transportation services more accessible, while a greater proportion of males than females found day treatment, early-intervention services (Harris County Jail pre-discharge planning), health insurance assistance, hospice, and medical nutrition therapy more accessible.

When assessed for race/ethnicity, a greater proportion of white participants found oral health care, primary HIV medical care (along other/multiracial PLWH), and substance abuse services more accessible than other race/ethnicity groups. A greater proportion of African American participants found housing, medical nutrition therapy, and transportation services more accessible than other race/ethnicity groups. Hispanic participants did not report ease of access to any service in greater proportions than other race/ethnicity groups. Unexpectedly, a greater proportion of other/multiracial PLWH found case management, day treatment, early-intervention services, food pantry, health insurance assistance, hospice, legal services, local HIV medication assistance, mental health services, and primary HIV medical care (along with whites) accessible than did other race/ethnicities.

Assessment of age groups revealed a greater proportion of youth (ages 18-24) found housing, local HIV medication assistance, and mental health services, while more participants ages 25-49 found case management, day treatment, early intervention services, food pantry, and medical nutrition therapy accessible. Participants ages 50 and older found health insurance assistance, hospice, legal services, oral health care, substance abuse services, and transportation services more accessible than any other age group.

Difficulty accessing HIV Care Services was assessed for special population groups. Compared to all participants, a greater proportion of MSM reported difficulty accessing case management, food pantry, oral health care, substance abuse services, and transportation services. Participants with housing instability reported more difficulty accessing day treatment, early intervention services, food pantry, housing, mental health services, oral health care, primary HIV medical care, substance abuse services, and transportation services. Those who had been released from jail or prison in the past 12 months reported difficulty accessing early intervention services, health insurance assistance, legal services, local HIV medication assistance, primary HIV medical care, substance abuse services, and transportation services. Out of care participants reported difficulty accessing food pantry and primary HIV medical care. Rural participants (those living outside Houston/Harris County) reported difficulty accessing Houston-based services like health insurance assistance, local HIV medication assistance , mental health services, oral health care, and primary HIV medical care. Participants whose answers indicated they were transgender or gender non-conforming found housing and transportation services difficult to access.

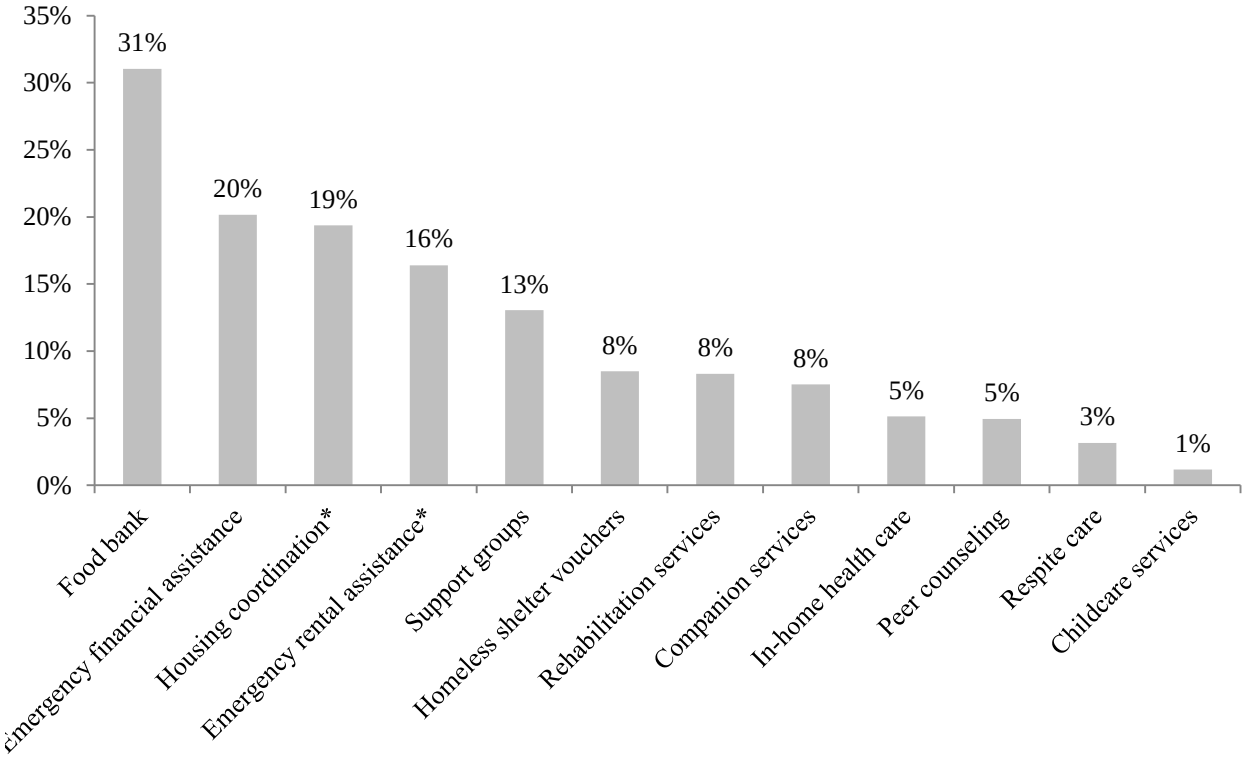
In addition to the HIV care services assessed, other services are allowable for funding by the Ryan White HIV/AIDS Program in local communities if there is a demonstrated need. Several of these other services have been funded by the Ryan White Program in the Houston Area in the past. The 2016 Houston HIV Care Services Needs Assessment measured the need for these services to gauge any new or emerging service needs in the community. In addition, some of these services are currently funded through other HIV-specific non-Ryan White sources, namely housing-related services provided by the Housing Opportunities with People with AIDS (HOPWA) program, as indicated.

Twelve other/non-Ryan White funded HIV-related services were assessed to determine emerging needs for Houston Area PLWH (**Figure 16**). Participants were also encouraged to write in other types of needed services. Of the 12 service options provided, 31% of participants selected food bank as a needed service, a decrease of 14 percentage points from the 2014 needs assessment.

Emergency financial assistance was selected second (20%), followed by housing-related services cited third (20%) and fourth (16%), and support groups cited fifth (13%).

Services that were written in most often as a need (and that are not currently funded by Ryan White) were (*in order*): employment assistance and job training, vision hardware/glasses, and services for spouses/partners.

***Figure 16*: Other Needs for HIV Care Services in the Houston Area, 2016**



Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)
Definition: Percent of needs assessment participants who selected each service in response to the survey question, "What other kinds of services do you need to help you get your HIV medical care?"
***These services are not currently funded by the Ryan White program; however, they are available through the Housing Opportunities for People with AIDS (HOPWA) program.*

2016 Houston HIV Care Services Needs Assessment also examined service gaps along the HIV Care Continuum (HCC). Participants were asked questions to determine whether they had been passively referred or actively linked to care when first diagnosed. Sixty-one percent (61%) reported receiving a list of HIV clinics to go to for medical care, 71% were given an appointment for their first HIV medical visit, and 66% received an offer from someone to help them get into HIV medical care (service linkage). It is notable that a majority (70%) of participants received their initial HIV diagnosis prior to 2010, when more sophisticated and readily available service linkage services became available in the Houston Area. When asked about timely linkage to care, 39% of participants reported waiting longer than 3 months to enter HIV medical care, with the most common reasons being fear of stigma (13%) or denial (11%). In addition to being asked if they were currently in care, participants were asked whether they had ever fallen out of care for 12 months or more since their initial HIV diagnosis. Twenty-nine percent (29%) reported a history of

being out of care, caused most often by substance use (9%), desiring a break from treatment (8%), and not wanting to take HIV medications (5%). Participants were also asked about current medication adherence. Only 8% of participants reported not currently taking HIV medications, with most common reasons being difficulty taking medications as prescribed or inability to pay for medications.

Barriers to HIV Services

Barriers to HIV Prevention Services

Social, Structural, and Client-Specific Barriers

Stigma, bias, and discrimination against people with HIV persist. Though over 30 years have passed since HIV was first brought to the public's attention, it continues to be highly stigmatized. PLWH can still face insensitivity, differential treatment, outright refusal of services, and even hostile environments or harassment because of their HIV status. Fear of discrimination keeps many people from learning their HIV status, disclosing their status, or seeking HIV medical care. In the latest Prevention Needs Assessment, nearly 50% of those who responded agreed or strongly agreed that they would be concerned to go to an HIV/AIDS organization because someone they know may see them. Many of the population groups that are most impacted by HIV may also experience bias based on other factors, such as race/ethnicity, sexual orientation, gender identity, or economic or legal circumstance.

Culturally, there is a resistance in much of Texas (and Houston) to discuss sexual health, sexual orientation, gender identity, and HIV/STD. Comprehensive sexual education is not taught in most schools and may even be restricted by sources of funding. Abstinence-plus education infuses strong abstinence messages, but the content of this education varies from district to district and even from school to school. This context may complicate the stigma experienced by those at higher risk for HIV and also discourage conversations between patients and the medical community on sexual risk and HIV/STD testing.

As expanded on in the epidemiologic overview, there are some unique factors to Houston that contribute to barriers faced by residents. Fewer adults ages 25 years and older are high school graduates compared to Texas and the U.S. overall. A slightly higher percent of the population lives below the federal poverty line compared to the U.S. and nearly 29% of Harris County residents did not have health insurance (versus 16% nationally). The uninsured rate is more pronounced among both African Americans and Hispanics in the Houston Area. Of PLWH participating in the Medical Monitoring Project, nearly 36% did not have health insurance.

Service linkage workers in the Houston Area work on a day-to-day basis with clients to mitigate any barriers to HIV medical care. A re-linkage to care demonstration project conducted by the Houston Health Department from 2012-2015 found that transportation was consistently cited as a top barrier to retention in care. Given the substantial geographic spread and limited public transportation system in the Houston Area, overcoming this barrier continues to be a challenge for both the HIV Prevention and Care systems.

Policy Barriers

Sexual and reproductive health policies in Texas: In 2015, Texas officials discontinued Planned Parenthood's HIV prevention funding. Operating in this capacity since 1988, this decision led to all HIV prevention services formerly offered by Planned Parenthood Gulf Coast to cease. Prior to this change, Planned Parenthood had been a major provider of HIV testing, counseling, and condom distribution in the Houston area. Before this decision, Planned Parenthood also lost its Texas Medicaid contract and is no longer eligible to participate in State-funded programs that provide cervical cancer screenings and breast exams to low-income women. Prior to 2015, funding to Planned Parenthood and other similar health care clinics throughout the state had been substantially reduced by legislative action, resulting in many of these clinics closing. Recently published research has shown adverse outcomes associated with these decisions (Stevenson et al., 2016).

Texas law does not allow for the implementation of syringe exchange programs, which include the distribution of sterile needles, syringes, and other sterile injection supplies. Under Chapter 481.125 of the Texas Health and Safety Code, a person commits an offense if the person knowingly or intentionally uses or delivers, or possesses with intent to use or deliver, drug paraphernalia that can be used to inject a controlled substance into the human body. The punishment for one of these offenses ranges from a Class C misdemeanor to a state jail felony. The HHD created a Hepatitis C Task Force that discusses how to best meet the needs of those who continue to be at risk for contracting HCV and HIV through unsafe injection practices in light of these prohibitions.

Although the nation now has the lowest uninsured rate in history, there are 19 states that have elected not to adopt Medicaid expansion under the Affordable Care Act (ACA) (Collins, 2015). Despite having the highest rates of uninsured, Texas policymakers continue to reject this opportunity. The impact of this decision is massive, especially given that Medicaid in its current form is only currently available to a small set of Texans. In Texas, only the following are Medicaid-eligible: "people with disabilities who have incomes below 75 percent of the federal poverty level (under $9,000 a year for an individual); pregnant women with incomes less than 200 percent of poverty (about $23,500 a year); and parents with incomes less than 19 percent of poverty (just under $5,000 a year for a family of four)." Compared to other Southern states that have elected to expand Medicaid, coverage rates have only moderately increased in Texas. In a recent study, the Commonwealth Fund found that Texas uninsured rates among low-income adults dropped from 39% in 2013 to 27% in 2014. This drop is minimal compared to Arkansas and Kentucky which both adopted Medicaid expansion (from 42% to 19% uninsured in Arkansas and from 40% to 12% uninsured in Kentucky) (Sommers, 2016). HIV prevalence is greater in areas of poverty throughout the urban U.S., therefore the lack of Medicaid expansion continues to place affordable healthcare out of the reach of many Houston Area residents at risk for, or living with, HIV (CDC, 2016).

Health Department Barriers

Dedicated HIV funding in the Houston Area has not kept pace with need. Federal funding for HIV has increased significantly over the course of the epidemic. However, many local jurisdictions have seen funding decline or remain level over time. As business costs rise, level funding can translate into fewer dollars for direct services. Although numerous cities throughout

the nation benefit from local investment in HIV/STD, the Houston Health Department receives ***zero*** dollars in general city revenue. The results of the financial inventory (Section I.C.) confirm just how dependent the Houston Area is on federal funding to maintain even the most basic HIV prevention services.

Since 2014, the HHD has utilized surveillance to identify persons that are potentially in need of re-linkage to HIV medical care. Record searches of HIV surveillance data are used prior to assignment of service linkage workers in order to prioritize those that appear to truly be out of care per gaps in HIV-related laboratory data. Through this work, the HHD has identified a challenge of completeness of reporting to surveillance by clinical trials and the Veteran's Administration (VA). While this challenge has been echoed across the nation from other jurisdictions regarding data from the VA, little attention has been placed on clinical trials. Furthermore, many clinical trials report coded names to surveillance which cannot be interpreted by health departments. These gaps in data continue to hamper the efficient use of resources to identify and locate those in need of re-linkage to HIV medical care.

The increased use of electronic medical records and health information exchanges has created an ever-growing demand that health departments evolve to incorporate a strong informatics core. Furthermore, informatics is often presented as the solution for enhanced efficiency and superior monitoring and evaluation of program outcomes. However, the structure and level of funding has not yet caught up to these demands. Informatics funding has mostly been awarded in silos separated by disease. At a local agency level, this has often translated to a small staff attempting to support multiple programs simultaneously that may or may not have informatics-specific funding. Additional investment from all program areas is also needed to support the initial investment in, and continual maintenance of, the necessary informatics infrastructure.

<u>Program Barriers</u>

In order to determine care status for re-linkage to care initiatives, multiple data systems must be checked for all relevant care appointments and CD4/viral load results. These systems include both HIV (eHARS) and STD (STD*MIS) surveillance databases, as well as the database for Ryan White Care in Houston (CPCDMS, managed by Harris County Public Health) and an electronic medical record system. Because eHARS and STD*MIS do not receive messages in the format sent through electronic laboratory reporting (ELR), another data system running on the Maven platform, is also utilized by the HHD as the mechanism for receiving laboratory reports. In effect, this translates to five data systems that all may provide evidence of recent HIV medical care. No single entity in the Houston Area is the owner of both care and surveillance data systems; therefore data is not matched between systems. This inability to match records necessitates manual data searches for each potential re-linkage client. Additional databases are also manually searched for locating information and incarceration status. Multiple data systems managed by varied entities remains a challenge for efficient utilization of data by the Houston Area for both program planning and current initiatives.

Voluntary HIV screening is offered in the Harris County Jail under a contract with TDSHS. Screening occurs during the inmate medical assessment, which takes place within 14 days of incarceration. Syphilis, chlamydia, and gonorrhea screening also occurs at this time. If an inmate is released prior to the time of medical assessment, however, then screening for HIV/STD does

not occur. Inmates who test positive for HIV or syphilis are then counseled and offered partner services by HHD Disease Intervention Specialists (DIS) assigned to the jail. Currently, additional HIV/STD screening at time of release does not occur in the Houston Area.

Provider Barriers and Increased Stakeholder Representation

The Houston Area has a large and multi-tiered health care system administered by city, county, and state officials as well as by private and non-profit organizations, including the "largest medical center in the world." The size and complexity of this system can create challenges for individuals seeking health care as well as for providers seeking to coordinate care. The Houston Area is also the least densely populated major metropolitan area in the nation. Relatively long distances must be travelled to seek services even within the urban center. This creates challenges for providers attempting to reach individuals for HIV follow-up. In rural Houston Area locations, even longer distances must often be travelled to reach HIV medical services. The lack of HIV medical homes in many rural parts of the Houston Area further exacerbates this barrier to care.

From a survey of participants in the Comprehensive Planning process, the following stakeholders need further representation and are necessary to more effectively improve outcomes along the HCC: primary education, managed care organizations, medical professional associations/medical societies/practice groups, the business community, and correctional/criminal justice. Additional representation is also critical from: community centers, chronic disease prevention, philanthropic organizations, workforce solutions, and alcohol/drug abuse providers. The ever increasing collaboration between HIV prevention and medical providers for interventions such as PrEP and Data to Care necessitate a strong presence from HIV care and PrEP providers, including physicians, nurses, and pharmacists. Improvements to engage these medical professionals in future planning efforts was a goal prioritized through this Plan's development.

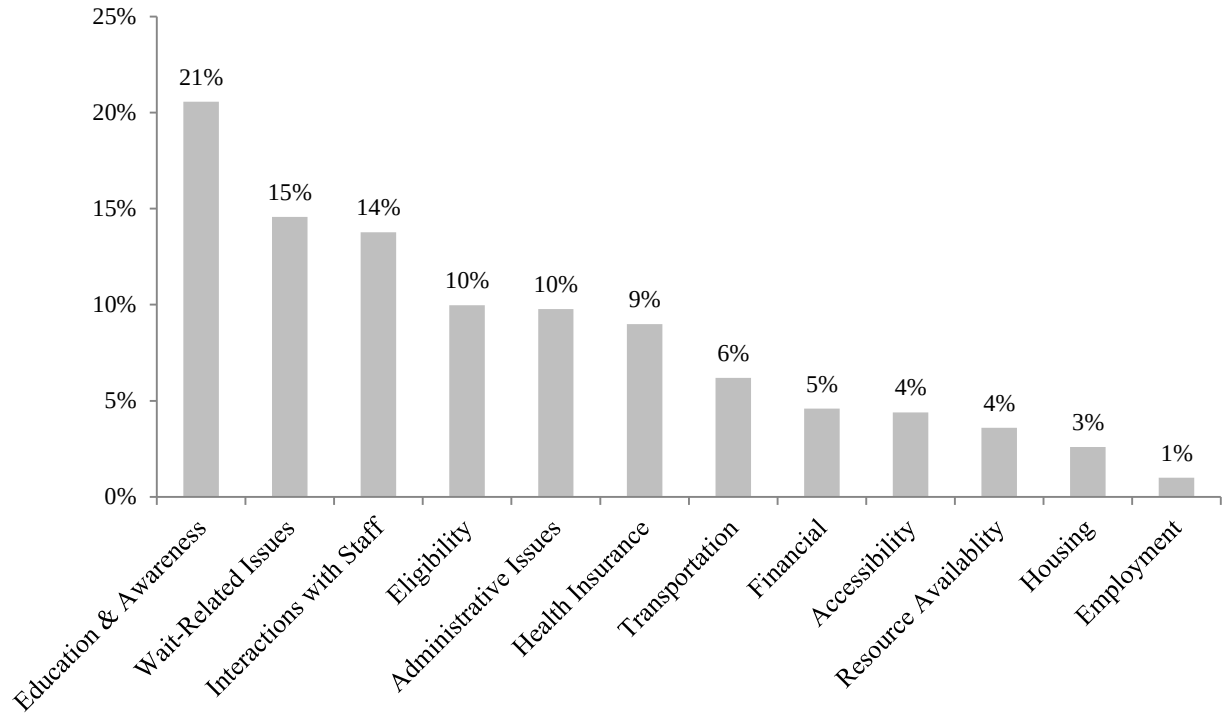
Barriers to HIV Care Services

Service Specific Barriers

For the first time in the Houston HIV Care Services Needs Assessment process, participants who reported *difficulty* accessing needed services were asked to provide a brief description of the barrier or barriers encountered, rather than choosing from a list of pre-selected barriers. Recursive abstraction was used to categorize participant descriptions into 39 distinct barriers. These barriers were then grouped together into 12 nodes, or barrier types.

Overall, the barrier types reported most often related to service education and awareness issues (21% of all reported barriers); wait-related issues (15%); interactions with staff (14%); eligibility issues (10%); and administrative issues (10%) (**Figure 17**). Employment concerns were reported least often (1%). Due to the change in methodology for barrier assessment between the 2014 and the 2016 Houston HIV Care Services Needs Assessments, a comparison of the change in number of reports of barriers will not be available until the 2020 Houston HIV Care Services Needs Assessment cycle.

***Figure 17*: Ranking of Types of Barriers to HIV Care Services in the Houston Area, 2016**



Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)
Definition: Percent of times each barrier type was reported by needs assessment participants, regardless of service, when difficulty accessing needed services was reported.

All funded services were reported to have barriers, with an average of 33 reports of barriers per service. Participants reported the least barriers for Hospice (two barriers) and the most barriers for Oral Health Care (86 barriers). In total, 525 reports of barriers across all services were indicated in the sample.

Within education and awareness, knowledge of the availability of the service and where to go to access the service accounted for 82% of barriers reported (**Table 15**). Being put on a waitlist accounted for a majority (66%) of wait-related barriers. Poor communication and/or follow up from staff members when contacting participants comprised a majority (51%) of barriers related to staff interactions. Almost all (86%) of eligibility barriers related to participants being told they did not meet eligibility requirements to receive the service or difficulty obtaining the required documentation to establish eligibility. Among administrative issues, long or complex processes required to obtain services sufficient to create a burden to access comprised most (59%) the barriers reported.

Most (84%) health insurance-related barriers occurred because the participant was uninsured or underinsured and experiencing coverage gaps for needed services or medications. The largest proportion (81%) of transportation-related barriers occurred when participants had no access to transportation. It is notable that multiple participants reported losing bus cards and the difficulty of replacing the cards presented a barrier to accessing other services. Inability to afford the service accounted for all barriers relating to participant financial resources. The service being offered at a distance that was inaccessible to participants or being recently released from

incarceration accounted for most (77%) of accessibility-related barriers, though it is worth noting that low or no literacy accounted for 14% of accessibility-related barriers. Receiving resources that were insufficient to meet participant needs accounted for most resource availability barriers. Homelessness accounted for virtually all housing-related barriers. Instances in which the participant's employer did not provide sufficient sick/wellness leave to allow the respondents to attend appointments comprised most (60%) of the employment-related barriers cited.

Table 15: Barrier Proportions within Each Barrier Type for HIV Care Services in the Houston Area, 2016

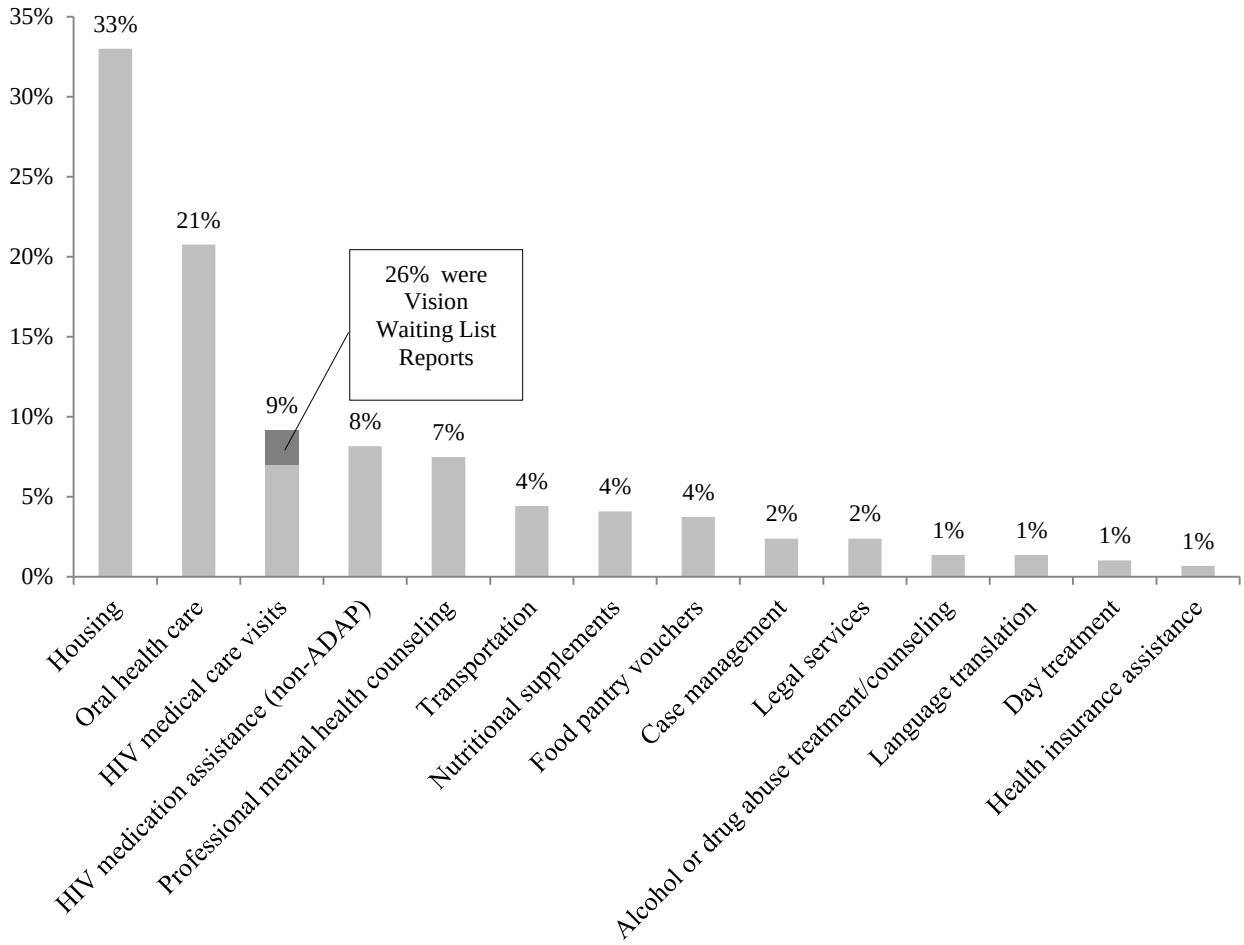
Education & Awareness	%	Wait-Related Issues	%	Interactions with Staff	%
Availability (Didn't know the service was available)	50%	**Waitlist** (Put on a waitlist)	66%	**Communication** (Poor correspondence/ Follow up from staff)	51%
Definition (Didn't know what service entails)	7%	**Unavailable** (Waitlist full/not available resulting in client not being placed on waitlist)	15%	**Poor Treatment** (Staff insensitive to clients)	17%
Location (Didn't know where to go [location or location w/in agency])	32%	**Wait at Appointment** (Appointment visits take long)	7%	**Resistance** (Staff refusal/ resistance to assist clients)	13%
Contact (Didn't know who to contact for service)	11%	**Approval** (Long durations between application and approval)	12%	**Staff Knowledge** (Staff has no/ limited knowledge of service)	7%
				Referral (Received service referral to provider that did not meet client needs)	17%
Eligibility	%	**Administrative Issues**	%	**Health Insurance**	%
Ineligible (Did not meet eligibility requirements)	48%	**Staff Changes** (Change in staff w/o notice)	12%	**Uninsured** (Client has no insurance)	53%
Eligibility Process (Redundant process for renewing eligibility)	16%	**Understaffing** (Shortage of staff)	2%	**Coverage Gaps** (Certain services/medications not covered)	31%
Documentation (Problems obtaining documentation needed for eligibility)	38%	**Service Change** (Change in service w/o notice)	10%	**Locating Provider** (Difficulty locating provider that takes insurance)	13%
		Complex Process (Burden of long complex process for accessing services)	59%	**ACA** (Problems with ACA enrollment process)	17%
		Dismissal (Client dismissal from agency)	4%		
		Hours (Problem with agency hours of operation)	16%		
Transportation		**Financial**	%	**Accessibility**	%
No Transportation (No or limited transportation options)	81%	**Financial Resources** (Could not afford service)	100%	**Literacy** (Cannot read/difficulty reading)	14%
Providers (Problems with special transportation providers such as Metrolift or Medicaid transportation)	19%			**Spanish Services** (Services not made available in Spanish)	9%
				Released from Incarceration (Restricted from services due to probation, parole, or felon status)	32%
				Distance (Service not offered within accessible distance)	45%
Resource Availability	%	**Housing**	%	**Employment**	%
Insufficient (Resources offered insufficient for meeting need)	56%	**Homeless** (Client is without stable housing)	100%	**Unemployed** (Client is unemployed)	40%
Quality (Resource quality was poor)	44%	**IPV** (Interpersonal domestic issues make housing situation unsafe)	0%	**Leave** (Employer does not provide sick/wellness leave for appointments)	60%

Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)

Waiting List Barriers and Experiences

In February 2014, the RWPC formed the ad hoc Waiting List Workgroup to evaluate the extent to which waiting and waitlists impact the receipt of HIV care and treatment services in the Houston Area and propose ways to address wait-related issues through changes to the HIV care and treatment system. With input from the Waiting List Workgroup, the 2016 Houston HIV Care Services Needs Assessment survey included questions specifically designed to elicit information from participants about the services for which they had been placed on a waiting list for in the past 12 months, the time period between first request for a service and eventual receipt of the service, awareness of other providers of waitlisted services, and services for which clients reported being placed on a waitlist more than once. Thirty-nine percent (39%) of participants indicated that they had been placed on a waiting list for at least one service in the past 12 months. A third of reports were for housing services (**Figure 18**). This was followed by oral health care (21%), HIV medical care (9%), local medication assistance (8%), and professional mental health counseling (7%). Of all participants reporting being on a wait list for HIV medical care visits, 26% indicated being placed on a waiting list specifically for vision services. There were no reports of participants being placed on a wait list for hospice or pre-discharge planning.

