The 2012 Memphis Transitional Grant Area (TGA)

Ryan White Part A Comprehensive Needs Assessment

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INTRODUCTION

Ryan White HIV/AIDS Program. In April of 2007, Shelby County Government was awarded funding to administer the Ryan White Part A Program. The Ryan White HIV/AIDS Program is a federal program that provides HIV-related health care services through grants to cities, states and community organizations. The Ryan White Program is a "payer of last resort" for people who are uninsured or underinsured and is administered by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), HIV/AIDS Bureau. In the Memphis area, the program is administered by the Shelby County Government Division of Community Services. Part A of the Ryan White Program provides medical and supportive services to communities that have been hit the hardest by the HIV/AIDS epidemic.

Guidelines for Conducting the Needs Assessment. The Ryan White Care Act requires each Part A Grantee to conduct a comprehensive needs assessment every three years. This assessment should include five specific components: an epidemiologic profile, an assessment of service gaps and needs, a resource inventory of HIV-related services, a profile of provider capacity and capabilities and an estimate of persons who know their HIV-positive status but are not receiving primary medical care. In 2009, the first comprehensive needs assessment was conducted in the Memphis Ryan White Part A program[1], and this document represents the second comprehensive assessment as required by the Ryan White Care Act.

Research Partnership. The Memphis Ryan White Part A Program partnered with the University of Memphis School of Public Health, the Shelby County Health Department Epidemiology Program, and Ryan White Part A funded service providers to implement the 2012 Needs Assessment. This needs assessment aims to direct the planning resource and allocation process and improve Ryan White funded services for PLWHA in the Memphis TGA.

Overall Research Design. Tri-annual needs assessments are conducted in the Memphis TGA to determine service gaps and barriers in the continuum of care for Persons Living with HIV/AIDS (PLWHA). The Memphis TGA is composed of eight counties across three states. Three counties are located in Tennessee (Shelby, Fayette and Tipton), while four counties are located in Mississippi (Desoto, Tunica, Tate, Marshall) and one in Arkansas (Crittenden).

As guided by HRSA recommendations, this needs assessment includes five specific components:

1) Identify epidemiologic trends in the HIV/AIDS epidemic, focusing on recent changes and emerging affected populations;
2) Identify consumer service needs with an emphasis on those that are not currently being fulfilled, utilization patterns and barriers to care;
3) Update a resource inventory of HIV-related services
4) Evaluate provider capacity for gaps in the continuum of care;
5) Obtain detailed information on PLWHA with unmet need for HIV primary medical care and strategies to improve retention.

Summary. The needs assessment is one component of a comprehensive planning process which guides the development of priorities and allocation of funds to address needs and improve upon existing services for PLWHA.

EPIDEMIOLOGICAL PROFILE

This Epidemiologic Profile provides detailed information about the current HIV/AIDS epidemic in the Memphis Transitional Grant Area. The data presented in this report serve as a resource for planning HIV/AIDS prevention and care activities in the Memphis Transitional Grant Area counties throughout Tennessee, Mississippi and Arkansas. This profile addresses:

a) Socio-demographic characteristics of the general population in the Memphis TGA;
b) Scope of the HIV/AIDS epidemic, including descriptions of the PLWHA population and recent trends;
c) Presence of HIV-related co-morbidities and social factors;
d) Indicators of risk for HIV disease among disproportionately impacted and disadvantaged populations;
e) Patterns of service utilization among Part A Ryan White clients and HIV tests conducted at publicly funded sites.

Case Definitions. Diagnosis of HIV infection and AIDS are included on the reportable diseases and events list in Tennessee, Arkansas and Mississippi. Health care providers and laboratories are required by law to report these conditions to the respective local or state health departments. Individuals are counted as an HIV case in the county of residence at initial HIV diagnosis. Once an individual progresses to AIDS, he/she will be reported as an AIDS case in the county of residence at the time of AIDS diagnosis. State health departments participate in duplication review processes to ensure individuals are counted in only one state.

HIV disease case reports represent persons who have a confirmed diagnosis with human immunodeficiency virus. This category represents all new diagnoses with HIV infection regardless of the stage of the disease. AIDS (acquired immunodeficiency syndrome) case reports represent only persons with HIV infection who have progressed to advanced disease; the CDC surveillance case definition for AIDS includes all HIV-infected persons who have less than 200 CD4+ T-lymphocytes/uL, a CD4+ T-lymphocyte percentage of total lymphocytes of less than 14, or one of the 27 AIDS-defining illnesses.[2] Once a person meets the AIDS case definition, this person is always included as an AIDS case, even if a CD4+ T-lymphocyte count or percentage increases. Persons may be diagnosed with HIV infection and AIDS concurrently; therefore, HIV disease reports and AIDS case reports should be reported separately during data reviews and evaluations. The two categories should not be combined to estimate an infected population, since the category of HIV disease also includes AIDS cases initially diagnosed with an AIDS defining condition.

Risk Transmission Categories. A hierarchy of transmission categories developed by the Centers for Disease Control and Prevention (CDC) is used to classify a person's possible HIV risk factors. The hierarchy selects one risk factor most likely to have been responsible for transmission; therefore, surveillance data cannot describe multiple potential transmission routes in individuals who have engaged in more than one transmission behavior. The exception is men who report sexual contact with other men and injection drug use; this group is classified in a

separate transmission category. When risk transmission category is incomplete, the individual is assigned undetermined risk (no reported/no identified risk). Over time, a case with an undetermined risk category may be reassigned to another category if additional information is received.The following hierarchy is used:

- Male-to-Male Sexual Contact (MSM): Males who have a history of sexual contact with other men or with both men and women.
- Injection Drug Use (IDU): Persons who have a history of injecting drugs.
- MSM & IDU: MSM who also have a history of injecting drugs.
- Heterosexual Contact: Persons who report specific heterosexual contact with a person known to have or at high risk for HIV infection.
- Blood recipient: HIV transmission via transfusing blood to blood products or transplanting tissue or organs.
- Perinatal exposure: HIV transmission from mother to child during birth or through breastfeeding.
- Undetermined: Persons with "no identified risk"or "no reported risk."Cases with no identified risk include individuals followed up by local health department officials. Persons are classified in "no reported risk" when the exposure history is missing because of death, loss to follow-up or if the individual declined an interview.[3]

Data Sources. The Shelby County Health Department Epidemiology Section utilized data from the Tennessee and Arkansas Enhanced HIV/AIDS Reporting System (eHARS) to describe HIV epidemiologic data for Shelby, Fayette, Tipton, and Crittenden counties. The Mississippi State Department of Health provided data tables for Northern Mississippi counties, which were used to create aggregated information for the Memphis TGA. Additional data were drawn from the U.S. Census, Ryan White Data Reports, sexually transmitted disease surveillance systems, CDC reports, and other sources as referenced below each table and figure.

Analysis. Examining incidence trends explains how HIV is presently spreading and how to more effectively focus prevention efforts. In this report, incidence estimates are based on the county of residence at initial diagnosis and the date of diagnosis. To evaluate incidence trends and emerging populations, annual rates of new HIV diagnoses by race, sex and age at HIV diagnosis were assessed by linear chi-square analysis for statistically significant changes ($p<0.05$) between 2007 and 2011. Risk transmission category data were analyzed by annual percent changes, as no reliable denominator data exists to allow rate calculations. Trends are also described by overall percent changes from 2007 and 2011.

Prevalence data provides a snapshot of the burden of infection in a given population and provides information about how to more effectively focus care efforts. Prevalence estimates may be based on either the county of residence at initial diagnosis or current residence. In this report, prevalence estimates are based on the resident's current residence as documented in the state surveillance system.

Case counts of less than five have been suppressed for statistical reliability and for privacy and confidentiality reporting guidelines.

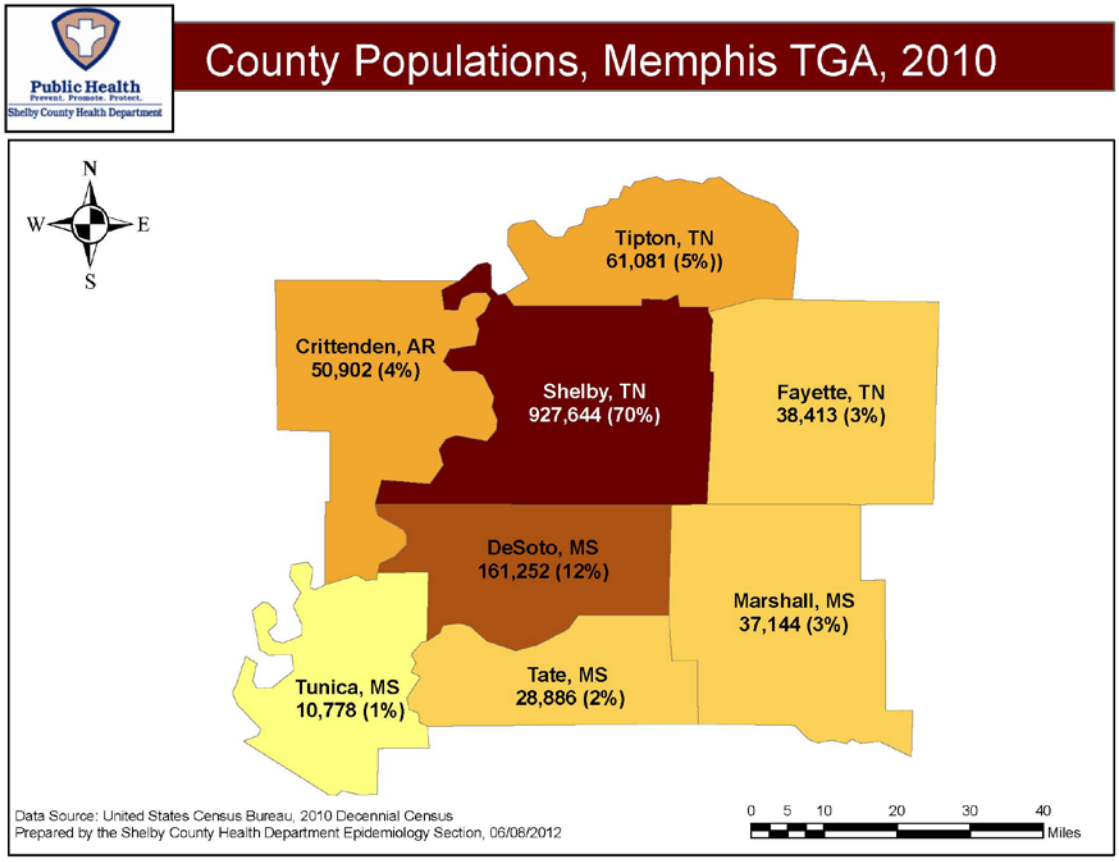
Data Limitations. These data provide a minimum estimate of persons known to be infected with HIV, as not all infected persons have been tested. In this report, newly diagnosed cases are measured by using the date of diagnosis; however, this measure does not tell when persons were infected because HIV diagnosis may take place months or years after initial infection. Furthermore, testing patterns may be influenced by the extent to which testing is routinely offered to specific populations, as well as routine access to medical care and testing services. In addition, reporting and updating an individual's clinical and vital status may cause changes to the data. ***All 2011 data presented in this report is considered provisional and subject to change; it must be cited as such. The use of preliminary data is intended for planning purposes only.***

Demographic Description of the Memphis TGA

County Populations. The Memphis Metropolitan Statistical Area (MSA), which mirrors the boundaries of the Transitional Grant Area, is populated by approximately 1.3 million people.[4] The city of Memphis is the urban hub of the region and located on the Mississippi River in Shelby County, Tennessee. The largest proportion of the Memphis TGA population reside in Shelby County (70%), followed by DeSoto County in Mississippi (12%) and Crittenden County in Arkansas (4%) (Figure 1).

The total population in the TGA has increased over the past 10 years by almost 35%. While some counties have remained relatively stable in growth, others have shown significant increases. DeSoto County has increased in population by 50% over the past decade, while Fayette County has increased by 33%. Crittenden County population has remained unchanged, and Shelby County has increased by approximately 3%.

Figure 1. Memphis TGA County Populations, 2010



Sex and Age. The 2010 Decennial Census estimates 48% of Memphis TGA residents (631,856) are male and 52% are female (684,244), while the median age is 35 years. The age distribution for males and females in the Memphis TGA is similar; however, a greater proportion of females are aged 65 and older compared to males. More than one-third (36.5%) of the population is less than 25 years of age (Table 1).

Table 1. Memphis TGA Population by Sex and Age, 2010

	Males		Females		Total	
	N	%	N	%	N	%
Total	**631,856**	**48.0%**	**684,244**	**52.0%**	**1,316,100**	**100**
Age						
Under 5 years	47,857	7.6%	46,452	6.8%	94,309	7.2%
5 to 9 years	47,651	7.5%	46,495	6.8%	94,146	7.2%
10 to 14 years	50,854	8.0%	48,585	7.1%	99,439	7.6%
15 to 19 years	51,245	8.1%	49,738	7.3%	100,983	7.7%
20 to 24 years	44,057	7.0%	45,038	6.6%	89,095	6.8%
25 to 29 years	44,206	7.0%	47,276	6.9%	91,482	7.0%
30 to 34 years	42,511	6.7%	45,804	6.7%	88,315	6.7%
35 to 39 years	43,348	6.9%	46,795	6.8%	90,143	6.8%
40 to 44 years	42,774	6.8%	46,550	6.8%	89,324	6.8%
45 to 49 years	45,633	7.2%	50,300	7.4%	95,933	7.3%
50 to 54 years	44,216	7.0%	49,682	7.3%	93,898	7.1%
55 to 59 years	38,698	6.1%	43,955	6.4%	82,653	6.3%
60 to 64 years	31,946	5.1%	35,595	5.2%	67,541	5.1%
65 years and over	56,860	9.0%	81,979	12.0%	138,839	10.5%

Source: US Census Bureau, 2010 Decennial Census Estimates, Table QT-P1.

Race and Ethnicity. The U.S. Census 2010 estimates 46% of Memphis TGA residents are Non-Hispanic White, 46% are Non-Hispanic Black/African American, and 5% are Hispanic (Table 2). Approximately 3% of the remaining TGA population is comprised of other races, including Asians (1.8%), American Indian/Alaskan Natives (0.2%) and persons reporting two or more races (1.1%).

The racial/ethnic distribution of Memphis TGA residents varies by county. Over half of Shelby County residents are Non-Hispanic Black/African American, while almost 6% are Hispanic. The majority of residents are Non-Hispanic White in the rural counties of Fayette, Tipton and Tate, while Tunica County is predominantly Non-Hispanic Black. The percentage of Non-Hispanic White and Black/African American residents in Crittenden County, Arkansas is more evenly distributed. DeSoto County in Mississippi is primarily comprised of Non-Hispanic White residents (70.4%), but the second largest Hispanic population is also located in this county (5.0%).

Table 2. Memphis TGA County Population by Race/Ethnicity, 2010

	Non-Hispanic White		Non-Hispanic Black or African American		Hispanic or Latino	
	N	%	N	%	N	%
Total	**608,449**	**46.2%**	**598,629**	**45.5%**	**65,395**	**5.0%**
County						
Shelby	359,106	38.7%	481,431	51.9%	52,092	5.6%
Fayette	26,193	68.2%	10,742	28.0%	858	2.2%
Tipton	46,831	76.7%	11,393	18.7%	1,269	2.1%
Crittenden	23,028	45.2%	25,953	51.0%	1,014	2.0%
DeSoto	113,553	70.4%	35,124	21.8%	8,086	5.0%
Marshall	18,161	48.9%	17,369	46.8%	1,192	3.2%
Tate	19,091	66.1%	8,723	30.2%	639	2.2%
Tunica	2,486	23.1%	7,894	73.2%	245	2.3%

Source: US Census Bureau, 2010 Decennial Census Estimate, Table DP-1.

Health Insurance. In the Memphis TGA, almost 23% of adults aged 18 to 64 years do not have health insurance coverage, while 6% of children and adolescents and less than 1% of adults aged 65 years and older do not have health insurance (Table 3). A larger percentage of males (18.3%) are uninsured as compared to females (13.9%) among Memphis TGA residents. Minorities also represent higher percentages of persons not covered by health insurance; 19% of Black/African Americans and 44% of Hispanics are not covered as compared to 12% of Whites in the Memphis TGA. Coverage among age groups varies by county in the Memphis TGA (Table 3). More than 20% of adults aged 18 to 64 years are not covered by health insurance in Crittenden (26.7%), Marshall (25.2%), Tate (22.8%) and Shelby County (22.0%). The largest percentage of children and adolescents not covered by insurance are reported in Marshall (20.3%), Tate (13.7%) and DeSoto (11.2%) County.

Table 3. Memphis TGA Residents Not Covered by Health Insurance by County and Age, 2010

	Under 18 years	18 to 64 years	65 years and older
Total	**6.1%**	**22.8%**	**0.6%**
County			
Shelby	6.9%	22.0%	0.6%
Fayette	9.1%	14.5%	0.0%
Tipton	3.7%	20.3%	0.2%
Crittenden	3.4%	26.7%	0.0%
DeSoto	11.2%	19.4%	0.0%
Marshall	20.3%	25.2%	0.0%
Tate	13.7%	22.8%	0.0%

Source: US Census Bureau, 2008-2010 American Community Survey 3-Year Estimates, Table S2701

Educational Attainment. In the Memphis TGA, approximately 15% of persons 25+ years have not achieved a high school diploma (Table 4). A larger percentage of adult females have attained a high school graduate degree or higher (87.2%) than males (83.9%). Approximately 25% of all Memphis TGA residents have obtained a bachelor's degree or higher.

Table 4. Educational Attainment among Memphis TGA Residents aged 25+ Years by Sex, 2010

	Total	Male	Female
	838,122	390,286	447,836
Less than 9th grade	4.9%	5.4%	4.5%
9th to 12th grade, no diploma	9.5%	10.8%	8.4%
High school graduate (includes equivalency)	29.3%	31.3%	27.7%
Some college, no degree	24.1%	22.0%	25.9%
Associate's degree	7.2%	6.2%	8.0%
Bachelor's degree	16.4%	16.0%	16.6%
Graduate or professional degree	8.7%	8.4%	9.0%
Percent high school graduate or higher	85.6%	83.9%	87.2%
Percent bachelor's degree or higher	25.1%	24.4%	25.6%

Source: US Census Bureau, 2010 American Community Survey 1-Year Estimates, Table S1501.

Poverty. Nineteen percent of all residents in the Memphis TGA are living below the poverty level (Table 5). Children and adolescents are disproportionately impacted by poverty; approximately 28% of all residents under the age of 18 years are living in poverty. Twenty-one percent of all Memphis TGA females are living below the poverty level, as compared to 17% of males. Minorities are also largely impacted by high rates of poverty; almost 29% of Black/African American residents and 39% of Hispanic/Latino residents are living below the poverty level. As educational attainment increases, the percentage of poverty decreases. Among residents aged 25 years and older who have less than a high school graduate degree, 32% are living in poverty.

Table 5. Memphis TGA Residents Below the Poverty Level by Selected Demographics, 2010

Total Population*	**19.1%**
Age	
Under 18 years	27.6%
18 to 64 years	17.1%
65 years and over	9.5%
Sex	
Male	17.2%
Female	20.8%
Race/Ethnicity	
White	9.6%
Black or African American	28.6%
Hispanic or Latino origin (of any race)	38.6%
Educational Status	
Less than high school graduate	32.2%
High school graduate (includes equivalency)	17.9%
Some college, associate's degree	10.2%
Bachelor's degree or higher	4.2%

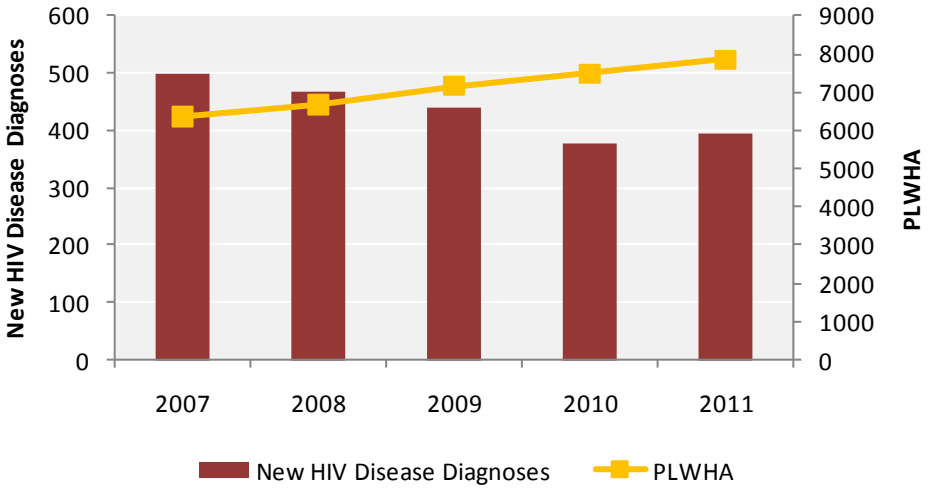
Source: US Census Bureau, 2010 American Community Survey 1-Year Estimates, Table S1701.
**for whom poverty status has been determined*

Scope of the HIV/AIDS Epidemic in the Memphis TGA

Introduction. As treatment options have advanced, HIV has become a manageable chronic disease in the United States. The Centers for Disease Control and Prevention estimates approximately 1.2 million people in the United States are living with HIV infection.[5] Over the past five years, the estimated number of persons living with HIV or AIDS in the Memphis TGA has increased by almost 24% to 7,856 individuals at the end of 2011 (Figure 2). While this number continues to increase each year, challenges persist to retain persons in primary medical care. The level of unmet need has remained relatively constant over the past four years in the Memphis TGA. Furthermore, the percent of "late testers" in the Memphis TGA indicates challenges in identifying those unaware of their HIV-positive status to ensure timely linkage to care before advanced disease.

While the number of new infections in the nation has remained relatively stable,[5] newly diagnosed cases in the Memphis TGA have shown and overall decline in the past five years; however, the TGA incidence rate remains above national figures. According to the Centers for Disease Control and Prevention, the estimated HIV infection rate *(adjusted for those who are unaware of their HIV positive status)* in the Memphis Metropolitan Statistical Area (33.7 per 100,000) was approximately three times greater than the estimated rate in the United States Metropolitan Statistical Areas (10.4 per 100,000) in 2010.[6] Provisional data for the Memphis TGA shows a small incline in new diagnoses during 2011. Among new infections, Non-Hispanic Black individuals remain disproportionately impacted, and males have an infection rate over twice that of females. New infections are spread across all age groups, but young adults aged 20-24 years report the highest rates. Transmission in the Memphis TGA continues to be characterized by heterosexual and male-to-male sexual contact (Table 9).

Figure 2. HIV Disease Diagnoses and Number of Persons Living with HIV/AIDS, Memphis TGA, 2007-2011

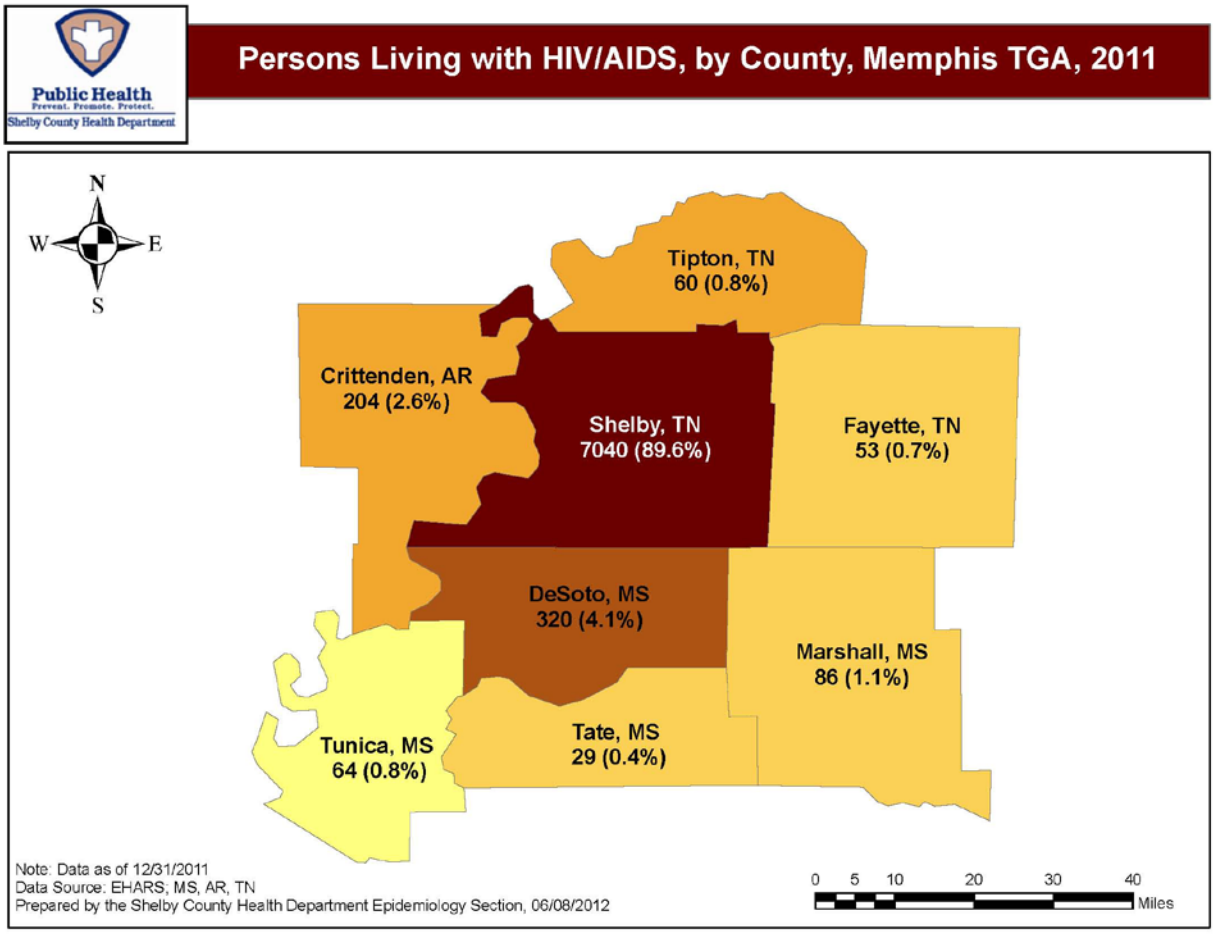


Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR[46-49]

Persons Living with HIV/AIDS in the Memphis TGA. As new HIV disease cases are being diagnosed each year and life-prolonging medications have become increasingly available, the prevalence of persons living with HIV/AIDS in the Memphis TGA continues to rise. As detailed in Table 6, a total of 7,856 individuals were estimated to be currently living with HIV disease at the end of 2011. The Memphis TGA accounts for the largest number of persons living with HIV/AIDS in Tennessee, and approximately 90% of all PLWHA in the Memphis TGA reside in Shelby County (Figure 3). DeSoto County in Mississippi accounts for the second largest PLWHA population (4.1%) followed by Crittenden County, Arkansas (2.6%).

Of the 7,856 individuals estimated to be currently living with HIV disease at the end of 2011, 48% (n=3,771) of these individuals are classified in the AIDS disease stage, while 52% (n=4,085) were living with HIV (not AIDS). The overall percentage of persons living with AIDS has increased. In 2007, 44% (n=2,807) of all PLWHA were living with AIDS, while 56% (n=3,552) were living with HIV (not AIDS).

Figure 3. Persons Living with HIV/AIDS by County, Memphis TGA, 2011

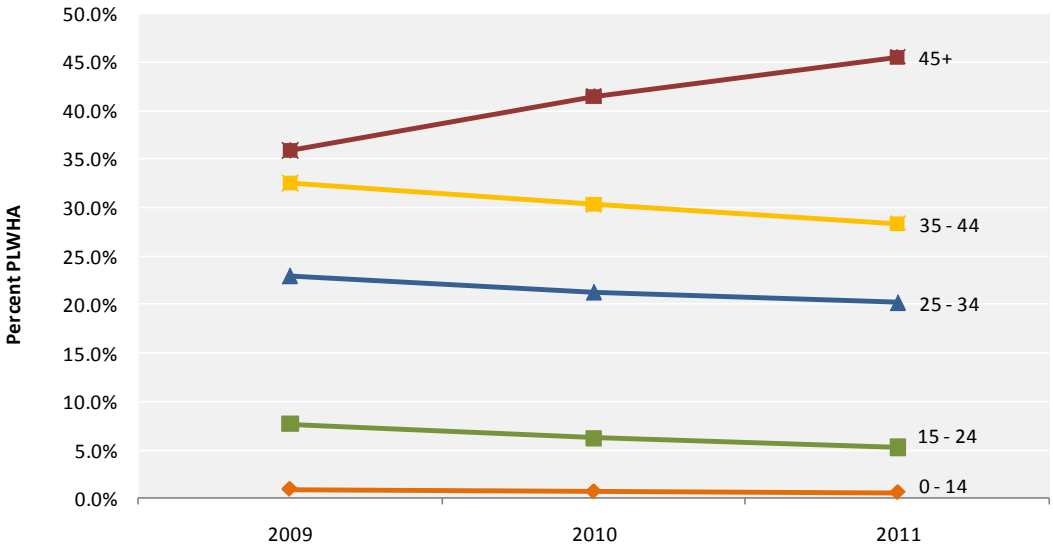


Almost 69% of people living with HIV or AIDS in the Memphis TGA are male. The majority is Non-Hispanic Black (82%), followed by Non-Hispanic White (15%) and 2% Hispanic (Table 6). A higher percentage of females living with HIV or AIDS are non-Hispanic Black (89%) compared to males (79%), as a larger number of males living with HIV or AIDS are Non-Hispanic White (18%).

Forty percent of all PLWHA account their risk exposure to MSM contact, 30% to heterosexual contact, 23% have an unidentified risk transmission exposure, 4% to intravenous drug use (IDU), 2% MSM/IDU, and 1% through perinatal exposure. The vast majority of HIV-infected women have heterosexual risk (67%), IDU (5%) and 27% have an unidentified risk exposure. Among males, 58% of the cases are attributed to MSM, followed by heterosexual risk (13%), MSM/IDU (3%), IDU (3%), and 22% have an unidentified exposure. Unidentified risk among women may be assigned because no sexual partners who were known to be HIV-infected or high-risk for HIV could be identified. For males, it is also likely that some percent of those individuals with unidentified risk do not report MSM contact due to stigma.

As depicted in Figure 4, almost 46% of persons living with HIV or AIDS were above 45 years of age at the end of 2011, which has increased from 36% in 2009. All other age categories have shown deceases over the past three years, indicating a general aging among the Memphis TGA PLWHA population.Sixty percent of all females living with HIV or AIDS are within the child-bearing range of 15 to 44 years of age (Table 6).

