2012
RYAN WHITE PART A
NASHVILLE TRANSITIONAL
GRANT AREA
NEEDS ASSESSMENT

SUGGESTED CITATION

Maurer LA, Thomas-Trudo SD. 2012 Ryan White Part A Nashville TGA Needs Assessment. Nashville, TN; Metro Nashville Public Health Department, 2012.

ACKNOWLEDGMENTS

A special thank you to the members of the Nashville Transitional Grant Area (TGA) Planning Council's Needs Assessment Committee who contributed their time and expertise to oversee the completion of the 2012 Ryan White Part A Needs Assessment:

Joseph Interrante, Chair

Thomas Demong

Allen Pinedo

We would like to give special recognition to the groups of persons living with HIV disease (PLWHA) who assisted in conducting the food and transportation survey and client satisfaction survey, and to those PLWHA who embraced the opportunity to enhance the HIV service system by contributing their personal experiences and opinions. Thank you to those individuals dedicated to helping PLWHA who contributed their expertise and ideas in the resource audit, town hall meetings, and key informant interviews, as well as those who dedicate their lives on a daily basis to supporting persons living with this disease. A special thank you to GivingMatters.com for assisting with the distribution of the resource audit.

We would also like to recognize Thom Shavor and Morton Wu with the Tennessee Department of Health who provided critical assistance with eHARS. Thank you to those agencies assisting in data compilation whose work allows us to understand a more comprehensive picture of HIV disease in the Nashville TGA.

Lastly, a note of appreciation goes out to all of the providers working hard to collect clean, accurate data so that we may better understand the needs of PLWHA in the Nashville TGA.

CONTENTS

Executive Summary iii

List of Tables and Figures v

Glossary 1

1. Introduction 4

2. Epidemiology Profile

    Geography 6

    Incidence (New Cases) 7

    Prevalence (Total Cases) 15

    Trends in Incidence 19

    Diagnosis Lag 22

    Deaths 25

    Co-Infection 26

    Special Populations 28

3. Implications of Prevention 31

4. Service Utilization 34

5. Unmet Need 42

6. Early Intervention Survey 44

7. Service Needs and Gaps 45

8. Food and Transportation Survey 59

9. Client Satisfaction Survey 70

10. Resource Audit 78

11. Town Hall Meetings 86

12. Key Informant Interviews 91

13. Recommendations 100

14. Sources 105

15. Appendix 109

EXECUTIVE SUMMARY

The Ryan White Part A Program was created to provide emergency assistance to Eligible Metropolitan Areas (EMA) and Transitional Grant Areas (TGA) that are most severely impacted by the epidemic of HIV disease. The Nashville TGA, based on the United States Census Bureau's designation of Metropolitan Statistical Areas, is comprised of 13 counties in Middle Tennessee. The Nashville TGA began receiving Ryan White Part A funds in 2007 when at least 1,000 persons had been reported with new AIDS diagnoses in the most recent five years.

An annual needs assessment is conducted in order to get a better understanding of the needs of those individuals living with HIV disease, so that the system of care can be enhanced to better serve them. This assessment assists the Ryan White Planning Council, the body guiding how the funds are utilized, in making informed decisions about how to prioritize services and allocate funds in the Nashville TGA.

In 2011, 239 new persons were newly diagnosed with HIV disease; this was a 19.0% decrease from 2010 HIV disease incidence (295). Non-Hispanic blacks represented 46.9% of new cases, followed closely by non-Hispanic whites representing 45.6% of cases; Hispanics and non-Hispanic others represented 5.0% and 2.5%, respectively. Non-Hispanic white males accounted for the greatest number of new cases of HIV disease with 38.5%; however, non-Hispanic black males were newly diagnosed at a rate almost five times that of non-Hispanic white males. Non-Hispanic black females were newly diagnosed at a rate over 6 times that of non-Hispanic white females and 8.5 times that of Hispanic females. Men who have sex with men (MSM) continued to represent the largest transmission category with 44.4% of new HIV disease diagnoses. Over half (53.6%) of new diagnoses occurred among persons 15-34 years of age.

There were 110 new AIDS diagnoses in 2011, including persons newly diagnosed with HIV and AIDS, as well as those persons who were previously diagnosed with HIV, but converted to AIDS in 2011. This was a decrease of nearly 25% from 2010 AIDS incidence in which 146 persons were newly diagnosed with AIDS. Over half (50.9%) of new AIDS diagnoses were among non-Hispanic whites, while non-Hispanic blacks represented 41.8% of new cases. Non-Hispanic blacks however had an AIDS incidence rate four times that of non-Hispanic whites and three times that of Hispanics.

Of the 295 persons who were diagnosed with HIV disease in 2010, 25.4% (75) were simultaneously diagnosed with HIV and AIDS or transitioned to AIDS within 12 months of their initial diagnosis, indicating they were not diagnosed until a later stage of the disease.

At the end of 2011, the Nashville TGA had an HIV disease prevalence of 5,209 persons, of which 48.4% were living with HIV and 51.6% with AIDS. Non-Hispanic whites represented 49.3% of HIV-positive persons in the TGA, although they account for 73.9% of the general population; non-Hispanic blacks represented 44.8% of HIV-positive persons, yet they account for only 15.3% of the general population.

The majority of people living with HIV/AIDS (PLWHA) in the TGA lived in Davidson County (76.9%).

A total of 34 PLWHA died in the TGA in 2010, although their deaths were not necessarily a result of their HIV disease. This was a 44.3% decrease from 2009 in which 61 PLWHA died.

Ryan White Part A funded providers served 3,465 PLWHA in the TGA in 2011. The majority received both medical and support services (66.4%, 2,301); 25.3% (878) received only support services and 8.3% (286) received only medical services. An estimate of unmet need predicts that 45.5% of PLWHA who are aware of their status are not receiving primary HIV medical care.

Four hundred forty-six PLWHA (8.6%, 446) received dental care through Ryan White funding, while 595 (11.4%) benefited from the Insurance Assistance Program (IAP), 1,085 (20.8%) used the AIDS Drug Assistance Program (ADAP), and 1,161 (22.3%) received TennCare (Medicaid); nationally 47% of PLWHA are receiving Medicaid.

A number of special studies have been conducted to learn more about particular subpopulations of the HIV-positive community or to learn more about certain aspects of the general HIV-positive population, including services needs and barriers. The most commonly reported barriers to care as self-reported by consumers include not being ready to deal with their diagnosis, not wanting others to find out their HIV-positive status, not having transportation, and not having insurance or financial resources to pay for services. Many PLWHA also encounter other difficulties affecting their ability to get into and remain in care, including insufficient food, homelessness or unstable housing, substance abuse problems, and mental health disorders.

It is the combination of these barriers and service needs, compounded with some of the more disproportionate HIV disease statistics that have led to the Needs Assessment Committee proposing the following recommendations:

1. Review continuum of care to identify, develop, and implement strategies to address current barriers and needs as appropriate and feasible.

2. Coordinate prevention and treatment systems in order to enhance efforts to assure persons, particularly high-risk populations, know their status, and to assure that newly identified HIV-positive persons are quickly engaged in care.

3. Increase service capacity when funds are available in areas where significant gaps and limited resources are identified.

There are also a number of areas in which we hope to expand on our knowledge of HIV disease in the TGA in the future, including the Hispanic population, persons 15-24 years of age, persons aware of their status but not accessing medical services, and persons who are not aware that they are HIV-positive.

This Needs Assessment presents a general framework and strategy for improving HIV-related services in the Nashville TGA. With a commitment from Part A and non-Part A funded providers and treatment and prevention, in conjunction with insight from PLWHA, the transmission of HIV disease in the TGA can be notably reduced and the needs of PLWHA better supported.

LIST OF TABLES AND FIGURES

Figure 1: HIV Disease Prevalence, 2007-2011 6

Figure 2: HIV Disease Prevalence in Nashville TGA by County, 2011 7

Figure 3: HIV Disease Incidence, 2007-2011 8

Table 1: HIV Disease Incidence vs General Population 8

Figure 4: HIV Disease Incidence by Race/Ethnicity and Gender, 2011 9

Figure 5: HIV Disease Incidence by Age Group, 2011 9

Figure 6: HIV Disease Incidence by Race/Ethnicity and Transmission Category, 2011 10

Figure 7: HIV Disease Incidence for 15-24 Year Olds, 2007-2011 11

Table 2: Total HIV Disease Incidence vs 15-24 Year Old HIV Disease Incidence 11

Figure 8: HIV Disease Incidence by Transmission Category for 15-24 Year Olds, 2011 12

Figure 9: AIDS Incidence, 2007-2011 13

Figure 10: AIDS Incidence by Age Group, 2011 14

Figure 11: AIDS Incidence by Gender for 15-24 Year Olds, 2007-2011 14

Figure 12: AIDS Incidence by Race/Ethnicity and Transmission Category, 2011 14

Figure 13: HIV and AIDS Prevalence, 2007-2011 15

Figure 14: HIV Disease Prevalence by Gender and Diagnosis, 2011 15

Figure 15: HIV Disease Prevalence by Race/Ethnicity, 2011 16

Figure 16: HIV Disease Prevalence by Race/Ethnicity and Gender, 2011 16

Figure 17: HIV Disease Prevalence by Age Group, 2011 17

Figure 18: HIV Disease Prevalence by MSM Transmission Category,
Race/Ethnicity, and Gender, 2011 17

Figure 19: HIV Disease Prevalence by Transmission Category, 2011 17

Figure 20: HIV Disease Prevalence and Incidence of IDU Transmission Category, 2007-2011 18

Figure 21: AIDS Prevalence, 2007-2011 18

Figure 22: HIV Disease Incidence by Race/Ethnicity, 2007-2011 19

Figure 23: HIV Disease Incidence by Gender, 2007-2011 20

Figure 24: HIV Disease Incidence by Age Group, 2007-2011 20

Figure 25: HIV Disease Incidence by Transmission Category, 2007-2011 21

Figure 26: HIV Disease Incidence Cases with Late Diagnosis by Diagnosis Lag and Gender, 2010 22

Figure 27: HIV Disease Incidence Cases with Late Diagnosis, 2007-2010 23

Figure 28: HIV Disease Prevalence Cases with Late Diagnosis, 2007-2010 24

Figure 29: Deaths of HIV-Positive Persons by Race/Ethnicity, 2010 25

Figure 30: Deaths of HIV-Positive Persons by Age Group, 2010 25

Figure 31: Deaths of HIV-Positive Persons, 2007-2011 25

Figure 32: PLWHA in Jail by Race/Ethnicity and Gender, 2011 28

Figure 33: HIV Disease Prevalence by Transmission Category:
Jail Population Compared to General Population, 2011 28

Figure 34: Point-In-Time Count of Homeless Persons in Davidson County, 2009-2011 29

Figure 35: Where People Test HIV-Positive in the TGA, 2007-2011 31

Table 3: Statewide Testing and Linkage to Care, 2010 32

Table 4: Expanded Testing in Nashville TGA, 2010 32

Table 5: Estimated Undiagnosed HIV-Positive Individuals ≥13 Years by Demographics:
CDC Estimates for Projecting TGA Numbers 33

Figure 36: Ryan White Part A Funded Service Providers: Consumer Service Utilization 34

Figure 37: Medical Service Utilization by Number of Visits, 2011 36

Figure 38: Consumers Receiving Medical Services by Race/Ethnicity, 2011 36

Figure 39: Consumers Not Receiving Medical Services by Race/Ethnicity, 2011 36

Figure 40: Ryan White Part A Consumers' Enrollment Status 37

Table 6: Ryan White Part A Nashville TGA Service Utilization, 2011 38

Figure 41: Oral Health Care Utilization by Enrollee Poverty Level, 2011 39

Figure 42: Oral Health Care Utilization by Number of Visits, 2011 39

Figure 43: IAP Utilization by Enrollee Poverty Level, 2011 40

Figure 44: ADAP Utilization by Race/Ethnicity, 2011 40

Table 7: ADAP Utilization by Race/Ethnicity and Gender, 2011 40

Table 8: TennCare Utilization by Race/Ethnicity and Gender, 2011 41

Table 9: 2011 Unmet Need Estimate 43

Figure 45: Top Reasons for Dropping Out of HIV Medical Care 44

Figure 46: Respondents by Age Group 47

Figure 47: Respondents by Gender and Race 48

Figure 48: Respondents by Diagnosis and Race 48

Figure 49: Respondents by Time Since Last Saw an HIV Medical Provider 49

Figure 50: Providers Respondents have Received HIV Services from Within the Last Year 50

Figure 51: Respondents' Utilization of HIV Medical Services Within the Last Year 50

Figure 52: Respondents' Needs for Assistance from Others Within the Last Year 51

Figure 53: Respondents' Need for Help Understanding How to Manage Their HIV Disease in the Last Year 52

Figure 54: Respondents Homebound for One Month or More in Need of HIV Services 52

Table 10: Respondents' Service Priorities 53

Figure 55: Barriers to HIV Care: Personal Barriers 54

Figure 56: Barriers to HIV Care: Knowledge Barriers 54

Figure 57: Barriers to HIV Care: Appointment Barriers 54

Figure 58: Barriers to HIV Care: Financial Barriers 55

Figure 59: Barriers to HIV Care: Staff Barriers 55

Figure 60: Barriers to Care: System Barriers 56

Figure 61: Respondents' Inability to Attend HIV Appointments Within the Last Year 56

Figure 62: I Don't Know this Service Exists: HIV Disease Core Medical Services 57

Figure 63: I Don't Know this Service Exists: HIV Disease Support Services 57

Figure 64: Respondents by Race/Ethnicity 61

Figure 65: Food Services Received by Respondents 63

Figure 66: Responses to: "The food I had just didn't last and I didn't have enough money to get more." by Race/Ethnicity of Respondent 63

Figure 67: Types of Food Most Difficult to Access by Race/Ethnicity of Respondent 64

Figure 68: Places for/Types of Food Assistance Services Known by Respondents: Non-AIDS Service Organizations 65

Figure 69: Places for Food Assistance Services Known by Respondents: AIDS Service Organizations 65

Figure 70: Transportation Services Received by Respondents 66

Figure 71: Types of Appointments/Services Missed Because of Transportation by Race/Ethnicity of Respondent 66

Figure 72: Transportation Services Needed by Respondents 67

Figure 73: Medical Providers of Respondents 72

Figure 74: Overall Rating of Health as Self-Reported by Respondents 73

Figure 75: Experiences with Medical Providers: HIV Medical Visit 74

Figure 76: Experiences with Medical Providers: HIV Medical Visit (2) 74

Figure 77: "I would rate the quality of care at this clinic in comparison to other clinics I know about as..." 75

Figure 78: "When I think about my care at this clinic, these words come to mind..." 75

Figure 79: Types of Participating Organizations 79

Figure 80: Demographic Composition of Staff: Percent Living with HIV Disease 80

Figure 81: "Who does your organization provide services to?" 81

Figure 82: Counties Where Face-to-Face Services are Provided by Agencies Outside of the Office 82

Figure 83: Accessibility Options Offered by Organizations 84

Figure 84: The Most Important Services a Person Needs in order to Successfully Live with HIV Disease 96

Figure 85: Which Populations are in Greatest Need of Having Their HIV-Related Needs Assessed at this Time? 98

GLOSSARY

ADAP: (AIDS Drug Assistance Program) This program assists with the purchase of specific drugs for HIV -positive individuals with a low-income and no other source of health coverage.

AETC: (AIDS Education and Training Center) These centers conduct targeted, multi-disciplinary education and training programs for persons providing health care to persons living with HIV disease.

AIDS: (Acquired Immune Deficiency Syndrome) This is the final stage of HIV disease.

CARE Act Services: The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act was enacted in 1990. Its primary goal is to improve the quality and availability of medical and support services for individuals and families affected by HIV disease. CARE Act services are those services covered by one of the five CARE Act program areas–Part A, Part B, Part C, Part D, and Part F.

CAREWare: This is a database program used for managing and monitoring HIV disease medical and support services.

CDC: Centers for Disease Control and Prevention

Convenience Sampling: A type of non-probability sampling which involves the sample being drawn from the part of the population which is close at hand.

eHARS: A CDC created database that contains demographic and biomedical information for people diagnosed with HIV disease.

EMA: (Eligible Metropolitan Area) This is the same as a Census-defined MSA (Metropolitan Statistical Area). An EMA is a Part A region that has had at least 2,000 new AIDS diagnoses in the last five years.

Frequency: This is the number of occurrences of an event per unit of time.

HIV: (Human Immunodeficiency Virus) This is a virus that alters the immune system, making a person more vulnerable to infections and diseases.

HIV Disease: This term is used to broadly describe the class of infections caused by the human immunodeficiency virus. It encompasses both HIV and AIDS. This is the more appropriate term to be used when referring to HIV/AIDS.

HRSA: Health Resources and Services Administration

IAP: (Insurance Assistance Program) This program assists eligible HIV-positive individuals with health insurance premiums, co-pays, and deductibles.

IDU: Intravenous/Injection Drug Use

Incidence: Incidence refers to the number of "new" cases, events, or deaths that occur in a specified time, usually one year.

> **HIV Disease Incidence:** This refers to the number of new HIV disease diagnoses in a particular geographic area. It includes people who were newly diagnosed with HIV disease, regardless of the stage of the disease; it includes people who were newly diagnosed with HIV (not AIDS), as well as persons who were concurrently diagnosed with HIV and AIDS, but not persons who were newly diagnosed with AIDS if their HIV diagnosis was in a previous year.
>
> **AIDS Incidence:** This refers to the number of new AIDS diagnoses in a particular geographic area. It includes people who were newly diagnosed with AIDS, regardless of when their initial HIV disease diagnosis occurred; it includes people who were newly diagnosed with HIV and AIDS concurrently, as well as persons who were previously diagnosed with HIV and have converted to AIDS in the specified period.

IRB: Institutional Review Board

MAI: (Minority AIDS Initiative) This is a HRSA-funded program that addresses the HIV disease-related needs of blacks and other disproportionately impacted communities.

Median: The median is the middle value of a distribution; half of the values are above the median and half are below the median.

MPHD: Metropolitan Public Health Department (Part A Grantee)

MSM: (Men who have Sex with Men) This is a transmission category for HIV disease regardless of a man's sexual orientation.

Peer: This is an individual who is HIV-positive who can provide support and guidance to other PLWHA.

PLWHA: (People Living With HIV/AIDS) This group may also be referred to as HIV-IP (HIV infected persons).

Prevalence: Prevalence refers to the current total number of events or cases, both newly and previously diagnosed, that are living at a particular point in time.

Rate: A rate is a standardized fraction — the upper part (the numerator) is the number of people affected by a condition; the lower part (the denominator) is the standard size of the population or subpopulation. Changing raw numbers into rates allows you to compare different population groups.

R-squared (R^2): This is a statistical measure often referred to as the coefficient of determination. It is a measure of how well a regression line approximates real data points. The closer the value is to 1.0, the greater the ability to predict future data values.

SAS Enterprise Guide: This is a Windows user interface for SAS, a data analysis tool with the capabilities to perform statistical analysis, data warehousing, report writing and graphics, etc.

STD: Sexually Transmitted Disease

STI: Sexually Transmitted Infection

SurveyMonkey: This is an online survey software and questionnaire tool.

TDMHSAS: (Tennessee Department of Mental Health and Substance Abuse Services) This was formerly the Tennessee Department of Mental Health and Developmental Disabilities (TDMHDD).

TDOH: Tennessee Department of Health

TGA: (Transitional Grant Area) A TGA is a Part A region that has had between 1,000-1,999 new AIDS diagnoses in the last five years. The Nashville TGA is comprised of the following 13 counties in Middle Tennessee: Cannon, Cheatham, Davidson, Dickson, Hickman, Macon, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson, and Wilson.

Trendline: This is a line on a graph that displays a trend based on real data points and can be used to predict future data points.

1. INTRODUCTION

OBJECTIVE

The objective of the 2012 Needs Assessment is to provide information about the needs of persons living with HIV/AIDS (PLWHA), current resources available to meet those needs, including both CARE Act (Ryan White Part A) funded services and non-CARE Act funded services, determining what gaps in care exist, and then proposing recommendations on ways to enhance the system of care in the Nashville Transitional Grant Area (TGA). The purpose of CARE Act services is to fill the gaps in care by helping PLWHA remain in care, or for those individuals not in care to access care. The Ryan White Planning Council uses the data and recommendations to make informed decisions about the prioritization of services, allocation of funds, and how to improve the overall system of HIV care in the Nashville TGA, to get and keep more people engaged in HIV care.

This assessment is meant to build on data presented in prior needs assessments and is not meant to replace this previous information. For this reason, the 2012 Needs Assessment incorporates data compiled for previous needs assessments, such as surveys, as well as new data analyses, surveys, and special studies. Including special studies conducted within the last three years, along with recent data analyses, will help the Planning Council to make the most informed decisions.

METHODS

The Needs Assessment was conducted in several stages. A profile of the epidemic was depicted using eHARS, a disease surveillance database, in which data variables were analyzed using SAS Enterprise Guide. This information included HIV disease incidence and prevalence and AIDS incidence and prevalence. Rates were calculated for HIV disease and AIDS incidence and prevalence according to multiple characteristics based on United States Census population reports. Data were also gathered on service utilization. CAREWare, a database of those PLWHA accessing Ryan White funded services, was analyzed. Special surveys and interviews have been conducted in order to get experiential data from consumers, providers, key informants, as well as the general community. Statistics were also gathered allowing for comparison between the Nashville TGA and the nation.

POINTS OF CONSIDERATION

It is worth noting that for the purposes of this Needs Assessment that the term HIV disease is used to indicate the class of infections caused by the human immunodeficiency virus. It is used when referencing both HIV and AIDS. It is also important to mention that once an individual is diagnosed with AIDS, he or she will always have an AIDS diagnosis. Even if that individual's CD4 count rises above 200 cells/μL, he will still be considered to have AIDS. A person's diagnosis will not revert back to HIV once he has received an AIDS diagnosis.

LIMITATIONS

This Needs Assessment has taken into account the best data available. Relying on data solely from some groups and not others introduces biases and can create a biased picture of the community's actual HIV care needs. Therefore, this report has collected additional data through special studies from consumers, HIV service providers, key informants, and the general community. The most recent data available from each source has been included in this report. All of the epidemiological data and a majority of the survey data were received or calculated between February and April 2012. Please keep in mind that all data presented are preliminary and are only good through the date in which they were extracted and analyzed. All calculations in the epidemiological profile are preliminary and are subject to change as cases are reviewed and confirmed. Other limitations to the data include:

A significant number of persons do not know their HIV disease status and are consequently underrepresented in the epidemiological profile. And although an estimation of the number of these persons has been calculated, their needs are not known and so are not accounted for in the data.

Many data sources are based on the perceptions of individual participants and are therefore only representative of those individuals' perceptions. The perceptions of individuals not contributing to that data source are not known and there is no way to determine what characteristics may vary between those who participated and those who did not.

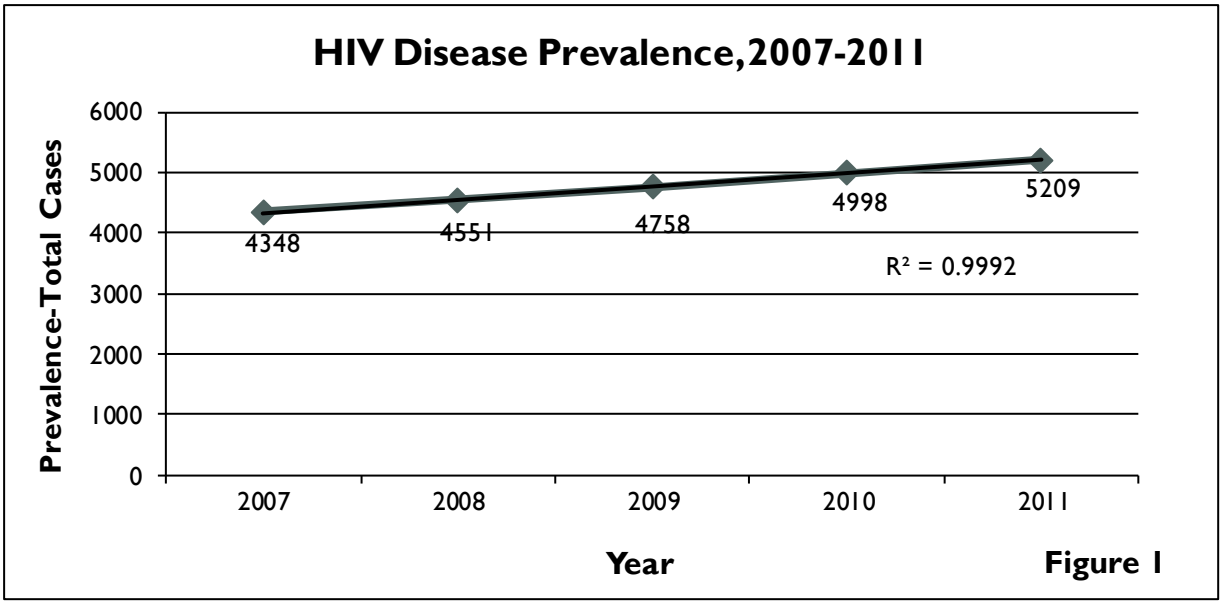
Some PLWHA in the TGA do not see Ryan White Part A funded providers so the grantee does not have access to information about them. The identity or number of individuals receiving care from a private physician or from a non-Part A funded organization is not known and so these people are not accounted for in the Needs Assessment.

Some data analyses may have built in weaknesses because all data may not be available or accessible. Also, some data sets are a compilation of data from multiple sources; therefore different standards for data entry and interpretation may have been used in each. Consequently, some data conclusions may too have inherent weaknesses.

It is important to remember that the purpose of the Needs Assessment is to provide a well-rounded picture of the current HIV disease situation in the Nashville TGA to allow the Planning Council to make informed decisions about how to improve HIV disease services. It is not realistic to obtain information on every PLWHA in the TGA or every service utilized. However, it is hoped that this Needs Assessment is able to give an accurate impression of the system of HIV care in this community, despite not having access to comprehensive data on all PLWHA in the TGA. Steps are always being taken to improve data collection and expand data accessibility in order to allow a more complete assessment of the needs of PLWHA in the Nashville TGA.

2. EPIDEMIOLOGY PROFILE

There were 5,209 persons living with HIV/AIDS (PLWHA) in the Nashville Transitional Grant Area (TGA) at the end of the 2011 calendar year. Since 2007, the number of persons living with HIV disease has increased from 4,348 to 5,209 (861 individuals, 19.8%). From the time HIV disease data began to be collected in 1981, 7,601 persons have been diagnosed with HIV disease in the Nashville TGA.



Note: An R^2 value is used to estimate future data values. The closer the R^2 value is to 1.0, the greater the ability to predict data points. Therefore, a value of 0.9992 indicates that future data values can be approximated.

GEOGRAPHY

The Nashville TGA consists of the following 13 counties: Cannon, Cheatham, Davidson, Dickson, Hickman, Macon, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson, and Wilson.

The Nashville TGA has a disproportionately high number of PLWHA. According to the U.S. Census Bureau, the TGA had a population of 1,589,934 in 2010 (25% of the state's total population). The total number of PLWHA who were living in Tennessee in 2011 was 17,277. The Nashville TGA represents 30.1% (5,209) of the state's PLWHA population, but only accounts for 25% of the state's total general population.

Almost 40% of the TGA's total general population lives in Davidson County, while the majority (76.9%) of the Nashville TGA's PLWHA live in Davidson County.

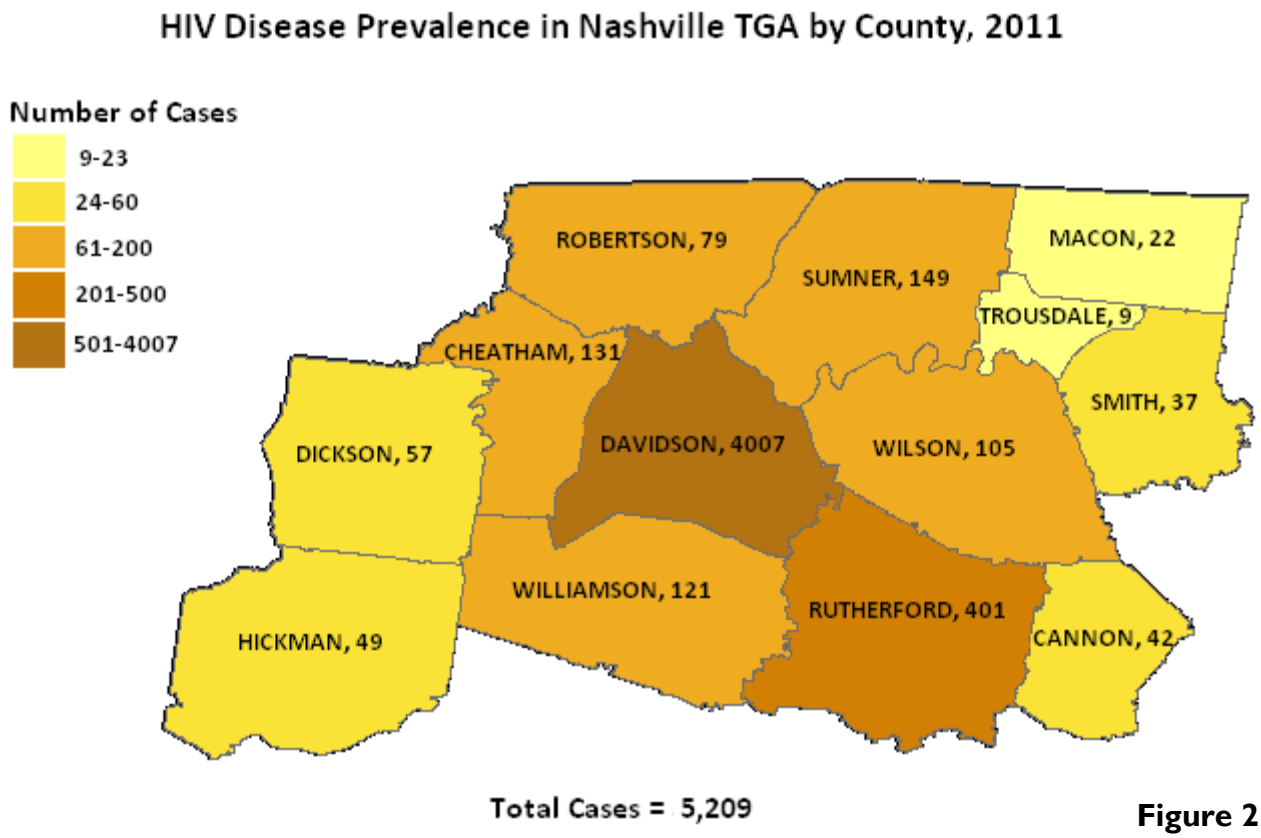
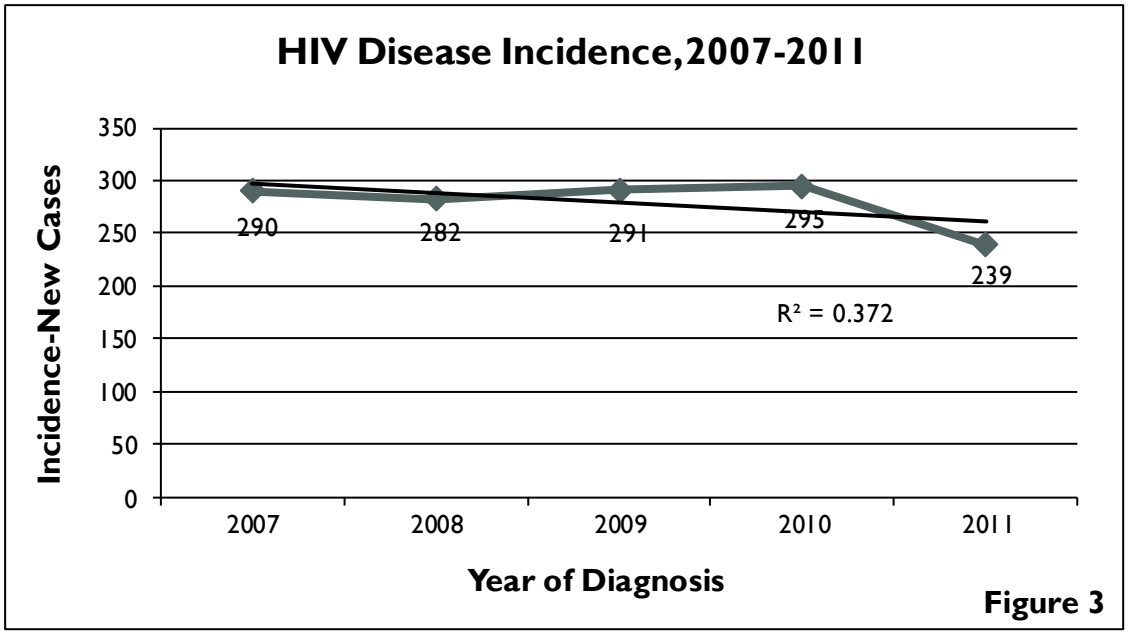


Figure 2

INCIDENCE (NEW CASES)

HIV DISEASE

HIV disease incidence refers to people who were newly diagnosed with HIV disease, regardless of the stage of the disease. Therefore, people who were newly diagnosed with HIV or concurrently diagnosed with HIV and AIDS were included; however, this does not include persons who were diagnosed with HIV in a previous year and may have converted to AIDS in the current year. There were a total of 239 new cases of HIV disease diagnosed in the TGA in 2011. This is a 19.0% decrease from 2010 in which there were 295 new diagnoses.



Note: An R^2 value is used to estimate future data values. The closer the R^2 value is to 1.0, the greater the ability to predict data points. Therefore, a value of 0.372 indicates that future data values cannot be estimated based on the current data.

Gender: The majority of new HIV disease diagnoses occurred among males, accounting for 82.0% (196), while females accounted for 18.0% (43) of new diagnoses.

Race/Ethnicity: Non-Hispanic blacks represented 46.9% (112) of new cases, while non-Hispanic whites accounted for 45.6% (109); Hispanics (5.0%, 12) and non-Hispanic others (2.5%, 6) accounted for significantly fewer new cases. The rate of new infection among non-Hispanic blacks (45.9 cases per 100,000 persons) was approximately five times greater than the rate of new infection for non-Hispanic whites (9.3 cases per 100,000 persons). Hispanics had a new infection rate of 11.4 cases per 100,000 persons.

Race/Ethnicity and Gender: Males represented the majority of cases among each of the racial/ethnic groups; however the proportion varies across these groups. Hispanic males are the most greatly over-represented group among the racial/ethnic categories for males, accounting for 91.7% of new diagnoses among Hispanics. Non-Hispanic white males and non-Hispanic black males represented 84.4% and 79.5% of their respective racial/ethnic groupings.

Table 1: HIV Disease Incidence vs General Population

Subpopulation	Actual HIV Disease Incidence	General Population
NH-white males	38.5%	36.1%
NH-black males	37.2%	7.3%
NH-black females	9.6%	8.0%
NH-white females	7.1%	37.8%
Hispanic males	4.6%	3.6%
Other	2.5%	4.2%
Hispanic females	0.4%	3.0%

Non-Hispanic white males (38.5%, 92) and non-Hispanic black males (37.2%, 89)

represented the majority of new cases. The number of new cases among non-Hispanic white males decreased slightly since 2010 (100), while new cases among non-Hispanic black males decreased by 22.6% since 2010 (115). Non-Hispanic white males were newly diagnosed with HIV disease at a rate of 16.0 cases per 100,000 persons. Hispanic males, having 11 (4.6%) new HIV disease diagnoses (19.2 cases per 100,000 persons), were diagnosed at a rate slightly greater than that of non-Hispanic white males, while non-Hispanic black males (77.0 cases per 100,000 persons) were diagnosed at a rate of almost five times that of non-Hispanic white males.

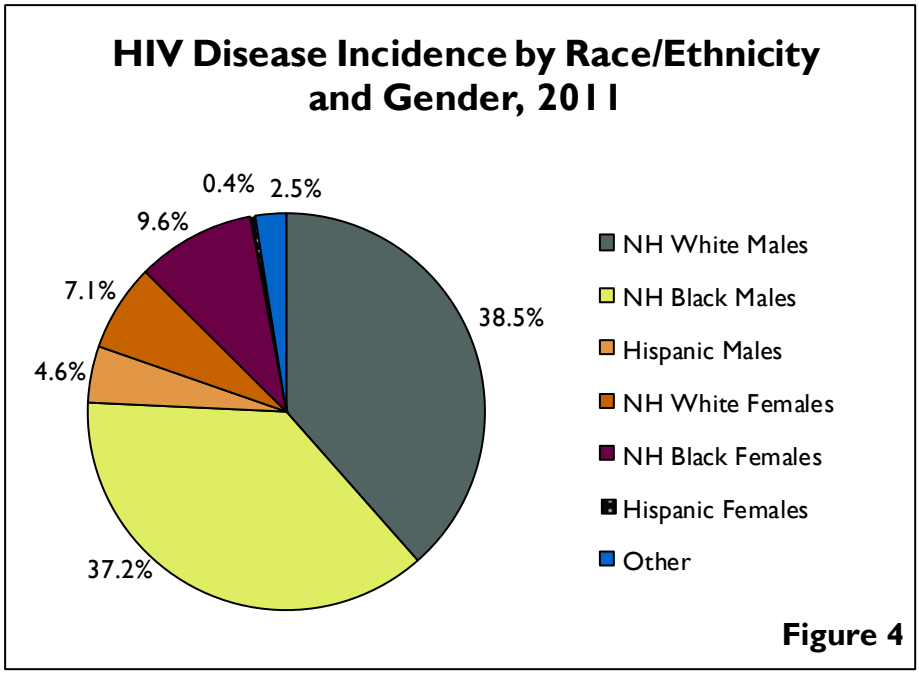


Figure 4

Non-Hispanic black females (23) had almost 1.4 times the number of new cases as non-Hispanic white females (17); there was only one (1) new HIV disease diagnosis among Hispanic females. Non-Hispanic black females also had a significantly higher HIV disease incidence rate than the other two groups, having a rate of 17.9 cases per 100,000 persons. Hispanic females and non-Hispanic white females had comparable rates, with 2.1 cases per 100,000 persons and 2.8 cases per 100,000 persons, respectively.