***Figure 18*: Percentage of Waiting List Reports by HIV Care Service in the Houston Area, 2016**

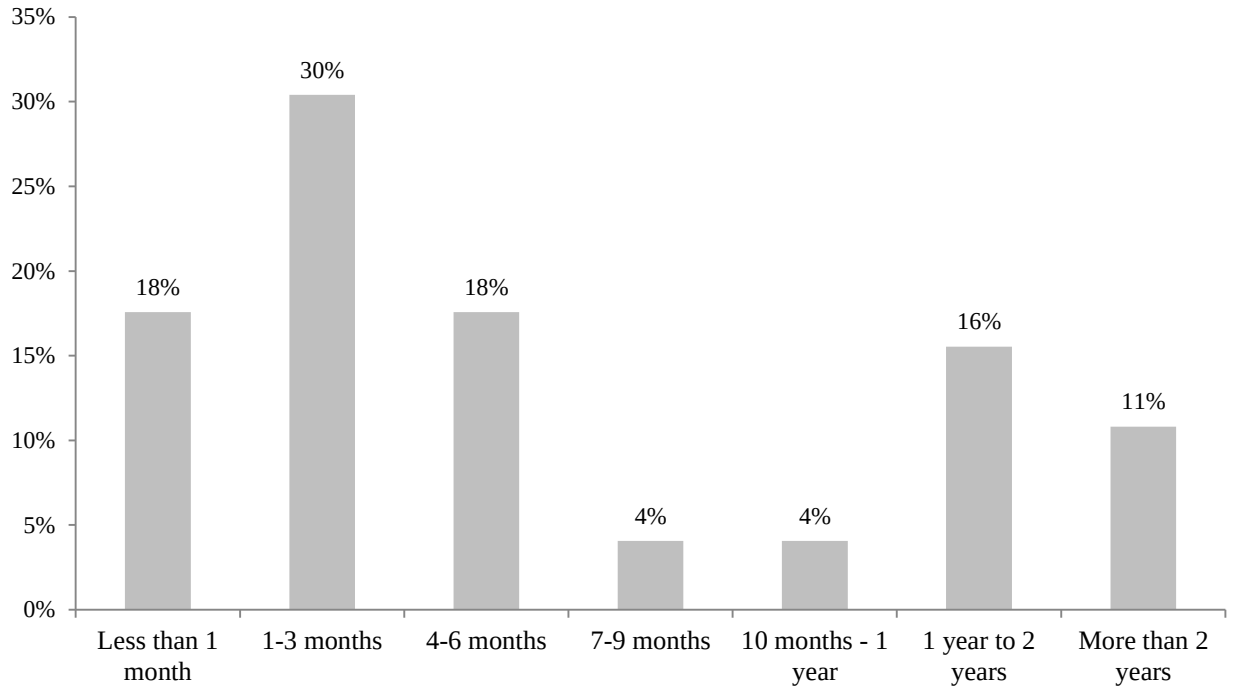


Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)
Definition: Percent of times needs assessment participants reported being on a waiting list for each service.

Participant reports of time elapsed from the initial request for a service until receipt of the service varied from 1 day to over 2 years (**Figure 19**). The greatest number of reports of time elapsed occurred for wait times between one and three months (30%), followed by less than one month (18%) and four to six months 18%).

Most wait times reported for housing services occurred for one to three months (26%), one to two years (26%), or 10 months to one year (18%). It is worth noting that 8% of participants reporting a wait time for housing services waited over two years between first request and receipt of service, with several expressing that they were on a housing wait list at the time of survey. Most reports of wait times for oral health care were less than one month (26%) or four to six months (26%). However, 14% of participants indicating a wait time for oral health care services reported wait times of over one year. Finally, most participants (64%) indicating wait times for HIV medical care including vision services reported waiting one to three months.

***Figure 19*: Percentage of Time Elapsed Between Initial Request for HIV Care Service and Receipt of Service While on a Waiting List in the Houston Area, 2016**



Source: 2016 Houston HIV Care Services Needs Assessment Report (approval pending)
Definition: Percent of times needs assessment participants reported time elapsed from the initial request for a service until receipt of the service for each time period.

When waiting lists are instituted, participants with acute needs who are aware of alternative service providers can seek services from these providers and reduce wait times for those remaining on waiting lists. A majority (83%) of participants who reported being on a wait list for at least one service in the past 12 months stated that they were not aware of another provider of the service for which they were waiting, or did not remember if they were aware of another provider. Of the remaining 35% of participants who were aware of another provider, over half (59%) reported not seeking service from the alternative provider. Nearly one-third of participants who reported being placed on a wait list in the past 12 months also reported having been placed

on a wait list for the service more than once. This was observed primarily among participants reporting being placed on a wait list for housing services (34%) and oral health care (29%).

General Social and Systems Barriers to HIV Care Services

In addition to service-specific barriers, general barriers to HIV care services were investigated throughout the 2016 Houston HIV Care Services Needs Assessment. Participants reported encountering socio-structural barriers like stigma, violence, and poverty. Twenty percent (20%) of participants reported experiencing some form of discrimination in the past 12 months, most often in the form of being treated differently because of their positive status, though this very rarely resulted in being denied services in the general community or being asked to leave a public place. Another 13% reported being threatened in the past 12 months, most often as verbal harassment or taunts and threats of violence by someone known to the participant. Four percent (4%) had been physically assaulted in the past 12 months by someone they knew, and another 4% had been sexually assaulted in the past 12 months, most often by a stranger. Among participants whose answers indicated they were transgender or gender non-conforming, the proportions who reported experiencing physical assault or sexual assault rose to 9% and 16%, respectively. Three percent (3%) of participants reported being in an intimate relationship with someone who made them feel afraid, threatened, isolated, who forced them to have sex, or who physically hurt them at the time of survey. Among participants who chose to report an income and household size, 71% were below 100% of the 2016 federal poverty level.

PLWH in the Houston Area experiencing poverty have an additional policy-related barrier to obtaining healthcare coverage, as the State of Texas has not adopted Medicaid expansion as of 2016. Kaiser Family Foundation estimates that 766,000 Texas residents could potentially gain access to healthcare coverage if Texas were to adopt Medicaid expansion, representing 58% of all currently uninsured adults in the state (Garfield and Damico, 2016). Twenty-four percent (24%) of participants reported getting medical care for HIV only through Ryan White (any funding stream), while another 4% reported self-pay or that they do not receive medical care because they cannot pay for it. Coverage gaps and incomplete coverage of expenses like medications and co-pays also presented a barrier for participants. Thirty-one percent (31%) reported seeking care at an emergency department at least once in the past 12 months because they felt sick. When asked about difficulty paying for medications, 27% of participants reported difficulty paying for HIV medications, 28% reported difficulty paying for medication for other medical conditions, and 18% reported difficulty paying for medications for mental health conditions. Of those reporting difficulty paying for medications, 32% reported receiving no assistance paying for medications.

Client-level barriers also presented challenges for participants. Eighteen percent (18%) reported that substance use (most commonly with alcohol or cocaine/crack) has interfered with their getting HIV medical care at some point. Sixty-eight percent (68%) of participant reported co-morbid health conditions, most commonly high blood pressure (32%), high cholesterol (21%), arthritis (13%), Hepatitis C (13%), and diabetes (11%). While 57% of participants indicated that they had been diagnosed by a healthcare professional with a co-morbid mental health condition such as depression (43%), bipolar disorder (23%), or anxiety disorder (23%), 66% of participants reported currently experiencing anxiety or worry (47%), sadness (32%), anger (27%), or insomnia (26%) to the extent that they wanted help. Twenty-six percent (26%) of participants reported current housing instability, and 12% reported their housing situation has interfered with their

getting HIV medical care. Twenty-two percent (22%) reported their transportation situation has interfered with them getting HIV medical care. When social support was defined as people or groups in a participant's life that provide emotional support, assistance, advice, and/or companionship, 70% of participants reported feeling that they had enough social support. Sufficient social support types cited most often were family (75%), friends (69%), partner or significant other (45%), a faith community (43%), and social support from an HIV-related group or program (27%). Needed but unfulfilled types of social support included a mentor (20%), the opportunity to be a mentor for others (17%), a faith community (16%), friends (16%), and a partner or significant other (16%).

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Section I: Statewide Coordinated Statement of Need/Needs Assessment

E. Data: Access, Sources, and Systems

Data Used in Needs Assessments

For the 2016 Prevention Needs Assessment, an anonymous HIV prevention consumer survey was developed to fulfill the requirements of the 2017 Comprehensive Plan by adapting a previous HIV prevention survey heavily vetted and approved by the Houston HIV Prevention Community Planning Group (CPG). An independent contractor was tasked with recruiting participants to complete the online survey using multiple databases of email addresses of Houston/Harris County residents. The survey was conducted from July – August 2016 using the Survey Monkey platform. The Houston Health Department (HHD) created and approved all questions and survey structure (i.e., skip logic), while the contractor built the survey online and collected all responses. Surveillance data was utilized to construct a sampling plan that targeted those most at risk for HIV by race/ethnicity, birth sex, age, and transmission risk. The survey tool was tailored to gauge the specific needs of the Houston/Harris County community, including individuals living with HIV and those at risk for HIV. It assessed potential barriers to HIV prevention services and medical care, HIV awareness and stigma, risk behaviors, satisfaction with prevention services, and basic sociodemographic information. This survey was conducted independent of any existing HIV prevention or care data systems and failed to encounter any significant policy or administrative obstacles. However, as evidence of the stigma that still surrounds HIV and discussion of sexual health, the first company contracted for this project abandoned the venture when their management expressed concerns of losing participants that agree to take future surveys due to the "sensitive nature of the questions" contained in our survey.

In contrast, the 2016 Houston HIV Care Services Needs Assessment was administered by Ryan White Planning Council (RWPC) Office of Support staff in hard-copy format, without the use of data systems. Paper surveys were administered in person to facilitate screening and assist participants with low literacy or vision concerns. The surveys were then coded by hand and entered into IBM© SPSS© Statistics (v. 22). Data were also cleaned and weighted, and quantitative data analyzed, using SPSS. Qualitative data were coded and analyzed using QSR International© NVivo© (v.10).

Data Used in Development of the HIV Care Continuum

Data used to develop the Houston Eligible Metropolitan Area (EMA) HIV Care Continuum (HCC) were requested from the Texas Department of State Health Services (TDSHS), as the Department has access to surveillance and care data for the entire state of Texas, as well as access to the most varied sources of data for establishing evidence of care (e.g., private payer data). At the time of request, the TDSHS was unable to release an estimate of the number of people living with undiagnosed HIV; therefore, the Houston EMA HCC is a diagnosis-based continuum. The Houston Health Department (HHD) is currently in the process of evaluating several methodologies for producing a local estimate of the number of undiagnosed/unaware PLWH that may be applied to a Houston Continuum in the future.

An on-going challenge in developing and utilizing the HCC model is the availability of local and state data on antiretroviral therapy (ART) use. Though many jurisdictions incorporate ART use

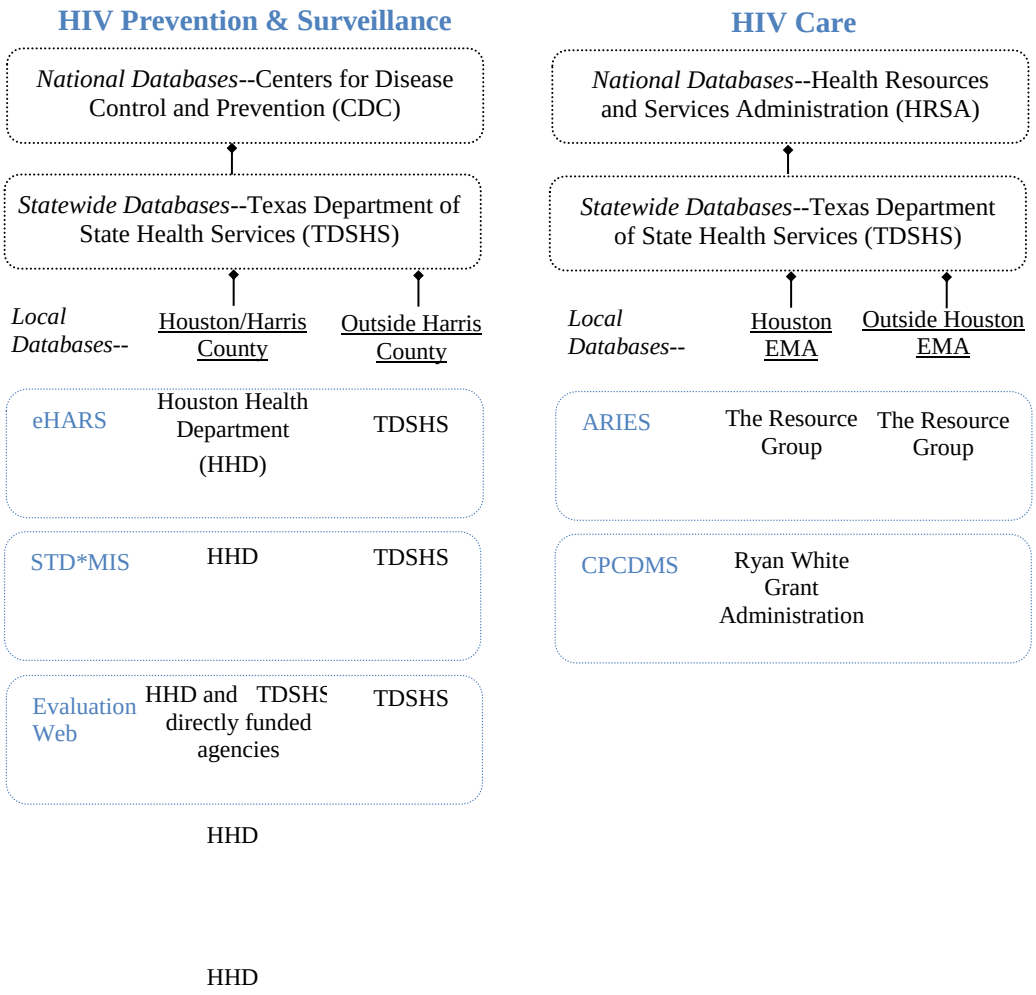
into their local HCC, these data are not available at the Houston EMA level. While ART prescription data are available for Ryan White Program Parts A and B clients through the Ryan White Grant Administration's (RWGA) Centralized Patient Care Data Management System (CPCDMS), there is currently no method for collecting ART prescription data for PLWH in the Houston EMA who are not served through the Ryan White program. Of the 24,979 diagnosed PLWH in the Houston EMA in 2014, roughly half (12,329) received services as unduplicated Ryan White program clients, indicating that the other half the HIV diagnosed population in the Houston EMA would not be accurately represented in any HCC stage using data derived only from CPCDMS.

While TDSHS has attempted measurement of ART use by collecting data available through the AIDS Regional Information and Evaluation System (ARIES), Medicaid, and 3rd party payers, these data have so far not proven sufficient to establish an accurate count of PLWH prescribed ART. The Ryan White program has attempted to estimate the number of PLWH in the Houston EMA prescribed ART as the number of PLWH retained in HIV care multiplied by the percentage prescribed ART in the CDC's Medical Monitoring Project (MMP), though this methodology is inconsistent with the methodology used to calculate engagement percentages in the remaining stages of the care continuum. As an alternative to applying national estimates to raw local data, the Houston EMA HCC utilizes actual diagnosis-based frequencies from TDSHS for each stage of the continuum, and omits the measure "prescribed ART" in favor of viral suppression as an indicator of medication adherence and the ultimate goal of progression along the HCC. The HHD Bureau of Epidemiology created the Houston EMA HCC, 2012-2014 in alignment with the omission of "prescribed ART". The majority of the measures utilized completely align with the methodology also employed and recommended by TDSHS; however, the Houston EMA HCC measure of retention favors the definition presented in the Integrated Guidance from CDC/HRSA over a different definition created by TDSHS.

Primary Data Systems Used in the Houston Area

The following data sources and data systems are relevant to collecting and maintaining client level HIV prevention, surveillance, and/or care data and are uniquely designed to serve the needs of the Houston Area. Each maintains some capacity to collect and store information relevant to addressing population parameters and some measures of the HCC, and there is significant capacity for expansion and growth for future use. There are currently seven major data systems in place, and each system is administered by specific agencies at the local, state, and national level according to jurisdiction (**Figure 1**).

***Figure 1*: Model of Client Level Data Systems in the Houston Area**



- **<u>eHARS.</u>** The Enhanced HIV/AIDS Reporting System (eHARS) is a browser-based HIV surveillance system provided by the CDC that is deployed at all state and local health departments. For Houston/Harris County, eHARS is administered by the Houston Health Department (HHD) Bureau of Epidemiology; for counties outside of Harris, the system is managed by the Texas TDSHS HIV/STD Prevention and Care Branch. Its purpose is to serve as a comprehensive centralized source for the ongoing, systematic collection and dissemination of data on HIV/AIDS in a local jurisdiction. All evidence of HIV infection and AIDS is entered into the eHARS system using pediatric/adult case reports and laboratory reports. AIDS has been a reportable disease in Texas since 1983 with named HIV reporting mandated in 1999. The law was effectively changed in 2010 to require the reporting of all CD4 counts or percentages and all HIV viral load tests regardless of the result, both positive and negative HIV-DNA or HIV-RNA virologic tests for children under three years of age, and all HIV genotype resistance results. Health departments submit de-identified data electronically to the national HIV/AIDS database at the CDC. The HHD reports Houston's

HIV/AIDS surveillance data to both the CDC and the Texas TDSHS. eHARS is the real-time source for HIV and AIDS incidence, prevalence, and mortality among local jurisdictions.

- **STD*MIS.** The Sexually Transmitted Disease Management Information System (STD*MIS) is an application provided by the CDC to state and local health departments for surveillance of sexually transmitted diseases (STD). Its purpose is to enable local STD programs to manage evidence of reportable STDs received from laboratories, health care providers, facilities, and Disease Intervention Specialists (DIS). In jurisdictions where STD*MIS is in use for this purpose, it can serve as a real-time source for STD incidence in a local jurisdiction as eHARS does for HIV/AIDS. STD*MIS also has the capacity to serve as a case management database for tracking treatment, partner services, and other public health follow-up activities. The HHD utilizes STD*MIS for STD surveillance in Houston/Harris County, which is administered by the Texas TDSHS. The HHD also provides data management of STD*MIS and currently uses it for case management of public health follow-up of HIV/STD. For counties outside of Harris, STD*MIS is managed by the TDSHS.
- **Evaluation Web.** Formerly the Program Evaluation and Monitoring System (PEMS), Evaluation Web is a national web-based client-level HIV prevention data collection system supported by the CDC for the collection of HIV prevention data variables, such as Counseling, Testing, and Referral (CTR) services. Its purpose is to enable HIV prevention providers and the CDC to monitor and report on HIV prevention service utilization, behavior change outcomes, and attainment of HIV prevention program performance indicators. In the Houston Area, all entities receiving CDC HIV prevention funds either directly or through a contract with a directly-funded state or local agency enter data into Evaluation Web through an upload from another data system.
- **ECLIPS.** The Electronic Client-Level Integrated Prevention System (ECLIPS) was developed by the HHD as a mechanism for tracking HIV prevention activities including HIV testing and prevention activities, as well as managing the fiscal aspects of contracts. A cornerstone of ECLIPS is its interface with CPCDMS. Through this interface, the HHD can seamlessly track referrals from initial HIV test to engagement in primary medical care for newly-diagnosed HIV positive individuals who were tested by HHD-contract agencies and receive care in the Ryan White system.
- **HEDSS.** The HHD uses the Houston Electronic Disease Surveillance System (HEDSS), a system running off Consilience Software's Maven platform, for disease surveillance, case management, and reporting. In January 2010, Texas State Law was amended to require reporting of all viral load and CD4 tests from laboratories. These laboratory results inform prevention and care activities in local jurisdictions as the data is often utilized as a marker of care in the development of the HCC. Currently, the HHD Bureau of Epidemiology receives these test results from several large laboratories and hospital providers via Electronic Laboratory Reporting (ELR). However, neither eHARS nor STD*MIS can accept ELR in its current format directly. This has necessitated the development of a separate new data platform in order for these tests to be fully collected and analyzed through a modifiable electronic tool, ultimately increasing the quality and capacity of data to inform jurisdictional HIV prevention activities in a timely manner. The HEDSS has the ability to accept ELR for CD4 counts, viral load results, and other HIV-related testing, and it is also being utilized for HIV surveillance investigation tracking. Heeding a nationwide call to produce high quality data and use these data to inform HIV care and prevention activities, service linkage management has also been built into HEDSS to improve monitoring and evaluation of client-level outcomes. Given the

flexibility and adaptability of HEDSS, the current builds are not static; they can be modified and improved to meet the demands of the HIV epidemic. The HEDSS will make it possible to better describe CD4 count and viral load trends community-wide and inform HCC measures. As this data system continues to be adapted for multiple diseases and conditions, the public health response in the Houston Area is further streamlined. Additionally, the Maven platform is currently being adopted by the TDSHS for launch of a single Texas-wide system to house HIV/STD surveillance data together with public health follow-up case management data. When this system has been completed by TDSHS, it will replace STD*MIS.

- **ARIES.** The AIDS Regional Information and Evaluation System (ARIES) was developed by the states of Texas and California and the Counties of San Diego and San Bernardino to serve as a centralized data collection system for client data, service details, and agency and staff information for services funded by HRSA's HIV/AIDS Bureau (HAB) (i.e., the Ryan White HIV/AIDS Program) in those jurisdictions. The primary goal of ARIES is to enhance services for clients by helping local providers automate, plan, manage, and report on client data in real-time. ARIES further provides a mechanism for funded agencies to submit required HRSA HAB reporting via the annual CARE Act Data Report (CADR). In the Houston Area, all entities receiving HRSA HAB funds for HIV/AIDS care services other than Part D rely on the CPCDMS (*see below*) for primary data entry. These data are then uploaded from CPCDMS to ARIES, thereby ensuring data are entered once even if shared by multiple grantees. Part D funded agencies enter data into ARIES manually or through an upload from another data system. For the Houston Area, ARIES is managed by the Houston Regional HIV/AIDS Resource Group, the Administrative Agent for Ryan White HIV/AIDS Program Part B and State Services and the grantee of Part C and D services. The TDSHS administers ARIES for the state of Texas.
- **CPCDMS.** The Centralized Patient Care Data Management System (CPCDMS) is a browser-based encrypted, real-time, de-identified client level database unique to the Houston Area. It links all Ryan White HIV/AIDS Program Part A, B, and C funded agencies on specific data variables, including registration, encounter, medical update information, demographic, co-morbidity, biological marker, service utilization, outcomes survey, and assessment data for each client served. Its purpose is to manage and produce real-time client level data for tracking service utilization, planning for services, and quality improvement of services for all Ryan White HIV/AIDS Program services community-wide. For example, CPCDMS data are used to generate quarterly service utilization reports, to monitor the health needs of a specific demographic served by the program, to assess health status indicators of the overall client population, and to generate population samples for annual clinical chart review. All entities in the Houston Area receiving HRSA/HAB funds for HIV care services other than Part D enter data into CPCDMS. CPCDMS is administered by Harris County Public Health Services Ryan White Grant Administration, the Administrative Agent for Ryan White HIV/AIDS Program Part A and the Minority AIDS Initiative (MAI).

Data System Challenges

Houston is uniquely challenged in that HIV prevention and HIV care services are not administered by the same government agency. Harris County Public Health – Ryan White Grant Administration administers Houston EMA Ryan White Part A and MAI funding, The Houston Regional HIV/AIDS Resource Group (TRG) administers TDSHS Ryan White Part B and State of Texas HIV care services funding in the Houston Health Service Delivery Area (HSDA), and

Houston/Harris County HIV prevention funding is managed by the Houston Health Department (HHD). Consequently, the data for care and prevention are managed by separate entities, severely limiting the ability of any agency to locally generate its own HCC. Due to the structure, laws, and policies of HIV reporting within the state of Texas, TDSHS was best equipped to collect data to create the HCC due to its access the most varied sources of data to determine HIV care status. However, like most jurisdictions, surveillance at TDSHS is unable to currently provide data on several special populations like transgender and gender non-conforming individuals or individuals experiencing homelessness. The TDSHS data were produced from Texas Enhanced HIV/AIDS Reporting System (eHARS), electronic laboratory reports, the AIDS Regional Information and Evaluation System (ARIES), AIDS Drug Assistance Program (ADAP) records, Medicaid, and private payer data systems. The HHD contributes data to eHARS, the HIV surveillance system, which assisted the TDSHS with the generation of the HCC for the Houston EMA.

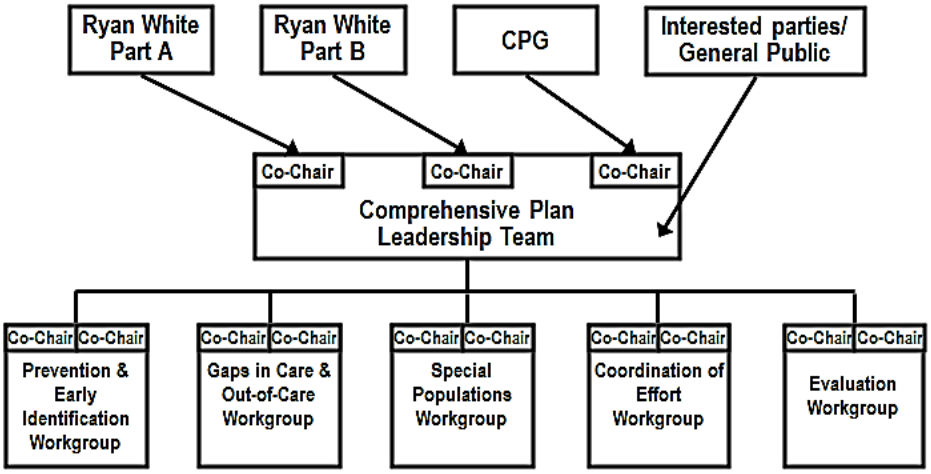
Despite robust local surveillance and programmatic data systems, Houston/Harris County lacks high quality data on PLWH who are recently released from incarceration. Also lacking are care appointments and prescription data on clients external to the Ryan White system and therefore not captured in CPCDMS or ARIES. The Comprehensive Plan Leadership Team greatly emphasized the need for these data to appropriately inform HIV prevention and care services as well as the HCC. Future collaborations between the local and state jurisdictions might seek to address this limitation and facilitate policies or activities to overcome this limiting factor. One such solution might involve remodeling the local data systems, some of which are flexible to jurisdictional needs, to increase their capacity to collect this information. The HHD has already modified its HEDSS database to capture whether or not HIV service linkage clients were released from incarceration in the past 12 months.

Section II: Integrated HIV Prevention and Care Plan

A. Integrated HIV Prevention and Care Plan

The 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan (2017 Comprehensive Plan) Integrated HIV Prevention and Care Plan development process mirrored the 2016 Houston HIV Care Services Needs Assessment process discussed in Section I.D. in many ways. Though meetings occurred in space provided by Harris County Public Health with administrative support by the Ryan White Planning Council (RWPC) Office of Support, and refreshments furnished by the Houston Health Department (HHD), the Integrated HIV Prevention and Care Plan development process was directed by three co-chairs representing Ryan White Program Part A, Ryan White Program Part B, and the Houston HIV Prevention Community Planning Group (CPG), along with consumers, stakeholders, interested parties, and the general public that comprise Comprehensive Plan Leadership Team membership (**Figure 1**). More discussion on collaborations, partnerships, stakeholder involvement, and consumer and community engagement is available in Sections II.B. and II.C.