Figure 4. Persons Living with HIV/AIDS by Age Group, Memphis TGA, 2009-2011



Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

Table 6. Persons Living with HIV/AIDS by Gender and Demographics/Risk Exposure Category, Memphis TGA, 2011

	Male		Female		Total	
	N	%	N	%	N	%
Gender						
	5382	100%	2464	100%	7856	100%
Race/Ethnicity						
White, not Hispanic	989	18%	213	9%	1202	15%
Black, not Hispanic	4239	79%	2203	89%	6442	82%
Hispanic	105	2%	41	2%	146	2%
Other Race, not Hispanic	48	1%	15	1%	63	1%
Not Specified	1	0%	2	0%	3	0%
Current Age						
0 - 14 years	21	<1%	25	1%	46	1%
15 - 19 years	33	1%	24	1%	57	1%
20 - 24 years	270	5%	86	3%	356	5%
25 - 34 years	1018	19%	571	23%	1589	20%
35 - 44 years	1408	26%	821	33%	2229	28%
45 - 54 years	1714	32%	610	25%	2324	30%
55+	918	17%	337	14%	1255	16%
Risk Exposure Category						
Men who have sex w/men (MSM)	3133	58%	…	…	3133	40%
Injection drug user (IDU)	186	3%	125	5%	311	4%
MSM & IDU	143	3%	…	…	143	2%
Heterosexual contact	681	13%	1652	67%	2333	30%
Blood product exposure	19	<1%	5	<1%	24	<1%
Undetermined	1186	22%	656	27%	1842	23%
Perinatal exposure	34	1%	36	1%	70	1%

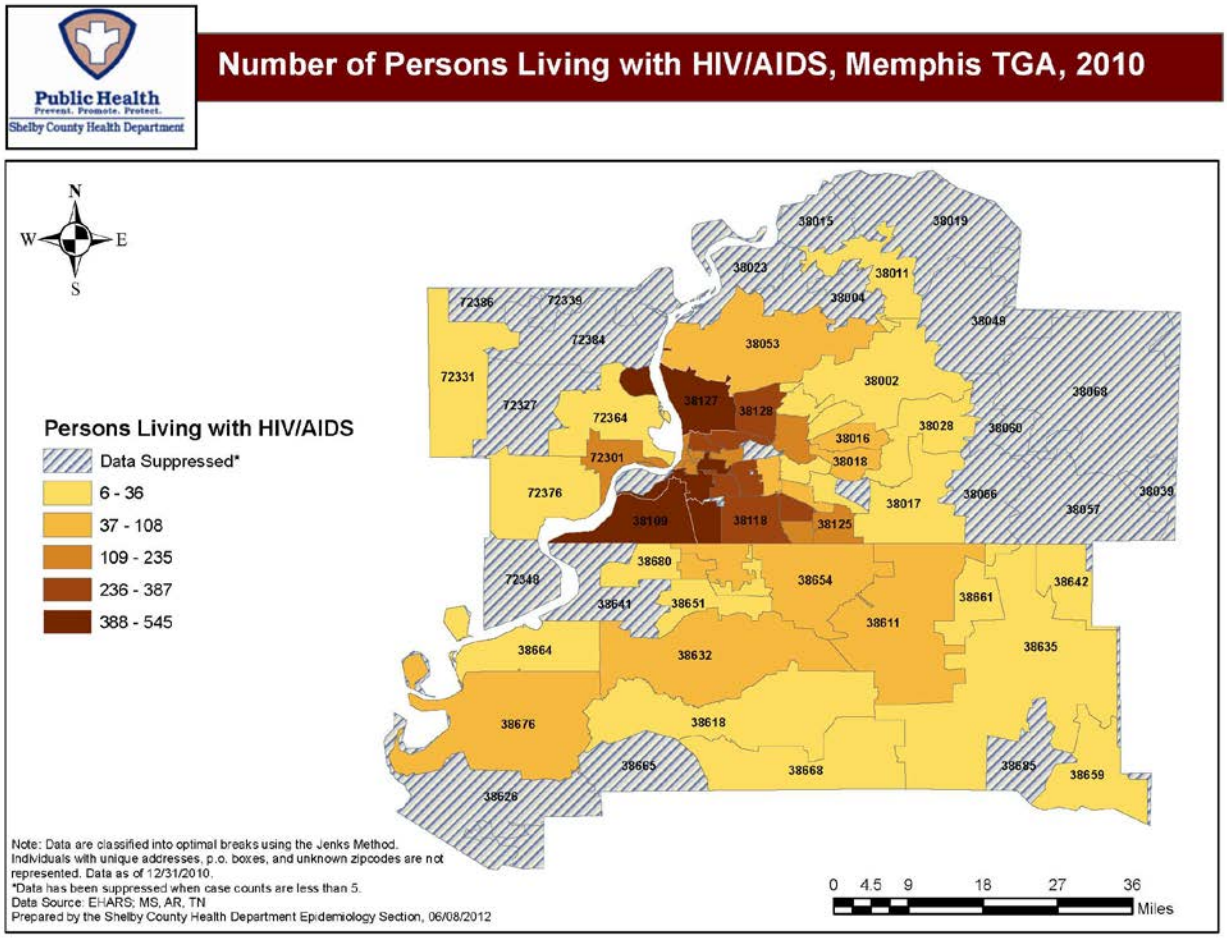
Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

Note: This represents the number of persons reported to be currently living with HIV or AIDS in the Memphis TGA as of December 31, 2011. Data is considered provisional and subject to change.

Persons living with HIV/AIDS in Shelby County, Tennessee. Ninety percent of all persons living with HIV or AIDS in the Memphis TGA reside within Shelby County (Table 7). As such, demographic frequencies are similar to those previously discussed in the TGA demographic section of persons living with HIV/AIDS. The majority of the PLWHA population in Shelby County is male (69%). Among males, 80% are Non-Hispanic Black, 75% are above age 35, and 58% reported MSM contact as a risk exposure. Among females, 91% are Non-Hispanic Black, 61% are between the child-bearing ages of 15-44 years, and 68% reported heterosexual contact as a risk exposure. The percentage of undetermined risk exposure among all males and females living in Shelby County at the end of 2011 was 22% and 25%, respectively.

Figure 5 displays the number of persons currently living with HIV or AIDS in the Memphis TGA by zip code at the end of 2010. As depicted, the largest number of individuals is located within Memphis city limits; zip codes within the North Memphis, Whitehaven, Westwood and downtown areas report the highest burden.

Figure 5. Persons Living with HIV/AIDS by Zip Code, Memphis TGA, 2010



Persons living with HIV/AIDS in Fayette and Tipton Counties, Tennessee. At the end of 2011, 113 individuals were reported to be currently living with HIV or AIDS in Fayette (n=53) and Tipton Counties (n=60) (Table 7). Approximately 83% of these individuals are male, which is higher than the overall TGA PLWHA population (69%). Additionally, 31% of all persons living with HIV or AIDS in Fayette and Tipton counties are Non-Hispanic White and 63% are Non-Hispanic Black, which also differs from the Memphis TGA PLWHA population (15% and 82%, respectively). Reported risk exposure is similar to the overall TGA distribution: 42% reported MSM contact, 28% heterosexual contact and 19% had undetermined risk. The number of persons living with HIV/AIDS in Fayette and Tipton is spread across all age groups: 20-24 years (10%), 25-34 years (15%), 35-44 years (29%), 45-54 years (28%), and 55+ years (17%). Among females, 32% are within the child-bearing ages of 15-44 years.

Persons living with HIV/AIDS in Northern Mississippi. Approximately 6% (n=499) of all persons living with HIV/AIDS in the Memphis TGA were residing in one of the four Northern Mississippi counties at the end of 2011 (Table 7). The majority reside within DeSoto County (n=320), followed by Marshall County (n=86), Tunica County (n=64) and Tate County (n=29). Approximately 69% of the Northern Mississippi PLWHA population is male, and 31% are female, which mirrors the overall TGA PLWHA population distribution. The majority are Non-Hispanic Black (62%) and Non-Hispanic White (33%), and 2% are Hispanic. As similarly reported in the Memphis TGA, 42% attribute MSM contact as a risk exposure, 5% attribute IDU, and 4% both MSM and IDU. A smaller percentage of heterosexual contact is reported (17%) as compared to the Memphis TGA, but this is likely due to a larger number of cases that have undetermined risk (31%). The number of persons living with HIV/AIDS in Northern Mississippi is spread across all age groups: 20-24 years (5%), 25-34 years (19%), 35-44 years (26%), 45-54 years (33%), and 55+ years (17%). Among females, 55% are within childbearing ages of 15-44 years.

Persons Living with HIV/AIDS in Crittenden County, Arkansas. At the end of 2011, 204 individuals were reported to be living with HIV or AIDS in Crittenden County, Arkansas, which accounts for approximately three percent of the entire Memphis TGA PLWHA population (Table 7). Crittenden County has the largest percentage of females living with HIV disease in the Memphis TGA; 42% of all PLHWA are female and 58% are male. Approximately 80% are non-Hispanic Black and 18% are non-Hispanic White. The highest percentage of heterosexual contact (37%) and IDU (10%) is reported in Crittenden County, while MSM contact (31%) and undetermined risk (18%) are the lowest in the Memphis TGA. The number of persons living with HIV/AIDS in Crittenden County is spread across all age groups: 20-24 years (3%), 25-34 years (12%), 35-44 years (34%), 45-54 years (29%), and 55+ years (19%). Among females, 62% are within childbearing ages of 15-44 years.

Table 7. Persons Living with HIV/AIDS by Geographic Residence and Demographics/Risk Exposure Category, Memphis TGA, 2011

	Northern MS Counties		Crittenden County, AR		Fayette and Tipton Co, TN		Shelby County, TN		Memphis TGA	
	N	%	N	%	N	%	N	%	N	%
Total	**499**	**6%**	**204**	**3%**	**113**	**1%**	**7040**	**90%**	**7856**	**100%**
Gender										
Male	344	69%	119	58%	94	83%	4825	69%	5382	69%
Female	155	31%	85	42%	19	17%	2215	31%	2464	31%
Race/Ethnicity										
White, not Hispanic	165	33%	37	18%	35	31%	965	14%	1202	15%
Black, not Hispanic	310	62%	164	80%	71	63%	5897	84%	6442	82%
Hispanic	12	2%	*	*	*	*	128	2%	146	2%
Other Race, not Hispanic	9	2%	*	*	*	*	50	1%	63	1%
Not Specified	3	1%	0	0%	0	0%	0	0%	3	0%
Current Age										
0 - 14 years	*	*	*	*	*	*	44	1%	46	1%
15 - 19 years	*	*	*	*	*	*	50	1%	57	1%
20 - 24 years	26	5%	7	3%	11	10%	312	4%	356	5%
25 - 34 years	93	19%	25	12%	17	15%	1454	21%	1589	20%
35 - 44 years	129	26%	70	34%	33	29%	1997	28%	2229	28%
45 - 54 years	164	33%	59	29%	32	28%	2069	29%	2324	30%
55+	83	17%	39	19%	19	17%	1114	16%	1255	16%
Risk Exposure										
MSM	210	42%	63	31%	48	42%	2812	40%	3133	40%
IDU	24	5%	21	10%	*	*	262	4%	311	4%
MSM & IDU	22	4%	*	*	*	*	113	2%	143	2%
Heterosexual contact	87	17%	76	37%	32	28%	2138	30%	2333	30%
Blood product exposure	*	*	*	*	*	3%	19	0%	24	0%
Undetermined	153	31%	36	18%	22	19%	1631	23%	1842	23%
Perintal exposure	*	*	*	*	*	*	65	1%	70	1%

Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

Note: Case counts of less than five have been suppressed for statistical reliability and confidentiality guidelines. Additional cells greater than five may be suppressed to prohibit back-calculation.This represents the number of persons reported to be currently living with HIV or AIDS in the Memphis TGA as of December 31, 2011. Data is considered provisional and subject to change.

HIV Disease Incidence in the Memphis TGA. In 2011, there were 396 newly diagnosed HIV disease cases in the Memphis TGA, which increased approximately 5% from 378 cases in 2010 (Table 8). Almost 90% (n=352) of these cases were diagnosed among Shelby County residents, while 5% were among DeSoto County residents (n=18), 3% among Fayette County residents (n=13) and 2% among Crittenden County residents (n=9). Less than five cases have been routinely reported in each of the remaining Northern Mississippi counties and Tipton County, Tennessee. While the number of new HIV disease cases diagnosed among DeSoto and Crittenden county residents has remained relatively stable over the past three years, a larger number of cases are now being identified among Fayette County residents.

Table 8. Newly Diagnosed HIV Disease Cases by County, Memphis TGA, 2007-2011

	2007	2008	2009	2010	2011
Shelby Co.	462	438	394	330	352
DeSoto Co.	14	8	17	17	18
Crittenden Co.	13	9	12	12	9
Fayette Co.	<5	<5	<5	9	13
Memphis TGA (Total)*	499	468	438	378	396

Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

** Marshall, Tipton, Tate, Tunica counties routinely report less than five cases and are not listed but are included in the overall Memphis TGA total.Case counts of less than five have been suppressed for statistical reliability and confidentiality guidelines. Additional cells greater than five may be suppressed to prohibit back-calculation.Data is considered provisional and subject to change.*

In comparing five years of trend data by linear chi-square, a significant decrease of 23% in the overall TGA HIV disease rates was observed between 2007 and 2011 (Table 9). This decrease was significant among both males and females; however, females reported larger reductions in HIV disease incidence than males. During this same time period, rates among Non-Hispanic Blacks showed a significant decrease by 26%. The largest reductions in incidence were observed among persons aged 25-34 years (-39%) and 35-44 years (-33%), both of which were statistically significant. While an overall percent decrease in incidence rates was observed in youth and adolescents aged 15-24 years during 2007-2011, these reductions were not statistically significant.

The overall rate in HIV disease incidence increased between 2010 and 2011 (28.7 to 30.1 per 100,000 persons); however, this increase was not statistically significant (Table 9). During the past year, females experienced a small increase in HIV disease rates, as well as Non-Hispanic Whites and Non-Hispanic Blacks. Young adults aged 20-24 years reported the largest increase in HIV disease incidence rates (from 79.7 to 97.6 per 100,000) between 2010 and 2011. The percentage of new cases identified as MSM and heterosexual risk also increased during the past year; however, this increase is likely due to the percentage of undetermined risk decreasing.

Table 9. Newly Diagnosed HIV Disease Cases by Demographics and Risk Exposure Category with Trend Analysis, Memphis TGA, 2007-2011

	2007		2008		2009		2010		2011		Statistical Trend	% Change
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	(2007-2011)	
TGA Total	**499**	**38.9**	**468**	**36.3**	**438**	**33.6**	**378**	**28.7**	**396**	**30.1**	Significant	-23%
Gender												
Male	324	52.3	324	52.4	298	47.4	281	44.5	277	43.8	Significant	-16%
Female	175	26.3	144	21.5	140	20.7	97	14.2	119	17.4	Significant	-34%
Race/Ethnicity												
Non-Hispanic White	42	6.8	39	6.3	39	6.3	34	5.4	37	5.9	Not Significant	-14%
Non-Hispanic Black	452	77.6	412	71.3	386	66.5	324	53.9	344	57.2	Significant	-26%
Hispanic	*	*	16	31.8	12	20.2	16	24.5	9	13.8	Not Significant	…
Other Race	*	*	*	*	*	*	*	*	*	*	…	…
Age at Diagnosis (Years)												
15 - 19 years	32	32.3	36	36.6	27	28.3	23	22.8	27	26.7	Not Significant	-17%
20 - 24 years	91	105.5	87	102.5	76	90.1	71	79.7	87	97.6	Not Significant	-7%
25 - 34 years	133	80.5	134	81.3	117	64.1	107	59.5	89	49.5	Significant	-39%
35 - 44 years	137	73.9	94	51.7	99	54.3	77	42.9	89	49.6	Significant	-33%
45 - 54 years	73	38.6	81	42.4	70	37.3	68	35.8	77	40.6	Not Significant	5%
55+	33	12.4	34	12.2	44	15.8	31	10.7	26	9.0	Not Significant	-27%
Risk Exposure Category[†]												
MSM	133	27%	146	31%	139	32%	104	28%	129	33%	Not Significant	-3%
IDU	5	1%	*	*	*	*	*	*	0	0%	Not Significant	-100%
MSM & IDU	*	*	*	*	*	*	*	*	0	0%	Not Significant	-100%
Heterosexual	176	35%	146	31%	135	31%	89	24%	108	27%	Significant	-39%
Blood product	0	0%	0	0%	0	0%	0	0%	0	0%	…	…
Perinatal	*	*	*	*	*	*	*	*	0	0%	Not Significant	-100%
Undetermined	183	37%	171	37%	154	35%	180	48%	159	40%	Significant	-13%

Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

[†]*Percentages are reported for risk exposure categories; rates cannot be calculated because population denominator data is unknown.*

Note: Case counts of less than five have been suppressed for statistical reliability and confidentiality guidelines. Additional cells greater than five may be suppressed to prohibit back-calculation. Data is considered provisional and subject to change.

AIDS Incidence in the Memphis TGA. While HIV disease surveillance data represents trends in HIV transmission, AIDS surveillance data reflects differences in access to testing and treatment. In the Memphis TGA, AIDS diagnoses decreased from 215 cases in 2007 to 169 cases in 2008, followed by an increase to 255 cases in 2010 (Table 10). Provisional data reflects a decrease in 2011 among newly diagnosed AIDS cases; however, this number is provisional and will likely increase.

In 2010, AIDS incidence rates among males (28.0 per 100,000) in the Memphis TGA are over twice female rates (11.4 per 100,000). Blacks overwhelmingly represent the majority of new AIDS cases; in 2010, the AIDS incidence rate among Non-Hispanic Black individuals (35.8 per 100,000) was eight times that of Non-Hispanic Whites (4.3 per 100,000). Persons aged 35 to 44 years reported the highest AIDS incidence rates in 2010 (45.8 per 100,000 persons), followed by persons aged 25 to 34 years (33.9 per 100,000 persons) and 45 to 54 year olds (32.1 per 100,000 persons).

Deaths due to HIV/AIDS. Vital statistics records were reviewed to describe the number of deaths due to HIV/AIDS as the primary cause of death among Shelby County residents. It is important to note that Table 11 does not reflect all deaths among all PLWHA. The number of deaths due to HIV/AIDS as the primary cause peaked to 137 in 2008 and decreased to 95 in 2010. Age-adjusted mortality rates are consistently higher among males than females (Table 11). While adults between the ages of 35-54 represent the populations with the highest death rates, all age groups have shown declining death rates since 2008. In 2010, the age-adjusted mortality rate among Non-Hispanic Blacks (18.9 per 100,000 population) was seven times that of Non-Hispanic Whites (2.6 per 100,000 population).

Table 10. AIDS Diagnoses by Demographics and Risk Exposure Category, Memphis TGA, 2007-2011

	2007		2008		2009		2010		2011	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Total	**215**	**16.8**	**169**	**13.1**	**217**	**16.6**	**255**	**19.4**	**126**	**9.6**
Race/Ethnicity										
White, not Hispanic	20	3.2	13	2.1	15	2.4	27	4.3	9	1.4
Black, not Hispanic	188	32.3	151	26.1	195	33.6	215	35.8	111	18.5
Hispanic	*	*	*	*	5	8.4	10	15.3	*	4.6
Other Race, not Hispanic	*	*	*	*	2		*	*	*	
Gender										
Male	127	20.5	109	17.6	151	24.0	177	28.0	84	13.3
Female	88	13.2	60	8.9	66	9.8	78	11.4	42	6.1
Age at Diagnosis (Years)										
0 - 14 years	*	*	*	*	*	*	*	*	*	*
15 - 19 years	*	*	*	*	*	*	*	*	*	*
20 - 24 years	16	18.6	17	20.0	17	20.1	24	26.9	5	5.6
25 - 34 years	57	34.5	43	26.1	51	27.9	61	33.9	36	20.0
35 - 44 years	77	41.5	48	26.4	70	38.4	82	45.7	34	18.9
45 - 54 years	46	24.4	43	22.5	52	27.7	61	32.1	27	14.2
55+	17	6.4	17	6.1	25	9.0	26	9.0	22	7.6
Risk Exposure Category[†]										
MSM	77	36%	50	30%	76	35%	78	31%	34	33%
IDU	7	3%	5	3%	7	3%	*	*	*	*
MSM&IDU	0	0%	2	1%	*	*	*	*	*	*
Heterosexuals	77	36%	61	36%	77	35%	92	36%	44	27%
Blood product exposure	0	0%	*	*	*	*	0	0%	0	0%
Unidentified	54	25%	50	30%	55	25%	79	31%	44	40%
Perinatal	0	0%	*	*	*	*	0	0%	0	0%

Source: Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

[†] *Percentages are reported for risk exposure categories; rates cannot be calculated because population denominator data is unknown.*

Note: Case counts of less than five have been suppressed for statistical reliability and confidentiality guidelines. Additional cells greater than five may be suppressed to prohibit back-calculation.Data is considered provisional and subject to change.

Table 11. Deaths due to HIV Disease and Mortality Rates by Demographics, Shelby County Residents, 2006-2010

	2006		2007		2008		2009		2010	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Total	**126**	**13.9**	**92**	**10.1**	**137**	**14.9**	**121**	**13.2**	**95**	**10.5**
Gender[†]										
Male	81	19.1	58	13.5	89	20.2	90	21.3	62	14.8
Female	45	9.4	34	7.1	48	10.1	31	6.2	33	7.0
Unknown	0	…	0	…	0	…	0	…	0	…
Age at Death										
20 to 24	*	*	*	*	*	*	*	*	*	*
25 to 34	19	14.5	21	16.1	28	21.4	21	16.1	14	10.7
35 to 44	43	33.0	32	24.6	40	30.7	33	25.3	29	22.2
45 to 54	44	33.2	27	20.4	40	30.2	39	29.4	28	21.1
55 to 64	14	15.0	9	9.7	21	22.5	19	20.4	12	12.9
65+	*	*	*	*	*	*	*	*	7	7.6
Unknown	0	…	0	…	0	…	0	…	0	…
Race/Ethnicity[†]										
Non-Hispanic Black	113	26.2	86	19.5	123	27.7	108	24.5	81	18.9
Non-Hispanic White	10	2.4	*	*	13	3.0	12	2.3	12	2.6
Hispanic, All Races	*	*	*	*	*	*	*	*	*	*
Other Race, Not Hispanic	*	…	*	…	*	…	*	…	*	…
Unknown	0	…	0	…	0	…	0	…	0	…

Source: Tennessee Department of Heath, Office of Policy, Planning and Assessment, Division of Health Statistics, Vital Record Data 2006-2010

[†] *Rates are age-adjusted.*

Note: These are the number of deaths occurring in Shelby County among Shelby County residents due to HIV as the primary cause of death as reported on the death certificate. Case counts of less than five have been suppressed for statistical reliability and confidentiality guidelines. Additional cells greater than five may be suppressed to prohibit back-calculation.

HIV-Related Co-Morbidities and Social Factors

Sexually Transmitted Diseases. Sexually transmitted infections (STIs) are known to increase the risk of both transmitting and acquiring HIV.[8] According to the Centers for Disease Control and Prevention, the Memphis Metropolitan Statistical Area (MSA) ranked first in the country among the 50 largest MSAs in 2010 for Chlamydia, Gonorrhea and Primary and Secondary (P&S) Syphilis incidence rates;[7] these extraordinarily high rates of STIs increase the risk of HIV infection within the Memphis TGA.

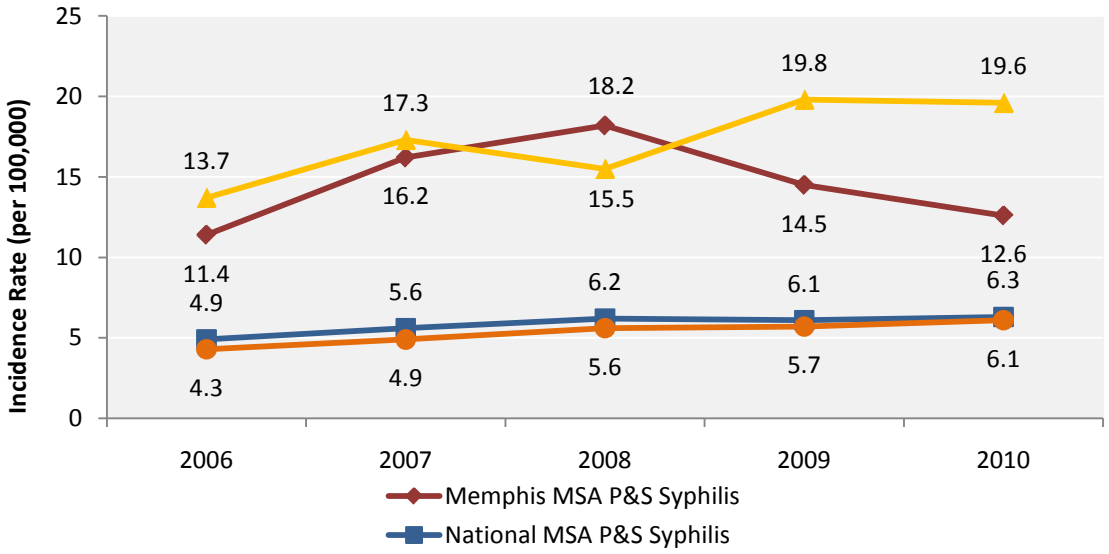
Syphilis. Syphilis remains a significant problem in the South and in urban areas of the United States. Increases in cases among MSM have occurred and have been characterized by high rates of HIV co-infection and high-risk sexual behaviors nationally.[9] While the P&S Syphilis and Early Latent Syphilis rates in the Memphis MSA remain above the national MSA figures, trends in the MSA have not followed those reported in the nation (Figure 6). Following a peak of 18.2 per 100,000 persons in 2008, the P&S Syphilis rate declined by 31% to 12.6 per 100,000 persons in 2010. During this same time period, Early Latent Syphilis rates inclined by 24%. In 2011, 14% (n=79) of Syphilis cases diagnosed among Shelby County residents were co-infected with HIV.

In a recent evaluation to assess the timing of HIV diagnosis among individuals also diagnosed with Syphilis, all Syphilis cases diagnosed among Shelby County residents between 2006 and 2009 were linked to the Tennessee HIV/AIDS Registry System. Of the 377 records linked, 36% (135) were diagnosed with HIV and Syphilis between a three month time period, while 58% (218) were diagnosed with HIV first followed by syphilis at least three months later, and 6% (24) were diagnosed first with syphilis followed by HIV at least three months later. Of the 218 cases diagnosed with HIV followed by Syphilis at least three months after initial HIV diagnosis, 66 individuals were diagnosed with P&S Syphilis, indicating continued risky sexual behaviors were continued following initial HIV diagnosis. Logistic regression analyses further indicated that men who have sex with men (OR=2.2, <.0001) were at an increased risk for co-infection.[10]

Chlamydia. According to the 2010 CDC Sexually Transmitted Disease Treatment Guidelines, sexually active PLWHA should be screened annually for Chlamydia, as infection is often asymptomatic and unlikely to be recognized unless testing occurs.[11] Chlamydia incidence rates in the Memphis TGA reached a peak in 2009, but still remained over twice the national MSA rate in 2010 (Figure 7). In 2011, just under one percent (n=89, 0.90%) of Chlamydia cases diagnosed among Shelby County residents were co-infected with HIV.

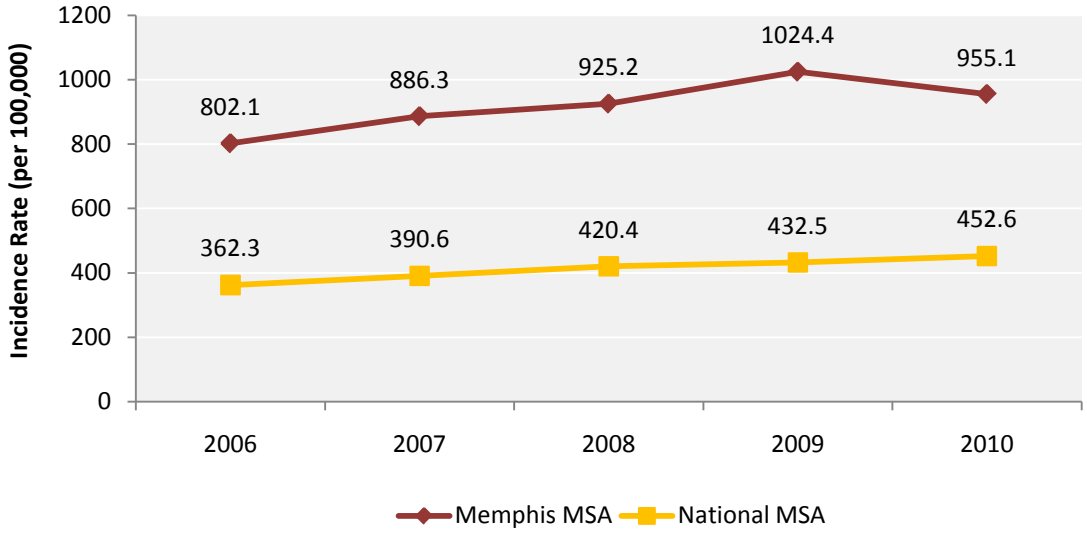
Gonorrhea. In addition to annual Chlamydia screening, CDC guidelines also recommend annual screening for Gonorrhea among sexually active PLWHA.[11] Gonorrhea rates in the Memphis MSA have declined since 2007 but remained almost three times the National MSA rate in 2010 (Figure 8).In 2011, approximately 2% (n=77) of Gonorrhea cases diagnosed among Shelby County residents were co-infected with HIV.

Figure 6. P&S Syphilis and Early Latent Syphilis Incidence Rates, Memphis MSA vs. National MSA, 2006-2010



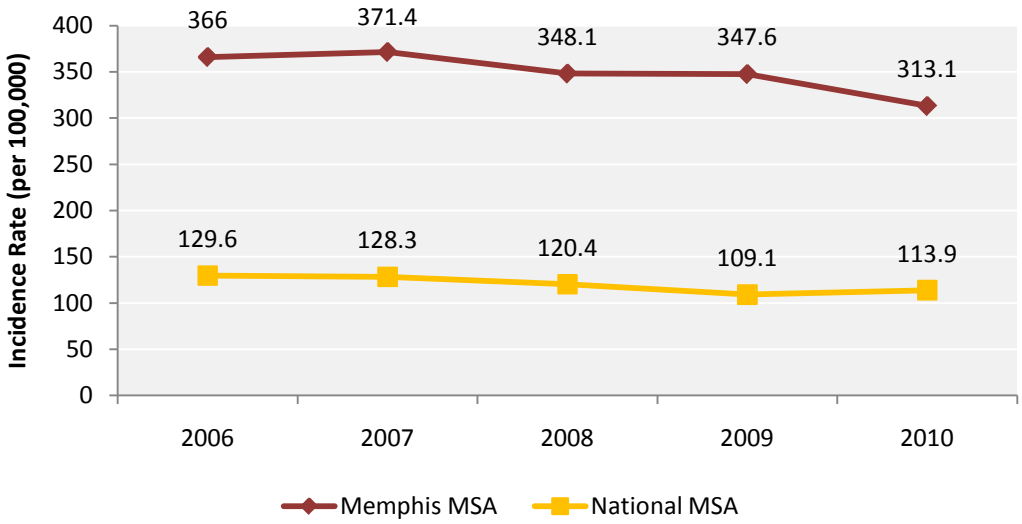
Source: Centers for Disease Control and Prevention. (2011).Sexually Transmitted Disease Surveillance 2010. Atlanta: U.S. Department of Health and Human Services.

Figure 7. Chlamydia Incidence Rates, Memphis MSA vs. National MSA, 2006-2010



Source: Centers for Disease Control and Prevention. (2011).Sexually Transmitted Disease Surveillance 2010. Atlanta: U.S. Department of Health and Human Services.

Figure 8. Gonorrhea Incidence Rates, Memphis MSA vs. National MSA, 2006-2010



Source: Centers for Disease Control and Prevention. (2011).Sexually Transmitted Disease Surveillance 2010. Atlanta: U.S. Department of Health and Human Services.