Age: HIV disease incidence is shifting to younger age groups. The age ranges of 15-24, 25-34, and 35-44 represent the majority of new HIV disease cases, accounting for 26.4%, 27.2%, and 23.4%, respectively. The portion of new HIV disease cases among 15-24 year olds increased by 106% from 2007 to 2011, shifting from 12.8% to 26.4%, even though no one under the age of 18 was newly diagnosed with HIV disease in 2011. While 35-44 year olds still represent the age group with the third greatest number of new diagnoses, until 2008 it was the age group with

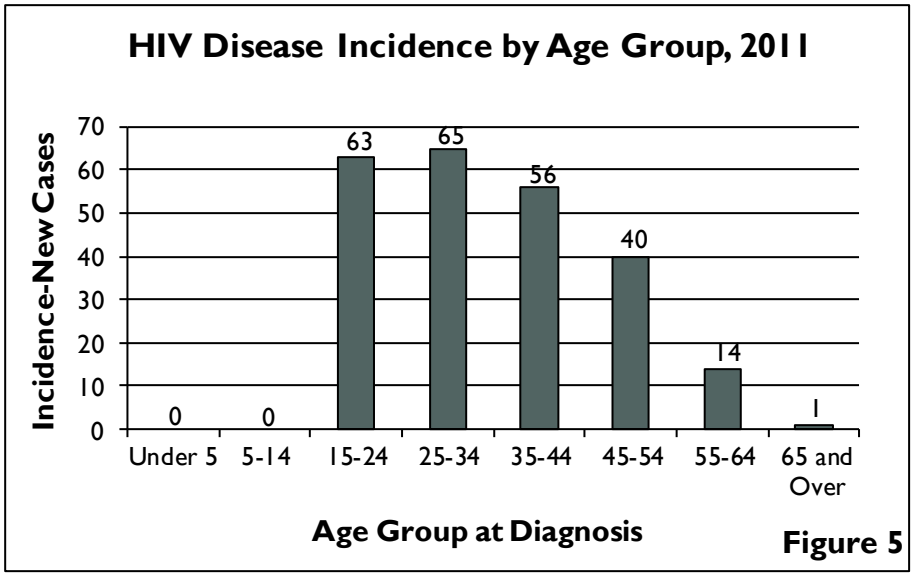


Figure 5

the highest incidence. Other age groups represented fewer numbers of new diagnoses, including 45-54 year olds (40, 16.7%), 55-64 year olds (14, 5.9%), and persons 65 and older (1, 0.42%).

Transmission Category: Men who have sex with men (MSM) represented 44.4% (106) of all new cases in 2011; this was a decrease from 2010 in which MSM's accounted for 51.5% (152) of new cases. Despite this decrease, MSM's represent only an estimated 5.5% of the general population in Tennessee according to a study in the Journal of Urban Health (2009), making them a significantly over-represented HIV subpopulation. Unknown/no risk (adult no risk reported) transmission also accounted for a significant portion of new cases (43.5%, 104). Heterosexual contact, injection/intravenous drug use (IDU), and MSM/IDU represented only small portions of new cases; 6.7% (16), 2.5% (6), and 2.9% (7), respectively.

While few people reported a transmission category of IDU, it was more common among males (66.7%, 4) than females (33.3%, 2), especially with the inclusion of MSM/IDU transmission. In total, 11 males and 2 females had transmission categories related to injection drug use.

Females were significantly more likely to have a transmission category of heterosexual contact; 30.2% of females compared to 1.5% of males. This is likely due to the nature of HIV disease and how it is spread. This category is also likely to be under-reported particularly for females. The transmission category of heterosexual contact includes individuals who report specific heterosexual contact with a person who has *documented* HIV disease or heterosexual contact with a person at increased risk for HIV disease (i.e. an injection drug user, transfusion recipient, a person with hemophilia, or a bisexual male). An individual who reports heterosexual contact with partners whose HIV risks and HIV status are not known is not placed in the transmission category of heterosexual contact, but rather in the category of unknown/no risk reported. However, if heterosexual contact can later be confirmed the person's transmission category will be reclassified.

Females were nearly twice as likely as males to report a transmission category of unknown/no risk. Although males had overall greater numbers in this category (76 compared to 28), a larger portion of females (65.1%) than males (38.8%) reported this mode of transmission. This is likely related to the necessary verification when heterosexual contact is reported; however the individual is placed in the unknown/no risk category until verification occurs.

There were no new cases of perinatal transmission in 2011.

Non-Hispanic white males accounted for 55.7% (59) of all new MSM transmissions, accounting for the single largest

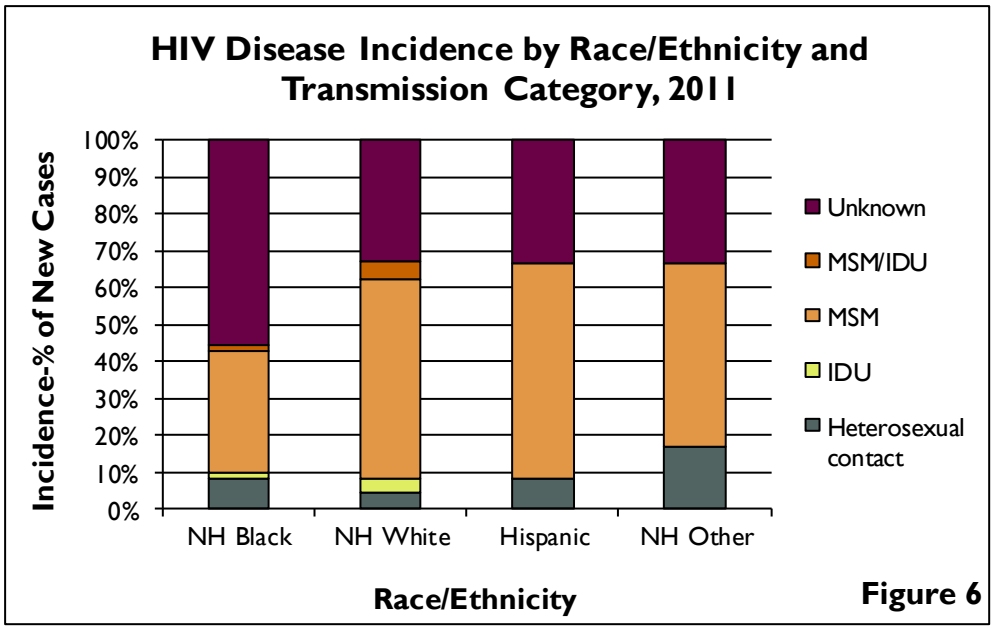
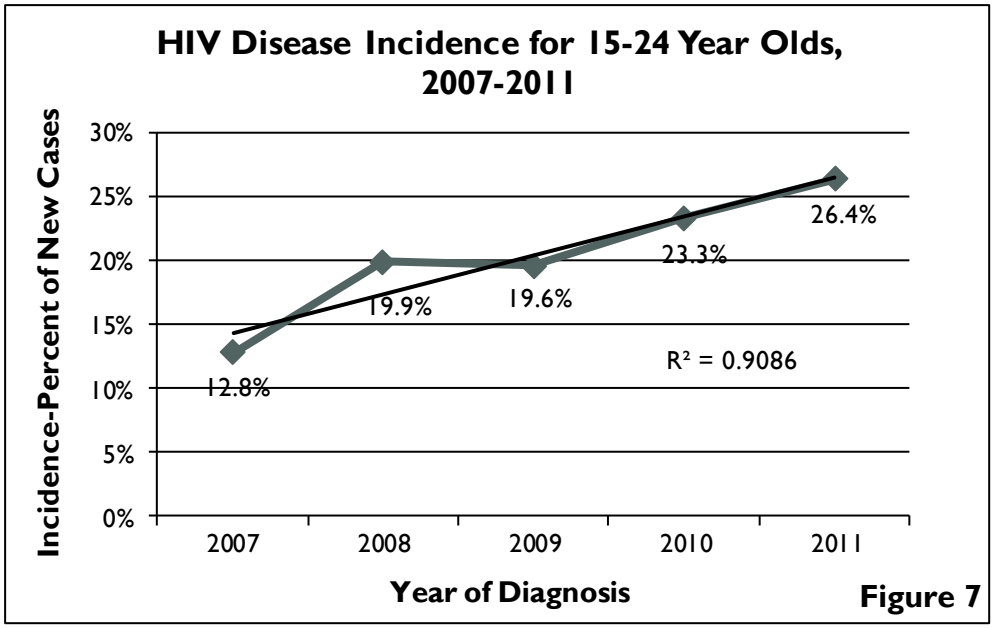


Figure 6

gender/racial group of new HIV disease cases with a specific transmission category; non-Hispanic black males accounted for 34.9% (37) of new MSM transmissions, followed by Hispanics (6.6%, 7), and non-Hispanic others (2.8%, 3). Non-Hispanic blacks with an unknown/no risk exposure represented the largest racial/ethnic group with a single transmission category, although it is likely that many of these people will be moved into other categories upon verification.

In-depth Review of 15-24 Age Group

The following is a comprehensive review of the 15-24 year old age group for 2011.



Note: An R^2 value of 0.9086 indicates strong predictive power in predicting future data points.

Sixty-three (63) persons in the 15-24 year old age group were newly diagnosed with HIV disease in 2011; all of these individuals were at least 18 years of age. This is a 7.4% decrease in frequency from 2010; however it is a 13.3% increase in the proportion of new diagnoses in this age group from 2010 to 2011. This indicates that as HIV disease incidence is decreasing, other age groups are experiencing more significant decreases compared to the 15-24 age group.

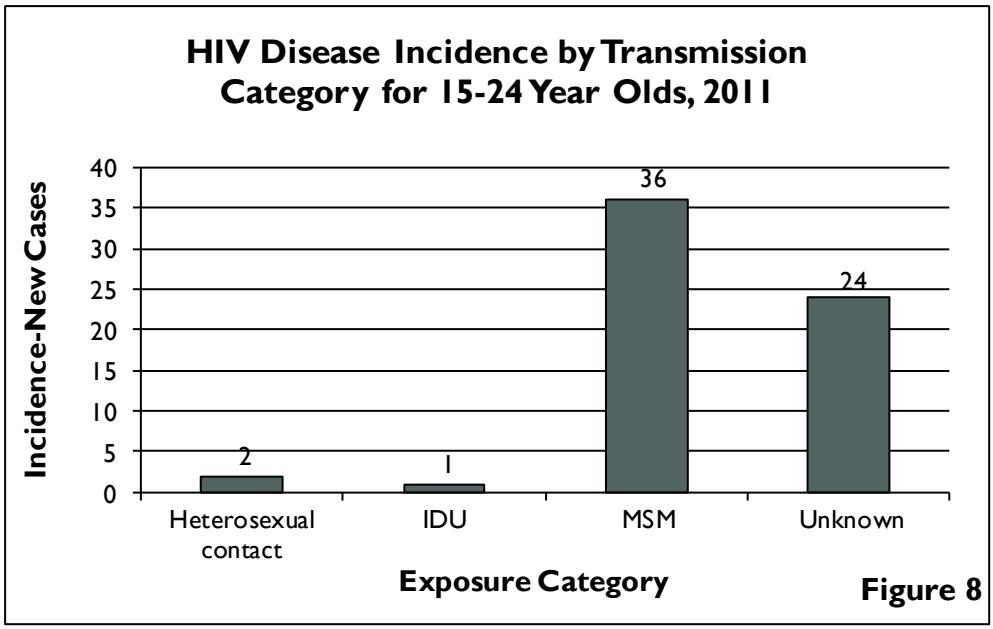
Gender: The majority of new HIV disease diagnoses among 15-24 year olds occurred among males (85.7%, 54); 14.3% (9) were among females. Females represented 5.8% (4) of diagnoses among this age group in 2010.

Race/Ethnicity: Non-Hispanic blacks accounted for over half (58.7%, 37) of all cases in this age group, while non-Hispanic whites represented 36.5% (23), Hispanics 3.2% (2), and non-Hispanic others 1.6% (1).

Table 2: Total HIV Disease Incidence vs 15-24 Year Old HIV Disease Incidence

Subpopulation	Total HIV Disease Incidence	15-24 Year Old HIV Disease Incidence
NH-white males	38.5%	30.2%
NH-black males	37.2%	50.8%
NH-black females	9.6%	7.9%
NH-white females	7.1%	6.3%
Hispanic males	4.6%	3.2%
Other	2.5%	1.6%
Hispanic females	0.42%	0.0%

Race/Ethnicity and Gender: The largest portion of cases were among non-Hispanic black males (50.8%, 32), followed by non-Hispanic white males (30.2%, 19); Hispanic males represented two new diagnoses. While no non-Hispanic black females in this age group were newly diagnosed in 2010, five were diagnosed in 2011; there were four new diagnoses among non-Hispanic white females. No Hispanic females in this age group have been newly diagnosed with HIV disease since 2007.



TRANSMISSION CATEGORY:

MSM: A total of 36 individuals had an HIV disease transmission category of MSM. This represents 57.1% of individuals aged 15-24. The majority (63.9%, 23) of these individuals were non-Hispanic black males, followed by non-Hispanic white males (30.6%, 11). One (2.8%) Hispanic male and one (2.8%) non-Hispanic other male had a transmission category of MSM. Over half (57.9%) of the non-Hispanic white males reported MSM exposure, while 71.9% of non-Hispanic black males reported MSM exposure.

Of the total 15-24 year old newly infected population, 36.5% were non-Hispanic black MSM's, 17.5% were non-Hispanic white MSM's, 1.6% were Hispanic MSM's, and 1.6% were non-Hispanic other MSM's.

Heterosexual contact: Both of the cases categorized as heterosexual transmission were among females (one non-Hispanic black and one non-Hispanic white); they represented only 3.2% of all cases among 15-24 year olds in 2011.

IDU: Only one non-Hispanic white female had a transmission category of IDU, representing 1.6% of all new diagnoses among this age group.

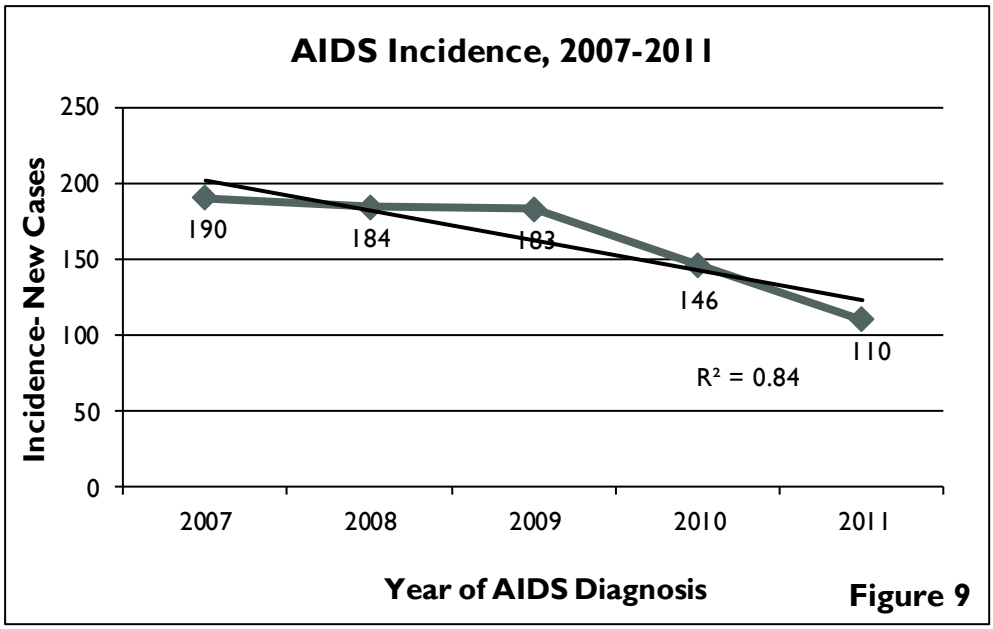
Unknown/No risk: The proportion of females (66.7%, 6) in the unknown/no risk category was greater than that of males (33.3%, 18); however there were three times the number of males than females included here. After verification of information, some of these individuals may be reclassified into another transmission category.

Over half of persons reporting an unknown transmission category were among non-Hispanic blacks (54.2%, 13), 41.7% (10) were among non-Hispanic whites, and one (4.2%) was among Hispanics.

AIDS

There were 110 new AIDS diagnoses in the Nashville TGA in 2011. This is a 24.7% decrease from 2010, in which there were 146 new AIDS diagnoses.

Race/Ethnicity: Of the new AIDS cases, over half (50.9%, 56) were among non-Hispanic whites; non-Hispanic blacks represented 41.8% (46). Hispanics (5.5%, 6) and non-Hispanic others (1.8%, 2) accounted for the remaining seven percent. The rate of AIDS incidence among newly diagnosed AIDS cases was greatest among non-Hispanic blacks (18.9 cases per 100,000 persons); their AIDS incidence rate was four times that of non-Hispanic whites (4.8 cases per 100,000 persons) and over three times that of Hispanics (5.7 cases per 100,000 persons).



Note: The R^2 value of 0.84 indicates that there is a strong ability to predict future data points based on the current data points.

Race/Ethnicity and Gender: Non-Hispanic black females (16) had 1.5 times the number of new AIDS diagnoses in 2011 as did non-Hispanic white females (11) and eight times the number of Hispanic females (2). When considering population sizes, the rate of AIDS incidence among non-Hispanic black females (12.5 cases per 100,000 persons) was almost seven times that of non-Hispanic white females (1.8 cases per 100,000 persons) and almost three times that of Hispanic females (4.2 cases per 100,000 persons).

Non-Hispanic white males (45)and Hispanic males (4) were newly diagnosed with AIDS at rates of 7.8 and 7.0 cases per 100,000 persons, respectively, while non-Hispanic black males (30) were diagnosed at a rate over 200% higher (26.0 cases per 100,000 persons).

Age: The largest portion of new AIDS diagnoses occurred among persons 35-44 years of age (36.4%, 40), followed by persons 45-54 (25.5%, 28). Other age groups represented lesser proportions: 25-34 year olds (17.3%, 19), 55-64 year olds (12.7%, 14), 15-24 year olds (7.3%, 8), and 65 and older (0.9%, 1).

15-24 Year Olds: Persons 15-24 years of age represented 26.4% of new HIV disease diagnoses, but only 7.8% of new AIDS diagnoses in 2011. There was a 33.3% decrease from 2010, in which 12 individuals were newly diagnosed with AIDS.

The majority of these 15-24 year olds were non-Hispanic black (87.5%, 7), and one individual was non-Hispanic white (12.5%). Also, 75.0% (6) of individuals were male and 25.0% (2) were female.

Transmission Category: The majority of persons newly diagnosed with AIDS had a transmission category of MSM (35.5%, 39), or unknown/no risk (35.5%, 39). MSM exposure decreased from 2010, in which 42.5% (62) of cases reported this transmission category, while unknown exposure increased from 27.4% (40). Other persons newly diagnosed in 2011 had transmission categories of heterosexual contact (19.1%, 21), IDU (5.5%, 6), and MSM/IDU (4.6%, 5).

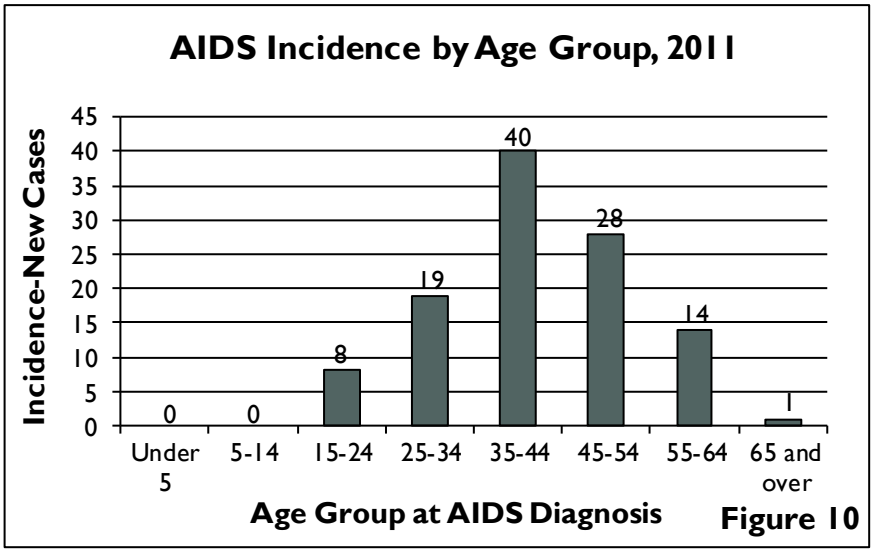


Figure 10

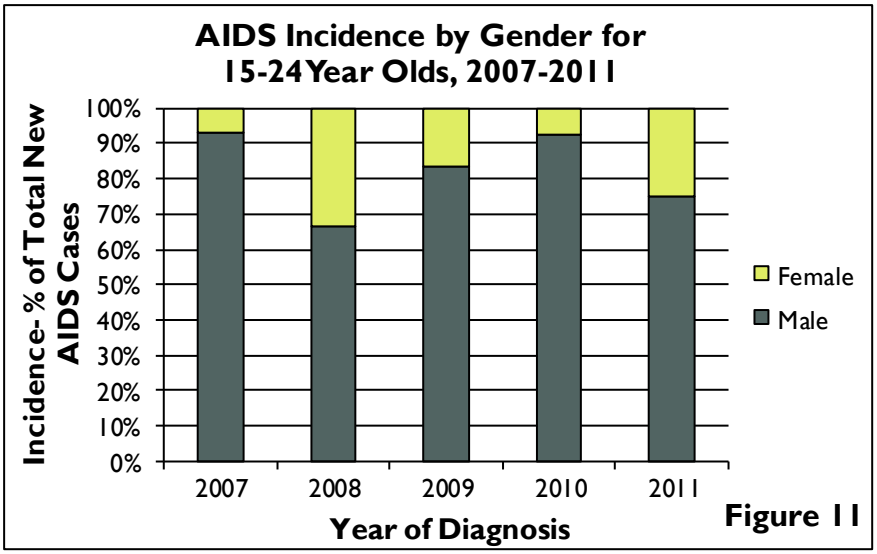


Figure 11

Note: Some of the data sets are relatively small and therefore analysis may be statistically unreliable.

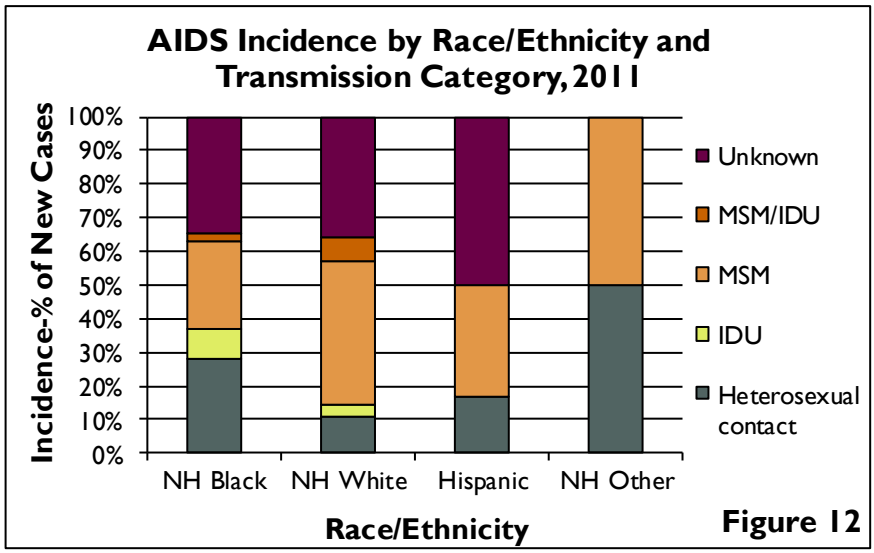


Figure 12

PREVALENCE (TOTAL CASES)

HIV DISEASE

At the end of 2011 there were 5,209 persons living with HIV disease in the Nashville TGA. Of those, 2,523 (48.4%) were living with HIV and 2,686 (51.6%) were living with AIDS. The proportion of HIV to AIDS cases has remained relatively stable over the last five years, ranging within about one percent of each other (47.1%-48.4%). The proportion of HIV cases in 2011 was the highest it has been in the last five years and has been gradually increasing in this time. This may indicate that people are being diagnosed earlier in the course of the disease, not progressing to AIDS as quickly, and/or adhering to treatment.

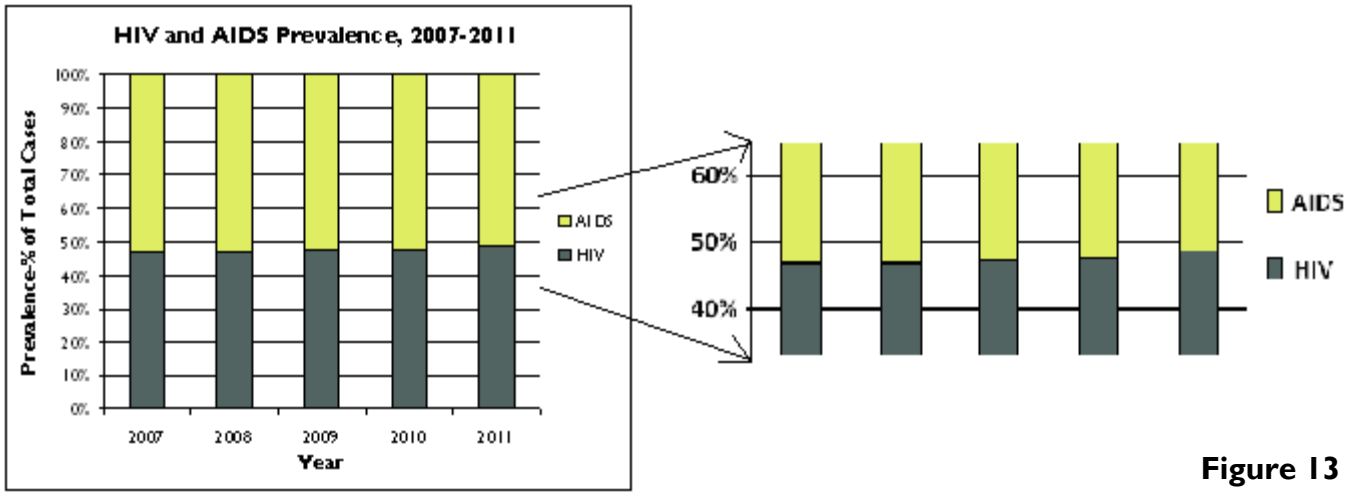


Figure 13

Residence of PLWHA: Most persons living with HIV disease in the Nashville TGA in 2011 lived in Davidson County (76.9%, 4,007), with the second highest prevalence county being Rutherford County (7.7%, 401). Over 23% of all HIV disease cases within the state of Tennessee resided in Davidson County. Other counties representing a significant portion of the TGA's HIV disease prevalence include Sumner (2.9%), Cheatham (2.5%), Williamson (2.3%), Wilson (2.0%), and Robertson (1.8%). The remaining six TGA counties accounted for 3.9% of the TGA's total HIV disease prevalence.

Gender: Forty-one percent (41.4%, 2,159) of PLWHA were males living with AIDS, 38.0% (1,978) were males living with HIV, 10.4% (545) were females living with HIV, and 10.1% (527) were females living with AIDS. Interestingly, of males living with HIV disease, a larger portion has AIDS, whereas of females living with HIV disease, a larger portion has HIV.

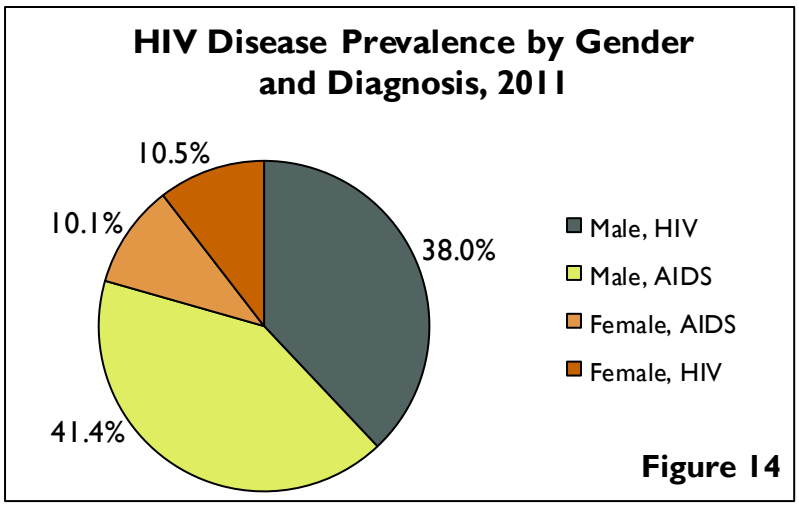
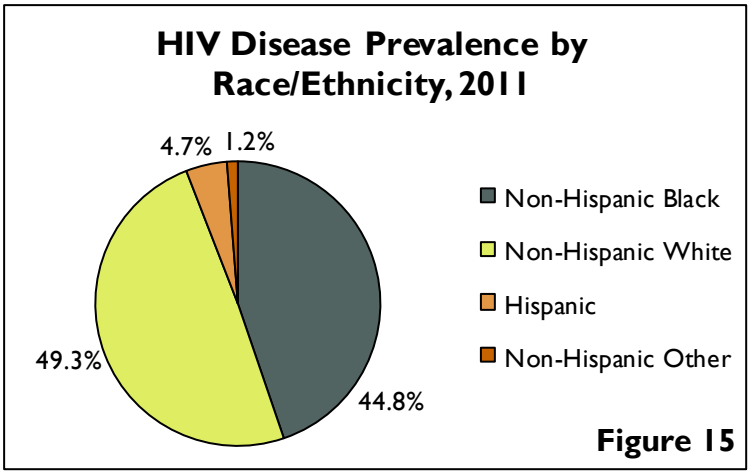
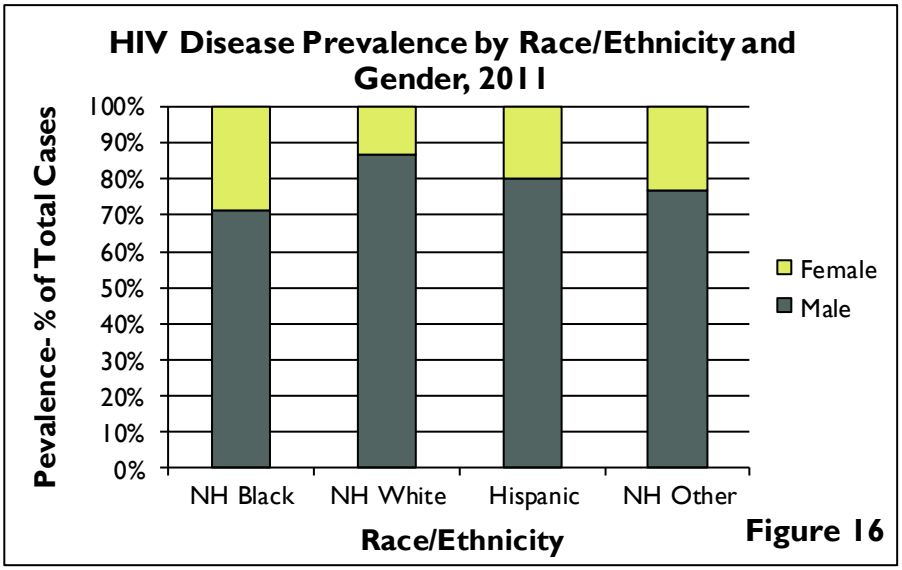


Figure 14

Race/Ethnicity: Non-Hispanic whites represented the largest group of PLWHA (49.3%, 2,570) in the TGA. Non-Hispanic blacks accounted for 44.8% (2,332) of persons living with HIV disease and Hispanics represented 4.7% (243). Non-Hispanic black prevalence rates of HIV disease (950.4 cases per 100,000 persons) were over 4.5 times that of non-Hispanic whites (207.0 cases per 100,000 persons) and over 4 times that of Hispanics (231.0 cases per 100,000 persons).



Race/Ethnicity and Gender: The majority of all HIV disease cases in the TGA were among males (79.4%, 4,137), while 20.6% (1,072) were among females. Non-Hispanic white males represented the largest portion of PLWHA in the TGA, accounting for 42.9% (2,233) of all cases. Non-Hispanic black males accounted for the second largest group (31.9%, 1,660), followed by non-Hispanic black females (12.9%, 672), non-Hispanic white females (6.5%, 337), Hispanic males (3.7%, 195), non-Hispanic other males (0.9%, 49), Hispanic females (0.9%, 48), and non-Hispanic other females (0.3%, 15). Even though the largest portion of PLWHA was non-Hispanic white males, non-Hispanic black males had the highest rate of prevalence (1,436.5 cases per 100,000 persons); non-Hispanic white males and Hispanic males had rates of 388.5 and 339.5 cases per 100,000 persons, respectively. Non-Hispanic black females had an HIV disease prevalence rate (524.0 cases per 100,000 persons) that was over five times that of Hispanic females (100.5 cases per 100,000 persons) and over nine times that of non-Hispanic white females (55.9 cases per 100,000 persons).



Age: In 2011, persons currently aged 35-44 and 45-54 had the highest prevalence of HIV disease, accounting for 27.0% (1,408) and 37.1% (1,934), respectively. Fifteen percent (14.9%, 776) of PLWHA were between 55 and 64 years of age, accounting for the third largest group and persons 25-34 years of age accounted for 13.3% (695) of all PLWHA. Other age groups accounting for lesser frequencies of individuals included 65 and over (3.8%, 199), 15-24 year olds (3.4%, 179), 5-14 year olds (0.3%, 14), and persons under 5 years of age (0.1%, 4).

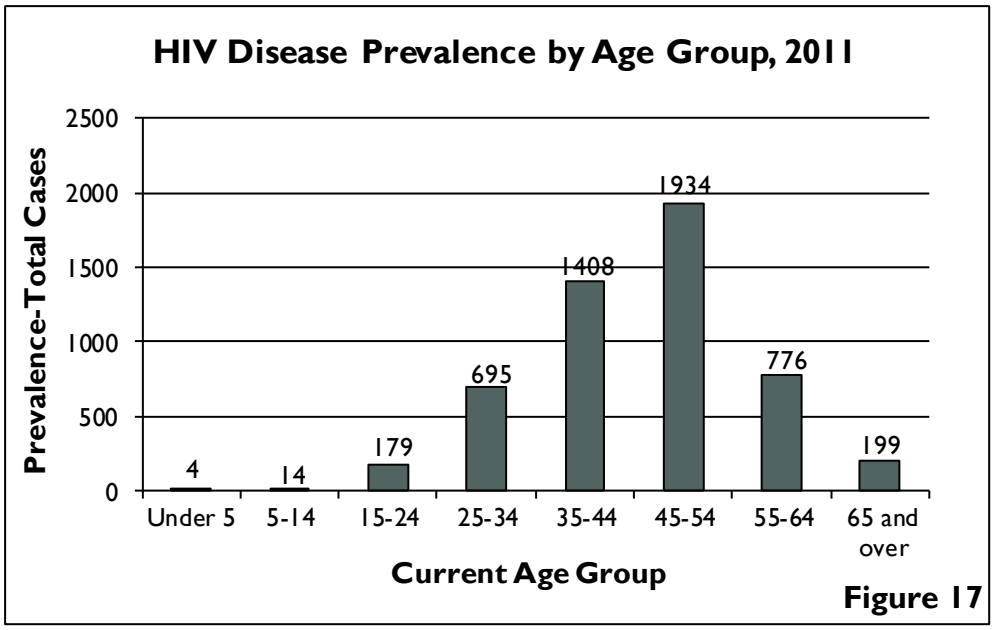


Figure 17

Transmission Category: The largest portion of PLWHA had their HIV disease attributed to MSM transmission (53.3%, 2,778). The majority of MSM exposure cases were among non-Hispanic white males (62.3%, 1,732) and non-Hispanic black males (32.3%, 897). This accounted for 77.6% of non-Hispanic white males and 54.0% of non-Hispanic black males who were living with HIV disease.

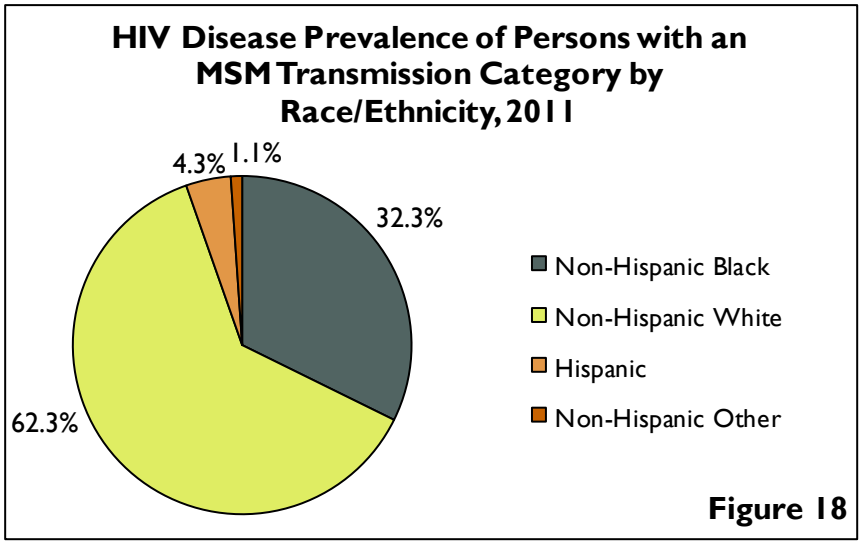


Figure 18

Heterosexual contact accounted for the second largest portion of PLWHA, with 17.9% (932), followed by unknown/no risk reported (12.2%, 634), IDU (11.3%, 580), MSM/IDU (4.1%, 211), and perinatal transmission (0.54%, 28). All other forms of transmission including hemophilia, transfusion/transplant, and other accounted for 0.88% (46).