***Figure 1*: Structure of the 2017-2021 Houston Area Comprehensive HIV Prevention and Care Services Plan Leadership Team and Workgroups, 2016**



The Comprehensive Plan Leadership Team functioned as a steering committee for the Integrated HIV Prevention and Care Plan development process. Development began in October 2015 when the Comprehensive Plan Leadership Team met to set meeting guidelines, review requirements for the 2017 Integrated Plan Guidance, review a draft timeline for 2017 Comprehensive Plan Development, and discuss Leadership Team expectations. The Leadership Team continued to meet throughout the remainder of 2015 through June 2016. Leadership Team tasks included guiding the overall 2017 Comprehensive Plan development process and providing ongoing feedback on structure, timeline, and outputs; offering a broad perspective for the 2017 Comprehensive Plan through reviewing mission, vision, values, guiding principles, and overall HIV prevention and care goals; identifying individuals to serve on the other Comprehensive Plan Workgroups; participating in the design of the community vetting process (e.g., community meetings, etc.), reviewing and providing feedback on Integrated HIV Prevention and Care Plan components of the 2017 Comprehensive Plan. The Comprehensive Plan Leadership Team established the mission, vision, overall goals, and system objectives described below.

2017 Comprehensive Plan Vision and Mission

The 2017 Comprehensive Plan Vision and Mission set a compelling and inspiring image for the Houston Area to achieve by 2021 that guided the development of the 2017 Comprehensive Plan overall goals, system objectives, and strategy specific goals, solutions, benchmarks, and activities.

Vision

The greater Houston area will become a community with an enhanced system of HIV prevention and care. New HIV infections will be reduced to zero. Should new HIV infections occur, every person, regardless of sex, race, color, ethnicity, national origin, age, familial status, marital status, military status, religion, disability, sexual orientation, genetic information, gender identity, pregnancy, or socio-economic circumstance, will have unfettered access to high-quality, life-extending care, free of stigma and discrimination.

Mission

The mission of the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan is to work in partnership with the community to provide an effective system of HIV prevention and care services that best meets the needs of populations living with, affected by, or at risk for HIV.

2017 Comprehensive Plan Overall Goals and Systems Objectives

The 2017 Comprehensive Plan overall goals and system objectives were created to align the 2017 Comprehensive Plan with the goals of the National HIV/AIDS Strategy (NHAS) updated to 2020 as well as replicate specific, quantified, and time-phased (SMART) NHAS indicators at the local level in a way that was responsive to the unique HIV prevention and care needs of the Houston Area.

Overall Goals

To fulfill the mission and vision of the 2017 Comprehensive Plan and make progress toward an ideal system of HIV prevention and care for the Houston Area, the Houston HIV community must complete the following by 2021:

1. Increase community mobilization around HIV in the Greater Houston area (*aligned with NHAS 2020 Goal 1: Reducing New HIV Infections and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic*);
2. Prevent and reduce new HIV infections (*aligned with NHAS 2020 Goal 1: Reducing New HIV Infections*);
3. Ensure that all people living with or at risk for HIV have access to early and continuous HIV prevention and care services (*aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV)*;
4. Reduce the effect of co-occurring conditions that hinder HIV prevention behaviors and adherence to care (*aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV and Goal 3: Reducing HIV-related Disparities and Health Inequities)*;
5. Reduce disparities in the Houston Area HIV epidemic and address the needs of vulnerable populations (*aligned with NHAS 2020 Goal 3: Reducing HIV-related Disparities and*

Health Inequities); and

6. Increase community knowledge around HIV in the Greater Houston area. (*aligned with NHAS 2020 Goal 1: Reducing New HIV Infections, Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV, and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic*).

System Objectives

To replicate the specific, quantified, and time-phased (SMART) national NHAS 2020 indicators at the local level in way that is responsive to the unique HIV prevention and care needs of the Houston Area, the Houston HIV community will accomplish the following by 2021:

1. **Reduce the number of new HIV infections diagnosed in the Houston Area by at least 25% from 1,386 (2014) to ≤1,004** (*NHAS 2020 Indicator 2: Reduce the number of new diagnoses by at least 25% and Indicator 9: Reduce disparities in the rate of new diagnoses by at least 15 percent in the following groups: gay and bisexual men, young Black gay and bisexual men, Black females, and persons living in the Southern United States*);
2. **Maintain and, if possible, increase the percentage of individuals with a positive HIV test result identified through *targeted* HIV testing who are informed of their positive HIV status, beginning at 93.8% (2014)** (*local target based on NHAS 2020 Indicator 1: Increase the percentage of people living with HIV who know their serostatus to at least 90%);*
3. **Increase the proportion of newly-diagnosed individuals linked to clinical HIV care within one month of their HIV diagnosis to at least 85% from 66% (2015)** (*NHAS 2020 Indicator 4: Increase the percentage of newly diagnosed persons linked to HIV medical care within one month of their HIV diagnosis to at least 85%*);

4.1 **Decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year by 25% from 25.9% (2014) to 19.4%** (*DHAP target; reduction in late/concurrent diagnoses is anticipated to yield results pertaining to NHAS 2020 Indicator 8: Reduce the death rate among persons with diagnosed HIV infection by at least 33%*);

4.2 **Decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year among Hispanic and Latino men age 35 and up by 25% from 36.0% (2014) to 27.0%** (*local target based on FY15, FY16, and FY17 EIIHA Plans; reduction in late/concurrent diagnoses is anticipated to yield results pertaining to NHAS 2020 Indicator 8: Reduce the death rate among persons with diagnosed HIV infection by at least 33%*);

5. **Increase the percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart) from 75.0 % (2014) to at least 90.0%** (*local target based on NHAS 2020 Indicator 5: Increase the percentage of persons with diagnosed HIV infection who are retained in HIV medical care to at least 90%*);
6. **Increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period) from 60.0% (2015) to at least 90.0%** (*NHAS 2020 Indicator 5: Increase the percentage of persons with diagnosed HIV infection who are retained in HIV medical care to at least 90%*);
7. **Maintain, and if possible, increase the proportion of Ryan White HIV/AIDS Program clients who are virally suppressed from 80.4% (2014) to at least 90.0%** (*local target based on NHAS 2020 Indicator 6: Increase the percentage of persons with diagnosed HIV infection*

who are virally suppressed to at least 80% and Indicator 10: Increase the percentage of youth and persons who inject drugs with diagnosed HIV infection who are virally suppressed to at least 80 %);

8. **Increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed from 57.0% (2015) to at least 80.0%** (*NHAS 2020 Indicator 6: Increase the percentage of persons with diagnosed HIV infection who are virally suppressed to at least 80%*); and
9. **Increase the number of gay and bisexual men of color and women of color receiving pre-exposure prophylaxis (PrEP) education each year (baseline to be developed) to at least 2,000** (local target based on *NHAS 2020 Indicator 2: Reduce the number of new diagnoses by at least 25% and Indicator 9: Reduce disparities in the rate of new diagnoses by at least 15 percent in the following groups: gay and bisexual men, young Black gay and bisexual men, Black females, and persons living in the Southern United States*).

The 2017 System Objective Evaluation Tool was created to ensure the 2017 Comprehensive Plan system objectives are met or exceeded by 2021 by establishing annual progress targets as well as recommended data sources and notes (**Table 1**).

Table 1: 2017 Comprehensive Plan System Objective Evaluation Tool

Objective to Be Measured	Recommended Data Source (Reference)	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes
❖ OBJECTIVE 1: Number of new HIV infections diagnosed in the Houston Area	TDSHS eHARS	1,386 (2014)	≤1,310	≤1,233	≤1,157	≤1,080	↓ at least 25% to ≤1004 (NHAS target)	Region is EMA
❖ OBJECTIVE 2: Percentage of individuals with a positive HIV test result identified through *targeted* HIV testing who are informed of their HIV+ status	HHD, TDSHS HIV Testing & Awareness Data	93.8% (2015)	93.8%	93.8%	93.8%	93.8%	Maintain or increase ≥93.8% (local target)	Region is Houston/Harris County for HHD; EMA for TDSHS Target exceeds NHAS 90% goal
❖ OBJECTIVE 3: Proportion of newly-diagnosed individuals linked to clinical care within one month of their HIV diagnosis	TDSHS Linkage to Care Data	66% (2015)	69.8%	73.6%	77.4%	81.2%	↑ to at least 85% (NHAS target)	Region is EMA
❖ OBJECTIVE 4.1: Percentage of new HIV diagnoses with an HIV stage 3 diagnosis within one year	TDSHS Late Diagnoses Data	25.9% (2014)	24.6%	23.3%	22.0%	20.7%	↓ at least 25% =19.4% (DHAP target)	Region is EMA
❖ OBJECTIVE 4.2: Percentage of new HIV diagnoses with an HIV stage 3 diagnosis within one year among Hispanic/Latino men age 35 and up	TDSHS Late Diagnoses Data	36% (2014)	34.2%	32.4%	30.6%	28.8%	↓ at least 25% = 27% (local target)	Region is EMA
❖ OBJECTIVE 5: Percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart)	CPCDMS	75.0% (2014)	78%	81%	84%	87%	↑ to at least 90% (NHAS target)	
❖ OBJECTIVE 6: Percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period)	TDSHS Retention Data	61% (2014)	66.8%	72.6%	78.4%	84.2%	↑ to at least 90% (NHAS target)	Region is EMA
❖ OBJECTIVE 7: Proportion of Ryan White HIV/AIDS Program clients who are virally suppressed	CPCDMS	80.4% (2014)	≥80.4%	≥80.4%	≥80.4%	≥80.4%	Maintain or increase ≥80.4% (local target)	
❖ OBJECTIVE 8: Percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed	TDSHS Viral Suppression Data	55% (2014)	60%	65%	70%	75%	↑ to at least 80% (NHAS target)	Region is EMA
❖ OBJECTIVE 9: Number of gay and bisexual men of color and women of color receiving pre-exposure prophylaxis (PrEP) education each year	HHD	To be developed	---	---	---	---	≥2000 (local target)	Among HIV-negative clients seen by HHD frontline staff (i.e. DIS and SLWs) and HHD-funded contractors

In addition to the Comprehensive Plan Leadership Team shown in **Figure 1**, four strategy Workgroups were convened with membership consisting of consumers and other PLWH, as well as stakeholders and subject matter experts, to design goals, solutions, benchmarks, and activities that aligned with the overall goals and systems objectives; NHAS Updated to 2020 goals, steps and indicators; and the HIV prevention and care needs of the Houston Area. A fifth process Workgroup (the Evaluation Workgroup) convened near the end of the 2017 Comprehensive Plan development process to design the monitoring and improvement plan in Section III.

Strategy for HIV Prevention and Early Identification

The first strategy Workgroup was the Prevention and Early Identification (PEI) Workgroup, which met from December 2015 through June 2016. The role of the Prevention and Early Identification Workgroup was to identify goals regarding individuals who are unaware of their HIV status with an emphasis on identifying individuals who are HIV-positive, informing individuals of their HIV status, referring individuals to needed services, and providing linkages to HIV care, in addition to proposing way to better coordinate efforts between Ryan White programs and prevention programs, including HIV prevention, partner notification initiatives, prevention with PLWH, STD prevention, and hepatitis prevention.

The PEI strategy aligned most with the 2017 Comprehensive Plan overall goals to prevent and reduce new HIV infections (*Goal 2 aligned with NHAS 2020 Goal 1: Reducing New HIV Infections*); ensure that all people living with or at risk for HIV have access to early and continuous HIV prevention and care services; infections (*Goal 3 aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV)*; and increase community knowledge around HIV in the greater Houston area (*Goal 6 aligned with NHAS 2020 Goal 1: Reducing New HIV Infections, Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV, and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic*). 2017 Comprehensive Plan system objectives that most aligned with the PEI strategy were Objective 1 to reduce the number of new HIV infections diagnosed in the Houston Area by at least 25% from 1,386 (2014) to ≤1,004 (*NHAS 2020 Indicator 2and Indicator 9)*; Objective 2 to maintain and, if possible, increase the percentage of individuals with a positive HIV test result identified through *targeted* HIV testing who are informed of their positive HIV status, beginning at 93.8% (2014) (*aligned with NHAS 2020 Indicator 1);* Objective 3 to increase the proportion of newly-diagnosed individuals linked to clinical HIV care within one month of their HIV diagnosis to at least 85% from 66% (2015) (*NHAS 2020 Indicator 4*); Objective 4.1 to decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year by 25% from 25.9% (2014) to 19.4% (*with anticipated results pertaining to NHAS 2020 Indicator 8)*; and Objective 4.2 to decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year among Hispanic and Latino men age 35 and up by 25% from 36.0% (2014) to 27.0% (*with anticipated results pertaining to NHAS 2020 Indicator 8).* The PEI strategy aligned with the Houston EMA HIV Care Continuum (HCC) steps to diagnose and link to care all PLWH in the Houston Area.

Prevention and Early Identification Goals, Solutions, Benchmarks, and Activities

The PEI Workgroup developed strategy goals as long-range desired outcomes to direct creation of prevention and early identification solutions, benchmarks, and activities. All PEI strategy solutions, benchmarks, and activities were designed to advance the following goals:

1. Reduce new HIV infections
2. Increase awareness of HIV
3. Increase awareness of HIV status
4. Ensure early entry into care
5. Increase access to antiretroviral therapy (ART) for both treatment and prevention
6. Address the HIV prevention needs of high incidence communities
7. Reduce community risk factors for HIV infection

From these goals, the PEI Workgroup developed solutions as approaches to advancing the vision, mission, overall goals, and system objectives of the 2017 Comprehensive Plan. Each PEI solution was aligned with pertinent NHAS Updated to 2020 steps (**Table 2**).

To quantify and evaluate progress on PEI strategy goals and solutions, 16 relevant benchmarks with 22 distinct measures were developed from NHAS Updated to 2020 indicators, system objectives, Healthy People 2020 goals, and local targets, present in the Benchmark Evaluation Tool for the PEI strategy (**Table 3**). It is anticipated that these measures will meet or exceed final targets by 2021.

The PEI Workgroup met multiple times to develop activities that would meet the HIV prevention and care needs of the Houston Area community and align with strategy goals and solutions. Each PEI activity corresponds to a PEI strategy solution and has a description of the activity, the responsible party identified for implementation of the activity (as well as potential non-responsible party partners and stakeholders), the timeframe for completion, resources required for implementation, the target populations served by the activity (if applicable), data indicator that the activity was successfully completed, and a priority ranking (**Table 4**).

***Table2* : 2017 Comprehensive Plan PEI Strategy Solution Alignment with NHAS Updated to 2020 Goal Steps**

2017 PEI Solutions	Corresponding NHAS Updated to 2020 Goal Steps
1. Adopt high-impact structural interventions such as governmental policy change and population-based efforts that destigmatize HIV risk reduction and help create unfettered access to HIV information and proven prevention tools	• Step 1.A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated • Step 1.B: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches • Step 1.C: Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention [PrEP], and transmission • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
2. Expand opportunities for HIV testing for the general public and in high-incidence populations and communities	• Step 1.A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated • Step 1.B: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches • Step 1.C: Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention [PrEP], and transmission • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
3. Increase the timeliness of the linkage to care system for newly-diagnosed HIV+ individuals	• Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities
4. Expand prevention with positives including treatment adherence and Treatment as Prevention (TasP), HIV prophylaxis including Pre-Exposure Prophylaxis (PrEP), and behavior change interventions for HIV+ individuals and their partners*	• Step 1.C: Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention [PrEP], and transmission • Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.A: Reduce HIV-related disparities in communities at high risk for HIV infection • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
5. Expand opportunities for HIV and sexual health education for the general public an high-incidence populations and communities	• Step 3.A: Reduce HIV-related disparities in communities at high risk for HIV infection • Step 4.A: Increase the coordination of HIV programs across the Federal government and between Federal agencies and State, territorial, Tribal, and local governments • Step 4.B: Develop improved mechanisms to monitor and report on progress toward achieving national goals

Table 3: 2017 Comprehensive Plan PEI Strategy Benchmark Evaluation Tool

Benchmark to Be Measured	Recommended Data Source (Reference)	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes
❖ BENCHMARK 1: Number of new HIV infections diagnosed in the Houston Area	TDSHS eHARS	1,386 (2014)	≤1,310	≤1,233	≤1,157	≤1,080	↓ at least 25% to ≤1004 (NHAS target)	Region is EMA
❖ BENCHMARK 2: Number of HIV/STD brochures distributed	HHD	88,700 (2014)	88,700 (2014)	88,700 (2014)	88,700 (2014)	88,700 (2014)	Maintain =88,700 (local target)	Region is Houston/Harris County
❖ BENCHMARK 3: Number of publicly-funded targeted and routine HIV tests								
Number of publicly-funded *targeted* HIV tests	HHD, TDSHS HIV Testing & Awareness Data	10,109 (2015)	10,109 (2015)	10,109 (2015)	10,109 (2015)	10,109 (2015)	Maintain = 10,109 (local target)	Region is Houston/Harris County for HHD; EMA for TDSHS
Number of publicly-funded *routine* HIV tests	HHD, TDSHS HIV Testing & Awareness Data	117,610 (2015)	117,610 (2015)	117,610 (2015)	117,610 (2015)	117,610 (2015)	Maintain = 117,610 (local target)	Region is Houston/Harris County for HHD; EMA for TDSHS
❖ BENCHMARK 4: Positivity rate for publicly-funded *targeted* HIV testing	HHD, TDSHS HIV Testing & Awareness Data	3.01% (2015)	3.01%	3.01%	3.01%	3.01%	Maintain = 3.01% (local target)	Region is Houston/Harris County for HHD; EMA for TDSHS
❖ BENCHMARK 5: Percentage of individuals with a positive HIV test result identified through *targeted* HIV testing who are informed of their HIV+ status	HHD, TDSHS HIV Testing & Awareness Data	93.8% (2015)	93.8%	93.8%	93.8%	93.8%	Maintain or increase ≥93.8% (local target)	Region is Houston/Harris County for HHD; EMA for TDSHS Target exceeds NHAS 90% goal
❖ BENCHMARK 6: Percentage of new HIV diagnoses with an HIV stage 3 diagnosis within one year	TDSHS Late Diagnoses Data	25.9% (2014)	24.6%	23.3%	22.0%	20.7%	↓ at least 25% =19.4% (DHAP target)	Region is EMA
❖ BENCHMARK 7: Proportion of newly-diagnosed individuals linked to clinical care within one month of their HIV diagnosis	TDSHS Linkage to Care Data	66% (2015)	69.8%	73.6%	77.4%	81.2%	↑ to at least 85% (NHAS target)	Region is EMA
❖ BENCHMARK 8: Proportion of Ryan White HIV/AIDS Program clients who are virally suppressed	CPCDMS	80.4% (2014)	≥80.4%	≥80.4%	≥80.4%	≥80.4%	Maintain or increase ≥80.4% (local target)	
Benchmark to Be Measured	Recommended	Baseline	2017	2018	2019	2020	2021	Notes

	Data Source (Reference)	(year)	Target	Target	Target	Target	Target	
❖								
❖ BENCHMARK 9: Percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed	TDSHS Viral Suppression Data	55% (2014)	60%	65%	70%	75%	↑ to at least 80% (NHAS target)	Region is EMA
❖ BENCHMARK 10: Number of new HIV infections in high HIV/STD morbidity zip codes targeted for intervention								
Sharpstown (77036 and 77074)	HHD, eHARS	56 (2014)	53	50	48	45	↓25% =42 (NHAS target)	
Sunnyside/South Park (77033 and 77051)	HHD, eHARS	34 (2014)	32	31	29	28	↓25% =26 (NHAS target)	
Greater 5th Ward (77020 and 77026)	HHD, eHARS	28 (2014)	27	25	24	22	↓25% =21 (NHAS target)	
Acres Home (77088 and 77091)	HHD, eHARS	32 (2014)	30	29	27	26	↓25% =24 (NHAS target)	
Montrose (77006)	HHD, eHARS	26 (2014)	25	24	22	21	↓25% =20 (NHAS target)	
❖ BENCHMARK 11: Rate of STD infection per 100,000 population (Chlamydia, gonorrhea, and primary and secondary syphilis)	HHD, STDMIS	CT: 563.7 GC: 162.5 P&S: 8.2 (2014)	CT: 553.0 GC: 161.4 P&S: 7.9	CT: 542.3 GC: 160.3 P&S: 7.6	CT: 531.7 GC: 159.2 P&S: 7.3	CT: 521.0 GC: 158.1 P&S: 7.0	CT: =510.3 (local target) GC: ↓0.6%/ year =157.0 (local target) P&S: 6.7 (HP 2020 males target)	Region is Houston/Harris County CT/GC targets based on available historical data
❖ BENCHMARK 12: Number of condoms distributed	HHD	450,000 (2014)	450,000	450,000	450,000	450,000	Maintain =450,000 (local target)	Includes mass and targeted condom distribution efforts

Benchmark to Be Measured	Recommended Data Source	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes

	(Reference)							
❖ BENCHMARK 13: Number of high-risk individuals that completes an evidence-based behavioral intervention to reduce risk for HIV	HHD	4,944 (2015)	4,944	4,944	4,944	4,944	Maintain =4,944 (local target)	Includes completion of ILI or GLI intervention only (not CLI)
❖ BENCHMARK 14: Percentage of prevention and care staff receiving standardized pre-exposure prophylaxis (PrEP) training	HHD, RWGA, TRG	To be developed	---	---	---	---	100% (local target)	
❖ BENCHMARK 15: Number of MSM and transgender persons of color receiving pre-exposure prophylaxis (PrEP) education	Project PrIDE	To be developed	---	---	---	---	2,000 annually (local target)	Among HIV-negative clients seen by HHD frontline staff (i.e. DIS and SLWs) and HHD-funded contractors
❖ BENCHMARK 16: Percentage of HIV-negative clients screened for PrEP eligibility	HHD Project PrIDE, ECLIPS, Maven	To be developed	---	---	---	---	10% increase (local target)	Among HIV-negative clients seen by HHD frontline staff (i.e., DIS and SLWs) and HHD-funded contractors

Table 4: 2017 Comprehensive Plan PEI Strategy Activities

Solution: 1. Adopt high-impact structural interventions such as governmental policy change and population-based efforts that destigmatize HIV risk reduction and help create unfettered access to HIV information and proven prevention tools						
Activity	**Responsible Parties (Name of entity)**	**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Explore opportunities for cross-representation between the Houston HIV community and School Health Advisory Councils (SHAC) for all school districts within the Houston area.	CPG; HHD	Annually	HHD CPG Support Staff; Task Forces (Youth Task Force)	Youth	Cross-representation occurred; SHAC minutes; Youth Task Force minutes	**4**
2. Educate Houston Area faith community leadership on HIV information, risk reduction, and prevention tools.	CPG;	Annually	HHD CPG Support Staff; Urban AIDS Ministry	Faith communities	Urban AIDS Ministry minutes; Speakers Bureau evaluations	**3**
3. Adopt PrEP uptake marketing models designed to remove stigma.	HHD	2017	HHD PrEP Coordinator; Project PrIDE	HIV negative individuals; partners of HIV positive individuals	Materials created	**1**
4. Educate public officials on changing governmental polices that create barriers to HIV prevention information and tools (e.g. repeal the ban on syringe access, access to PrEP, adopt comprehensive sexuality education in schools, etc.).	HHD; CPG; *Potential non-RP partners:* Positive Organizing Project; Task Forces; Texas HIV/AIDS Coalition	Annually	HHD staff; HHD CPG Support Staff; HHD PrEP Coordinator; RWPC-OS	Public officials; policy-level interventions	Education occurred; local/state policy changes	**2**

Solution: 2. Expand opportunities for HIV testing for the general public and in high-incidence populations and communities.							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Expand education activities into new MSM and transgender specific community events	HHD	*Potential non-RP partners:* CPG; Task Forces	2020	HHD staff & contractors	General public; targeted populations	Record that testing occurred at event including location, population targeted (if applicable), and number of tests	**3**
2. Disseminate routine testing implementation toolkit to targeted private and non-Ryan White funded providers and FQHCs to facilitate linkage to care. *(See also: Coordination of Effort Strategy Solution 1 Activity 1 and Special Populations Strategy Solution 1 Activity 3)*	RWPC-OS	*Potential non-RP partners:* TDSHS; AETC; HHS	Annually	TDSHS, Test Texas, Texas HIV/AIDS Coalition, and Baylor College of Medicine	Status unaware individuals	Toolkits disseminated	**2**
3. Expand distribution of HIV testing and PrEP information and resources to healthcare providers *(See also: Special Populations Strategy Solution 2 Activity 3)*	HHD; CPG		Annually	HHD CPG support staff; volunteers	HIV negative and status unaware in high-incidence areas	Information distributed; New diagnoses in high-incidence areas decreased	**1**
4. Education Task Forces, community groups, funded agencies, and non-HHD funded agencies on availability of the Mobile Testing Unit	HHD	*Potential non-RP partners:* HHD Clinical Services	As needed	HHD staff	Task Forces; community groups; funded agencies; non-HHD funded agencies	Education occurred; Mobile Unit schedule	**4**

Solution: 3. Increase the timeliness of the linkage to care for newly-diagnosed HIV+ individuals							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Create and distribute rural referral resource list to DIS.	TRG		Annually	TRG staff	Rural PLWH	List created and distributed; list regularly updated	**2**
2. Explore opportunities to partner with community health workers to support timely linkage to care.	RWGA; HHD		2021	RWGA staff; HHD staff	PLWH – general	Opportunities explored	**3**
3. Pursue strategies to reduce time period between diagnosis and entry into HIV medical care to facilitate timely linkage to care.	HHD; RWGA; RWPC	*Potential non-RP partners:* all HIV care providers	2017	HHD staff; RWGA staff; RWPC-OS; contracted providers	Newly diagnosed PLWH; incoming consumers	Record of strategies pursued	**1**

Solution 4. Expand prevention with positives including treatment adherence and Treatment as Prevention (TasP), HIV prophylaxis including Pre-Exposure Prophylaxis (PrEP), and behavior change interventions for HIV+ individuals and their partners.

Activity	Responsible Parties (Name of entity)		Timeframe (By when)	Resources (Funding, staff, etc.)	Target Population	Data Indicator	Priority (rank by #)
1. Adopt PrEP uptake marketing models designed to remove stigma.	HHD		2017	HHD PrEP Coordinator; Project PrIDE	HIV negative individuals; partners of HIV positive individuals	Materials created	**3**
2. Coordinate a workgroup to develop and secure funding for a public service announcement detailing the benefits of treatment adherence, treatment as prevention, and retention in care *(See also: Gaps in Care Strategy Solution 2 Activity 1)*	RWPC	*Potential non-RP partners:* HHD for distribution	2019	RWPC-OS; volunteers	PLWH and partners; at-risk for falling out of care; Out of Care	Public service announcement created	**2**
3. Expand materials education PLWH and partners about PreP and treatment as prevention.	HHD		2018	HHD staff; HHD PrEP Coordinator	PLWH; partners of PLWH	Materials created	**3**
4. Hold consumer PrEP and treatment as prevention education forums.	RWPC; HHD	*Potential non-RP partners*: AETC	Annually	RWPC-OS; HHD staff; volunteers; possibly pharma rep if not COI	PLWH; partners of PLWH	Forums occurred; evaluations	**1**
5. Explore feasibility of same-day PrEP initiation for high-risk HIV negative individuals. *[Staff note: discussion centered on rapid PrEP initiation for high-risk negative individuals following HIV/STI testing]*	HHD	*Potential non-RP partners:* RWPC-OS	2019	HHD PrEP Coordinator; RWPC-OS Planner	High-risk HIV negative	Feasibility study report	**5**

Solution 5. Expand opportunities for HIV and sexual health education for the general public and high-incidence populations and communities.

Activity	Responsible Parties (Name of entity)		Timeframe (By when)	Resources (Funding, staff, etc.)	Target Population	Data Indicator	Priority (rank by #)
1. Identify methods for measuring local online HIV and sexual health information seeking.	HHD		2017	HHD PrEP Coordinator; HHD staff	N/A	Methods identified; resulting measurements	**1**
2. Coordinate a workgroup to develop and secure funding for a public service announcement detailing the benefits of treatment adherence, treatment as prevention, and retention in care *(See also: Gaps in Care Strategy Solution 2 Activity 1)*	RWPC	*Potential non-RP partners:* HHD for distribution	2019	RWPC-OS; volunteers	PLWH and partners; at-risk for falling out of care; Out of Care	Public service announcement created	**2**
3. Explore opportunities to expand community access to local academic research findings. *(See also: Coordination of Effort Strategy Solution 3 Activity 7)*	HHD (Sharing Science Symposium); RWPC-OS		2020	HHD staff; RWPC-OS staff	General public	Opportunities identified	**3**

Strategy for Bridging Gaps in Care and Reaching the Out of Care

The second strategy Workgroup was the Bridging Gaps in Care and Reaching the Out of Care (Gaps) Workgroup, which met from January 2016 through July 2016. The role of the Gaps Workgroup was to identify goals regarding individuals who are aware of their HIV status but who are not in care (i.e., unmet need/out of care) with an emphasis on ways to improve retention in care, propose solutions for closing gaps in the current system of HIV prevention and care services in the Houston Area, and propose solutions for addressing overlaps, or duplication, of services in the current system.