Hepatitis. The CDC reports that one-quarter of HIV-infected persons are also infected with Hepatitis C (HCV) and an estimated 50 to 90% of persons infected with HIV through injection drug use (IDU) are also infected with HCV. HCV co-infection increases the risk of severe side effects from HIV medications, and co-infection can accelerate the rate at which HCV-related liver disease progresses.[12]

In Tennessee, labs indicative of Hepatitis A,B,C are reportable to the health department for further classification into acute or chronic disease; however, due to prolonged and intensive case investigation procedures, many cases are not identified in the acute phase. To date, 117 acute Hepatitis A, B or C cases (including confirmed, probable and suspect) have been identified in Shelby County during 2011; none of these cases were identified as HIV positive upon matching to the HIV registry.

According to the 2011 Ryan White Data Reports, approximately three percent (n=64) of Part A consumers receiving outpatient medical services reported themselves as injection drug users. In addition, TGA epidemiological data indicate approximately 6% (n=454) PLWHA attribute injection drug use as a risk exposure category; however, no newly diagnosed HIV disease cases in 2011 were attributed to IDU.

Tuberculosis. Among persons infected with latent tuberculosis (TB) infection, HIV is the strongest risk factor for progressing to active TB disease.[13] While the total number of TB cases diagnosed among Shelby County residents has decreased from 89 cases in 2008 to 49 cases in 2011, the percentage of cases co-infected with HIV has remained relatively stable (Table 12). In 2011, 16% (n=8) of all TB cases were co-infected with HIV.

Table 12. Tuberculosis Cases and Percentage HIV Co-Infection among Shelby County Residents, 2007-2011

	2007	2008	2009	2010	2011
Total Number of TB Cases	72	89	64	48	49
Percentage of TB Cases Co-Infected with HIV	15%	17%	17%	19%	16%

Source: Tennessee Department of Health, National Electronic Disease Surveillance System (NEDSS)

Homelessness. Several studies have reported a seroprevalence of greater than one percent among the homeless population in multiple sites across the nation.[14-16] Partners for the Homeless administers point-in-time surveys to assess capacity of shelter housing in Memphis, as well as an annualized report to document the number of unduplicated persons receiving services from agencies participating in the Homeless Management Information System (HMIS). Data provided by participating providers reflects that a total of 4,322 adults were documented to have received emergency shelter, transitional housing and services at some point in time, for some period of time during the year ending September 30, 2009. Neither the point-in-time or annualized statistics from the Homeless Management Information System capture data on the prevalence of HIV/AIDS in the Memphis TGA.[17]

The National Alliance to End Homelessness estimates that approximately 3.4% of homeless individuals are infected with HIV disease.[18] In applying this estimate to the Memphis TGA PLWHA population, it is estimated that 267 persons living with HIV disease were homeless during 2011. Furthermore, Ryan White Data Reports indicate that 11% of all Part A Clients in the Memphis TGA were documented to be non-permanently housed or living in an institution during 2011.

Indicators of HIV Risk among Disproportionately Impacted Populations

Black/African American MSM. At the end of 2011, male-to-male sexual contact was the most commonly reported risk exposure category (40%) among PLWHA in the Memphis TGA. In Shelby County, Non-Hispanic Blacks accounted for 87% of all newly diagnosed HIV disease cases among males in 2011. Male-to-male sexual contact represents the largest number of cases among Non-Hispanic Black males; between 2010 and 2011, the number of newly diagnosed HIV disease cases among Black males attributed to MSM contact increased from 33% (n=72) to 44% (n=96) (Table 13).

A large percentage of newly diagnosed cases have unidentified risk, which causes limitations in fully understanding the incidence of infection among males attributed to MSM or heterosexual contact. The high percentage of cases for which no transmission category was identified may be due in part to under-reporting of male-to-male sexual activity because of stigma. In addition, unidentified risk exposure may be assigned among heterosexuals if no HIV-infected or high-risk partners could be identified.

Syphilis surveillance data also suggests the presence of risky sexual behaviors among MSM. Male-to-female (M:F) rate ratios may be used as a surrogate measure to monitor occurrence of syphilis among MSM and are calculated by dividing the male case rate by the female case rate for a specified period. Male-to-female rate ratios in excess of 1:1 suggest male-to-male transmission.[19] The female P&S syphilis rates have declined significantly in the Memphis MSA since 2007, while the male P&S syphilis rates peaked in 2008 but remained higher in 2010 than the rates reported in 2006 (Figure 9). As the gap between male and female syphilis rates have widened, the male-to-female syphilis rate ratio in 2010 was the highest experienced in the past five years in the Memphis MSA (4.3).

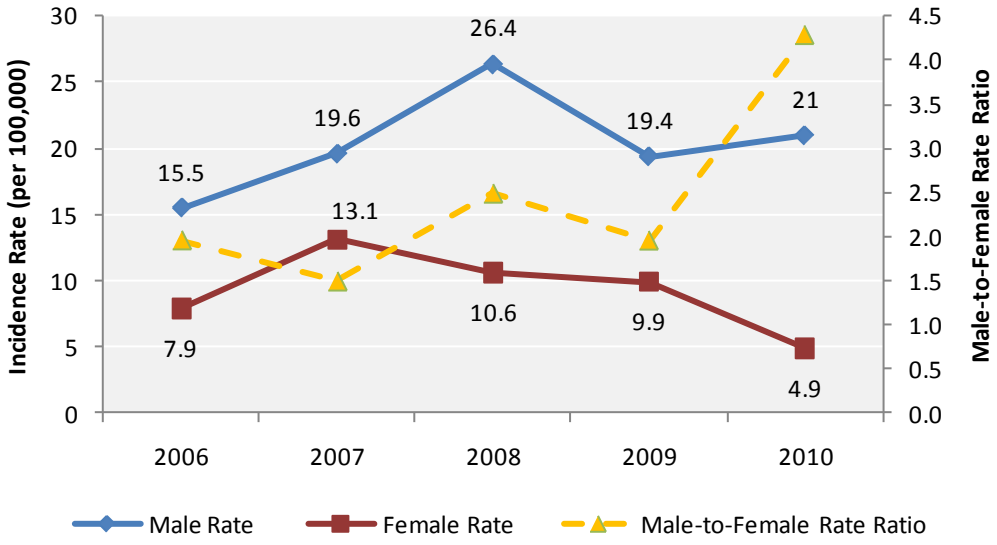
Table 13. HIV Disease Cases Diagnosed among Non-Hispanic Black Males by Risk Exposure Category, Shelby County, 2007-2011

	2007		2008		2009		2010		2011	
	N	%	N	%	N	%	N	%	N	%
Heterosexual Contact	67	25%	54	20%	39	16%	28	13%	33	15%
MSM	109	41%	117	44%	108	45%	72	33%	96	44%
Unidentified Risk	89	33%	92	35%	92	38%	116	54%	89	41%
MSM&IDU	<5	*	<5	*	<5	*	<5	*	<5	*
IDU	<5	*	<5	*	<5	*	<5	*	<5	*
Perinatal	<5	*	<5	*	<5	*	<5	*	<5	*
Total	268	100%	264	100%	240	100%	216	100%	218	100%

Source:Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

Note: Case counts of less than five have been suppressed for statistical reliability and confidentiality guidelines. Additional cells greater than five may be suppressed to prohibit back-calculation.

Figure 9. P&S Syphilis Rates by Gender and Male-to-Female Rate Ratios, Memphis MSA, 2006-2010

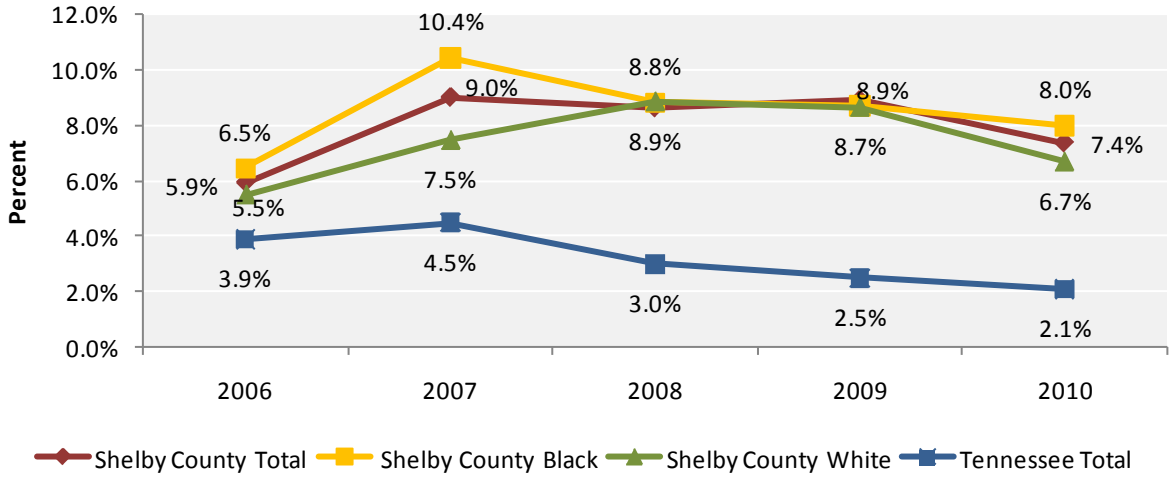


Source: Centers for Disease Control and Prevention. (2011).Sexually Transmitted Disease Surveillance 2010. Atlanta: U.S. Department of Health and Human Services.

Black/African American Women of Child-Bearing Age. In the Memphis TGA**,** almost 90% of all women living with HIV or AIDS are Non-Hispanic Black, and 61% are between the child-bearing ages of 15-44 years. While the incidence of HIV disease has decreased significantly among women over the past five years, this population is still of particular interest not only to protect the health and well-being of women within the Memphis TGA but also to prevent perinatal transmission.

Accessand adequate utilization of prenatal care is critical to prevent perinatal HIV transmission.[20] Eight newly diagnosed HIV disease cases were attributed to perinatal transmission in the Memphis TGA between 2006 and 2010; no perinatal cases were identified in 2011. Lack of prenatal care is also reflected in congenital syphilis surveillance data. Between 2007 and 2011, 38 congenital syphilis cases were diagnosed among Shelby County infants; 33 of these births occurred among infants born to Black mothers.Figure 10 presents the percentage of Shelby County and Tennessee mothers who reported not receiving any prenatal care on the birth certificate. In 2010, 7.4% of Shelby County mothers had no prenatal care. While prenatal care access among Black mothers has improved since 2007, the percentage of Black mothers receiving no prenatal care (8.0%) remains higher than White mothers in Shelby County (6.7%).

Figure 10. Percent of Mothers Who Report Having Received No Prenatal Care, Shelby County & Tennessee 2006-2010

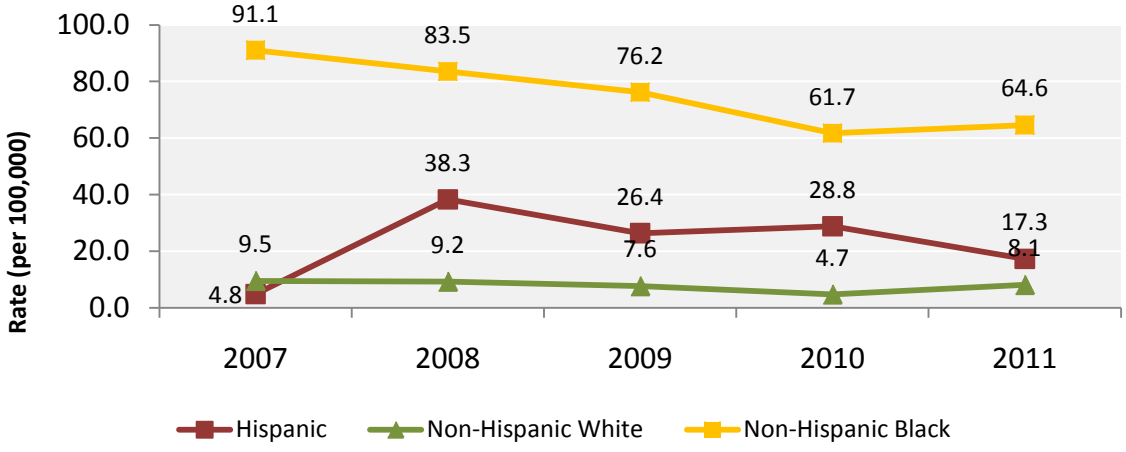


Source: Tennessee Department of Heath, Office of Policy, Planning and Assessment, Division of Health Statistics, Birth Record Data 2001-2010

Hispanics. In 2011, Hispanics accounted for approximately two percent (n=145) of all PLWHA in the Memphis TGA. While this is a relatively small number, the rate of incident HIV disease cases among Hispanics in Shelby County increased in 2008 and was almost four times that of Non-Hispanic Whites (Figure 11). Since 2008, the rate of HIV disease has decreased but still remains above Non-Hispanic Whites.

Additionally, HIV testing data from publicly funded test sites reports that Hispanics are under-represented among those receiving testing. Of the 38,184 tests conducted at publicly funded test sites in Shelby County during 2011, 2% were administered among the Hispanic population, while Hispanics represent almost 6% of the Shelby County population (Table 2, Table 19).

Figure 11. HIV Disease Incidence Rates by Race/Ethnicity, Memphis TGA, 2007-2011



Source:Enhanced HIV/AIDS Reporting System (eHARS); TN, MS, AR [46-49]

Youth. Sexually active adolescents and young adults aged 15 to 24 years of age are at a higher risk for acquiring STIs for a combination of behavioral, biological and cultural reasons.[21] In 2011, youth between the ages of 15-24 years represented 26% of all new HIV disease infections in the Memphis TGA. While the incidence rate among adolescents and young adults has shown an overall downward trend over the past five years, this change is not statistically significant. Recent surveillance data reports an increase in both age groups between 2010 and 2011 (Table 9).

The Youth Risk Behavioral Survey (YRBS) conducted in Memphis City Schools in 2011 reported that approximately 62% of respondents had ever had sex, 41% were currently sexually active, 25% had four or more sexual partners, and almost 40% did not use a condom at last sexual intercourse; each of these findings were higher than national figures (Table 14). Sixteen percent of respondents to the Memphis YRBS survey reported they had never been taught about HIV/AIDS in school, which is lower than the national figure of 23%.[22]

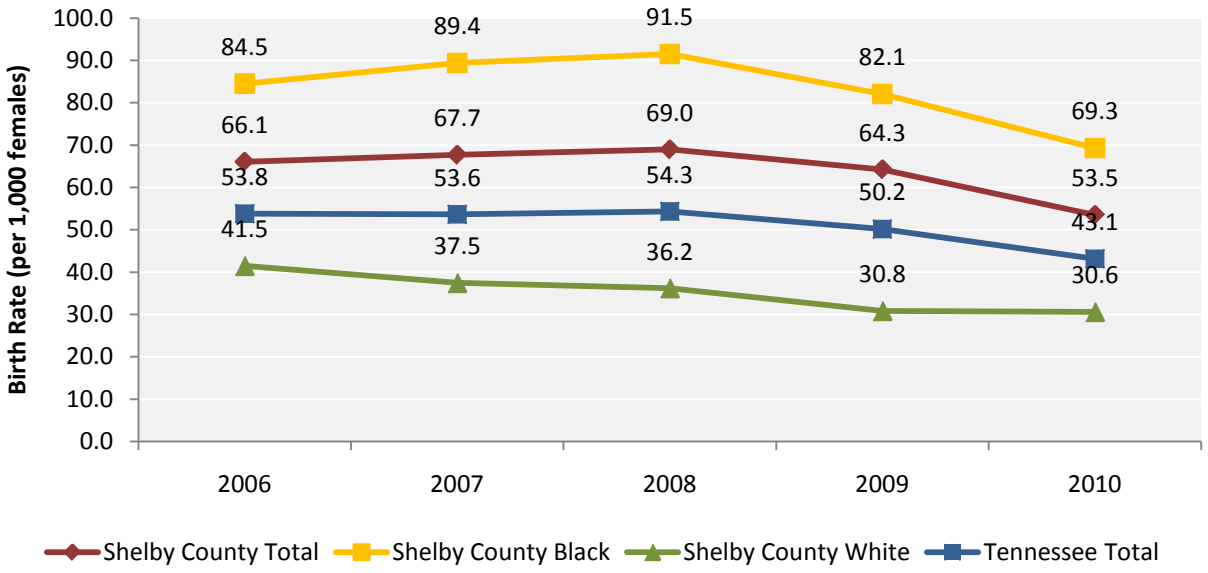
Table 14. Sexual Health Responses from the Youth Risk Behavior Survey among 9-12th Graders in Memphis and the Nation, 2011

	Memphis	Nation
Ever had sex	62.2%	47.4%
Currently sexually active	41.4%	33.7%
4+ sexual partners	25.3%	15.3%
Did not use a condom at last sexual intercourse	39.8%	27.9%
Never taught about HIV/AIDS in school	16.0%	22.8%

Source: Centers for Disease Control and Prevention, Youth Risk Behavior Survey

In Shelby County, a total of 1904 infants (14% of all births) were born to females aged 15–19 years, for a live birth rate of 53.5 per 1,000 women during 2010. This is a record low since 2006 for Shelby County teens, and a drop of 22% from 2008 (Figure12). The decline among black teen birth rates during this same time period is larger; since 2008, birth rates have declined by 32%. Despite these declines, substantial disparities persist in teen birth rates. Black adolescents aged 15-19 years have a teen birth rate over twice the rate reported among white teens.

Figure 12. Birth Rate per 1,000 Females Ages 15-19 Years by Race, Shelby County & Tennessee 2006-2010



Source: Tennessee Department of Heath, Office of Policy, Planning and Assessment, Division of Health Statistics, Birth Record Data 2001-2010

Homeless. Due to higher rates of drug use and sexual risk behaviors, homeless persons are at an increased risk for HIV infection compared to the general population.[23-24] The Centers for Disease Control and Prevention (CDC) recommends HIV testing as a routine part of care[11]; in recognition of these guidelines and the high rate of HIV and reported risk behaviors, homeless persons represent a population for whom HIV testing should be targeted to identify those individuals unaware of their HIV positive status.

In a convenience-based sample survey conducted among homeless and transitionally housed adults in Shelby County, sexual risk behaviors and HIV testing practices were documented. Of the 110 participants surveyed, 81 (73.6%) had had ever been tested for HIV. Of the 81 participants ever tested, only 32 (39.5%) had been tested for HIV within the past 12 months at the time of the survey.[26] The Health Resources and Services Administration defines an individual as unaware of their HIV status if they have not been tested within the past 12 months.[27] In applying this definition, approximately 71% (n=78) of the sample responding to the convenience based survey did not fit HRSA's definition as being aware of their HIV status, as they had not been tested in the past 12 months or had never been tested.

Sexual behaviors were also documented (Table 15). Among all participants, almost 51% reported not using a condom during sex in the past 12 months. Approximately 45% had sex while drunk or high on drugs, 24% had sex with someone they didn't know and 15% had five or more sex partners. A smaller number of individuals reported using needles to inject drugs (n=8, 7.3%) and sex with an IV drug user (n=7, 6.4%).[26]

Table 15. Sexual and Drug Use Behaviors among Homeless and Transitionally Housed Adults Participating in an HIV Outreach Survey, Shelby County, 2011

In the past 12 months, have you...	N	%
Sex without a condom	56	50.9%
Sex while drunk or high on drugs	49	44.5%
Sex with someone didn't know	26	23.6%
Five or more sex partners	16	14.5%
Used needles to inject drugs	8	7.3%
Sex with an IV drug user	7	6.4%
Diagnosed with STD	<5	*
Sex with MSM	<5	*
Sex with HIV+ person	<5	*
Traded sex for drugs or money	<5	*
Total respondents	**110**	**100.0%**

Source: The University of Memphis School of Public Health, Shelby County Health Department Epidemiology Section.

Incarcerated. According to the U. S. Department of Justice, Shelby County is the 10th largest local jail jurisdiction in the country based upon the average daily population of inmates held in local, state and federal correctional institutions. The Shelby County jail logged a total of 55,415 bookings in 2010. The daily average population was 2,699 inmates, of which 86% were male. With a CDC Expanded Testing Initiative in Shelby County Jails, rapid HIV testing is offered to all inmates at the time of intake. In 2010, 17,106 inmates accepted HIV testing at intake and 309 (1.8%) had a positive test. Many of these tests represent duplicate positives, as the jail system is a "revolving door" for repeat offenders; eight-seven percent of all inmates had prior incarcerations in 2010.[28] Of the 309 positive tests, 43 persons represented new infections.

Over the past three years, 130 newly diagnosed HIV infections have been identified in the Shelby County jail system. Incarcerated individuals have a significant impact on the HIV/AIDS service delivery system for several reasons. Inmates often give false names and incorrect contact information to law enforcement in an effort to make it difficult to find them after release. Locating and providing care to inmates when they are released from jail poses a significant challenge for the Ryan White system. Released former inmates need to be linked to care in order to ensure their future health as well as to prevent HIV transmission. Many transitioning inmates need intensive early intervention services (EIS) and medical case management (MCM) to be successfully linked to care and remain engaged in medical care.

Patterns of Service Utilization

The priorities setting and funding allocation processes with the Ryan White Part A Program requires an understanding of clients who are currently being served by the program, as well as patterns in service utilization. Monitoring this data can describe clients' current service needs and potentially forecast service needs for the future.

Ryan White Memphis TGA Part A Client Population. According to the 2011 Memphis TGA Ryan White Data Reports, a total of 4,698 HIV-positive clients received supportive or medical services from the Part A Program. Approximately 65% of these clients are male, 34% female and one percent is transgender (Table 16). Over half are between the ages of 25-44 years, and 84% are Non-Hispanic Black. The majority of Part A clients are at least 100 percent of the federal poverty level (98%). While 11% of Part A clients have either non-permanent housing or are living in an institution, 86% have reporting living in a stable or permanent housing situation. Since Ryan White is a 'payer of last resort', many clients have no documented health insurance (43%); however, clients covered under Medicaid (23%), Medicare (15%), and private insurance (10%) may still receive Ryan White supportive services that would not be covered under their primary health insurance.

Ryan White Part A Core Medical Service Utilization. Outpatient primary medical care services are the foundation of the Ryan White Program, where the ultimate goal is to engage and retain PLWHA into medical care. Since 2009, the Memphis Ryan White Part A Program has increased the number of unduplicated clients receiving outpatient medical care by 66%, from 1,195 clients in 2009 to 1,984 clients in 2011 (Table 17). Medical Case Management is also a key component of engaging and retaining PLWHA in medical care within the Memphis TGA. Medical Case Managers at various sites throughout the TGA enroll eligible clients into services offered by Ryan White Parts A, B, C and D through a collaborative cross-parts eligibility process to ensure that clients have access to a wide array of services offered within the TGA.

Early Intervention Services (EIS) provide the foundation for connecting newly diagnosed clients, out-of-care clients, and those unaware of their HIV-positive status in the Memphis TGA. The EIS service category has shown the largest increase in service utilization among core medical services. In 2009, 343 Part A clients received early intervention services; in 2011, this number has risen to 2,482 unduplicated clients.

The 2009 Memphis TGA Part A Comprehensive Needs Assessment demonstrated an unmet need for dental services among Part A clients.[1] In an effort to meet these dental and oral health needs, service utilization of oral health services has increased by over 90% between 2009 and 2011. The 2009 Comprehensive Needs Assessment also demonstrated an unmet need for medical nutrition therapy among Part A clients. [1] Medical nutrition therapy services consist of nutrition counseling by registered dieticians. Service utilization for medical nutrition therapy has remained stable during the same time period; in 2009, 757 Part A clients received this service as compared to 756 Part A clients in 2011.

Ryan White Part A Supportive Service Utilization. Among the supportive service categories, outreach services have shown the largest increase in service utilization over the past three years.

In 2010, the Part A Program began a local campaign, "Know Now, Live Longer," to raise awareness about HIV in the Mid-South. As part of this campaign, a website was created to provide resources about HIV services in the Memphis area; website visits have been tracked and are included in the outreach service utilization data (Table 17).

Non-Medical Case Management activities ensure that clients have access to social support services that are necessary for a client's ability to access and maintain medical care. This service provides essential support for connecting clients to community resources, such as housing, financial assistance, child care, psychosocial support and transportation. Attention to these immediate everyday needs often overshadows an individual's ability to engage in medical care. Utilization of Non-Medical Case Management services has increased by 71% over the past three years (Table 17).

Food Bank has always been one of the most highly utilized services of the Part A Program. The high levels of need and utilization may be a result of the high levels of poverty that exist within the TGA, making it increasingly difficult for individuals to access basic necessities. Utilization of food bank services has increased by 26% between 2009 and 2011 (Table 17).

Table 16. Characteristics of HIV-Infected Clients Receiving Ryan White Part A Services in the Memphis TGA, 2011

	Number	Percent
Total	4698	100%
Gender		
Male	3062	65%
Female	1608	34%
Transgender	28	1%
Age		
2 to 12	30	1%
13 to 24	372	8%
25 to 44	2416	51%
45 to 64	1786	38%
65+	92	2%
Race/Ethnicity		
Non-Hispanic Black	3929	84%
Non-Hispanic White	474	10%
Other Race (not Hispanic)	16	0%
More than one race (not Hispanic)	140	3%
Hispanic	99	2%
Unknown	40	1%
Annual Income		
Less than or equal to 100% FPL	3653	78%
101-200% FPL	618	13%
201-300% FPL	224	5%
More than 300% FPL	83	2%
Unknown	120	3%
Housing Status		
Stable/Permanent	4036	86%
Non-Permanent	335	7%
Institution	166	4%
Other	6	0%
Unknown	155	3%
Insurance Status		
Private	492	10%
Medicare	728	15%
Medicaid	1092	23%
No Insurance	2036	43%
Other	214	5%
Unknown	136	3%

Data Source: Memphis TGA Ryan White Part A Data Reports, 2011

Table 17. Number of Unduplicated* Clients Receiving Ryan White Part A Services, 2009-2011

Core Medical Services	**2009**	**2010**	**2011**
Outpatient Care	1195	1889	1984
Local ADAP	171	176	167
Oral Health	343	729	655
Early Intervention Services	343	685	2482
Mental Health	164	268	280
Nutrition	757	616	756
Medical Case Management	2760	3092	3453
Substance Abuse Treatment	19	19	17
Supportive Services			
Non-Medical Case Management	686	858	1175
Emergency Financial Assistance	97	119	128
Food Bank	1065	1148	1344
Health Education and Risk Reduction	0	39	4
Transportation	800	967	1195
Psychosocial Support	218	328	334
Housing	0	0	7
Outreach Services	218	1162	4411

Data Source: Memphis TGA Ryan White Part A Data Reports, 2009-2011

** Outreach clients are not unduplicated.*

HIV Testing

Examining data about HIV testing can help identify potential gaps in surveillance systems, which only represent persons who have been tested for HIV. A negative HIV test result is not a reportable event in Tennessee; thus, routinely collected HIV testing utilization data is only available from sites funded by the Tennessee Counseling and Testing Programs.

Testing at Publicly Funded Counseling and Testing Sites in Shelby County. Twelve HIV testing sites were funded by the Tennessee Counseling and Testing Program in Shelby County during 2011. These sites include the local health department sites, emergency department sites, community-based organizations (CBOs), and public clinics. The number of tests conducted at these publicly funded test sites has risen steadily each year over the past three years, from 27,500 tests in 2009 to 38,184 tests in 2011. Of the 38,184 tests conducted in 2011, 681 (1.8%) were positive; however, 241 (0.6%) were previously positive by self-report. A total of 440 (1.2%) new infections were identified at these sites in Shelby County in 2011, and 317 (72%) were linked to care.

Among the publicly funded test sites, the health department sites administered the highest number of tests and reported the highest percent positivity (Table 18). Of the 26,425 tests conducted at the health department sites, 601 were positive (2.3%), and 391 were new infections.

Of the 38,184 tests conducted at publicly funded test sites in Shelby County during 2011, 53% were male, 98% were non-Hispanic, and 84% were Black (Table 19). Publicly funded HIV test sites aim to target the most at-risk populations; thus, racial demographics of those tested in publicly funded sites will not match that of the Memphis MSA population.

Table 18. HIV Test Positivity at Publicly Funded Test Sites in Shelby County by Test Site Type, 2011

Test Site	Total Tests	Number Positive	% Positivity	New Infections
Health Department	26,425	601	2.3%	391
CBO/Outreach	1,075	16	1.5%	8
Hospital ED	5,550	45	0.8%	14
Public Clinic	5,134	19	0.4%	18
Total, All Sites	38,184	681	1.8%	440

Source: Tennessee Department of Health; HIV Counseling and Testing Program

Table 19. Demographics of Persons Receiving HIV Tests at Publicly Funded Test Sites in Shelby County, 2011

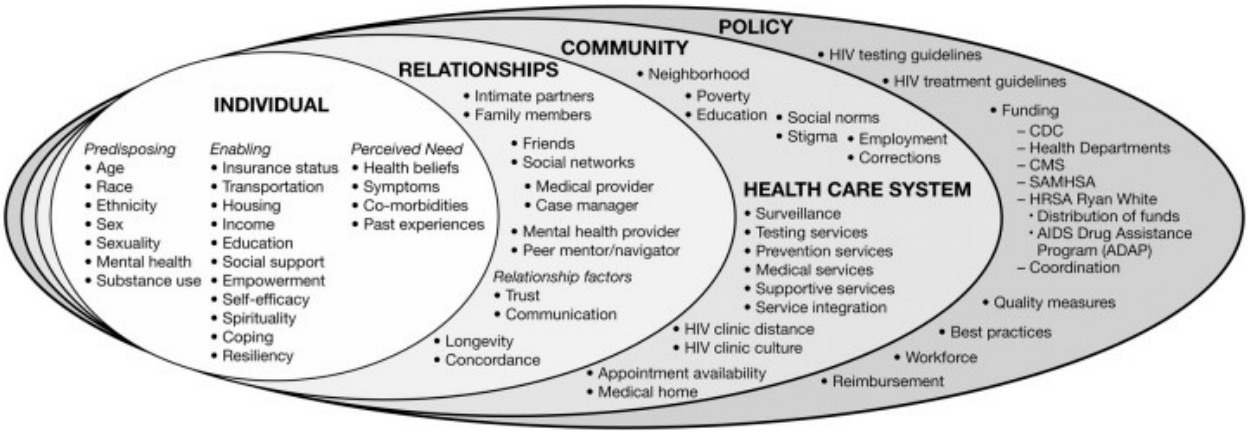
Gender	N	%
Male	20,157	53%
Female	18,000	47%
Transgender	13	<1%
Ethnicity		
Hispanic	580	2%
Not Hispanic	37,604	98%
Race		
Black	32,106	84%
White	4,879	13%
Other	153	<1%

Source: Tennessee Department of Health; HIV Counseling and Testing Program

ASSESSMENT OF SERVICE NEEDS AND GAPS

This needs assessment was guided by the Behavioral Model for Vulnerable Populations (Figure 13).[29, 30] The Behavioral Model describes health services utilization and factors that enable or impede such use can predispose a person's access to care.[31] Below is a conceptual model highlighting important linkages.

Figure 13. The Behavioral Model for Vulnerable Populations



We assessed individual level factors such as sexuality and sociodemographic characteristics from PLWHA. At the interpersonal/relationship level we asked participants about support received from friends, family, and the church to maintain medication adherence. At the community level, we explored social support, incarceration, and HIV-related stigma. Finally, we assessed medical and support services received by PLWHA to better understand how factors at the health care system level influence retention to care.

A participatory research approach also was applied to address the objectives of the needs assessment by involving all community-academic partners in all phases of the research process.[32,33]A partnership between Shelby County Health Department Epidemiology Section, Ryan White Part A Memphis TGA Priorities and Comprehensive Planning Committee, and the University of Memphis School of Public Health has been formed to carry-out the needs assessment. Key personnel from each of these organizations created a planning team to refine the objectives of the needs assessment, develop the survey instrument and focus group guide, recruit eligible participants and data collection sites, collect qualitative and quantitative data, analyze and interpret data, and prepare data for dissemination (e.g., presentations to stakeholders).