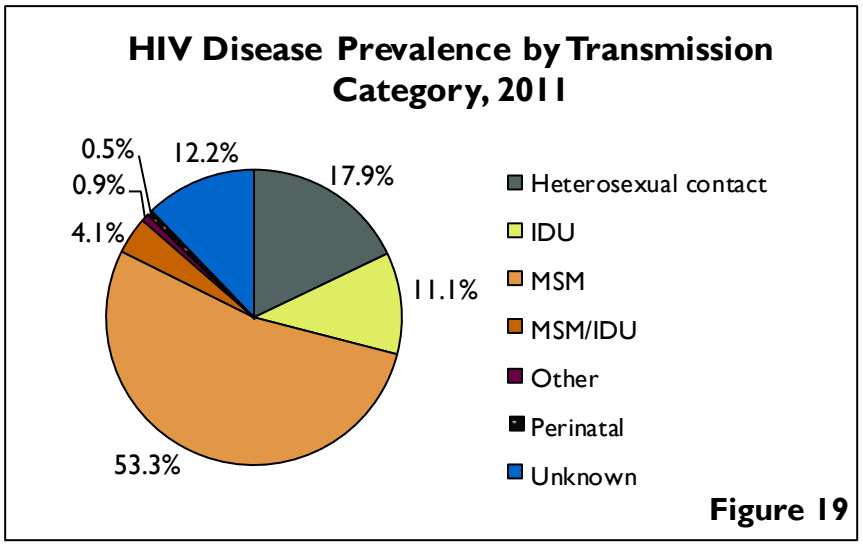
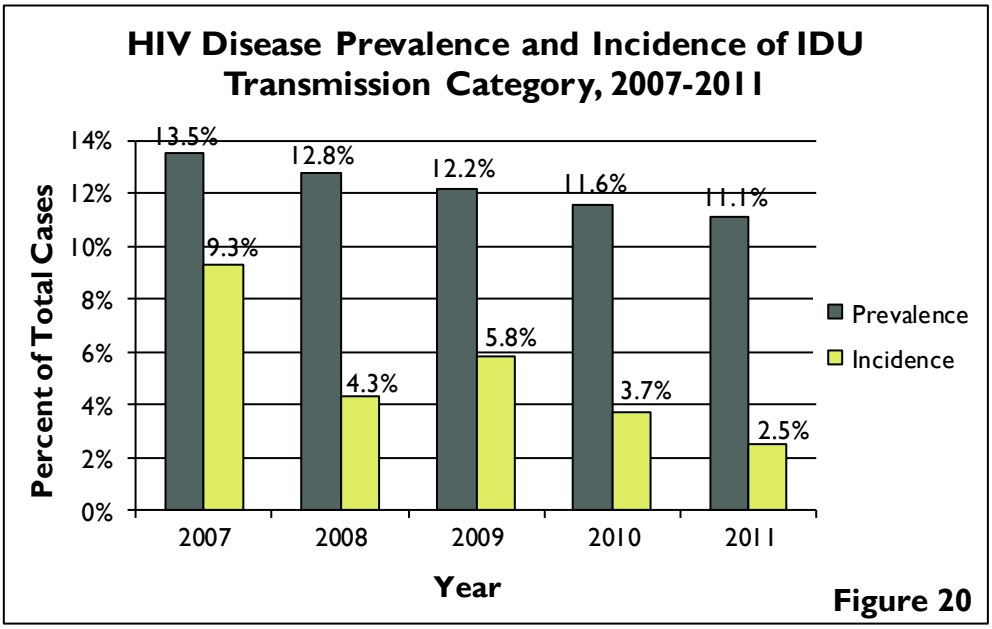


Figure 19

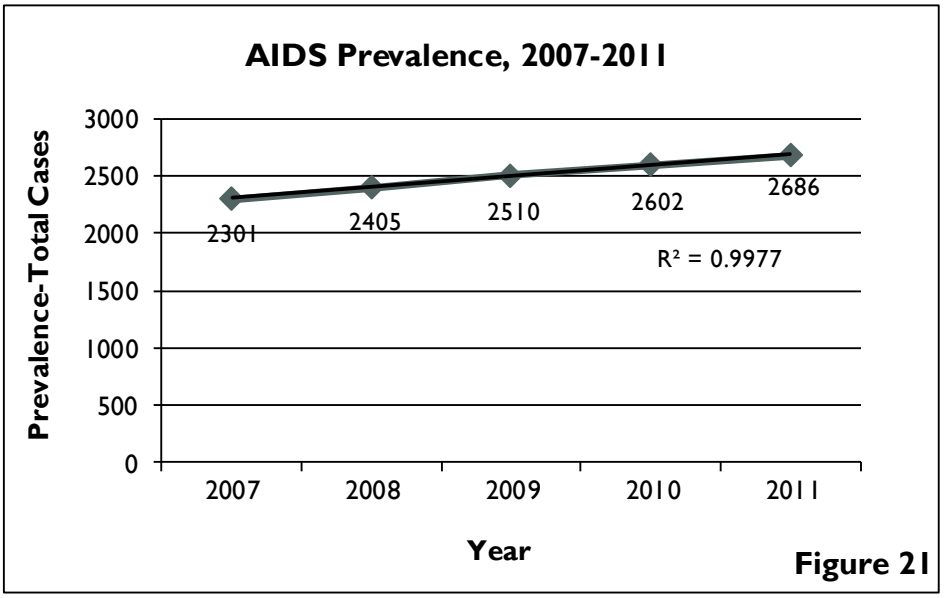
There has been a consistent decrease in the incidence of persons becoming infected with HIV disease through IDU over the last five years. While the transmission category of IDU accounted for 11.1% of persons living with HIV disease, there were only six individuals (2.5%) in 2011 whom were exposed through these means, compared to 9.3% in 2007. As the incidence of IDU transmission continues to decline, so will the prevalence of IDU transmission within the TGA's PLWHA.



It is important to recognize that the 12.2% (634) of people reporting an unknown/no risk transmission category could significantly impact the picture of HIV transmission if their transmission category was known. With so many persons being in the unknown/no risk transmission category, an accurate picture of how the HIV disease epidemic is changing cannot be understood.

AIDS

There were 2,686 individuals living with AIDS in the Nashville TGA at the end of 2011. Although fewer people are being diagnosed with AIDS on a yearly basis, AIDS prevalence is increasing because some people are still being diagnosed with AIDS, but also because people are living longer with the disease. However, the rate at which AIDS prevalence is increasing has decreased each year since 2007; 4.5% from 2007-2008, 4.4% from 2008-2009, 3.7% from 2009-2010, and 3.2% from 2010-2011.



Note: An R^2 value of 0.9977 has very strong predictive power. A value of 1.0 means that the regression line perfectly fits the data.

Demographic analysis of AIDS prevalence data produces results comparable to that of HIV disease prevalence. The male to female ratio is about four to one (4:1), just as with HIV disease. Also, non-Hispanic whites are the most prevalent racial/ethnic group, representing 50.9% (1,367), followed by non-Hispanic blacks (43.3%, 1,162) and Hispanics (3.8%, 103). MSM transmission (53.4%, 1,434) accounts for the largest group in terms of transmission category, with heterosexual contact (18.3%, 491) and IDU (12.8%, 343) representing the second and third most prevalent forms of transmission.

The greatest number of persons living with AIDS resided in Davidson County (76.6%, 2,056) in 2011, followed by Rutherford County (7.5%, 201).

TRENDS IN INCIDENCE

Race/Ethnicity: Although there have been minor fluctuations in the racial/ethnic proportions over the last five years, the proportions remained fairly steady from 2007 to 2010. Non-Hispanic blacks represented the largest proportion in each of these years, followed by non-Hispanic whites, and then Hispanics. However, in 2011, notable changes occurred in the proportions of each of the groups. While non-Hispanic blacks have continued to represent the largest proportion, they now only outnumber non-Hispanic whites by a handful of individuals. The proportion of non-Hispanic blacks decreased by nearly 10%, while the proportion of non-Hispanic whites increased by over 21%. And while Hispanics represent only a small proportion of new HIV disease diagnoses, they experienced a 41% decrease in proportion size, from 8.5% to 5.0%.

The changes that occurred in racial/ethnic proportions in 2011 are significant because they may indicate that something is changing in the groups contracting HIV disease. However, with these changes only being apparent in the data for one year there is not enough of a pattern to say that a new trend is occurring.

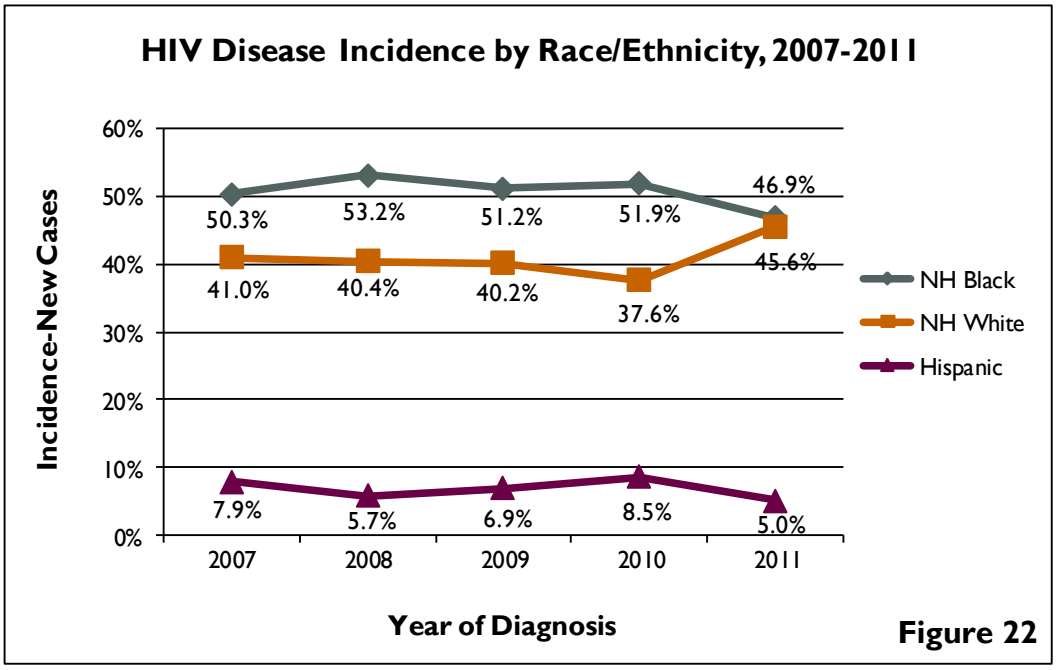


Figure 22

Gender: Despite a slight shift in proportion size between males and females in 2008, males have continued to represent an increasingly larger proportion of new HIV disease diagnoses since 2007, while females have continued to show a drop in proportion size. The frequency of females has decreased by 39.4% since 2008 and the proportion they make up has decreased by 28.6% in this time, moving from 25.2% in 2008 to 18.0% in 2011. The proportion of males however, has increased by 9.6%, growing from 74.8% in 2008 to 82.0% in 2011.

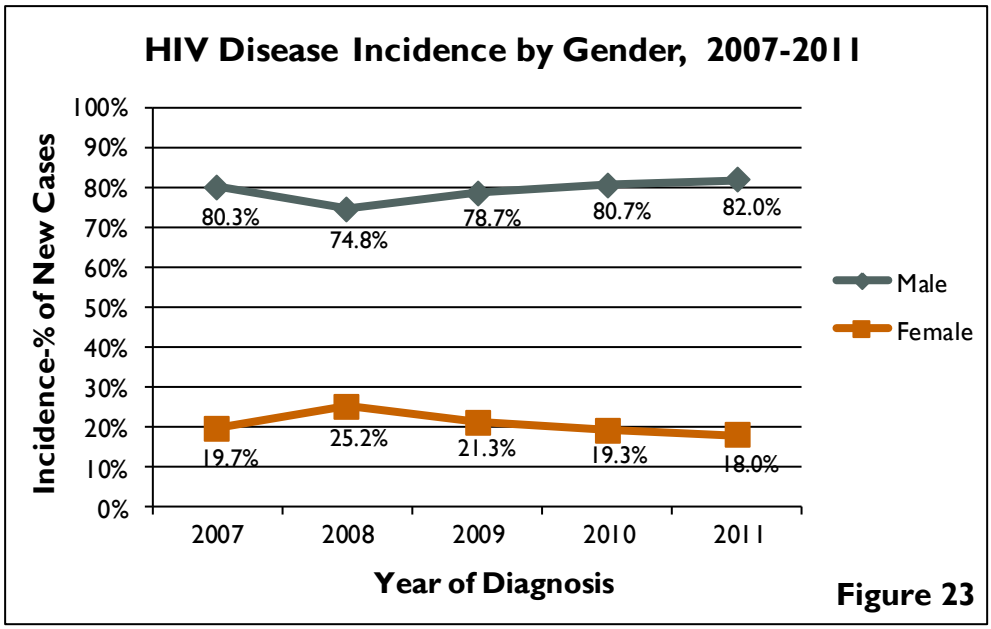


Figure 23

Race/Ethnicity and Gender: The number of non-Hispanic black males exceeded the number of non-Hispanic white males from 2007 through 2010; however in 2011 the number of non-Hispanic white males outnumbered non-Hispanic black males. Non-Hispanic black females had the greatest frequency among females in each of the last five years.

Non-Hispanic blacks had the largest proportion of females and consequently the lowest proportion of males out of all the racial/ethnic groups. Non-Hispanic whites had the greatest difference in occurrence between males and females in 2007 and 2008, but the disparity between the two started to decrease in 2009.

Age: Trends in data seem to indicate that an increasing proportion of younger people are becoming infected with HIV disease each year. This is most seen in the 15-24 year old age group; they represented 12.8% of new HIV disease diagnoses in 2007, compared to 26.4% in 2011, a 106% increase in five years. Persons under 5 and 5-14 years of age have

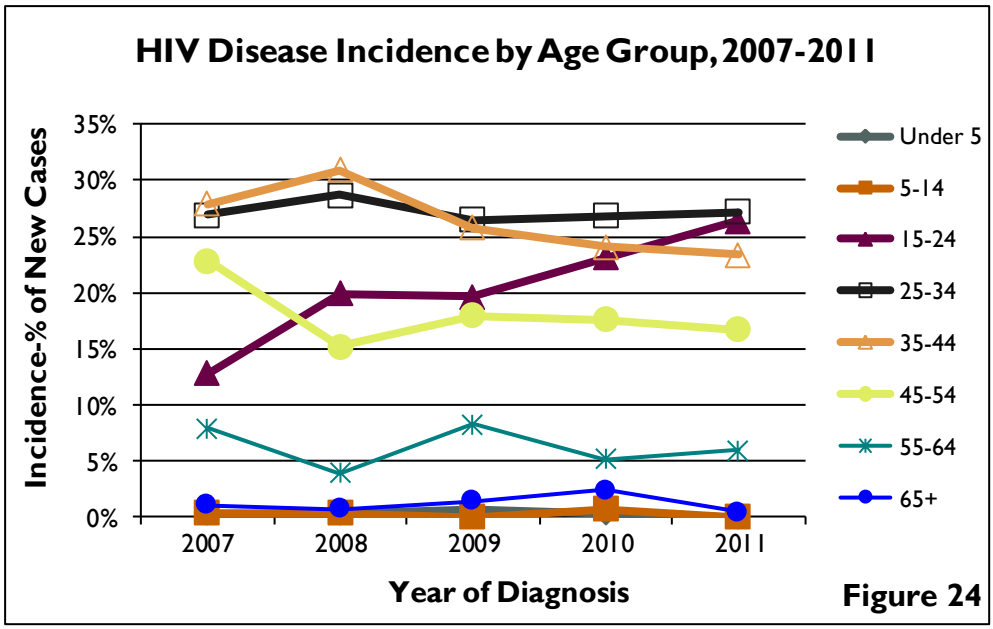


Figure 24

continued to account for low numbers of new diagnoses. Persons 25-34 have maintained a steady proportion since 2007, accounting for one of the two largest age groups. The proportions of individuals 35-44 and 45-54 have generally decreased in the last five years. Those 55-64 years of age and 65 years of age and older have experienced fluctuations in the last five years, however they have remained some of the smallest age groups.

Transmission Category: Transmission category trends have changed remarkably since 2007. The unknown/no risk category is the only transmission category to have grown since 2007. This steady upswing has led to a 368% increase, moving from 9.3% to 43.5% of new HIV disease case exposures. Persons categorized as having an unknown/no risk exposure either did not report an exposure or one could not be determined. There are various reasons why a person may be classified as having an unknown/no risk mode of transmission, including confidentiality concerns, reduced resources in health departments and provider settings, lack of standardized terminology, and differences in the source of reports where documentation may be less extensive. Also, persons reporting heterosexual contact who cannot be connected with a person with a confirmed HIV status or a person at high-risk of HIV disease, are included in this category; while it is presumed heterosexual transmission, it does not meet the definition of the heterosexual contact transmission category. As some of these cases are verified, cases may be reclassified into other transmission categories.

MSM exposure continues to produce the greatest number of new HIV disease cases; however, its proportion has decreased by 19.0%. Heterosexual contact had the second greatest incidence in 2007, yet with a steady decline of 71.4%, it represented the third greatest incidence in 2011. Although smaller in frequency, IDU has experienced the greatest decrease in proportion in the last five years (73.1%).

MSM/IDU transmissions and other transmissions have remained relatively steady since 2007. The other category includes such exposures as perinatal, adult/pediatric hemophilia, adult/pediatric transfusion/ transplant, adult other, and pediatric unknown.

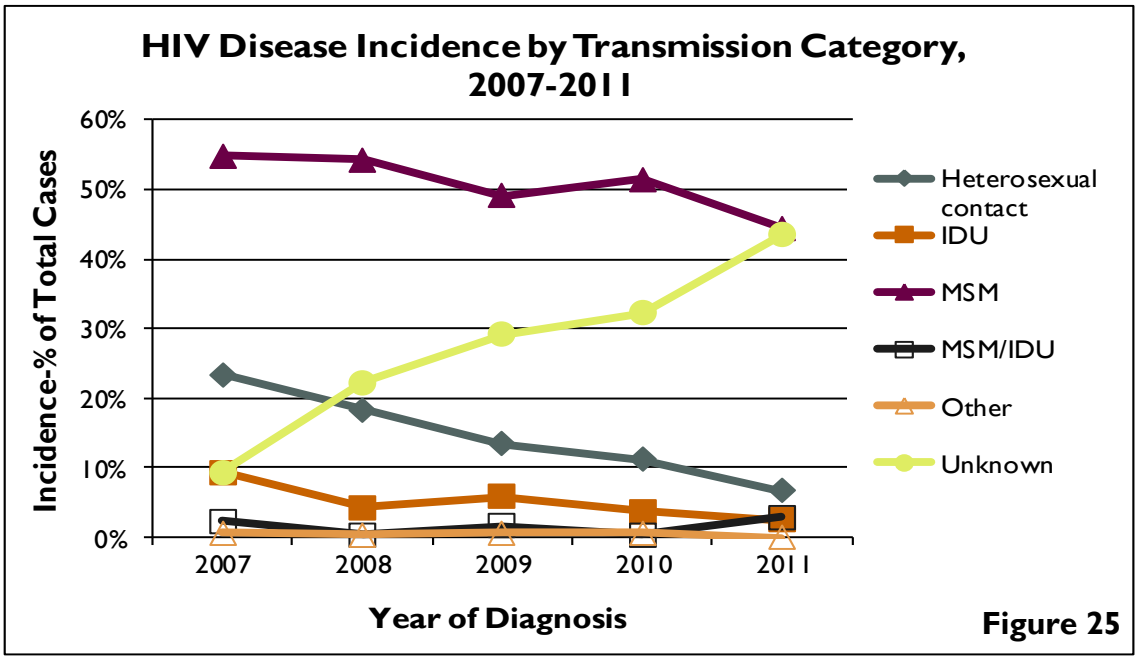


Figure 25

DIAGNOSIS LAG

Late diagnosis is a measure designed to assess the number of persons who are either (a) diagnosed with HIV and AIDS at the same time or (b) diagnosed with AIDS within 12 months of their initial HIV diagnosis. In a 2009 report from the U.S. Centers for Disease Control and Prevention reporting on 46 states, it was determined that 32% of individuals diagnosed with HIV during 2009 were diagnosed with AIDS simultaneously or within 12 months.

It is important to note that late diagnosis cannot be analyzed until a full 12-month period has lapsed from the end of the reporting cycle in order to give those individuals being diagnosed late in the year a full year to determine if they convert to AIDS. As a result, 2010 data are being used for this measure because a full year has not yet lapsed for those individuals diagnosed in the latter part of 2011. Using 2011 data at this time would lead to an inaccurate measure because the data would not be complete.

INCIDENCE

In 2010, 295 people were newly diagnosed with HIV disease, and of these cases 25.4% (75) were simultaneously diagnosed with HIV and AIDS or progressed to AIDS within 12 months of their initial HIV diagnosis. The majority (60.0%, 45) were concurrently diagnosed with HIV and AIDS, while 40.0% (30) progressed to AIDS within 12 months of their initial HIV diagnosis, with 86.7% (26) of those cases converting within 3 months. Those persons progressing to AIDS within 12 months of their initial HIV diagnosis did not convert to AIDS because they entered care, but rather because they were likely diagnosed at a late stage of the disease. If people are tested and diagnosed early on in the course of the disease then they are not likely to progress through the disease as rapidly.

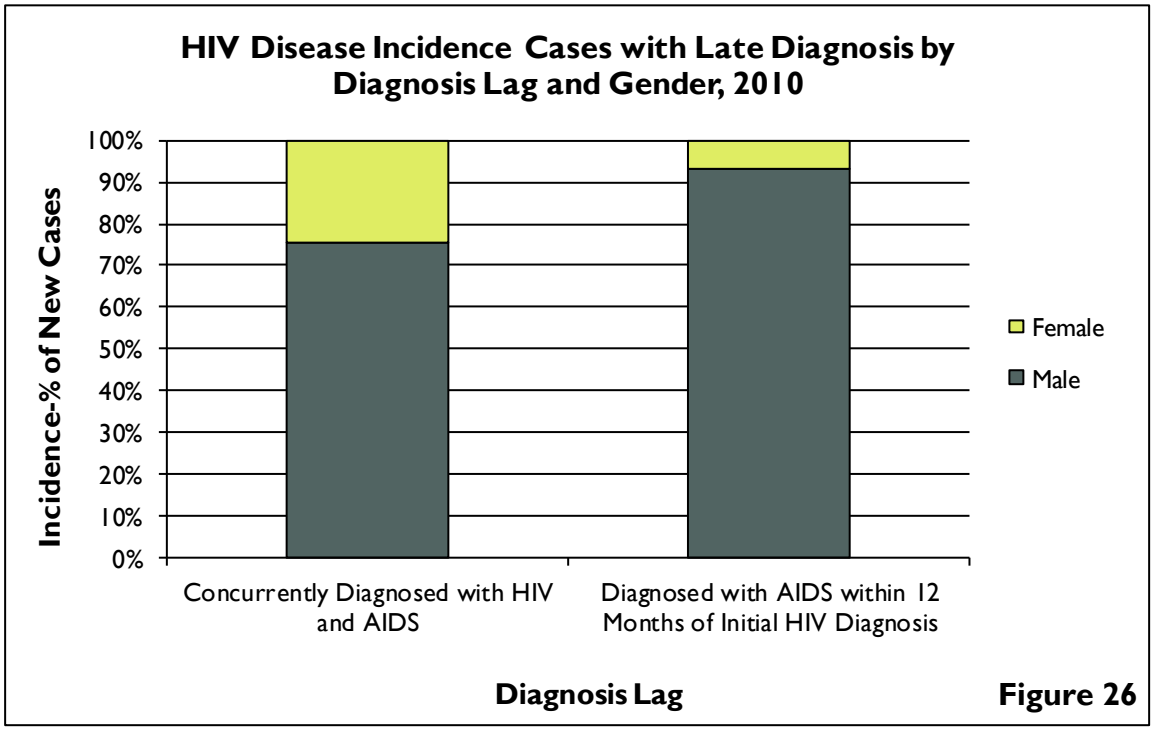
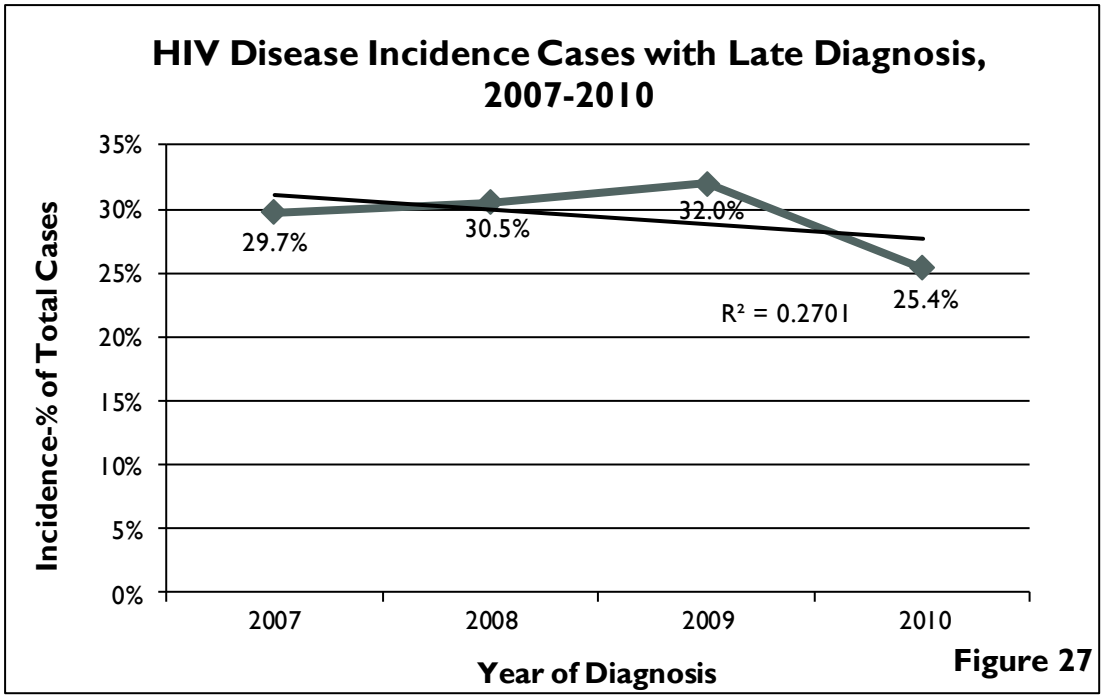


Figure 26

The percentage of PLWHA in the Nashville TGA with a diagnosis lag, 25.4%, is lower than the national average of 32%. This means that in comparison to the entire country, a greater proportion of people in the TGA are diagnosed earlier in the disease than they are in the country as a whole. However, the national average that is available is from 2009, and so the national average for diagnosis lag may have decreased in 2010 just as the portion did in the Nashville TGA. It is important to note that late diagnosis was increasing in the TGA until 2010. The R^2 value, 0.2701, indicates that the data has a significant amount of variability and therefore cannot be used to predict future data outcomes with accuracy. Therefore, not until future data is available will it be determined if there has been a shift in trends or if the 2010 data point is anomalous.



Note: An R^2 value of 0.2701 means that future data points cannot be well predicted based on the current data points. The closer the R^2 value is to 0.0, the less the predictive power.

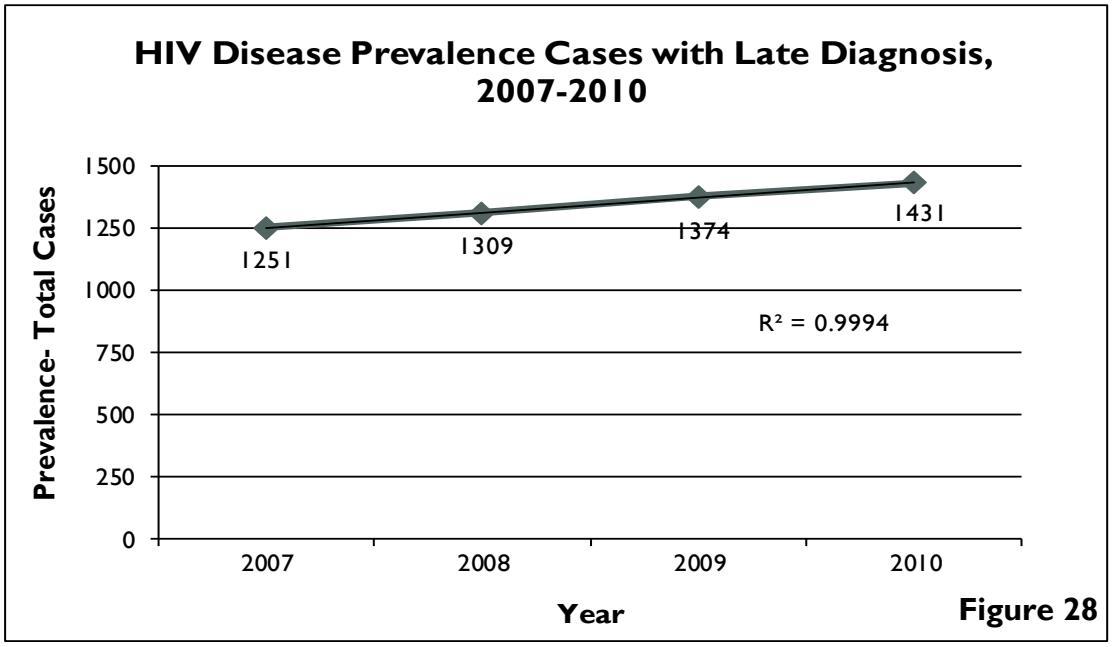
Males represented 82.7% (62) of individuals having a late HIV disease diagnosis, while females represented 17.3% (13) of these cases. Non-Hispanic blacks and non-Hispanic whites were evenly represented among those with a late diagnosis, each accounting for 45.3% (34). Hispanics accounted for 5.3% (4) and non-Hispanic others for 4.0% (3). Almost one-third (29.3%, 22) of individuals receiving a late diagnosis were 45-54 years of age, followed by persons 35-44 years of age (25.3%, 19). The largest portion of persons with a late diagnosis had a transmission category of MSM (50.7%, 38); 32.0% (24) had a transmission category of unknown/unreported.

PREVALENCE

Of the 4,998 PLWHA in the Nashville TGA at the end of 2010, 1,431 of those individuals had been diagnosed with HIV and AIDS simultaneously or progressed to AIDS within one year of their initial HIV diagnosis; these individuals accounted for 28.6% of PLWHA at that time. The number of PLWHA with a late diagnosis has increased by 14.4% since 2007. The majority of these individuals were male (82.0%, 1,174); 18.0% (257) were female. The largest portion of persons with a late HIV disease diagnosis was non-Hispanic whites (52.6%, 752), while 40.3% (576) were non-Hispanic black, 5.6% (80) were Hispanic, and 1.6% (23) were non-Hispanic other. Over half (55.4%, 792) of these individuals had a transmission category of MSM, followed by heterosexual transmission (18.4%, 263).

Non-Hispanic white males (664) represented the single largest group of PLWHA who have received a late HIV disease diagnosis, accounting for 46.4% of all PLWHA with a late diagnosis as of 2010. They had a late diagnosis rate of 115.5 cases per 100,000 persons. Non-Hispanic black males (29.4%, 421) had the second largest late HIV disease diagnosis prevalence; however their rate of late diagnosis (364.3 cases per 100,000 persons) was over three times that of non-Hispanic white males. Hispanic males (69, 120.1 cases per 100,000 persons) had a late diagnosis rate comparable to non-Hispanic white males despite having a much lower frequency.

Non-Hispanic black females (155, 120.9 cases per 100,000 persons) had a late diagnosis rate that was over 8 times that of non-Hispanic white females (88, 14.6 cases per 100,000 persons) and 5.3 times that of Hispanic females (11, 23.0 cases per 100,000 persons).



Note: An R^2 value of 0.9994 indicates that the data points have strong predictive power in predicting future data points. The data points almost perfectly match the trend line.

DEATHS

A total of ten PLWHA in the Nashville TGA were identified as having died in 2011 as of April 2, 2012, although their deaths were not necessarily related to their HIV disease. It is important to note that death data may not be complete at the time this analysis was conducted. Due to data coming from different states, and needing to be verified, confirmation of individuals and deaths is not timely. Therefore, an in-depth analysis was conducted on 2010 death data.

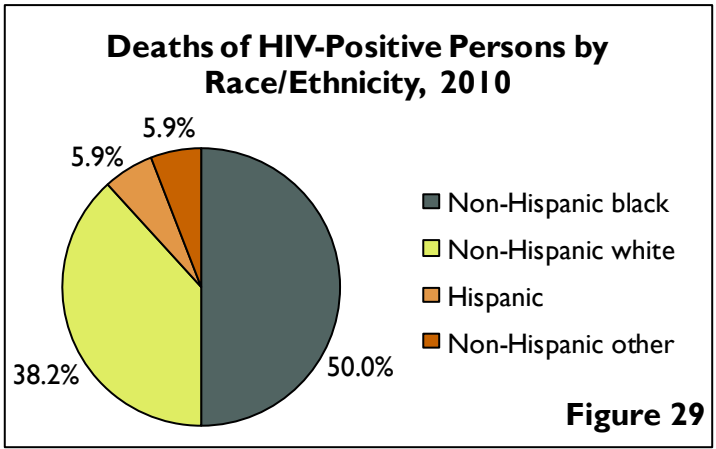


Figure 29

In 2010, 34 PLWHA died in the Nashville TGA. Although these people were all HIV-positive, their death may not have been the result of their HIV disease. The majority of deaths occurred among males (67.7%, 23), while 32.4% (11) occurred among females. Non-Hispanic blacks represented half (50.0%, 17) of the deaths; non-Hispanic whites accounted for 38.2% (13) and Hispanics and non-Hispanic others each accounted for 5.9% (2). Nearly half (44.1%, 15) of the deaths occurred among persons 45 -54 years of age, followed by persons 35-44 years of age (23.5%, 8).

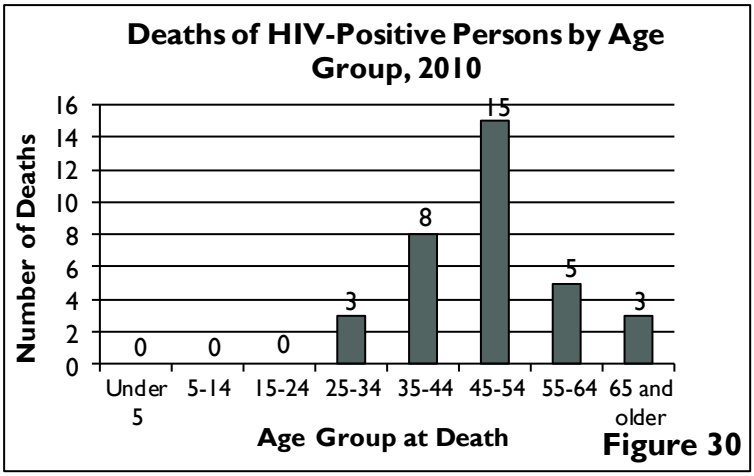


Figure 30

The majority of deaths occurred among persons living with AIDS (97.1%, 33), while only one individual living with HIV (2.9%, 1) died in 2010. Of those persons with AIDS, 20.6% were simultaneously diagnosed with HIV and AIDS.

Overall, there was a 44.3% decrease in deaths among PLWHA from 2009 to 2010 and a 52.8% decrease since 2007. Although 2011 death data is likely not complete at this time, it can be predicted from the current data that there were 29 deaths in the Nashville TGA in 2011.

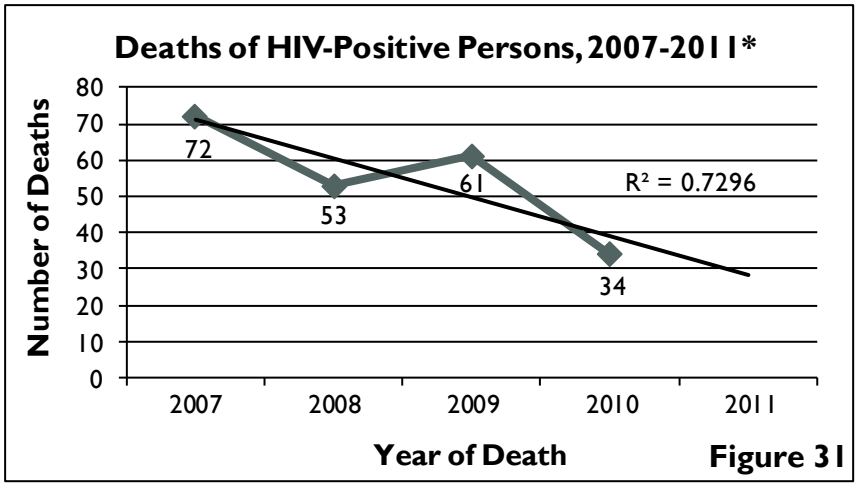


Figure 31

*2011 data is not complete. Therefore, the number of deaths for 2011 is estimated from the 2007-2010 death data.
Note: An R^2 value of 0.7296 means that future data points can be fairly strongly predicted based on the current data points.

CO-INFECTION

(All of these diseases are reportable to state/local public health departments with the exception of Hepatitis C.)

HEPATITIS C

Nationally it is estimated that 33% of people with HIV disease are co-infected with hepatitis C. It is significantly higher for persons who acquired HIV disease through injection drug use; it could be as high as 90% (Highleyman, Dieterich, & Sherman, 2012). Because hepatitis C is not a reportable disease, the actual number of persons co-infected with HIV disease and hepatitis C is not known. However, based on national estimates, hepatitis C and HIV disease co-infection in the TGA for 2011 is estimated to be about 1,740 individuals.

TUBERCULOSIS (TB)

A total of 10,521 new cases of tuberculosis were reported in the United States in 2011; that was a rate of 3.4 cases per 100,000 persons. This was a 6.4% decrease from the 2010 rate of 3.6, and is the lowest rate recorded since national reporting began in 1953. Fifty-five (55) individuals were diagnosed with tuberculosis in the Nashville TGA in 2011; that was a rate of 3.5 cases per 100,000 persons. Therefore, while the Nashville TGA was lower than the national rate in regards to tuberculosis cases in 2010 (3.5 cases per 100,000), it had a slightly greater rate than the nation in 2011.