The Gaps strategy most aligned with the 2017 Comprehensive Plan overall goals to ensure that all people living with or at risk for HIV have access to early and continuous HIV prevention and care services (*Goal 2 aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV*); reduce the effect of co-occurring conditions that hinder HIV prevention behaviors and adherence to care (*Goal 3 aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV and Goal 3: Reducing HIV-related Disparities and Health Inequities)*; and reduce disparities in the Houston Area HIV epidemic and address the needs of vulnerable populations (*Goal 5aligned with NHAS 2020 Goal 3: Reducing HIV-related Disparities and Health Inequities)*. 2017 Comprehensive Plan system objectives that most aligned with the Gaps strategy were Objective 5 to increase the percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart) from 75.0 % (2014) to at least 90.0% (*NHAS 2020 Indicator 5*); Objective 6 to increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period) from 60.0% (2015) to at least 90.0% (*NHAS 2020 Indicator 5);* Objective 7 to maintain, and if possible, increase the proportion of Ryan White HIV/AIDS Program clients who are virally suppressed from 80.4% (2014) to at least 90.0% (*NHAS 2020 Indicator 6 and Indicator 10)*; and Objective 8 to increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed from 57.0% (2015) to at least 80.0% (*NHAS 2020 Indicator 6)*. The Gaps strategy aligned with the Houston EMA HCC steps to link/re-link to care, retain in care, and support viral suppression for all PLWH in the Houston Area.

<u>Bridging Gaps in Care and Reaching the Out of Care Goals, Solutions, Benchmarks, and Activities</u>

The Gaps Workgroup developed strategy goals as long-range desired outcomes to direct creation of solutions, benchmarks, and activities to bridge service gaps and reduce unmet need. As such, Gaps strategy goals were organized to mirror the Houston EMA HCC. All Gaps strategy solutions, benchmarks, and activities were designed to advance the following goals:

1. Ensure early entry into care
2. Reduce Unmet Need
3. Increase retention in continuous care
4. Improve health outcomes for PLWH
5. Increase viral suppression

From these goals, the Gaps Workgroup developed solutions as approaches to advancing the vision, mission, overall goals, and system objectives of the 2017 Comprehensive Plan. Each Gaps solution was aligned with pertinent NHAS Updated to 2020 steps (**Table 5**).

To quantify and evaluate progress on Gaps strategy goals and solutions, 6 relevant benchmarks were developed from NHAS Updated to 2020 indicators, system objectives, and local targets, present in the Benchmark Evaluation Tool for the Gaps strategy (**Table 6**). It is anticipated that these measures will meet or exceed final targets by 2021.

The Gaps Workgroup met multiple times to develop activities that would meet the HIV prevention and care needs of the Houston Area community and align with strategy goals and solutions. Each Gaps activity corresponds to a Gaps strategy solution and description of the activity, the responsible party identified for implementation of the activity (as well as potential non-responsible party partners and stakeholders), the timeframe for completion, resources required for implementation, the target populations served by the activity (if applicable), data indicator that the activity was successfully completed, and a priority ranking (**Table 7**).

***Table 5*: 2017 Comprehensive Plan Gaps Strategy Solution Alignment with NHAS Updated to 2020 Goal Steps**

2017 Gaps Solutions	Corresponding NHAS Updated to 2020 Goal Steps
1. Target linkage to care efforts to vulnerable points in the HIV system (e.g. at initial diagnosis, before the first medical visit, after the initial visit, upon release from incarceration, unstably housed, transitioning from pediatric to adult care, etc.) where individual are more likely to not seek care or to fall out of care, particularly newly-diagnosed PLWH	• Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status • Step 4.A: Increase the coordination of HIV programs across the Federal government and between Federal agencies and State, territorial, Tribal, and local governments
2. Expand retention and engagement activities with in-care PLWH, focusing on community education system enhancements, and health literacy	• Step 1.C: Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention [PrEP], and transmission • Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
3. Adopt strategies to retain and/or reengage PLWH to return to care, particularly those receiving care outside of Ryan White	• Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.A: Reduce HIV-related disparities in communities at high risk for HIV infection • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status

Table 6: 2017 Comprehensive Plan Gaps Strategy Benchmark Evaluation Tool

Benchmark to Be Measured	Recommended Data Source (Reference)	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes
❖ BENCHMARK 1: Proportion of PLWH with Unmet Need	TDSHS Unmet Need Data	25.0% (2014)	23.4%	21.8%	20.2%	18.6%	↓ 1.6% annually =17.0% (local target)	Region is EMA Target based on available historic data (2010= 33.1%)
❖ BENCHMARK 2: Proportion of newly-diagnosed individuals linked to clinical care within one month of their HIV diagnosis	TDSHS Linkage to Care Data	66% (2015)	69.8%	73.6%	77.4%	81.2%	↑ to at least 85% (NHAS target)	Region is EMA
❖ BENCHMARK 3: Percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart)	CPCDMS	75.0% (2014)	78%	81%	84%	87%	↑ to at least 90% (NHAS target)	
❖ BENCHMARK 4: Percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period)	TDSHS Retention Data	61% (2014)	66.8%	72.6%	78.4%	84.2%	↑ to at least 90% (NHAS target)	Region is EMA
❖ BENCHMARK 5: Proportion of Ryan White HIV/AIDS Program clients who are virally suppressed	CPCDMS	80.4% (2014)	≥80.4%	≥80.4%	≥80.4%	≥80.4%	Maintain or increase ≥80.4% (local target)	
❖ BENCHMARK 6: Percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed	TDSHS Viral Suppression Data	55% (2014)	60%	65%	70%	75%	↑ to at least 80% (NHAS target)	Region is EMA

Table 7: 2017 Comprehensive Plan Gaps Strategy Activities

Solution: 1. Target linkage to care efforts to vulnerable points in the HIV system (e.g. at initial diagnosis, before the first medical visit, after the initial visit, upon release from incarceration, unstably housed, transitioning from pediatric to adult care, etc.) where individual are more likely to not seek care or to fall out of care, particularly newly-diagnosed PLWH.

Activity	Responsible Parties (Name of entity)	Timeframe (By when)	Resources (Funding, staff, etc.)	Target Population	Data Indicator	Priority (rank by #)
1. Assess the feasibility of providing Ryan White-funded buddy/peer mentoring support to incoming clients during first eligibility and primary care appointment(s).	RWGA *Potential Non-RP partners:* RWPC-OS; RWPC	2017	RWGA staff; RWPC-OS; volunteers	Incoming clients	Report completed for feasibility study	**1**
2. Revise case management, service linkage, and outreach services Standards of Care and policies to incorporate warm handoff protocols.	RWGA *Potential Non-RP partners:* HHD; RWPC	2017; revisit annually	RWGA staff; RWPC-OS; HHD Hearts program staff; volunteers	Incoming clients	Changes made to Standards of Care; increase in retention per CPCDMS	**3**
3. Design Standards of Care ensuring follow-up contact with newly diagnosed consumers throughout first year of diagnosis.	RWGA *Potential Non-RP partners:* HHD; RWPC	2017; revisit annually	RWGA staff; RWPC-OS; HHD Hearts program staff; volunteers	Newly diagnosed PLWH	Changes made to Standards of Care; increase in retention per CPCDMS	**2**
4. Provide case managers with training to improve skills for building referral networks for appropriate support group, mental health, and substance abuse resources.	RWGA; TRG	Annually	RWGA staff; TRG staff	Case managers	Training provided	**5**
5. Develop a process to provide regular updates on Ryan White system developments and resources to targeted private providers.	RWPC-OS	2018	RWPC-OS	Private providers; PLWH seeing private providers	Process developed; list of targeted providers generated	**4**

Solution: 2. Expand retention and engagement activities with in-care PLWH, focusing on community education system enhancements, and health literacy							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Coordinate a workgroup to develop and secure funding for a public service announcement detailing the benefits of treatment adherence, treatment as prevention, and retention in care *(See also: Prevention and Early Identification Strategy 4 Activity 2)*	RWPC	*Potential non-RP partners:* HHD for distribution	2019	RWPC-OS; volunteers	PLWH and partners; at-risk for falling out of care; Out of Care	Public service announcement created	**1**
2. Assess consumer-preferred alternative hours of operation for primary care sites as a component of client satisfaction surveys.	RWGA; TRG		2020	RWGA staff; TRG staff	RW clients	Client satisfaction survey tool updated; client satisfaction surveys	**7**
3. Collaborate with the City of Houston Housing and Community Development Department on development of the Houston HOPWA care continuum and expansion of engagement and retention activities. *(See also: Special Populations Strategy Solution 3 Activity 2)*	RWPC-OS	*Potential non-RP partners:* HCD	2018	RWPC-OS	HOPWA/housing clients; homeless PLWH	HOPWA care continuums created; engagement and retention activities developed and implemented	**5**
4. Expand the Road to Success consumer training program to housing sites.	RWPC-OS; RWP; RWGA; TRG	*Potential non-RP partners:* HCD; housing sites	Annually	RWPC-OS; RWGA staff; TRG staff	HOPWA/housing clients	Road to Success agenda; evaluations	**4**
5. Evaluate, adjust, and distribute existing social media materials to increase consumer and community health literacy.	RWPC; HHD; CPG		2019	RWPC; HHD; CPG support staff; volunteers; existing health literacy campaigns	General public	Resulting materials; record of distribution	**6**
6. Evaluate the feasibility of establishing a site or sites with community partners for PLWH experiencing homelessness to safely store and access medications. *(See also: Special Populations Strategy Solution 2 Activity 6)*	RWPC-OS; RWGA	*Potential non-RP partners:* City of Houston; Homeless Coalition; homeless services providers	2018	RWPC-OS; RWGA staff	Homeless PLWH	Report completed for feasibility study	**2**
7. Assess current level of risk reduction counseling provided through Primary Care, focusing particularly on promotion of treatment as prevention.	RWGA		2018	RWGA staff	RW clients	Assessment report	**3**

Solution: 3. Adopt strategies to retain and/or reengage PLWH to return to care, particularly those receiving care outside of Ryan White							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Study the feasibility of allowing non-Ryan White providers CPCDMS access to health information to support re-linkage. *(See Also: Coordination of Effort Strategy Solution 5 Activity 1)*	RWGA	*Potential non-RP partners:* Local hospital systems	2017	RWGA staff; Pam Green	Out of Care PLWH	Report completed for feasibility study	**1**
2. Explore and, if appropriate, implement best practices for incentivization for providers to increase retention and viral suppression. [Staff clarification: incentivization in this instance refers to creating an incentive for providers to improve retention and viral suppression among their clients, not direct incentivization; incentiviation does not necessarily imply a financial incentive]	RWGA; RWPC-OS	*Potential non-RP partners:* RWPC	2021	RWGA staff; RWPC-OS; volunteers	Providers; clients	Best practices list created; if appropriate, incorporated into HTBMN process	**3**
3. Identify Houston area hospitals serving highest number of HIV positive patients, and target for dialog about ways to interface with the Ryan White system for re-linkage.	HHD; RWGA	*Potential non-RP partners:* Local hospital systems; agencies	2019	HHD Surveillance staff; RWGA staff; Pam Green	Local hospitals; Out of Care PLWH	List of hospitals generated (HHD); record of contact made to hospitals	**2**
4. Contact Health Departments in other jurisdictions and begin dialog regarding success and opportunities for working with health insurance providers to identify and reengage Out of Care individuals.	RWPC-OS		2017	RWPC-OS	Out of Care PLWH; PLWH with private/public insurance	Record that discussion occurred; success and opportunities applicable to Houston generated	**4**

Strategy to Address the Needs of Special Populations

The third strategy Workgroup was the Addressing the Needs of Special Populations (SP) Workgroup, which met from December 2015 through July 2016. The role of the SP Workgroup was to identify any emerging special populations not included in the last Houston Area Comprehensive HIV & Care Services Plan (2012-14, extended through 2016). Comprehensive Plan (selection of emerging special populations had to be data-driven); identify goals for improving HIV prevention and care for members of special populations, and propose solutions for meeting the HIV prevention and care services needs of each special population.

The SP strategy most aligned with the 2017 Comprehensive Plan overall goals to increase community mobilization around HIV in the Greater Houston area (*Goal 1 aligned with NHAS 2020 Goal 1: Reducing New HIV Infections and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic)*; ensure that all people living with or at risk for HIV have access to early and continuous HIV prevention and care services (*Goal 3 aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV); r*educe the effect of co-occurring conditions that hinder HIV prevention behaviors and adherence to care (*Goal 4 aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV and Goal 3: Reducing HIV-related Disparities and Health Inequities)*; and reduce disparities in the Houston Area HIV epidemic and address the needs of vulnerable populations (*Goal 5 aligned with NHAS 2020 Goal 3: Reducing HIV-related Disparities and Health Inequities)*. 2017 Comprehensive Plan system objectives that most aligned with the SP strategy were Objective 1 to reduce the number of new HIV infections diagnosed in the Houston Area by at least 25% from 1,386 (2014) to ≤1,004 (*NHAS 2020 Indicator 9: Reduce disparities in the rate of new diagnoses by at least 15 percent in the following groups: gay and bisexual men, young Black gay and bisexual men, Black females, and persons living in the Southern United States*); Objective 2 to maintain and, if possible, increase the percentage of individuals with a positive HIV test result identified through *targeted* HIV testing who are informed of their positive HIV status, beginning at 93.8% (2014) (*NHAS 2020 Indicator 1: Increase the percentage of people living with HIV who know their serostatus to at least 90%);* Objective 4.2 to decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year among Hispanic and Latino men age 35 and up by 25% from 36.0% (2014) to 27.0% (*local target based on FY15, FY16, and FY17 EIIHA Plans; reduction in late/concurrent diagnoses is anticipated to yield results pertaining to NHAS 2020 Indicator 8);* and Objective 9 to increase the number of gay and bisexual men of color and women of color receiving pre-exposure prophylaxis (PrEP) education each year (baseline to be developed) to at least 2,000 (*NHAS 2020 Indicator 2: Reduce the number of new diagnoses by at least 25% and Indicator 9: Reduce disparities in the rate of new diagnoses by at least 15 percent in the following groups: gay and bisexual men, young Black gay and bisexual men, Black females, and persons living in the Southern United States*). The SP strategy aligned with all steps of the Houston EMA HCC steps as it relates to diagnosis, linkage/re-linkage to care, retention in care, and viral suppression for special populations in the Houston Area.

Definitions of Special Populations

After review of local epidemiological data, needs assessment/special study data, service utilization data, and the NHAS Updated to 2020, the SP selected and defined the 2017 Comprehensive Plan Special Populations according to the following rationale:

1. **Youth** – People living with or at risk for HIV aged 13-24 years. Youth represent one of the fastest growing populations experiencing new diagnoses in the Houston Area, particularly young MSM of color. Youth also have unique challenges with securing employment and healthcare coverage. Those with healthcare coverage through a parent or guardian may encounter fear of disclosure or stigma as a barrier to seeking needed HIV prevention and care services.
2. **Homeless** – People living with or at risk for HIV who lack a fixed, regular, and adequate nighttime residence, including those who live in locations not meant for human habitation such as public parks and streets, those who live in or are transitioning from temporary housing or shelters, and those who have persistent housing instability. Housing services is one of the most needed but least accessible services in the Houston Area, and just over a quarter of all PLWH surveyed in the 2016 Houston Area HIV Care Services Needs Assessment reported currently experiencing housing instability (see Section I.D.). Individuals experiencing homelessness have unique challenges to safe medication storage and accessing eligibility documentation that are not experienced by the general Houston population.
3. **Incarcerated/Recently Released (I/RR)** – People living with or at-risk for HIV who are currently incarcerated in the jail or prison system or have been released from jail or prison within the past 12 months. Status unaware incarcerated individuals who leave jail before the 14 day medical assessment and intake do not experience the benefit of HIV testing in the Houston Area. People living with or at-risk for HIV with felony charges have substantially higher difficulty accessing housing than the general Houston population.
4. **Injection Drug Users (IDU) –** People living with or at-risk for HIV who inject medications or drugs, including illegal drugs, hormones, and cosmetics/tattooing. Injection drug use is one of the highest estimated HIV transmission risk per exposure modes of HIV transmission. Individuals with substance use concerns have more difficulty accessing services than the general Houston population.
5. **Men who have Sex with Men (MSM) –** People living with or at-risk for HIV who engage in male-to-male sexual practices and identify as gay or bisexual, those who engage in male-to-male sexual practices and do not identify as gay or bisexual, and those who engage in gay or bisexual male culture regardless of gender identity. MSM make up the largest proportions of both PLWH and new diagnoses in the Houston Area, though many still experience homophobia, rejection from family members, and HIV stigma related to sexual orientation.
6. **Transgender and Gender Non-conforming –** People living with or at-risk for HIV who cross or transcend culturally-defined categories of gender. Transgender and gender non-conforming individuals are often not accurately reflected in epidemiologic data, and share an unequal HIV burden as a result of transphobia, physical and sexual assault, and engaging in sex work.
7. **Women of Color –** People living with or at-risk for HIV who identify racially or ethnically as Black/African American, Hispanic/Latina, or multiracial women, regardless of sex at birth. Women of color experience higher HIV prevalence and new diagnoses than any other women in the Houston Area. Women of color also experience intersections of racism and sexism,

status as primary caretakers in families with children or elderly members, and high proportions of late diagnoses compared to the general Houston population.

8. **Aging** – People living with or at risk for HIV aged 50 years and older; Aging present the highest proportions of late diagnoses and, by 2021, will account for the majority of PLWH in the Houston Area. Long-term survivors experience challenges not typically experienced by younger PLWH, such as AIDS Survivor Syndrome, lack of retirement or income resources, and age-related co-morbidities caused or affected by HIV medications.

Special Populations Goals, Solutions, Benchmarks, and Activities

The SP Workgroup developed strategy goals as long-range desired outcomes to direct creation of solutions, benchmarks, and activities to address the needs of people living with or at-risk for HIV. All SP strategy solutions, benchmarks, and activities were designed to advance the following goals:

1. Prevent new HIV infections among the special populations of youth, homeless, IRR from jail or prison, IDU, MSM, transgender and gender non-conforming, women of color, and aging
2. Reduce barriers to HIV prevention and care for the special populations of youth, homeless, IRR from jail or prison, IDU, MSM, transgender and gender non-conforming, women of color, and aging
3. Strengthen the cultural and linguistic competence of the HIV prevention and care system

The SP Workgroup also understood definitions of "culture" and "health" in activities relating to this goal to align with current Office of Minority Health National Cultural and Linguistically-Appropriate Services Standards

From these goals, the SP Workgroup developed solutions as approaches to advancing the vision, mission, overall goals, and system objectives of the 2017 Comprehensive Plan. Each SP solution was aligned with pertinent NHAS Updated to 2020 steps (**Table 8**).

To quantify and evaluate progress on SP strategy goals and solutions, 4 relevant benchmarks with 27 measures were developed from NHAS Updated to 2020 indicators, system objectives, and local targets, present in the Benchmark Evaluation Tool for the SP strategy (**Table 9**). It is anticipated that these measures will meet or exceed final targets by 2021.

The SP Workgroup met multiple times to develop activities that would meet the HIV prevention and care needs of the Houston Area community and align with strategy goals and solutions. Each SP activity corresponds to a SP strategy solution and has a description of the activity, the responsible party identified for implementation of the activity (as well as potential non-responsible party partners and stakeholders), the timeframe for completion, resources required for implementation, the target populations served by the activity (if applicable), data indicator that the activity was successfully completed, and a priority ranking (**Table 10**).

***Table 8*: 2017 Comprehensive Plan SP Strategy Solution Alignment with NHAS Updated to 2020 Goal Steps**

2017 SP Solutions	Corresponding NHAS Updated to 2020 Goal Steps
1. Evaluate HIV prevention and care system policies, procedures, and other structural components, and adjust to ensure that treatment is sufficient to meet the needs of all people living with or at risk for HIV.	• Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
2. Close gaps in targeted interventions and services to better meet the HIV prevention and care needs of special populations.	• Step 1.A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated • Step 1.B: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches • Step 1.C: Educate all [people living in the Houston Area] with easily accessible, scientifically accurate information about HIV risks, prevention, and transmission • Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.A: Reduce HIV-related disparities in communities at high risk for HIV infection • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
3. Improve data management systems to better reveal information on the HIV epidemiology, risks outcomes, and needs of historically under-sampled populations and support Data to Care.	• Step 4.A: Increase the coordination of HIV programs across the Federal [and local] government and between Federal agencies and State, territorial, Tribal, and local governments • Step 4.B: Develop improved mechanisms to monitor and report on progress toward achieving national goals

Table 9: 2017 Comprehensive Plan SP Strategy Benchmark Evaluation Tool

Benchmark to Be Measured	Recommended Data Source (Reference)	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes
❖ BENCHMARK 1: Number of new HIV infections diagnosed among each special population:								
Youth (13-24)	TDSHS eHARS	360 (2014)	302	244	186	128	↓25% =70 (NHAS target)	Region is EMA
Homeless	HMIS (potential)	54 (2014)	51	49	46	44	↓25% =41 (NHAS target)	Region is Harris/Fort Bend County Baseline: 3.9%- National Alliance to End Homelessness, 2009. http://www.nationalhomeless.org/factsheets/hiv.html applied to local 2014 new Dx
Incarcerated in Jail	TRG	Baseline to be established	---	---	---	---	↓25% (NHAS target)	
Incarcerated in Prison	TDCJ	Baseline to be established	---	---	---	---	↓25% (NHAS target)	
IDU	TDSHS eHARS	66 (2014)	63	60	56	53	↓25% =50 (NHAS target)	Region is EMA
MSM	TDSHS eHARS	930 (2014)	884	837	791	744	↓25% =698 (NHAS target)	Region is EMA
Transgender and Gender Non-conforming	HHD, HIV Surveillance System	Baseline to be established	---	---	---	---	↓25% (NHAS target)	Region is Houston/Harris County
Benchmark to Be Measured	Recommended	Baseline	2017	2018	2019	2020	2021	Notes

	Data Source (Reference)	(year)	Target	Target	Target	Target	Target	
Women of Color	TDSHS eHARS	Baseline to be established	---	---	---	---	↓25% (NHAS target)	Region is EMA
Aging (50 and older)	TDSHS eHARS	264 (2014)	251	238	224	211	↓25% =198 (NHAS target)	Region is EMA Baseline: Placeholder, reflects 45+
❖ BENCHMARK 2: Proportion of newly-diagnosed individuals within each special population linked to clinical care within one month of their HIV diagnosis								
Youth (13-24)	TDSHS Linkage to Care Data	74.0% (2014)	76.2%	78.4%	80.6%	82.8%	85% (NHAS target)	Region is EMA Baseline: Reflects 3 month linkage window
Homeless	Needs Assessment	53.9% (2016)	60.1%	66.3%	72.6%	78.8%	85% (NHAS target)	Region is HSDA Baseline: Unstable housing
Recently Released from Jail (*linked within 1 month of release)	TRG	Baseline to be established	---	---	---	---	85% (NHAS target)	Region is HSDA Harris County Jail only.
Recently Released from Prison (*linked within 1 months of release)	TRG	Baseline to be established	---	---	---	---	85% (NHAS target)	Region is HSDA
IDU	TDSHS Linkage to Care Data	85.0% (2014)	≥85.0%	≥85.0%	≥85.0%	≥85.0%	85% (NHAS target)	Region is EMA
MSM	TDSHS Linkage to Care Data	78.0% (2014)	79.4%	80.8%	82.2%	83.6%	85% (NHAS target)	Region is EMA
Transgender and Gender Non-conforming	Needs Assessment	54.1% (2016)	60.3%	66.5%	72.7%	78.8%	85% (NHAS target)	Region is HSDA
Women of Color	TDSHS eHARS	Baseline to be established	---	---	---	---	85% (NHAS target)	Region is EMA
Aging (50 and older)	TDSHS eHARS	84% (2014)	84.2%	84.4%	84.6%	84.8%	85% (NHAS target)	Region is EMA Baseline: Placeholder, reflects 45+

Benchmark to Be Measured	Recommended Data Source	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes

		(Reference)							
❖	BENCHMARK 3: Proportion of PLWH with unmet need within each Special Population								NHAS 90% retention target
	Youth (13-24)	TDSHS Unmet Need Analysis	24.0% (2014)	21.2%	18.4%	15.6%	12.8%	10% (NHAS target)	Region is EMA
	Homeless	Needs Assessment – Out of Care Assessment	To be developed	---	---	---	---	10% (NHAS target)	Region is HSDA 2014 NA = 16.3%
	Recently Released from Jail/Prison	Needs Assessment – Out of Care Assessment	To be developed	---	---	---	---	10% (NHAS target)	Region is HSDA 2014 NA = 11.9%
	IDU	TDSHS Unmet Need Analysis	27.0% (2014)	23.6%	20.2%	16.8%	13.4%	10% (NHAS target)	Region is EMA
	MSM	TDSHS Unmet Need Analysis	25.0% (2014)	22%	19%	16%	13%	10% (NHAS target)	Region is EMA
	Transgender and Gender Non-conforming	Needs Assessment – Out of Care Assessment	To be developed	---	---	---	---	10% (NHAS target)	Region is HSDA 2014 NA = 7.4%
	Women of Color	TDSHS Unmet Need Analysis	To be developed	---	---	---	---	10% (NHAS target)	Region is EMA
	Aging (50 and older)	TDSHS Unmet Need Analysis	25% (2014)	22%	19%	16%	13%	10% (NHAS target)	Region is EMA Baseline: Placeholder, reflects 45+
❖	BENCHMARK 4: Percentage of grievances relating to cultural and linguistic competence received through the Ryan White grievance lines and the HHD prevention "warmline" and website	HHD: RWGA; TRG	To be developed	Track only	Track only	Track only	Track only	Track only	Region is Houston/Harris Count; EMA; HSDA

Table 10: 2017 Comprehensive Plan SP Strategy Activities

Solution: 1. Evaluate HIV prevention and care system policies, procedures, and other structural components, and adjust to ensure that treatment is sufficient to meet the needs of all people living with or at risk for HIV.							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Assess and adjust Standards of Care and other relevant policies to ensure access to facilities and services for all people regardless of sexual orientation or gender identity.	RWGA; TRG; HHD	*Potential non-RP partners:* RWPC	Annually	RWGA staff; TRG staff; HHD staff; volunteers	HIV prevention and care services clients	Standards of Care modified	**3**
2. Review and revise client satisfaction survey tool to measure provision of culturally and linguistically appropriate services.	RWGA; TRG		2018	RWGA staff; TRG staff;	HIV prevention and care services clients	Resulting method and measurement	**2**
3. Educate providers serving special populations about routine HIV testing and PrEP, and promote inclusion of routine HIV testing and PrEP education in policies, procedures, and practices to facilitate linkage to care. *(See also: Prevention and Early Identification Strategy Solution 2 Activity 2)*	HHD; CPG; RWPC	*Potential non-RP partners:* TDSHS – rural areas; AETC	Annually	HHD PrEP Coordinator; HHD CPG support staff; RWPC-OS; Project PrIDE; possibly Gilead Project FOCUS if not COI	Private providers; special populations	Education materials developed/used; list of providers educated; increase in routine testing	**1**
4. Partner with SIRR to develop a process for tracking linkage for recently released PLWH.	TRG; RWGA	*Potential non-RP partners:* SIRR; HCSO	2019	TRG staff (ARIES); SIRR members; RWGA staff (CPCDMS and QM)	Incarcerated and recently released	Tracking process in place; any necessary adjustments made to ARIES/CPCDMS	**4**
5. Explore feasibility of cooperation between RWGA and HCD to provide assisted living facility service aging PLWH.	RWGA; RWPC	*Potential non-RP partners:* HCD	2018	RWGA staff; RWPC-OS; HCD staff; volunteers	Aging PLWH; homeless PLWH	Report exploring feasibility created	**Unranked**

Solution: 2. Close gaps in targeted interventions and services to better meet the HIV prevention and care needs of special populations.							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Develop an HIV Care Continuum for each Special Population as possible, and disseminate to providers and the public as appropriate.	RWPC; HHD	*Potential non-RP partners:* TDSHS	2017 *Include as needed in each Epi Profile*	RWPC-OS; HHD staff	Special populations for which data are available	Completed continuums	**4**
2. Train PrEP providers and prevention workers on best practices for educating and promoting PrEP among special populations.	HHD		Annually	HHD staff; Project PrIDE	PrEP providers & prevention workers; HIV negative individuals in special populations	Training occurred; increased testing of members in special populations	**1**
3. Expand distribution of HIV testing and PrEP information and resources to healthcare providers *(See also: Prevention and Early Identification Strategy Solution 2 Activity 2)*	HHD; CPG	*Potential non-RP partner:* Task Forces	Annually	HHD CPG support staff; HHD Task Force liaisons; volunteers	HIV negative and status unaware in high-incidence areas	Information distributed; New diagnoses in high-incidence areas decreased	**2**
4. Coordinate a workgroup to develop and secure funding for tailored public service announcements for each special population educating the community on the benefits of Treatment as Prevention.	RWPC; CPG	*Non-RP partners:* Actors for PSAs; Community partners	2020	RWPC-OS; actors; community partners (distribution and possibly to help fund)	Special populations, PLWH	PSAs created	**3**
5. Compile HIPAA compliant best practices for using technology to communicate with consumers and incorporate into provider training. *(See also: Coordination of Effort Strategy Solution 4 Activity 1)*	RWGA; TRG		2017	RWGA staff; TRG staff	Youth, homeless PLWH	List of best practices compiled; training occurred	**5**
6. Evaluate the feasibility of establishing a site or sites with community partners for PLWH experiencing homelessness to safely store and access medications. *(See also: Gaps in Care Strategy Solution 2 Activity 2)*	RWPC; RWGA	*Non-RP partners:* City of Houston; Homeless Coalition; homeless services providers	2018	RWPC-OS; RWGA staff	Homeless PLWH	Report completed for feasibility study	**6**

Solution: 3. Improve data management systems to better reveal information on the HIV epidemiology, risks outcomes, and needs of historically under-sampled populations and support Data to Care.							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Provide training to DIS staff on data collection for transgender and other special population clients.	HHD	*Potential non-RP partners:* TDSHS	Annually	HHD staff	Special populations (especially transgender)	Training provided	**1**
2. Collaborate with City of Houston Housing and Community Development Department on development of a local Housing Unmet framework and local Housing Care Continuums, including special populations to the extent feasible. *(See also: Gaps in Care Strategy Solution 2 Activity 3)*	RWPC	*Potential non-RP partners:* HCD	2018	RWPC-OS	HOPWA/housing clients; homeless PLWH	HOPWA care continuums created; engagement and retention activities developed and implemented	**5**
3. Explore additional Need Assessment activities (including utilization of local data systems) to assess causes of loss to care among special populations.	RWPC; HHD		2018	RWPC-OS; HHD staff; ECLIPS	Special populations; Out of Care PLWH	Report of causes for loss to care for PLWH in special populations	**4**
4. Train surveillance staff to enhance data collection on transgender community.	HHD	*Potential non-RP partners:* HHD Surveillance Bureau	TBD	HHD staff; HHD Surveillance Bureau staff	MSM, transgender	Training provided; sex/gender field in data reports includes transgender	**2**

Strategy to Improving Coordination of Effort

The final strategy Workgroup was the Improving Coordination of Effort (COE) Workgroup, which met from December 2015 through July 2016. The role of the COE Workgroup was to identify goals for ensuring optimal access to prevention and care through enhanced coordination within the HIV Prevention Program and Ryan White HIV/AIDS Program Parts; propose ways to better coordinate efforts between prevention and Ryan White programs and other community service provider, including but not limited to public providers, Medicare/Medicaid, State Children's Health Insurance Program, Federally-Qualified Health Centers, private providers, and substance abuse treatment programs and facilities; and propose ways to better coordinate efforts between Ryan White programs and "non-traditional" partners (e.g., those agencies, organizations, or programs that are not providing direct HIV services but who may be serving PLWH for other reasons, such health care services, or other needs).