Overall Strategy. A community-based convenience sample of adults living with HIV/AIDS participated in interviewer administered surveys and focus group discussions exploring consumer service needs.

Eligibility. All HIV+ adults (aged 18+) receiving Ryan White Part A services in the following counties: Shelby, Fayette and Tipton (Tennessee), Desoto, Tunica, Tate, Marshall (Mississippi),

and Crittenden (Arkansas) were eligible to participate. The primary population of interest was adults living with HIV, regardless of race, ethnicity, religion, or sexuality. The consumer interviews and focus group discussions were limited to persons who were English speaking, as resources were not available for proper translation services at the time of the study. Finally, we defined those "in-care" as having an outpatient visit that included a CD4 count, viral load test, or provision of ARV's within the last year. Those "out-of-care" have not seen a primary care doctor within the past year, have not received antiretroviral medications, or had necessary lab work (e.g., CD4 or viral load count).

Recruitment. We recruited HIV+ consumers from Ryan White Part A funded medical provider and support service organizations. A listing of Ryan White Memphis TGA Service providers was obtained from the Ryan White Memphis Part A Program. To be selected as a data collection site, the provider must have: 1) signed a letter of support to serve as a data collection site for the needs assessment; and 2) provided space for the survey administration and needs assessment project staff. These organizations included Friends for Life, St. Jude Children's Research Hospital, Christ Community Health Services, Hope House, East Arkansas Family Health Center, Sacred Heart Southern Missions, the Adult Special Care at the Regional Medical Center, and the Shelby County Health Department. HIV service provider directors and staff posted flyers and announced the opportunity to participate in the needs assessment to their consumers. A $10 Kroger gift card was offered for participation and time compensation. Project staff contacted participating data collection sites by telephone to document peak hours of operation and availability of space for survey administration. A member of the project staff scheduled survey administration times according to availability of space. Peak hours of operation were considered to maximize participation. Upon entering the data collection site on the day of survey administration, project staff notified the director or other staff of their presence. Project staff approached individuals to ask if they would like to take part in a survey or the Director/Staff of the data collection announced their presence on the premises.Additionally, the Memphis Ryan White Part A Program has quarterly public meetings for consumers to address challenges with service delivery. We used these regularly scheduled meetings to recruit focus group participants and to administer surveys. Recruitment lasted approximately 3 months.

Consumer Survey

Method. The consumer survey was interviewer-administered with HIV+ adults (18+ yrs.) to assess barriers and facilitating factors to receiving care. A panel of community experts and members of the population of interest reviewed the survey instrument assessing readability, ease of administration, and comprehension prior to field testing the survey. Survey items included demographic questions, length of time receiving Ryan White services, barriers/needs associated with accessing medical and supportive services, primary care and supportive services utilization, social support, stigma, sexual risk behaviors, and incarceration [See Appendix A]. Ryan White medical/non-medical case managers and Early Intervention Specialists administered surveys at medical clinic/community sites. Project staff completed the informed consent process with eligible participants, answered questions, and then proceeded with administration of the surveys. We consulted with the Ryan White Planning Council Coordinator regarding upcoming meeting dates and requested to be added to the agenda to administer surveys to consumers at various public meetings.

Analysis. The consumer survey data were entered in IBM SPSS Statistics 20, a statistical software program for the social sciences. Duplicate surveys were assessed using the unique identifier assigned during the consent process. Where duplicates were identified, the first survey conducted was kept for analysis and the latter surveys were eliminated. Descriptive statistics, cross-tabulations, and regression analyses were conducted. Chi-square analyses (χ^2) were conducted to report significant differences between demographic groups; the observed significance level (p-value) is reported at a p-value < .05. All analyses were performed using the Statistical Package for Social Sciences (SPSS version 20).

Sample Characteristics. A total of 286 surveys were administered to HIV+ adults aged 18 and older. Consumers ranged in age from 18 to 71 years (meanage 40 years), and 65% were men. Nearly 89% of this sample was African American. The majority of survey respondents lived in Shelby County, TN. Characteristics are reported in Table 20.

Table 20. Characteristics of Consumer Survey Respondents (N=286)

		N	%
SEXUAL IDENTITY	Male	185	64.7
	Female	96	33.6
	Transgender	5	1.7
AGE GROUPS	18-24	45	16.2
	25-34	50	18.0
	35-44	67	24.1
	45-54	89	32.0
	55+	27	9.7
EDUCATION	<High School	64	22.4
	High School Graduate/GED	105	36.7
	Some College	91	31.8
	College Graduate	19	6.6
	Graduate Degree	5	1.7
EMPLOYMENT	Full-time ≥40 hours	31	10.9
	Part-time <40 hours	26	9.1
	Unemployed	100	35.1
	Disability	89	31.2
	Other (e.g., retired, student)	39	13.8

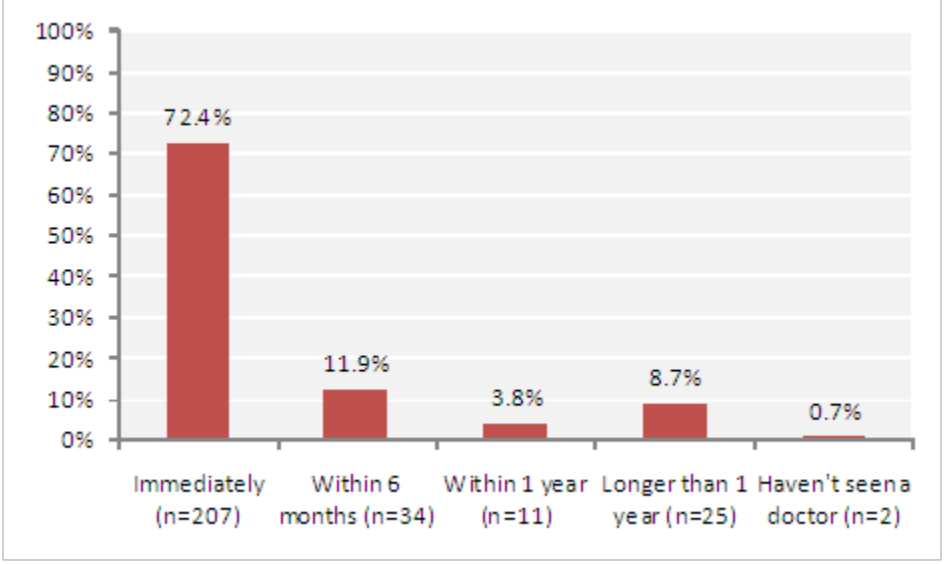
Table 20. Characteristics of Consumer Survey Respondents (cont.) (N=286)

		N	%
RACE	Black	253	88.5
	White	20	7.0
	Other	13	4.5
RELATIONSHIP STATUS	Single	192	67.1
	Married/Living w/Partner	44	15.4
	Steady Partner (not living together)	26	9.1
	Separated/Divorced/Widowed	24	8.4
STABLE HOUSING*	Yes	187	65.3
COUNTY**	Shelby	238	83.2
	Tipton	2	0.7
	Desoto	17	5.9
	Tunica	6	2.1
	Tate	1	0.3
	Marshall	3	1.0
	Crittendon	19	6.6

*Definition rent/own home
**Tipton, Tate, Marshall <5 cell counts

Medical Care. All of the survey respondents had been diagnosed with HIV. Of those who were aware of their AIDS status, 18% (n=50) reported an affirmative diagnosis. Participants were asked how soon after diagnosis did they go to see a doctor about their HIV diagnosis. Approximately 72%went immediately to the doctor, 12%went within 6 months and nearly 9% waited longer than a year (Figure 14).

Figure 14. Length of Time after HIV Diagnosis Before Seeing Medical Doctor Reported among Consumer Survey Respondents



Indicators of HIV Care. Approximately 83% of consumers reported receiving HIV medication in the last 12 months (Figure 15). The majority of respondents surveyed were considered in-care; 94% had a viral load test, 95% had a CD4 count, and nearly 70% reported three or more medical visits in the past 12 months (Figure 16).

Figure 15. Receipt of HIV Medication, Viral Load Test, and CD4Counts in the Last 12 Months Reported among Consumer Survey Respondents

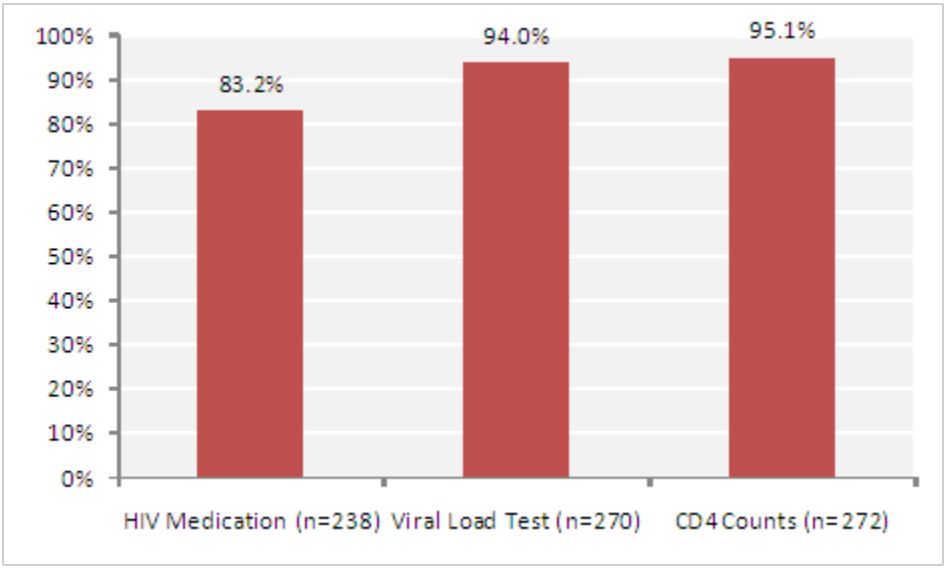
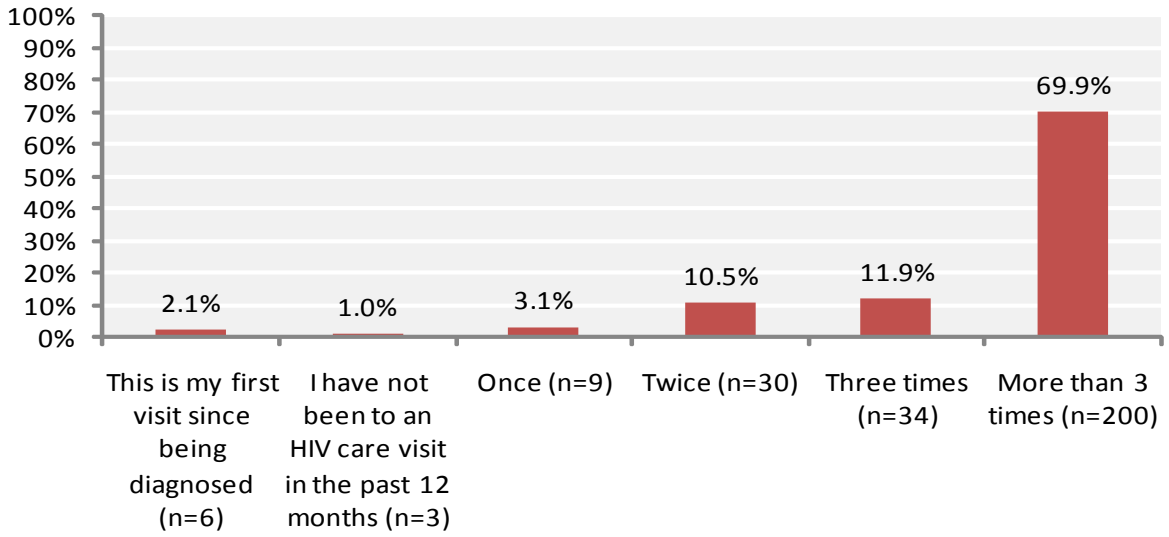


Figure 16. Number of Medical Care Visits in the Past 12 Months Reported among Consumer Survey Respondents



HIV Testing and Mode of Transmission. Participants were asked reasons for seeking HIV testing. Almost 21% of survey respondents wanted to know their HIV status which motivated them to be tested. Nearly 20% of consumers reported getting tested for HIV because he/she had fallen sick or were hospitalized. A smaller percentage of Ryan White consumers were tested due to a prior STD diagnosis; while in Jail; and because free tests were offered at a local organization. (Figure 17-18).

Figure 17. Reasons for Getting an HIV Test Reported among Consumer Survey Respondents

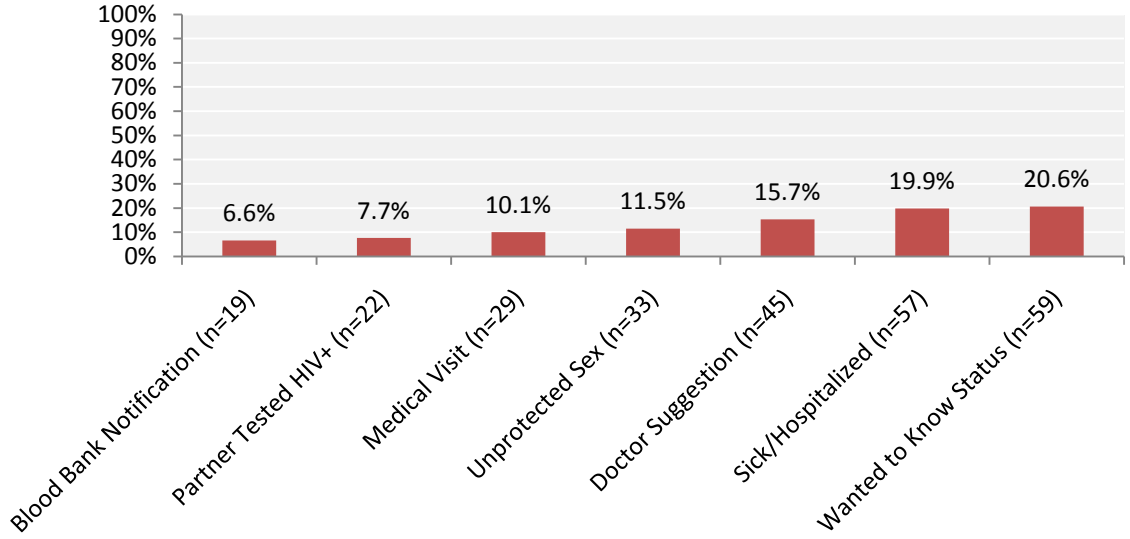
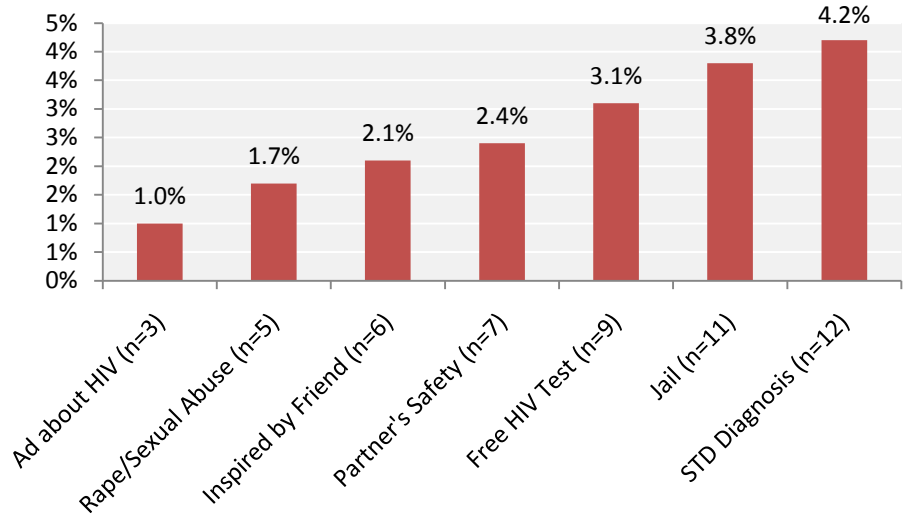


Figure 18. Reasons for Getting an HIV Test Reported among Consumer Survey Respondents (cont.)



Among survey respondents, the highest mode of HIV transmission is attributed to having sex with men (Figure 19). This applies to both men and women ($\chi^2$49.266 p<0.001); 44% of males reported having sex with another man, and 76% of females reported sex with a man (Table 21). Perinatal infection was reported by 1.5% (n=4) of consumers and blood products were reported by 4.2% (n=11). Other modes of transmission (8.7%, n=23) included rape, sexual abuse, and tattoos.

Figure 19. Perceived Mode of HIV Transmission Reported among Consumer Survey Respondents

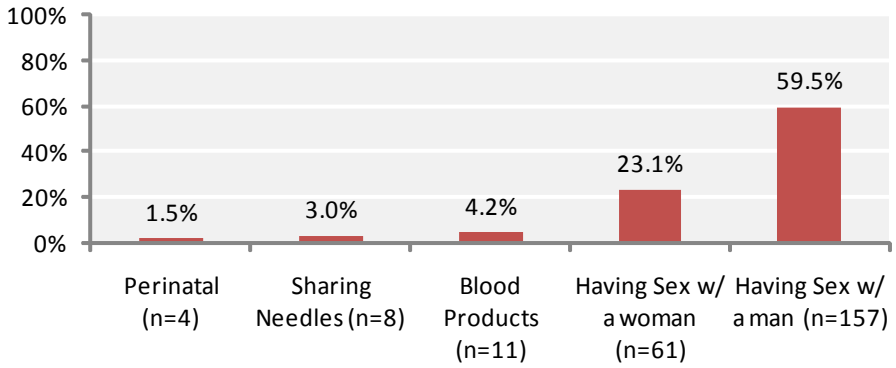


Table 21. Perceived Mode of HIV Transmission Reported among Consumer Survey Respondents

	Male (N=185)		Female (N=96)		Transgender (N=5)	
	N	%	N	%	N	%
Perinatal	3	1.6	1	1.0	---	---
Sharing Needles	6	3.2	2	2.1	---	---
Blood Products	9	4.9	2	2.1	---	---
Having Sex w/ Woman	61	32.6	---	---	---	---
Having Sex w/ Man	81	44.0	73	76.0	3	60.0
Other	15	8.1	7	7.3	1	20.0

Core Medical and Support Service Needs. In 2011, the Memphis Ryan White Part A Program provided core medical and supportive services to 4,698 unduplicated clients, which accounts for approximately 60% of the total PLWHA population in the Memphis TGA. Several service categories are available through the Ryan White Care Act for funding allocation by Ryan White programs; however, each respective Ryan White Planning Council must prioritize funding based on local needs. At the time of survey administration, several service categories did not have funding allocated by the Memphis TGA Part A Planning Council, but service utilization and needs for each service category were assessed to evaluate unmet need among all medical and supportive service categories.

According to HRSA, service gaps are defined as "all service needs not currently being met for all PLWHA except for the need for primary health care for individuals who know their status but are not in care. Service gaps include additional need for primary health care for those already receiving primary medical care (in care)." (Ryan White CARE Act Title I Manual).

Core Medical Services. Survey respondents were asked about core medical service utilization; 96% had outpatient medical visits, 84% of clients received medical case management, 82% received prescription drug assistance, and 69% received oral health care (Table 22).

Table 22. Medical Services Received by Consumer Survey Respondents

Medical Service Category	N	%
Primary HIV Care	267	96
Medical Case Management	230	84
Prescription drug assistance	224	82
Dental Care and Oral Health	188	69
Local pharmacy assistance with medications	180	66
HIV health insurance	158	58
Early Intervention Services	122	45
Nutrition Services	107	40
Mental Health Care/Counseling	106	40
Alcohol/drug outpatient treatment	23	9
Home health care	20	7
Home health aides	14	5
Hospice	10	4

Survey respondents were asked if they needed but were not receiving a particular medical service; the top two medical service categories with unmet need were dental and oral health (27%) and nutrition services (20%) (Table 23).Unmet need among each service category was assessed for differences in demographics. There were significant differences by age group for unmet need for mental health care/counseling ($\chi^2$23.078, p<.027). Among those who needed this service, the highest need was in the 25-34 year old age category.

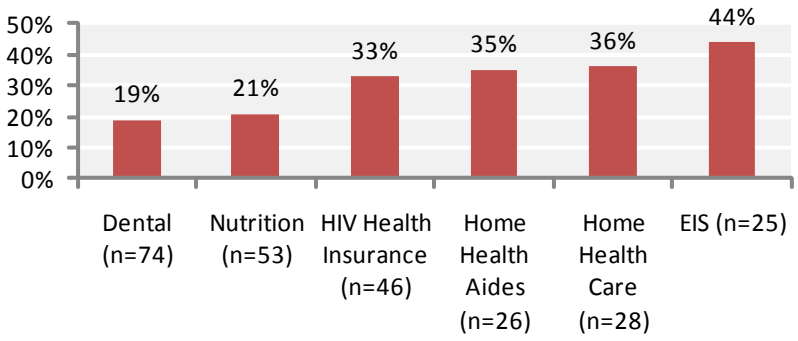
Table 23. Medical Service Needs Reported by Consumer Survey Respondents

Medical Service Category	Unmet Need (Need but did not receive service)	
	N	%
Dental Care and Oral Health	74	27
Nutrition Services	53	20
HIV Health Insurance*	46	17
Home Health Care*	28	10
Mental Health Care/Counseling	27	10
Home Health Aides*	26	10
Early Intervention Services	25	9
Local Pharmacy Assistance with Medications	25	9
Medical Case Management	17	6
Prescription Drug Assistance	17	6
Alcohol/Drug Outpatient Treatment	15	6
Primary HIV Care	10	4
Hospice*	9	3

** Service categories are available for funding allocation through Ryan White programs, but no funding was allocated in the Memphis TGA at the time of survey administration.*

We assessed the proportion of Ryan White consumers with unmet need who were unaware of core medical service availability. Among individuals who had unmet need for Early Intervention Services, 44% are unaware of the service availability through Ryan White programs. While dental (n=74) and nutrition services (n=53) represented the highest number of persons with unmet need, 19% and 21% of these individuals reported they were unaware of service availability, respectively. HIV health insurance, home health care, home health aides and hospice services may be funded through Ryan White funds, but no funding had been allocated in these service categories at the time of the survey. Among respondents who expressed unmet need for these services, 33-36% are unaware of service availability through other funding sources (Figure 20).

Figure 20. Percent of Consumer Survey Respondents with Unmet Need for a Medical Service because Unaware of Service Availability



Service needs from the 2009 comprehensive needs assessment were compared to the current assessment period. Similar to 2009, survey respondents in the 2012 needs assessment reported dental care/health and nutrition as the highest unmet need among medical services (Table 24).

Table 24. Unmet Need for Medical Services Reported by Consumer Survey Respondents, 2009 and 2012

Medical Service Category	Unmet Need (%) (Need but did not receive service)	
	2009	2012
Dental Care and Oral Health	42	27
Nutrition Services	16	20
HIV Health Insurance	19	17
Mental Health Care/Counseling	12	10
Home Health Care	6	10
Prescription Drug Assistance	8	6
Medical Case Management	8	6
Alcohol/Drug Outpatient Treatment	3	6
Primary HIV Care	1	4
Hospice	6	3

Supportive Services. Supportive service utilization was also assessed among survey respondents. The most utilized services include food pantry (69%), non-medical case management (64%), and health education/HIV prevention (55%) (Table 25).

Table 25. Supportive Services Received among Consumer Survey Respondents

Support Service Category	N	%
Food Pantry	189	69
Case Management (non-Medical)	172	64
Health Education/HIV Prevention	145	55
Medical Transportation Services	123	46
Referrals	112	42
Support Groups	107	40
Outreach Services	65	24
Housing Services	61	23
Treatment adherence counseling	62	23
Utility Assistance	58	22
Rehabilitation	21	8
Legal services	17	6
Child care	8	3
Translation	8	3
Alcohol/drug residential treatment	9	3
Respite	2	0.8

Survey respondents were asked if they needed but were not receiving a particular supportive service; the top three supportive services with unmet need were housing services (32%), utility assistance (32%), and legal services (24%) (Table 26).Unmet need among each service category was assessed for differences in demographics. There were significant differences by age group for unmet need for housing ($\chi^2$24.815, p<.016). Among those who needed this service, the highest need was in the 25-34 year old age category.

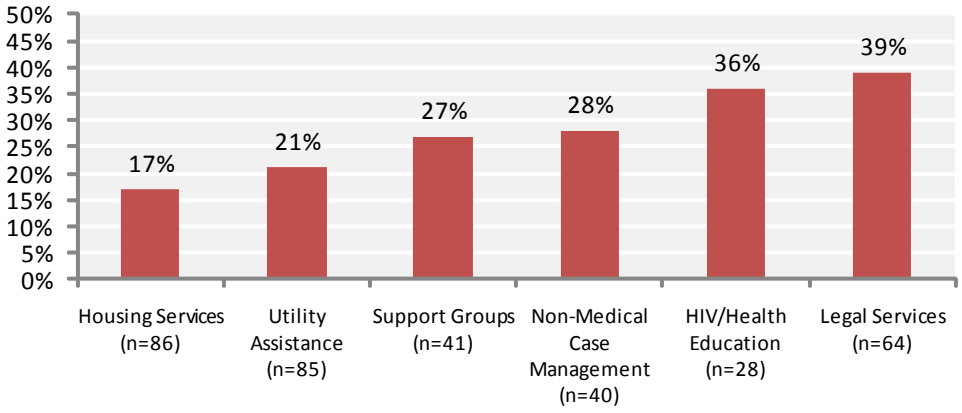
We assessed the proportion of Ryan White survey respondents with unmet need who were unaware of supportive service availability. While respondents cited housing (n=86) and utility services (n=85) as the largest unmet needs, 17% and 21% of these individuals reported they were unaware of service availability, respectively (Figure 21). Legal services may be funded through Ryan White funds, but no funding had been allocated in this service category at the time of the survey. Among respondents expressing unmet need for this service, nearly 40% were not aware of legal services available through community resources outside of the Ryan White system of care.

Table 26. Support Service Needs Reported by Consumer Survey Respondents

Support Service Category	Unmet Need (Need but did not receive service)	
	N	%
Housing Services	86	32
Utility Assistance	85	32
Legal Services*	64	24
Referrals*	42	16
Food Pantry	42	15
Support Groups	41	15
Case Management (non-Medical)	40	15
Outreach Services	40	15
Medical Transportation Services	38	14
Health Education/HIV Prevention	28	11
Rehabilitation*	24	9
Treatment Adherence Counseling	19	7
Child Care*	15	6
Respite*	12	5
Alcohol/Drug Residential Treatment*	9	3
Translation	5	2

** Service categories are available for funding allocation through Ryan White programs, but no funding was allocated in the Memphis TGA at the time of survey administration.*

Figure 21. Percent of Consumer Survey Respondents with Unmet Need for a Supportive Service because Unaware of Service Availability



Comparisons were made for support services needed in 2009 vs 2012. In 2009, utility assistance and housing services were among the top two services needed by consumers. These needs remain true today where 32% of consumers report unmet needs for utility and housing services (Table 27).

Table 27. Unmet Need for Supportive Services Reported by Consumer Survey Respondents, 2009 and 2012

Medical Service Category	Unmet Need (%) (Need but did not receive service)	
	2009	**2012**
Utility Assistance	37	32
Housing Services	30	32
Support Groups	20	15
Food Pantry	12	15
Case Management (non-Medical)	9	15
Medical Transportation Services	17	14
Treatment Adherence Counseling	7	7
Respite	9	5
Alcohol/Drug Residential Treatment	2	3

Reasons for Not Receiving Services. Of the 286 survey respondents, 182 (63.6%) reported needing additional medical or supportive services. In addition to being unaware of service availability as described above, participants specified several reasons for not receiving services including not knowing where to access services, being unable to pay for services, and not having transportation.

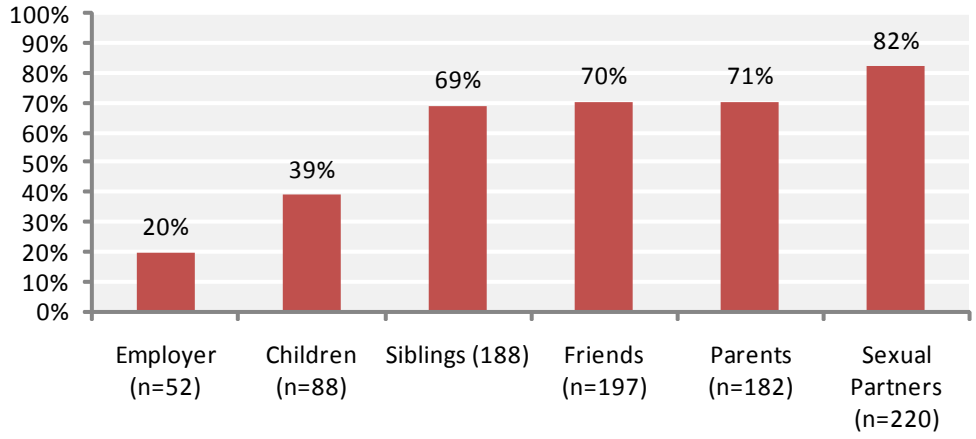
HIV Stigma. Consumers were asked how often they had experienced HIV-related stigma on a scale of one to four, where one signified often and four signified never.[34] Forty-six percent of respondents reported they thought other people were uncomfortable being with them sometimes/often. Forty-four percent feared they would lose friends if they learned about their diagnosis. Nearly 60% of those who sometimes/often thought their diagnosis was punishment for things done in the past were men ($\chi^2$6.474, p<.001). No significant difference was observed between risk exposure groups (Table 28).

Table 28. Perceived HIV-Related Stigma among Consumer Survey Respondents

	Rarely/Never Felt this way		Sometimes/Often Felt this way	
	N	%	N	%
Thought other people were uncomfortable being with you	148	54	127	46
Feared you would lose friends if they learned about diagnosis	154	56	121	44
Thought your diagnosis was punishment for things done in the past	162	59	115	42
Feared losing job if someone found out	167	63	100	38
Felt people avoiding you because of diagnosis	171	62	105	38
Feared family would reject you if they learned about diagnosis	179	66	93	34
Felt blamed by others for diagnosis	204	73	74	27
Felt compelled to change residence because of diagnosis	205	75	69	25
Felt you wouldn't get as good health care if people learned about diagnosis	215	78	61	22
Avoided getting treatment because someone might find out	227	83	48	18
Feared people might hurt your family if they learned of your diagnosis	232	84	43	16

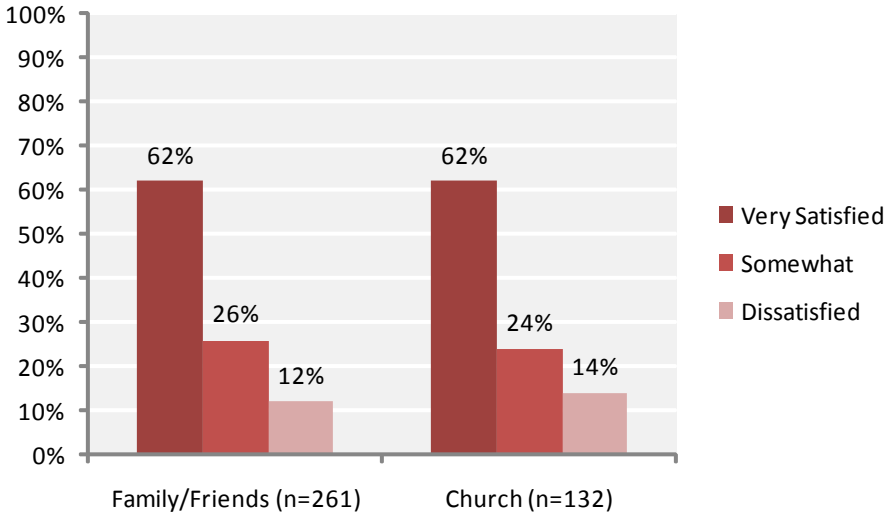
HIV Disclosure. 257 (92%) of consumers reporteddisclosing their HIV status. The breakdown of individuals to which HIV status was disclosed included 79% sexual partners, 70% friends, 67% siblings, and 66% parents (Figure 22).