Latent TB (no symptoms and non-infectious) is much more likely to become active TB in someone with HIV disease because HIV weakens the immune system and makes it harder to fight off diseases like tuberculosis. Therefore, in HIV infected people tuberculosis is considered an AIDS-defining condition. In other words, someone who has both HIV and TB has AIDS. Six PLWHA in the TGA were diagnosed with tuberculosis in 2011. This accounts for 33.3% of people diagnosed with TB in Sumner County and 13.2% in Davidson County (TDOH, 2012). Almost 11% (10.9%, 6) of all TB cases in the TGA occurred among PLWHA and 0.11% of PLWHA in the TGA in 2011 were co-infected with active tuberculosis. PLWHA were diagnosed with active TB at a rate of 113.8 cases per 100,000 PLWHA.

GONORRHEA

In 2010, 28 PLWHA were diagnosed with gonorrhea in Davidson County. This represented 0.55% of all HIV disease cases and 2.9% of all gonorrhea infections in Davidson County. PLWHA were diagnosed with a gonorrhea co-infection at a rate of 553.8 cases per 100,000 PLWHA.

CHLAMYDIA

In 2010, 24 PLWHA were diagnosed with Chlamydia in Davidson County. This represented 0.47% of all HIV disease cases and 0.69% of all Chlamydia infections in Davidson County. PLWHA were diagnosed with a Chlamydia co-infection at a rate of 474.7 cases per 100,000 PLWHA.

SYPHILIS

In 2010, 63 PLWHA were diagnosed with syphilis in Davidson County. This represented 1.2% of all HIV disease cases and 15.9% of all syphilis infections in Davidson County. Total syphilis cases included 4.8% (3) primary syphilis, 31.7% (20) secondary syphilis, 30.2% (19) early latent syphilis, 7.9% (5) latent syphilis, and 25.4% (16) late latent

syphilis. PLWHA were diagnosed with a syphilis co-infection at a rate of 1,246.0 cases per 100,000 PLWHA.

Note: Gonorrhea, Chlamydia, and syphilis co-infections are only reported here for Davidson County. However, it is expected that HIV/STD co-infections occur relatively equally throughout the HIV-positive population, regardless of county of residence. Therefore, because 16.5% of HIV disease cases in the TGA are outside of Davidson County, it is likely that the 115 total HIV disease co-infections in Davidson County would be 16.5% greater if including the other 12 TGA counties; this would estimate that an additional 19 co-infections have occurred in non-Davidson counties.

SPECIAL POPULATIONS

JAIL

In 2011 there were 148 persons known to be HIV-positive in the Davidson County jails, out of a duplicated jail population of 48,591. Of those individuals, 77.7% (115) were males and 22.3% (33) were females. The largest portion of PLWHA in jail were non-Hispanic blacks (66.9%, 99), followed by non-Hispanic whites (27.7%, 41); five (3.4%) Hispanics and three (2.0%) non-Hispanic others were in the jail system. The single largest group of HIV-positive individuals in the jails was non-Hispanic black males, accounting for 51.4% (76); this was over twice the number of non-Hispanic white males (20.9%, 31), the second largest group.

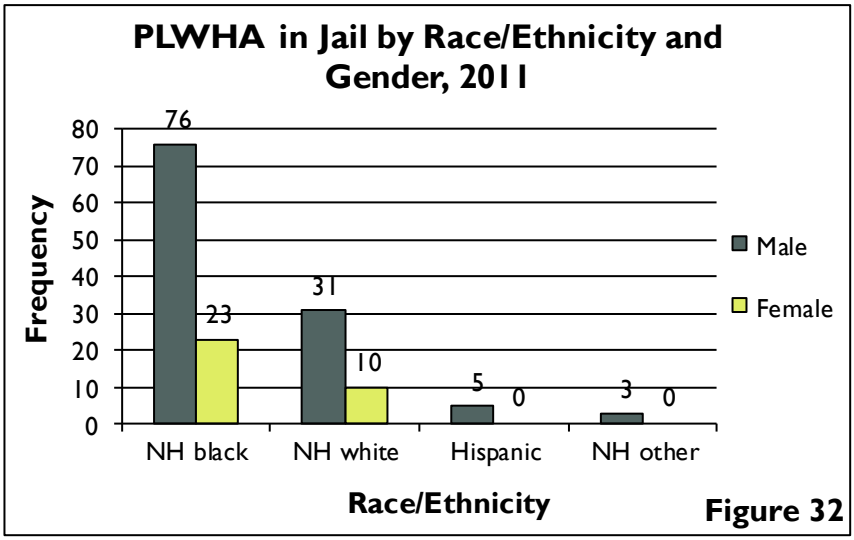


Figure 32

Transmission category looked very different for HIV-positive persons in jail than for the general HIV-positive population in the Nashville TGA. MSM transmission (41.9%, 62) still accounted for the largest portion of cases. However, injection drug use was the second most common transmission category among HIV-positive individuals in jail, representing 23.0% (34) of cases. In the general HIV-positive population IDU was the transmission category for only 11.1% of individuals. Other common transmission categories among persons in jail were unknown/no risk (17.6%, 26) and heterosexual exposure (14.2%, 21). MSM/IDU (3), perinatal (1), and pediatric no risk (1) accounted for less than 3.5% total.

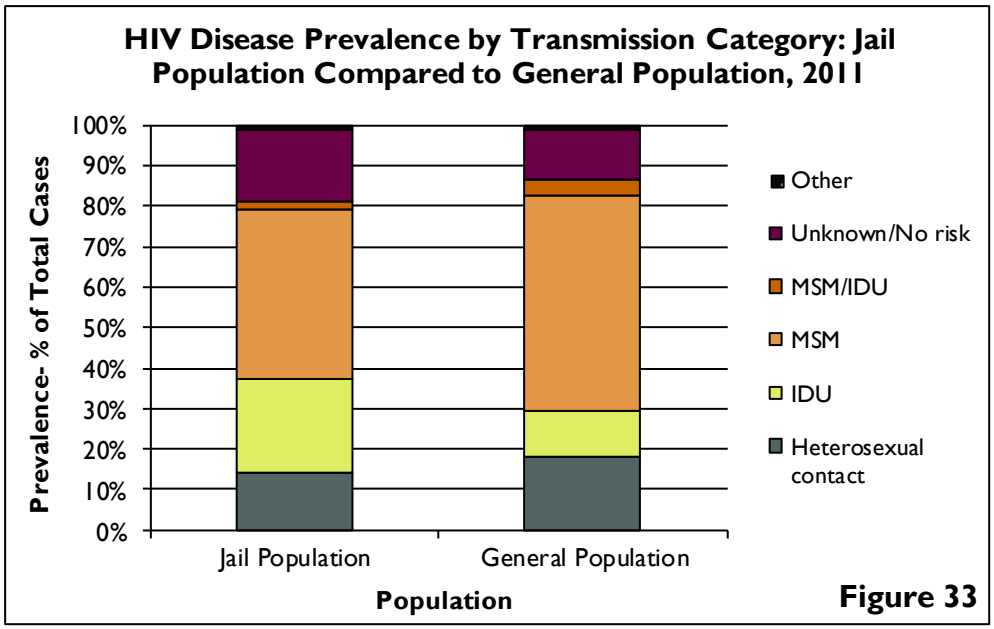


Figure 33

HOMELESSNESS

There are an estimated 3.5 million homeless people in the United States every year (National Alliance to End Homelessness, 2006). Conditions of homelessness are significant contributing factors to illness and disease. A disproportionately high number of homeless people suffer from substance abuse disorders and mental illnesses; it is these related behaviors that put people at increased risk for contracting HIV disease. Homelessness may also lead to sexual behaviors that increase the risk of contracting HIV disease because these conditions make it difficult to form stable sexual relationships. Homeless women and adolescents are at particular risk for reasons connected to sexual abuse, exploitation, and exchanging sex for food, clothing, and shelter (National Coalition for the Homeless, 2009).

Homeless people are already three to six times more likely than housed individuals to become ill, and since HIV attacks the immune system, the body's inability to fight off infection is exacerbated by homeless conditions. Consequently, the rate of HIV disease prevalence is at least three times higher among the homeless than the general population. The National Alliance to End Homelessness (2006) estimates that 3.4% of homeless people are HIV-positive, compared to 0.4-1.0% of adults and adolescents in the general population. Other estimates of HIV disease prevalence among homeless individuals range from 3-20%, with certain subgroups having a much higher burden of disease (National Coalition for the Homeless, 2009).

Homeless people are not just more susceptible of becoming infected with HIV disease, but people who are already living with HIV disease are more likely to become homeless or develop unstable housing (National Alliance to End Homelessness, 2006). Up to 50% of PLWHA in the United States are at risk of becoming homeless at some point. The costs of medical care and medications for HIV disease are significant, and often difficult to keep abreast of. PLWHA are also at risk of losing their jobs due to HIV-related absences and discrimination.

According to the Key Alliance and the Metropolitan Homelessness Commission (2011), about 4,000 individuals and families in Nashville are homeless on any given night, including 800 individuals who are chronically homeless (have been homeless for more than a year). In January 2011, during a point-in-time count, 2,245 individuals were found to be homeless in Davidson County; this includes 360 people outdoors and 1,885 people in shelters (The Key Alliance & Metropolitan Homelessness Commission, 2011). This is a decrease of 3.3% (76) from the point-in-time count

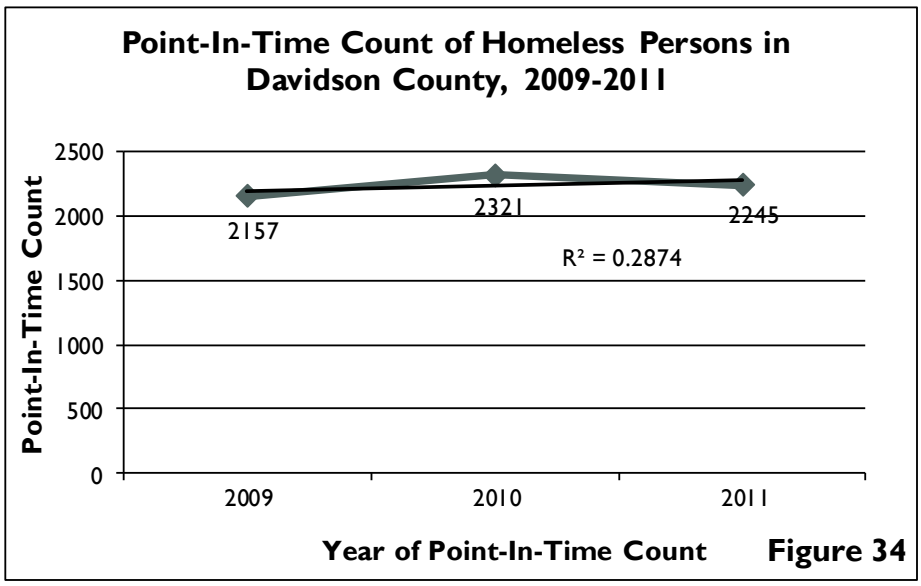


Figure 34

Note: An R^2 value of 0.2874 has little predictive power. Therefore, future data points are not likely to be predicted with great accuracy.

in January 2010, in which 2,321 homeless persons were counted in Davidson County. These point-in-time counts are for Davidson County and therefore do not include homeless persons in the other 12 counties of the Nashville TGA. In 2010-2011, the Metro Nashville Public School system reported that 2,049 children in their school system were homeless. An average of 30 people in Nashville die on the streets each year (The Key Alliance & Metropolitan Homelessness Commission, 2011).

Using the National Alliance to End Homelessness estimation that 3.4% of homeless people are living with HIV disease, it can be projected that approximately 76 homeless persons in Davidson County were living with HIV disease as of January 2011. However, with the limited access to health care among the homeless and consequently low incidence of HIV testing, this number could be much higher.

Veterans in the VA system Living with HIV Disease

United States

The Veterans Health Administration (VA) is the single largest provider of HIV medical care in the United States, seeing 24,296 HIV-positive veterans in 2010 and 25,271 HIV-positive veterans in 2011 (U.S. Department of Veterans Affairs, February 2012 and March 2012). Therefore, about 1 of every 250 veterans receiving medical care from the VA is living with HIV disease (U.S. Department of Veterans Affairs, 2009).

The typical veteran with HIV disease is male (97%), 53 years of age, and is receiving anti-retroviral medications to treat HIV (80%).The most common co-morbidities in HIV-positive veterans in 2008 were depression (51%), hypertension (49%), and dyslipidemias (high cholesterol, 43%). One in four had chronic hepatitis C virus infection and 7% had chronic hepatitis B virus infection (U.S. Department of Veterans Affairs, 2009).

The number of HIV-positive veterans receiving care from the VA has remained relatively stable over the last five years, with approximately 9% entering VA care and 9% leaving (including deaths) VA care in a given year.

Tennessee

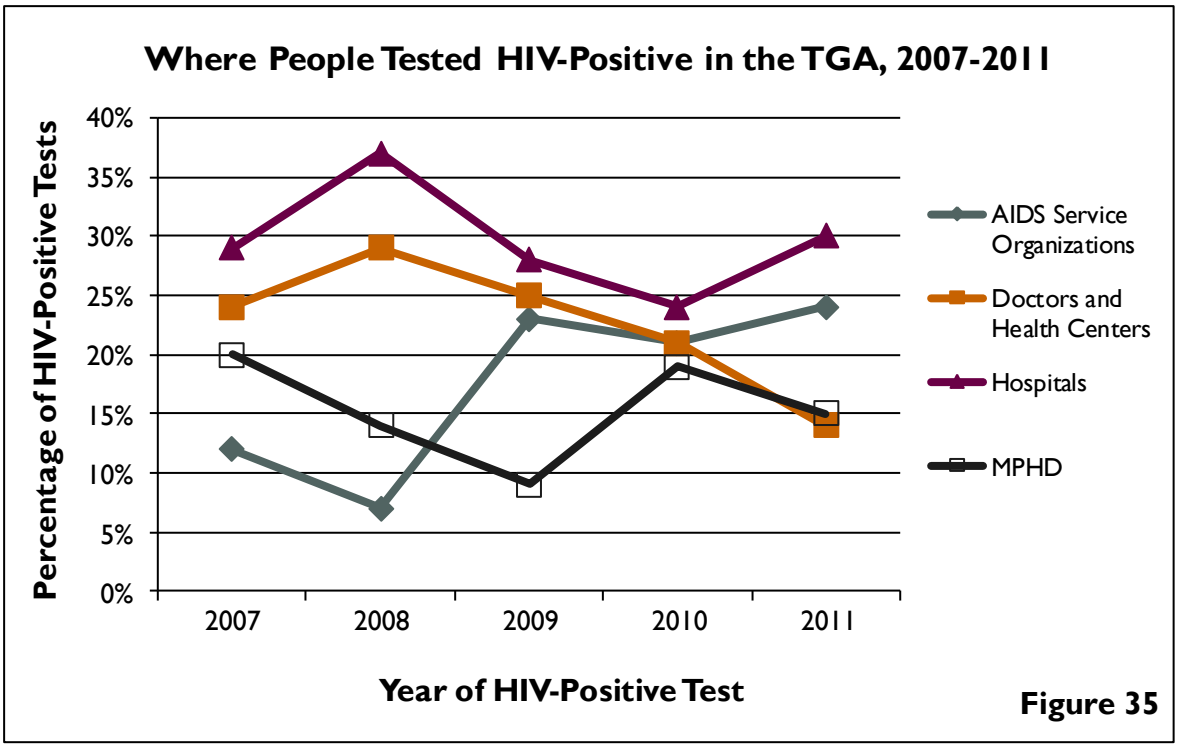
In 2011, 681 HIV-positive veterans (2.69% of all HIV-positive veterans in the VA system) received HIV medical care from a VA in Tennessee (U.S. Department of Veterans Affairs, March 2012). Of these individuals, 85% (576) were on anti-retroviral therapy and 26% (178) had an AIDS opportunistic infection at some time; 23% (159) were on anti-retroviral therapy and had AIDS opportunistic infections.

Based on data for the state, it is estimated that 303 of the 681 HIV-positive veterans receiving HIV medical care from a VA in Tennessee in 2011 received their care from the Nashville VA. This estimate was based on trends in data from previous years of the proportion of HIV-positive clients at the Nashville VA in comparison to the number of HIV-positive clients at a VA in Tennessee.

3. IMPLICATIONS OF PREVENTION

NASHVILLE TGA HIV TESTING DATA

The Nashville TGA has 13 local health departments that offer HIV counseling, testing, and referral. Other entities reporting a significant number of HIV tests included: 15 private physicians; 13 hospital settings; 5 correctional settings; 4 blood banks; AIDS services organizations; and 66 healthcare clinics, including federally qualified health centers. As shown in Figure 35, the initiation of "rapid tests" in 2008 has changed the pattern of where persons are being diagnosed with HIV disease in the TGA. This pattern suggests key locations where linkage between HIV prevention and treatment are critical.



Note: Not all testing entities were included in the graph, therefore percentages do not total 100.

HIV testing data is collected by the Tennessee Department of Health. Compilation and analysis of data is crucial for describing the process of testing in the community. Table 3 presents a broad summary of statewide results from 2010. Table 4 provides information about the expanded testing conducted in Nashville and illustrates the results of testing in the community and ability to "test and treat".

Table 3: Statewide Testing and Linkage to Care, 2010

	Number Tested	% Positive	% Newly Diagnosed	% Received Results	% Linked to Care
Targets	~125,000	1.0%	0.3%	≥ 90%	≥ 80%
HIV Prevention	77,618	N/A	0.6%	95%	61%
Expanded Testing	53,589	0.7%	0.2%	92%	75%

Source: TDOH Presentation, Dr. Carolyn Wester, March 29, 2012

Table 4: Expanded Testing in Nashville TGA, 2010

Number of Tests	Total HIV-Positives	Previously Diagnosed Positive	New HIV-Positives	Received Results	Referred to Care	Linked to Care	Received/ Referred for Prevention Counseling	Received Partner Services
29,514	104 (0.4%)	43 (0.2%)	61 (0.2%)	59 (97%)	56 (92%)	50 (82%)	57 (93%)	50 (82%)

Source: TDOH Presentation, Dr. Carolyn Wester, March 29, 2012

RISK BEHAVIOR

Measurement of HIV-related risk behaviors can provide critical information for HIV planning, service development and targeting interventions. Key risk behaviors for HIV transmission include, but are not limited to the following: unprotected sex, having multiple sex partners, injection drug use, incidence of other sexually transmitted diseases, substance abuse, and perception of HIV risk. Monitoring these risk behaviors, (particularly by subpopulations) and educating the public on their danger, are key to decreasing new infections and assuring access to testing and treatment as early as possible. A few examples of important Tennessee data are: (a) the 2009 Youth Risk Behavior Survey Report noted that 20% of high school students reported not using a condom the last time they had sexual intercourse; and (b) the TN 2009 HIV Prevention Community Needs Assessment Survey reported that 25% of persons reported having unsafe sex (e.g., trading sex for money/drugs/shelter).

INDIVIDUALS UNAWARE OF THEIR HIV-POSITIVE STATUS

Using the federal formula for calculating the estimated number of persons 13 years and older who do not know they are HIV-positive, it is estimated that 1,381 HIV-positive persons within the Nashville TGA are not aware of their status. Therefore, in addition to the 5,194 persons at least 13 years of age who have been diagnosed and are currently living with HIV disease, another 1,381 persons living in the TGA are also HIV-positive, but have not yet been diagnosed. Table 5 uses the CDC's estimates, adjusted to the TGA's demographic make-up, to identify the demographics of those individuals in the TGA who are unaware of their HIV-positive status.

Estimated number of HIV-positive individuals at least 13 years of age who are unaware of their status as of 12/31/2011: (0.21/0.79) x 5,194 = 1,381.

Table 5: Estimated Undiagnosed HIV-Positive Individuals ≥13 Years by Demographics: *CDC Estimates for Projecting TGA Numbers

		CDC %	CDC % Adjusted for TGA*	Projected TGA Prevalence (Unaware)	Diagnosed TGA Prevalence	Diagnosed Prevalence + Projected Prevalence
Gender	Female	22.9%	23.0%	318	1,062	1,380
	Male	77.1%	77.0%	1,063	4,132	5,195
Race/Ethnicity	NH Black	48.6%	56.0%	773	2,320	3,093
	NH White	30.9%	33.4%	461	2,568	3,029
	Hispanic	18.0%	6.8%	94	242	336
	NH Asian/Pacific Islander	1.9%	0.84%	12	37	49
	NH American Indian/ Alaskan Native	0.5%	0.19%	3	12	15
Age Group	13-24	9.9%	9.4%	130	182	312
	25-34	21.4%	22.9%	316	695	1,011
	35-44	32.7%	34.2%	472	1,408	1,880
	45-54	23.3%	22.8%	315	1,934	2,249
	55+	12.6%	10.7%	148	975	1,123
Transmission Category§	Heterosexual-Female	18.3%		253	699	952
	Heterosexual-Male	12.0%		166	295	461
	IDU-Female	4.3%		59	247	306
	IDU-Male	8.2%		113	420	533
	MSM	53.7%		742	2,707	3,448
	MSM/IDU	2.9%		40	174	214
	Other	0.7%		10	26	35
Total†		**100%**	**100%**	**1,381**	**5,194**	**6,575**

*The CDC's national percentage estimates were adjusted for the demographic composition of the Nashville TGA.
§The CDC's percentage estimates were used because there is no reason to believe that transmission category significantly differs in the Nashville TGA from the rest of the nation. Data was adjusted statistically to redistribute cases among the other transmission categories which were reported without a risk factor. These adjustments were based on risk redistribution beliefs from the mid-1990's that may no longer be valid; this could lead to over- or under-adjustment of the data.
†Because column totals were calculated independently from the subpopulation values, and all values were rounded, the values may not sum to the respective column total.

4. SERVICE UTILIZATION

BACKGROUND AND METHODS

Service utilization data is collected electronically from all Ryan White Part A funded medical and support service providers on either a quarterly or semiannual basis. It is input into a MPHD managed CAREWare system, a centralized electronic database. The information collected includes demographic characteristics of the clients served by each agency, detailed information on the types and dates of services received by each client, as well as the clients' extent of service utilization (measured in units of service). The information is then cleaned, unduplicated, and analyzed for the calendar year by the MPHD Research Analyst. All service utilization data was run on March 5, 2012.

The service utilization analysis is based on CAREWare data, and does not include information from eHARS. Therefore, some categories, such as transmission category, may be different from eHARS because the data is based on self-report and is not confirmed, as it is for certain categories in eHARS.

TOTAL SERVICE USE: PART A FUNDED AGENCIES

A total of 4,489 PLWHA received a service from a Ryan White Part A funded agency in 2011, regardless of locality of client residence or funding source. Over 75% (3,465) of these people receiving a service from a Part A provider resided within the TGA. Therefore, Ryan White Part A funded medical and support providers served 66.5% of all PLWHA in the Nashville TGA.

Of the 3,465 PLWHA who utilized services, 2,301 people received both HIV medical and support services, representing 66.4% of those who received services. This number represents 44.2% of PLWHA with HIV disease in the TGA. Eight hundred seventy-eight (878) people living with HIV disease only received support services from a Ryan White Part A funded provider. This group accounts for 25.3% of the people who utilized services in 2011 and 16.9% of the

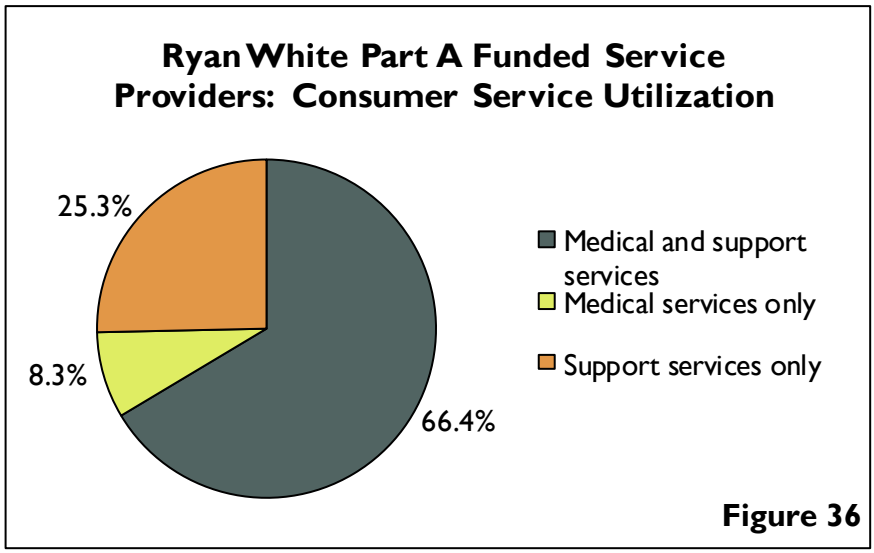


Figure 36

total number of PLWHA in the Nashville TGA. Two hundred eighty-six (286) PLWHA received only HIV medical services from a Ryan White Part A funded provider, accounting for 8.3% of those receiving services and 5.5% of all people diagnosed with HIV disease in the TGA.

There was a 4.4% (146) increase from 2010 in the number of persons receiving services from a Part A provider. There was also a shift in the types of services people received. While the same proportion of PLWHA receiving only support services (25%) remained the same from 2010 to 2011, about half as many people in 2011 (8.3%) received only medical services as had in 2010 (15.6%). However, there was an increase of 16.6% (328) among those persons receiving both medical and support services. This indicates that more people are accessing support services than had been in the past and could signify a necessary area of expansion in the system of care.

SERVICE USE: PART A FUNDED MEDICAL PROVIDERS

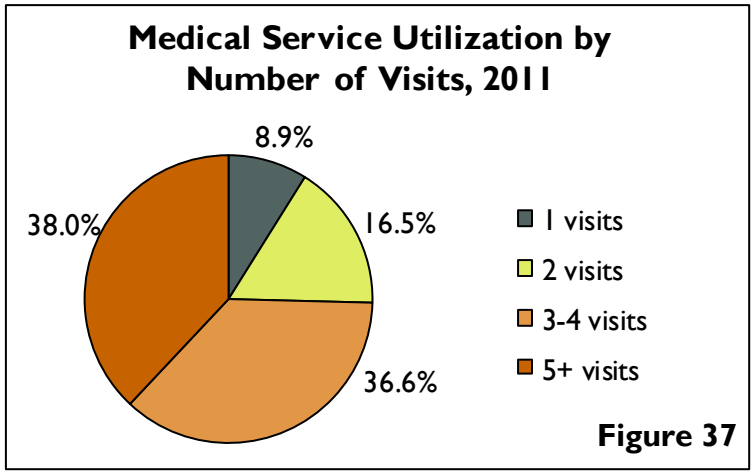
A total of 2,587 individuals received HIV medical services at a Ryan White Part A funded medical provider at least one time in 2011, although they may not have received Part A funding. This represents 49.7% of all PLWHA who resided in the Nashville TGA and 74.7% of all PLWHA who received services from a Ryan White Part A funded provider. Individuals were included in this group if they received any outpatient/ambulatory care service (office and/or lab visit) for their HIV disease in 2011.

Demographics: Of the 2,587 persons living with HIV disease who received an HIV medical service from a Ryan White Part A funded provider, 73.0% (1,888) were male, 26.5% (685) were female, and 0.5% (14) were transgender. Non-Hispanic blacks represented the largest portion with 48.1% (1,243), followed by non-Hispanic whites (45.2%, 1,170), and Hispanics (4.5%, 115); non-Hispanic others accounted for 2.3% (59). The most represented age group among those persons receiving medical services was 45-54 years old (36.6%, 948), followed closely by the 35-44 years old group (28.0%, 723). Persons 25-34 years old accounted for 16.5% (426) and persons 55-64 years of age represented 12.9% (334). Persons 15-24 and 65 and over had the lowest frequency with 3.9% (100) and 2.2% (56), respectively. The proportion of persons from each age group receiving HIV medical services is comparable to the proportions these age groups make up within the greater HIV-positive population in the TGA.

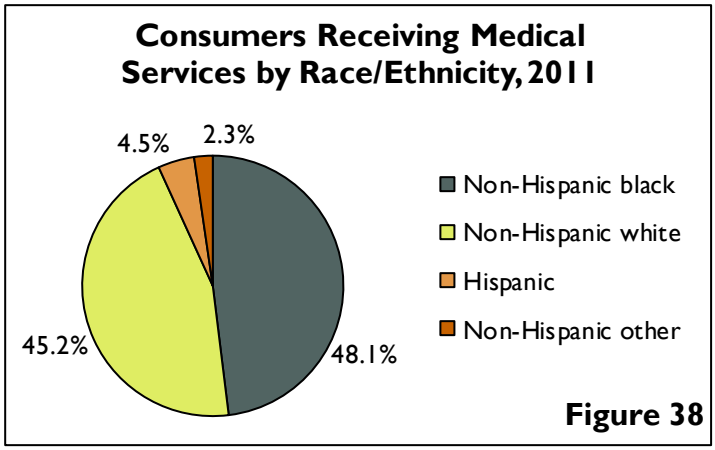
Persons with a transmission category of MSM represented the largest portion (51.7%, 1,337) of HIV-positive persons receiving medical care. Persons with a heterosexual transmission category represented 38.9% (1,007) and injection drug use represented 6.1% (157). All other transmission categories accounted for 3.3% (86) of persons in medical care.

Frequency: Almost 20% (18.5%, 478) of the PLWHA who received a medical service from a Ryan White Part A provider had not received an HIV medical care service from one of these providers prior to 2011. Of the 2,587 persons who received a medical service (office and/or lab visit), the largest portion of persons had five or more visits (38.0%, 982), followed closely by three to four visits (36.6%, 948). Persons with two visits and one visit, representing 16.5% (426) and 8.9% (231), respectively, divided the remaining 25%. There were slight differences between the trends of medical service utilization in 2011 and 2010. In 2010 the largest portion of consumers had three or four visits (37.3%), compared to the 38.0% of persons having five or more visits in 2011. There was also a small shift between these two years from fewer visits (1 or 2) to more frequent visits (3-4 and 5 or more).

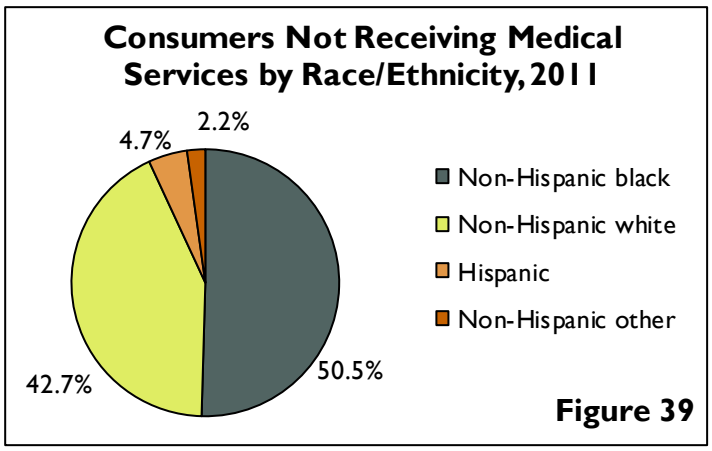
Of the 878 PLWHA who visited a Ryan White Part A funded provider, but did not receive medical services, 75.9% (666) were male, 23.2% (204) were female, and 0.9% (8) were transgender. Non-Hispanic blacks represented 50.5% (443), non-Hispanic whites represented 42.7% (375), Hispanics represented 4.7% (41), and non-Hispanic others represented 2.2% (19). Persons 45-54 and 35-44 years of age represented the largest portion of persons not receiving care; they accounted for 35.8% (314) and 25.9% (227), respectively. Persons 25-34 years of age accounted for 14.2% (125), followed by persons 55-64 (13.7%, 120), 15-24 (7.3%, 64), 65 and over (2.7%, 24), and 14 and under (0.5%, 4). It is likely that a significant number of persons in the two youngest groups are receiving medical care from Vanderbilt pediatrics; MPHD however does not have access to this data for verification.



The demographics of those persons receiving HIV medical services varied only slightly from the demographics of all PLWHA in the TGA. Non-Hispanic whites and Hispanics were slightly under-represented in terms of those persons receiving medical services from a Part A provider, and non-Hispanic blacks and non-Hispanic others were over-represented. Non-Hispanic whites accounted for 49.3% of all HIV-positive persons in the TGA, but only represented 45.2% of those persons receiving HIV medical services and Hispanics represented 4.7% of all persons in the TGA who were living with HIV disease, but only accounted for 4.5% of those receiving medical services. On the other hand, non-Hispanic blacks accounted for 44.8% of all PLWHA, but represented 48.1% of those receiving medical services; non-Hispanic others made up only 1.2% of the total population, but represented twice the proportion (2.3%) of those receiving medical services.



It is possible that non-Hispanic whites appear to be under-represented in terms of those receiving medical services because they may receive their HIV medical services from non-Part A providers. If they receive their care elsewhere then they are not accounted for here. This could then affect the proportion of non-Hispanic blacks and non-Hispanic others receiving medical services, making it appear as if they are over-represented



among those receiving medical care, when in fact they may only be over-represented at Part A providers. Hispanics may be under-represented here because they too are receiving medical care elsewhere; or it is possible that they are under-represented due to an inability to receive services from providers who meet their cultural needs.

TOTAL SERVICE USE: PART A CLIENTS

Demographics: A total of 2,601 individuals received at least one Ryan White Part A service in 2011. Thirteen percent (13.4%, 349) of Part A clients were new in 2011. Almost 75% (72.3%, 1881) of the Part A clients were male, while 26.8% (698) were female, and 0.8% were transgender. Half (49.8%, 1,296) of the clients were 45-64 years of age and 43.1% (1,122) were 25-44 years of age. Over half (52.2%, 1,361) were non-Hispanic black; non-Hispanic whites made up 40.4% (1,050), Hispanics accounted for 5.1% (133), and non-Hispanic others represented 2.2% (57).

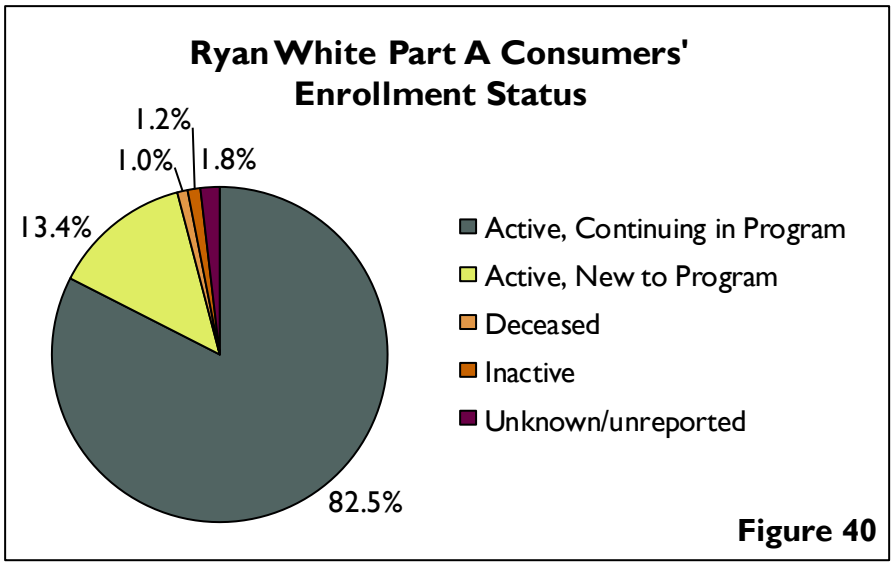


Figure 40

The majority (62.3%, 1,621) of persons receiving Part A services had a household income equal to or below the federal poverty line. Nearly two-thirds (63.1%, 1,641) had stable/permanent housing, while 27.1% (706) were not permanently housed.

Services: Clients received a variety of Part A funded services. The most common service received was medical case management (MCM), with 81.1% (2,109) of Part A clients receiving at least one MCM service. The other most common services included outpatient/ambulatory medical care (45.9%, 1,194), food bank/home-delivered meals (41.2%, 1,072), and mental health services (17.7%, 461). Early intervention services and oral health care followed closely behind with 17.1% (444) and 14.8% (386), respectively.

It is important to note that the services reported here were only Part A funded services and do not include services that were funded through non-Part A sources. Therefore, the number of services and percent of PLWHA who received those services is not indicative of the total number of individuals who received those services.

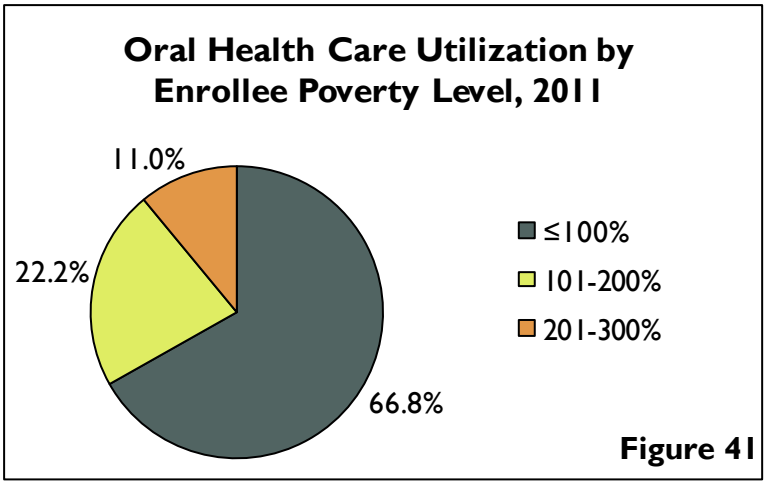
Table 6: Ryan White Part A Nashville TGA Service Utilization, 2011

	Total Number of Unduplicated Clients		Performance Measures (Outputs/Outcomes)
	Part A	MAI	
Core Services			
Outpatient/Ambulatory medical care	1,030	n/a	87.7% attended 2 or more medical appointments at least 3 months apart 94% compliance with medical monitoring standards (best practices)
Oral health services	386	108	A: 74% completed approved treatment plan MAI: 82% completed approved treatment plan
Pharmaceutical assistance	0	n/a	Number with increased access to needed medications = 0
Early intervention services	444	166	A: 77.5% attended 2 or more medical appointments at least 3 months apart MAI: 90.4% attended 2 or more medical appointments at least 3 months apart
Mental health services	529	n/a	99.6% reported improvement in emotional stability
Medical case management	1,978	n/a	84.9% attended 2 or more medical appointments at least 3 months apart
Substance abuse services-outpatient	100	n/a	93.2% reported awareness of relapse triggers and recovery techniques
Support Services			
Emergency financial assistance	124	n/a	Number served = 124
Food bank/home-delivered meals	1,136	591	A: Number who received food needed to meet daily living needs = 1,136 MAI: number who received food needed to meet daily living needs = 591
Housing services	42	n/a	100% reported improvement in health status
Linguistics	15	n/a	Number with increased access to HIV services due to receipt of service = 15
Medical transportation services	71	n/a	Number with increased access to HIV services due to receipt of service = 71
Psychosocial support services	167	n/a	100% experienced increased knowledge of HIV, increased self-management, or increased comfort with having HIV disease
Referral for health care/support services	136	n/a	Number with increased access to needed medications due to receipt of service = 136

Note: The numbers served are based on the 2011 calendar year and the performance measures are based on the 2011 grant year. Total number of clients is not unduplicated between Part A and MAI.
N/A: These services are not funded through MAI.