The COE strategy aligned most with the 2017 Comprehensive Plan overall goals to increase community mobilization around HIV in the Greater Houston area (*Goal 1 aligned with NHAS 2020 Goal 1: Reducing New HIV Infections and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic*); reduce the effect of co-occurring conditions that hinder HIV prevention behaviors and adherence to care (*Goal 4 aligned with NHAS 2020 Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV and Goal 3: Reducing HIV-related Disparities and Health Inequities*); reduce disparities in the Houston Area HIV epidemic and address the needs of vulnerable populations (*Goal 5 aligned with NHAS 2020 Goal 3: Reducing HIV-related Disparities and Health Inequities*); and increase community knowledge around HIV in the Greater Houston area. (*Goal 6 aligned with NHAS 2020 Goal 1: Reducing New HIV Infections, Goal 2: Increasing Access to Care and Improving Health Outcomes for People Living with HIV, and Goal 4: Achieving a More Coordinated National [and Local] Response to the HIV Epidemic*).

2017 Comprehensive Plan system objectives that most aligned with the COE strategy were Objective 5 to increase the percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart) from 75.0 % (2014) to at least 90.0% (*NHAS 2020 Indicator 5*); Objective 6 to I increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period) from 60.0% (2015) to at least 90.0% (*NHAS 2020 Indicator 5*);*Objective 7 to m*aintain, and if possible, increase the proportion of Ryan White HIV/AIDS Program clients who are virally suppressed from 80.4% (2014) to at least 90.0% (*NHAS 2020 Indicator 6 and Indicator 10*); and Objective 8 to increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed from 57.0% (2015) to at least 80.0% (*NHAS 2020 Indicator 6).* The COE strategy aligned with all steps of the Houston EMA HCC steps as it relates enhancing coordination for diagnosis, linkage/re-linkage to care, retention in care, and viral suppression for PLWH in the Houston Area.

<u>Coordination of Effort Goals, Solutions, Benchmarks, and Activities</u>

The COE Workgroup developed strategy goals as long-range desired outcomes to direct creation of solutions, benchmarks, and activities to address the needs of people living with or at-risk for

HIV, as well as the HIV prevention and care system in the Houston Area. All COE strategy solutions, benchmarks, and activities were designed to advance the following goals:

1. Increase awareness of HIV among all Greater Houston area health and social service providers
2. Increase the availability of HIV-related prevention and care services and providers
3. Reduce barriers to HIV prevention and care
4. Partner to address co-occurring public health problems that inhibit access to HIV prevention and care
5. Monitor and respond to state and national-level changes in the health care system

From these goals, the COE Workgroup developed solutions as approaches to advancing the vision, mission, overall goals, and system objectives of the 2017 Comprehensive Plan. Each COE solution was aligned with pertinent NHAS Updated to 2020 steps (**Table 11**).

To quantify and evaluate progress on COE strategy goals and solutions, 11 relevant benchmarks were developed from local targets present in the Benchmark Evaluation Tool for the COE strategy (**Table 12**). It is anticipated that these measures will meet or exceed final targets by 2021.

The COE Workgroup met multiple times to develop activities that would meet the HIV prevention and care needs of the Houston Area community and align with strategy goals and solutions. Each COE activity corresponds to a COE strategy solution and has a description of the activity, the responsible party identified for implementation of the activity (as well as potential non-responsible party partners and stakeholders), the timeframe for completion, resources required for implementation, the target populations served by the activity (if applicable), data indicator that the activity was successfully completed, and a priority ranking (**Table 13**).

***Table 11*: 2017 Comprehensive Plan COE Strategy Solution Alignment with NHAS Updated to 2020 Goal Steps**

2017 COE Solutions	Corresponding NHAS Updated to 2020 Goal Steps
1. Launch proactive efforts to unify stakeholders and to engage new and non-traditional partners in achieving the HIV prevention and care mission	• Step 1.A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated • Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.A: Reduce HIV-related disparities in communities at high risk for HIV infection • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities • Step 4.A: Increase the coordination of HIV programs across the Federal government and between Federal agencies and State, territorial, Tribal, and local governments
2. Support technical assistance and training to current HIV-related service providers and extend training to potential providers	• Step 1.B: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches • Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.B: Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 4.A: Increase the coordination of HIV programs across the Federal government and between Federal agencies and State, territorial, Tribal, and local governments • Step 4.B: Develop improved mechanisms to monitor and report on progress toward achieving national goals
3. Increase communication of HIV-related issues through media to educate and mobilize the public and providers	• Step 1.A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated • Step 1.B: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches • Step 1.C: Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention, and transmission • Step 3.C: Reduce stigma and eliminate discrimination associated with HIV status
4. Optimize and explore new ways to utilize technology to: (a) link people at risk for or living with HIV (PLWH) to resources; and (b) assist providers with real-time referrals for clients to HIV prevention and care services	• Step 1.A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated • Step 1.C: Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention, and transmission • Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 2.C: Support comprehensive, coordinated, patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges meeting basic needs, such as housing • Step 3.B: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities

2017 COE Solutions	Corresponding NHAS Updated to 2020 Goal Steps
5. Strengthen coordination of data systems within the HIV care system, HIV prevention and care; and HIV prevention and care service providers and the broader health care delivery system	• Step 2.A: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk • Step 4.A: Increase the coordination of HIV programs across the Federal government and between Federal agencies and State, territorial, Tribal, and local governments • Step 4.B: Develop improved mechanisms to monitor and report on progress toward achieving national goals

Table 12: 2017 Comprehensive Plan COE Strategy Benchmark Evaluation Tool

Benchmark to Be Measured	Recommended Data Source (Reference)	Baseline (year)	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	Notes
❖ BENCHMARK 1: Number of Ryan White Planning Council members who are not employed at HIV care or prevention service providers	RWPC-OS	29 total 4 non-infected/ affected (2014)	29 total 4 non-infected/ affected	29 total 4 non-infected/ affected	29 total 4 non-infected/ affected	29 total 4 non-infected/ affected	Maintain (local target)	Baseline includes Council and External members who do not bring HIV expertise because of their place of employment. 2014 measure is placeholder for 2016 data.
❖ BENCHMARK 2: Number of non-HIV prevention and care service providers requesting information about HIV services	RWPC-OS	110 (2015)	>110	>110	>110	>110	Increase (local target)	Actual numbers tallied using office tracking sheets and website requests. Defined as an entity that does not state HIV prevention or care in its mission.
❖ BENCHMARK 3: Proportion of PLWH reporting barriers to using Ryan White HIV/AIDS Program Core Medical	Needs Assessment	40.5% (2016)	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Baseline: Numerator = 203; Denominator = 501 Target to be based on available historical data (2014)
❖ BENCHMARK 4: Proportion of PLWH reporting barriers to using Ryan White HIV/AIDS Program Support Services	Needs Assessment	20.2% (2016)	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Baseline: Numerator = 93 Denominator = 461 Target to be based on available historical data (2014)
❖ BENCHMARK 5: Proportion of PLWH reporting barriers to outpatient alcohol or drug abuse treatment services	Needs Assessment	8.2% (2016)	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Baseline: Numerator = 10 Denominator = 122 Target to be based on available historical data (2014)
Benchmark to Be Measured	Recommended	Baseline	2017	2018	2019	2020	2021	Notes

	Data Source (Reference)	(year)	Target	Target	Target	Target	Target	
❖ BENCHMARK 6: Proportion of PLWH reporting barriers to professional mental health counseling	Needs Assessment	12.1% (2016)	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Pending 2014 SPSS Re-Run	Baseline: Numerator = 32 Denominator = 265 Target to be based on available historical data (2014)
❖ BENCHMARK 7: Proportion of PLWH reporting housing instability	Needs Assessment	25.6% (2016)	≤25.6%	≤25.6%	≤25.6%	≤25.6%	Maintain =25.6% (local target)	Target based on current resources and planning
❖ BENCHMARK 8: Percentage of Ryan White HIV/AIDS Program clients with Medicaid or Medicare enrollment	CPCDMS	27% (2014)	>27%	>27%	>27%	>27%	Increase (local target)	Baseline to be updated
❖ BENCHMARK 9: Proportion of Ryan White HIV/AIDS Program clients who may qualify for Medicaid or Medicare, but who are not enrolled in either program	CPCDMS	To be developed	---	---	---	---	Decrease (local target)	
❖ BENCHMARK 10: Percentage of Ryan White HIV/AIDS Program clients with private health insurance	CPCDMS	10% (2014)	>10%	>10%	>10%	>10%	Increase (local target)	Baseline to be updated
❖ BENCHMARK 11: Proportion of Ryan White HIV/AIDS Program who may qualify for an Advanced Premium Tax Credit, but who are not enrolled in an ACA Marketplace QHP.	CPCDMS	To be developed	---	---	---	---	Decrease (local target)	6.3% of RW enrolled in QHP in 2015

Table 13: 2017 Comprehensive Plan COE Strategy Activities

Solution: 1. Launch proactive efforts to unify stake-holders and to engage new and non-traditional partners in achieving the HIV prevention and care mission						
Activity	**Responsible Parties (Name of entity)**	**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Support AETC efforts to provide regular HIV-related updates to the Houston medical community.	RWCP; RWGA; HHD; *Potential non-RP partners:* AETC; HHS; TDSHS	As needed	RWPC-OS; RWGA staff; HHD staff; TDSHS	Houston medical community	Evidence of support (e.g. promotion emails/social media communication sent; collaborative products, etc.)	**1**
3. Facilitate an annual Task Force meeting for community-wide coordination of effort.	HHD; CPG; Task Forces	Annually	HHD CPG support staff; HHD Task Force liaisons; Task Force members	Current stakeholders; populations served by Task Forces	Meeting occurred; resulting coordination	**2**
4. Sustain current efforts and target the following sectors and groups for coordination of effort activities: a. Advocacy groups b. Aging (e.g., assisted living, home health care, hospice, etc.) c. Alcohol and drug abuse providers and coalitions at the local and regional levels d. Business and Chambers of Commerce e. Community centers f. Chronic disease prevention, screening, and self-management programs g. Faith communities h. Medical professional associations, medical societies, and practice groups i. Mental health (e.g., counseling associations, treatment facilities, etc.) j. New HIV-related providers such as FQHCs and Medicaid Managed Care Organizations (MCOs) k. Philanthropic organizations l. Primary education, including schools and school districts m. Secondary education, including researchers, instructors, and student groups n. Workforce Solutions and other vocational training and rehabilitation programs	RWGA; TRG; HHD; RWPC-OS; RWPC; CPG;	Annually	RWGA staff; TRG staff; HHD staff; HHD CPG support staff; HHD Task Force liaisons; RWPC-OS; RWPC; CPG; Task Forces	Per sector	Record of coordination per sector	**3**

Solution: 2. Support technical assistance and training to current HIV-related service providers and extend training to potential providers						
Activity	**Responsible Parties (Name of entity)**	**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Support AETC efforts to provide regular HIV-related updates to the Houston medical community.	RWCP; RWGA; HHD *Potential non-RP partners:* AETC; HHS; TDSHS	As needed	RWPC-OS; RWGA staff; HHD staff; TDSHS	Houston medical community	Evidence of support (e.g. promotion emails/social media communication sent; collaborative products, etc.)	**3**
2. Extend notification of quarterly case manager trainings to non-funded case managers and social workers at local hospitals (Ben Taub, LBJ, etc.).	RWGA	Annually	RWGA staff; RWPC-OS staff	Non-RW case managers; PLWH outside RW system	Record of notice sent (e.g. email, blast fax, etc.)	**1**
3. Create and disseminate an access and utilization guide for the RW Health Insurance Assistance Program to non-RW funded case managers and social workers.	TRG	2018	TRG staff	Non-RW case managers; PLWH outside RW system	Guide created; list of dissemination locations/contacts	**2**
4. Cultivate peer technical assistance that facilitates sharing best practice models between current providers.	RWGA; TRG	As needed	RWGA staff; TRG staff	Current RW providers	Peer technical assistance model created and implemented	**4**

Solution: 3. Increase communication of HIV-related issues through media to educate and mobilize the public and providers							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Explore the feasibility and practicality of developing a clearinghouse of HIV-related educational opportunities.	RWPC		2018	RWPC-OS	N/A	Brief report on feasibility compiled	**1**
2. Identify local media resources to serve as outlets for HIV education and community mobilization efforts.	RWPC; CPG	*Potential non-RP partners: Task Forces; RWPC-OS; HHD*	Annually	RWPC-OS staff; HHD CPG support staff; volunteers	N/A	List of opportunities compiled	**4**
3. Cultivate social media pathways to disseminate HIV-related information and mobilization efforts.	HHD; TRG; RWPC; CPG		2017 *Utilize annually*	HHD staff; HHD CPG support staff; RWPC-OS; TRG; volunteers; Task Force members	N/A	Documentation stating pathways; evidence of pathways utilized	**2**
4. Pursue partnerships to promote national prevention and care services campaigns locally.	RWPC; RWPC (Affected); HHD; CPG		2020	RWPC-OS; HHD CPG support staff; volunteers	General public; populations targeted in campaigns	Documentation of partnerships pursued; list of national campaigns supported in the Houston area	**3**
5. Explore transportation-based advertisements of PrEP and other HIV prevention and care messaging.	HHD		2021	HHD staff; Project PrIDE; RWPC-OS	General public; public transportation users	Advertisements placed if possible; transportation providers trained	**5**
6. Evaluate opportunities for partnering with other local government initiatives for co-branding HIV-related issues.	HHD; RWGA; TRG	*Potential Non-RP partners:* City of Houston; Harris County; HSDA Counties	Annually	HHD staff; RWGA staff; TRG staff	N/A	Opportunities identified; partnerships (MOU if necessary) created	**6**

Activity	Responsible Parties (Name of entity)	Timeframe (By when)	Resources (Funding, staff, etc.)	Target Population	Data Indicator	Priority (rank by #)
7. Explore opportunities to expand community access to local academic research findings. *(See also: Prevention and Early Identification Strategy Solution 6 Activity 3)*	HHD (Sharing Science Symposium); RWPC-OS	2020	HHD staff; RWPC-OS staff	General public	Opportunities identified	**Unranked**
8. Investigate need for and feasibility of creating a RWPC-OS position for an Education and Communication Coordinator.	RWPC; RWGA	2018	RWPC-OS; RWGA	General public	Documentation of need investigate; position created if needed and feasible	**Unranked**

Solution: 4. Optimize and explore new ways to utilize technology to: (a) link people at risk for or living with HIV (PLWH) to resources; and (b) assist providers with real-time referrals for clients to HIV prevention and care services

Activity	Responsible Parties (Name of entity)	Timeframe (By when)	Resources (Funding, staff, etc.)	Target Population	Data Indicator	Priority (rank by #)
1. Compile HIPAA compliant best practices for using technology to communicate with consumers, and incorporate into provider training *(See also: Special Populations Strategy Solution 2 Activity 5)*	RWGA; TRG	2017	RWGA staff; TRG staff	Youth, homeless PLWH	List of best practices compiled; training occurred	**1**

Solution: 5. Strengthen coordination of data systems within the HIV care system, HIV prevention and care; and HIV prevention and care service providers and the broader health care delivery system							
Activity	**Responsible Parties (Name of entity)**		**Timeframe (By when)**	**Resources (Funding, staff, etc.)**	**Target Population**	**Data Indicator**	**Priority (rank by #)**
1. Study the feasibility of allowing non-Ryan White providers CPCDMS access to health information to support re-linkage. *(See Also: Gaps in Care Strategy Solution 3 Activity 1)*	RWGA	*Potential non-RP partners:* local hospital systems	2017	RWGA staff; Pam Green	Out of Care PLWH	Report completed for feasibility study	**3**
2. Investigate opt-in secure HIPAA-compliant health information exchanges (e.g. Greater Houston Health Connect) and assess whether incorporation of such exchanges into the RW system would be appropriate and useful.	RWGA; TRG		2018	RWGA staff; TRG staff; providers	RW clients seeking care outside the RW system; Out of Care PLWH	Report completed for investigation	**2**
3. Develop process for sharing information in CPCDMS between record-owning agencies and other RW providers to facilitate access to care.	RWGA	*Non-RP partners:* TRG (ARIES)	2018	RWGA staff	RW clients seeking non-primary care with other RW providers	Process developed	**1**

Anticipated Challenges or Barriers to Implementation of the 2017 Comprehensive Plan

The greatest challenge, as well as the greatest opportunity for change, projected for implementation of the 2017 Comprehensive Plan is unforeseen changes to local health and social services systems that, through iterative evaluation and monitoring, alter Plan activities. Through implementation and evaluation of the last Comprehensive Plan (2012-14, extended through 2016), the Houston HIV community learned that certain activities and benchmarks identified to enhance or assess the HIV prevention and care system when written in 2011 were either inapplicable or were greatly transformed to achieve the intended goal. One activity from the last Comprehensive Plan found to be inapplicable was a task for the RWPC Office of Support to explore the feasibility of partnering with Area Agencies on Aging (AAA) and Aging and Disability Resource Centers (ADRC) to provide public health insurance benefits counseling to newly eligible HIV infected consumers by 2014. At its creation, this activity was anticipated to help aging and disabled PLWH obtain health care coverage through provisions of the Affordable Care Act as well as enhance coordination of effort between aging and disability service providers and the HIV care system. Partnership in this manner was found to be unnecessary as both AAA and ADRC were selected for federal funding in 2013 to provide ACA navigator services. However, other activities were developed to achieve the intended impact of the original activity including implementation of multiple education and ACA enrollment promotion activities tailored to PLWH in the Houston area, partnership with the Houston HIV and Aging Task Force, and staff attendance at Houston Elder Service Providers Network events.

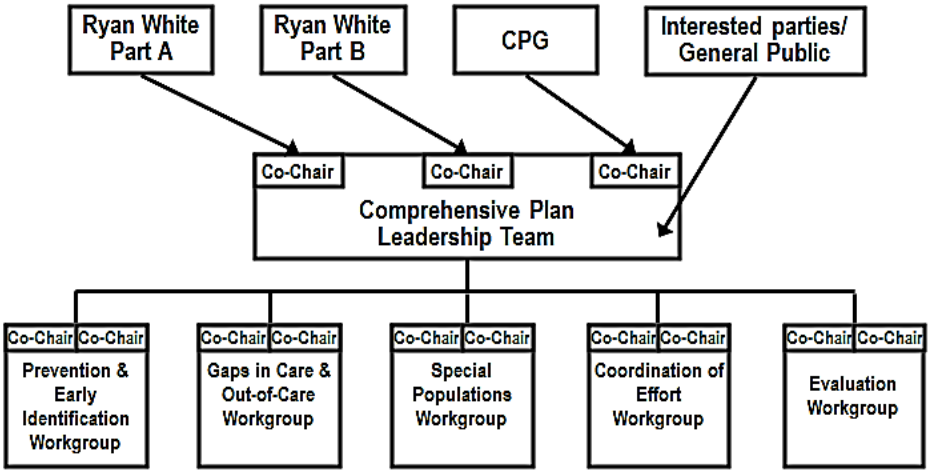
Another welcome challenge anticipated is the capacity of new technological advancements, programmatic changes, and national initiatives to shape implementation of the 2017 Comprehensive Plan. Though PrEP and Treatment as Prevention (TasP) have grown in the Houston Area over the last five years and fostered new opportunities for coordination between HIV prevention and care, neither PrEP nor TasP implementation were prevalent in the Houston Area when the when the last Comprehensive Plan was written. As such, there were not activities in the original version of the last Comprehensive Plan that pertained to PrEP or TasP. The HIV Care Continuum Initiative was also not available for inclusion in the last Comprehensive Plan, though it has greatly changed the way Houston Area planning bodies, administrative agencies, and stakeholders view and address full diagnosis and engagement in care. Though advances such as these provide the Houston HIV community with critical tools and improve HIV prevention and care services for people living with or at-risk for HIV, creating activities and evaluation processes with sufficient flexibility to adapt to these advancements has been challenging.

Section II: Integrated HIV Prevention and Care Plan

B. Collaborations, Partnerships, and Stakeholder Involvement

A unique feature of HIV planning in the Houston area is the maintenance of two separate HIV-related planning bodies that work jointly with one another to provide full coverage HIV prevention and care services planning. Both Houston Area planning bodies as well as Ryan White Program Part B representatives were key partners in the development of the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan (2017 Comprehensive Plan) in both membership and leadership on the Comprehensive Plan Leadership Team and its Workgroups, as seen in (**Figure 1**).

***Figure 1*: Structure of the 2017-2021 Houston Area Comprehensive HIV Prevention and Care Services Plan Leadership Team and Workgroups, 2016**



The Houston Area HIV Services Ryan White Planning Council (RWPC) is an up to 40 member volunteer HIV care services planning group comprised of community members who have been appointed by the Ryan White Program Part A funds CEO (Harris County Judge Ed Emmett). Council members, along with many consumers and subject matter experts, determine which HIV medical and support services are needed by people living with HIV (PLWH) in the Houston Eligible Metropolitan Area (EMA). The RWPC prioritizes these services, allocates Houston's Part A grant award, and provides guidance for the allocation of the Houston Health Service Delivery Area (HSDA) Ryan White Program Part B and State of Texas HIV Services (State Services) awards to fund the service categories according to the approved priorities. The RWPC also provides input on Standards of Care for each funded service category and development of the Comprehensive Plan to provide those services. The co-chair of the Comprehensive Plan Leadership Team representing Ryan White Program Part A served as a member on the RWPC, was a co-chair for the RWPC's standing Comprehensive HIV Planning Committee, and was employed at a facility receiving Ryan White Program Parts A, B, C, D, F and State Services funding. The co-chair of the Comprehensive Plan Leadership Team representing Ryan White Program Part B served as a member on the RWPC, and was employed at a facility receiving Ryan White Program Parts A, B, and State Services funding.

The Houston HIV Prevention Community Planning Group (CPG) is a volunteer body of up to 35 members selected to represent the demographics of the Houston Area HIV epidemic. The CPG is responsible for prioritizing populations and interventions for Houston Area by the Centers for Disease Control and Prevention (CDC) funded HIV prevention activities. To maximize its contributions to the Comprehensive Plan, the CPG suspended regular meetings from January-August 2016, meeting only twice instead of monthly. The CPG members were assigned to Comprehensive Planning workgroups that most aligned with their CPG Committee assignments and received reminders from the CPG staff liaison to attend workgroup meetings. The co-chair of the Comprehensive Plan Leadership Team representing Ryan White Program Part B also served as community co-chair on the CPG and was employed at a facility receiving U. S. Department of Housing and Urban Development, U.S. Department of Health and Human Services, Texas Department of State Health Services funding. At the time of the Comprehensive Plan development, representation on the CPG included 17 members. Per self-report, membership included 46% representing the LGBT community, 46% representing a community-based organization, 15% representing ex-offenders, and 38% representing the needs of minority populations.

To support robust attendance and engagement in the process, all Comprehensive Planning Workgroup members, including planning body and community members, received email reminders of upcoming meetings at least one week prior to meeting, with additional email reminders sent the business day before to each meeting. Each reminder included an agenda, minutes from the previous meeting, and a packet of materials that would be covered in the upcoming meeting. As an additional support, Houston Health Department (HHD), Ryan White Grant Administration (RWGA), and The Resource Group (TRG) staff members attended all five workgroups of the Comprehensive Planning process and Leadership Team meetings.

A survey was conducted of Comprehensive Planning membership mid-way through the Comprehensive Plan development process to assess personal and professional representation from priority subpopulations and organizations (**Table 1**). A total of 62 members responded. Below is a table of respondent affiliations by workgroup (members may belong to more than one workgroup):

***Table 1*: Workgroup/Team Involvement, Comprehensive Plan Mid-Development Engagement Survey, 2016**

Workgroup/Team	**#**	**(%)**
Leadership Team	35	(56.5%)
Prevention & Early Identification Workgroup	34	(54.8%)
Special Populations Workgroup	32	(51.6%)
Coordination of Effort Workgroup	22	(35.5%)
Gaps in Care & Out-of-Care Workgroup	19	(30.7%)
Evaluation Workgroup	18	(29.0%)

Source: 2016 Comprehensive Plan Mid-Development Engagement Survey

Populations with the greatest personal or professional representation in the Comprehensive Plan development process included people living with HIV (56%), communities of color (54%), MSM (53%), gay/lesbian/bisexual (47%), and aging (39%) (**Table 2**).

Table 2: **Populations Represented on Leadership Team and Workgroups, Comprehensive Plan Mid-Development Engagement Survey, 2016**

Population Represented	#	(%)
People living with HIV (PLWH)	33	(55.9%)
Communities of color	32	(54.2%)
Men who have sex with men (MSM)	31	(52.5%)
Gay/lesbian/bisexual	28	(47.5%)
Aging	23	(39.0%)
Homeless	19	(32.2%)
Youth (13-24 years)	15	(25.4%)
Transgender	14	(23.7%)
People with mental disabilities and/or mental health concerns	14	(23.7%)
Substance abuse	12	(20.3%)
People with physical disabilities	10	(17.0%)
Incarcerated or recently released	10	(17.0%)
Faith community	10	(17.0%)
Sex workers	9	(15.3%)
Injection drug users (IDU)	7	(11.9%)

Source: 2016 Comprehensive Plan Mid-Development Engagement Survey

Members surveyed were asked to identify which organizations they represented in the Comprehensive Planning process. Emphasis was placed on assessing the proportion of organizations represented that were prioritized for further coordination and engagement in the previous Houston Area Comprehensive HIV & Care Services Plan (2012-14, extended through 2016). Though organizational representation was diverse, additional outreach was used to solicit members from the following sectors: primary education, managed care organizations, medical professional associations/medical societies/practice groups, the business community, and correctional/criminal justice. An invitation letter from the co-chairs of the Leadership Team was sent to personally invite representatives from these sectors. These letters described gaps in representation and encouraged a stakeholder from each organization to participate in upcoming meetings. Office of Support and HHD staff sent multiple announcements to Comprehensive Planning Leadership Team and Workgroup membership and key staff at HIV administrative agencies to obtain contact information to extend the invitations, leading to a total of 20 personalized letters sent. Preliminary analysis revealed that these efforts yielded additional representation from managed care organizations, secondary education, local or state health departments, and CPG, and at least 3 additional members (**Table 3**).