Figure 22. Percentage of Consumer Survey Respondents Disclosing HIV Status to Others



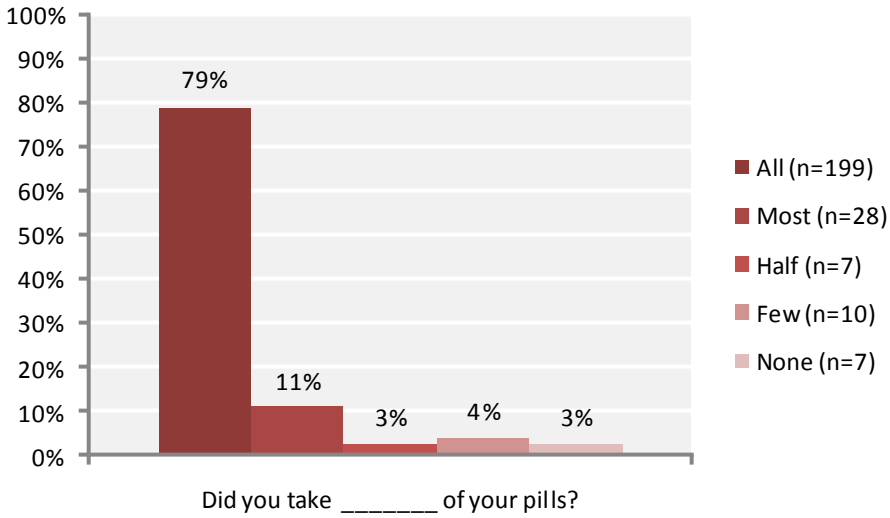
Social Support. Consumers were asked about the level of satisfaction with regard to support from family, friends, and the church. Over 60% of respondents were very satisfied with support received (Figure 23).

Figure 23. Satisfaction Level of Social Support Received from Family, Friends, and Church Reported among Consumer Survey Respondents



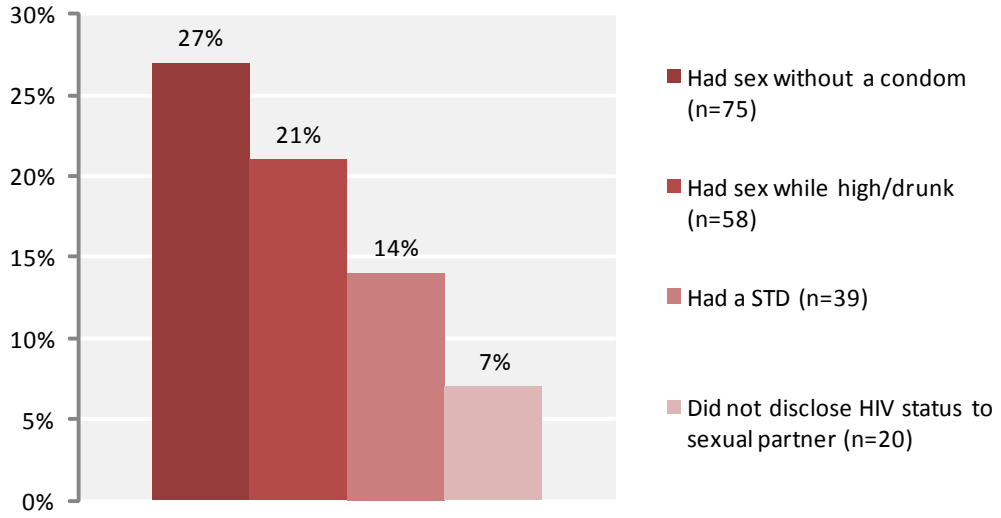
Medication Adherence. Fifty-nine participants (20.6%) never missed taking their HIV medication within the past month.For those who reported missing medication doses, the reasons ranged from being away from home (23%), having a change in daily routine (18%), forgetting (31%), and running out of pills (17%).Survey participants also were asked about medication adherence over the last 7 days. 79% had taken all of their pills, while 21% reported less than optimal adherence levels (Figure 24).

Figure 24. Medication Adherence over the Last 7 Days Reported among Consumer Survey Respondents



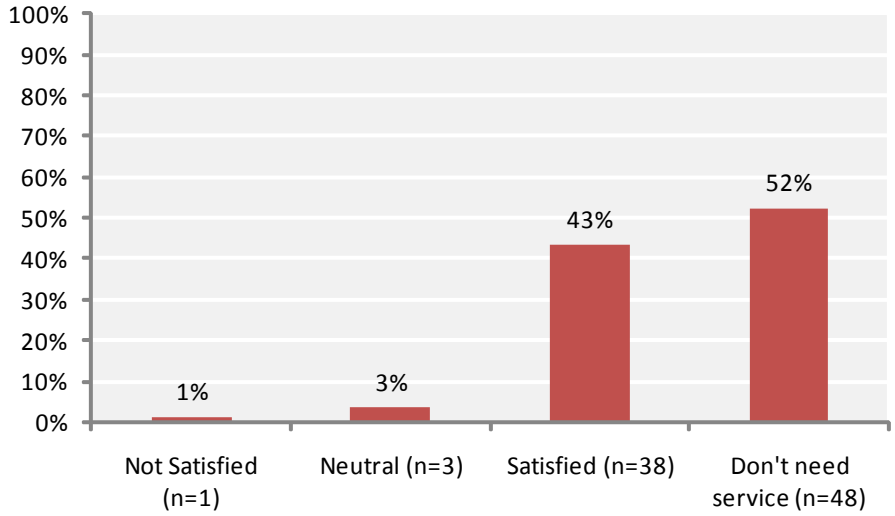
Sexual Behaviors. Consumers were asked about sexual behaviors in the past 12 months including condom use, sex under the influence of drugs/alcohol, and sexually transmitted disease diagnosis. Almost 30% of consumers had sex without a condom in the past 12 months. Twenty-one percent engaged in sexual intercourse while high or drunk, and 14% had been diagnosed with a STD (Figure 25). One-third of respondents' primary partner's status was HIV+ and 12% of consumers were unaware of their partner's HIV status. Seven percent did not disclose their HIV+ status to their partner. There were significant differences by age. Of those who reported having sex while high or drunk, 29% were in the 18-24 year old age category ($\chi^2$11.291, p<.023). Forty-two percent of younger adults aged 18-24 years also reported having a STD and which was significantly higher than the other age categories ($\chi^2$30.181, p<.001).

Figure 25. Sexual Risk Behaviors, STDs and HIV Disclosure Reported by Consumer Survey Respondents



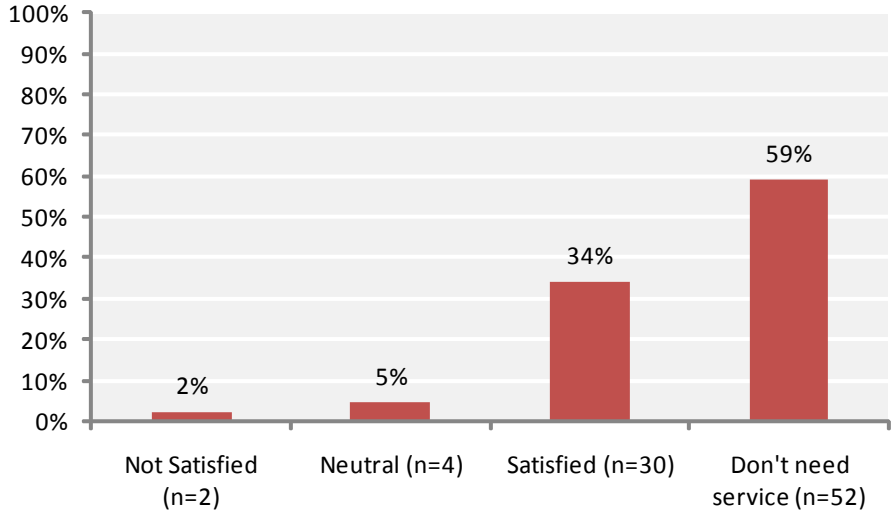
Reproductive Health. Women were asked about their satisfaction level with their reproductive health care. On the whole, 43% were satisfied with being able to share concerns about birth control with HIV medical providers (Figure 26).

Figure 26. Satisfaction with Being Able to Share Concerns about Birth Control with HIV Medical Provider Reported among Female Consumer Survey Respondents (n=88)



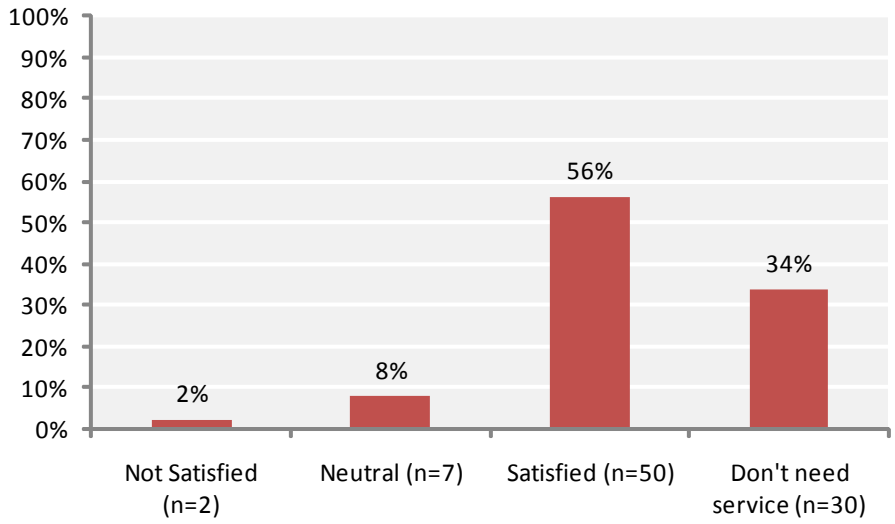
Nearly 60% of the sample of women reported that they did not need pregnancy related services. Only 35% of the women were satisfied with talking to providers about pregnancy (Figure 27).There were significant differences by age where 32% of those satisfied were in the 25-34 age category ($\chi^2$27.265, p<.007).

Figure 27. Satisfaction with Talking to HIV Medical Provider about Pregnancy Reported among Female Consumer Survey Respondents



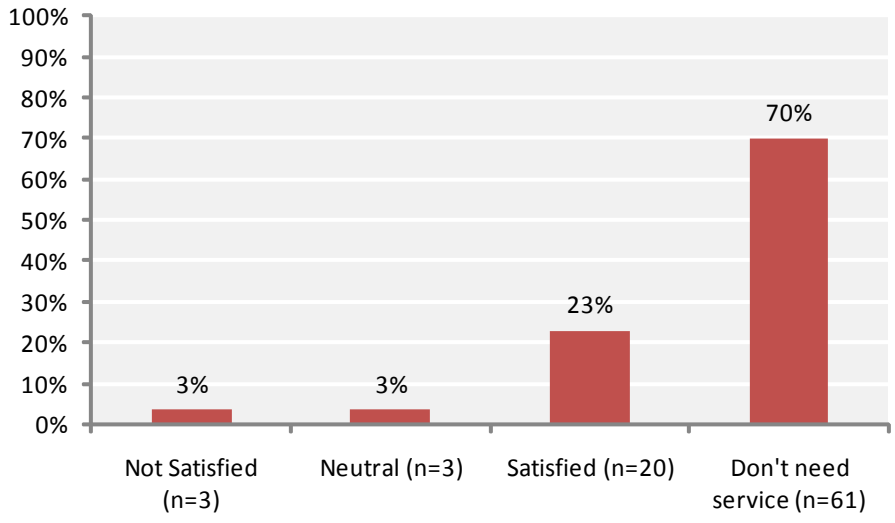
Over half of women were satisfied with having conversations about sexual intercourse with their HIV medical provider (Figure 28). However, significant differences were found by county of residence ($\chi^2$10.854, p<.013). Nearly 71% of women living outside of Shelby County believed they did not need this service compared to 29% of Shelby County residents.

Figure 28. Satisfaction with Sharing Concerns about Sexual Intercourse with HIV Medical Provider Reported among Female Consumer Survey Respondents



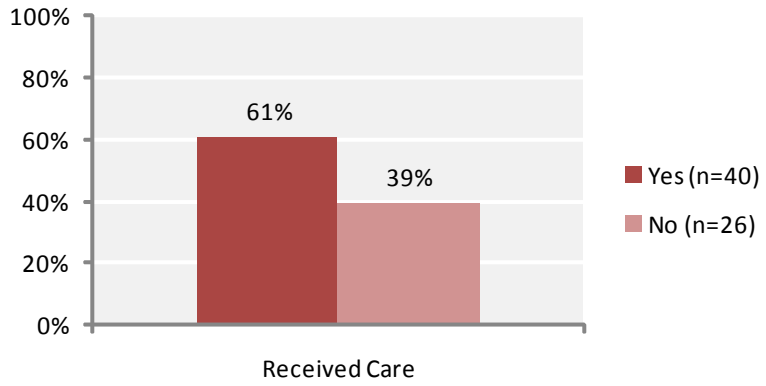
In terms of pregnancy planning, 70% of women reported that they did not need this service, and 23% said they were satisfied with the pregnancy planning information received from their HIV medical provider (Figure 29).

Figure 29. Satisfaction with Receiving Pregnancy Planning Information from HIV Medical Provider Reported among Female Consumer Survey Respondents



Incarceration. A total of 66 survey respondents had been incarcerated since their HIV diagnosis. The average time spent in jail or prison was 11 months (range 1 day to 9 years). Of the 66 respondents who reported a period of incarceration since their HIV diagnosis, 61% received HIV related medical care (Figure 30). Among participants who did not receive HIV medical care, 13 (50%) respondents reported that the intake prison/jail staff did not know his/her status.

Figure 30. Utilization of HIV Medical Care while Incarcerated among Consumer Survey Respondents who were Previously Incarcerated while Living with HIV/AIDS



Consumer Survey Limitations. The 2012 consumer survey used a convenience-based sample of participants from local medical and support service providers. The 2009 needs assessment also used a convenience-based sample. While comparisons were made between the two needs assessments, it is important to note that the respondents surveyed were not the same cohort of individuals; participants from the 2009 survey were not followed over time to determine if their individual needs were met or what new needs arose. Additionally, the survey did not probe into specific types of legal services needed.

Out-of-Care Surveys

Method. Secondary data sources were supplied by the Memphis Ryan White Part A Program to assist with assessing service needs reported by PLWHA whoare out-of-care. A total of 149 out-of-care client surveys were collected at Friends for Life, East Arkansas Family Health Center, and Shelby County Health Department from September 2009 through September 2011. Surveys were administered by Early Intervention Service (EIS) staff when clients returned to care who had not previously had a medical appointment in the past six months. Secondary data sources were stripped of all identifying information.

Analysis. Client data were entered in IBM SPSS Statistics 20 and Excel. Descriptive statistics including frequencies, percentages, and means were conducted. All analyses were performed using Microsoft Excel.

Sample Characteristics. Ninety-nine percent (n=132) of out-of-care survey respondents were African American, 73% (n=106) male, and 84% (n=124) were diagnosed in the Memphis TGA. Additional demographics of PLWHA are presented below (Table 29).

Table 29. Characteristics, Reasons for Leaving Care and Actions Needed to Get into Care Reported by Out-of-Care Survey Respondents

		N	%
AGE GROUPS	15-24	19	13
	25-34	44	30
	35-44	50	34
	45-54	28	19
	55-64	5	3
	65+	1	1
TIME SINCE DIAGNOSIS	≤6 months	12	8
	6-12 months	20	14
	1-2 years	20	14
	2-5 years	36	25
	5 years or more	57	39
CURRENT HOUSING SITUATION	Live with family/friend	74	52
	Rent	38	27
	Own	11	8
	Shelter/Homeless	7	5
	Share Apartment	7	5
	Transitional Housing	3	2
	Incarcerated	2	1

Table 29. Characteristics, Reasons for Leaving Care and Actions Needed to Get into Care Reported by Out-of-Care Survey Respondents (cont.)

		N	%
TIME OUT-OF-CARE	Never in care	53	37
	6-12 months	60	42
	1-2 years	12	8
	2-5 years	16	11
	5 years or more	3	2
REASON FOR LEAVING CARE	Incarceration	44	30
	Stigma	42	28
	Not Sick	36	24
	Transportation	24	16
	Substance Use	18	12
	Housing	18	12
	Work Schedule	9	6
	Other	8	5
	Financial/Lack of Insurance	7	5
	Mental Health	6	4
	Did not like provider	4	3
ACTION NEEDED TO GET IN CARE	Peer Support	110	74
	Transportation	44	30
	New Provider (Medical Service)	35	23
	Housing	29	19
	Substance Use Treatment	13	9
	Mental Health Treatment	9	6
	Financial Help (EFA)	2	1
	Other	2	1

Findings. Of the 149 out-of-care clients, 5% had an AIDS diagnosis and50% were unaware of their disease stage (e.g., AIDS, HIV not-AIDS).Over 40% reported being out-of-care for 6-12 months, while 37% reported never being in care. Approximatelyhalf of out-of-care clients were living with family or friends and nearly 30% were renting. Reasons for not receiving medical care included a history of incarceration, HIV-related stigma, not experiencing symptoms or not being sick. Peer support (74%), transportation (30%) and going to a new medical service provider (23%) were identified as the most cited actions needed to get back into care. Overall, 40% of respondents identified peer support as the *only* action needed to return to care.

Consumer Focus Groups

Method. A total of four focus groups were conductedamong adults living with HIV/AIDS. Three groups were held in Memphis, TN and one was held in West Memphis, AR.[35] Participants were recruited during the consumer survey, where they were asked if they would also like to participate in focus group discussions. Each focus group lasted approximately two hours. The focus group protocol useda semi-structured interview guide, whereby certain key questions were specified and other items and probes were listed to be explored at the discretion of the facilitator.[36] The discussion was largely led by the participants. Discussion questions explored barriers, unmet need, and satisfaction with/quality of services [See Appendix B for complete focus group guide]. The partnership reviewed and adapted other interview guides from previous needs assessments and added items based on the feedback from members of the Ryan White Memphis Priorities and Comprehensive Planning Committee and an external consultant. During the week of the focus group, a member of the project staff followed-up with potential participants via telephone to confirm their participation and to provide information on the logistics such as the meeting time, location, and directions. A trained moderator from the partnership led focus group discussions at a convenient time and location.[35] The moderator was accompanied by a note taker who observed body language, tone of voice, and other cues of the participants. The informed consent and ground rules were reviewed at the beginning, and the participants were asked to complete questionnaires assessing age, sex, educational attainment, and sexual risk behaviors, as well as barriers and facilitating factors associated with managing their HIV disease. Each participant wasprovided refreshments during the discussion and compensated with a $10 gift card upon completion of the focus group discussion. After each focus group session, the moderator and note taker debriefed and summarized key findings and interpretations prior to conducting the next focus group. The audiotaped focus group discussions were transcribed verbatim by a professional transcriptionist. The moderator and/or note taker verified all transcripts against the original audiotapes to ensure that the transcripts were accurate.

Analysis. Transcripts were imported into a qualitative software program, NVIVO (QSR International Pty Ltd, Version 9.0, 2010), to assist in data analysis. Data analysis involved coding data text across interviews into categories to identify key themes using a constant comparative approach, first with each session individually and then as a whole.[37] A summary of the findings was presented to members of the Priorities and Comprehensive Planning Committee for feedback and interpretation. Notable quotes are cited in the findings.

Sample Characteristics. Each focus group had between five and nine participants for a total of twenty-five in all. Participants ranged in age from 19 to 64 years old, with an average age of approximately 44 years. Three-quarters of the participants were male; 80% identified themselves as non-Hispanic Blacks and 20% identified themselves as non-Hispanic Whites. The majority of participants resided within Shelby County, TN (n=16), while others were represented from Tipton County, TN (n=1), Desoto County, MS (n=1), Marshall County, MS (n=2) and Crittenden County, AR (n=5).Additional demographics of focus group participants are described in Table 30.

Table 30. Characteristics of Focus Group Participants (N=25)

		N	%
SEXUAL IDENTITY	Male	19	76
	Female	5	20
	No Response	1	4
AGE GROUPS	18-24	3	12
	25-34	3	12
	35-44	6	24
	45-54	10	40
	55+	3	12
EDUCATION	<High School	4	16
	High School Graduate/GED	6	24
	Some College	13	52
	College Graduate	1	4
	Graduate Degree	1	4
EMPLOYMENT	Full-time ≥40 hours	0	0
	Part-time <40 hours	1	4
	Unemployed	6	24
	Disability	14	56
	Other (e.g., retired, student)	4	16
RACE	Black	20	80
	White	5	20
	Other	0	0
RELATIONSHIP STATUS	Single	16	64
	Married/Living w/Partner	3	12
	Steady Partner (not living together)	2	8
	Separated/Divorced/Widowed	4	16
STABLE HOUSING*	Yes	12	48

Table 30. Characteristics of Focus Group Participants (cont.) (N=25)

		N	%
COUNTY	Shelby	16	64
	Tipton	1	4
	Desoto	1	4
	Tunica	0	0
	Tate	0	0
	Marshall	2	8
	Crittenden	5	20

Findings.

Core Medical Services. Core medical services, including primary HIV care, anti-retroviral medication and dental services, were cited as the most important HIV services received in the last year. Participants in the focus groups reported they were able to access these services near their homes. Moreover, participants were most satisfied with these three services:

> "When I go to the clinic, when the lady comes out and calls my name and takes my blood pressure, she says, 'How's everything been going? You feeling good?' She's got a smile on her face."

> "I'm satisfied with my doctor, yeah."

> "I like the medication, the way it comes in the mail, it's very private."

> "It's nice we have medical care here in Arkansas."

Despite their overall satisfaction with medical services, participants also identified some challenges. For one, they felt the doctor did not always spend enough time with them or they were uncomfortable discussing some of their problems with HIV-negative service providers:

> "I don't think the doctor actually spends enough time with the… I mean, you don't actually get to see a doctor anymore, you see the doctor's assistant. When the doctor comes in, all he does is just, you know, if anything, check your heart, check your back and that's it, you don't even get a chance to ask this doctor questions."

> "I know someone at the clinic who's HIV positive and they make their status known, and I feel so much better talking with them about different situations than I do some of the other staff members."

To address these issues, participants discussed finding the right doctor for them and suggested providers offer more medical information and education to help bring people into, and keep them in, care:

> "I stopped going to the doctor there and started going here instead, and I formed a family relationship with my doctor there so I don't have to go back to the other clinic."

> "One of the things I personally needed to know was, uh, how sick am I? I need to know exactly what's going on in my body and then what do I do from here. My doctor told me in the hospital what my cell count was, but I still didn't know what, okay, what's a viral load? So information, as soon as you're diagnosed they need to go ahead and tell you this is what this is."

While clients receiving outpatient medical care under a Ryan White program are not charged co-pays, individuals covered under another insurance source may be incurring these costs; co-pays were also listed as a barrier to receiving regular medical care, and one suggestion put forth by participants involved basing these payments on the patient's income:

> "My medical visits aren't as regular as they used to be because of the co-pay, because I can't afford it. I wish something can be done about that whereas it's free or go by your income, you know, pay what you can afford."

Supportive Services.Supportive services received a range of reviews from the participants. Participants were satisfied with the services they received, including support groups, wellness education and food pantry; however, participants cited frustrations with unhelpful staff, waiting periods and a lack of services outside of Memphis. With regards to agency staff, participants reported feeling as though they did not always receive information about services, either because case managers were unaware of the services or concealing information due to limited availability and funding:

> "My case manager, I called about the dental thing and they told me to go to this one place and the last thing they told me on the phone was, 'I shouldn't have to talk to you about this.'"

> "With me, I heard about it, but didn't know how to go about getting it. I get a bit of information here, a bit of information there, then somebody tell me, 'Well, you got to sign up with this program, but you have to do this,' and, 'If it's not this then you have to go over here and talk to this person,' and then out here is something totally different, 'You need to talk to so-and-so, they'll get you on'. It's confusing."

> "If this entity over here has information that this entity over here doesn't have, you know, share that information. Don't just sit on that information because all of us do not need the same thing, all of us need different things and then we can't get everything we need if you're sitting over here on information that is pertinent to what the client needs over here on this side."

The issue of waiting periods was brought up largely in relation to housing and utility assistance, and was particularly troubling for participants when they inquired and signed up for these at a time of great need:

> "It's just like, a lot of people want to get it. There's a whole [stack], my case manager told me, it's a stack full of paper of people applying for it so there's a waiting list."

> "For the utility assistance, the case manager said that you have to have a shut off notice to get it, so you got to sit around and wait until you get a shut off notice, and it's not guaranteed that you're going to get the assistance either, so if you get behind and then they deny you, that means that you're out of luck."

Participants who live outside of Shelby County, TN report a lack of any supportive services in their area. While all PLWHA report having similar support needs, participants report that access to these agencies and services is limited to Memphis:

> "We have nothing in Tipton County. I have to come to Shelby County for any type of HIV service I'm looking for. You got a lot of people in Tipton County that's HIV positive that don't come here and so they just sitting there dying because they don't have any services. They don't know anything about getting any services, but they need the same thing they need in Shelby County."

> "I don't have a problem with them distributing funds over in Memphis, but can't you put applications over here in Arkansas? Can't you apply here? You can live over there, fax it, you know, why should we all spend our gas when we can't afford it to go over the bridge for services, you know?"

> "In North Mississippi, there is no service, period; no food pantry, no doctors' offices, no transportation. In Marshall County, there's a big fat nothing, but in all of North Mississippi there's a dentist. There's not food pantry, there's no utility assistance, there's no doctor, no transportation."

Besides the issues mentioned above, other barriers to accessing services in the community included transportation and parking costs, red tape and few location options.

Stigma. When asked about the most important issues faced by PLWHA, barriers to accessing services in the community and reasons newly diagnosed persons do not seek medical care, the fear of stigma was the most common response from participants. This theme included statements related to rejection, judgment and worries about confidentiality or embarrassment if one is seen entering or exiting known HIV service provider agency:

> "The rejection you face when people find out… they don't want to sit behind you, they don't want to shake your hand or eat around you… That's hard on a person because not only are you going through your emotional changes within your own self, but you're being rejected by your other folks and it leads you to a point of isolation."

> "I never have told anybody and the thing that I face is other people that know me that have come out or whatever and told what's going on with them, I see people that talk about those people and I'm like, 'They're talking about them,' but they don't know that I'm positive too. They're telling me all kinds of stuff about other folks and I'm hearing all of this."
>
> "When you go to these places, it's obvious that that's what your problem is."

Additionally, the issue of participants facing stigma from multiple angles, including HIV status, race, gender and sexuality, was discussed:

> "I feel like a lot of us face stigma anyway. First for being gay, then for being HIV positive, then for most us in here for being black, so it's always stigma, no matter what. For most us in here, we have 3 stigmas: gay, black and HIV positive."

Suggestions for Improvement. Participants were asked to provide ideas for ways to improve the quality of HIV-related services. Themes included quality control, changing procedures and broadening services. Participants noted that many agencies had suggestion boxes, but there were several issues that kept them from being effective, such as location of the box, lack of anonymity, etc.

> "Maybe there need to be more frequent visits to the suggestion boxes, and the suggestion boxes need to be where the clients are really going to be."
>
> "Well, at the clinic the comment box is gone, but the for the longest time it was there with no indicator what it was, but now it's just gone, and that avoids a whole lot of negative comments if you take the box away."

Related to quality control and management, one participant also suggested a form of "secret shoppers" to come in and review the services firsthand:

> "They have these secret shoppers that descend into Walmart and see how they… Nobody would guess that I'm walking in there to sign up for something, that I'm really somebody that works for the feds and I'm watching to see how they treat me, if they really do a care plan, if they treat me like a person."

Changes in procedures related to sign up for services, renewing Ryan White cards and payments. First, some participants brought up extremely personal questions that seemed unnecessary being asked to them while they were signing up for services:

> "Why you asking me that, you know, that's not even related to my HIV status. I went and filled out an application about two weeks, and it's like a book and some of the questions weren't even related to my HIV status, you know."

Some of the participants also wanted the Ryan White renewal process to be extended from six months to one year:

> "When you have to keep your Ryan white card updated, you know, if you fall of, there's a waiting list, so every six months you have to renew this card and it should be a year."

While the Ryan White system of care does not implement co-pays, some participants with other forms of insurance cited co-pays as a barrier to seeking regular medical care. It was suggested that these payments be based on a sliding scale to accommodate those on unemployment or disability:

> "My medical visits aren't as regular as they used to be because of the co-pay, because I can't afford it, you know. Financially, I'm having a hard time and when I have to pay out of pocket to see the doctor, you know, that's a hardship on me, and I wish something could be done about that whereas they go by your income, you know, pay what you can."

Participants wanted to expand services, especially education about health and availability of services:

> "I know we got a lot of new people coming in really not knowing about it; they just know they're diagnosed and now they're taking medicine, but they need to know more education on what all they need to do and how to keep healthy, keep doing support groups, learn more about what can affect them and what not."

> "Hearing the stories; you can live, you can live if you stay on your medication. That is the thing that I think needs to be hammered home to everybody: You can live a long, you can live to be 70 years old if you stay on your medication."

Limitations. Focus group participants were volunteers from a convenience-based sample who were available during the week when the focus groups were held. Small portions of the discussions could not be transcribed due to multiple participants talking at once, background noise, mumbling, etc., though this did not significantly hinder content analysis.

Conclusions. Overall, participants are appreciative and satisfied with the medical and supportive services they receive; however, stigma is still a constant issue and key barrier for people living with HIV/AIDS. In addition to stigma, several other topics were raised as reasons people do not access or remain in care, including not knowing where or how to sign up for services, agencies with tense environments and unhelpful staff, lack of education services, and living outside of Memphis and Shelby County. The focus groups not only allowed participants an opportunity to express their positive and negative experiences with Ryan White services, but also offer suggestions for improvement, which included quality control and management and expanding education, awareness and services.

RESOURCE INVENTORY

As provided in Appendix D, the resource inventory describes organizations providing services accessible to PLWHA. It includes information related to the type and description of services as well as eligibility and contact information.The identification of resource center locations and the services provided therein allows agencies to share accurate information with PLWHAs. This information also allows those that can assist with the expansion of services to see where gaps in service opportunities exist and how they can possibly be filled by neighboring resources. Overall, the collection and centralization of resources can create more collaboration among the various resource centers.

Method. Secondary data sources were used to compile the comprehensive list of available community resources. Service providers were categorized by specialty. A member of the research team telephoned service providers to verify contact information and current services offered. If the service provider was unreachable by phone, the research assistant referred to the organization's website (if available) for necessary information to include in the list of resources in addition to seeking community expertise.

Findings. The resources in the Memphis TGA are comprehensive and are inclusive for the eight county area in Tennessee, Mississippi and Arkansas. Services include medical providers (n=13 providers); alcohol/drug residential programs (n=13); church sponsored support (n=23 faith-based organizations); housing services (n=17 providers); transportation services (n=12); and legal services (n=6). HIV testing sites funded by the CDC HIV Prevention and Expanded Testing grants wereadded to thedatabase (n=30). An updated list of the Memphis TGA Service Providers for fiscal year 2012 may be found in AppendixC.