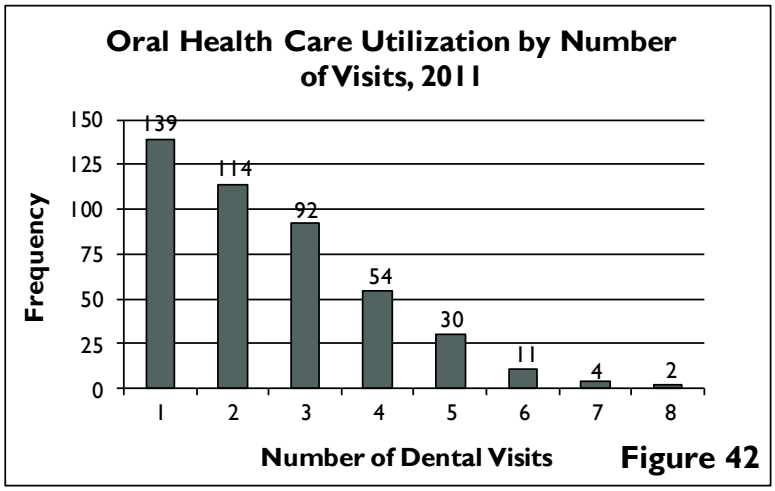
ORAL HEALTH CARE UTILIZATION

Four hundred and forty-six (446) people living with HIV disease in the TGA received oral health care services in 2011 through Ryan White Part A, Ryan White Part B, or Ryan White MAI funding. The majority (67.5%, 301) of individuals were male, while 32.2% (144) were female and 0.2% (1) were transgender. Those who received oral health care services were primarily non-Hispanic black (52.7%, 235) and non-Hispanic white (42.8%, 191); non-Hispanic others represented 4.5% (20) and Hispanics accounted for 0.9% (4).



Note: The 2011 poverty level for one person was $10,890 annually. The maximum annual income a family of one could have and still qualify for Ryan White services was $32,670 (300% of poverty level).

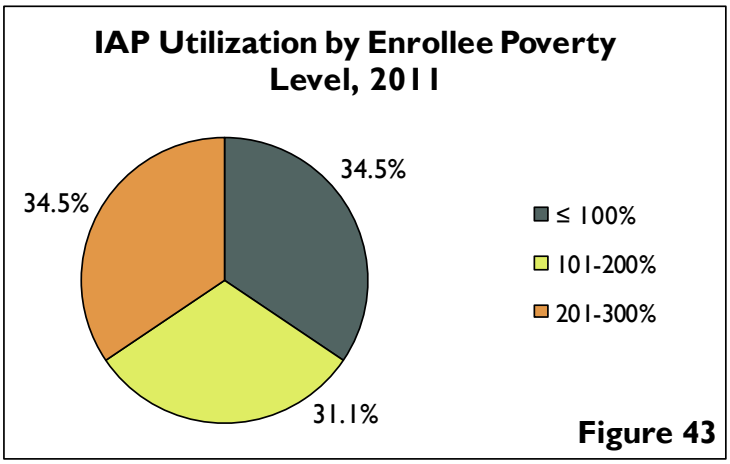
The majority of persons receiving oral health care services lived in Davidson County (78.0%, 348), followed by Rutherford (9.2%, 41), Wilson (3.8%, 17) and Sumner (2.2%, 10) counties. Two-thirds (66.8%, 298) were living at or below 100% of the poverty level, 22.2% (99) were between 101-200% of the poverty level, and 11.0% (49) were between 201-300% of the poverty level.



The number of oral health care visits received by each enrollee in 2011 ranged from one to eight visits. Over half (56.7%, 253) of the individuals received one or two visits and over 75% (77.4%, 345) received one to three visits.

INSURANCE ASSISTANCE PROGRAM (IAP) UTILIZATION

A total of 595 PLWHA who lived in the Nashville TGA received insurance assistance in 2011. Over half (54.8%, 326) of recipients were non-Hispanic white and 39.5% (235) were non-Hispanic black; Hispanic and non-Hispanic others each represented 2.9% (17) of individuals who received insurance assistance in 2011. The majority were male (75.8%, 451), while 23.5% (140) were female and 0.67% (4) were transgender. Over one-third (34.5%, 205) of IAP recipients were living at or below 100% of the federal poverty level; 31.1% (185) were at 101-200% of the federal poverty level and 34.5% (205) were at 201-300% of the federal poverty level. Ninety-five (95) of the IAP enrollees were new in 2011, accounting for 16.0% of all enrollees. (Source: Nashville Cares)



Note: The 2011 poverty level for one person was $10,890 annually. The maximum annual finances a family of one could have and still qualify for Ryan White services was $32,670 (300% of poverty level).

AIDS DRUG ASSISTANCE PROGRAM (ADAP) UTILIZATION

A total of 1,085 PLWHA in the Nashville TGA utilized ADAP services in 2011. ADAP recipients were 76.6% (831) male, 22.8% (247) female, 0.28% (3) transgender, and 0.37% (4) unknown. The largest portion was non-Hispanic black (48.4%, 525), followed by non-Hispanic white (41.8%, 453), Hispanic (5.4%, 59), and non-Hispanic others (4.4%, 48). One hundred seventy-five (175) of the 1,085 enrollees were new in 2011, accounting for 16.1% of the total Nashville TGA ADAP enrollment in 2011. The majority of ADAP enrollees resided in Davidson County (76.0%, 825), followed by Rutherford County (9.4%, 102). (Source: Tennessee State Department of Health)

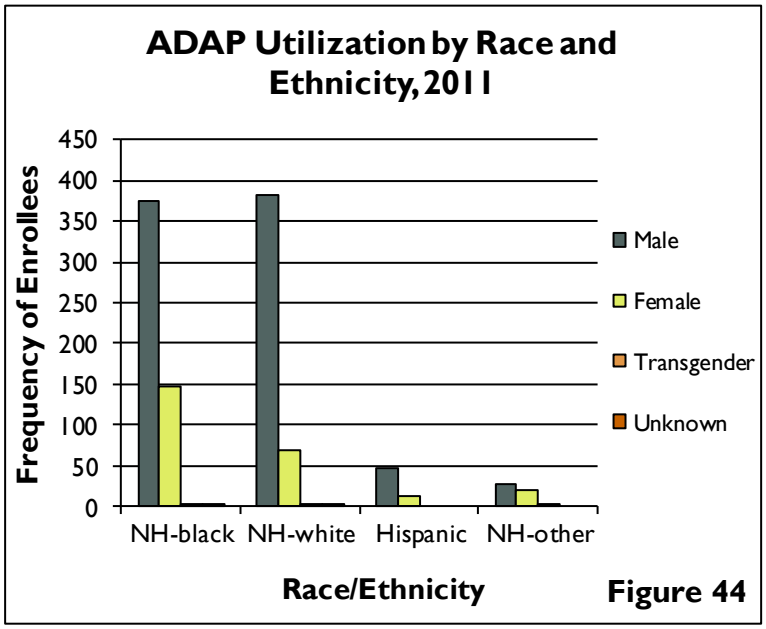


Table: 7 ADAP Utilization by Race/Ethnicity and Gender, 2011

	Female		Male		**Total**	
	Number	Percent (%)	Number	Percent (%)	**Number**	**Percent (%)**
NH Black	147	13.6%	374	34.7%	**521**	**48.3%**
NH White	68	6.3%	383	35.5%	**451**	**41.8%**
Hispanic	13	1.2%	46	4.3%	**59**	**5.5%**
NH Other	19	1.8%	28	2.6%	**47**	**4.4%**
Total	**247**	**22.9%**	**831**	**77.1%**	**1,078**	**100%**

TENNCARE (MEDICAID) UTILIZATION

In 2011, 247,640 persons in the Nashville TGA were enrolled in TennCare, of which 1,161 were living with HIV disease (0.47%). This accounts for 22.3% of the total number of PLWHA in the TGA. According to a 2011 Kaiser Family Foundation report, persons living with HIV disease represent <1% of the total Medicaid population. While Medicaid recipients with HIV represent a small portion of the total Medicaid population, they account for 23% of people who have been diagnosed with HIV disease in the United States and 47% of those persons in care. During 2011, in the Nashville TGA, only 22.3% of persons living with HIV disease were enrolled in TennCare.

PLWHA receiving TennCare in the TGA were 45.4% female and 54.6% male. The largest portion (54.5%) of enrollees were non-Hispanic blacks, followed by non-Hispanic whites (36.4%), non-Hispanic others (7.9%), and Hispanics (1.1%). Almost half (48.4%) of the enrollees were between 45 and 64 years of age; 42.4% were between 21 and 44 years of age. The majority of PLWHA in the TGA enrolled in TennCare in 2011 lived in Davidson County (74.2%); Rutherford County represented 9.6% of enrollees. (Source: TennCare)

Table 8: TennCare Utilization by Race/Ethnicity and Gender, 2011

	Female		Male		**Total**	
	Number	Percent (%)	Number	Percent (%)	**Number**	**Percent (%)**
NH Black	304	57.7%	329	51.9%	**633**	**54.5%**
NH White	167	31.7%	256	40.4%	**423**	**36.4%**
Hispanic	7	1.3%	6	0.9%	**13**	**1.1%**
NH Other	49	9.3%	43	6.8%	**92**	**7.9%**
Total	**527**	**45.4%**	**634**	**54.6%**	**1,161**	**100%**

5. UNMET NEED

DEFINITION OF UNMET NEED

HRSA defines *unmet need* as individuals who are HIV-positive and know their status, but are not currently receiving primary medical care for HIV disease. An individual is considered to have unmet need if there is no evidence of any of the following three components of HIV primary medical care in a specified 12-month period: (a) viral load testing, (b) CD4 count, or (c) provision of anti-retroviral therapy. Unmet need focuses on HIV primary medical care and does not include support services in its assessment.

UNMET NEED METHODOLOGY

To calculate the 2011 unmet need estimate for the Nashville TGA several data sources were used. Ryan White Part A funded medical providers submitted client-level service data to the grantee. These data were analyzed using CAREWare, and the clients who received HIV primary medical care services were extracted. Additionally, the eHARS database includes some lab values, so this data was also used in determining unmet need. Service utilization of the AIDS Drug Assistance Program (ADAP) was then obtained from the Tennessee State Department of Health because this data indicates the provision of anti-retroviral therapy.

All three sources of 2011 medical care utilization data were matched with the data of those HIV-positive individuals residing within the Nashville TGA as of 12/31/2011. Data matching was initially conducted using SAS Enterprise Guide by matching last name, first name, date of birth, and race/ethnicity. Then, visual matching was conducted in order to catch records with typos or miss-entered data.

An estimation of the 2011 HIV medical care utilization at the Nashville Veteran's Administration was included in the unmet need estimation. While some duplication is possible between this number and those included in the ADAP utilization list, because this list was not significant in number, it is not believed that there would be much duplication.

The unmet need estimate was then calculated by using Mosaica's unmet need framework. Mosaica, a HRSA contractor, developed the unmet need framework to assess the number of persons in a specified area living with HIV disease who meet the definition of unmet need. The framework calculates unmet need by subtracting the number of PLWHA who received as least one HIV medical care service from the total number of prevalence cases residing in the TGA in 2011. The remaining PLWHA are those persons not receiving any HIV medical care services from an HIV medical provider, and thus represent unmet

need. A review completed by Mosaica in 2007 estimated the national unmet need to be 37% for Ryan White Part A and 43% for Ryan White Part B.

UNMET NEED ESTIMATION LIMITATIONS

The unmet need estimation is inherently limited for multiple reasons. The assessment of unmet need is a methodologically complicated process requiring the capacity to collect all the necessary data, integrate it together, and translate necessary information for appropriate use. Limitations exist in data availability and access. CAREWare is made up of service utilization data for only those persons receiving care from a Ryan White Part A provider. Therefore, if a person receives their medical care from a private physician, health maintenance organization (HMO), free clinic, or any medical entity outside of the Part A program, their utilization of medical services may not be known and could be causing unmet need to be over-estimated. These people not receiving CARE Act services are likely to be persons with higher incomes or those who are incarcerated.

Also, at this time, eHARS does not have all lab values included in its records; individuals may have had viral load testing or their CD4 count determined, however if it has not yet been input into eHARS and they do not appear on any of the other utilization lists, their medical service utilization is not confirmed for 2011. It is through this particular source that the HIV medical utilization or persons with higher incomes can be verified. Once all lab values are included in eHARS unmet need estimation is likely to be easier.

Limitations exist with matching data from various databases. Challenges include matching equivalent data variables, determining typographical errors, and unduplicating clients so that they are only counted once. Because different systems and databases may have different data entry rules, some data matches are not recognized by computer matching, and therefore visual matching by the Research Analyst is also necessary.

UNMET NEED ESTIMATE

In 2011 the estimated unmet need in the Nashville TGA was 45.5%. A total of 2,352 people did not receive HIV primary medical care in 2011. Unmet need decreased from 48.4% in 2010 to 45.5% in 2011. This change likely indicates growing accuracy of data and increased access to it.

Table 9: 2011 Unmet Need Estimate

Category	Number of Cases	Date Source
Population Size	N	
Number of persons living with HIV disease, 2011	5,209	eHARS, Metro Public Health Department Division of Epidemiology
Care Patterns		
Number of PLWHA who received HIV primary medical care services in 2011	2,857	CAREWare, eHARS lab values, IAP utilization, ADAP utilization, Veterans Administration
Calculated Results		
Number of PLWHA who did not receive primary medical care services in 2011	2,352	
Percentage of HIV-positive individuals aware of their status, but not receiving HIV primary medical care services (quantified estimate of unmet need)	**45.5% of PLWHA**	

6. EARLY INTERVENTION SURVEY

In 2008-2009 Early Intervention Services (EIS) staff conducted a survey with many of their new clients who met the definition of unmet need, meaning there were no records of them having received any primary medical care for their HIV disease within the previous year. A total of 102 surveys were completed.

Of the 102 survey respondents, 55% were HIV-positive (not AIDS), 26% were living with AIDS, and 19% did not know if they had HIV or had progressed to AIDS. The majority of respondents were male (81%); 17% were female and 2% were transgender. The respondents ranged in age from 22 to 64, with a median age of 39; the largest portion of respondents was 24 to 37 years of age. Non-Hispanic blacks accounted for over half (56%) of respondents, while non-Hispanic whites represented 42.1% and Hispanics represented 3.5%.

Respondents provided a variety of experiences that may have contributed to their having been lost to care. Nearly one-quarter (24%) of respondents reported being incarcerated in the past year; 63% of these persons were non-Hispanic black and 37% were non-Hispanic white. Twenty-three percent (23%) of respondents indicated that they had been homeless in the past year; those individuals were 65% non-Hispanic black and 35% non-Hispanic white.

Over half (58%) of the respondents stated that they had not been to see an HIV doctor in over a year and 28% indicated they had not seen an HIV doctor in two or more years prior to connecting with EIS. Various reasons were given for why people had not seen an HIV primary medical doctor in over a year. The most common answers were that the person was in jail/prison (26%), was actively using drugs/alcohol (25%), or felt they "weren't sick" (24%); other responses included not being ready to deal with it (13%) and that they were/are homeless (12%).

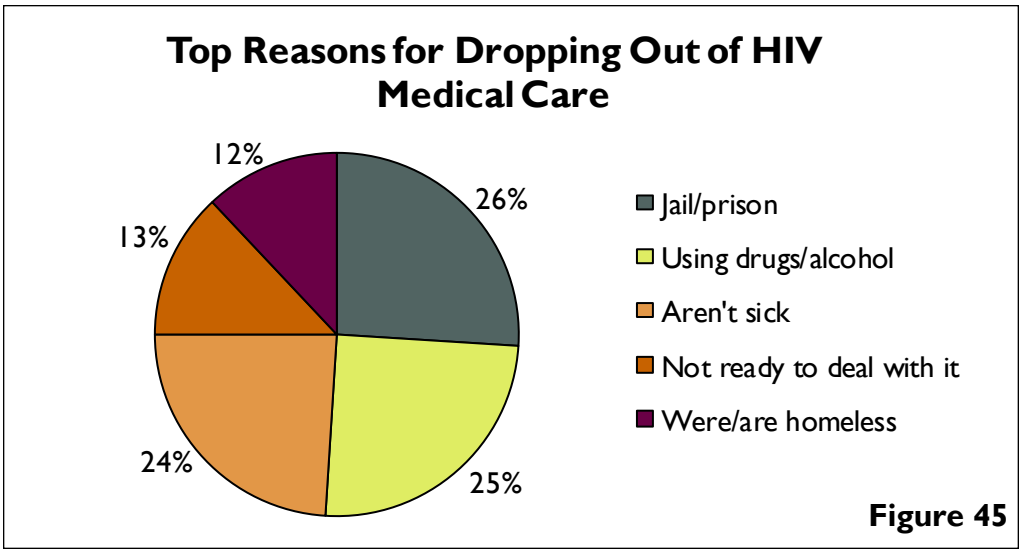


Figure 45

7. SERVICE NEEDS AND GAPS

BACKGROUND

In 2011, a service gaps survey was created by the MPHD Research Analyst and the Needs Assessment Committee to determine what medical and support services were needed by PLWHA in the Nashville TGA who were in care. The survey was aimed at ascertaining what services a person knew about, what services a person needed, what services a person was receiving, whether or not those services were meeting the client's needs, and any barriers the person had experienced in accessing services.

METHODOLOGY

Survey Development: An appropriate sample size was determined to be at least 344 PLWHA living in the TGA, in order to maintain a margin of error of +/-5 percentage points with a 95% confidence level for a population of 3,319 (the number of PLWHA who received HIV services at a Ryan White Part A funded provider in 2010).

The survey was created by the MPHD Research Analyst. Some questions were adapted from other surveys/interview guides, including the Las Vegas TGA's Consumer Survey of PLWHA.

Confidentiality Measures: All peers and volunteers helping to execute the survey signed a confidentiality agreement. Each participant who completed a survey at a provider site was informed by a peer or staff member that the survey was voluntary and confidential. Participants receiving a survey with home-delivered food bags received a document explaining that the survey was voluntary, anonymous, and that their individual answers would remain confidential. All respondents were instructed to omit their name and any other identifiable information from the survey. No survey questions required identifiable information to be disclosed.

Survey Administration: The survey was administered by peers at provider sites in an attempt to strengthen the integrity of the survey by (a) ensuring more accurate responses from the respondents, and (b) increasing the response rate within the HIV-positive population due to having a good rapport amongst the individuals. The peers were trained by the Research Analyst on the following:

- The importance of informing participants of the voluntary nature of the survey, as well as the survey's anonymity and therefore inherent confidentiality of personal information.
- How to administer the survey without bias.
- The importance of accurate and honest data collection.

After the peers were trained they conducted surveys at their provider sites through convenience sampling. Provider sites being used included the First Response Center, the Meharry Wellness Center, Nashville Cares and Vanderbilt's Comprehensive Care Clinic. Nashville Cares also delivered surveys to clients receiving home-delivered food bags.

Data Entry and Data Cleaning: A corresponding survey was created using SurveyMonkey in order to allow for more accurate data entry. This survey was used only by Ryan White Part A staff for data entry purposes. Directions for data cleaning and entry were established and reviewed to ensure employees entered survey data in a consistent manner. The surveys were numbered and manually entered into SurveyMonkey following the coding guidelines.

Data entry was completed by the Research Analyst, as well as other members of the Ryan White Part A Program, as surveys were received until all surveys were entered. The data were checked by the Research Analyst after data entry was completed to ensure data accuracy and to correct improper coding.

It is important to note that each question except one allowed for only one response, and therefore the number of responses for each question is indicative of the number of respondents answering the question. However, respondents could mark more than one HIV provider whom she or he had received services from within the last year.

Limitations: Participant responses were based on the perceptions of the participant and therefore are only representative of his/her perceptions. Also, the perceptions of individuals not participating in the survey are not known, nor is there any way to determine what characteristics may vary between individuals participating in the survey from those who did not. Surveys were only conducted at Ryan White Part A funded providers. Consequently PLWHA who did not receive services from these providers or did not receive services from these providers during the surveying time period did not have the opportunity to disclose their perceptions of HIV care and support services.

Analysis: Frequency counts were conducted on all demographic information, including

- HIV status
- Gender
- Zip code
- Race and ethnicity
- Age

Average and range were calculated for age as well. Percentages were also calculated for HIV status, gender, race and ethnicity.

Frequency counts and percentages were performed for (a) the length of time since the client last saw a medical provider, (b) the number of clients receiving services from each HIV provider within the last year, (c) yes or no questions about experiences within the past year, and (d) barriers to accessing services.

Survey participants ranked their top five services (of the 24 services that Ryan White Part A funds) according to importance. Responses were weighted as indicated by the order of importance assigned by the participant; frequency for how often the service was included in the top five services was also noted. Frequency counts and percentages were conducted for whether or not a client knew about a service, was receiving a service, and was satisfied with the service if he received it.

Cross tabulations were performed on several data elements.

Analyses were only conducted on valid, non-missing responses; if a respondent did not answer a question or did not give a valid response, the response was not included in the analysis for that question.

KEY FINDINGS

A total of 427 surveys were submitted by PLWHA. Of these, 19 surveys were not included in the study due to incompleteness and another 20 surveys were omitted because the persons did not actually live within the Nashville TGA. Therefore, a total of 388 valid surveys were submitted.

It is important to note that some respondents may not have answered every question and therefore the *n-value* for each question is different. As a result, comparing frequencies across questions is not an accurate measure of difference; comparing percentages allows for a more accurate assessment.

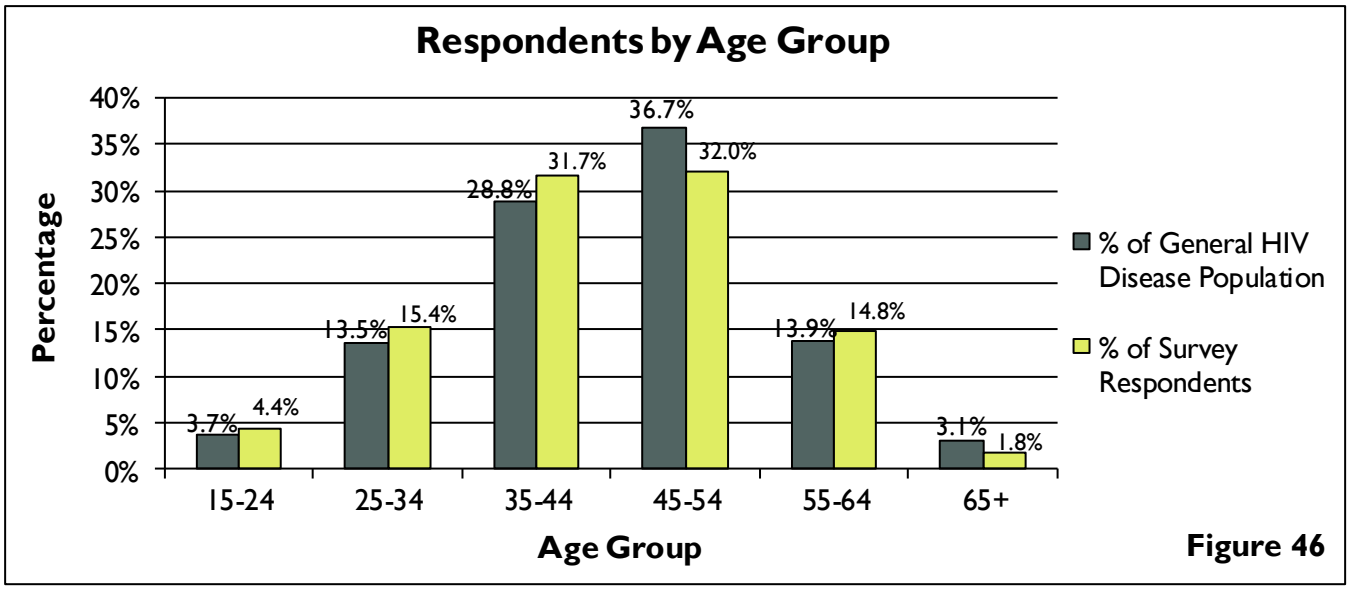


Figure 46

Demographic Information

The majority (74%, 287) of individuals participating in this survey were living with HIV, 18.3% (71) were living with AIDS, and 7.7% (30) were not sure if they had HIV or had progressed to AIDS. Ages ranged from 18 to 81, with the average age of respondents being 43.7. The majority (63.6%) of respondents were between the ages of 35 and 54. The proportion of ages of survey respondents was similar to that of the general HIV disease population in the Nashville TGA.

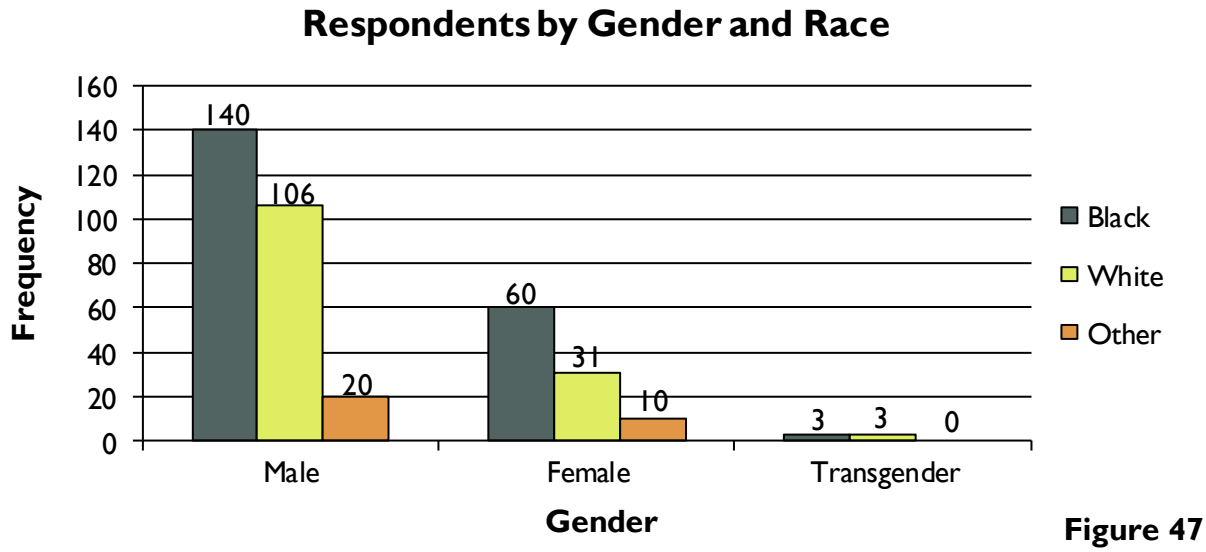


Figure 47

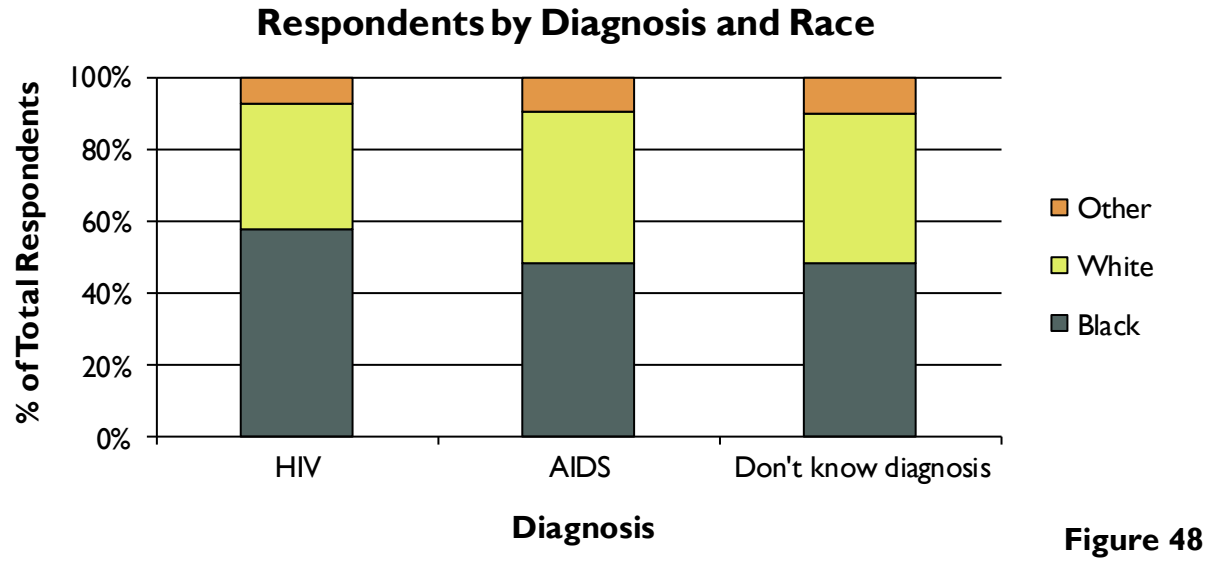


Figure 48

Males accounted for 71.7% (274) of respondents, with females accounting for 26.7% (102), and transgender persons accounting for 1.6% (6). The majority (54.9%) of respondents were Black, 37% were White, and 8.2% of participants identified as Other. Twenty-seven (27) of those who identified as the Other race did not specify another race; two people identified as Native American, one as Asian, and one

as multiple races. By race and gender, 37.5% of respondents were Black males, 28.4% were White males, 16.1% were Black females, 8.3% were White females, 0.8% were Black transgender, and 0.8% were White transgender.

The majority (57%) of respondents with HIV were Black, 35% were White, and 7.5% identified as Other. Of those individuals who had been diagnosed with AIDS, 48% were Black, 42% were White, and 10% were Other. Individuals not knowing whether their current diagnosis was HIV or AIDS were 48% Black, 41% White, and 10% Other. The racial/ethnic breakdown of respondents was similar between those with AIDS and those not knowing if they had HIV or AIDS. However, the number of respondents with HIV had a significantly higher frequency of Blacks and fewer Whites.

Eight respondents (4.6%, 8) identified as Hispanic, while 165 respondents (95.4%) identified as non-Hispanic. However, of the 388 survey respondents, only 173 persons (44.6%) responded to this question; 215 persons skipped this question. Therefore, it is likely that this measure did not accurately capture the true number of Hispanic and non-Hispanic individuals completing the survey. Consequently, Hispanic ethnicity data were not used in survey analysis.

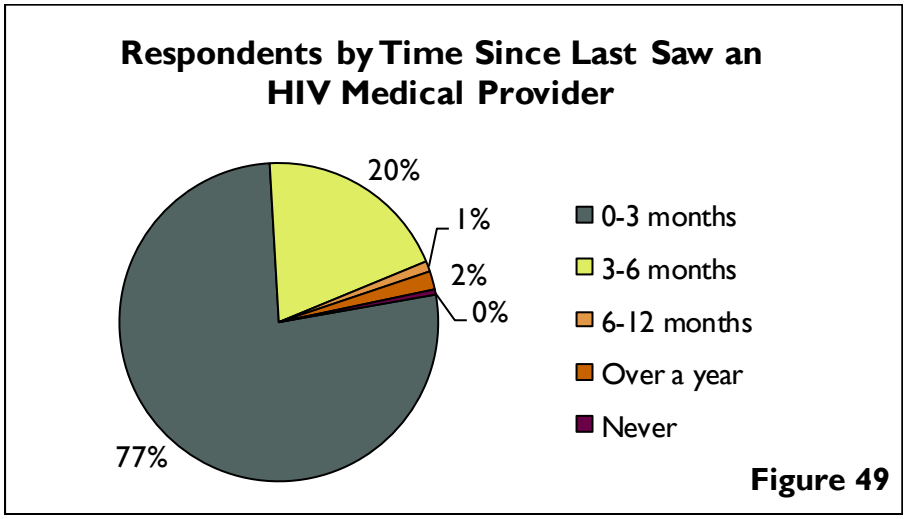


Figure 49

The majority of respondents resided in Davidson County (298), accounting for 89.8% of responses. Thirty-four (34) individuals lived outside of Davidson County, but were still located within the TGA; these individuals accounted for 10.2% of responses. Fifty-six (56) participants did not provide their zip code. The most common zip codes were 37209 (39), 37208 (31), 37203 (29), and 37207 (28). The most common non-Davidson County zip code was 37086 (4), located in Rutherford County.

Because only 10% of respondents lived in non-Davidson counties, and 19% of PLWHA in the Nashville TGA lived in non-Davidson counties, the demographic make-up of the survey respondents was not representative of PLWHA in the Nashville TGA. As a result, conclusions may not be as representative for individuals living outside of Davidson County as they are for those living within Davidson County.

History of Services

Most (97%, 363 of 376 responses) respondents had seen a medical provider for HIV medical care within the last six months. Seventy-seven percent (77%, 289) of respondents had seen a medical provider for HIV care within the last three months and 20% (74) had seen one in the last three to six months. Four respondents reported not having seen an HIV medical professional for 6 to 12 months and 7 respondents had not seen an HIV medical provider in over a year. Two individuals (0.5%) had never seen an HIV medical provider for HIV medical care.

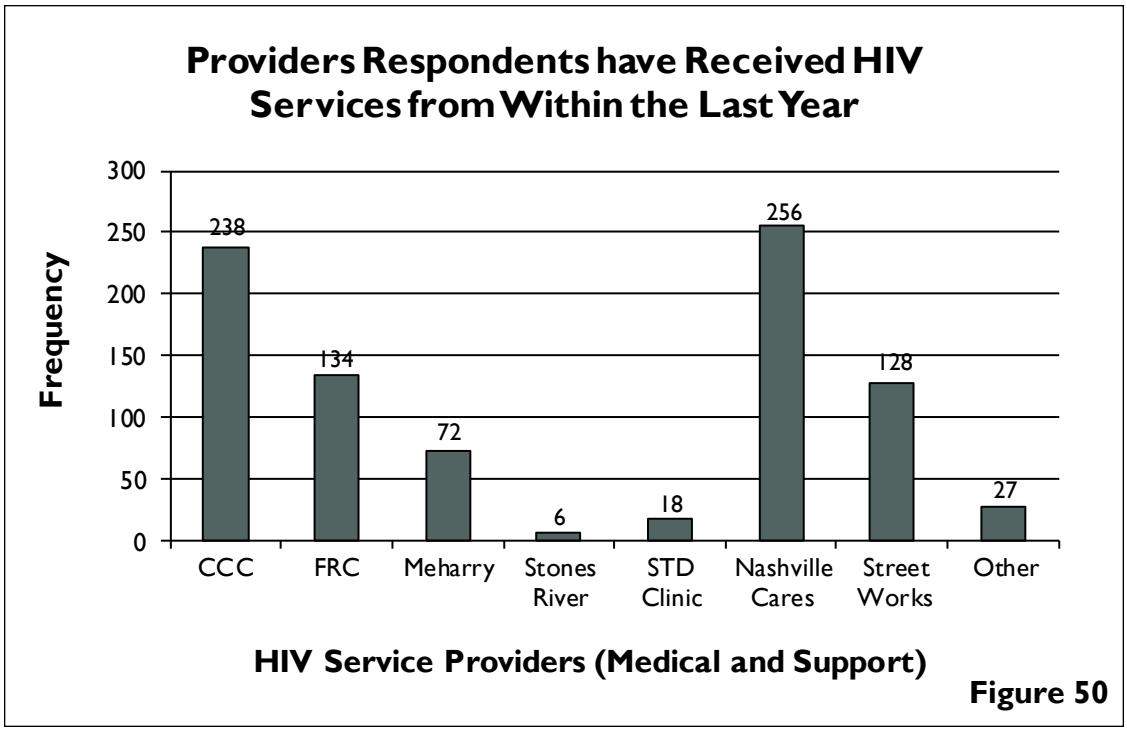


Figure 50

Participants received HIV services from multiple providers within the last year. The most frequented HIV support service provider was Nashville Cares, having served 66.8% (256) of respondents within the last year. Street Works served 33.4% (128) of respondents and the MPHD STD Clinic served 4.7% (18) of respondents.

The HIV medical provider serving the most respondents was Vanderbilt's Comprehensive Care Clinic, with 62.1% (238). The other HIV medical providers providing services to respondents included the First Response Center (35%, 134), the Meharry Wellness Center (18.8%, 72), and Stones River (1.6%, 6). Of those persons selecting Other, eight individuals noted that they received HIV services from the VA within the last year and three persons indicated they received HIV services through the jail system.

It is important to note that respondents could select multiple HIV providers that they had seen within the last year. Therefore, the total number of responses did not equal the number of respondents answering the question, but rather the actual number of providers utilized. Also, the percentages do not total to 100% because each provider was analyzed separately.