Table 3: **Organizations Represented on Leadership Team and Workgroups, Comprehensive Plan Mid-Development Engagement Survey, 2016**

Organization Represented	Mid-Development Survey	
	#	(%)
Business or chamber of commerce	1	(1.6%)
Community centers	2	(3.2%)
Community health care centers	9	(14.5%)
Federally qualified health center (FQHC)	10	(16.1%)
Community based organization (CBO)	14	(22.6%)
Managed care organization (MCO)	0	(0.0%)
Chronic disease prevention, screening, and self-management programs	2	(3.2%)
Mental health (e.g., counseling associations, treatment facilities, etc.)	6	(9.7%)
Philanthropic organizations	2	(3.2%)
Primary education, including schools and school districts	0	(0.0%)
Secondary education, including researchers, instructors, and student groups	3	(4.8%)
Workforce solutions, other vocational training and rehabilitation programs	2	(3.2%)
Correctional/criminal justice	1	(1.6%)
HOPWA and other housing programs	3	(4.8%)
Homeless services	6	(9.7%)
Alcohol and drug abuse providers	2	(3.2%)
Social services	7	(11.3%)
Faith community	6	(9.7%)
Local hospital systems	5	(8.1%)
Local or state health departments	14	(22.6%)
Houston Area Ryan White Planning Council (RWPC)	20	(32.3%)
Houston HIV community Planning Group (CPG)	8	(12.9%)
The Resource Group (TRG)	3	(4.8%)
Other government agency	3	(4.8%)

RWPC Office of Support staff analyzed minutes from Leadership Team and Workgroup meetings. By the final meeting of the Comprehensive Plan Leadership Team, additional organizational representation beyond what was determined in the Mid-Development Survey was observed in the following sectors:

- Secondary education, including researchers, instructors, and student groups (3 additional representatives)
- Correctional/criminal justice (5 additional representatives)
- HOPWA and other housing programs – including recipients of housing services (9 additional representatives)
- Local or state health departments (10 additional representatives)
- RWPC (13 additional representatives)
- CPG (1 additional representative)

To reach traditional and non-traditional partners and sectors, responsible parties for implementation the 2017 Comprehensive Plan will complete activities listed under the Coordination of Effort strategy detailed in Section II.A. The RWPC Speaker's Bureau, created as a result of the 2012-14 Comprehensive Plan, will continue outreach to the Houston business

community to recruit members into the planning process. Representatives from the following sectors in will improve outcomes along the HCC include: primary education, managed care organizations, medical professional associations/medical societies/practice groups, the business community, and correctional/criminal justice, community centers, chronic disease prevention, philanthropic organizations, workforce solutions, and alcohol/drug abuse providers. Though profession was not queried the Comprehensive Plan Mid-Development Engagement Survey, increasing collaboration between HIV prevention and medical providers for interventions such as PrEP and Data to Care signify that robust representation presence from HIV care and PrEP providers, including physicians, nurses, and pharmacists will be beneficial for Plan implementation and evaluation.

Section II: Integrated HIV Prevention and Care Plan

C. People Living with HIV (PLWH) and Community Engagement

The Houston Area excels at engaging people living with and at-risk for HIV in all planning processes. In addition to mentoring and providing technical assistance to other planning bodies and support staff throughout the United States, the Houston Ryan White Planning Council (RWPC) Office of Support gave a presentation on PLWH engagement and education at the 2016 National Ryan White Conference on HIV Care and Treatment, and the 2015 U.S. Conference on AIDS with Houston Area Ryan White consumers and RWPC members as presenters of multiple sections. This commitment of full consumer representation and engagement extended to development of the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan (2017 Comprehensive Plan) as well.

Membership from both the RWPC and CPG were represented on the Comprehensive Plan Leadership Team and Workgroups, as detailed in Section II.B. Parity, inclusion, and representation are required under membership guidelines in CPG by-laws. The RWPC is also required by law to have representation that closely resembles the Houston HIV epidemic (**Table 1**).

***Table 1*: Comparison of 2015 Houston EMA HIV Prevalence (All Stages) to 2016 Ryan White Planning Council and External Committee PLWH Representation**

	EMA HIV prevalence (all stages) as of 12/31/15*		**Total Appointed Members of the 2016 Ryan White Planning Process* as of 09/06/16**		**Total Appointed Non-Conflicted Consumer Participants in the 2016 Ryan White Planning Process***		**Total Appointed HIV Positive Members of the 2016 Ryan White Planning Process***	
Race/Ethnicity	No.	%	No.	%	No.	%	No.	%
White, not Hispanic	5,341	21%	11	22%	4	19%	4	14%
Black, not Hispanic	12,721	49%	24	48%	13	62%	18	64%
Hispanic	7,001	27%	12	24%	4	19%	6	22%
Other	978	04%	3	06%	0	0%	0	0%
Total*	**26,041**	**100%**	**50**	**100%**	**21**	**100%**	**28**	**100%**
Gender	No.	%	No.	%	No.	%	No.	%
Male	19,479	75%	25	50%	11	52%	18	64%
Female	6,562	25%	24	48%	9	43%	9	32%
Transgender - Female			1	02%	1	05%	1	04%
Total*	**26,041**	**100%**	**50**	**100%**	**21**	**100%**	**28**	**100%**

*This chart includes Ryan White Planning Council and External Committee members. It does not include additional non-member consumers and individuals who attended Comprehensive Plan Leadership Team or Workgroup meetings.

The Comprehensive Plan Leadership Team and Workgroups each developed quorum requirements necessitating the presence of at least one PLWH at each meeting, though often PLWH represented a majority of Team and Workgroup members in attendance. The Leadership

Team included 19 self-disclosed PLWH members, four of whom also served as co-chairs on each Comprehensive Plan Workgroup.

People living with or at-risk for HIV were also crucial for the development of goals, objectives, solutions, benchmarks, and activities in the 2017 Comprehensive Plan that best meet the needs of the Houston Area. In particular, several Plan activities were proposed by PLWH based equally on epidemiologic and needs assessment data presented in Sections II.A. and II.B. and their experiences and observations as consumers of local HIV prevention and care services. Activity 1, Solution 1 under the Prevention and Early Identification Strategy to explore opportunities for cross-representation between the Houston HIV community and School Health Advisory Councils (SHAC) for all school districts within the Houston area was proposed by a self-disclosed PLWH member with a background in education. Under the strategy to Bridge Gaps in Care and Reach the Out of Care, PLWH members proposed the activities to revise case management, service linkage, and outreach services Standards of Care and policies to incorporate warm handoff protocols, assess the current level of risk reduction counseling provided through Primary Care, focusing particularly on promotion of Treatment as Prevention (TasP), and identify Houston Area hospitals serving highest number of HIV positive patients, and target those hospitals for dialog about ways to interface with the Ryan White system for re-linkage. PLWH and at-risk for HIV led evidence-based selection of the Special Populations and prosed an activity under this strategy to educate providers serving special populations about routine HIV testing and PrEP, and promote inclusion of routine HIV testing and PrEP education in policies, procedures, and practices to facilitate linkage to care. Though as a strategy Coordination of Effort takes a systems-level view of HIV prevention and care services, a PLWH member advised inclusion of an activity to develop a process for sharing information in CPCDMS between record-owning agencies and other RW providers to facilitate access to care based on barriers they and their associates encountered.

The community vetting and concurrence process for the 2017 Comprehensive Plan ensured that people living with and at-risk for HIV had multiple opportunities to assess the responsiveness of HIV prevention and care activities to their needs. Just before the Leadership Team approved the 2017 Comprehensive Plan components featured in Section II.A., members were invited to participate in an activity to re-evaluate each proposed activity, ask questions, and suggest modification or removal of activities. Each Plan activity was posted along the wall of the meeting room by strategy, and members were asked to mark each activity with a green sticker to keep it as written, a yellow sticker to modify or ask questions about an activity, and a red sticker to remove an activity. Each activity that received at least one yellow or red sticker underwent group discussion, and was modified or removed as appropriate. Members were also given an opportunity to write in any activities or areas they observed were not addressed by the activities under review. As a result of this process, activities were added to investigate need for and feasibility of creating a RWPC office of support position for an Education and Communication Coordinator and explore feasibility of cooperation between RWGA and Houston Department of Housing and Community Development to provide an assisted living facility serving aging PLWH. Members in attendance at that meeting including 11 self-disclosed PLWH, men and women of color, MSM, seniors, and staff who work with pediatrics, youth, IDU, people experiencing homelessness, and people recently released from incarceration.

Both CPG and RWPC reviewed the 2017 Comprehensive Plan components featured in Section II.A. in August 2016 with multiple opportunities ask questions and provide input. Each planning body passed motions to concur with the submission of the 2017-2021 Comprehensive Plan for HIV Prevention and Care Services in response to the guidance set forth for health departments and HIV planning groups. A joint letter describing this concurrence is included among the front matters of the 2017 Comprehensive Plan.

People living with or at-risk for HIV were also involved development on the 2017 Comprehensive Plan Monitoring and Improvement Plan in Section III. through membership on the Evaluation Workgroup. In accordance with the Monitoring and Improvement Plan, members of both planning bodies will received quarterly activities updates and review the Evaluation Workgroups annual evaluation report to critique progress and help identify resources and partnerships for Plan implementation.

Section III: Monitoring and Improvement

2017–21 Monitoring and Evaluation Plan and Stakeholder Communication and Feedback Processes

The goal of the monitoring and evaluation plan is to assess successful implementation of the 2017-21 Comprehensive HIV Prevention and Care Services Plan as measured by:

1. Completion of stated activities and efforts (Section II); and
2. Annual progress toward the target measurements of stated objectives and benchmarks (Section II).
3.

In the 2017 guidance for comprehensive jurisdictional HIV prevention and care services planning, the Health Resources and Services Administration (HRSA) and the Centers for Disease Control and Prevention (CDC) require that a process and plan be in place to monitor and evaluate progress toward Plan goals and objectives. This emphasis on evaluation is reflective of a *national* trend toward increased accountability, careful monitoring, constant re-evaluation of how scarce HIV resources are allocated, and the impact these resources are having on the HIV epidemic.

When determining its approach to the 2017-2021 Houston Area Comprehensive HIV Prevention and Care Services Plan (2017 Comprehensive Plan), the Houston area Ryan White Planning Council (RWPC) and Houston HIV Prevention Community Planning Group (CPG), i.e. the two Houston area HIV planning bodies, local public health departments, consumers, HIV providers, non-HIV specific providers, and others worked together to make this decision. The following strategies will continue to be employed to provide evaluation activities throughout the comprehensive planning process and ensure that the resulting document will adhere to SMART (Specific, Measurable, Achievable, Realistic, and Time-Phased) criteria with clear quantifiable measures of the anticipated impact on the Houston area HIV epidemic:

- **Planning Principles.** Among the key findings from the 2009-11 Comprehensive Plan evaluation was that future HIV planning goals and objectives for the Houston area needed greater specificity in order to meaningfully measure impact on the local epidemic. In the development of the Houston Area Comprehensive HIV & Care Services Plan (2012-14, extended through 2016) four principles were applied to the planning process in order to remedy this challenge. These planning principles were again utilized in the development of the 2017 Comprehensive Plan:
  1. Each goal will be measurable through at least one quantitative benchmark;
  2. Benchmarks will have replicable data sources and existing baselines, unless the function of the benchmark is the creation of a baseline, and either national or locally-defined targets based on historical data will be used;
  3. Each activity will identify responsible parties, potential non-responsible collaborative partners, and the timeframe for completion; and
  4. Terminology used in goals, objectives, activities, and benchmarks will be standardized and/or defined.
- **Benchmarking Tool.** In developing the 2017 Comprehensive Plan, workgroups throughout the planning process used an objective benchmark evaluation tool to ensure the planning principles described above were applied. Designed as a matrix, the tool consolidated all process and outcome benchmark measures identified for each goal of the Comprehensive

Plan, as well as anticipated data sources, baselines, and targets throughout implementation. Because of this process, a total of 65 measures across 37 benchmarks were developed to assess the impact of the 2017 Comprehensive Plan on the Houston area epidemic.

- **Comprehensive Plan Evaluation Workgroup.** During implementation of the 2012-2016 Comprehensive Plan, an 18-member Evaluation Workgroup oversaw all evaluation-related components of the planning process. Workgroup membership included subject matter experts in epidemiology, disease surveillance, research methods, strategic planning, and HIV-related outcome measures in prevention and care, consumers, as well as planning body and agency representatives. Each year, the Workgroup conducted formal evaluations to identify areas of success and those with continued challenges. The evaluation process greatly influenced the development of the 2017 Comprehensive Plan, particularly in regard to identifying activities for the new plan and adjusting objectives and benchmarks to be more meaningful, representative, and measurable. The Workgroup reviewed and approved all 2017 Comprehensive Plan objectives and benchmarks; identified replicable data sources, baselines, and target measurements; and will continue to conduct ongoing, formal evaluations of the 2017 Comprehensive Plan.

Activities to monitor, evaluate, and disseminate 2017 Comprehensive Plan implementation progress, as well as collect iterative feedback from stakeholders, will be conducted as follows:

- HHD Bureau of Epidemiology staff will update the Houston EMA Care Continuum, and planning body support staff will continue to link it to the RWPC website (Beginning October 2016; annually thereafter)
- Planning body support staff will review activities and inform responsible parties of the status of their assigned activities. (Beginning March 2017; quarterly thereafter)
- Both the RWPC and CPG will receive progress updates on 2017 Comprehensive Plan activities (Beginning April 2017; quarterly thereafter)
- The 2017 Comprehensive Plan Evaluation Workgroup will convene on a regular basis to review the status of activities, benchmarks/care continua data, provide explanation of outcomes, identify areas of course correction, assess direction of stated objectives, and report findings to the planning bodies (Beginning February 2018; annually thereafter)
- Planning body support staff will conduct a document review and archive reports produced by responsible parties containing information about stated activities and efforts (Beginning February 2018; annually thereafter)
- Planning body support staff will compile an evaluation report following the annual Evaluation Workgroup review process and present the report to planning bodies (Beginning April 2018; annually thereafter)
- Planning body support staff will update the 2017 Comprehensive Plan Dashboard detailing progress on stated objectives, benchmarks, and activities will continue to be featured on the RWPC website (Beginning April 2018; annually thereafter)

Data Utilization for Health Outcome Improvements, Progress along the HIV Care Continuum, and Long-Range Planning

In order to determine the extent to which the 2017 Comprehensive Plan has been successfully implemented, the Houston area HIV community will assess progress on the following overarching Plan objectives with the aim of having met or exceeded these goals by 2021:

1. Reduce the number of new HIV infections diagnosed in the Houston Area by at least 25% from 1,386 (2014) to ≤1,004 (NHAS target);
2. Maintain and, if possible, increase the percentage of individuals with a positive HIV test result identified through targeted HIV testing who are informed of their positive HIV status, beginning at 93.8% (2014) (local target based on NHAS target);
3. Increase the proportion of newly-diagnosed individuals linked to clinical HIV care within one month of their HIV diagnosis to at least 85% from 66% (2015) (NHAS target);

4.1 Decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year by 25% from 25.9% (2014) to 19.4% (DHAP target; also based on NHAS death rate reduction target);

4.2 Decrease the percentage of new HIV diagnoses with an HIV stage 3 (AIDS) diagnosis within one year among Hispanic and Latino men age 35 and up by 25% from 36.0% (2014) to 27.0% (local target based on FY15, FY16, and FY17 EIIHA Plans; also based on NHAS death rate reduction target);

5. Increase the percentage of Ryan White HIV/AIDS Program clients who are in continuous HIV care (at least two visits for HIV medical care in 12 months at least three months apart) from 75.0 % (2014) to at least 90.0% (local target based on NHAS target);
6. Increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are retained in HIV medical care (at least two documented HIV medical care visits, viral load or CD4 tests in a 12 month period) from 60.0% (2015) to at least 90.0% (NHAS target);
7. Maintain, and if possible, increase the proportion of Ryan White HIV/AIDS Program clients who are virally suppressed from 80.4% (2014) to at least 90.0% (local target based on NHAS target)
8. Increase the percentage of individuals with diagnosed HIV infection in the Houston Area who are virally suppressed from 57.0% (2015) to at least 80.0% (NHAS target); and
9. Increase the number of gay and bisexual men of color and women of color receiving pre-exposure prophylaxis (PrEP) education each year (baseline to be developed) to at least 2,000 (local target based on NHAS target).

Across all four 2017 Comprehensive Plan strategies referenced in Section II.A., 65 measures for 37 benchmarks have been identified to assess the Plan's impact on the local HIV epidemic through 2021. These include benchmarks that lack existing data sources and/or baseline data not currently available through data systems, as described in Section II.A. Several activities in the 2017 Comprehensive Plan strategies will also result in new data for use in HIV prevention and care services planning.

Data Utilization in HIV Prevention

The Houston Health Department's Bureau of HIV/STD and Viral Hepatitis Prevention (HHD/HIV) is responsible for monitoring HIV prevention services provided by prevention contractors, with a focus on the core HIV prevention activities of Counseling, Testing, and Referral (CTR) and Health Education/ Risk Reduction (HE/RR). The HHD/HIV maintains a Contractor Compliance database, *Electronic Client-Level Integrated Prevention System* (ECLIPS), for the purpose of monitoring contractor activities and producing service utilization reports as follows:

- **Activity Report:** Monthly activity reports summarize CTR and HE/RR units of service provided per HIV prevention contractor per month as well as track the percent of progress

made toward yearly contractor service goals. Examples of activities summarized in these reports include the number of HIV and syphilis tests provided, and the number of individuals who tested positive for HIV (new or previous), received post-test counseling and were referred to care. The report also indicates the number of interventions delivered to individuals (ILI) verses groups (GLI), and the number of persons who completed the intended number of intervention sessions.

- **Positivity Report:** Quarterly positivity reports provide linkage to care information for individuals who test positive for HIV. Examples of information provided include status of referral to care and attendance at medical appointment.
- **Budget Report:** A comparison of billed vs. actual CTR and HE/RR units of service provided per HIV prevention contractor is produced quarterly and annually. Cost per unit of CTR and HE/RR service is also generated in the budget report.
- **All Agency Report:** A summary of CTR and HE/RR activities for all HIV prevention contractors is also produced. This report gives a broad overview of service utilization of CTR and HE/RR for the HIV prevention system as a whole.

In addition, the HHD conducts a compliance check of CTR activities reported by HIV prevention contractors compared to data entered into the ECLIPS system described above. Quarterly chart audits are conducted at contractor sites to ensure all data are up to date and accurately entered.

ECLIPS has a built-in report function that produces reports on testing activity, including the number of tests done, in total and by target population; positivity rates; and referral outcomes. HHD/HIV Bureau Program Liaisons use these reports for monitoring purposes. These data are also used to provide feedback to agencies on program performance, and to inform quality improvement activities. Quarterly aggregate data are presented at Contractor meetings, and progress toward objectives is discussed. When needed, HHD/HIV data is also used to create reports related to special populations, or for other purposes.

Reports on routine testing performance are shared monthly with the Routine Testing Steering Committee. After comparing these reports against HIV surveillance data, additional reports are created that show the number already in care, and those successfully referred to care. These reports are used to guide program improvement both at testing and service linkage programs.

Beginning in 2015, the HHD/HIV received three-year funding from the Centers for Disease Control and Prevention (CDC) for an intervention known as “Data to Care”. This intervention utilizes HIV surveillance data to identify, locate, and link people living with HIV into medical care and support services. Data to Care is also used to identify and link those who have never been in care and to re-link those who have fallen out of care. Utilizing the resources provided by this new funding, a new data system was constructed in Maven, a widely used project management and comprehension tool, to improve monitoring and evaluation for all existing HHD/HIV Service Linkage programs. The following enhancements ensure that high-quality programmatic data is available electronically:

- Automated deduplication
- Security enhancements, including permissions by role
- Complex skip logic

- Automated workflows to improve the flow and timeliness of cases between staff members

With the computerized expansion of Service Linkage program data, useful trends can be analyzed and shared with planning bodies which improves strategic long-term planning. Examples include:

- Trends in the number of service linkage referrals by referral source
- Resources expended to locate and (re-)link clients to care
- Changes in the reasons clients report being out of care

In addition to monitoring the activities of HIV prevention contractors, HHD establishes and assesses minimum HIV prevention performance standards. The purpose of the HIV/STD Prevention Services Standards are to determine the minimal acceptable levels of quality in the delivery of CTR and HE/RR services, as well as provide a measure for the effectiveness of and/or need for HIV/STD prevention services in the jurisdiction. The HHD standards outline methods for measurement, required documentation, and the location of records as proof of documentation in each of the following domains for both CTR and HE/RR services:

1. Staffing and Training
2. Testing Requirements
3. Linkage to Care Requirements
4. PrEP Education Requirements
5. PrEP Referral Requirements
6. HE/RR Requirements
7. Client Referral and Tracking
8. Client Rights/Responsibilities
9. Protocol Based Counseling (PBC) Process and Risk Reduction
10. CTR in Non-Traditional Settings
11. CTR in Traditional Settings
12. Prioritization
13. Documentation of Services
14. Recruitment

HHD/HIV uses the following system to monitor HIV prevention contractors regarding standards of care:

- **Liaison Program:** HHD/HIV maintains a program in which one Program Liaison is assigned to each HHD/HIV-funded prevention contractor. The Program Liaison serves as the primary contact for the assigned contractor for all HIV prevention activities including attainment of prevention standards. The Program Liaison provides ongoing technical assistance to contractors to ensure compliance with policies, procedures and guidelines. A quarterly meeting is held between contractors, Liaisons, and HHD/HIV management to discuss changes in policies and procedures or other topics relevant to contract requirements. The Liaison conducts monitoring activities and assesses capacity building needs and opportunities for quality improvement. The Liaison also reviews budgets and monthly invoices for appropriate spending patterns and allowable expenses. Each Liaison regularly monitors and maintains contractor budgets to assess over- or under-spending and ensure that funds are being spent in a timely manner. Routine reports are created to document contractor activities and progress throughout the funding year. HHD Fiscal Management Analysts, in partnership with Liaisons,

are responsible for fiscal audits of each HIV prevention contractor to review financial records and ensure overall contract compliance.

- **Houston Health Department (HHD) Quality Council.** The HHD maintains a standing Quality Council that consists of key leadership, including the Public Health Authority and HHD Director. The Council meets quarterly and works in collaboration with the Performance Improvement and Accreditation Team to develop and implement the HHD's Quality Improvement Plan. The Plan chronicles the HHD's overall objectives and outlines an overarching strategy for quality improvement and achievement of the requirements of Public Health Department Accreditation as defined by the Public Health Accreditation Board (PHAB). A subcommittee of the Quality Council, the Quality Assurance Committee, is made up of subject matter experts throughout the HHD who ensure compliance with quality requirements and develop performance measures. Both the Quality Assurance Committee and Quality Council are available in an advisory role to Program Liaisons and monitor audit findings of all Department contractors.

Data Utilization in HIV Care Services

Harris County Public Health Ryan White Grant Administration (RWGA) and the Houston Regional HIV/AIDS Resource Group (TRG) provide the following utilization reports for Ryan White HIV/AIDS Program Parts A and B, and State Services funding via the Centralized Patient Care Data Management System (CPCDMS) deployed by RWGA. TRG also uses the Texas Department of State Health Services (TDSHS) AIDS Regional Information and Evaluation System (ARIES) to analyze data that is regularly uploaded from CPCDMS to ARIES under a Memorandum of Understanding (MOU) between RWGA, TRG and TDSHS. The CPCDMS is used to monitor service utilization of all Ryan White funded core medical and support services in the Houston area. Reports of service utilization are produced and used as follows:

- **Quarterly Report.** Service utilization reports for each Core Medical and Supportive Service are produced quarterly for RWPC review. These reports summarize goals for the number of unduplicated clients to be served per service category, actual numbers of unduplicated clients served per category, and demographic characteristics.
- **Multi-Year Report.** Multi-year service utilization reports are compiled for the RWPC's annual *How to Best Meet the Need* process, during which epidemiological, needs assessment, and service utilization data are reviewed to determine which Ryan White HIV/AIDS Program service categories are needed to meet the needs of people living with HIV in the Houston area. Annual service utilization data reports are also used during the Planning Council's annual Priorities and Allocations process, which allows the RWPC to evaluate trends in service utilization over time. Client level data in the CPCDMS includes the sex, gender, and race/ethnicity of clients, allowing RWPC members to monitor utilization and ensure that services are being utilized by consumers from historically underserved populations and that consumer demographics mirror the demographics of the local HIV epidemic.

In addition to monitoring service utilization, the client level data collected in CPCDMS is an integral part of the development and monitoring of clinical outcomes and performance measures for HIV care services in the Houston area. As the administrator of CPCDMS, RWGA oversees clinical outcomes and performance measure data collection and reporting for Ryan White HIV/AIDS Program-funded service categories in the jurisdiction. Annual clinical chart reviews are conducted at provider agencies and self-administered client satisfaction surveys are collected

to supplement these data. The jurisdiction's data collection system is monitored regularly to ensure provider agencies are entering clinical outcomes and performance measures data as required. The following clinical outcomes and performance measures are monitored as part of this system:

- **Clinical Outcomes Measures.** A logic model of initial, intermediate, and long term clinical client outcomes is applied to Houston area HIV care services in the following domains:
  1. Health outcomes such as changes in CD4 counts, viral load, and stage of illness;
  2. KAP (knowledge, attitudes, and practices) outcomes such as changes in service utilization rates and adherence to drug treatment regimens;
  3. Cost-effectiveness outcomes such as utilization of pharmaceutical assistance programs to mitigate costs of medications; and
  4. Quality of life outcomes such as increased ability to perform activities of daily living.

  Clinical outcomes data are monitored, analyzed, and reported annually to the RWPC and service providers. Additionally, select core outcomes are monitored on a quarterly basis and are incorporated into annual planning for system-wide quality improvement activities.
- **Performance Measures.** HRSA HIV/AIDS Bureau (HAB) HIV/AIDS Core Clinical Performance Measures for Adults and Adolescents and the Institute for Health Care Improvement's performance measures for HIV/AIDS quality of care are used to measure performance of service providers. Examples of current performance measures include:
  1. 90% of clients with HIV infection will have two or more medical visits in an HIV care setting.
  2. HIV-infected female clients who were ≥18 years old or reported having a history of sexual activity will have pap screening.
  3. 80% of clients for whom there is lab data in the CPCDMS will be virally suppressed (<200 copies/mL).
  4. 90% of HIV-infected oral health clients will have a dental treatment plan developed or updated at least once.
  5. HIV-infected oral health clients will receive oral health education at least once.
  6. HIV-infected oral health clients will receive periodontal screening or examination at least once.
  7. A minimum of 85% of clients will utilize Part A, B, C, or D funded primary care two or more times at least three months apart after accessing medical case management services.
  8. 60% of medical case management clients will have service plans developed/or updated two or more times in the measurement year. .
  9. 90% of clients diagnosed with wasting syndrome or suboptimal body mass who receive Ryan White funded nutritional supplements will improve or maintain body mass index (BMI) in the measurement year.
  10. 75% of clients with diagnosed HIV/AIDS related and general ocular disorders will resolve, improve, or stay the same over time.

Performance measures are monitored continuously through annual chart reviews and analysis of data in CPCDMS. Performance measures are revised annually to reflect identified needs, changes to U.S. Department of Health and Human Services guidelines, and best practices. Ryan White HIV/AIDS Program-funded service providers are further required to implement quality improvement projects to better facilitate system-wide attainment of performance measures.

To monitor clinical outcomes and performance measures of HIV care services in the Houston area, the following activities are conducted:

- **Clinical Chart Reviews.** Clinical chart abstractions are performed on an annual basis for each primary medical care and selected health-related service delivery agency. Annual reports summarizing agency level findings are distributed to the respective providers. An aggregate report of jurisdiction-wide findings is shared with all quality management stakeholders. Chart review results are also used to assist in the development of agency-specific quality management plans described below. Agencies review the results from their chart reviews and identify areas in need of improvement. They then develop plans to address identified needs.
- **Quality Management (QM) Plans.** Each Ryan White HIV/AIDS Program-funded service provider must maintain an annual QM plan. The QM plan must include applicable jurisdiction-wide performance measures selected for improvement based on chart review results and clinical outcomes data. Providers are also required to evaluate their internal service delivery systems and processes to identify areas for improvement. Semi-annual updates to the QM plan are required and must include the results of the provider's internal assessment activities. QM efforts are also monitored bi-monthly by the CQI Committee's Primary Care Subcommittee (see below). Technical support and guidance is provided to funded-service providers as they develop and update their QM plans. Annual site visits are conducted at all agencies to evaluate their QM programs and provide technical assistance.
- **Client Satisfaction Surveys.** A client satisfaction survey tool is administered year-round to consumers of Ryan White HIV/AIDS Program services in the Houston area. The survey queries satisfaction with specific services, service providers, and the Houston area Continuum of Care as a whole. The tool is available in both hard copy and electronic formats, and submission is on-going for "real time" client input. Focus groups with consumers are also conducted at each funded primary medical care agency to solicit additional client satisfaction input. A report of key findings from the client satisfaction process is provided annually to the RWPC for review.