Summary. The resource inventoryis extensive and provides information, organized by category or type of service, about resources that are most often needed by PLWHA.

PROVIDER CAPACITY AND CAPABILITIES

Provider capacity is assessed by examining the resource inventory and provider-level surveyresponses to identify the extent to which medical and supportive services are available and being utilized by PLWHA. HIV service providers (e.g., administrators, case managers, social workers, early intervention specials and patient advocate liaisons) were included in the assessment to examine perceptions around consumer needs and barriers to accessing services, and providing referrals and services.

Method. All Ryan White HIV service providers in the Memphis TGA were eligible to complete the HIV service provider self-administered questionnaire.We consulted with the Ryan White Planning Council Coordinator regarding upcoming meeting dates and requested to be added to the agenda to administer surveys to providers at various public meetings. Questions were based upon their experiences working with individuals living with HIV/AIDS such as efforts used to link and retain persons in care, outreach strategies, and identified gaps and service priorities.

Recruitment. The Ryan White Program shared recruitment materials about the needs assessment with their network of providers and members of the Ryan White Planning Council. Recruitment advertisements included a letter from the Principal Investigator, Dr. Latrice Pichon, to HIV service providers. A list of service provider names, addresses, email, and telephone numbers was providedby the Ryan White Program office. We used this informationand contact listings in a community resource directory, recently updated by the TGA Case Management Committee, to share the recruitment advertisement and letter with their networks. The letter described the purpose of the needs assessment, the voluntary nature of participating in the needs assessment or completing the questionnaire, and that a member of the project staff (i.e., research assistants, P.I., Co P.I.) would follow-up by phone within one week. The letter and flyer also was sent via email.

Analysis. Questionnaire data were entered in IBM SPSS Statistics 20, a statistical software program for the social sciences. Descriptive statistics, cross-tabulations, and regression analyses were conducted. All analyses were performed using the Statistical Package for Social Sciences (SPSS version 20).

Sample Characteristics. A total of 42 HIV service providers representing a range of agencies completed the 16-item self-administered questionnaire. Providers ranged in age from 24 to 78 years (mean age 44 years), and 83% were women. Nearly 65% of this sample was African American. The majority of survey respondents were Ryan White providers. Characteristics of the sample are shown in Table 31.

Table 31. Characteristics of HIV Service Provider Respondents (N=42)

		N	%
SEXUAL IDENTITY	Male	7	16.7
	Female	35	83.3
MEAN AGE		44	
RACE	Black	27	64.3
	White	12	28.6
	Other	3	7.2
RYAN WHITE PROVIDER	Yes	38	90.5
MEAN YEARS AS PROVIDER		6	
POSITION	Medical Case Manager	15	35.7
	Non-Medical Case Manager	5	11.9
	EIS	7	16.7
	Other	15	35.7

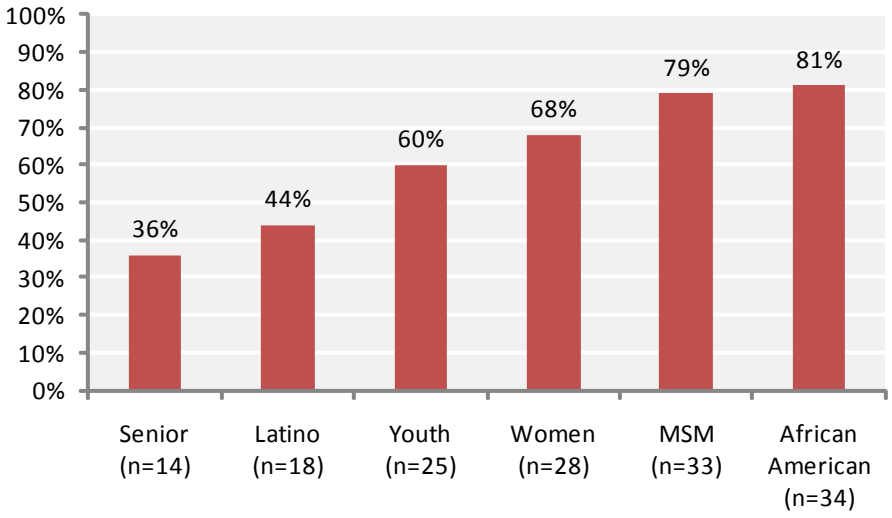
Findings. Providers were given a list of possible Ryan White-funded medical and support services offered by their agency. Over 60% of respondents reported providing medical case management, 50% had EIS, and 51% provided HIV primary care. Among support services, 50% reported providing transportation services and 40% provide non-medical case management.

Table 32. Types of Agency Services Provided to PLWHA Reported by Service Provider Survey Respondents

MEDICAL	N	%	SUPPORT	N	%
Primary HIV Care	20	51	Case Management (non-Medical)	15	40
Local pharmacy assistance with medications	14	36	Utility Assistance	8	22
Dental Care and Oral Health	14	36	Food Pantry	10	27
Early Intervention Services	22	55	Housing Services	7	19
Mental Health Care/Counseling	15	40	Medical Transportation Services	19	50
Nutrition Services	13	33	Outreach Services	8	22
Medical Case Management	26	63	Support Groups	12	32
Alcohol/drug outpatient treatment	2	5	Other: referrals, gas cards, bus passes	2	5

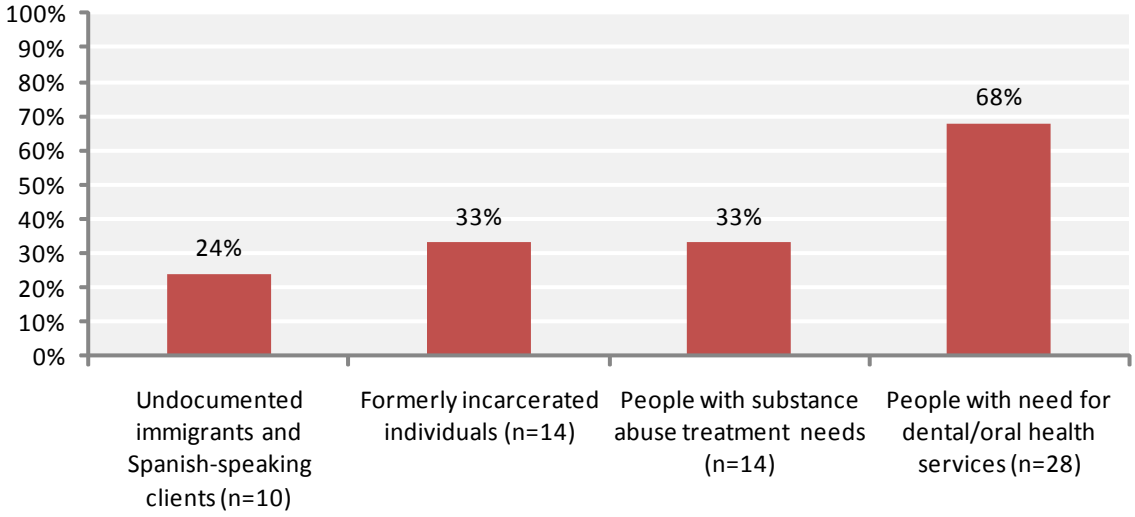
We explored whether or not service needs were being met by specific underserved populations e.g., Latino, seniors. 81% of services providers believed the needs of African Americans were being met. Less than 40% perceived the needs of seniors or aging adults as being met (Figure 31).

Figure 31. Percentage of HIV Service Provider Respondents who Perceive Ryan White Services are Meeting the Needs of Specific PLWHA Populations



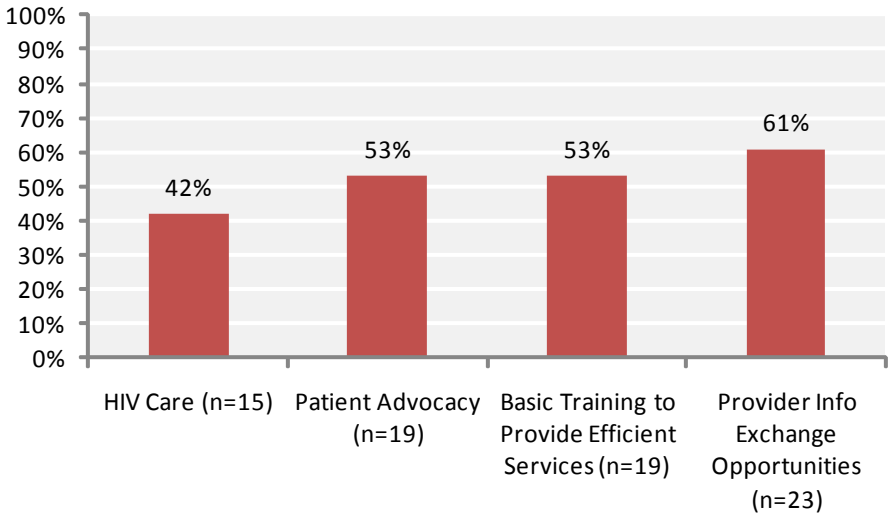
HIV service providers were asked about the appropriateness of services for PLWHA. Less than 25% perceived services for undocumented immigrants and Spanish-speaking clients as being sufficient. Only 33% believe the needs for both formerly incarcerated adults and substance users as adequate (Figure 32).

Figure 32. Percentage of HIV Service Provider Respondents who Perceive Ryan White Services are Appropriate for Specific PLWHA Populations



We assessed HIV service providers' perspective concerning possible ways to better serve HIV clients. Over 61% suggested increasing mechanisms for providers to exchange information across agencies (Figure 33).

Figure 33. Ways to Better Serve Clients Reported by HIV Service Provider Survey Respondents



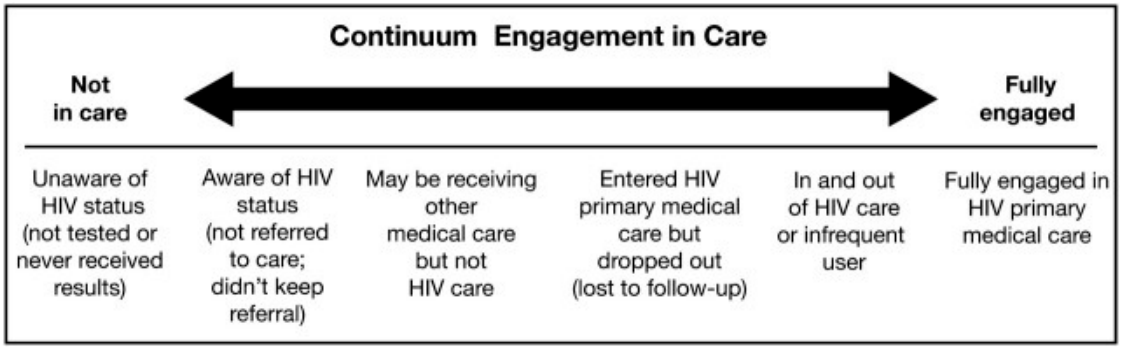
Factors that Facilitate or Impede Care. HIV service provider respondents endorsed Early Intervention Services (EIS) as the most effective method to retain clients into care. Furthermore, providers suggested Outreach Testing as an effective method to link recently diagnosed individuals into care. In terms of needed system changes, providers would like to see collaborative partnerships with other Ryan White funded HIV service providers, a centralized system to exchange information, and better communication across agencies. Finally, perceived barriers to care reportedby service providers included HIV-related stigma and staffing; cited barriers around staffing included overall availability of staff, not being able to travel out to the community, and not enough Medical Case Managers.

Limitations. As with the consumer surveys and focus groups, the service provider survey sample was convenience-based from attendance at monthly meetings.

ESTIMATION AND ASSESSMENT OF UNMET NEED

The continuum of engagement in care for persons living with HIV/AIDS ranges from those who are unaware of their HIV-positive status to those who are fully engaged in HIV primary medical care (Figure 34). Several different evaluation measures are used to estimate those unaware of their HIV-positive status, those not receiving primary medical care, and the level of retention among those who are in-care.

Figure 34. The Continuum of Engagement in Care for Persons Living with HIV/AIDS



Source: National Quality Center; www.nationalqualitycenter.org

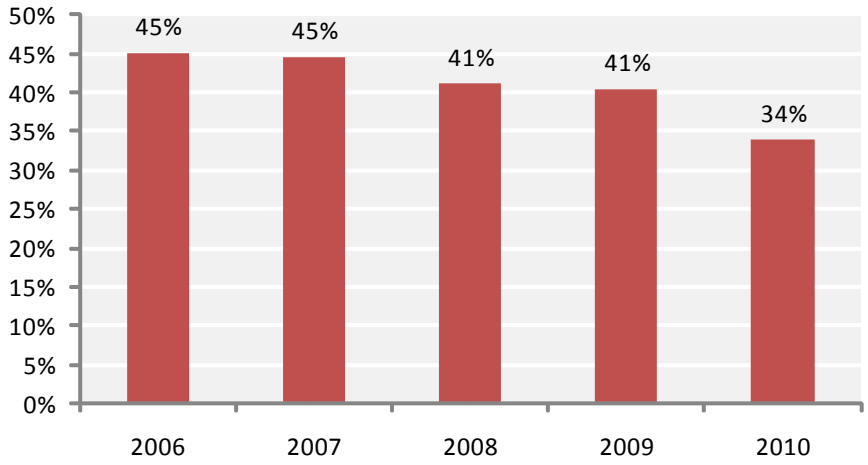
Estimating the Unaware. In the United States, the challenge of late diagnosis of HIV infection poses obstacles to HIV prevention efforts, which contributes to the spread of HIV by those who do not know they are infected.[39] In the continuum of engagement in care, individuals unaware of their HIV-positive status are located at the left of the spectrum, as they have not been tested after initial infection, or they never received their positive test results (Figure 34).

The Centers for Disease Control and Prevention developed a statistical model, the "extended back calculation method," to estimate those unaware of their HIV-positive status. This model is based on the 2006 Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS) that examines historical trends in HIV infections in the United States from 1977-2006.[40] The extended back calculation method can be applied to the Memphis TGA epidemiologic data; however, the model is based on a national proportion and thus not specific to the Memphis TGA jurisdiction. In applying this statistical model to the number of PLWHA in the Memphis TGA at the end of 2010, it is estimated that 2,032 individuals are HIV-positive but unaware of their status.

Measuring the time between initial HIV disease diagnosis and AIDS diagnosis can also provide insight around those who are unaware of their HIV-positive status. A significant number of persons do not undergo testing for HIV until they become immunosupressed. In a study involving over 4,000 persons diagnosed with AIDS from 16 states, the CDC found that 45% of these individuals received an initial HIV diagnosis within one year of their AIDS diagnosis. Given the history of HIV infection, this suggests that many of these individuals were probably unaware of their HIV positive status 5–10 years before diagnosis.[39]

As depicted in Figure 35, the time between initial HIV diagnosis and AIDS diagnosis in Shelby County is described between 2006 and 2010. In 2006 and 2007, 45% of AIDS cases had an initial HIV disease diagnosis within one year of their AIDS diagnosis. This figure has decreased to 34% in 2010.

Figure 35. Percentage of AIDS Cases Diagnosed with HIV Disease Within One Year of AIDS Diagnosis, Shelby County, 2006-2010



Source: Enhanced HIV/AIDS Reporting System (eHARS); TN Department of Health

Measuring Unmet Need. In the Memphis TGA, there are a significant number of individuals who are aware of their HIV-positive status but are not receiving HIV-related primary health care. These individuals fit into the middle of the care spectrum; this includes individuals who are aware of their HIV positive status (but weren't referred to care or didn't keep the referral), those who are receiving other medical care but not HIV care, those who entered primary medical care but dropped out, and those who are infrequent users (Figure 36). Unmet Need for HIV primary medical care in the Memphis TGA is defined as no evidence of any of the following three components during calendar year in 2011:

1. viral load testing; or
2. CD4 count; or
3. provision of antiretroviral therapy (ARV).

The Epidemiology Section at the Shelby County Health Department was consulted to collect and analyze data for the unmet need framework, which includes data sources containing the three components listed above to describe the percentage of PLWHA who are not receiving HIV primary medical care. Tennessee Department of Health policy requires laboratories to report all tests indicative of HIV infection, but this regulation did not specifically mandate reporting of CD4 and viral load labs in 2011; however, any CD4 and viral load labs reported to the health department are documented. Similar to Tennessee, Mississippi and Arkansas legislation does not mandate reporting of CD4 and viral load tests, but any reported labs are documented. Among the Part A Ryan White client population, all CD4 and viral load labs are documented in CAREWare, the electronic medical record system maintained by the Memphis TGA Program.

In addition, all persons receiving services from the AIDS Drug Assistance Program (ADAP) or the Insurance Assistance Program (IAP) are included in the framework. These data sources are matched using identifiable information (last name, first name, date of birth) with the state surveillance registry to classify individuals as "in care" or "out of care."

Additionally, persons receiving care through state Medicaid may not be included in the framework data sources listed above. To account for this, the total number of PLWHA submitting pharmacy claims for antiretroviral therapy to Arkansas, Mississippi and Tennessee Medicaid programs are subtracted from the framework. Since identifiable data was not available to directly match to the state surveillance registry, this method likely contributes to duplication and possibly over-estimates the number of persons in care.

In addition to the limitation described above, it is important to note an additional limitation with the unmet need framework methodology in the Memphis TGA. Data sources used in the unmet need framework may not include persons who are covered outside of the Ryan White or Medicaid systems of care; however, as of January 1, 2012, the Tennessee Department of Health revised reporting policies to mandate reporting for *all* CD4 and viral load labs. This policy change will expand the unmet need framework data to include individuals covered under private insurance sources to provide a more accurate estimate of persons in care from calendar year 2012 forward.

Estimate of Unmet Need. Table 32 outlines the percent of estimated unmet need among PLWHA for calendar years 2007 through 2011. When subtracting PLWHA who have submitted pharmacy claims for ARVs to state Medicaid programs, it is estimated that 43% of all persons living with a diagnosis of HIV or AIDS are not currently receiving primary medical care in the Memphis TGA during 2011; this percentage has decreased from 47% in 2007.

As previously discussed, identifiable data for PLWHA enrolled in Tennessee, Mississippi and Arkansas Medicaid programs was not obtained; thus a stratified breakdown in the total percentage of persons with HIV disease (not AIDS) or AIDS who are out-of-care is only available for data collected from other sources. The data indicates that there are some differences in the level of unmet need between those living with HIV (not AIDS) and those living with AIDS. When excluding those PLWHA who received pharmacyservices from Medicaid, it is estimated that 47% of persons living with AIDS and 64% of persons living with HIV disease are out-of-care.

Table 33. Estimation of Unmet Need in the Memphis TGA, 2007-2010

	2007	2008	2009	2010	2011
PLWHA	6359	6673	7156	7418	7856
PLWH	3552	3719	3965	4063	4085
PLWA	2807	2954	3191	3418	3771
"Unmet Need" among PLWHA					
PLWHA	3988	3598	3717	4057	4407
PLWH	2323	1934	2482	2520	2624
PLWA	1665	1664	1235	1537	1783
Medicaid Clients					
N	1023	797	764	938	989
Estimation of Unmet Need among PLWHA *(subtracting Medicaid clients)*					
N	2965	2805	2953	3056	3414
%	47%	42%	41%	41%	43%

Source: Tennessee Department of Health, Mississippi State Department of Health, Arkansas Department of Health; (eHARS, ADAP/IAP); Ryan White Memphis TGA Part A Program (CAREWare); Bureau of TennCare; MS Medicaid; AR Medicaid

Note: ADAP and IAP data sources were incorporated in 2009. Mississippi and Arkansas Medicaid clients were included in 2009; previous years only include those enrolled in TennCare with pharmacy benefits.

Demographics such as race, age and sex were analyzed among persons with unmet need, as well as county of current residence. Eighty-one percent of the total persons not receiving primary medical care are non-Hispanic Blacks, followed by 17% of White, not Hispanic persons and 2% of Hispanic persons. The majority (69%) of persons identified out of care are male. Persons aged 40-49 account for 33% of persons not receiving primary medical care, followed by persons aged 30-39 years (23%) and 50-59 years (23%). The reported transmission risk categories for those not in care were MSM (39%), heterosexual activity (29%), injection drug use (4%), male-to-male sexual activity and injection drug use (2%); 24% of the out-of-care individuals have unidentified risk.

Table 34 presents the number and percent of PLWHA out-of-care by county. While the Memphis TGA Tennessee counties (Shelby, Fayette, Tipton) accounts for the highest number of PLWHA who are not receiving primary medical care, the Northern Mississippi counties have the highest percentage of unmet need.

Table 34. Estimated Percentage of Unmet Need by County, Memphis TGA, 2011

	PLWHA	Estimated Unmet Need	
	N	N	%
Shelby, Fayette and Tipton (TN)	7153	3086	43%
Crittenden County (AR)	112	49	44%
DeSoto, Tunica, Tate, Marshall (MS)	499	279	56%

Source: Tennessee Department of Health, Mississippi State Department of Health, Arkansas Department of Health; (eHARS, ADAP/IAP); Ryan White Memphis TGA Part A Program (CAREWare); Bureau of TennCare; MS Medicaid; AR Medicaid

Measuring Retention in Care. HIV outpatient care combines two different approaches to patient care: long-term health care for individuals with a chronic condition and the vital public health service of reducing transmission of an infectious disease. Thus, continual treatment and retention in care are important for both individuals and public health. Several different methodologies can be used to evaluate whether PLWHA are fully engaged in care; these measures evaluate beyond the unmet need framework to measure frequency of medical care utilization among the PLWHA population. The National Quality Center, with the HRSA HIV/AIDS Bureau (HAB) has recently begun a national quality improvement initiative, the 'In+Care Campaign,' that has provided four measures to evaluate retention in care. The four measures are outlined in Table 35 below. These measures are evaluated in the Memphis TGA through an electronic servicerecord system (CAREWare) for Part A clients. The Memphis TGA results are submitted to a national database, where comparisons can be made between different data groups participating in the In+Care Campaign; the Memphis TGA Part A Program belongs to the National Ryan White Part A Data group.

It is important to note the limitations with measuring these indicators for retention. The Memphis TGA Ryan White Program only has access to Part A and Part C client-level data, so clients who move outside of the Ryan White program of care may have missing medical data in the CAREWare system.

Table 35. National Quality Center In+Care Campaign Retention Measure Definitions

Retention Measure 1: Gap Measure
Percentage of patients with a diagnosis of HIV/AIDS who did not have a medical visit with a health care provider* in the last 6 months of a measurement year.
Retention Measure 2: Medical Visit Frequency
Percentage of patients with a diagnosis of HIV/AIDS who had at least one medical visit with a health care provider* in each 6-month period during a 2 year measurement period with a minimum of 60 days between medical visits.
Retention Measure 3: Patients Newly Enrolled in Medical Care
Percentage of patients with a diagnosis of HIV/AIDS who were newly enrolled with a health care provider* who had a medical visit in each 4-month periods in a measurement year.
Retention Measure 4: Viral Load Suppression
Percentage of patients with a diagnosis of HIV/AIDS with a viral load less than 200 copies/mL at the last viral load test during the measurement year.

Source: National Quality Center; http://www.incarecampaign.org
** A health care provider who is licensed in their jurisdiction to prescribe ARV therapy*

Estimates of Retention in Care. Table 36 outlines the results from the most recent In+Care Campaign data submission.Retention measure one ('Gap Measure') indicates that approximately 20% of Ryan White Part A clients who received a medical visit within the first six months of the measurement period did not have another visit within the second half of the year. This result is higher than the National Ryan White Part A Data Group (16%), indicating retention in the Memphis TGA among Ryan White clients falls behind national figures.

Retention measure two ('Medical Visit Frequency') reports that only 26% of Ryan White Part A clients who had a medical visit within the 2-year measurement period had a total of four visits, with a minimum of one visit every six months at least 60 days apart. Among the four measures, this has the greatest difference in comparison to the National Ryan White Part A Data Group (53%). Frequent and timely medical visits are a key component to providing quality care for PLWHA; these results indicate that many clients in the Memphis TGA are not accessing medical care in a consistent manner.

Retention measure three ('Patients Newly Enrolled in Medical Care') indicates that almost 41% of the Ryan White Part A clients who were newly enrolled with a health care provider had at least three visits within each four month period of the measurement year. This result was lower than the National Ryan White Part A Data Group (53%).

Retention measure four ('Viral Load Suppression') reports that almost 62% of the Ryan White Part A clients who had a medical visit within the measurement year had a suppressed viral load (<200 copies/mL) at the last viral load test. This result was similar to the National Ryan White Part A Data Group (65%).

Table 36. In+Care Campaign Retention Measure Results, Memphis TGA and National Ryan White Part A Data Group

	Memphis TGA	National Ryan White Part A Data Group
Retention Measure 1: Gap Measure *(2/1/2011-1/31/2012)*	20.1%	16.2%
Retention Measure 2: Medical Visit Frequency *(2/1/2010-1/31/2012)*	25.7%	53.1%
Retention Measure 3: Patients Newly Enrolled in Medical Care*(2/1/2011-1/31/2012)*	40.9%	53.4%
Retention Measure 4: Viral Load Suppression *(2/1/2011-1/31/2012)*	61.9%	65.0%

Source: Memphis TGA Ryan White Part A Program, CAREWare; HRSA National Quality Center, In-Care Campaign Database

CONCLUSIONS

Core Medical Service Needs. Primary medical care services are the foundation of the Ryan White Program, where the ultimate goal is to engage and retain PLWHA into care. The continued need for outpatient medical care is reflected in this needs assessment, as well as service utilization data. Utilization of Part A outpatient medical care services has increased by 66% over the past three years. Results from the consumer survey indicates primary HIV care as the most utilized service among participants, and focus groups also cite it as one of the three most important services received in the past year.

Data from unmet need estimates further defines the critical role of outpatient medical care for the PLWHA population in the Memphis TGA. The most recent estimation of unmet need indicates that approximately 43% of persons living with HIV or AIDS in the Memphis TGA are not receiving primary medical care. Furthermore, In+Care results indicate that a significant percentage of Part A clients who do receive primary medical care aren't fully engaged; one of the In+Care measures reports that 20% of individuals who had a medical visit within the first six months of the year did not follow up with another visit in the second half of the year. Early Intervention Services (EIS) play a pivotal role in linking newly diagnosed individuals to care and re-engaging those who have fallen out of care, as this service has shown the largest increase in service utilization among the core medical services over the past year.

Highly active antiretroviral therapy (HAART) inhibits viral replication to delay disease progression, but this outcome is affected by the level of adherence to complex regimens; non-adherence with antiretroviral therapy may result in reduced treatment efficacy and the selection of drug-resistant HIV strains.[41-42] Among the Memphis TGA Ryan White Part A consumers, non-adherence is indicated from the In+Care Campaign retention estimates, as well as the consumer survey results. The most recent In+Care results estimate that approximately 38% of all consumers do not have a suppressed viral load, while the consumer survey reported that 21% of participants did not take all of their HAART medication within the past seven days at the time of the survey. Focus group results revealed anti-retroviral medication as one of the top three most important services received in the past year; however, focus group participants expressed interest in spending additional time with medical providers for education about how to monitor disease progression.

People who are HIV-positive need comprehensive and individualized oral healthcare; some estimates have shown that over 90% of persons will have at least one oral complication due to their HIV disease during the course of their infection.[43] In addition, diminished oral health can increase the likelihood of opportunistic infections in PLWHA.[44] Among the consumer survey respondents to this needs assessment, dental/oral health was ranked the highest unmet need among core medical services. However, this service had the largest reduction in percent of unmet need compared to the 2009 assessment (42% to 27%); this finding is verified by the 90% increase in oral health service utilization among Ryan White Part A clients between 2009 and

2011. Furthermore, focus group results cited oral health as one of the top three most important services received in the past year.

Support Services. Housing and utility assistance were among the highest unmet needs among supportive services. Among consumer survey respondents, adults between the ages of 25-34 years reported a significantly higher unmet need for housing services than other age categories. HIV service providers also cited housing as one of the most needed services for clients. A small increase in percent of unmet need for housing services (30% to 32%) and decrease for utility services (37% to 32%) compared to 2009 assessmentwas reported.

Legal services were identified as the third highest unmet need among supportive services; however, the specific type of needed legal services was not documented. Future data analysis should investigate the correlation between need for legal services and the need for housing. Given this gap, contact information for available legal services has been included in the resource inventory.

Unmet need for transportation services declined compared to 2009 assessment (17% to 14%); however, providers cite transportation as one of the most needed services. Additionally, out-of-care clients report transportation as a service needed to return to care.

Barriers to Care. Responses from the out-of-care surveys revealed that consumers cited incarceration as the top reason for falling out of care. Barriers to care around incarceration are further implied from consumer survey results; almost 25% of all consumer survey respondents served time in jail or prison since initial HIV diagnosis.

Among out-of-care survey respondents, stigma was identified as the second highest reason for falling out of care. Issues around stigma were also reported in focus group and consumer survey results. Among focus group respondents, fear of stigma was the most commonly cited barrier to accessing services and reason why newly diagnosed persons don't seek medical care. Consumer survey results reported that almost half of respondents said they "sometimes/often" thought other people were uncomfortable being with them. Although differences were not significant between the MSM and heterosexual communities, a significant difference in perceived HIV-related stigma was described between genders. Nearly 60% of those who sometimes/often thought their diagnosis was punishment for things done in the past were men.

The third highest reason for falling out of care cited on the out-of-care surveys was not feeling sick. Research demonstrates that routine primary medical care and early initiation of HIV treatment optimizes health outcomes for PLWHA.[45] Data around the percentage of "late-testers" in Shelby County indicates that persons are waiting until advanced disease to be tested and linked to care. In 2010, 34% of all newly reported AIDS cases were diagnosed with initial HIV infection within 12 months of their AIDS diagnosis.

Additionally, focus group results reported that clients often encounter confusion about where and how to get services. Among the highest unmet need service categories, clients were unaware of dental (19%), nutrition (21%), utility (21%), and housing services (17%).

Health Behaviors. Among consumer survey participants, several risky sexual behaviors within the past 12 months were documented: having sex without a condom (30%), diagnosis of an STD (14%), sex while drunk or high (21%), and not disclosing status to partnerin the past 12 months (7%). A significant percentage of respondents who had engaged in sex while drunk/high or had been diagnosed with an STD were between the ages of 18 and 24 years.

Sexually transmitted disease surveillance data and information from the Youth Risk Behavior Survey indicate the need for behavioral interventions within the adolescent/young adult and MSM communities. The Youth Risk Behavior Survey results from 2011 among 9-12th graders reported that approximately 40% of respondents did not use a condom at last sexual intercourse. The HIV incidence rate among 15-24 year olds has risen over the past year, and provisional data indicates the highest rate is reported among young adults between the ages of 20-24 years in 2011. Syphilis surveillance data suggests the presence of risky sexual behaviors among MSM; the male-to-female rate ratio more than doubled between 2009 and 2010 in the Memphis TGA.

Strategies to Improve Retention. It is suggested by providers that continuous and constant follow-up with PLWHA is imperative to improve retention rates. Early Intervention Services (EIS), Peer Advocates, and Outreach, Education, Support/Counseling were suggested by consumer focus groups and HIV service provider survey participants. Among respondents to the out of care survey, the top four actions cited as needed to return to care include peer support, transportation, finding a new provider for medical services, and housing; 40% of respondents cited peer support as the *only* action needed to return to care.

RECOMMENDATIONS

The following are recommendations to improve medical and supportive services for clients:

1. **Consumer Education and Behavioral Interventions**
   - To increase awareness of supportive and core medical services, update consumers with Ryan White service options; provide listing of service providers at 6 month recertification.
   - Consider service categories that may fund evidence-based, behavioral interventions to address risky sexual behaviors.