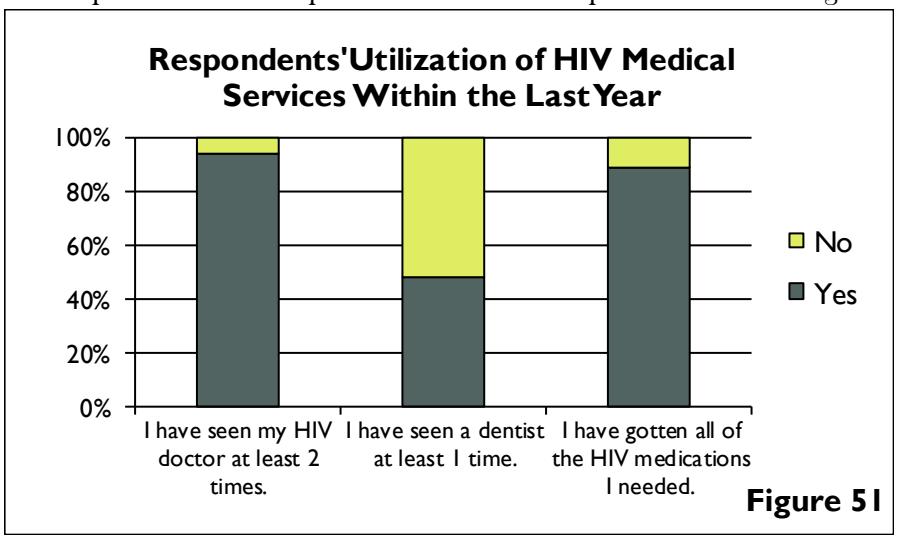


Figure 51

Experiences within the Last Year

Nutrition: Nearly one-quarter (24.4%, 94) of respondents did not have enough food to eat for three or more days in a row. Twenty-four percent (23.6%, 91) of respondents were told by their doctor to take a nutritional supplement to support their health; of those individuals, 43% (39) did not have enough food to eat for three or more days in a row.

Housing: Being homeless within the last year was reported by 19.8% (76) of respondents, meaning they were either living in a shelter or on the street for some period of time.

Other Health Problems: Fifteen percent (14.9%, 57) of respondents had another health problem and did not know where to go.

Jail/Prison: Incarceration (jail or prison) during the last year was reported by 14.1% (54) of respondents.

HIV Medical Service Utilization: Most (94.3%, 365) respondents saw their HIV doctor at least two times within the last year; 22 individuals did not see their HIV doctor at least two times in the past year. Almost half (47.8%, 184) of respondents saw a dentist at least once within the last year; 201 respondents did not see a dentist in the past year. Most (88.8%, 341) respondents got all of the medications they needed in the last year; 43 persons were not able to get all of the medications they needed.

Need for Assistance from Others: A need for help in dealing with sadness, stress, or other emotional issues was reported by 43% (165) of respondents. A need for help dealing with alcohol or drug use during the last year was reported by 18.8% (72) of respondents. Nearly half (48.3%, 187) of respondents needed to talk with someone else who was HIV-positive. Almost one-quarter (23.4%, 89) of respondents needed to talk with a member of the clergy or a pastor within the last year.

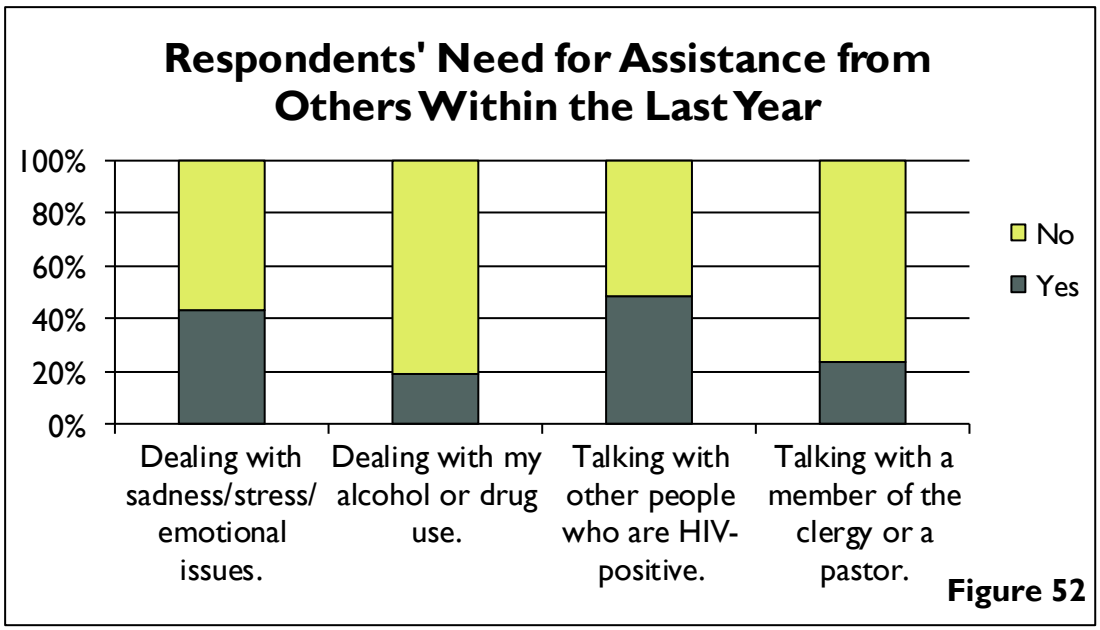


Figure 52

Need for Assistance in Understanding How to Manage Their HIV Disease: Over one-third (35.5%, 135) of respondents needed help finding and getting the services they needed within the last year. A need for help understanding doctor's directions and/or their medications was reported by 18.7% (72) of respondents. Twelve percent (11.7%, 45) of respondents had unanswered questions about their HIV disease and how to stay healthy. Having unanswered questions about what they should eat to stay healthy was reported by 19.6% (75) of respondents.

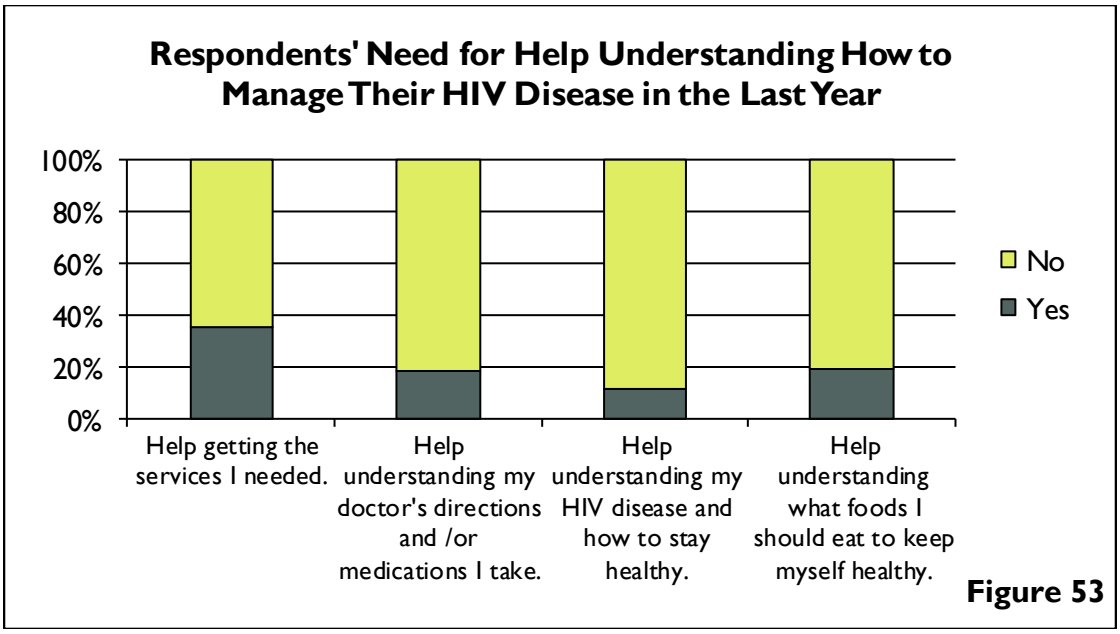


Figure 53

Homebound Persons: Nine percent (8.6%, 33) of respondents were homebound for a month or longer during the last year due to illness and needed help from a doctor or nurse. Eighteen percent (18%, 69) needed help from someone to help care for their home, providing services such as cooking and cleaning.

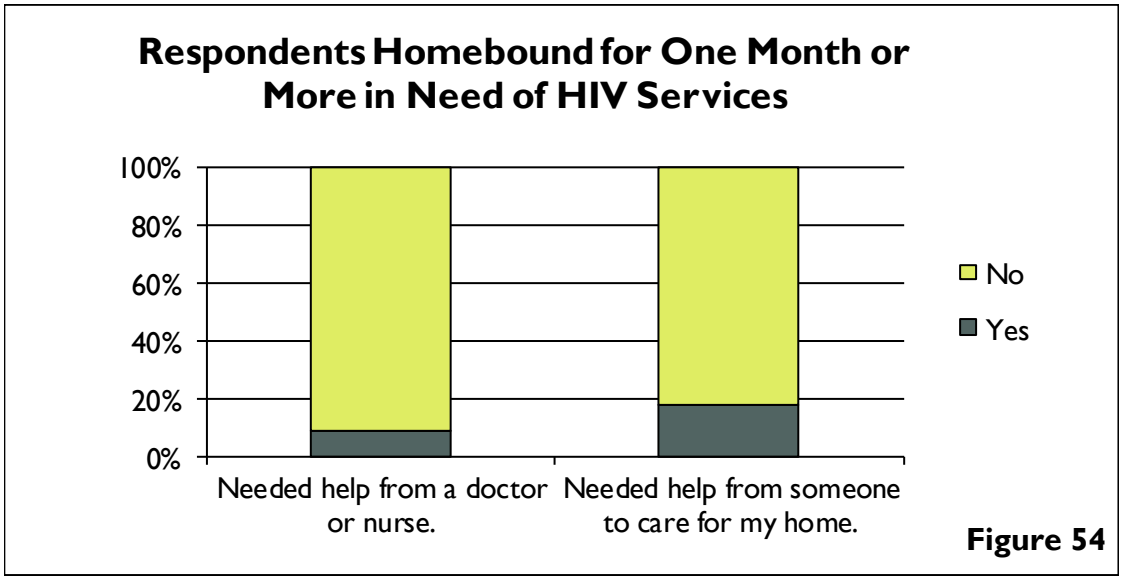


Figure 54

SERVICE PRIORITIES

Respondents were asked to rank the top five services they needed to maintain their health. The top five services selected, in order of priority, were as follows: HIV medical care, HIV medications, dental care, housing, and food. Although fewer people included housing in their top five services than included food, housing received an overall higher ranking of importance than did food.

The *Services by Frequency* column indicates the number of people who included that service in their top five most important services, while the *Services by Priority Level* column indicates the services by order of importance. This column was calculated by multiplying the frequency in which the service was chosen with the average ranking of importance it was assigned.

Table 10: Respondents' Service Priorities

	Services by Frequency	Services by Priority Level
1	HIV medical care (290)	HIV medical care
2	HIV medication (254)	HIV medications
3	Dental care (200)	Dental care
4	Food (145)	Housing
5	Housing (138)	Food
6	Transportation for HIV care (107)	Transportation for HIV care
7	Help paying for insurance (71)	Help paying for insurance
8	Help paying utilities (57)	Support groups
9	Support group (54)	Help paying utilities
10	Counseling (50)	Counseling
11	Help finding services (35)	Help finding services
12	Nutritional supplements (29)	Drug/alcohol treatment
13	HIV education (27)	Nutritional supplements
14	Drug/alcohol treatment (26)	Talking with someone HIV-positive
15	Talking with someone HIV-positive (22)	HIV education
16	Counseling from a dietician (14)	Counseling from a dietician
17	Legal services for power of attorney (POA), do not resuscitate (DNR), accessing benefits (14)	Legal services for power of attorney (POA), do not resuscitate (DNR), and accessing benefits
18	HIV medical care at home (9)	HIV medical care at home
19	Child care services (6)	Pastoral/clergy support
20	Physical therapy (6)	Physical therapy
21	Pastoral/clergy support (6)	Child care services
22	Time off for my caregiver (2)	Time off for my caregiver
23	Language interpretation (1)	Language interpretation
24	Hospice care (1)	Hospice care

Personal Barriers: Not being ready to deal with their HIV disease diagnosis was reported by 21.6% (83) of respondents. Over one-third (34.4%, 131) of respondents were worried about other people finding out they had HIV disease.

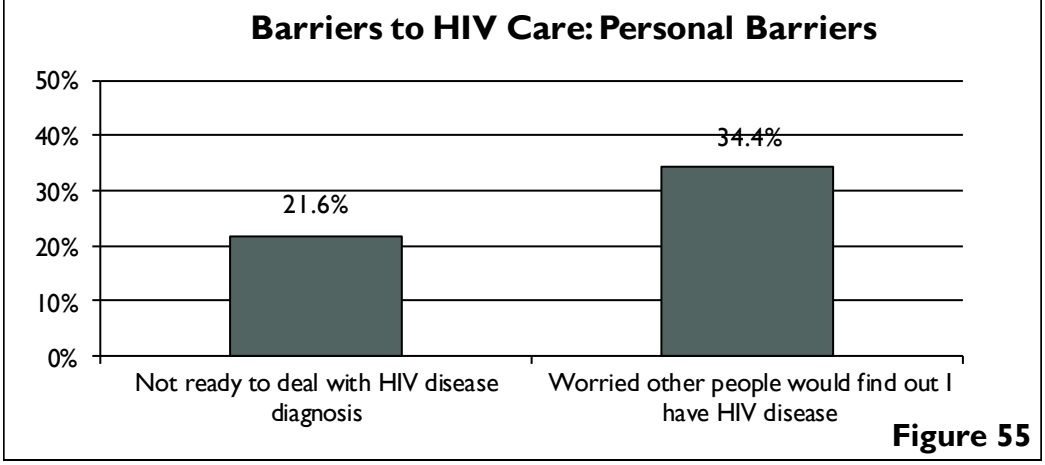


Figure 55

Knowledge Barriers: Not knowing the location of the organization providing a service was reported by 13.3% (51) of respondents. Not knowing what services they needed in order to deal with their HIV disease was reported by 14.1% (54) of respondents. Not knowing where to go or who to ask for help was reported by 14.5% (56) of respondents.

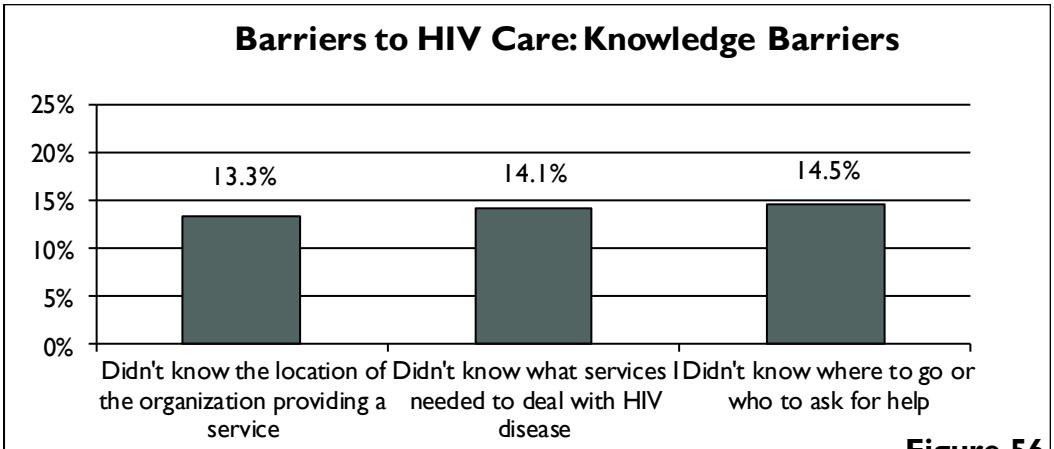


Figure 56

Appointment Barriers: Having to wait too long to get an appointment with their HIV doctor was reported by 12.6% (48) of respondents. Thirteen percent (12.8%, 49) of people were not able to access services because the hours the provider is open did not work with their schedule. Nearly one-quarter (24.7%, 94) of respondents did not have transportation to get to their appointments.

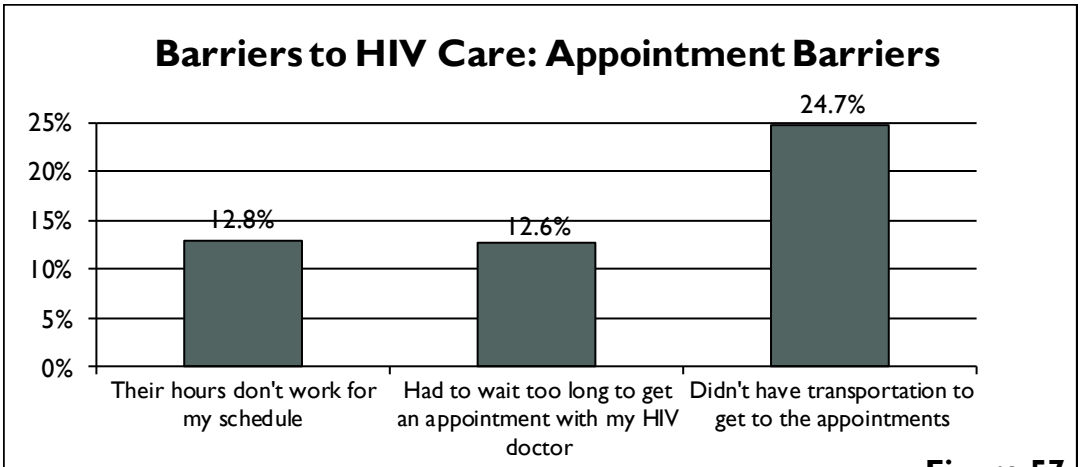


Figure 57

Financial Barriers: Not being able to afford the services they needed was reported by 18.8% (72) of respondents. Lack of health insurance as a barrier to care was reported by 22.7% (87) of respondents. Fifteen percent (14.9%, 57) of respondents reported an inability to qualify for services because of their income. Twenty percent (19.6%, 75) of respondents had insurance, but the insurance did not cover the full costs of services needed.

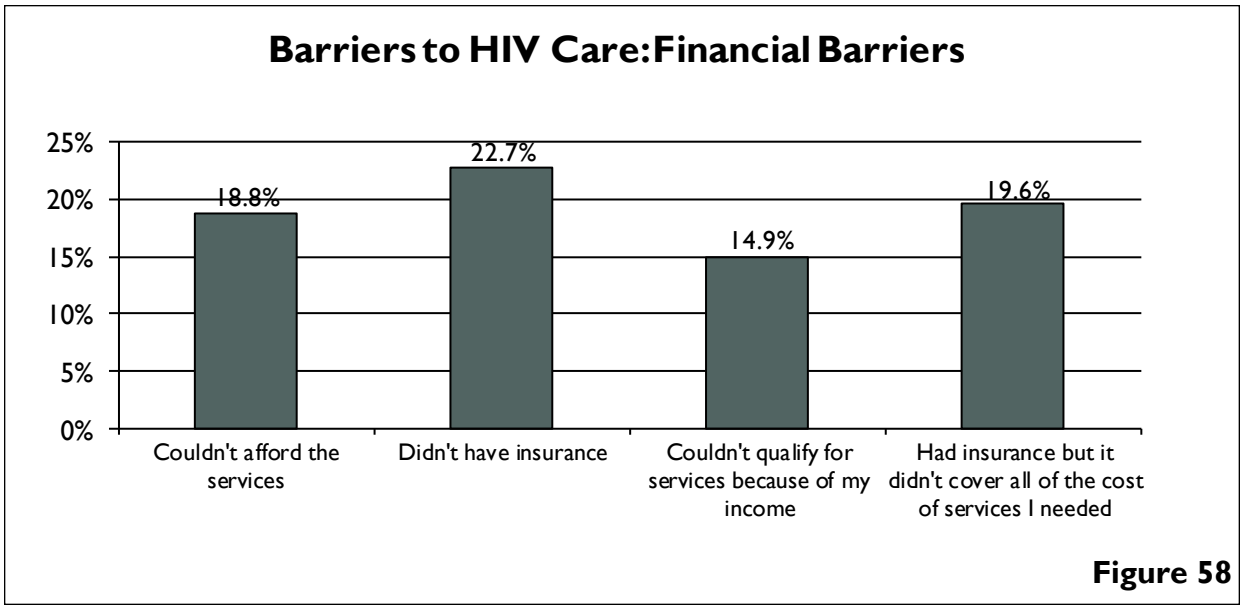


Figure 58

Staff Barriers: Twelve percent (12.1%, 46) of respondents reported that no one was willing to answer questions or explain things to them. Impolite or unhelpful treatment by service staff was reported by 14.4% (55) of respondents. And fourteen percent (14.2%, 54) of respondents reported feeling that the provider did not really understand what they needed.

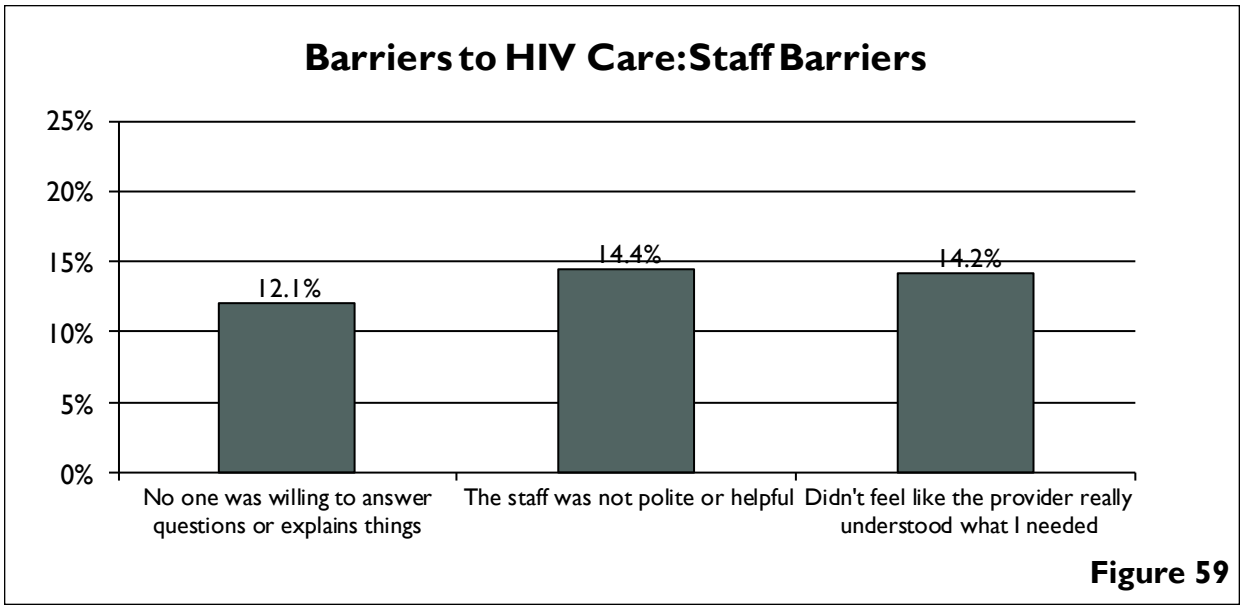
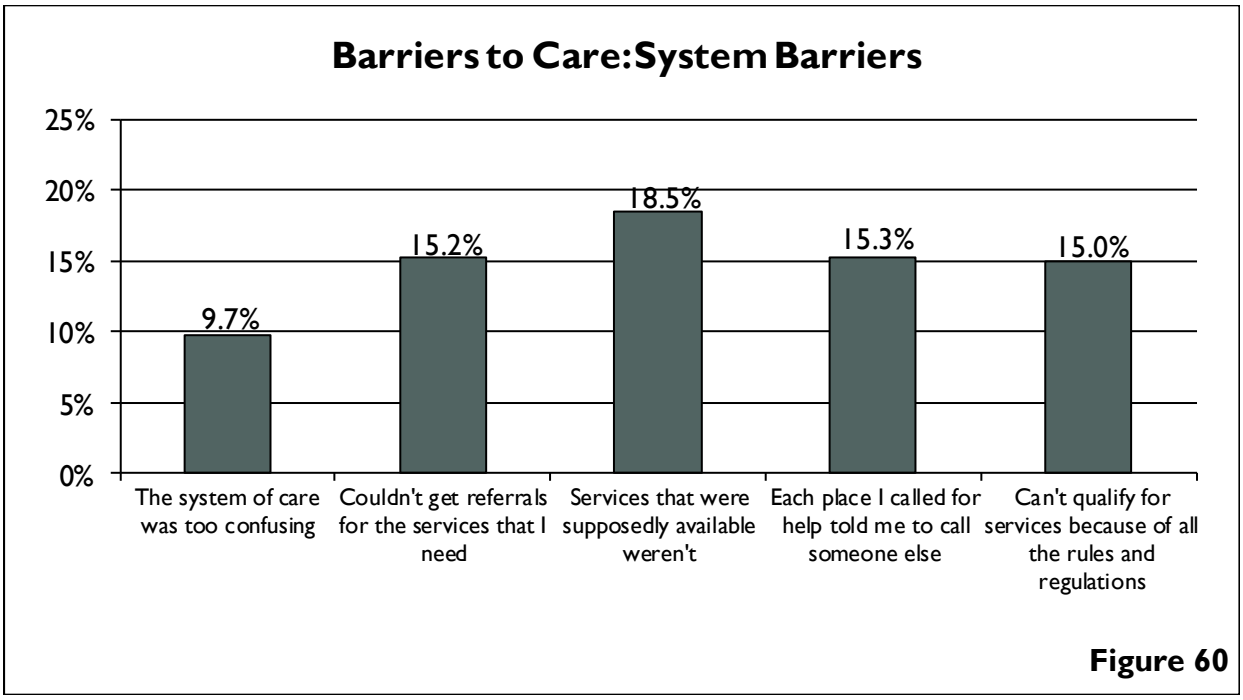
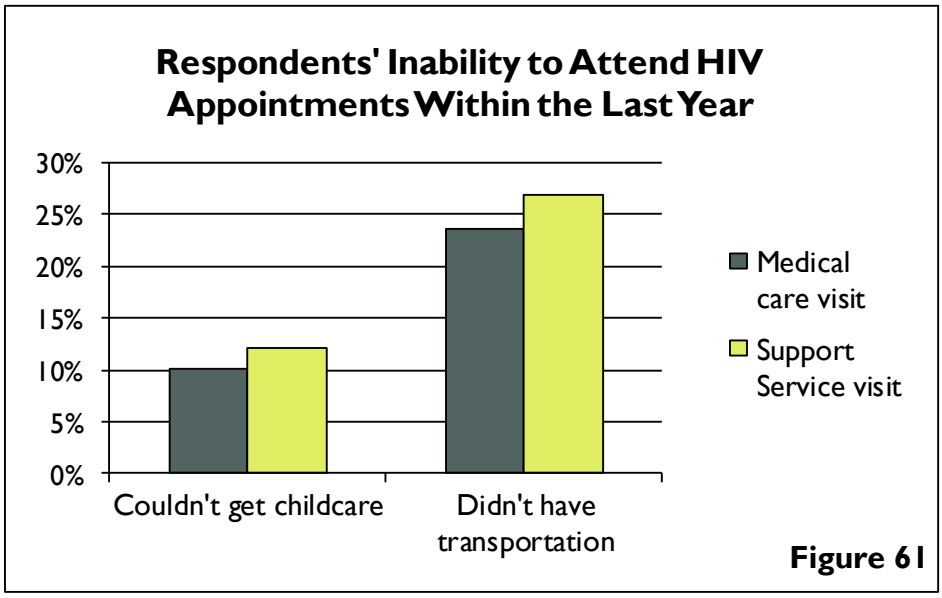


Figure 59

System Barriers: Ten percent (9.7%, 37) of respondents felt the system of HIV care was too confusing. Inability to get referrals for the services they needed was reported by 15.2% (58) of respondents. Nineteen percent (18.5%, 71) of respondents reported that the services that were supposedly available were not there when they tried to get them. Fifteen percent (15.3%, 58) of respondents reported that each place they called for help told them to call someone else. Not being able to qualify for services because of all of the rules and regulations was reported by 15% (57) of respondents.



Inability to Attend HIV Appointments: Ten percent (10.1%, 39) of respondents missed an appointment with their HIV doctor in the last year because they did not have child care and 12.2% (47) missed an appointment with an HIV support service provider because of not having child care. Nearly one-quarter (23.7%, 91) of respondents missed an appointment with their HIV doctor because they did not have a way to get there and 27% (103) missed an appointment with an HIV support service provider due to not having transportation.



KNOWLEDGE OF HIV DISEASE SERVICES

Overall, respondents were more aware of HIV disease core medical services than they were of support services. The average percentage of respondents not knowing that a core medical service exists was 20.8%, while on average 27% of respondents did not know a support service exists. The service known by the most respondents was HIV disease medical care (98.1%), with only six respondents not knowing about it. Other services known by most respondents included HIV education (87.9%), counseling and support groups (87.4%), medical case management (85.7%), and substance abuse services (82.9%). The service known by the fewest respondents was child care, with only 48.1% of respondents knowing it exists for HIV-positive persons. Other services with a low percentage of awareness included interpretation and language translation (49%), home health care (54.2%), and health insurance assistance (66.7%).

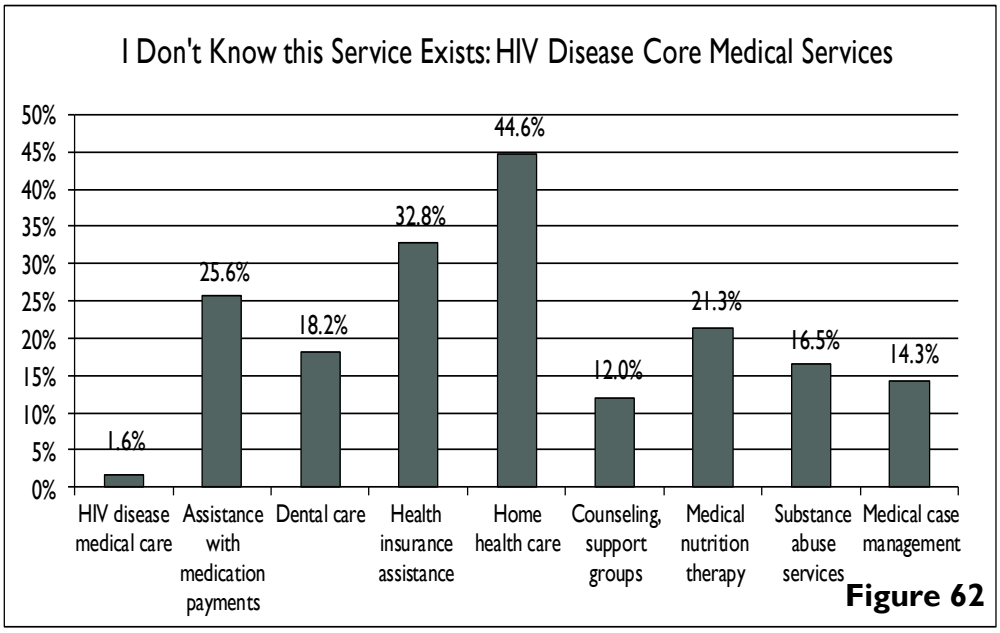


Figure 62

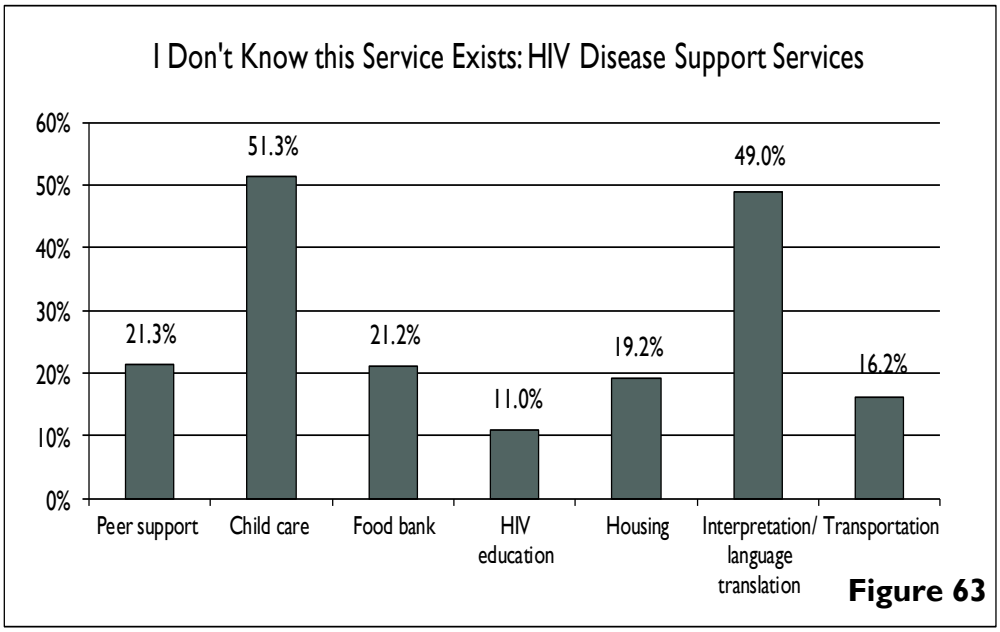


Figure 63

On the whole, persons were satisfied with the services they were receiving. Everyone receiving home health care reported that the service met their needs. On average, only 2.7% of respondents felt that a service did not meet their needs. According to respondents receiving each service, the services most commonly reported for not meeting the client's needs were dental care (7.8%, 13), interpretation and language translation (7.1%, 2), child care services (5.3%, 2), and health insurance assistance (4.8%, 6). It is important to remember that the number of respondents reporting they received these services is small in some cases. Therefore, the percentage of people not being satisfied with services may be deceptive.

CONCLUSIONS

The most prominent gaps in HIV services as reported by survey respondents were dental care, housing, food, and transportation. These services were listed by the respondents as the third through sixth most important services. Even though HIV medical care and HIV medications were prioritized as the top two services, respondents were receiving these services, as is indicated by 94% of respondents reporting that they had seen an HIV doctor at least twice in the last year and 89% of respondents reporting that they were getting the HIV medications they needed. However, 52.2% of respondents were not being seen by a dentist at least once a year. Dental care was also the service most often stated as not meeting the needs of those persons receiving it.

A significant number (19.8%) of respondents were living on the street or in a shelter for some part of the last year. Those individuals staying with friends or family, staying in a half-way house or treatment facility, or staying in some other form of temporary housing are not accounted for in this question; therefore the number of individuals not having stable housing is likely to be even higher than the percentage reported here.

Almost one-quarter (24.4%) of respondents reported that they did not have enough food to eat for three or more days in a row at some point within the last year. This does not account for those persons not having enough food to eat for one or two days at a time. Although three days in a row without enough food was thought to indicate people who truly did not have enough food, for those persons needing to eat before taking their HIV medications, any length of time without food is a problem.

Almost one-quarter (23.7%) of respondents missed appointments with their HIV doctor because they did not have transportation and 27% of respondents missed appointments with HIV support service providers because of not having transportation. Lack of transportation has actually prevented 24.7% of respondents from receiving HIV care, however this does not mean that they have never been able to receive care as a result of transportation issues.

While there will always be some gaps in services, certain services are more essential to the survival of a person living with HIV disease. Food and housing are necessary for everyone to lead a healthy life; however when a person is dealing with HIV disease as well, these elements become even more important because they impact other facets of a person's HIV care. An individual may not be able to appropriately store HIV medications if he does not have housing or may not be able to take the medications if he does not have food to take with them. Or a person's immune system may be weakened due to insufficient nutrition or rest, leaving him vulnerable to opportunistic infections. In addition, while dental care and transportation may be beneficial for the average person's life, they are even more critical to PLWHA. HIV -positive individuals are at greater risk for oral health problems and without proper dental care they could become susceptible to other infections. Transportation is critical as well; without transportation a person may not be able to receive necessary HIV medical care, pick up HIV medications, or pick up food bags.

It is through the experiential contributions of PLWHA that a better understanding of the needs of persons living with HIV disease can be achieved.

8. FOOD AND TRANSPORTATION SURVEY

BACKGROUND

In 2012, the MPHD Research Analyst and the Community Access Committee created a Food and Transportation Survey to examine patterns of need regarding food and transportation services among HIV -positive persons in the Nashville TGA. The survey was aimed at determining whether people who are eligible for food and transportation services were receiving said services, to learn whether people were experiencing times of insufficient nutrition or unreliable transportation, and to ascertain what services were necessary to meet the food and transportation needs of PLWHA in the Nashville TGA.

METHODOLOGY

Survey Development: A previous study was conducted by the Research Analyst and Needs Assessment Committee in 2011 and found that 24.4% of HIV-positive respondents in the Nashville TGA reported not having enough food to eat for three or more days in a row. Also, 23.7% of respondents missed an appointment with their HIV doctor because they did not have transportation; 27.0% missed an appointment for an HIV support service due to not having transportation.

In order to determine some areas of focus regarding food and transportation among PLWHA, the Research Analyst conducted an in-depth analysis of the responses of the 2011 Ryan White Part A Service Needs and Gaps Survey. Responses were analyzed by looking at six different groups of respondents: all respondents (used as a baseline), persons reporting that they did not have enough food, persons reporting that they did have enough food, persons reporting that they did not have adequate transportation, persons reporting that they did have adequate transportation, and persons reporting that they did not have enough food or adequate transportation. This analysis was used to determine potential problematic areas, as well as areas of disparity regarding demographics and service utilization.

Survey questions were created based on the Service Needs and Gaps Survey in-depth analysis, as well as being modified from *Hunger in America 2010*, a National Report Prepared for Feeding America, and an article from the National Rural Health Association, *Rural HIV Care: Transportation*.

An appropriate sample size was determined to be at least 344 PLWHA living in the TGA, in order to maintain a margin of error of +/-5 percentage points with a 95% confidence level for a population of 3,319 (the number of PLWHA who received HIV services at a Ryan White Part A funded provider in 2010).

Before the survey was administered, it was submitted to the MPHD Institutional Review Board (IRB) to ensure that the survey complied with regulations regarding human subjects research ethics. The survey was approved by the IRB.

Confidentiality Measures: All peers and volunteers helping to execute the survey signed a confidentiality agreement stating that they would not share any information they may learn while assisting with the surveys. A peer or staff member informed each participant who completed a survey at a provider site that the survey was voluntary and confidential. An optional question was included that asked for the respondents' name and phone number in the event that the participant was willing to share additional information at a later time; participants were not required to share this information. The Research Analyst was the only person to see respondents' names and phone numbers.

Survey Administration: Peers at provider sites administered the survey in an attempt to strengthen the integrity of the survey by (a) ensuring more accurate responses from the respondents, and (b) increasing the response rate within the HIV-positive population due to having a good rapport amongst the individuals. The Research Analyst trained the peers on the following:

- The importance of informing participants of the voluntary nature of the survey, as well as the survey's anonymity and therefore inherent confidentiality of personal information.
- How to administer the survey without bias.
- The importance of accurate and honest data collection.