Quality management for Ryan White Part A and the Minority AIDS Initiative (MAI) is implemented by the Harris County Public Health Ryan White Grant Administration (RWGA); and by the Houston Regional HIV/AIDS Resource Group, Inc. (TRG) for Ryan White Parts B, C, D, and State Services funding. The Houston area also maintains two quality management oversight bodies:

Clinical Quality Improvement (CQI) Committee. The membership of the CQI Committee reflects the diversity of disciplines involved in HRSA defined Core Medical and Supportive Services in the Houston area. Currently, the committee structure consists of Ryan White HIV/AIDS Program-funded providers in the following disciplines:

1. Two Physicians/One Dentist (1 HIV Specialist to serve as Chairperson)
2. Two Nurses
3. One Medical/Clinical Case Manager
4. One Pharmacist
5. One Nutritionist
6. Two Program Administrators
7. One Quality Management Coordinator
8. One HIV Prevention Specialist
9. One Data Manager

The CQI committee is responsible for assisting with the following activities:

1. Quarterly meetings to review system-wide CQM issues/challenges and the development of strategies to improve care.
2. Annual meetings to:
    a. Review chart review and clinical outcome measures reports and other relevant data;
    b. Determine system-wide quality initiatives and performance indicators and goals;
    c. Review and recommend revisions to the Standards of Care to reflect current US Department of Health and Human Services Treatment guidelines as well as federal and state regulations for HIV care and services; and
    d. Review and revise assessment and data collection tools/protocols as necessary.
3. Establish subcommittees as needed to address service specific quality issues.
4. Plan and develop educational strategies for Ryan White HIV/AIDS Program-funded service providers which may include grand rounds for HIV care and clinical updates according to federal guidelines.
5. Annually review and update the quality management plan.
6. Provide input into an annual evaluation of the quality management system.

- **Ryan White Planning Council Quality Improvement (QI) Committee.** The QI Committee operates as a standing committee of the RWPC and includes consumers, providers, subject matter experts and others. All annual chart review and client satisfaction survey reports, semi-annual clinical outcomes measures reports, service utilization reports, and annual revisions to standards of care are disseminated to the QI Committee at appropriate intervals during the grant year. Members of the QI Committee collaborate with quality management staff to address issues identified through the reports described above. Committee members evaluate and share the information with the RWPC, which in turn uses the data to inform the annual *How to Best Meet the Need* process to evaluate and revise local service categories definitions and decide whether currently unfunded service categories should be funded in the upcoming fiscal year to meet emerging needs.

Joint Data Utilization

Though comprehensive jurisdictional HIV services plans are developed only once every five years per federal requirements, planning for HIV prevention and care services is conducted *throughout each year* through the work of the RWPC and the CPG. Data on the HIV system in the Houston area is collected and analyzed for these interim processes as well. Three sources of information about the Houston area HIV system are produced regularly to assist the planning bodies in completing both short-term and long-term planning tasks. These sources are also used by various stakeholders throughout the Houston Area HIV community and include many of the types of data that will be used to monitor progress of the 2017 Comprehensive Plan goals:

- **HIV Epidemiological Profile (every three years with annual updates).** The HIV epidemiologic profile describes HIV disease trends in a defined geographic area; as a result, it serves as a source of quantitative data from which HIV prevention and care priorities can be identified based on the burden of disease. Epidemiological profiles describe HIV incidence, prevalence, mortality, socio-demographics, and other disease trends for various populations, including the general population, the HIV-diagnosed population, and the non-diagnosed population (including the status unaware). Since the release of the last Houston Area Comprehensive HIV & Care Services Plan (2012-16), an HIV epidemiologic profile was

constructed in 2013 (jointly produced by the RWPC and HHD) and 2016 (produced by HHD), with a jointly produced update in 2014. Data captured in the HIV Epidemiological Profile are used to plan and tailor HIV prevention services, design care services during the *How to Best Meet the Need* process, adjust service priorities and allocations, update local HIV Care Continua, identify special and emerging populations, and inform sampling strategies for HIV needs assessment processes.

- **Needs Assessments of People Living with and At-Risk for HIV (every three years).** Conducted as two separate survey processes which are aligned where applicable, the HIV prevention needs assessment appraises the needs of the Houston Area undiagnosed population (including the status unaware) for HIV prevention services while the Houston Area HIV Care Needs Assessment (NA) evaluates HIV prevention and care service needs, use, gaps, and barriers among the HIV-diagnosed population. Both needs assessments measure perceived general health status, the presence of co-morbidities, history of service utilization, and social determinants factors, such as housing, transportation, social support, healthcare coverage, and income. The Needs Assessment also features analyses of data regarded access and health equity concerns for special or emerging populations as determined by the planning bodies and the Comprehensive Planning process. Since the release of the Houston Area Comprehensive HIV Prevention and Care Services Plan (2012-16), the HIV prevention needs assessment was conducted in 2014 and 2016 and the HIV care needs assessment was conducted in 2013 and 2016. Data captured in the HIV needs assessment processes are used to design both prevention and care services, adjust HIV prevention and care Standards of Care, create service priorities, and identify gaps and barriers in services that are addressed through programmatic as well as planning and allocation changes.
- **Special Studies (as needed).** When a specific HIV-related topic or population requires additional data or further exploration of available data, a special study may be conducted at the request of the RWPC. Special studies in the Houston area often sample from among a particular special or emerging population in order to reveal details of their disease burden, need for services, or unique barriers encountered. Past examples include Access to HIV Care among Transgender and Gender Non-Conforming People in Houston and Evaluating the Referral Process for HIV Positive Post-Release Offenders. Previous emphasis on special or emerging populations has evolved to include special studies on HIV service categories to better assess and address barriers to care. In 2014, the special study Health Insurance Marketplace Enrollment Among Ryan White Consumers was conducted, which resulted in the release of a health insurance enrollment education document titled *10 Things People Living with HIV/AIDS Need to Know About the Health Insurance Marketplace and Open Enrollment*, as well as a guide for case management staff on effective tools for assisting consumers with enrollment. A second special study conducted in the same year was Feasibility of a Pilot Project Using Ryan White Health Insurance Funding to Assist Consumers Below 100% FPL with Purchasing Health Insurance, which projected likely cost and savings scenarios that would be encountered should the local Ryan White program assist consumers below 100% of the federal poverty level and therefore ineligible for the Advanced Premium Tax Credit with the purchase of Affordable Care Act Qualified Health Plans.

Appendices

Appendix 1: List of Acronyms
A list of acronyms used in the 2017-2021 Houston Area Comprehensive HIV Prevention & Care Services Plan

Appendix 2: Coordination of Services and Funding Streams (Attachment 7 from Houston EMA FY16 RW Part A Grant Application)
A table showing coordination between various Houston Area HIV services and funding streams; this table appeared in the Houston EMA FY16 Ryan White Part A grant application as Attachment 7

Appendix 3: Funding Source Tables
A collection of tables showing HIV services funding sources in the Houston Area, including funding amounts, services provided with funding, and alignment of services with the Houston EMA HIV Care Continuum.

Appendix 4: Workforce Capacity Tables
A collection of tables showing HIV workforce capacity by position and service in the Houston Area

Appendix 5: 2016 Houston HIV Care Services Needs Assessment Survey Tool
The survey tool used to collect data for the 2016 Houston HIV Care Services Needs Assessment

Appendix 1: List of Acronyms

List of Acronyms

1. AA - Administrative Agent
2. AAA –Area Agencies on Aging
3. AAASOE – African American State of Emergency Task Force
4. ACA – Patient Protection and Affordable Care Act
5. ADAP – AIDS Drug Assistance Program
6. ADRC – Aging and Disability Resource Centers
7. AETC – AIDS Education and Training Centers
8. ARIES – AIDS Regional Information and Evaluation System
9. ART – Antiretroviral therapy
10. BRFSS – Behavioral Risk Factor Surveillance System
11. CADR – CARE Act Data Report
12. CBOs – Community-based organizations
13. CDBG – Community Development Block Grant
14. CDC – Centers for Disease Control and Prevention
15. CHW – Community health workers
16. COE – Improving Coordination of Effort Strategy
17. CPCDMS – Centralized Patient Care Data Management System
18. CPG – Houston HIV Prevention Community Planning Group
19. CQM – Clinical quality management
20. CR – Community Residences
21. CRCS – Comprehensive Risk Counseling Services
22. CTR – HIV Counseling, Testing, and Referral
23. DCBP – Division of Community-Based Programs (under HRSA/HAB
24. DHAP – Division of HIV/AIDS Prevention
25. DHHS – U.S. Department of Health and Human Services
26. DIS – Disease Intervention Specialists
27. DSS – Division of Services Systems (under HRSA/HAB)
28. EBIs – Effective Behavioral Intervention
29. ECLIPS – Electronic Client-Level Integrated Prevention System
30. EFA – Emergency Financial Assistance
31. eHARS – Enhanced HIV/AIDS Reporting System
32. EIIHA – Early Identification of Individuals with HIV/AIDS
33. EMA – Houston Eligible Metropolitan Area
34. EMSA – Houston Eligible Metropolitan Statistical Area
35. ETI – Expanded Testing Initiative
36. FQHCs – Federally-Qualified Health Centers
37. FTE – Full-time employees
38. Gaps – Bridging Gaps in Care and Reaching the Out of Care Strategy
39. HAB – HIV/AIDS Bureau (under HRSA)
40. HASA – HIV Administrative Service Area
41. HCC – HIV Care Continuum
42. HCD – City of Houston Housing and Community Development Department
43. HE/RR – Health Education/Risk Reduction
44. HET – Heterosexuals

45. HHD – Houston Health Department
46. HHD/HIV – Bureau of HIV/STD and Viral Hepatitis Prevention (under HHD)
47. HHS – Harris Health System
48. HISD – Houston Independent School District
49. HIV – Human Immunodeficiency Virus
50. HMMP – Houston Medical Monitoring Project
51. HOPWA – Housing Opportunities for Persons with AIDS
52. Houston Electronic Disease Surveillance System (HEDSS),
53. HPV – Human papillomavirus
54. HRSA – Health Resources and Services Administration
55. HSDA – Houston Health Services Delivery Area
56. HUD – U.S. Department of Housing and Urban Development
57. I/RR – Incarcerated/Recently Released (I/RR)
58. IDU – Intravenous or injection drug use(r)
59. KFF – Kaiser Family Foundation
60. LGBT – Lesbian, gay, bi, and/or transgender
61. LPAP – Local Pharmaceutical Assistance Program
62. MAI – Minority AIDS Initiative
63. MCO – Managed Care Organization
64. MMP – The Medical Monitoring Project
65. MOU – Memorandum of Understanding
66. MSA – Houston Metropolitan Statistical Area
67. MSM – Men who have sex with men
68. NAG – Needs Assessment Group
69. NCHHSTP – National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
70. NHAS – National HIV/AIDS Strategy
71. NHBS – National HIV Behavioral Surveillance System
72. PBC – Protocol Based Prevention Counseling
73. PCRS – Partner Counseling and Referral Services
74. PEI – Prevention and Early Identification Strategy
75. PLWH – People living with HIV
76. PrEP – Pre-Exposure Prophylaxis
77. Project LEAP – Learning, Empowerment, Advocacy, and Participation
78. QI – Ryan White Planning Council Quality Improvement Committee
79. RW/A – Ryan White Part A
80. RW/B – Ryan White Part B
81. RW/C – Ryan White Part C
82. RW/D – Ryan White Part D
83. RW/F – Ryan White Part F
84. RWGA – Ryan White Grant Administration (under HCPC)
85. RWHAP – Ryan White HIV/AIDS Program
86. RWPC – Houston Area HIV Services Ryan White Planning Council
87. SAFER – Strategic AIDS/HIV Focused Emergency Response Initiative
88. SAMHSA – Substance Abuse and Mental Health Services Administration
89. SCHIP – State Child Health Insurance Program
90. SLW – Service Linkage Worker

91. SP –Address the Needs of Special Populations Strategy
92. SPNS – Special Projects of National Significance
93. STD – Sexually transmitted disease
94. STD*MIS – Sexually Transmitted Disease Management Information System
95. STI – Sexually transmitted infection
96. STRMU – Short-Term Rent, Mortgage, and Utility Assistance
97. TasP – Treatment as Prevention (TasP)
98. TBRA – Tenant-Based Rental Assistance
99. TCOOMI – Texas Correctional Office on Offenders with Medical or Mental Impairments
100. TDCJ – Texas Department of Criminal Justice
101. TDSHS – Texas Department of State Health Services
102. TRG – The Houston Regional HIV/AIDS Resource Group
103. TSHC – Thomas Street Health Center
104. UAS – Unprotected anal sex
105. UVS – Unprotected vaginal sex
106. VA – Veterans Affairs
107. WIC – Special Supplemental Food Program for Women, Infants and Children
108. YRBS – Youth Risk Behavior Survey
109. YRBSS – Youth Risk Behavioral Surveillance System

Appendix 2: Coordination of Services and Funding Streams (Attachment 7 from Houston EMA FY16 RW Part A Grant Application)

Funding Source	2015 Budget		Anticipated 2016 Budget		Core Medical-related Services	Outpatient/Ambulatory Medical Care	AIDS Drug Assistance Program	AIDS Pharmaceutical Assist.	Oral Health Care	Early Intervention Services	Health Insurance Premium/Cost-Sharing	Home Health Care	Home & Community-based Health Services	Hospice Services	Mental Health Services	Medical Nutrition Therapy	Medical Case Management	Substance Abuse Services – Outpatient	Supportive Services	Non-medical Case Management	Child Care Services	Emergency Financial Assistance	Food Bank/Home-delivered Meals	Health Education/Risk Reduction	Housing Services	Legal Services	Linguistic Services	Medical Transportation Services	Outreach Services	Psychosocial Support Services	Referral Health Care/Supportive Services	Rehabilitation Services	Respite Care	Substance Abuse Services – Residential	Treatment Adherence Counseling	HIV Testing
	Dollar Amount	%	Dollar Amount	%																															
Part A	22,506,456	22%	22,506,456	22%		x		x	x		x					x	x	x		x					x		x								
Part B	39,416,791	38%	38,592,751	38%			x		x		x		x																						
Part C	734,963	1%	734,963	1%		x							x		x			x																	x
Part D	1,064,680	1%	1,064,680	1%		x									x		x			x								x							
Part F	147,379	0%	147,379	0%		x							x																						
CDC	13,597,323	13%	13,058,229	13%																x				x							x				x
SAMHSA	3,333,955	3%	3,333,955	3%														x																	
HOPWA	10,369,506	10%	10,361,393	10%																x					x										
Local	296,885	0%	296,885	0%																															
State (not Part B)	8,428,968	8%	8,624,097	8%		x				x	x			x	x												x								x
Other	3,116,905	3%	2,857,188	3%		x				x																									x

Appendix 3: Funding Source Tables

HIV Care Continuum Impact			All	Met Need, Retention, Suppression	All	All	Diagnosed	Linkage, Met Need, Retention, Suppression
			HIV Services					
Funding Source	Total Funding	Percent of Total Funding (%)	Administration	Camp for HIV+	Capacity building for HIV Services	Clinical case management (for substance abuse/ mental health)	Condom distribution	Day treatment for HIV+
CDC	$8,943,983	16.06	$4,133,593		$410,567		$47,855	
HOPWA	$6,406,544	11.50	$348,919					
DSHS 1115 Medicaid Waiver	$367,627	0.66						
DSHS (CDC)	$2,693,607	4.84	$332,565				$92,809	
DSHS (RW Part B + DSHS + HOPWA)	$804,934	1.45	$804,934					
DSHS (RW Part B, MAI)	$229,501	0.41	$18,131					
DSHS (SAMHSA, MHSA)	$1,477,657	2.65	$181,684					
Gilead Sciences, Inc.	$801,947	1.44	$106,944		$13,923			
HCPH (RW Part A)	$15,065,060	27.05	$1,221,259			$220,625		
HCPH (RW Part A, MAI)	$2,171,813	3.90	$192,989					
HHD (CDBG)	$193,537	0.35	$45,868					
HHD (CDC)	$2,292,186	4.12	$554,696					
HRSA (RW Part A)	$1,843,502	3.31	$1,843,502					
HRSA (RW Part C)	$779,014	1.40	$46,694					
HRSA (RW Part D)	$435,247	0.78	$150,609					
HRSA (RW Part F, SPNS)	$272,637	0.49	$79,531					
HUD (COC)	$1,711,633	3.07	$130,084					
Other Agency (RW Part A)	$481,800	0.87	$38,062					
Multiple Sources	$553,200	0.99	$147,635	$168,564				
Other	$2,961,697	5.32	$347,866					
Other Agency (RW Part F, AETC)	$80,000	0.14	$6,000					
SAMHSA	$1,034,068	1.86	$59,234					
SAMHSA (MAI)	$218,938	0.39	$1,095		$108,374			
TRG (DSHS, State Services)	$624,331	1.12	$49,000					
TRG (HOPWA)	$25,177	0.05	$403					
TRG (RW Part B)	$3,003,189	5.39	$300,319					$200,808
TRG (RW Part D)	$212,053	0.38	$8,456					
Total	**$55,684,883**	**100.00**	**$11,150,070**	**$168,564**	**$532,864**	**$220,625**	**$140,664**	**$200,808**

HIV Care Continuum Impact	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	All	All	Diagnosed
	HIV Services							
Funding Source	Dental services for HIV+	Financial assistance/ services for HIV+	Food assistance/ services for HIV+	Health insurance premium and cost sharing assistance for HIV+	Hepatitis C testing	HIV advocacy	HIV evidence-based intervention	HIV health education for HIV-
CDC								$236,044
HOPWA								
DSHS 1115 Medicaid Waiver								
DSHS (CDC)								$50,700
DSHS (RW Part B + DSHS + HOPWA)								
DSHS (RW Part B, MAI)								
DSHS (SAMHSA, MHSA)					$14,000			
Gilead Sciences, Inc.					$95,931			$27,845
HCPH (RW Part A)	$156,416			$1,344,996				
HCPH (RW Part A, MAI)								
HHD (CDBG)								$147,669
HHD (CDC)					$4,988		$177,456	$124,611
HRSA (RW Part A)								
HRSA (RW Part C)								
HRSA (RW Part D)								
HRSA (RW Part F, SPNS)								
HUD (COC)								
Other Agency (RW Part A)								
Multiple Sources			$15,063					
Other		$5,000				$65,000		$86,382
Other Agency (RW Part F, AETC)								
SAMHSA					$188,566			$102,361
SAMHSA (MAI)					$10,947			$21,894
TRG (DSHS, State Services)								
TRG (HOPWA)								
TRG (RW Part B)	$1,727,375			$774,687				
TRG (RW Part D)								
Total	**$1,883,791**	**$5,000**	**$15,063**	**$2,119,683**	**$314,433**	**$65,000**	**$177,456**	**$797,506**

HIV Care Continuum Impact	All	Linkage, Met Need, Retention, Suppression	Diagnosed	Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	All	Linkage, Met Need, Retention, Suppression	Linkage
	HIV Services							
Funding Source	HIV health education for HIV+	HIV medical care	HIV testing	Hospice care for HIV+	Housing assistance/services for HIV+	HPV vaccinations	Insurance navigation for HIV+	Linkage to HIV medical care
CDC	$348,301		$1,196,509					$846,351
HOPWA					$6,057,625			
DSHS 1115 Medicaid Waiver								$367,627
DSHS (CDC)	$178,451		$410,275					$22,500
DSHS (RW Part B + DSHS + HOPWA)								
DSHS (RW Part B, MAI)								$211,370
DSHS (SAMHSA, MHSA)			$277,686					$604,123
Gilead Sciences, Inc.	$13,923		$252,000					$15,036
HCPH (RW Part A)		$6,897,592						$1,248,324
HCPH (RW Part A, MAI)		$1,978,824						
HHD (CDBG)								
HHD (CDC)	$208,611		$1,046,215					$175,610
HRSA (RW Part A)								
HRSA (RW Part C)		$629,593					$100,392	
HRSA (RW Part D)		$129,460						$43,635
HRSA (RW Part F, SPNS)								$13,346
HUD (COC)					$1,581,549			
Other Agency (RW Part A)								$202,838
Multiple Sources					$2,869			
Other	$71,039		$695,522			$1,048,569		$128,177
Other Agency (RW Part F, AETC)								
SAMHSA	$40,945		$255,306					$41,148
SAMHSA (MAI)			$21,894					
TRG (DSHS, State Services)				$372,989				
TRG (HOPWA)					$24,774			
TRG (RW Part B)								
TRG (RW Part D)	$46,017	$71,226						$46,017
Total	**$907,286**	**$9,706,694**	**$4,155,405**	**$372,989**	**$7,666,817**	**$1,048,569**	**$100,392**	**$3,966,101**

HIV Care Continuum Impact	All	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Diagnosed, Linkage	All	Linkage, Met Need, Retention, Suppression	Diagnosed
	HIV Services							
Funding Source	Linkage to substance abuse/mental health services	Medical case management for HIV+	Mental health services/counseling/ psychiatry for HIV+	Nutrition services for HIV+	Partner services	Patient navigation (to any service regardless of HIV status)	Pharmaceutical assistance (ADAP & LPAP)	PrEP/nPEP
CDC					$1,093,255	$48,650		$215,350
HOPWA								
DSHS 1115 Medicaid Waiver								
DSHS (CDC)					$1,606,307			
DSHS (RW Part B + DSHS + HOPWA)								
DSHS (RW Part B, MAI)								
DSHS (SAMHSA, MHSA)		$388,165						
Gilead Sciences, Inc.								$248,500
HCPH (RW Part A)		$1,611,495	$276,405	$590,171			$944,580	
HCPH (RW Part A, MAI)								
HHD (CDBG)								
HHD (CDC)								
HRSA (RW Part A)								
HRSA (RW Part C)								
HRSA (RW Part D)		$106,920						
HRSA (RW Part F, SPNS)		$163,419						
HUD (COC)								
Other Agency (RW Part A)		$240,900						
Multiple Sources			$159,533					$59,535
Other								
Other Agency (RW Part F, AETC)								
SAMHSA								
SAMHSA (MAI)								
TRG (DSHS, State Services)			$202,343					
TRG (HOPWA)								
TRG (RW Part B)								
TRG (RW Part D)		$27,949	$12,389					
Total	**$0**	**$2,538,848**	**$650,670**	**$590,171**	**$2,699,562**	**$48,650**	**$944,580**	**$523,385**

HIV Care Continuum Impact	All	All	Linkage, Met Need, Retention, Suppression	All	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression	Linkage, Met Need, Retention, Suppression
	HIV Services							
Funding Source	Program promotion	Provider education and training on HIV	Research projects for HIV+	Substance abuse services (regardless of HIV status)	Substance abuse services for HIV+	Translation services for HIV+	Transportation services for HIV+	Vision services for HIV+
CDC	$176,086	$191,422						
HOPWA								
DSHS 1115 Medicaid Waiver								
DSHS (CDC)								
DSHS (RW Part B + DSHS + HOPWA)								
DSHS (RW Part B, MAI)								
DSHS (SAMHSA, MHSA)				$4,000	$4,000		$4,000	
Gilead Sciences, Inc.	$27,845							
HCPH (RW Part A)					$44,280		$324,675	$184,242
HCPH (RW Part A, MAI)								
HHD (CDBG)								
HHD (CDC)								
HRSA (RW Part A)								
HRSA (RW Part C)							$2,335	
HRSA (RW Part D)							$4,624	
HRSA (RW Part F, SPNS)			$16,342					
HUD (COC)								
Other Agency (RW Part A)								
Multiple Sources								
Other		$500,000	$14,142					
Other Agency (RW Part F, AETC)		$74,000						
SAMHSA				$346,509				
SAMHSA (MAI)				$54,735				
TRG (DSHS, State Services)								
TRG (HOPWA)								
TRG (RW Part B)								
TRG (RW Part D)								
Total	**$203,931**	**$765,422**	**$30,484**	**$405,243**	**$48,280**	**$0**	**$335,633**	**$184,242**

Appendix 4: Workforce Capacity Tables

Workforce Capacity - Personnel (FTE)	Administration	Capacity building for HIV services	Clinical case management (for substance abuse/mental health)	Condom distribution	Day treatment for HIV+	Dental services for HIV +
Behavioral/Mental health support		0.08				
Care coordination staff						
Case manager			3.00			
Clinical support						
Consumer relations/Community engagement	0.80					
Coordinator	2.53					
Coordinator (Programmatic)	0.20	0.02		0.08	1.43	0.50
Dental assistant						4.00
Dental hygienist						2.35
Dentist						4.85
Dietitian/Nutritionist						
Director/Executive staff	6.55	0.04				
Disease intervention specialist						
Driver						
Eligibility staff			0.08			0.30
Facilities staff						
Health educator, outreach worker, risk reduction specialist, HIV tester		0.22		0.53		
Laboratory support						
Non-clinical support	64.47					
Nurse					0.80	
Nurse practitioner						
Patient advocate						
Patient navigator/Linkage to services						0.08
Pharmacist						
Pharmacy technician						
Physical therapist						
Physical therapy assistant						
Physician						
Physician assistant						
Psychiatrist						
Public affairs specialist						
Service linkage worker						
Supervisor/Manager	2.16					
Supervisor/Manager (Programmatic)	3.27				0.80	
Trainer		0.16				
Translator						
Total	**79.97**	**0.52**	**3.08**	**0.60**	**3.03**	**12.08**

Workforce Capacity - Personnel (FTE)	Health insurance premium and cost sharing assistance for HIV+	Hepatitis C testing	HIV advocacy	HIV evidence-based intervention	HIV health education for HIV-	HIV health education for HIV+
Behavioral/Mental health support					0.80	0.88
Care coordination staff						
Case manager						
Clinical support						
Consumer relations/Community engagement						
Coordinator		0.92				
Coordinator (Programmatic)				0.18	0.49	0.65
Dental assistant						
Dental hygienist						
Dentist						
Dietitian/Nutritionist						
Director/Executive staff		0.14	0.35		1.09	0.42
Disease intervention specialist						
Driver						
Eligibility staff				0.15		
Facilities staff						
Health educator, outreach worker, risk reduction specialist, HIV tester		0.81		2.35	10.46	9.51
Laboratory support						
Non-clinical support						
Nurse						
Nurse practitioner						
Patient advocate						
Patient navigator/Linkage to services					0.07	0.24
Pharmacist						
Pharmacy technician						
Physical therapist						
Physical therapy assistant						
Physician						
Physician assistant						
Psychiatrist						
Public affairs specialist			0.30			
Service linkage worker						
Supervisor/Manager						
Supervisor/Manager (Programmatic)	0.25				0.15	
Trainer						
Translator						
Total	**0.25**	**1.87**	**0.65**	**2.68**	**13.07**	**11.70**

Workforce Capacity - Personnel (FTE)	HIV medical care	HIV testing	Hospice care for HIV+	Housing assistance/ services for HIV+	HPV vaccinations	Insurance navigation for HIV+
Behavioral/Mental health support				1.00		
Care coordination staff	1.30				2.00	
Case manager				25.79		
Clinical support	20.51				0.40	
Consumer relations/Community engagement		0.10				
Coordinator						0.60
Coordinator (Programmatic)	0.20	5.09		5.34		
Dental assistant						
Dental hygienist						
Dentist						
Dietitian/Nutritionist	1.50					
Director/Executive staff		1.01				
Disease intervention specialist						
Driver		0.50				
Eligibility staff	1.80	0.05		2.87		
Facilities staff	2.00			6.00		
Health educator, outreach worker, risk reduction specialist, HIV tester	0.90	35.34		0.50		
Laboratory support		2.00				
Non-clinical support	3.33	3.00				
Nurse	9.89		2.90		1.30	
Nurse practitioner	5.81					
Patient advocate	1.00					
Patient navigator/Linkage to services	0.10	0.05				
Pharmacist	5.55					
Pharmacy technician	9.03					
Physical therapist	1.00					
Physical therapy assistant	2.00					
Physician	3.28	0.15			0.35	
Physician assistant	0.60					
Psychiatrist	0.30					
Public affairs specialist						
Service linkage worker		1.00				0.33
Supervisor/Manager		0.64				
Supervisor/Manager (Programmatic)	0.65	1.88				
Trainer						
Translator	1.00					
Total	**71.75**	**50.82**	**2.90**	**41.50**	**4.05**	**0.93**