2. **Service Provider Capacity**
   - Use monthly service provider meetings as an opportunity and forum to improve collaboration between Ryan White funded providers to address challenges related to service delivery.
   - Consider new methods for providers to exchange information and strengthen collaborative relationships.
   - Recruit more multi-lingual staff/providers to the Memphis TGA.
   - Offer language training opportunities to providers to better communicate with non-English speaking communities.
   - Train providers on methods to address issues relatedto eligibility documentation to get more undocumented PLWHA to get into care.
   - Present continuing trainings for all case managers, EIS, and medical staff to provide updates about existing services.
   - Provide cultural competency trainings.

3. **Linkage and Retention in Care**
   - Provide newly diagnosed PLWHA the attached resource inventory post-diagnosis.
   - Explore and utilize best practices for peer support services.
   - Provide presentations at service provider meetings around methods for retention and allow providers to share best practices.
   - Consider service categories that will fund outreach testing efforts to non-traditional settings with populations where HIV risk is indicated.

4. **Stigma and Community Awareness**
   - Continue engaging in activities such as the “Know Now, Live Longer” Campaign to raise community awareness about testing and care services.
   - To address the needs of the unaware (HIV-positive and HIV-negative), conduct awareness activities about Ryan White services, HIV/STD surveillance data and HIV testing recommendations in points of primary care access, such as private physician groups.

5. **Evaluation and Assessment**
    - Consider assessments to evaluate nutrition/consumption of fresh fruits and vegetables and possible associations with other co-morbidities/health disparities.
    - Ensure that comment card boxes for consumer feedback are present at each service provider entrance, where only Ryan White staff should have access to these boxes; comments should be collected and analyzed for qualitative feedback to service providers and considered for internal evaluation.
    - Investigate possible correlation between housing and utility assistance needs with consumer legal issues.
    - Expand assessment of co-morbidities to include substance use, chronic diseases, and mental health.
    - Consider additional data sources to address limitations of estimating unmet need.

6. **Future Needs Assessment Processes**
    - Allow additional time to obtain IRB approval.
    - To sample out of care clients, continue methodology used for out of care surveys; allow time for data collection in a continual process over one to two years.
    - Coordinate efforts with HIV service providers who maintain listings of out-of-care clients to send follow-up reminders for recertification and invitation to complete needs assessment.
    - Stagger survey development and data collection in 6 month increments to allow more time to gather high quality data from providers and consumers.

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APPENDIX A: CONSUMER QUESTIONNAIRE

Instructions: Please place a check mark or an X in the box beside the appropriate answer. If you have completed this survey in the past 4 months, do not turn one in again.

1. What county do you live in?
   - (1) ☐ Shelby County, TN
   - (2) ☐ Fayette, TN
   - (3) ☐ Tipton, TN
   - (4) ☐ Desoto, MS
   - (5) ☐ Tunica, MS
   - (6) ☐ Tate, MS
   - (7) ☐ Marshall, MS
   - (8) ☐ Crittenden, Arkansas

2. Please check the box that best describes your current living situation:
   - (5) ☐ I own the home I live in
   - (4) ☐ I rent the home I live in
   - (3) ☐ I am staying with friends/family
   - (2) ☐ I live in a car or other vehicle
   - (1) ☐ I live in a shelter
   - (0) ☐ I live "on the streets"

3. How old are you? _____

4. What is your sexual identity?
   - (1) ☐ Male
   - (2) ☐ Female
   - (3) ☐ Transgender (Male to Female)
   - (4) ☐ Transgender (Female to Male)

5. What is your ethnicity? (1) ☐ Hispanic/Latino (0) ☐ Non-Hispanic/Latino

6. What is your race? (check all that apply)
   - (0) ☐ White/Caucasian
   - (1) ☐ Black or African American
   - (2) ☐ Asian
   - (3) ☐ American Indian or Alaskan Native
   - (4) ☐ Native Hawaiian or Pacific Islander
   - (5) ☐ Other: _____

7. What is your current relationship status?
   - (0) ☐ Single
   - (1) ☐ Married/living with partner
   - (2) ☐ Widowed
   - (3) ☐ Separated/divorced
   - (4) ☐ Have steady partner but not living together

8. What is your current job situation?
   (1) ☐ Working full-time job
   (2) ☐ Working part-time job
   (3) ☐ Self-employed
   (4) ☐ Working off and on
   (5) ☐ Unemployed (looking for work)
   (6) ☐ Unemployed (not looking for work)
   (7) ☐ Retired
   (8) ☐ Disability
   (9) ☐ Student

9. What is the highest level of school you have completed?
   (1) ☐ Less than high school
   (2) ☐ High School Graduate or GED equivalent
   (3) ☐ Some college, vocational school
   (4) ☐ College Graduate (Bachelors Degree)
   (5) ☐ Graduate degree (Masters, Doctorate, MD, PhD)
   (6) ☐ Other:_____

10. Have you ever been diagnosed with HIV? (0) ☐ No (1) ☐ Yes (0) ☐ Don't know

11. Have you ever been diagnosed with AIDS? (0) ☐ No (1) ☐ Yes (0) ☐ Don't know

12. What year were you first diagnosed with HIV? _____ (0) ☐ Don't know

13. What made you get tested for HIV? (check all that apply)
   (1) ☐ My doctor suggested it
   (2) ☐ I had unprotected sex
   (3) ☐ I just wanted to know my status
   (4) ☐ It was offered to me during a medical visit
   (5) ☐ For my partner's safety
   (6) ☐ I was diagnoses with another STD
   (7) ☐ I was inspired by a friend
   (8) ☐ I shared needles
   (9) ☐ I saw an ad about HIV
   (10) ☐ Free tests were offered at an organization I know
   (11) ☐ Because a sexual partner tested positive
   (12) ☐ Other: _____

14. How do you think you were infected by HIV?
   (1) ☐ Having sex with a man
   (2) ☐ Having sex with a woman
   (3) ☐ Sharing needles
   (4) ☐ Blood products/transfusion
   (5) ☐ Perinatal transmission (born with it or infected at birth)
   (6) ☐ Other: _____ (specify)
   (7) ☐ Don't know

15. How soon after you were diagnosed with HIV did you go to see a doctor about your HIV diagnosis?
    (1) ☐ Immediately
    (2) ☐ Within 6 months
    (3) ☐ Within a year
    (4) ☐ Longer than 1 year
    (5) ☐ I have not seen a doctor for HIV
    (6) ☐ Don't Remember
    (7) ☐ Other:_____

16. Have you had any of the following in the last 12 months? (check all that apply)

a. CD4 counts	(0) ☐ No	(1) ☐ Yes	(0) ☐ Don't know
b. Viral load test	(0) ☐ No	(1) ☐ Yes	(0) ☐ Don't know
c. HIV medication (ARV)	(0) ☐ No	(1) ☐ Yes	(0) ☐ Don't know

17. How often have you received HIV care in the past 12 months?
    (1) ☐ This is my first visit since being diagnosed.
    (2) ☐ I have not been to an HIV care visit in the past 12 months.
    (3) ☐ Once
    (4) ☐ Twice
    (5) ☐ Three times
    (6) ☐ More than three times

18. In the table below, please check one option per category to show whether you need and receive a particular service, need but do not receive the service, need but don't know about the service, or do not need the service.

Medical Services	I get service	I need but I don't get service	I need but don't know about service	I don't need this service
a. Primary HIV Doctor				
b. Prescription Drug Assistance				
c. Local Pharmacy Assistance with Medications				
d. Dental Care and Oral Health Care				
e. Early Intervention Services				
f. HIV Health Insurance Assistance				
g. Home Health Care				
h. Home Health Aides				
i. Hospice Services				
j. Mental Health Care/Counseling				
k. Nutrition Services				
l. Medical Case Management				
m. Alcohol/ Drug Outpatient Treatment				

In the table below, please check one option per category to show whether you need and receive a particular service, need but do not receive the service, need but don't know about the service, or do not need the service.

Support Services	I get service	I need but I don't get service	I need but don't know about service	I don't need this service
a. Case Management (non-Medical)				
b. Child Care Services				
c. Utility Assistance				
d. Food Pantry				
e. Health Education/ HIV Transmission Education				
f. Housing Services				
g. Legal Services				
h. Translation Services				
i. Transportation to Medical Care				
j. Outreach Services				
k. Support Group				
l. Referral for Health Care/Supportive Services				
m. Rehabilitation Services				
n. Respite Care				
o. Alcohol/drug residential treatment				
p. Treatment Adherence Counseling				

19. What kept you from getting the services you needed during the past 12 months? (check all that apply)
    - (0) ☐ This does not apply to me. I did get the services I needed during the past 12 months.
    - (1) ☐ I did not know where to get services
    - (2) ☐ I could not get an appointment
    - (3) ☐ I could not get transportation
    - (4) ☐ I could not get childcare
    - (5) ☐ I was too busy taking care of my partner, family, and/or children
    - (6) ☐ I could not pay for services
    - (7) ☐ I did not want people to know that I have HIV
    - (8) ☐ I was not ready to deal with having HIV
    - (9) ☐ I did not feel sick
    - (10) ☐ There are not enough doctors in my area
    - (11) ☐ I had a bad experience with medical staff
    - (12) ☐ I could not get time off work
    - (13) ☐ I was depressed
    - (14) ☐ I was homeless

(15) ☐ I was afraid of partner abuse/domestic violence
(16) ☐ Other: _____

20. How long have you been receiving Ryan White funded HIV care, treatment, or other supportive services?
_____years _____months

21. In the past 3 years, do you think the Ryan White services in general have:
(2) ☐ Improved
(1) ☐ Remained the same
(0) ☐ Declined/got worse
(9) ☐ This does not apply to me. I have not received services in the past 3 years.

22. How often have you:

	OFTEN	SOMETIMES	RARELY	NEVER
Felt blamed by others for diagnosis				
Thought your diagnosis was punishment for things done in the past				
Feared losing job if someone found out				
Felt compelled to change residence because of diagnosis				
Avoided getting treatment because someone might find out				
Feared people might hurt your family if they learned of your diagnosis				
Thought other people were uncomfortable being with you				
Felt people avoiding you because of diagnosis				
Feared you would lose friends if they learned about diagnosis				
Feared family would reject you if they learned about diagnosis				
Felt you wouldn't get as good health care if people learned about diagnosis				

23. Have you disclosed your HIV status to anyone? (1) ☐ Yes (0) ☐ No

24. Have you disclosed your HIV status to any of the following persons:

	YES	NO
Bosses/employers		
Close friends		
Casual acquaintances		
Parents		
Brothers and sisters		
Children		
Other relatives		
Health care providers		
Sexual partners		

25. How satisfied are you with thesupport you get from your friends and family members?
(1) ☐ Very satisfied (2) ☐ Somewhat satisfied (3) ☐ Somewhat dissatisfied (4) ☐ Very dissatisfied (5) ☐ N/A

26. Do your friends or family members help you remember to take your HIV medication?
(1) ☐ Yes (0) ☐ No (8) ☐ N/A

27. How satisfied are you with the support you get from your church?
(1) ☐ Very satisfied (2) ☐ somewhat satisfied (3) ☐ somewhat dissatisfied (4) ☐ Very dissatisfied (5) ☐N/A

28. To what extent do members of your church help you remember to take your HIV medication?
(0) ☐ Not at all (1) ☐ A little (2) ☐ A lot (8) ☐ N/A

29. People may miss taking their HIV medications for various reasons. What are possible reasons why you may have missed taking any HIV medications within the past month? (check all that apply)
(0) ☐ N/A – don't take HIV medications
(1) ☐ Was away from home
(2) ☐ Had a change in daily routine
(3) ☐ Simply forgot
(4) ☐ Had too many pills to take
(5) ☐ Wanted to avoid side effects
(6) ☐ Had problem taking pills at specified times
(7) ☐ Did not want others to know I was taking HIV medication
(8) ☐ Ran out of pills
(9) ☐ Felt good/felt healthy
(10)☐ Other: _____

30. Thinking back over the last seven days, did you take _____ of your pills?
(4) ☐ all (3) ☐ most(2) ☐ half (1) ☐ few (0) ☐ none (8) ☐ N/A-don't take HIV medications

31. In the past 12 months have you:

	YES	NO	DON'T KNOW	REFUSE
Had sex without using a condom?				
Had five or more sex partners?				
Had sex with women only?				
Had sex with men only?				
Had sex with both men and women?				
Had a sexually transmitted disease such as herpes, gonorrhea, chlamydia, syphilis, genital warts?				
Had sex while you were drunk or high on drugs?				
Traded sex for drugs or money or something else you needed?				
Had sex with an IV drug user?				
Used a needle to inject any drugs, including steroids, under your skin or into a vein? *If yes*: Shared drug injection equipment?				

32. What is your primary sexual partner's HIV status?
(1) ☐ Positive(2) ☐ Negative (3) ☐ Don't know (4) ☐ N/A – not having sex/no partner

33. Did your primary sexual partner know that you were HIV-positive because you told him/her that you were positive?
(1) ☐ Yes (0) ☐ No (8) ☐ N/A – not having sex/no partner

34. This question is for <u>WOMEN</u> only. How satisfied are you with your reproductive health care? Please indicate if you are satisfied, neutral, or not satisfied with the following:

	Satisfied	Neutral	Not Satisfied	Don't Need Service
Being able to share my concerns about birth control with my HIV medical provider				
Talking to my HIV medical provider about pregnancy				
Sharing my concerns about sexual intercourse with my HIV medical provider				
Receiving pregnancy planning information from my HIV medical provider				

35. Have you served time in jail or prison since your HIV diagnosis?
(0) ☐ No (If no, skip to question 43) (1) ☐ Yes

36. If yes, what is the total length of time you were in jail or prison?years _____ months _____

37. Did you receive HIV/AIDS related medical care while in jail/prison? (0) ☐ No (1) ☐ Yes

a. If no, why not? (0) ☐No, I didn't want care (1) ☐No, they didn't know my status

38. In what year were you released from prison?_____

39. When you were released from jail/prison, which of the following did you receive? (check all that apply)
(1) ☐ Information about finding housing
(2) ☐ Referral to medical care
(3) ☐ Referral to case management
(4) ☐At least a week supply of HIV medication to take with me
(5) ☐ Other: _____
(6) ☐ This does not apply to me.

40. How long did it take you to find stable housing after being released?
(0) ☐ Less than 1 month
(1) ☐ Between 1 and 6 months
(3) ☐ Between 6 months and 1 year
(4) ☐ More than 1 year
(5) ☐Still haven't found housing

41. How long did it take you to access medical care after being released?
(0) ☐ less than 1 month
(1) ☐ Between 1 and 6 months
(3) ☐ Between 6 months and 1 year
(4) ☐ More than 1 year
(5) ☐Still haven't accessed medical care

42. What prevented you from getting the HIV/AIDS services you needed after you were released? (check all that apply)
    - (0) ☐ This does not apply to me. I was able to get HIV services after my release.
    - (1) ☐ No insurance – financial reasons
    - (2) ☐ I did not know where to go
    - (3) ☐ I did not want anyone to know I have HIV
    - (4) ☐ I could not get away from drugs
    - (5) ☐ I was having trouble finding friends I could trust
    - (6) ☐ I did not want to take off from work
    - (7) ☐ I did not have transportation to get services
    - (8) ☐ I did not have ID or documentation to qualify
    - (9) ☐ I had too many other things on my mind
    - (10) ☐ Other: _____

43. Overall, did you think this survey was:
    - (0) ☐ Too long, but covered all the information
    - (1) ☐ Too long, and I did not want to finish it
    - (2) ☐ Too short, there were more things you could have asked
    - (3) ☐ Just right

Is there anything else you would like us to know?

_____
_____
_____
_____

Thank you for your time.

APPENDIX B: FOCUS GROUP SCRIPT

Introduction
Thank you for agreeing to participate in this focus group. My name is [INSERT NAME] and I will be guiding our discussion today. This is [INSERT NAME] and she/he will be taking notes for us. The purpose of our time together is to better understand your experiences, knowledge, and opinions about the service needs for people like yourself living with HIV/AIDS. The focus group will be used along with our notes to make a summary of the common themes and key insights emerging from our discussion. Before we begin our discussion, I'd like to review a fewimportant points. 1. All comments are confidential, which means what is shared in the group should stay in the group.Please understand that while transcriptions and audio recordings will be held confidential under privacy laws, the researchers cannot be held responsible for what focus group members repeat outside of the session. When the findings are given in reports, scientific papers, or presentations no one's name will be mentioned. The focus groups are also anonymous, which means that we will not be using your real names during the group. Please choose a name you want to be called during the group. 2. All ideas have value. There are no 'right' or 'wrong' answers; even negative comments are useful in gaining insight about the topic under discussion. So please say exactly what you think. Don't worry about whatI think or what your neighbor thinks. 3. Express your opinions, but do not argue with other participants. Also, please ask for clarification if a question is unclear. 4. This discussion is being taped, so please speak up and speakclearly. Let's try to have only one person talking at one time so that a complete record of our discussion is captured. Iwill try to make sure that everyone gets a turn to share theiropinions. 5. Please silence your cell phones for the duration of the session. 6. Finally, I hope everyone will leavethis group having had a worthwhile and stimulating experience. Do you have any questions before I begin?

Main Questions	Prompts and/or Probes
Let's go around the table and share one thing that makes you unique compared to other people.	
What are the most important issues faced by people living with HIV?	What are the most important needs? What about the needs of a newly diagnosed individual?
What are the most important HIV-related services you are using now or have used in the past year?	How well do Ryan White Part A services meet your needs?
What services are you most satisfied with?	Does satisfaction include medical care, case management, transportation, mental health, substance abuse counseling, support groups?
What services are you least satisfied with?	Does dissatisfaction sometimes have to do with an experience of stigma and/or providers (consciously or not) making you feel stigmatized?

Are there ways in which the quality of HIV-related services can be improved?	
In your experiences with seeking and using HIV-related services in the Memphis TGA, do you feel like you are treated differently because of some aspect of yourself? Have there been instances when you have felt particularly welcome, comfortable or motivated by an agency?	Being a member or being seen as a member of a particular group
Are there instances when you have felt particularly unwelcome, uncomfortable, or discriminated against by an agency?	Did you ever tell anyone at the agency about your experience?
What HIV services do you receive near your home? What HIV services are needed near your home?	travel out of neighborhood for HIV services
What is your most important health concern OTHER than HIV?	mental health, emotional health, physical health, social functioning, physical functioning, substance use
What are some reasons why newly diagnosed individuals do not seek medical care?	Tell us more about what caused you to be out of care. What caused you to stop accessing care? What could have kept you in care? Tell us more about how you got back into care. What made you want to access care again?
Are there any barriers that you have experienced while trying to access services in your community?	If you could change one thing in the HIV/AIDS system of care what would it be? Are there any services you need but can't get or aren't offered in your area? Barriers in applying for assistance (e.g., rent, utility)
What suggestions do you have for making it easier for people to get the services they need and stay in care?	What would you recommend to improve the lives of people living with HIV?
Finally, were there questions on the survey that were unclear?	Length, Ease of administration, Appropriately worded
That's all I have to ask. Are there other things that you would like to add? Maybe something that is important for me to know that I didn't ask about already? Or even something that you wanted to say earlier, but didn't get a chance to say?	Thank the participants for their time and remind them to pick up their gift card before leaving.

APPENDIX C: RESOURCE INVENTORY

Ryan White Part A Service Providers

MEMPHIS TGA					
Agency	**Address**	**City/State**	**Zip**	**Contact(s)**	**Service Provided**
Adult Special Care - The Regional Medical Center	880 Madison Avenue	Memphis, TN	38103	Lynn Patterson, VP-Ambulatory Care 901-545-8540 lpleasants@the-med.org	Outpatient/Ambulatory Health Services AIDS Pharmaceutical Assistance (Local) Medical Case Management Medical Nutrition Therapy Medical Transportation Services Early Intervention Services
				Becky Bayless, Grants Manager 901-545-8949 bbayless@the-med.org	
				Ayesha Sarwar, Project Manager 901-545-6684 asarwar@the-med.org	
Christ Community Health Services	2595 Central Avenue	Memphis, TN	38104	Burt Waller, Executive Director burt.waller@christchs.org	Outpatient/Ambulatory Health Services AIDS Pharmaceutical Assistance (Local)
				Amanda Chandler, Program Manager 901-260-8494 amanda.chandler@christchs.org	Medical Case Management Medical Transportation Services Oral Health Mental Health Food Bank/Home Delivered Meals Early Intervention Services
Cocaine Alcohol Awarenes Program	4041 Knight Arnold Road, Suite100	Memphis, TN	38118	Albert Richardson, Jr., Authorized Rep. 901-360-0442 albertrichardson@bellsouth.net	Substance Abuse Services - Outpatient
East Arkansas Family Health Center	215 East Broad Street	West Memphis, AR	72301	Lisa Brensendine, Program Director	Outpatient/Ambulatory Health Services AIDS Pharmaceutical Assistance (Local)
				Cherry Whitehead-Thompson, COO 870-735-3291 cwhitehead100@sbcglobal.net	Medical Case Management Medical Transportation Services Oral Health
				Robert Beard, CFO rwbeard@sbcglobal.net	Mental Health Food Bank/Home Delivered Meals Early Intervention Services Emergency Financial Assistance Psychosocial Support
Friends for Life Corp.	43 North Cleveland Ave.	Memphis, TN	38104	Kim Daughtery, Executive Directory 901-272-0855 x240 kim.daughtery@friendsforlifecorp.org	Medical Transportation Services Oral Health Food Bank/Home Delivered Meals
				John Hill, Chief Financial Officer 901-272-0855 x227 john.hill@friendsforlife.org	Early Intervention Services Emergency Financial Assistance Case Management (non-Medical) Psychosocial Support Services
Hope House	PO Box 41437	Memphis, TN	38174	Maria Randall 901-272-2702 mrandall@hopehousememphis.org	Psychosocial Support Services Case Management (non-Medical)
Memphis Center for Reproductive Health	1726 Poplar Ave.	Memphis, TN	38104	Jennifer Marshall, Asst. Director 901-791-9384 jmarshall@mcrh-tn.org	Outpatient/Ambulatory Health Services
Memphis Health Center	360 E. Crump Blvd.	Memphis, TN	38126	Marilyn Burress, Program Manager 901-261-2072	Outpatient/Ambulatory Health Services Medical Case Management
				Brian Wallace, CFO	Outreach Medical Transportation Services
Sacred Heart Southern Missions	6050 Highway 161 North	Walls, MS	38680	Fr. Jack Kurps, Executive Director jkurps@shsm.org	Case Management (non-Medical) Emergency Financial Assistance
				Sr. Betteann McDermott 662-342-3176 mmcdermott@shsm.org	Food Bank/Home Delivered Meals Medical Transportation Services
St. Jude Children's Research Group	262 Danny Thomas Place, Mail Stop 600	Memphis, TN	38105	Patricia Flynn, MD Department of Infectious Diseases 901-595-5067	Outpatient/Ambulatory Health Services Medical Case Management Psychosocial Support Services
				Katherine Knapp, MD, Project Director 901-595-4645 901-595-5067 katherine.knapp@stjude.org	
				Dawn DonLevy, CRA, Senior Grant Accountant 901-595-4275 dawn.donlev@stjude.org	
				Judith Maina, MS, Sr. Grant & Contract Admin. 901-595-4347	
Shelby County Health Dept.	814 Jefferson	Memphis, TN	38105	Cedric Robinson, Manager Infectious Diseases 901-222-9428 cedric.robinson@shelbycountytn.gov	Medical Case Management Medical Nutrition Therapy Early Intervention Services
				Louann Denman, Community Nutritionist 901-222-9235 lou.denman@shelbycountytn.org	
State of Tennessee Health Dept.	425 5th Ave., North	Nashville, TN	37243	Dan McEachern 615-532-2392	ADAP-State
The Healing Arts Research Training (HART) Center	1364 Madison Ave.	Memphis, TN	38104	Rev. Dr. Jane Abraham, Clinical Director 901-726-4213 jane@thehartcenter.org	Mental Health Case Management (non-Medical) Psychosocial Support

ALCOHOL AND DRUG COMMUNITY SUPPORT SERVICES			
Agency	**City**	**State**	**Telephone Number**
8th Street Mission	West Memphis	AR	(870)735-6010
Alcoholics Anonymous	Memphis	TN	(901)726-6750
CAAP, Inc.	Memphis	TN	(901)367-7550
Charles McKinnon Center	Brighton	TN	(901)476-8967
Christian Counseling Ministries	Southaven	MS	(662)342-0155
Communicare	Hernando	MS	(662)429-7875
Counseling Alternatives	Covington	TN	(901)476-8999
Counseling Services of Eastern Arkansas	West Memphis	AR	(870)735-5118
DeSoto Behavioral Health	Southaven	MS	(662)349-6658
DeSoto Family Counseling Center	Southaven	MS	(662)342-2700
Family Counseling Services of Millington	Memphis	TN	(901)872-3525
Family Services of the Mid-South	Memphis	TN	(901)324-3637
Frayser Family Counseling Center	Memphis	TN	(901)353-5440
JB Summers Center	Somerville	TN	(901)465-9831
Lakeside	Memphis	TN	(901)377-4700
Life Strategies	West Memphis	AR	(870)702-7563
Memphis Alcohol and Drug Council	Memphis	TN	(901)274-0056
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Memphis Gay and Lesbian Community Center	Memphis	TN	(901)278-4297
Memphis Recovery Center	Memphis	TN	(901)272-7751
Midtown Mental Health Center	Memphis	TN	(901)577-0221
Millington Professional Counseling	Millington	TN	(901)476-8967
Narcotics Anonymous	Memphis	TN	(901)276-5483
New Directions	Memphis	TN	(901)346-5497
Pyramid Recovery	Memphis	TN	(901)948-4862
Southeast Mental Health Center	Memphis	TN	(901)369-1400
Victory Center	Memphis	TN	(901)794-5683
Whitehaven Southwest Mental Health Center	Memphis	TN	(901)259-1920

ALCOHOL AND DRUG RESIDENTIAL PROGRAMS			
Agency	**City**	**State**	**Telephone Number**
Baby Love	Memphis	TN	(901)577-0256
Dozier House	Memphis	TN	(901)722-4719
East Arkansas Substance Abuse Program	West Memphis	AR	(870)739-5676
Genesis House	Memphis	TN	(901)726-9786
Grace House	Memphis	TN	(901)722-8460
Harbor House	Memphis	TN	(901)743-1836
Lakeside	Memphis	TN	(901)377-4700
Memphis Recovery Center	Memphis	TN	(901)272-7751
Moriah House	Memphis	TN	(901)522-8819
New Directions, Inc.	Memphis	TN	(901)346-5497
Renewal Place	Memphis	TN	(901)543-8586
Serenity Recovery Center	Memphis	TN	(901)521-1131
Synergy Foundation	Memphis	TN	(901)332-2227

CASE MANAGEMENT			
Agency	**City**	**State**	**Telephone Number**
Case Management, Inc.	Memphis	TN	(901)821-5600
Community HIV Network .	Memphis	TN	(901)545-6577
East Arkansas Family Health Center	West Memphis	AR	(870)735-3291
Family Services of the Mid-South	Memphis	TN	(901)324-3637
Frayser Family Counseling Center	Memphis	TN	(901)353-5440
Friends for Life	Memphis	TN	(901)272-0855
Jefferson Comprehensive	Pine Bluff	AR	(870)543-2380
LeBonheur Children's Medical Center	Memphis	TN	(901)572-5225
Magnolia Medical Clinic	Greenwood	MS	(601)459-1277
Memphis Health Center, Inc.	Memphis	TN	(901)775-2000
Mid-State Opportunities	Olive Branch	MS	(662)895-4153
Midtown Mental Health Center	Memphis	TN	(901)577-0221
Porter Leath Children Services	Memphis	TN	(901)577-2500 (901)577-2506
Regional Medical Center at Memphis (Adult Special Care Clinic)	Memphis	TN	(901)545-8481
Southeast Mental Health Center	Memphis	TN	(901)369-1400
St. Jude Children's Research Hospital	Memphis	TN	(901)495-5029
University of Tennessee, OB/GYN Clinic	Memphis	TN	(901)545-6369
Whitehaven Southwest Mental Health Center	Memphis	TN	(901)259-1920
Youth Villages	Memphis	TN	(901)251-5000

CHURCH SPONSORED SUPPORT			
Agency	**City**	**State**	**Telephone Number**
8th Street Mission Crittendon West Memphis, AR	West Memphis	AR	(870)735-6010
African American Pastors Consortium (AAPC) Shelby Memphis, TN	Memphis	TN	(901)543-9600
African American Pastors Spouses Shelby Memphis, TN	Memphis	TN	(901)786-0414
Calvary Episcopal Church Shelby Memphis, TN	Memphis	TN	(901)525-6602
Cathedral of the Immaculate Conception Shelby Memphis, TN	Memphis	TN	(901)725-2702
Christian Counseling Ministries Desoto Southaven, MS	Southaven	MS	(662)342-0155
Counseling Center of First Baptist Church Tipton Covington, TN	Covington	TN	(901)476-2489
Ecumenical Village Crittendon West Memphis, AR	West Memphis	AR	(870)735-1115
First Baptist Crittendon West Memphis, AR	West Memphis	AR	(870)735-5241
First Congregational Church (First Congo) Shelby Memphis, TN	Memphis	TN	(901)278-6786
First United Methodist Tipton Covington, TN	Covington	TN	(901)476-9694
Heart to Heart Tipton Covington, TN	Covington	TN	(901)476-6528
Holy Trinity Community Church Shelby Memphis, TN	Memphis	TN	(901)320-9376
Interfaith Council on Poverty in Hernando Desoto Hernando, MS	Hernando	MS	(662)429-6646
Mississippi Boulevard Christian Church Shelby Memphis, TN	Memphis	TN	(901)729-6222
Neighborhood Christian Center Shelby Memphis, TN	Memphis	TN	(901)452-6701 (901)881-6013
Open Heart Spiritual Center Shelby Memphis, TN	Memphis	TN	(901)323-3514
Prescott Memorial Baptist Church	Memphis	TN	(901)327-8479
Ray of Hope Christian Counseling Center Shelby Millington, TN	Millington	TN	(901)873-4673
Sacred Heart Southern Mission AIDS Ministry Desoto Walls, MS	Walls	MS	(662)626-6654
St. Andrew A.M.E. Church/Project CHARM Shelby Memphis, TN	Memphis	TN	(901)775-2968
St. Andrew A.M.E. Church/Project HOPE Shelby Memphis, TN	Memphis	TN	(901)775-2968
Wonder City Ministries Crittendon West Memphis, AR	West Memphis	AR	(870)735-3394

DAYCARE SERVICES & EMERGY RESPITE CARE			
Agency	**City**	**State**	**Telephone Number**
Hope House Day Care Center	Memphis	TN	(901)272-2702

DENTAL SERVICES			
Agency	**City**	**State**	**Telephone Number**
Bill Castle, DDS	Memphis	TN	(901)685-5008
Church Health Center	Memphis	TN	(901)272-0003
Magnolia Medical Clinic	Greenwood	MS	(601)459-1277
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Memphis Health Center, Inc.	Memphis	TN	(901)775-2000
Joe O'Neal, DDS	Memphis	TN	(901)276-7314
Regional Medical Center at Memphis (Adult Special Care Clinic)	Memphis	TN	(901)545-8481
University of Tennessee College of Dentistry	Memphis	TN	(901)448-6220