After the Research Analyst trained the peers, they conducted surveys at their provider sites through convenience sampling. Provider sites used included the First Response Center, Nashville Cares, and Vanderbilt's Comprehensive Care Clinic. Nashville Cares' rural case managers also provided the survey to clients when conducting off-site visits in order to allow people not receiving services at the physical office to have the opportunity to participate in the study.

Data Entry and Data Cleaning: The Research Analyst created a corresponding survey using SurveyMonkey in order to allow for more accurate data entry. The Research Analyst was the only one to use this survey tool. The surveys were numbered and manually entered into SurveyMonkey following pre-established coding guidelines.

The Research Analyst conducted the data entry, entering data as surveys were received until all surveys were entered. The Research Analyst checked the data after data entry was completed to ensure data accuracy and to correct improper coding.

Limitations: Participant responses were based on the perceptions of the participant and therefore are only representative of his perceptions. In addition, the perceptions of individuals not participating in the survey are not known, nor is there any way to determine what characteristics may vary between individuals participating in the survey from those who did not. Surveys were only conducted at Ryan White Part A funded providers and so those PLWHA who did not receive services from these providers or did not receive services from these providers during the surveying time period did not have the opportunity to disclose their perceptions of HIV medical care and support services. However, because this survey was in

part evaluating the food and transportation services that are provided by Ryan White Part A, it was not logical to implement the survey at non-Part A sites.

Analysis: Data were analyzed as of March 14, 2012.

Frequency counts were conducted on all demographic information, as well as general service information, in order to determine what the sample population looked like and how it compared with the greater HIV-positive population in the Nashville TGA.

Poverty level was determined by crossing the household monthly income with household size data and comparing it to the *2011 Federal Poverty Guidelines*. However, because household income was collected in ranges, rather than an exact income, poverty levels could only be estimated.

Averages and ranges were calculated for length of time living with HIV disease, time to HIV medical and HIV-related support service appointments, how early one arrives to an appointment, and how late one must wait after an appointment.

Cross tabulations were performed on several data elements.

Analyses were only conducted on valid, non-missing responses; if a respondent did not answer a question or did not give a valid response, the response was not included in the analysis for that data variable.

KEY FINDINGS

A total of 307 surveys were collected. Of these, 16 surveys were excluded from the study due to insufficient data provided, 16 surveys were excluded because the respondents did not live within the Nashville TGA, and one was excluded because the respondent was not HIV-positive. Therefore, a total of 274 valid surveys were submitted and analyzed. The number of useable surveys did not meet the appropriate sample size in order to maintain a margin of error of +/-5 percentage points with a 95% confidence level. However, obtaining a sample size of 274 only slightly increased the margin of error to +/-5.67 percentage points, while still maintaining a 95% confidence level.

It is important to note that some respondents may not have answered every question and therefore the *n-value* for each question is different.

DEMOGRAPHIC INFORMATION

The majority (76.3%, 209) of persons participating in this survey were living with HIV, 17.9% (49) were living with AIDS, and 5.8% (16) were not sure if they had HIV or had progressed to AIDS. Over half (51.5%, 139) of the participants were between the ages of 45 and 64, while 40.0% (108) were between 25 and 44 years of age. Only 7.4% (20) and 1.1% (3) were 18 to 24 years old and 65 and older, respectively. No one younger than 18 years of age was eligible to participate in this survey.

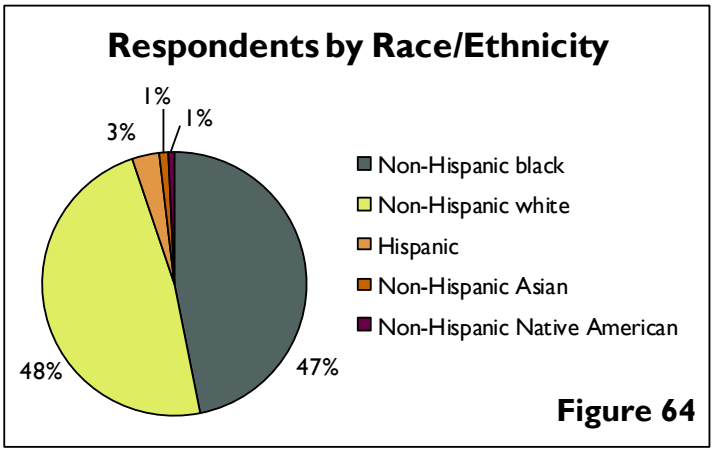


Figure 64

Males represented 70.8% (194) of respondents, with females accounting for 28.5% (78), and transgender persons accounting for 0.7% (2). The largest portion of respondents identified as non-Hispanic white (48.0%, 130), followed by non-Hispanic black with 46.9% (127) of respondents. Non-Hispanic Asians accounted for 1.1% (3) and non-Hispanic Native Americans accounted for 0.7% (2). Only 3.3% (9) identified as Hispanic.

The majority (88.8%, 229) of respondents resided in Davidson County. Twenty-nine (29) individuals lived outside of Davidson County, but were still located within the TGA; these persons accounted for 11.2% of survey respondents. The largest portions of people outside Davidson County resided in Rutherford County (34.5%, 10) and Sumner County (24.1%, 7). The most common zip codes were 37206 (22), 37207 (22), 37208 (20), and 37211 (20). Sixteen (16) persons did not provide their zip code.

Because only 11.2% of respondents lived in non-Davidson counties, and 23.1% of PLWHA in the Nashville TGA live in non-Davidson counties, the demographic make-up of the survey respondents may not be generalizable to persons residing outside of Davidson County. As a result, conclusions may not be as representative for persons living outside of Davidson County as they are for those living within Davidson County.

Respondents have been living with HIV disease for an average of 11 years, with lengths of time ranging from 1 month to 30 years.

Respondents were not asked exact household income, but rather for a range of household income; therefore, a precise poverty level could not be calculated for each respondent. However, based on the information collected, it is estimated that 56.4% of respondents were living at or below 100% of the poverty level.

Service Information

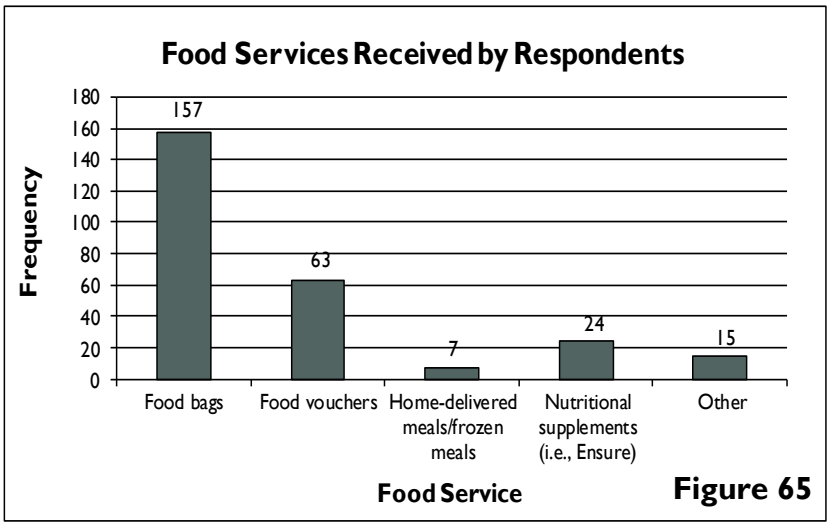
Almost all respondents (96.0%, 263) reported that they were currently receiving medical care, while only 4.0% (11) of persons indicated that they were not receiving medical care for their HIV disease. Similarly, 91.1% (246) were currently taking medications for their HIV disease, while 8.9% (24) were not.

The majority (54.4%, 147) of respondents had seen their HIV case manager within the last 3 months, while 22.2% (60) and 14.1% (38) had seen their case manager within the last 4-6 months and 6-12 months, respectively. Few people (4.4%, 12) reported that they had a case manager, but had not seen him in over 12 months. Five percent (4.8%, 13) of respondents stated that they did not have a case manager.

Food Services

Approximately 80% (215) of respondents were aware of food services prior to taking this survey, while 20.5% (56) were not aware of these services. Two-thirds (67.3%, 183) of the respondents reported that they were eligible to receive food services, while 8.1% (22) reported they were not eligible; 24.6% (67) did not know if they were eligible. Two-thirds (63.9%, 175) of respondents stated that they were currently receiving food services. Responses were evenly split between knowing or not knowing that food could be delivered if a person was not able to pick it up due to a medical or transportation issue; 47.8% (131) knew this and 47.1% (129) did not.

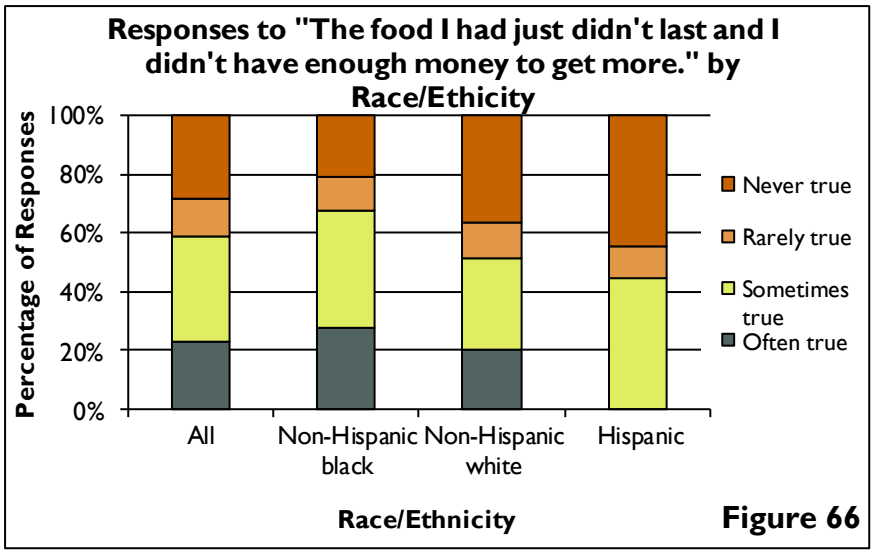
Respondents receiving food services have a variety of services available to them, with the most common one received being food bags (89.2%, 157), followed by food vouchers (35.8%, 63). A person may receive more than one type of food service and therefore the percentages do not total 100%. Ninety-eight (98, 35.8%) respondents reported that they were not currently receiving any food services and 88 (32.1%) respondents indicated that they had never received any food services. The non-Hispanic black respondents were 49% more likely to be currently receiving food services than were the non-Hispanic white respondents. In addition, the non-Hispanic white respondents were over 125% more likely to have never received food services than were the non-Hispanic black respondents. These two measures are significant reflections of socio-economic indicators because in order to receive food services a person must qualify based on their household income.



Note: Respondents may receive more than one food service and therefore the frequency is not equal to the total number of persons receiving food services.

Of those persons who had ever received food services, 71.1% (113) received them on a monthly basis, 17.6% (28) received them twice a month, and 1.3% (2) received them weekly. The majority (61.1%, 96) of respondents received food services from only one provider, while 17.2% (27) received from two providers, 19.7% (31) from three providers, and 1.9% (3) from four providers. Over half (53.2%, 84) of food service recipients had received food services for over two years; 7.0% (11) for less than three months, 11.4% (18) for 3-6 months, 8.2% (13) for 6-12 months, and 20.3% (32) for 1-2 years.

For those respondents who had received food services, 54.5% (91) indicated that finding transportation to access food services was not difficult; however, 20.4% (34) and 25.1% (42) stated it was very difficult or somewhat difficult, respectively. In addition, 40.7% (68) of these individuals reported that lack of transportation has at times prevented them from receiving food services.



Survey respondents reported a variety of experiences regarding food and its availability to them within the last year. When asked whether their food just did not last and they did not have enough

money to get more, 23.0% (62) of respondents indicated this was often true. Over one-third (35.9%, 97) reported this statement was sometimes true, 12.6% (34) rarely true, and 28.5% (77) never true.

When asked whether the respondent or any other adults in the household have ever cut the size of meals within the last year because there was not enough money or food, over one-fourth of respondents stated this occurred either every month (12.9%, 34) or most months (13.6%, 36). And while 36.3% (45) of non-Hispanic black respondents stated this happened no months, 57.7% (71) of non-Hispanic white respondents gave this response.

When asked if the respondent ever ate less than he felt he should because there was not enough money or food, 48.1% (129) reported yes. Also, 34.9% (90) of respondents reported that within the last 12 months there were times they were hungry but did not eat because they could not afford enough food. Significant differences were present between the responses of non-Hispanic whites and non-Hispanic blacks. Non-Hispanic black respondents were over 35% more likely to report having eaten less then they felt they should because there was not enough money to buy food than were non-Hispanic white respondents; non-Hispanic blacks were also 13% more likely to report having been hungry, but did not eat because they could not afford enough food.

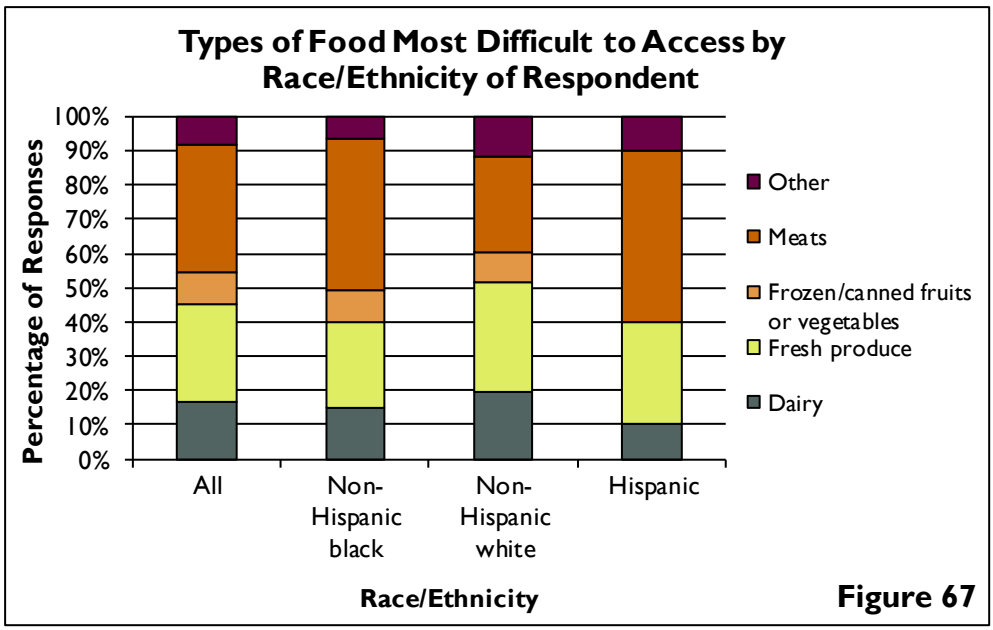


Figure 67

Respondents reported a variety of foods that they could not get enough of. And while the most common foods respondents could not access were meats (60.9%, 142) and fresh produce (fruits or vegetables; 47.7%, 110), there were notable differences between non-Hispanic whites and non-Hispanic blacks. Non-Hispanic whites were most likely to state fresh produce was the most difficult food to access (54.6%, 53) and non-Hispanic blacks were most likely to state meats were the most difficult food to access (71.7%, 86).

Non-Hispanic blacks were 40% more likely than non-Hispanic whites to receive food that they do not eat. It is possible this difference could be attributed to non-Hispanic blacks being more likely to receive food services and therefore having less control over the foods they receive. Sixty-two (62) of the 91 respondents who indicated that they have received food that they do not eat reported what they do with the items. The most common response was to share or give the items away to family, friends, neighbors, homeless persons, or anyone in need (40.3%, 25). Others stock piled the items (14.5%, 9), traded them (9.7%, 6), returned the items or did not take them in the first place (6.5%, 4), or threw them away (4.8%, 3). Rather

than listing what was done with the items, some respondents noted what the items were that they do not eat, including peanut butter, rice, canned goods, pastas, some meats, and vegetables.

Respondents were aware of a number of places in which a person could receive food assistance services. The most common services/places respondents were aware of include food stamps (75.6%, 183), food banks (64.5%, 156), and churches (59.5%, 144). The most commonly known AIDS service organization in which food services could be received from was Nashville Cares (94.4 %, 238), followed by First Response Center (31.0%, 78), Street Works (29.4%, 74), and W.O.M.E.N. (9.1%, 23).

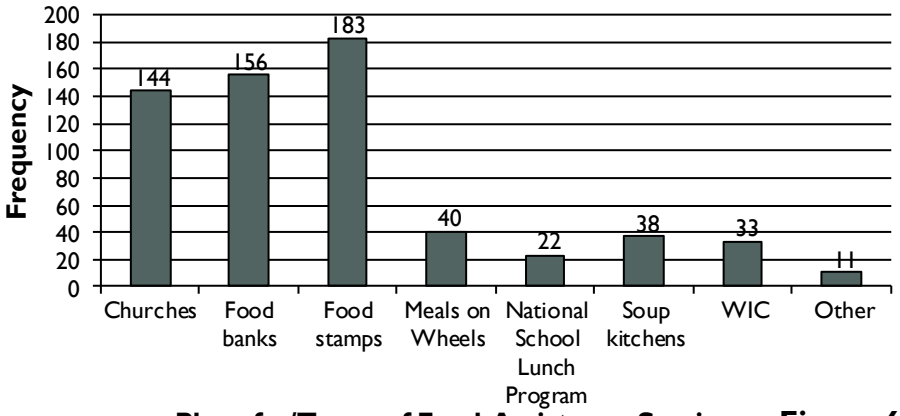


Figure 68

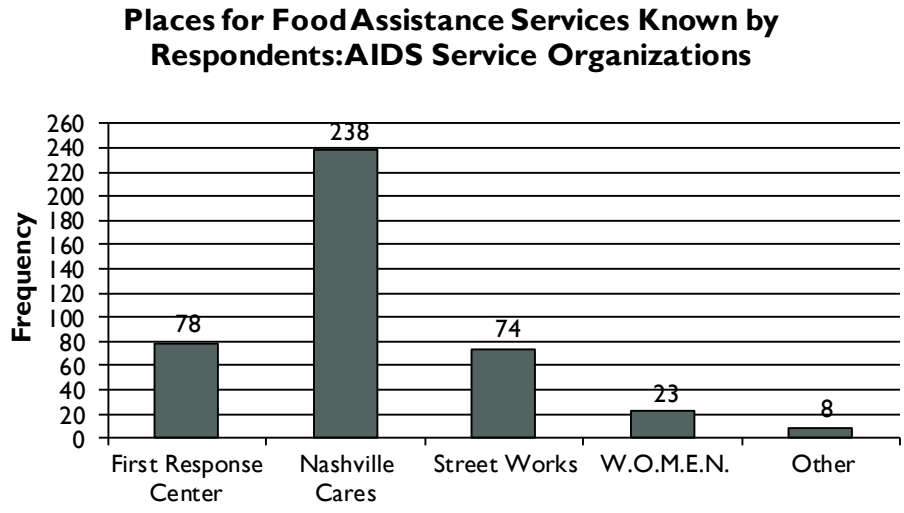


Figure 69

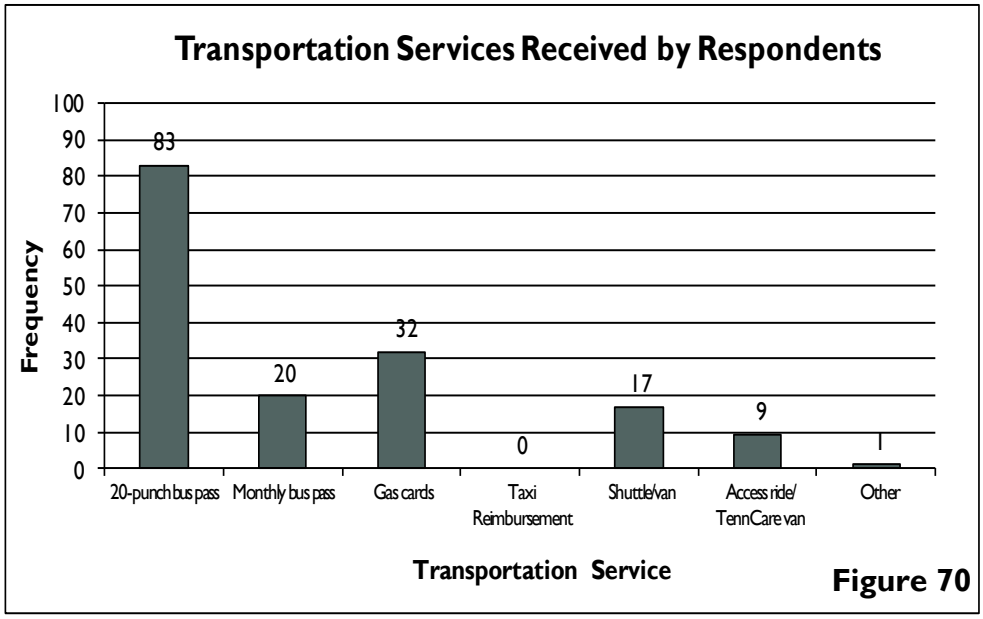
Note: Respondents may receive more than one food service and therefore the frequency is not equal to the total number of persons receiving food services.

TRANSPORTATION SERVICES

The majority (72.8%, 198) of respondents were aware of transportation services prior to participating in this survey; 25.0% (68) were not aware of this type of service. Over half (53.3%, 144) reported that they were eligible for transportation services, 15.6% (42) reported they were not eligible, and 31.1% (84) did not know if they were eligible. Less than half (46.7%, 128) of the respondents were currently receiving transportation services and over half (55.5%, 147) had never received transportation services.

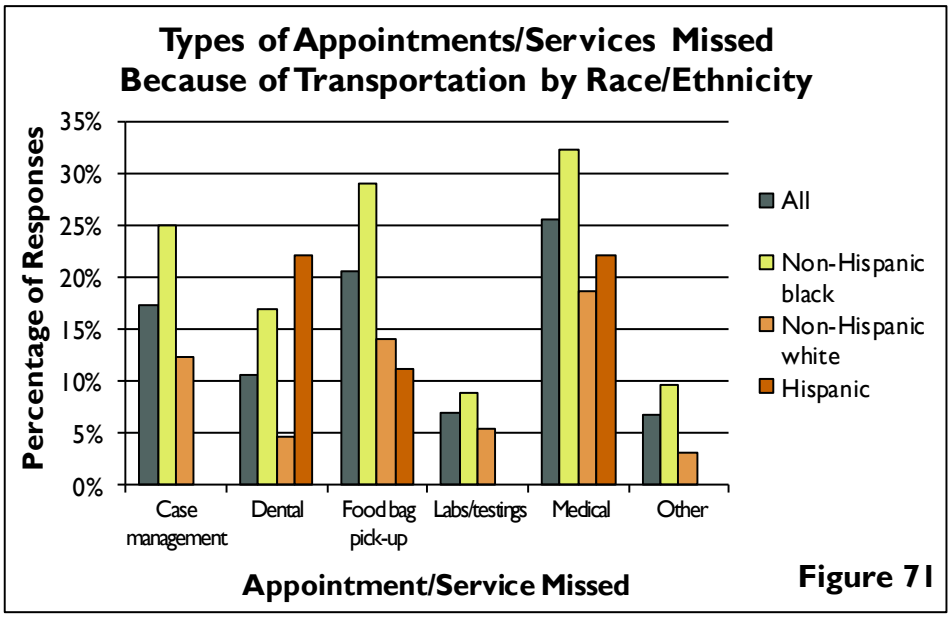
The most common transportation service currently being received by respondents was 20-punch bus passes (60.6%, 83), followed by gas cards (23.4%, 32), monthly bus passes (14.6%, 20), a shuttle/van service (12.4%, 17), and Access ride/TennCare van (6.6%, 9). Non-Hispanic white respondents were over 100%

more likely to not be receiving any transportation services than were non-Hispanic black respondents. Over half (52.9%, 145) of respondents got to their HIV-related appointments with their own car, 33.2% (91) used the bus, and 15.7% (43) got a ride with a family member/friend. Other means of transportation included Access ride, TennCare van, getting a ride with their case manager, and walking. Non-Hispanic white respondents were 87% more likely than non-Hispanic black respondents to get to their appointments in their own car.



Note: Respondents may receive more than one transportation service and therefore the frequency is not equal to the total number of persons receiving transportation services.

Over half (54.6%, 149) of all respondents reported they never miss HIV-related appointments due to lack of transportation. However, significant differences were present between the responses of non-Hispanic black and non-Hispanic white respondents. Non-Hispanic black respondents were 40% more likely to miss HIV-related appointments than were non-Hispanic white respondents. And while both groups were equally likely to frequently miss appointments, non-Hispanic blacks were over 140% more likely to sometimes miss HIV-related appointments. The most common services missed due to lack of transportation were medical appointments (60.5%, 69), food bag pick-up (49.1%, 56), and case management appointments (41.2%, 47).

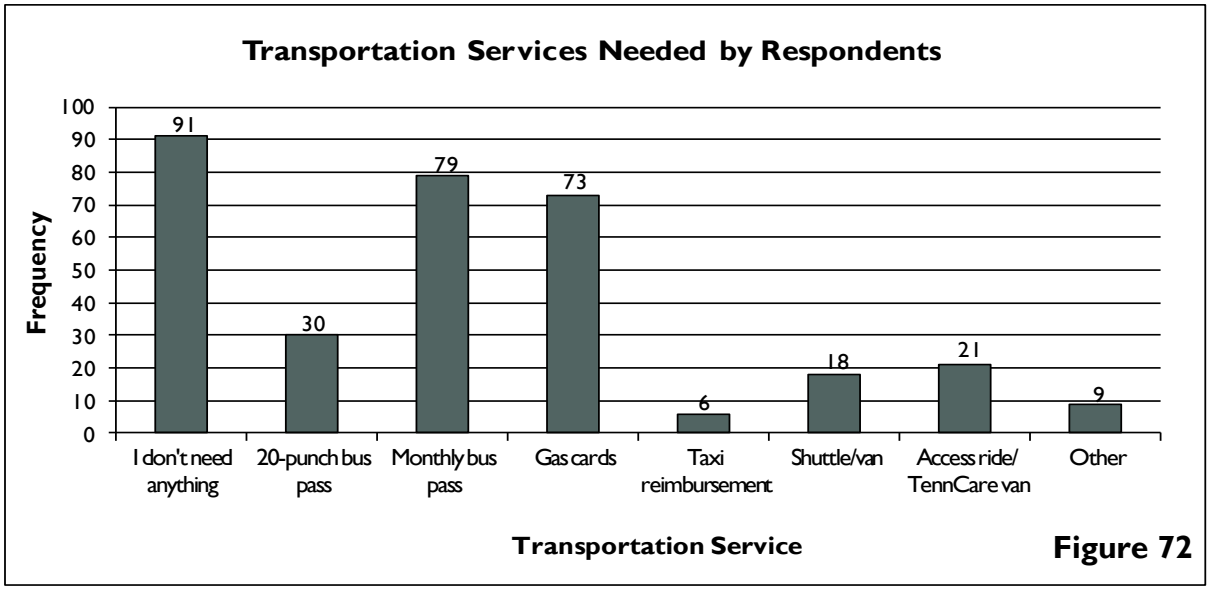


Respondents reported an average travel time of 57.0 minutes to get to an HIV medical appointment, with times ranging from 5 minutes to 3 hours. An average travel time of 42.5 minutes was reported for getting to an HIV-related support service provider; responses ranged from 0 minutes, because the provider would come to the client, to 3 hours. For times that were provided in a range, the greater time was used for the analysis.

Respondents using the public bus system reported an average of two transfers to get to HIV-related appointments, with responses ranging from zero to four transfers (meaning one to five buses). Due to the structure of the public bus system in the Nashville area, it is unlikely that persons would need to take five different buses to get to one appointment. It is therefore likely that some respondents counted the number of transfers to get to an appointment, as well as home from an appointment, or that they counted the number of buses they may need to take as the number of transfers. Both of these misinterpretations would lead to over-reporting of bus usage and consequently over-reporting of the necessary number of bus passes per appointment.

Respondents who do not drive themselves to their HIV-related appointments, reported arriving an average of 37.8 minutes prior to their scheduled appointment time. Times ranged from two hours early to being on time; three individuals stated they arrive late for their appointments. Respondents had an average wait time of 42.8 minutes for their ride after their appointment. The times ranged from zero minutes to three hours. For respondents who reported their times in a range, the greater time was used for the analysis.

Respondents were asked what they would need regarding transportation so that they could reliably and consistently get to their HIV-related appointments. The largest proportion of respondents (34.9%, 91) stated that they do not need anything. Others reported needing monthly bus passes (30.3%, 79), gas cards (28.0%, 73), 20-punch bus passes (11.5%, 30), Access ride/TennCare van (8.0%, 21), a shuttle/van (6.9%, 18), and taxi reimbursement (2.3%, 6).



Note: Respondents could select more than one service that would help them to more reliably and consistently get to their HIV-related appointments. Therefore responses do not total 100%.

Non-Hispanic black and non-Hispanic white respondents had significantly different needs regarding the types of services they reported that would help them get to their HIV-related appointments. While 52.5% (64) of non-Hispanic white respondents stated they did not need anything, only 16.8% (21) of non-Hispanic black respondents provided this response. Also, while 44.8% (56) and 19.2% (24) of non-Hispanic blacks said monthly bus passes and 20-punch bus passes, respectively, would help them, only 18.0% (22) and 2.5% (3) of non-Hispanic white respondents noted these services.

SUMMARY

The majority of respondents who were eligible for food and transportation services were at receiving said services at the time of this survey. Of those respondents self-reporting that they were eligible for food services (183), 86.3% (158) stated that they wee receiving food services and 89.6% (164) had received food services within the last year. Of the 144 respondents self-reporting that they qualified for transportation services, 83.3% (120) of them were receiving transportation services.

Despite receiving transportation services, many respondents have experienced times of unreliable transportation causing them to miss appointments frequently (12.0%) or sometimes (36.0%). Only 36.3% of the respondents receiving transportation services reported never missing appointments due to transportation issues.

Persons having their own car were 189% more likely to report never missing an appointment than were persons not having their own car. And persons having their own car and not receiving any transportation services were 25% more likely to report never missing an appointment than were persons who had their own car, but were receiving gas cards. The majority (83.6%) of respondents with their own car and not receiving transportation services never missed appointments, while only 66.7% of persons with their own car, but receiving gas cards never missed appointments. Only 28.9% of respondents not having their own car reported that they never missed appointments. In addition, no respondents having their own car reported frequently missing appointments, whether they received gas cards or not, yet 13.3% of respondents not having their own car stated they frequently missed appointments. Non-Hispanic whites were also more likely to have their own car (67.7%, 88), and therefore more likely to never miss appointments due to transportation (86.4%, 76) than were non-Hispanic blacks, in which 36.2% (46) had their own car and 65.2% (30) reported never missing appointments because of transportation.

Overall, the respondents had increased access to constant and dependable transportation due to the transportation services funded by the Ryan White Part A Program. And while 35% of respondents stated that they did not need anything else in order to reliably and consistently get to their HIV-related appointments, the remaining 65% reported needing additional assistance. The most commonly reported transportation services noted were monthly bus passes, gas cards, 20-punch bus passes and Access ride/ TennCare van. Moreover, many people commented that the 20-punch bus passes did not last long enough and therefore, many of these people felt monthly bus passes would be better. Also, persons receiving gas cards remarked that the gas cards did not have enough money on them, especially for those persons living further out from the city.

The majority of respondents receiving food services reported that they have often (24.2%, 44) or sometimes (41.8%, 76) within the last year experienced times in which the food they had did not last and they did not have money to get more. In addition, 53.9% (97) of respondents receiving food services reported that they have eaten less than they felt they should because there was not enough money to buy food. Meanwhile 39.2% (69) of these persons noted that they have been hungry within the last year, but did not eat because they could not afford enough food. Although it is unclear as to whether these reported food insufficiencies occurred prior to a person receiving food services or once they were already receiving food services, 75.0% of those receiving food services have been receiving them for over one year, indicating a prolonged need for these services.

The respondents have increased access to food due to the food services available to them; however, they have reported still having difficulty in accessing certain types of food, primarily fresh produce and meats. Overall, the foods respondents were the most dissatisfied with were those that are part of most food bags (pastas, rice, and peanut butter). Moreover, although a high percentage of those receiving food services have reported not having enough food and not having enough money to buy more food, 43.8% stated that they receive foods they do not eat. Some persons were not able to eat all types of food included in food bags, such as those who are diabetic or have heart disease. Therefore, having food bags available for persons with certain medically prescribed diets would likely prove to be beneficial.

CONCLUSIONS

Some people are not aware of services, do not know what they qualify for, or do not know how to get the services. Of those who specifically mentioned this, 83% have a case manager, so they should not be having these problems. Therefore, the case managers are either not asking the clients if they need additional services or the clients are not telling their case managers that they need more help. For those clients not having a case manager, the first step for them would be getting a case manager to inform them of services and assist them in linking to services.

Significant differences appeared in the responses of non-Hispanic whites and non-Hispanic blacks. In general, non-Hispanic blacks were more likely to report experiencing food deficiencies, as well as inconsistent and unreliable access to transportation for HIV-related appointments. This is likely a reflection of the differences in socio-economic statuses among persons of different racial groups in this region. Locating food and transportation services available to and easily accessible to areas of predominantly non-Hispanic blacks may ensure that more persons who qualify for services are able to access the services.

Regarding food services, persons would benefit from receiving education on the intent of the food services Ryan White funds; understanding that food bags are only meant to supplement one's diet may help motivate people to seek out other food resources. Providing persons with ideas on different ways to prepare common foods would help reduce the number of persons who are not eating these foods because they have grown tired of them. Teaching people how to purchase groceries that are healthy and economical would also be beneficial for the health of people living with HIV disease, in addition to reducing the financial requirements of this service placed on the Ryan White program.

9. CLIENT SATISFACTION SURVEY

BACKGROUND

In 2012, the MPHD Research Analyst and the Needs Assessment Committee created a Client Satisfaction Survey on HIV Medical Care. It has been found that patients with higher satisfaction levels tend to have improved health outcomes. Therefore, in order to most effectively serve HIV-positive persons in our community, and improve health outcomes, it is essential to get a better understanding of how clients perceive the medical care they receive from Ryan White Part A providers. The purpose of this evaluation of client satisfaction is to determine any areas in which clients are dissatisfied with their HIV medical care–access to care, waiting for appointments, experiences during the medical visit, and overall quality of HIV care.

METHODOLOGY

Survey Development: An appropriate sample size was determined to be at least 346 people living with HIV disease in the TGA, in order to maintain a margin of error of +/-5 percentage points with a 95% confidence level for a population of 3,465 (the number of PLWHA who received HIV services at a Ryan White Part A funded provider in 2011).

The survey was created by the MPHD Research Analyst and reviewed by the Needs Assessment Committee. The survey was adapted from the Patient Satisfaction Survey for HIV Ambulatory Care produced by the New York State Department of Health AIDS Institute.

A Spanish version of the survey was also created in order to expand participation accessibility to persons either not speaking English or being uncomfortable completing a survey not in their preferred language.

Before the survey was administered, it was submitted to the MPHD Institutional Review Board (IRB) to confirm that the survey complied with regulations regarding human subjects research ethics. The survey was approved by the IRB.

Confidentiality Measures: All peers helping to implement the survey signed a confidentiality agreement stating that they would not share any information they may learn while assisting with the surveys. A peer or staff member informed each participant who completed a survey at a provider site that the survey was voluntary and confidential.

The Research Analyst was the only person to have access to completed surveys, although no identifiable information was collected on the surveys so there was consequently no manner in which surveys could be connected with a specific individual.

Survey Administration: Peers at provider sites were used to administer the surveys in an attempt to strengthen the integrity of the survey by (a) ensuring more accurate responses from the respondents, and (b) increasing the response rate within the HIV-positive population due to having a good rapport amongst the individuals. The Research Analyst trained the peers on the following:

- The importance of informing participants of the voluntary nature of the survey, as well as the survey's anonymity and therefore inherent confidentiality of personal information.
- How to administer the survey without bias.
- The importance of accurate and honest data collection.

After the Research Analyst trained the peers, they conducted surveys at their provider sites. Medical provider sites used included the First Response Center, the Meharry Wellness Center, and Vanderbilt's Comprehensive Care Clinic (CCC). Surveys were also completed at Nashville Cares in order to gain access to persons who may not have had a medical appointment during the surveying period.

It is important to note that respondents answered the survey questions according to their perceptions of HIV medical care provided by their HIV medical provider, regardless of the site in which they completed the survey.

Data Entry and Data Cleaning: The Research Analyst created a corresponding survey using SurveyMonkey in order to allow for more accurate data entry. The Research Analyst was the only one to use this survey tool. The surveys were cleaned, numbered, and manually entered into SurveyMonkey following pre-established coding guidelines.

The Research Analyst conducted the data entry, entering data as surveys were received until all surveys were entered. The Research Analyst checked the data after data entry was completed to ensure data accuracy and to correct improper coding.

It is important to note that almost all of the questions, except three, could have only one response, and therefore the number of responses for each question is indicative of the number of respondents answering that question. However, respondents could mark more than one HIV provider whom he had received services from within the last year, could select multiple words to describe the care from their medical provider, and could note as many reasons for being treated poorly as they felt appropriate. For these questions, the total number of responses is not indicative of the total number of respondents.

Limitations: Participant responses were based on the perceptions of the participant and therefore are only representative of his/her perceptions. In addition, the perceptions of individuals not participating in the survey are not known, nor is there any way to determine what characteristics may vary between individuals participating in the survey from those who did not. Although surveys were only conducted at Ryan White Part A funded medical providers and Nashville Cares (also funded by Part A), the purpose of the survey was to evaluate client

satisfaction of these specific medical providers and therefore the perceptions of persons not receiving services from these medical providers are not necessary to be captured in this survey. However, persons who are currently clients of these medical providers, but did not receive services from these providers during the surveying time period did not have the opportunity to disclose their perceptions of HIV medical care.