Workforce Capacity - Personnel (FTE)	Linkage to HIV medical care	Linkage to substance abuse/mental health services	Medical case management for HIV+	Mental health services/ counseling/ psychiatry for HIV+	Nutrition services for HIV+	Partner services
Behavioral/Mental health support	0.13		7.22	4.90		
Care coordination staff		0.50				
Case manager	1.00		20.18			
Clinical support						1.00
Consumer relations/Community engagement	0.20					
Coordinator						
Coordinator (Programmatic)	1.55		2.07		0.76	
Dental assistant						
Dental hygienist						
Dentist						
Dietitian/Nutritionist					0.72	
Director/Executive staff	0.26			0.30		
Disease intervention specialist						23.70
Driver						0.50
Eligibility staff	0.70		1.53	0.42		
Facilities staff						
Health educator, outreach worker, risk reduction specialist, HIV tester	3.32					
Laboratory support						
Non-clinical support	7.00					9.00
Nurse	0.20					
Nurse practitioner	0.10					
Patient advocate						
Patient navigator/Linkage to services	0.57					
Pharmacist						
Pharmacy technician						
Physical therapist						
Physical therapy assistant						
Physician	0.02					
Physician assistant						
Psychiatrist				0.60		
Public affairs specialist						
Service linkage worker	49.79					
Supervisor/Manager						
Supervisor/Manager (Programmatic)	2.08					7.00
Trainer						
Translator						
Total	**66.92**	**0.50**	**31.00**	**6.22**	**1.48**	**41.20**

Workforce Capacity - Personnel (FTE)	Patient navigation (to any service regardless of HIV status)	Pharmaceutical assistance (ADAP & LPAP)	PrEP/nPEP	Program promotion	Provider education and training on HIV	Research projects for HIV+
Behavioral/Mental health support				0.08		
Care coordination staff						
Case manager						
Clinical support						
Consumer relations/Community engagement			2.00	0.20		
Coordinator						
Coordinator (Programmatic)			1.00	0.06	0.49	
Dental assistant						
Dental hygienist						
Dentist						
Dietitian/Nutritionist						
Director/Executive staff				0.06		
Disease intervention specialist						
Driver						
Eligibility staff		2.45				
Facilities staff						
Health educator, outreach worker, risk reduction specialist, HIV tester	0.75		1.50	0.30		
Laboratory support						
Non-clinical support			4.00			0.10
Nurse						0.10
Nurse practitioner						
Patient advocate						
Patient navigator/Linkage to services						
Pharmacist		1.64				
Pharmacy technician		3.58				
Physical therapist						
Physical therapy assistant						
Physician						
Physician assistant						
Psychiatrist						
Public affairs specialist						
Service linkage worker						
Supervisor/Manager			1.00			
Supervisor/Manager (Programmatic)	0.08				1.00	
Trainer					3.15	
Translator						
Total	**0.83**	**7.67**	**9.50**	**0.70**	**4.64**	**0.20**

Workforce Capacity - Personnel (FTE)	Substance abuse services (regardless of HIV status)	Substance abuse services for HIV+	Translation services for HIV+	Transportation services for HIV+	Vision services for HIV+
Behavioral/Mental health support	2.29	0.51			
Care coordination staff					0.25
Case manager					
Clinical support					
Consumer relations/Community engagement					
Coordinator					
Coordinator (Programmatic)	0.18	0.02	0.51	0.02	
Dental assistant					
Dental hygienist					
Dentist					
Dietitian/Nutritionist					
Director/Executive staff	0.14				
Disease intervention specialist					
Driver				3.85	
Eligibility staff		0.65	0.15	0.35	0.30
Facilities staff					
Health educator, outreach worker, risk reduction specialist, HIV tester	0.84	0.06		0.06	
Laboratory support					
Non-clinical support				1.60	
Nurse					
Nurse practitioner					
Patient advocate					
Patient navigator/Linkage to services					0.25
Pharmacist					
Pharmacy technician					
Physical therapist					
Physical therapy assistant					
Physician					0.58
Physician assistant					
Psychiatrist					
Public affairs specialist					
Service linkage worker			0.17		
Supervisor/Manager					
Supervisor/Manager (Programmatic)					0.25
Trainer					
Translator					
Total	**3.46**	**1.24**	**0.83**	**5.88**	**1.63**

Appendix 5: 2016 Houston HIV Care Services Needs Assessment Survey Tool

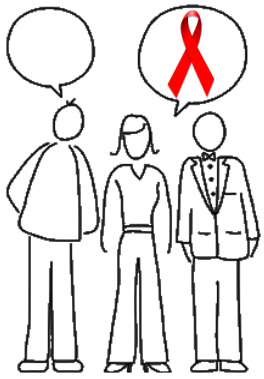
***STAFF USE ONLY**-SURVEY ADMIN*

Date of survey: _____

Agency/location: _____

Staff initials: _____

Gift card #: _____



***STAFF USE ONLY**-DATA ENTRY*

Date of data entry: _____

Auto survey #: _____

Staff initials: _____

2016 Consumer Survey

Dear Participant,

The purpose of this survey is to learn about your needs for HIV care and what it's like for you to be living with HIV. Only people who are HIV positive, 18 years of age or older, and who live in the greater Houston area should take this survey. If you don't meet these requirements or are not sure, please talk to a staff person now.

Please read the following before you begin:

- Your participation in this survey is 100% voluntary. You do not have to participate. If you do, it will help us learn what people need for HIV care.
- Everything you tell us is 100% confidential. You will not be identified in the report, and no information about you *as an individual* will be shared. All the answers you give will be combined with other surveys and shown as a group.
- You may find some of the questions personal, and they may make you feel uncomfortable. You do not have to continue if you feel this way. Please talk to a staff person at any time if you feel uncomfortable with the survey.
- You will receive an incentive for your participation after you have finished the survey. You will be asked to sign for the incentive, but you do not have to use your legal name.
- If you complete the survey, you are consenting to participate in this project. You are also giving us your consent to use your survey answers. Again, you will not be identified in the report, and no information about you *as an individual* will be shared.
- Please take your time to answer all questions as completely and accurately as possible. There are no right or wrong answers. There is no time limit.
- If you have questions about this survey, please contact the Ryan White Planning Council Office of Support at (713) 572-3724 at any time.

You can begin the survey now. Please bring your completed survey to a staff person when you are done. Thank you for your participation in this project!

Section 1: HIV Services

1. Please tell us about any of the following HIV services that you have used <u>in the past 12 months</u>:

HIV medical care visits or clinic appointments with a doctor, nurse, or physician assistant (i.e., outpatient primary HIV medical care)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
HIV medication assistance *in addition* to ADAP	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Health insurance assistance (this is when you have private health insurance or Medicare and you get help paying for your co-pays, deductibles, or premiums for medications or medical visits)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Oral health care visits with a dentist or hygienist	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____

Con't: Please tell us about any of the following HIV services that you have used <u>in the past 12 months</u>:

Case management (these are people at your clinic or program who assess your needs, make referrals for you, and help you make/keep appointments)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Alcohol or drug abuse treatment or counseling (in an outpatient setting only)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* → **Did you need this service for:** ***(Check all that apply)*** ☐ Alcohol use concerns ☐ Drug use concerns	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Professional mental health counseling (by a licensed professional counselor or therapist either individually or as part of a therapy group)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Day treatment (this is a place you go during the day for help with your HIV medical care from a nurse or PA. It is *not* a place you live.)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____

Con't: Please tell us about any of the following HIV services that you have used <u>in the past 12 months</u>:

Hospice care (a program for people in a terminal stage of illness to get end-of-life care)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Nutritional supplements (like Ensure, fish oil, protein powder, etc.) and/or nutritional counseling from a professional dietician	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Legal services (help from an attorney with things like Medicaid eligibility, wills, and permanency planning)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Language translation (at your clinic or program in a language *<u>other than English or Spanish</u>)*	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* →	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____

Con't: Please tell us about any of the following HIV services that you have used <u>in the past 12 months</u>:

Transportation (to/from your HIV medical appointments on a van or with a Metro bus card)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* ⟶ **Did you need this service for:** ***(Check all that apply)*** ☐ Van ride(s) ☐ Bus pass(es)	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Housing (specifically for HIV+ people or for a family with an HIV+ family member. This can be temporary or long-term housing)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* ⟶	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
Food pantry vouchers	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* ⟶	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____
*****If you were in Harris County Jail, please tell us about:*** **Pre-discharge planning** (this is when jail staff help you plan for HIV medical care after your release)	**Please check one:** ☐ I didn't know this service was available ☐ I did not need this service ☐ I needed this service, and it was easy to get ☐ I needed this service, and it was difficult to get *(go here* ⟶	**Briefly, please tell us what made it difficult for you to get this service?** _____ _____ _____

2. **<u>In the past 12 months</u>, have you been told you were on a waiting list for any of the following services?** (*Check all that apply*)

- ☐ I was not told I was on a waiting list for any service (***skip bullets below and go to Question 3***)
- ☐ HIV medical care visits
- ☐ HIV medication assistance *in addition* to ADAP
- ☐ Health insurance assistance
- ☐ Oral health care
- ☐ Case management
- ☐ Alcohol or drug abuse treatment or counseling
- ☐ Professional mental health counseling
- ☐ Day treatment
- ☐ Hospice care
- ☐ Nutritional supplements
- ☐ Legal services
- ☐ Language translation
- ☐ Transportation
- ☐ Housing
- ☐ Food pantry vouchers
- ☐ Pre-discharge planning (if you were in Harris County Jail)

- **What was the time period between your first request for the service(s), and when you received the service(s)? _____**
- **Were you aware of another provider for the service(s) while you were on the waiting list?**
  - ☐ Yes, and I went to the other provider
  - ☐ Yes, but I did not go to the other provider
  - ☐ No
  - ☐ Don't remember
- **Have you been placed on a waiting list for the service(s) more than once?**
  - ☐ Yes ☐ No ☐ Don't remember

3. **What other kinds of services do you need <u>to help you get your HIV medical care</u>?** *(Check any that apply)*

- ☐ Childcare services or childcare reimbursement
- ☐ Companion services, or a buddy to support you
- ☐ Emergency financial assistance
- ☐ Emergency rental assistance
- ☐ Food bank
- ☐ Homeless shelter vouchers
- ☐ Housing coordination assistance
- ☐ In-home health care services
- ☐ Peer counseling
- ☐ Support groups
- ☐ Rehab services (therapy, medical care, and other help for regaining independence with daily tasks)
- ☐ Respite care (short-term help to those who are caring for HIV positive family members)
- ☐ Other:_____

Section 2: When You Were First Diagnosed

4. **What year were you diagnosed with HIV?** _____

5. **When you got your HIV diagnosis, did you get any of the following services <u>from the same agency</u>?** *(Check one answer for each item below)*

- **A list of HIV clinics to go to for medical care** ☐ Yes ☐ No ☐ Don't remember
- **An appointment for your first HIV doctor's visit** ☐ Yes ☐ No ☐ Don't remember
- **Someone offered to help you get into HIV care** ☐ Yes ☐ No ☐ Don't remember

Section 3: Your HIV Care History

6. If you delayed seeing a doctor for HIV more than 1 month after you received your HIV diagnosis, why? (*Check all that apply)*

- ☐ I did not delay seeing a doctor for HIV
- ☐ I felt fine, I wasn't sick
- ☐ I didn't want to believe I was infected
- ☐ I didn't want to take medications
- ☐ I didn't know where to get HIV medical care
- ☐ I couldn't afford HIV medical care
- ☐ I was drinking or doing drugs at the time
- ☐ I had a mental health issue/illness at the time
- ☐ There were other priorities in my life at the time
- ☐ I couldn't get there, no transportation
- ☐ I was afraid of people finding out I was HIV+
- ☐ Don't remember
- ☐ Other:_____

7. If you ever stopped seeing an HIV doctor for 12 months or more, why did you stop? *(Check all that apply)*

- ☐ I never stopped seeing a doctor for 12 months
- ☐ I felt fine, I wasn't sick
- ☐ I was tired of it, wanted a break
- ☐ I didn't want to take HIV medications
- ☐ I had side effects from my HIV medications
- ☐ My viral load was undetectable
- ☐ I couldn't afford it anymore
- ☐ I lost my health insurance or Ryan White
- ☐ I was drinking or doing drugs at the time
- ☐ I had a mental health issue/illness at the time
- ☐ There were other priorities in my life at the time
- ☐ I couldn't get there, no transportation
- ☐ My doctor or case manager left
- ☐ I had a bad experience at the clinic
- ☐ Don't remember
- ☐ Other:_____

8. <u>In the past 6 months</u>, have you done *<u>any</u>* of the following? *(Check one answer for each item below)*

	Yes	No	Don't know	Don't remember
• **Seen a doctor, nurse, or PA for HIV**	☐	☐	☐	☐
• **Been prescribed HIV medication (ART)**	☐	☐	☐	☐
• **Had a test for your HIV viral load**	☐	☐	☐	☐
• **Had a test for your CD4 (t-cell) count**	☐	☐	☐	☐

9. If you are <u>not</u> currently taking HIV medications, why are you not taking them? *(Check all that apply)*

- ☐ N/a, I *do* take HIV medication
- ☐ No doctor has offered them to me
- ☐ My doctor doesn't think it's a good idea for me
- ☐ I had bad side effects
- ☐ They are too hard to take as prescribed
- ☐ I don't have the correct food to take with them
- ☐ I can't pay for them
- ☐ I don't have prescription insurance coverage
- ☐ I don't have a safe place to keep them
- ☐ I don't want anyone to know I'm taking HIV meds
- ☐ I was tired of it, wanted a break
- ☐ I choose not to take them
- ☐ I feel fine, I'm not sick
- ☐ Other:_____

10. In the past 12 months, did you go to an ER because you felt sick?
(Check one)

☐ Yes ☐ No ☐ Don't remember

Section 4: Other Health Concerns

11. Has a doctor told you that you currently have any of the following *non-HIV* medical condition? *(Check all that apply)*

☐ Alzheimer's or dementia
☐ Arthritis
☐ Asthma
☐ Auto-immune disease (i.e., MS, lupus)
☐ Cancer
☐ Diabetes
☐ Heart disease
☐ Hepatitis C
☐ Herpes
☐ High blood pressure
☐ High cholesterol
☐ HPV (human papillomavirus)
☐ Lung disease/COPD
☐ Liver disease
☐ Obesity
☐ Osteoporosis, or bone disease
☐ TB. If so: ☐ Active TB ☐ Latent TB
☐ I have not been told I have any of these
☐ Prefer not to answer
☐ Other:_____

12. In the past 6 months, have you been tested, diagnosed, and/or treated for the following conditions? *(Check all that apply for each item below)*

	Not tested	Tested	Diagnosed	Treated	Don't know
Chlamydia	☐	☐	☐	☐	☐
Gonorrhea	☐	☐	☐	☐	☐
Syphilis	☐	☐	☐	☐	☐

13. In the past 12 months, have you felt any of the following *to such a degree* that you thought you wanted help? *(Check all that apply)*

☐ Anger
☐ Anxiety or worry
☐ Fear of leaving your home
☐ Feeling manic or out of control
☐ Hallucinations
☐ Night terrors
☐ Insomnia
☐ Memory loss
☐ Sadness
☐ Thoughts of hurting yourself or others
☐ Other:_____
☐ None of the above
☐ Prefer not to answer

***If you are having any of these thoughts right now, contact your counselor immediately or refer to the resource list attached to this survey.*

14. Has a doctor told you that you currently have any of the following conditions?
(Check all that apply)

☐ ADD/ADHD
☐ Agoraphobia
☐ AIDS Survivor Syndrome
☐ Anxiety or panic attacks
☐ Bipolar disorder
☐ Depression
☐ Gender dysphoria/gender identity disorder
☐ Obsessive compulsive disorder
☐ PTSD
☐ Other: _____
☐ I don't have a mental health diagnosis

15. <u>In the past 12 months</u>, have you experienced any of the following?
(Check all that apply)

- ☐ Been treated differently because of being HIV+
- ☐ Been denied services because of being HIV+
- ☐ Been asked to leave a public place
- ☐ Verbal harassment/taunts
- ☐ Threats of violence by someone you know
- ☐ Threats of violence by a stranger
- ☐ Physical assault by someone you know
- ☐ Physical assault by a stranger
- ☐ Sexual assault by someone you know
- ☐ Sexual assault by a stranger
- ☐ None of the above
- ☐ Prefer not to answer

16. Are you currently in an intimate relationship with someone who makes you feel afraid, threatened, isolated, forces you to have sex, or physically hurts you? *(Check one)*

☐ Yes ☐ No ☐ Prefer not to answer

Section 5: Substance Use

17. Has your alcohol or drug use <u>ever</u> interfered with you getting HIV medical care? *(Check one)*

- ☐ Yes
- ☐ No, my alcohol or drug use has not interfered with getting HIV medical care
- ☐ No, I do not use alcohol or drugs (***skip bullets below and go to Question 18***)
- ☐ Prefer not to answer

- **<u>If you answered yes</u>, which substance(s)?** *(Check all that apply)*
  - ☐ Alcohol
  - ☐ Club/party drugs
  - ☐ Cocaine or crack
  - ☐ Hallucinogens
  - ☐ Heroin
  - ☐ Inhalants (poppers, glue)
  - ☐ Marijuana
  - ☐ Methamphetamine (meth)
  - ☐ Prescription drugs not prescribed to you (e.g., painkillers, tranquilizers)
  - ☐ Prescription drugs prescribed to you, but that you use differently than intended
  - ☐ Legal drugs from a shop (e.g., bath salts, fake marijuana)
  - ☐ Other: _____
  - ☐ None of the above
  - ☐ Prefer not to answer

Section 6: Housing, Transportation, and Social Support

18. Do you feel your housing situation is stable? *(Check one)* ☐ Yes ☐ No

19. Has your housing situation interfered with you getting HIV medical care? *(Check one)* ☐ Yes ☐ No

20. Has your transportation situation interfered with you getting HIV medical care? *(Check one)* ☐ Yes ☐ No

21. Social support is when people or groups in your life provide emotional support, assistance, advice, and/or companionship. Do you feel that you have enough social support? *(Check one)* ☐ Yes ☐ No

22. Please mark which types of social support a.) <u>you currently have</u>, b.) <u>you do not have, but feel you need</u>; or c.) <u>you do not have and do not need</u>.
(Check one answer for each item below)

	a. Currently Have	b. Don't Have But Need	c. Don't Need
Family	☐	☐	☐
Friends	☐	☐	☐
Partner/significant other	☐	☐	☐
Faith community	☐	☐	☐
Co-workers	☐	☐	☐
Sobriety group (like AA or NA)	☐	☐	☐
A mentor	☐	☐	☐
Being a mentor to others	☐	☐	☐
An HIV-related group or program	☐	☐	☐
Advocacy/activism group	☐	☐	☐
Support group	☐	☐	☐
Community group	☐	☐	☐
Fundraising group	☐	☐	☐
Board, committee, or task force	☐	☐	☐

23. Do you have any other types of social support not listed above? _____
_____

Section 7: Financial Resources

24. What is your current monthly household income? $_____
☐ Prefer not to answer

- **How many people, including you, depend on this income?** _____
- **Of these, how many are children under 18 years old?** _____

25. How do you pay for *general* medical care for yourself or your family?
(Check all that apply)

☐ Private health insurance. *If so, which company do you have?*_____ *(e.g., Aetna, Anthem, Blue Cross/ Blue Shield, CIGNA, Humana)*
☐ COBRA
☐ Medicaid
☐ Medicare
☐ Gold Card
☐ VA
☐ Indian Health Service
☐ Self-pay
☐ I don't get medical care because I can't pay for it
☐ I only get medical care for HIV through Ryan White
☐ Other:_____

26. Do you have trouble paying for the following types medications on your own?
(Check one answer for each item below)

	Yes	No	I do not take this
HIV medication(s)	☐	☐	☐
Non-HIV related medications	☐	☐	☐
Medications for mental health conditions	☐	☐	☐

- **If you have trouble paying for your medications, are you getting help paying for them?** *(Check one)*
  - ☐ Yes
  - ☐ No
  - ☐ Don't know
  - ☐ N/a, I do not take medication

Section 8: Please Tell Us About Yourself…

27. What zip code do you live in? _____

28. What is your age (in years)?
- ☐ 13-17 years old
- ☐ 18-24 years old
- ☐ 25-34 years old
- ☐ 35-49 years old
- ☐ 50-54 years old
- ☐ 55-64 years old
- ☐ 65-74 years old
- ☐ 75+ years old

29. What sex were you assigned at birth? *(Check one)*
- ☐ Male
- ☐ Female
- ☐ Intersex *(someone born with both male and female reproductive or sex organs; or with reproductive or sex organs that were not clearly male or female)*

30. What is your *primary* gender identity or gender expression today? *(Check one)*
- ☐ Male
- ☐ Female
- ☐ Part time male, part time female
- ☐ Other: _____

31. Are you currently pregnant? *(Check one)* ☐ Yes ☐ No ☐ Don't know

- **If you are currently pregnant, are you in prenatal care?** *(Check one)* ☐ Yes ☐ No ☐ Don't know

32. How do you identify in terms of your sexual orientation? *(Check one)*
- ☐ Straight/Heterosexual
- ☐ Gay
- ☐ Lesbian
- ☐ Bisexual
- ☐ Pansexual *(someone who feels sexual attraction, desire, love toward all sexes/genders)*
- ☐ Asexual *(someone who does not feel sexual attraction)*
- ☐ Undecided
- ☐ Other: _____

33. Are you of Hispanic or Latino origin? ☐ Yes ☐ No

34. What is your primary race? *(Check one)*
- ☐ White
- ☐ Black/African American
- ☐ Hispanic/Latino
- ☐ Asian American
- ☐ Pacific Islander or Native Hawaiian
- ☐ American Indian or Alaska Native
- ☐ Multiracial
- ☐ Other: _____

35. What is your immigration status? *(Check one)*
- ☐ Permanent resident/born here
- ☐ U.S. citizen for more than 5 years
- ☐ U.S. citizen for less than 5 years
- ☐ Visa (student, work, tourist, etc.)
- ☐ Prefer not to answer
- ☐ Other: _____

36. <u>In the past 12 months</u>, have you been released from jail or prison?
(Check one) ☐ Yes ☐ No

Section 9: Prevention Activities

37. Where did you get your HIV diagnosis? _____

38. <u>In the past 12 months</u>, have you received any information about preventing HIV transmission? *(Check one)* ☐ Yes ☐ No

- **If so, where did you get this information? _____**

39. Pre-Exposure Prophylaxis (also called PrEP) is a way for people who don't have HIV to prevent getting HIV by taking a pill every day. Have you heard about PrEP before? *(Check one)* ☐ Yes ☐ No ☐ Don't remember

40. Do you know where a person who does not have HIV can go to get on PrEP?
(Check one) ☐ Yes ☐ No
***See the resource list attached to this survey for more information about PrEP.*

41. <u>If you've had sex in the past 6 months,</u> what is the HIV status of your sex partner(s)?
This could be anal, vaginal, or oral sex, either receptive (bottom) or insertive (top), with any person. *(Check all that apply)*

☐ HIV positive
☐ HIV negative
☐ I don't know
☐ I don't remember
☐ Prefer not to answer
☐ I have not had sex in the past 6 months (***skip Questions 42-44 below and go to Question 45***)

42. <u>If you've had sex in the past 6 months</u>, how often did you use a condom (or female condom) for each of the following? *(Check one answer for each item below)*

	Every time	Most of the time	About half of the time	Rarely	Never	N/a, I didn't do this
• **Getting oral sex**	☐	☐	☐	☐	☐	☐
• **Giving oral sex**	☐	☐	☐	☐	☐	☐
• **Vaginal sex**	☐	☐	☐	☐	☐	☐
• **Anal sex, receptive** (bottom)	☐	☐	☐	☐	☐	☐
• **Anal sex, insertive** (top)	☐	☐	☐	☐	☐	☐

43. <u>If you've had sex in the past 6 months,</u> and you did <u>not</u> use a condom, why? *(Check all that apply*)

- ☐ I only ever have sex with one person
- ☐ My sex partner(s) is also HIV+
- ☐ My sex partner(s) is on PrEP
- ☐ My viral load is undetectable
- ☐ I don't think I can get HIV again
- ☐ I can't get condoms
- ☐ I don't like condoms
- ☐ I'm not comfortable using condoms
- ☐ I'm allergic to condoms
- ☐ I can't find condoms that fit
- ☐ I'm too drunk/high to remember to use condoms
- ☐ I get caught up in the moment, and forget to use them
- ☐ I don't think my partner likes condoms
- ☐ My partner(s) doesn't know my HIV+ status
- ☐ I'm not comfortable talking to partners about condoms
- ☐ I'm afraid of what my partner will do if I bring up condoms
- ☐ I only have oral sex, so I don't feel like I need a condom
- ☐ I want to have a baby
- ☐ Sex with a condom doesn't feel as good
- ☐ Other:_____

44. How often do you talk about your HIV status with new sex partners? *(Check one)*

- ☐ Always, with every partner
- ☐ Sometimes, with some partners
- ☐ Never, my partner already knows
- ☐ Never, I always use condoms, so I don't feel like I have to disclose my status
- ☐ Never, I don't feel comfortable disclosing my status
- ☐ Never, I don't want to disclose my status
- ☐ Never, I do not have sex

One Last Question…

45. Do you know how to file a grievance or a complaint? *(Check one for each item below)*

	Yes	No
With an agency	☐	☐
With Ryan White**	☐	☐

***See the resource list attached to this survey for the Ryan White grievance/complaint lines.*

Thank you for taking our survey!

Your answers will help us learn what people need for HIV care in the Houston Area.

If you have questions about this survey after today, please contact:

Ryan White Planning Council

Office of Support

(713) 572-3724

Please bring your completed survey to a staff person now.

RESOURCE LIST – YOURS TO KEEP! ***Please tear off this page and take it with you.***

If you need immediate help, please contact the agencies below.

All services are available in English and Spanish.

CRISIS HOTLINES (available 24 hours/7 days)	
Abuse/Neglect Hotline (Adult, Child, Disabled)	1-800-252-5400
Coalition for the Homeless	713 739-7514
Crisis Intervention of Houston **Spanish**	713 HOTLINE (468-5463) 713 4AYUDA
LGBT Switchboard Helpline	713 529-3211
Rape Crisis Hotline	713 528-7273
Suicide Prevention Hotline	1-800-273-TALK (8255) 1-800-799-4TTY (4889) TTY
Teen Crisis Hotline	713 524-TEEN
Texas Youth Hotline	1-800-989-6884
Trevor Lifeline (LGBTQ youth)	1-866-488-7386
United Way	211 (713-957-4357)
Vet2Vet Crisis Hotline	1-877-VET2VET (838-2838)
Veteran Crisis Line	1-800-273-8255 (Press 1)
DOMESTIC/INTIMATE PARTNER VIOLENCE	
Aid to Victims of Domestic Abuse	713 224-9911
Domestic Violence Hotline	713 528-2121
LGBT Switchboard Helpline	713 529-3211
DOMESTIC VIOLENCE EMERGENCY SHELTER	
Fort Bend County Women's Center	281 342-HELP (4357)
Houston Area Women's Center	713 528-2121
Montgomery County Women's Center	936 441-7273
The Montrose Center (LGBT)	713 529-3211
MENTAL HEALTH CRISIS	
Emergency Psychiatric Services	713 970-7070
Tri-County Emergency Psychiatric Services (Montgomery, Liberty, and Walker counties)	1-800-659-6994
PRE-EXPOSURE PROPHYLAXIS (PrEP)	
Bee Busy Wellness Center	713 771-2292
Dr. Gorden Crofoot	713 526-0005
Houston Area Community Services (HACS)	832 384-1406
Legacy Community Health	832 548-5221
St. Hope Foundation	713 778-1300
SUBSTANCE & ALCOHOL ABUSE	
Alcoholics Anonymous	713 686-6300
Al-Anon	713 683-7227
Cocaine Anonymous	713 668-6822
Narcotics Anonymous	713 661-4200
Palmer Drug Abuse Program	281 589-4602
QUESTIONS ABOUT THE SURVEY	**713 572-3724**

GRIEVANCE/COMPLAINT PROCEDURES

If you have questions on how to file a complaint with one of the agencies listed below regarding a Ryan White funded service, please contact:

FUNDED AGENCIES

RYAN WHITE PART A:

- Accesshealth (Fort Bend)
- Houston Area Community Services
- Houston Health Department
- Houston Volunteer Lawyers Program
- Legacy Community Health
- Montrose Center
- Saint Hope Foundation
- Thomas Street Health Center
- UT Health Science Center (pediatrics)
- VA Medical Center

RYAN WHITE PART B & STATE SERVICES:

- Bering Omega Community Services
- Harris County Jail
- Legacy Community Health
- Montrose Center
- Saint Hope Foundation

RYAN WHITE PART A:

English: **713-439-6089**

Spanish: **713-439-6095**

Or write to:

Harris County Public Health Services
Ryan White Grant Administration
2223 West Loop South, Suite 417
Houston, TX 77027

RYAN WHITE PART B & STATE SERVICES:

Reachelian Ellison, Consumer Relations Coordinator
713-526-1016, Ext. 104
rellison@hivresourcegroup.org

Or write to:

Houston Regional HIV/AIDS Resource Group
500 Lovett Boulevard, Suite 100
Houston, TX 77006

If your complaint remains unresolved after you have followed all procedures with the agency, you will be informed on how to file a formal grievance.