EDUCATIONAL RESOURCES			
Agency	**City**	**State**	**Telephone Number**
American Red Cross	Memphis	TN	(901)726-1690
Area Health Education Centers	Somerville	TN	(901)465-6183
Arkansas Managed Care	West Memphis	AR	(870)735-3291
Association of Nurses in AIDS Care (ANAC)	Memphis	TN	(901)495-3240
Children and Family Services Wellness Center	Covington	TN	(901)476-2364
Community HIV Network	Memphis	TN	(901)545-6577
Comprehensive School Health Program	Memphis	TN	(901)729-3779
Delta Area Health Education Centers	West Memphis	AR	(870)735-5527
DeSoto County Health Department	Hernando	MS	(662)429-9814
Fayette County Health Department	Somerville	TN	(901)465-5243
Friends For Life	Memphis	TN	(901)272-0855
Girls, Inc.	Memphis	TN	(901)523-0217
Heart to Heart	Memphis	TN	(901)476-6528
Hemophilia Foundation	Memphis	TN	(901)458-6727
Latino Memphis	Memphis	TN	(901)366-5882
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Memphis Center for Reproductive Health	Memphis	TN	(901)274-3550
Memphis Gay and Lesbian Community Center	Memphis	TN	(901)278-4297
Memphis Health Center, Inc.	Memphis	TN	(901)775-2000
Memphis Regional Planned Parenthood	Memphis	TN	(901)725-1717
New Directions, Inc.	Memphis	TN	(901)346-5497
Parents, Family and Friends of Lesbians and Gays (PFLAG)	Memphis	TN	(901)268-2511
Pfizer Pharmaceuticals/Agouron Division	Memphis	TN	(901)487-7412
Positive Living Center	Memphis	TN	(901)247-8321
Positive Voices	Memphis	TN	(901)247-8321
Pyramid Recovery Center	Memphis	TN	(901)948-4862
South Memphis Alliance (SMA)	Memphis	TN	(901)946-9582
St. Jude Children's Research Hospital	Memphis	TN	(901)495-5029
Tennessee Department of Health	Nashville	TN	(800)525-2437
Tipton County Health Department	Covington	TN	(901)476-0235
University of Arkansas Cooperative Extension Services	Marion	AR	(870)739-3239

FINANCIAL ASSISTANCE			
Agency	**City**	**State**	**Telephone Number**
8th Street Mission	West Memphis	AR	(870)735-6010
AIDS Virus Awareness	Memphis	TN	(901)789-7123
Community Service Agency	Memphis	TN	(901)523-7551
Crowley Ridge Development Corporation	Marion	AR	(870)739-6019
Delta Human Resources Agency	Somerville	TN	(901)465-3201
Family Services of the Mid-South	Memphis	TN	(901)324-3637
Fayette Cares	Memphis	TN	(901)465-3805
First United Methodist	Memphis	TN	(901)476-9694
Good Neighbor Center	West Memphis	AR	(870)735-0870
Helping People with AIDS	Little Rock	AR	(501)666-6900
Memphis Light Gas and Water (MLGW)	Memphis	TN	(901)528-4788
Mid-State Opportunities	Olive Branch	MS	(662)895-4153
MIFA (Metropolitan Inter-Faith Association)		TN	(901)527-0226
Mississippi Boulevard Christian Church	Memphis	TN	(901)729-6222
Partners for the Homeless	Memphis	TN	(901)526-9411 (901)526-9413
South Memphis Alliance (SMA)	Memphis	TN	(901)946-9582
Southaven Samaritans	Memphis	MS	(662)393-6439
Whitehaven Southwest Mental Health Center	Memphis	TN	(901)259-1920
Wonder City Ministries	West Memphis	AR	(870)735-3394

FOOD & NUTRITION			
Agency	**City**	**State**	**Telephone Number**
Crittendon West Memphis, AR	West Memphis	AR	(870)735-6010
AIDS Virus Awareness	Memphis	TN	(901)789-7123
Commodity Supplemental Food Program	Memphis	TN	(901)528-0461
Crowley Ridge Development Corporation	Marion	AR	(870)739-6019
Fayette Cares	Somerville	TN	(901)465-3805
Feast for Friends	Memphis	TN	(901)272-0855
First Baptist	West Memphis	AR	(870)735-5241
First United Methodist	Memphis	TN	(901)476-9694
Friends for Life	Memphis	TN	(901)272-0855
Good Neighbor Center	West Memphis	AR	(870)735-0870
Interfaith Council on Poverty in Hernando	Hernando	MS	(662)429-7851
Jefferson Comprehensive Care System	Pine Bluff	AR	(870)543-2380
Magnolia Medical Clinic	Greenwood	MS	(601)459-1277
Manna House	Memphis	TN	(901)726-1142
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Memphis Health Center, Inc.	Memphis	TN	(901)775-2000
MIFA (Memphis Inter-Faith Association)	Memphis	TN	(901)527-0226
Olive Branch Food Pantry	Olive Branch	MS	(662)895-2913
Positive Living Center	Memphis	TN	(901)247-8321
Sacred Heart Southern Missions AIDS Ministry	Walls	MS	(662)626-6654
Southaven Samaritans	Southaven	MS	(662)393-6439
Tennessee Department of Health (Food Stamps)	Nashville	TN	(800)525-2437
Tipton Cares	Munford	TN	(901)837-1777
University of Arkansas Cooperative Extension Services	Marion	AR	(870)376-6299
WIC (Women Infants and Children)	Memphis	TN	(901)544-1341
Wonder City Mission	West Memphis	AR	(870)735-3394

FUNDING & FUNDRAISING			
Agency	**City**	**State**	**Telephone Number**
Aphrodite	Memphis	TN	
Mid-South AIDS Fund	Memphis	TN	(901)722-0054
Pfizer Pharmaceuticals/Agouron Division	Memphis	TN	(901)487-7412
Southwest Tennessee HIV/AIDS Care Consortium	Memphis	TN	(901)433-4300

HEALTH DEPARTMENTS			
Agency	**City**	**State**	**Telephone Number**
Arkansas Department of Health	West Memphis	AR	(870)735-4334
DeSoto County Health Department	Hernando	MS	(662)429-9814
Fayette County Health Department	Somerville	TN	(901)465-5243
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Tennessee Department of Health	Nashville	TN	(800)525-2437
Tipton County Health Department	Covington	TN	(901)476-0235

HOME HEALTH			
Agency	**City**	**State**	**Telephone Number**
Crossroads Hospice	Memphis	TN	(901)382-9292
Hospice South	Bartlett	TN	(901)385-2221
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Methodist Alliance Hospice	Memphis	TN	(901)680-0169
Regional Medical Center at Memphis (Adult Special Care Clinic)	Memphis	TN	(901)545-8481
Trinity Home Health and Hospice	Memphis	TN	(901)762-6767
Visiting Nurses Association	Memphis	TN	(901)385-7787

HOTLINES			
Agency	**City**	**State**	**Telephone Number**
American Social Health Association			(800)227-8922
Alcoholics Anonymous	Memphis	TN	(901)726-6750
Family Services. of the Mid-South Crisis Center Hotline	Memphis	TN	(901)274-7477
LINC - Memphis Library Community Resource Database	Memphis	TN	(901)415-2790 or 211
Memphis and Shelby County AIDS Hotline Shelby Memphis, TN	Memphis	TN	(901)544-7575
Memphis Area Gay Youth (MAGY) Shelby Memphis, TN	Memphis	TN	(901)335-6249
Memphis Gay and Lesbian Switchboard Shelby Memphis, TN	Memphis	TN	(901)324-4297
Memphis Sexual Assault Resource Center Shelby Memphis, TN	Memphis	TN	(901)272-2020
Narcotics Anonymous Shelby Memphis, TN	Memphis	TN	(901)276-5483
Spanish Information Hotline (SIDA)			(800)344-7432
Suicide and Crisis Intervention Shelby Memphis, TN	Memphis		(901)274-7477
Teen AIDS Hotline			(800)234-8336

HOUSING SERVICES			
Agency	**City**	**State**	**Telephone Number**
Crowley Ridge Development Corporation	Marion	AR	(870)739-6019
Ecumenical Village	West Memphis	AR	(870)735-1115
First United Methodist	Covington	TN	(901)476-9694
Friends for Life/Shelter Plus Care	Memphis	TN	(901)272-0855
Memphis Housing Authority	Memphis	TN	(901)544-1100
Memphis Inter-Faith Hospitality Network (MIHN)	Memphis	TN	(901)529-4536
Metropolitan Inter-Faith Association (MIFA)	Memphis	TN	(901)529-4515
Partners for the Homeless	Memphis	TN	(901)526-9411 (901) 526-9413
Peabody House	Memphis	TN	(901)527-3863
Project Safe Place	Memphis	TN	(901)725-6911
Salvation Army	Memphis	TN	(901)543-8586
Shelby County Housing Authority	Memphis	TN	(901)353-0590
Sisters of Charity	Memphis	TN	(901)276-7386
Southeast Community Mental Health Center - Housing Developer	Memphis	TN	(901)452-6941
St. Jude Children's Research Hospital	Memphis	TN	(901)495-5029
Whitehaven Southwest Mental Health Center	Memphis	TN	(901)259-1920
YWCA of Greater Memphis, Crisis Shelter	Memphis	TN	(901)323-2211

LEGAL SERVICES			
Agency	**City**	**State**	**Telephone Number**
Community Legal Center	Memphis	TN	(901)543-3395
East Arkansas Legal Services	West Memphis	AR	(870)732-6370
Memphis Area Legal Services	Memphis	TN	(901)523-8822
Memphis Lesbian and Gay Coalition for Justice	Memphis	TN	(901)327-2677
Positive Living Center	Memphis	TN	(901)247-8321
Shelby County Relative Caregiver Program	Memphis	TN	(901)448-7097

MEDICAL CARE SERVICES			
Agency	**City**	**State**	**Telephone Number**
Church Health Center	Memphis	TN	(901)272-0003
Christ Community Health Services	Memphis	TN	
East Arkansas Family Health Center	West Memphis	AR	(870)735-3291
Health Loop	Memphis	TN	(901)525-6761
Infectious Disease Associates	Memphis	TN	(901)685-3490
Jefferson Comprehensive Care System	Pine Bluff	AR	(870)543-2380
LeBonheur Children's Medical Center	Memphis	TN	(901)572-5225
Magnolia Medical Clinic	Greenwood	MS	(601)459-1277
Memphis Center for Reproductive Health	Memphis	TN	(901)274-3550
Memphis Health Center, Inc.	Memphis	TN	(901)775-2000
Methodist Teaching Practice	Memphis	TN	(901)726-8785
Mid-South Center for Natural Medicine	Memphis	TN	(901)766-9355
Peabody Healthcare Group	Memphis	TN	(901)725-0648
Regional Medical Center at Memphis (Adult Special Care Clinic)	Memphis	TN	(901)545-8481
St. Jude Children's Research Hospital	Memphis	TN	(901)495-5029
The Birthplace at the Regional Medical Center	Memphis	TN	(901)545-6100
University of Tennessee, OB/GYN Clinic	Memphis	TN	(901)545-6369

MEDICATION SUPPORT			
Agency	**City**	**State**	**Telephone Number**
Bioscrip Pharmacy	Memphis	TN	(901)725-7828

PSYCHIATRIC/MENTAL HEALTH SERVICES			
Agency	**City**	**State**	**Telephone #**
Charles McKennon Center	Brighton	TN	(901)476-8967
Christian Counseling Ministries	Southaven	MS	(662)342-0155
Communicare	Hernando	MS	(662)429-7875
Community HIV Network	Memphis	TN	(901)545-6577
Counseling Alternatives	Covington	TN	(901)476-8999
Counseling Center of First Baptist Church	Covington	TN	(901)476-2489
Counseling Services of Eastern Arkansas		AR	(870)735-5118
DeSoto Behavioral Health	Southaven	MS	(662)349-6658
DeSoto Family Counseling Center	Southaven	MS	(662)342-2700
Family Counseling Services of Millington	Millington	TN	(901)872-3525
Frayser Family Counseling Center	Memphis	TN	(901)353-5440
JB Summers Center	Somerville	TN	(901)465-9831
Lakeside	Memphis	TN	(901)377-4700
Life Strategies	West Memphis	AR	(870)702-7563
Lowenstein House	Memphis	TN	(901)274-5486
Memphis and Shelby County Health Department	Memphis	TN	(901)544-7552
Midtown Mental Health Center	Memphis	TN	(901)577-0221
Millington Professional Counseling	Millington	TN	(901)476-8967
Porter Leath Children Services	Memphis	TN	(901)577-2500 (901)577-2506
Professional Care Services	Somerville	TN	(901)465-9831
Professional Counseling	Millington	TN	(901)873-0305
Ray of Hope Christian Counseling Center	Millington	TN	(901)873-4673
Regional Medical Center at Memphis (Adult Special Care Clinic)	Memphis	TN	(901)545-8481 (901)545-7177
Sacred Heart Southern Missions AIDS Ministry	Walls	MS	(662)253-1035
Southeast Mental Health Center	Memphis	TN	(901)369-1400
St. Jude Children's Research Hospital	Memphis	TN	(901)495-5029
Whitehaven Southwest Mental Health Center	Memphis	TN	(901)259-1920
Youth Diagnostic Assessment Center (YDAC)	Memphis	TN	(901)577-0200
Youth Villages	Memphis	TN	(901)251-5000

SUPPORT SERVICES			
Agency	**City**	**State**	**Telephone #**
African-American Pastors Consortium Shelby Memphis, TN	Memphis	TN	(901)543-9600
Alcoholics Anonymous	Memphis	TN	(901)726-6750
Arkansas Delta AIDS Consortia (ADAC)	West Memphis	AR	(870)735-3291
Caregivers Inc.	Memphis	TN	(901)794-2060
Children and Family Services	Covington	TN	(901)476-2364
Community HIV Network	Memphis	TN	(901)545-6577
DePorres Health Center	Marks	MS	(662)326-9232
East Arkansas Family Health Center	West Memphis	AR	(870)735-3291
Exodus Empowerment Project	Memphis	TN	(901)274-1024
Family Services of the Mid-South	Memphis	TN	(901)324-3637
Feast for Friends	Memphis	TN	
Friends for Life	Memphis	TN	(901)272-0855
Healing Arms Support Group	Memphis	TN	(901)276-4726
Holy Trinity Community Church	Memphis	TN	(901)320-9376
Hope House	Memphis	TN	(901)272-2702
Hospitality HUB	Memphis	TN	(901)522-1808
Jefferson Comprehensive Care System	Pine Bluff	AR	(870)543-2380
LeBonheur Center for Children and Parents	Memphis	TN	(901)327-4766
Manna House	Memphis	TN	(901)726-1142
Memphis Area Gay Youth (MAGY)	Memphis	TN	(901)335-6249
Memphis Gay and Lesbian Community Center	Memphis	TN	(901)278-4297
Memphis Health Center, Inc.	Memphis	TN	(901)775-2000
Narcotics Anonymous	Memphis	TN	(901)276-5483
Northeast Arkansas Regional AIDS Network	West Memphis	AR	(870)400-0072
Partners for the Homeless	Memphis	TN	(901)526-9411 (901)526-9413
Porter Leath Children Services	Memphis	TN	(901)577-2500 (901)577-2506
Positive Living Center	Memphis	TN	(901)247-8321
Regional Medical Center at Memphis (Adult Special Care Clinic)	Memphis	TN	(901)545-8481 (901)545-7177
Shelby County Relative Caregiver Program	Memphis	TN	(901)448-7097
St. Andrew A.M.E. Church/Project CHARM	Memphis	TN	(901)775-2968
Urban Youth Initiative	Memphis	TN	(901)729-3988
Victims Assistance Center of Shelby County	Memphis	TN	(901)545-4357
West Memphis Junior Auxiliary	West Memphis	AR	(870)732-2488
Women in Community Services	Memphis	TN	(901)544-1341
YWCA of Greater Memphis, Crisis Shelter	Memphis	TN	(901)323-2211

TESTING SERVICES						
Agency	**Address**	**City**	**State**	**Telephone Number**	**Hours of Operation**	**Other**
Arkansas/ Crittenden County Health Department	901 N. 7th St.	West Memphis	AR	(870)735-4334	M-F 8am - 3 pm	
Christ Community Health Services	Multiple Locations…	Memphis	TN	(901)271-6000	M-F 9am - 5pm	
Community HIV Network	2400 Poplar Ave., Ste. 500	Memphis	TN	(901)287-4750	M-F 8am - 4:30pm	
DeSoto County Health Department	3212 Highway 51 South	Hernando	MS	(662)429-9814	T, Th 8am - 3pm	
DeSoto County Health Department	6569 Cockrum Rd	Olive Branch	MS	(662)895-3090	W, Th 8am - 3pm	
DeSoto County Health Department	8705 Northwest Drive	Southhaven	MS	(662)393-2775	M, F 8am - 3pm	
Fayette County Health Department	90 Yum Yum	Somerville	TN	(901)465-5243	M-F 8am - 4:30pm	
Friends for Life	43 North Cleveland	Memphis	TN	(901)272-0855	T, Th 10:30am - 3pm	
Guthrie Health Center	1064 Breedlove	Memphis	TN	(901)515-5400	M - F 8am - 4:30pm	
Hollywood Clinic	2466 Peres	Memphis	TN	(901)515-5400	M-F 8am - 4:30pm	
Life Blood	At Any Donor Center…	Memphis	TN	(901)522-8585	M-Th 7am - 4pm, S 8am - 12pm	$100 cost
LifeChoices	5575 Raliegh Lagrange Rd.	Memphis	TN	(901)388-1172	M-Th 9am - 5pm	w/ preg test only
LifeChoices	806 S. Cooper	Memphis	TN	(901) 274-8895	W&Th 10am - 6pm, F&S 10am - 3pm	w/ preg test only
Marshall County Health Department	225 S. Market	Holly Springs	MS	(662)252-4621	M-F 8am - 11am, 1pm - 3pm	
Memphis Center for Reproductive Health (CHOICES)	1726 Poplar Avenue	Memphis	TN	(901)274-3550	M-F 9am - 2pm	
Memphis Gay and Lesbian Community Center	892 South Cooper St	Memphis	TN	(901)278-6422	W 6pm - 9pm	
Memphis Health Center, Inc	360 E.H. Crump	Memphis	TN	(901)261-2000	M-F 9am - 5pm	
Memphis Sexual Assault Resource Center	2675 Union Ext.	Memphis	TN	(901)272-2020	M-F 7:30am - 2:30pm	
Methodist North ED	3960 Covington Pike	Memphis	TN	(901)516-5200	24 hours	
Methodist South ED	1300 Wesley Dr.	Memphis	TN	(901)516-3700	24 hours	
Methodist University ED	1265 Union Ave.	Memphis	TN	(901)516-7000	24 hours	
Planned Parenthood Greater Memphis Region	2430 Poplar Avenue	Memphis	TN	(901)725-1717	M, T, Th 9am - 6pm, W&F 8am - 4pm	
Regional Medical Center (The MED)	877 Jefferson	Memphis	TN	(901)545-6969	24 hours	
Shelby County Health Department Cawthon Clinic	1000 Haynes	Memphis	TN	(901)222-9876	M-F 8am - 2pm	
Shelby County Health Department Packer Clinic	814 Jefferson, Rm. 221	Memphis	TN	(901)222-9385	M-F 8am - 2pm	
South Memphis Alliance	1048 South Bellvue	Memphis	TN	(901)774-9582	Th 8:30am - 4:30pm	
South Memphis Health Center	1362 Mississippi	Memphis	TN	(901)515-5700	M-F 8am- 4:30pm	
South Third Clinic	1955 S. 3rd St.	Memphis	TN	(901)515-5800	M-F 8am - 4:30pm	
Tate County Health Department	100 Preston McKay Drive	Senatobia	MS	(662)562-4428	M-F 8am - 4pm	
Tunica County Health Department	2073 Old Hwy 61 North Ste 4	Tunica	MS	(662)363-2166	T,W,F 8am - 3:30pm	

TRANSPORTATION SERVICES			
Agency	**City**	**State**	**Telephone Number**
Arkansas Medicaid Transportation		AR	(800)482-1141
Delta Area Rural Transportation Services (DART)	Sommerville	TN	(901)465-9602
Delta Human Resource Agency	Sommerville	TN	(901)465-3201
Delta Transportation	Covington	TN	(901)475-1269
DePorres Health Center	Marks	MS	(662)326-9232
Family Services of the Mid-South	Memphis	TN	(901)324-3637
Friends for Life	Memphis	TN	(901)272-0855
Jefferson Comprehensive Care System	Pine Bluff	AR	(870)543-2380
Magnolia Medical Clinic	Greenwood	MS	(601)459-1277
Sacred Heart Southern Missions AIDS Ministry	Walls	MS	(662)253-1035
St. Jude Children's Research Hospital	Memphis	TN	(901)495-5029
TennCare Transportation	Memphis	TN	(901)385-0025

APPENDIX D: HIV SERVICE PROVIDER QUESTIONNAIRE

Instructions: Please place a check mark or an X in the box beside the appropriate answer.

1. Are you a Ryan White Part A Service Provider? (1) ☐ Yes (0) ☐ No

2. Are you a:
   (1) ☐ Medical Case Manager
   (2) ☐ Non-Medical Case Manager
   (3) ☐ Early Intervention Specialist
   (4) ☐ Physician
   (5) ☐ Nurse
   (6) ☐ Other: _____

3. How long have you been providing care for people living with HIV/AIDS? _____ months _____ years

4. What services does your agency provide to adults living with HIV? (check all that apply)

MEDICAL			SUPPORT	
a. Primary HIV Care	☐		a. Case Management (non-Medical)	☐
b. Local pharmacy assistance with medications	☐		b. Utility Assistance	☐
c. Dental care and Oral Health	☐		c. Food Pantry	☐
d. Early Intervention Services	☐		d. Housing Services	☐
e. Mental Health care/counseling	☐		e. Medical Transportation Services	☐
f. Nutrition Services *(provided by a dietician)*	☐		f. Outreach Services	☐
g. Medical Case Management	☐		g. Support Groups	☐
h. Alcohol/drug outpatient treatment	☐		h. Other:	☐
i. Other:	☐			

5. Are there services that you currently need more of or don't have that would allow you to better serve your clients/patients?
   (1) ☐ Yes (0) ☐ No

   If yes, please explain:

   _____
   _____

6. Do you feel that Ryan White Part A programming sufficiently meets the needs of these populations?

African Americans	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
Latinos/Hispanics	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
Men who have sex with men	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
Seniors	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
Women	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
Youth	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure

7. Do you feel that Part A services have sufficiently expanded to fill key service area gaps related to:

Formerly incarcerated individuals	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
People with substance abuse treatment needs	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
People with need for dental/oral health services	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure
Undocumented immigrants & Spanish-speaking clients	(1) ☐ Yes	(0) ☐ No	(9) ☐ Not Sure

8. What do you feel are the most effective methods your agency uses to retain clients in care?

   _____
   _____

9. What do you feel are the most effective methods your organization uses to identify people living with HIV/AIDS and bring them into care?

   _____
   _____

10. Which of the following do you feel would most help you to better serve your clients/patients living with HIV? Mark all that apply.
    (1) ☐ Training on how to better advocate for clients/patients
    (2) ☐ HIV care related training surrounding antiretroviral therapy, managing opportunistic infections, or monitoring/explaining a patient's health status
    (3) ☐ Training to provide more efficient services, including but not limited to, flexible office hours, faster appointment scheduling, less wait time for clients during visits, transportation, etc.
    (4) ☐ Additional opportunities to share information between providers

11. Briefly describe the single most important system-wide change (other than funding) you would suggest to improve services for all people living with HIV.

    _____
    _____

12. What barriers, other than funding, does your organization experience when providing care to people living with HIV/AIDS?

    _____
    _____

13. Are you: (1) ☐ Male (2) ☐ Female (3) ☐ Transgender

14. What is your age in years? _____

15. What is your ethnicity? (1) ☐ Hispanic/Latino (0) ☐ Non-Hispanic/Latino

16. What is your race? (check all that apply)
    (0) ☐ White/Caucasian
    (1) ☐ Black or African American
    (2) ☐ Asian
    (3) ☐ American Indian or Alaskan Native
    (4) ☐ Native Hawaiian or Pacific Islander
    (5) ☐ Other: _____

Thanks for your time completing this questionnaire!

APPENDIX E: INSTITUTIONAL REVIEW BOARD

THE UNIVERSITY OF MEMPHIS

Institutional Review Board

To: Latrice Pichon
Social and Behavioral Sciences

From: Chair, Institutional Review Board
For the Protection of Human Subjects
irb@memphis.edu

Subject: Ryan White Part A Memphis TGA Needs Assessment (#2049)

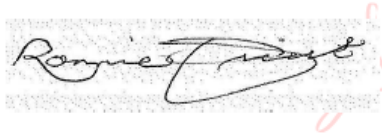
Approval Date: February 2, 2012

This is to notify you of the board approval of the above referenced protocol. This project was reviewed in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. At the end of one year from the approval date, an approved renewal must be in effect to continue the project. If approval is not obtained, the human consent form is no longer valid and accrual of new subjects must stop.
2. When the project is finished or terminated, the attached form must be completed and sent to the board.
3. No change may be made in the approved protocol without board approval, except where necessary to eliminate apparent immediate hazards or threats to subjects. Such changes must be reported promptly to the board to obtain approval.
4. The stamped, approved human subjects consent form must be used unless your consent is electronic. Electronic consents may not be used after the approval expires. Photocopies of the form may be made.

This approval expires one year from the date above, and must be renewed prior to that date if the study is ongoing.



Digitally signed by Dr. Ronnie Priest
DN: cn=Dr. Ronnie Priest, o=The University of Memphis, ou=Institutional Review Board, email=rpriest@memphis.edu, c=US
Date: 2012.02.10 08:42:50 -06'00'

Chair, Institutional Review Board
The University of Memphis

THE UNIVERSITY OF TENNESSEE
Health Science Center

Institutional Review Board
910 Madison Avenue, Suite 600
Memphis, TN 38163
Tel: (901) 448-4824

March 01, 2012

LATRICE PICHON, Ph.D.
The Med - Regional Medical Center at Memphis

Re: 12-01762-XP
Study Title: Ryan White Part A Memphis TGA Needs Assessment

Dear Dr. PICHON:

The Administrative Section of the UTHSC Institutional Review Board (IRB) has received your written acceptance of and/or responses dated 02/29/2012 and 03/01/2012 03:52:47 PM CST to the provisos outlined in our correspondence of 02/29/2012 and 03/01/2012 concerning the above referenced project. The IRB determined that your application is eligible for **expedited** review under 45 CFR 46.110(b)(1), category (7). In accord with 45 CFR 46.116(d), informed consent is altered, with the cover statement used in lieu of an informed consent interview. The requirement to secure a signed consent form is waived under 45 CFR 46.117(c)(2). Willingness of the subject to participate will constitute adequate documentation of consent. The IRB has reviewed these materials and determined that they do comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects. Therefore, this letter constitutes full approval by the IRB of your application (version 1.2) as submitted including the University of Memphis IRB approval documents which include: U of M IRB approval letter; protocol, letters of support, recruitment flyer and the consent cover statement which are in a format required by the respective IRB and are acceptable. Approval of this study will be valid from 03/01/2012 to 02/28/2013.

This study may not be initiated until you receive approval from the institution(s) where the research is being conducted.

In the event that subjects are to be recruited using solicitation materials, such as brochures, posters, web-based advertisements, etc., these materials must receive prior approval of the IRB. Any revisions in the approved application must also be submitted to and approved by the IRB prior to implementation. In addition, you are responsible for reporting any unanticipated serious adverse events or other problems involving risks to subjects or others in the manner required by the local IRB policy.

Finally, **re-approval** of your project is required by the IRB in accord with the conditions specified above. You may not continue the research study beyond the time or other limits specified unless you obtain prior written approval of the IRB.

Sincerely,

Signature applied by Cameron A Barclay on 03/01/2012 05:09:09 PM CST

Signature applied by Terrence F Ackerman on 03/01/2012 05:09:58 PM CST

Cameron Barclay, MSA, CIM, CIP
Director
UTHSC IRB

Terrence F. Ackerman, Ph.D.
Chairman
UTHSC IRB

Regional Medical Center at Memphis

March 6, 2012

Latrice C. Pichon, PhD, MPH, CHES
U of M - School of Public Health
Division of Social and Behavioral Sciences
3825 Desoto Avenue
Robison Hall Room 209
Memphis, TN 38152-3330

Dear Dr. Pichon:

The project proposal entitled "*Ryan White Part A Memphis TGA Needs Assessment*" **(IRB # 12-01762-XP)** has been reviewed by this office. The goals of the project appear to be consistent with the commitment of the Regional Medical Center to the advancement of medical science and healthcare, and I am pleased to inform you of its approval.

I understand no services will be performed by The MED that are chargeable to this project.

For your convenience, the following list will serve as a reminder of some of your responsibilities as the principal investigator at this site. All members of your team must be aware of these requirements to ensure compliance with the MED's policies for conducting research (items applicable to this study have been listed). Please refer to the MED's "Research Policies and Procedures" for a complete listing. If you have any questions, please call the Office of Medical Research at 545-7453.

1. Any revisions in the protocol must be forwarded to the Office of Medical Research.
2. In the event your study extends beyond the initial one-year IRB approval, a copy of the **Letter of Approval for Continuation** from the UT IRB Office must be submitted to the MED's Office of Medical Research. This should be continued for each successive year for the duration of the study.
3. Upon completion of the study, the Research Office must be informed of the end date.

I commend you for your research activity and look forward to hearing from you regarding the outcome of this study. If our office may be of help to you in connection with this project or with future endeavors, please let us know.

Sincerely,

Carl J. Getto, M.D.
Executive V.P./Chief Medical Officer

CC Maria van Werkhooven, Director
Office of Medical Research

877 Jefferson Avenue Memphis, TN 38103 901.545.7100

THE UNIVERSITY OF MEMPHIS

Institutional Review Board

To:	Latrice Pichon Social and Behavioral Sciences
From:	Chair, Institutional Review Board For the Protection of Human Subjects irb@memphis.edu
Subject:	Ryan White Part A Memphis TGA Needs Assessment (#2049)
Approval Date:	April 20, 2012

This is to notify you of the board approval of the above referenced protocol. This project was reviewed in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. At the end of one year from the original approval date, an approved renewal must be in effect to continue the project. If approval is not obtained, the human consent form is no longer valid and accrual of new subjects must stop.
2. When the project is finished or terminated, the attached form must be completed and sent to the board.
3. No change may be made in the approved protocol without board approval, except where necessary to eliminate apparent immediate hazards or threats to subjects. Such changes must be reported promptly to the board to obtain approval.
4. The stamped, approved human subjects consent form must be used unless your consent is electronic. Electronic consents may not be used after the approval expires. Photocopies of the form may be made.

This approval expires on February 2, 2013, and must be renewed prior to that date if the study is ongoing.

Digitally signed by Dr. Ronnie Priest
DN: cn=Dr. Ronnie Priest, o=The University of Memphis, ou=Institutional Review Board, email=rpriest@memphis.edu, c=US
Date: 2012.04.24 13:22:20 -05'00'

Chair, Institutional Review Board
The University of Memphis

RESEARCH TEAM

Lead Principal Investigator:
Latrice C. Pichon, PhD, MPH
Assistant Professor, University of Memphis School of Public Health
Visiting Assistant Professor, University of California, San Francisco, Center for AIDS Prevention Studies

Co-Principal Investigator:
Kristen Morrell, MPH
HIV/STD Epidemiologist
Shelby County Health Department Epidemiology Section

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James Henderson
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Marvell Terry
Mardrey Wade
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Amanda Chandler
David Collier, M.D.
Tonya King

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Andrea Williams, MPA
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Qualitative Research Consultant:
Terrinieka T. Williams, PhD
Assistant Professor, Johns Hopkins University Bloomberg School of Public Health