Analysis: Data was analyzed as of May 7, 2012. A total of 389 surveys were collected for this study: 373 were considered complete and useable, 13 were excluded due to incompleteness, and 3 were excluded because the respondents were not HIV-positive. Of the 373 useable surveys, 344 were completed by individuals residing within the Nashville TGA, while 29 of the respondents lived outside of the TGA; also, 11 of the completed surveys were of the Spanish version. Surveys completed by those residing outside the TGA were included in the analysis because even though these people do not qualify to have their services paid for by Ryan White Part A, they receive the same medical services and have the same needs as those residing within the TGA. There were not enough surveys completed by persons residing outside of the TGA to skew the results of the survey.

KEY FINDINGS

General Information: Survey respondents ranged in age from 18 to over 65 years of age. The majority of respondents were 45-64 years of age (58.9%, 218) and 25-44 (34.1%, 126). There were also small numbers of respondents 18-24 years of age (4.6%, 17), and over 65 years of age (2.4%, 9).

People living with AIDS were underrepresented in this survey, accounting for only 20.9% (78) of respondents. This could be attributed to persons not knowing their up-to-date diagnosis or believing that once their CD4 level rises above 200 cells/µL that they no longer have AIDS, and have reverted back to HIV; however, once a person is diagnosed with AIDS his diagnosis does not change.

Females were overrepresented in this study, having accounted for 36.2% (135) of respondents, compared to males who were underrepresented with 63.3% (238). Only two transgender persons participated in this survey.

Non-Hispanic blacks represented the largest racial/ethnic group, accounting for 58.0% (203). Non-Hispanic whites were underrepresented in terms of those persons who access medical services from a Ryan White Part A medical provider (36.9%, 129). Hispanics accounted for 4.0% (14) and non-Hispanic others accounted for 1.1% (4) of respondents, including persons reporting their race as Asian, Native American, and multi-racial.

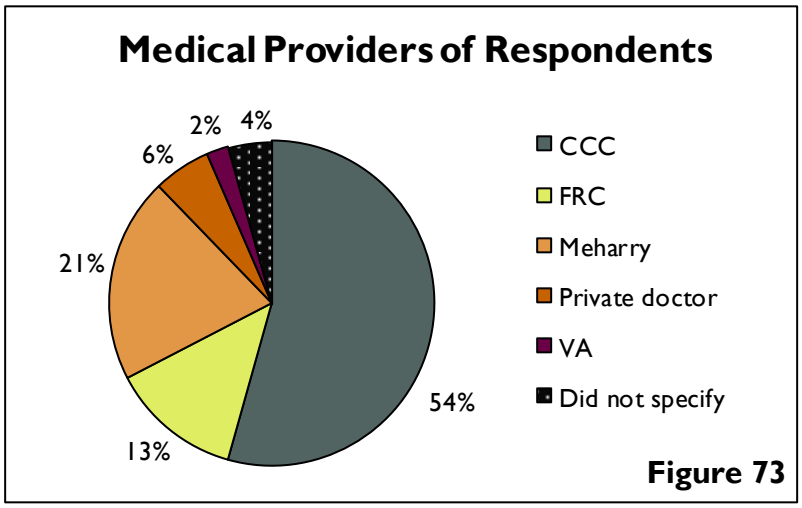
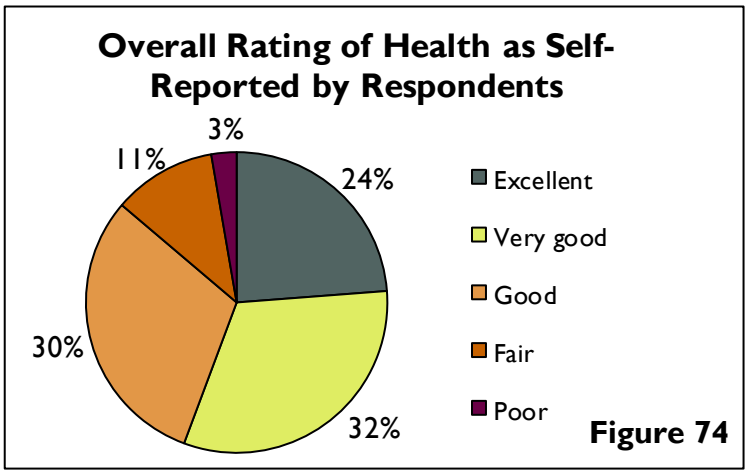


Figure 73

Respondents had been living with HIV disease for a range of less than one year to over 30 years. On average, the respondents had been living with the disease for 12 years.

The majority of respondents (98.4%, 360) reported that they were currently receiving HIV medical care, while only six individuals (1.6%) stated they were not receiving HIV medical care at that time. Of those receiving medical care, 55.6% (200) were receiving their medical care from Vanderbilt's Comprehensive Care Clinic (CCC). Others reported receiving their care from the Meharry Wellness Center (20.8%, 75), First Response Center (13.3%, 48), a private doctor (5.8%, 21), and the Veteran's Administration Hospital (2.2%, 8). Sixteen individuals (4.4%) reported that they were currently receiving HIV medical care, however they did not specify from where. Individuals may have indicated receiving medical care from more than one place, of which eight individuals did so; these cases are likely to be persons who changed providers during the last year.



The largest portion of respondents (39.6%, 143) had been receiving HIV medical care at their reported medical facility for over five years. Others received care for 3-5 years (22.2%, 80), 1-2 years (19.9%, 72), and less than 1 year (18.3%, 66). Over half of respondents (50.6%, 183) had their last HIV medical visit within 2 months, 42.0% (152) within the last 2-6 months, and 4.1% (15) within 6-12 months. Twelve individuals (3.3%, 12) had not had an HIV medical visit in over 12 months.

Eighty-seven percent (87.2%, 312) of respondents reported having had a general medical check-up within the last 12 months. The largest portion of respondents (31.9%, 118) rated their overall health as very good; 2.7% (10) reported their health as poor.

Access to HIV Care: Overall, respondents were able to access HIV care. The majority of respondents (83.4%, 306) were always or mostly able to get an appointment soon enough for their needs. Also, 88.7% (331) of respondents stated that their HIV providers talked with them always or mostly about the importance of keeping their appointments. Almost everyone (92.0%, 333) reported receiving services in their language of preference all of the time or most of the time.

There were lower rates of access to care regarding persons who could always or mostly reach someone at the office when the clinic was closed (55.1%, 201), as well as being able to always or mostly reach someone on the phone to discuss a medical question (69.5%, 256).

Almost ten percent (9.9%, 36) of respondents reported that they always or mostly were not able to receive the medical services they needed because they could not pay for them.

Waiting for Your Appointment: A significant portion of respondents stated that the staff was always or mostly friendly towards them (94.6%, 351) and that HIV-related educational materials were always or mostly available (93.2%, 340). Fewer people reported being able to see their doctor within 30 minutes of their scheduled appointment time (71.7%, 261).

Your HIV Medical Visit: The majority of persons reported that their provider always or most of the time made sure they understood their lab results (87.9%, 326) and side effects of HIV medications (78.0%, 284), explained how to avoid getting sick (82.5%, 301), and talked about safer sex practices and risk reduction (82.2%, 303).

Other elements of care respondents reported receiving all the time or most of the time included: "being satisfied with the amount of time my provider spent with me" (88.7%, 329), "feeling the staff and my providers kept my HIV status confidential" (92.6%, 339), "being asked about my life situation by staff and providers and receiving referrals as necessary" (65.5%, 238), and "getting the services my provider referred me to" (76.8%, 281).

Nearly one-quarter (22.4%, 81) of respondents had questions they wanted to ask their doctor, but did not. Additionally, 17.6% (64) of respondents felt uncomfortable discussing personal or intimate issues with their provider and 13.0% (47) of respondents felt their providers felt uncomfortable asking about personal or intimate issues. Persons who did ask their doctors questions, reported that it was hard to understand their answers (11.2%, 40). Over half (62.1%, 224) of respondents reported always or most of the time wanting to be more involved in making decisions about their health care.

Twelve percent (11.8%, 43) of respondents felt their providers ignored their complaints about their care.

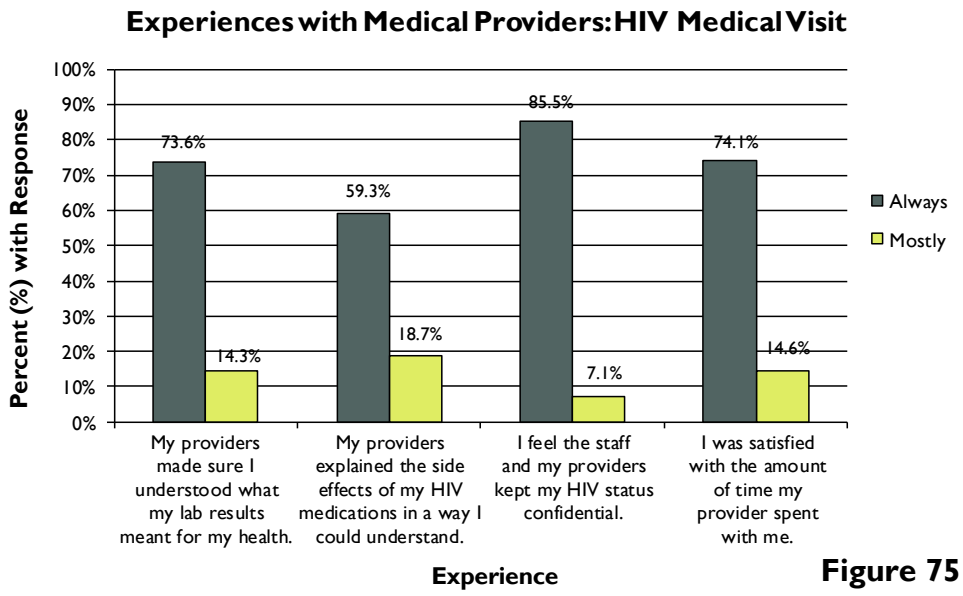


Figure 75

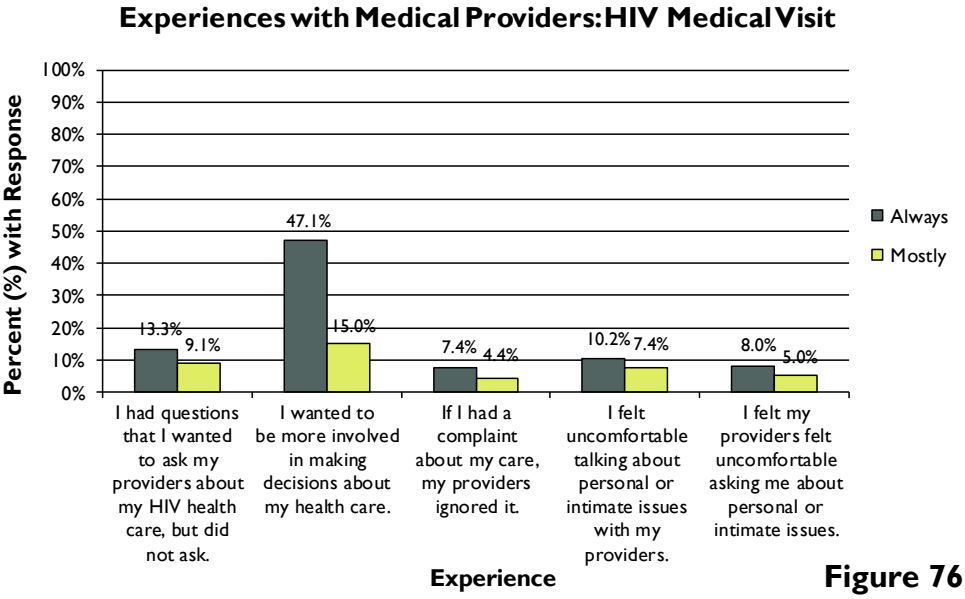


Figure 76

Overall Quality of HIV Care: Most of the respondents rated their provider's knowledge of the newest developments in HIV medical standards as excellent (61.5%, 227) or very good (27.4%, 101), however a small portion rated their knowledge as fair (2.4%, 9) or poor (0.8%, 3). Over half (65.6%, 205) of respondents rated the quality of care at their clinic in comparison to others as much better; nine individuals (2.5%) rated their clinic as worse.

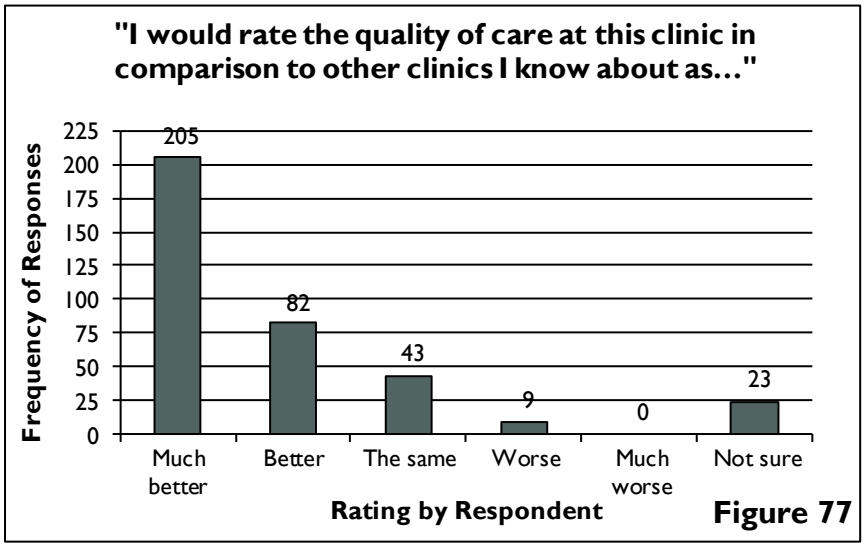


Figure 77

Respondents most frequently selected the following words to describe the care at their clinic: excellent (70.4%, 254), respectful (50.7%, 187), friendly (48.5%, 175), caring (40.4%, 146), and understanding (38.5%, 139). Other words less frequently selected include adequate (22.4%, 81), ok (10.8%, 39), busy (7.5%, 27), and impersonal (3.6%, 13).

Nine percent (8.9%, 31) of respondents reported having felt they were treated poorly at their HIV medical clinic. Reasons they believed they were treated poorly included their race (11), age (6), drug use (6), income (5), gender (4), language (4), and sexual orientation (2). Other reasons provided by respondents included mental health (3) and pain management/medication needs (2). Three people claimed poor treatment, but did not indicate a reason for such treatment.

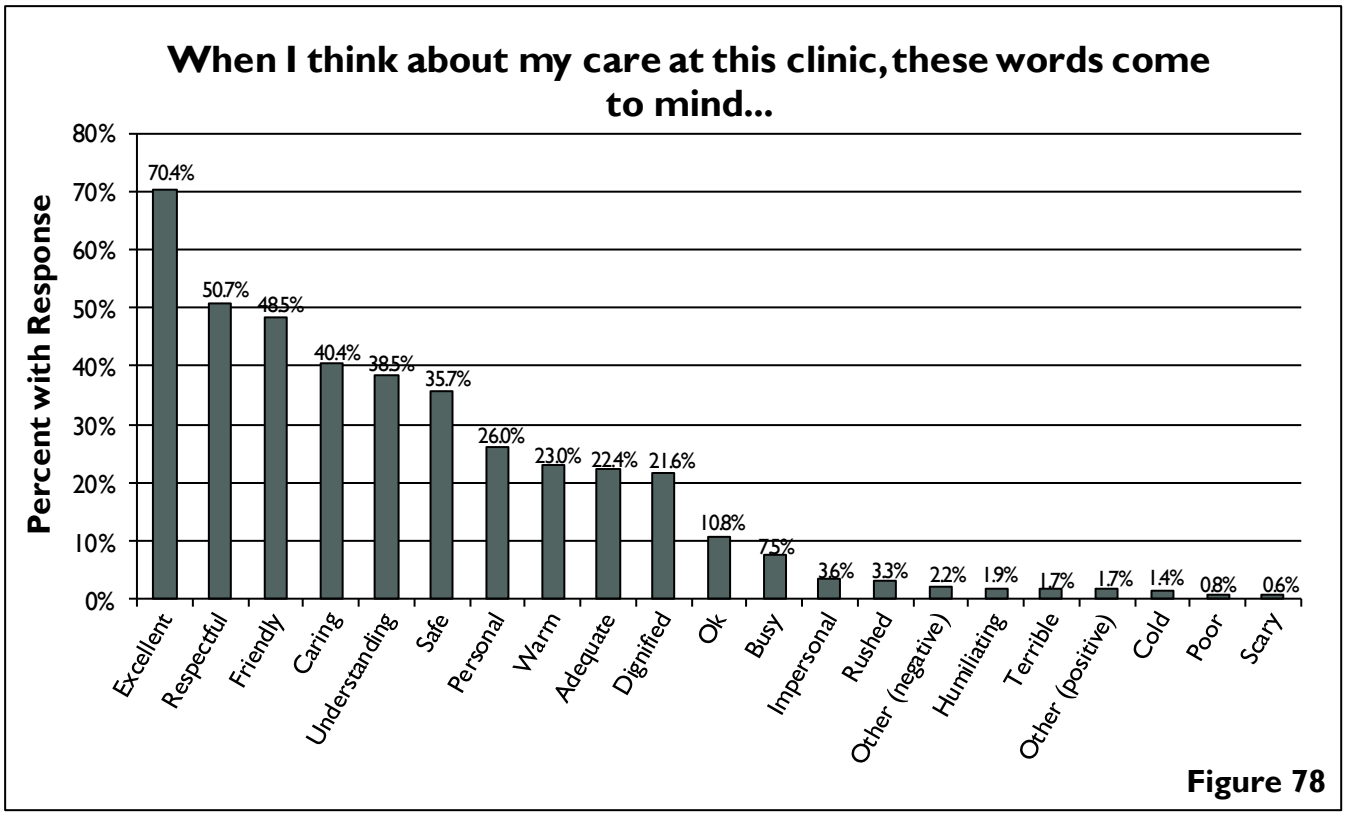


Figure 78

The majority (81.0%, 278) of respondents stated that they would definitely recommend their HIV medical clinic to HIV-positive friends with similar needs. Fourteen percent (14.3%, 49) said they may recommend their clinic and 3.2% (11) said they were not sure. Five respondents (1.5%) indicated they would definitely not recommend their clinic to HIV-positive friends.

Nineteen individuals (5.6%, 19) stated that they left an HIV medical provider because they were dissatisfied with the services and/or care they were receiving. At least one respondent left each of the following providers because of dissatisfaction within the last 12 months–CCC, Meharry Wellness Center, First Response Center, and the VA.

Many respondents added additional comments about the medical care they are receiving for their HIV disease. A client at CCC wrote "I greatly appreciate all the help I've gotten and continue to get." Another said, "Doctors and staff are world-class. It is difficult to imagine a better comprehensive facility anywhere." Other respondents noted: "They are very understanding and trustworthy and well educated about this disease." (Meharry); "My doctor is compassionate, to the point, and displays knowledge and wisdom." (CCC); and "They are very good to me." (FRC) Other comments included "Front staff have become very impersonal and mostly rude" and "It would be nice to talk to someone who really knows what you're going through and can relate."

CONCLUSION

The Nashville TGA Part A Program last conducted a Client Satisfaction Survey in 2009. Based on survey results, it appears as though many aspects of HIV medical care have improved since 2009. While 81% of respondents in 2009 strongly agreed or agreed that the medical provider made sure the client understood his lab results, 88% agreed with this in the 2012 survey. And while 87% of respondents felt the staff and providers kept their HIV status confidential in 2009, 93% felt this way in 2012. However, 85% of the 2009 respondents stated that the doctor discussed lifestyle choices for improving one's health, but fewer agreed with this in 2012 (83%).The majority of 2009 respondents (88%) reported that they are involved in making decisions about the care and services they received, however in 2012 47% of respondents stated that they wanted to be more involved in the decision-making about their healthcare; although this does not necessarily mean that they were not involved at all, it does indicate that clients would like to have greater input in their care.

Overall, respondents of the 2012 Client Satisfaction Survey were satisfied with the care they are receiving at the Ryan White Part A-funded medical clinics. People reported being able to get the services they needed when they needed them. They also reported getting a clear understanding of what their labs, medications, and lifestyle mean for their HIV disease. Less people reported feeling comfortable enough with their doctor to ask questions or discuss personal and intimate issues. However, there were people who reported not being able to receive services or access staff to ask questions; these are key elements that contribute to people dropping out of care and to poorer health outcomes.

Persons with higher satisfaction tend to have improved health outcomes and therefore having anyone with low satisfaction is undesirable. In order to reduce the number of individuals being lost to care, there needs to be high satisfaction across the board, which will be obtained by addressing different areas of improvement at each medical provider.

10. RESOURCE AUDIT

BACKGROUND

In 2012, a resource audit was created by the MPHD Research Analyst and the Needs Assessment Committee to gain a comprehensive picture of the continuum of care of the organizations and individuals providing services to HIV-positive persons, regardless of whether the provider sees itself as an HIV/AIDS service provider. The audit consisted of two primary components that are essential in determining resources available to HIV-positive persons: (a) the resource inventory portion depicts the HIV services currently available and (b) the profile of provider capacity and capability portion provides detailed information about the availability, accessibility, and appropriateness of services for PLWHA.

METHODOLOGY

Survey Development: The resource audit was created by the MPHD Research Analyst and reviewed by the Needs Assessment Committee of the Planning Council. Some questions in the audit were adapted from other resource audits/surveys, including the Central Florida Ryan White CARE Act 2005 Needs Assessment: Title I and Title II Provider Survey; Final Results: Indiana Provider Survey, A Component of the 2009 HIV Services Needs Assessment; and the Las Vegas TGA Needs Assessment Provider Survey for Agencies Serving People Living with HIV/AIDS.

Before the survey was administered, it was submitted to the MPHD Institutional Review Board (IRB) to be sure that the survey complied with regulations regarding human subjects research ethics. The IRB concluded that the resource audit was not human subjects research..

Confidentiality Measures: The information collected in this resource audit was public knowledge; no personal information was gathered. Therefore, no precautionary measures were necessary to reduce potential risks. However, because the audit was implemented through SurveyMonkey, SSL encryption was enabled in order to encrypt the results as they were sent between the respondents and SurveyMonkey.

Survey Administration: A convenience sample was obtained by implementing the resource audit through SurveyMonkey, an online survey software program, as a means of allowing more agencies to access the audit. An explanation of the survey purpose, as well as a link to the resource audit, was emailed to select agencies through GivingMatters.com, a community foundation of non-profit organizations in Middle Tennessee. Agencies were selected by GivingMatters.com based on the types of services they provide, the geographic location of the agency, and the geographic location of their clients' residences. A total of 241 pertinent agencies were invited to participate in the resource audit.

The survey was scheduled to be open for three weeks, however due to some unforeseen problems in emailing the survey link and a low response rate, the survey deadline was extended for an additional ten days.

A GivingMatters.com associate emailed the resource audit to selected organizations. Because the organizations being sought out already had contact with GivingMatters.com, it was believed that this relationship would help promote survey participation. The surveying period was 4.5 weeks and agencies received reminder emails during this time period to elicit greater participation.

At the end of the surveying period, 88 surveys were taken. However, two were removed due to insufficient data for proper analysis and five were removed because of being duplicates within an agency. Therefore, 81 surveys were included in the data analysis.

Limitations: Participation in the resource audit was limited to those organizations that received an email notice of the survey. The purpose of using GivingMatters.com was to increase the scope of those organizations asked to participate by not limiting the participation list to only organizations known by the Research Analyst and members of the Needs Assessment Committee. However, many organizations do not recognize the link between their work and the needs of HIV-positive persons, and consequently did not participate in the survey.

The results of this resource audit are not representative of all the non-profit organizations in Middle Tennessee, nor are they representative of the organizations providing services to HIV-positive persons. The data gathered through this audit serves as a source to a detailed understanding of the framework and services provided by those agencies that participated. The summary analysis functions to give a general picture of those agencies participating in the resource audit and the resources they have available to HIV-positive persons. Responses were based on self-reports by agency staff and have not been independently verified.

KEY FINDINGS

BASIC INFORMATION ABOUT PROVIDER AGENCIES

Almost half of respondents (49.4%) were human services organizations, providing such services as education, childcare, veterans' affairs, and assistance for the physically and developmentally disabled. Other types of organizations participating in this audit included medical providers (11.1%), housing/shelter providers (8.6%), food organizations (7.4%), and mental health centers (6.2%). Other organizations accounted for 17.3%.

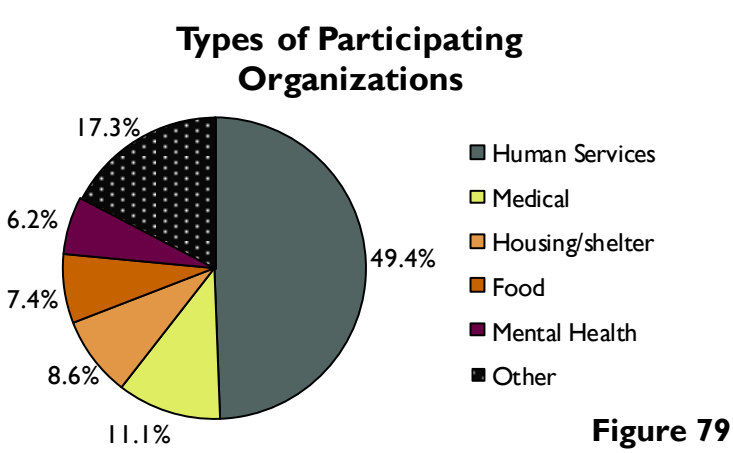


Figure 79

Financial Resources

Almost all participating organizations (91.0%) received contributions/donations within the last year. Over half (56.4%) received funding from the state government.

The total annual budget for participating agencies ranged from less than $100,000 to over $20,000,000, with 64.2% having received $100,000 to $5,000,000.

Less than twenty percent (19.8%) of agencies had an HIV/AIDS budget of up to $1,000,000. Three agencies had HIV/AIDS budgets ranging from $1,000,001 to $15,000,000. Almost one-third (62.7%) of agencies do not provide services specific to HIV/AIDS and therefore do not have a set budget for HIV/AIDS services; this does not mean however that these agencies do not serve PLWHA.

Staff Resources

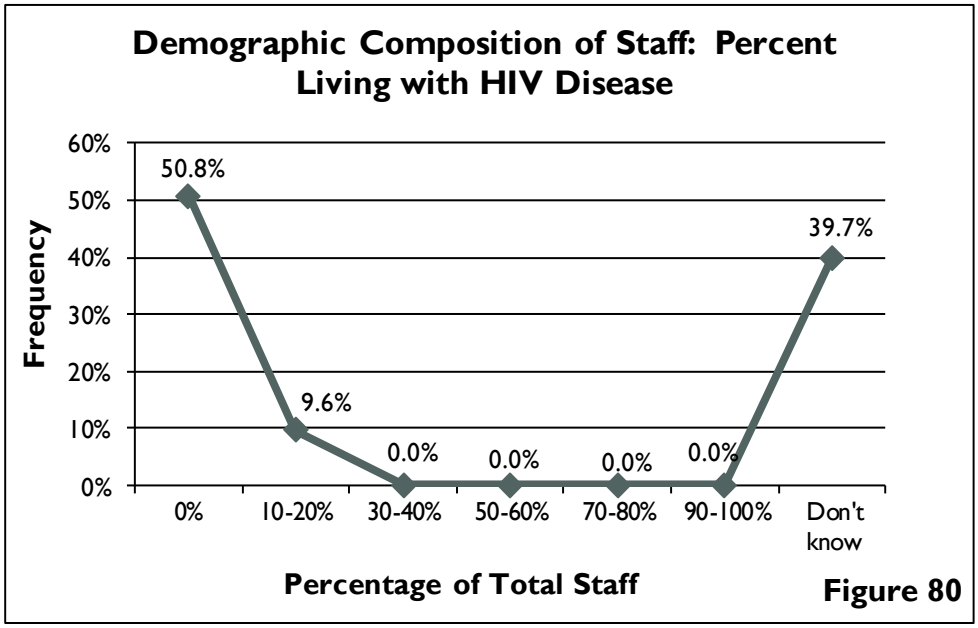


Figure 80

Staff composition was over 50% female in 91.4% of the participating agencies, with 22.9% of all the agencies having only female staff members. Over one-third (33.8%) of the agencies have 10-30% racial/ethnic minority staff members. Many agencies (19.1%) claimed 0% racial/ethnic minority make-up. Over half (50.8%) of the agencies have no staff members living with HIV/AIDS, while only 9.5% reportedly have 10-20% of staff living with the disease; 39.7% did not know how many of their staff members are living with HIV/AIDS. LGBT staff made up 0% (42.4%), 10-20% (21.2%) and 30-50% (4.5%). One-third (31.8%) of agencies did not know the percentage of staff members who are LGBT.

Sixteen (16) agencies reported having full-time staff members working in HIV/AIDS, ranging from one to 333 people. Twelve agencies had part-time staff members working in HIV/AIDS; this ranged from one to 13 people. Ten agencies reported having volunteers who work in HIV/AIDS medical care or support services; the number of volunteers ranged from one to 400 persons.

The most common staff training among agencies was cultural competence in racial/ethnic minorities (66.7%), followed by cultural competence in underserved populations (60.9%), and cultural competence in people with disabilities (49.3%). Staff with specialized trainings in HIV/AIDS occurred in 20.3-24.6% of the participating agencies, depending on the specific HIV/AIDS training area.

Targeted Populations Served

The most commonly targeted population was adults (35.6%), followed closely by females (31.5%) and youth (27.4%). HIV-positive persons are targeted by 15.1% of the agencies. Other notable targeted groups include: homeless persons (19.2%), persons with alcohol or other substance dependencies (17.8%), persons with serious mental illness (13.7%), men who have sex with men (6.8%), and injection drug users (6.8%). Non-Hispanic blacks and Hispanics were targeted by 19.2% and 17.8% of agencies, respectively.

Program Focus

Over half (57.7%) of the responding agencies reported that they do not know if their clients are HIV-positive; however, they would serve them regardless. Over one-third (35.2%) of the agencies serve a larger population, but have some people who are HIV-positive. Three agencies (4.2%) do not serve HIV-positive persons and one (1.4%) said they do not know if any of their clients are HIV-positive, but they would not serve them if they knew. Only one agency (1.4%) reported that they only serve persons who are HIV-positive.

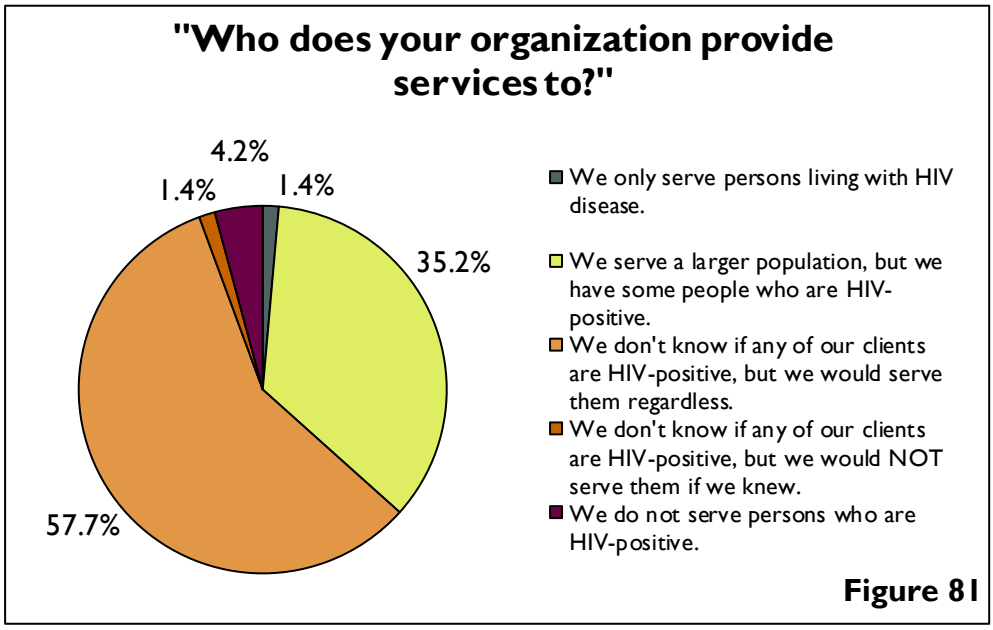


Figure 81

The most common medical services provided by participating agencies, whether to the general population or a specific population, included mental health treatment (42.4%), medication (29.8%), substance abuse-outpatient (23.2%), disease screening (22.8%), and HIV testing (22.8%). The most common support services provided, including services to the general population as well as a special population, include referral (80.0%), community outreach (69.5%), supportive counseling (64.2%), advocacy (62.7%), case management (59.6%), outreach (55.8%), and child/family support (53.8%). The most common financial service provided was utility payments (31.6%).

No agencies reported eliminating any services within the last year. Seven agencies reported adding services in this time period; some of these additions included a psychiatric medical clinic, increasing presence at health fairs targeting HIV-positive populations, counseling and economic support for PLWHA, an outreach worker to provide testing, and increasing peer delivered services.

PROJECT SERVICE AREA

The majority (83.6%) of responding agencies has a main or branch office in Davidson County, followed by Rutherford County (14.9%), Williamson County (13.4%), and Sumner County (7.5%). Each of the 13 counties in the TGA had at least one agency with a main or branch office participate in this resource audit.

While 28.6% of the agencies do not provide services outside of the office, people residing in each TGA county could receive face-to-face services outside of an office setting from a number of agencies.

Ninety-one percent (91.0%) of the agencies served clients residing in Davidson County. Agencies' clients resided in each of the 13 TGA counties, ranging from Williamson County (62.7%) to Smith County (29.9%).

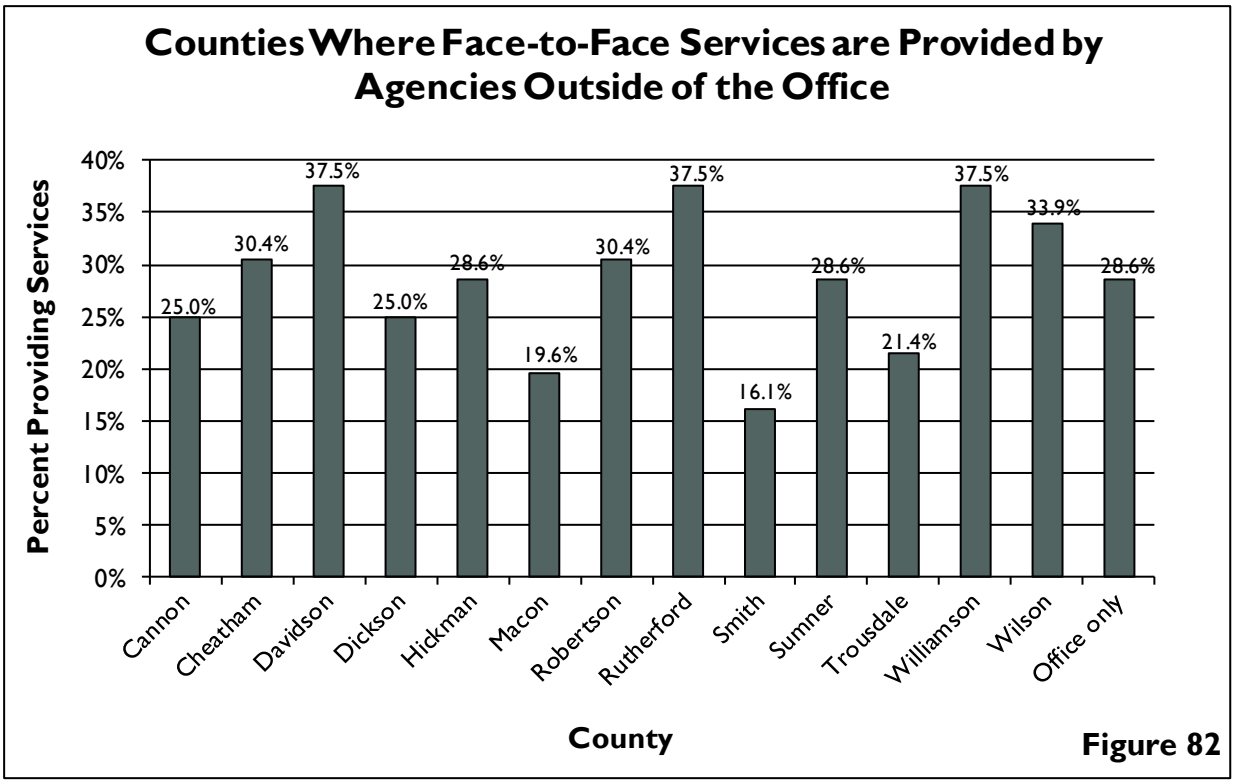


Figure 82

SERVICE CAPACITY

Same day/walk-in services were most commonly available for the first medical visit in the following areas: HIV testing (17.7%), medication (11.5%), lab work (8.2%), outpatient medical care (8.2%), disease screening (8.2%), and mental health treatment (8.1%). An average waiting time of a few days was reported in the following areas: mental health treatment (14.5%), substance abuse-outpatient (9.8%), and lab work (6.6%). One agency reported that it would take over two months for a client to receive HIV testing.

The support services with the shortest wait time (same day/walk-in) to a person's first support service include referral (58.3%), supportive counseling (28.6%), outreach (27.6%), advocacy (26.8%), food bags/ vouchers (22.8%), and transportation (21.8%). Case management and community outreach had a slightly longer wait time of a few days (29.1% and 24.6%, respectively).

Wait time for a client's first financial service greatly ranged depending on the service and the agency. However, utility payments had the shortest wait time with 6.8% for same day/walk-in and 6.8% within a few days.

No more than two agencies offering any service reported an average wait of over two months for that service.

Half of the responding agencies reported having no waiting lists for services, although 55.3% of the services have a waiting list at a minimum of one agency. The most common services to necessitate waiting lists were transitional housing (11.3%), permanent housing (9.7%), and childcare (8.1%). Other services with waiting lists included dental/oral care, mental health treatment, substance abuse-residential, advocacy, and financial support; each of these services was reported at 4.8%.

Capacity building training needs were similar across training categories. However, those training areas needed by the most agencies, regardless of training level, included program evaluation (59.7%), media/ public relations (59.7%), motivational training (53.2%), and community planning (49.2%). The most commonly needed HIV/AIDS and STD-related capacity building trainings were HIV/AIDS general training (40.3%), providing HIV/AIDS linkages (33.9%), and STD general training (33.9%).

Because many agencies do not know if their clients are HIV-positive, they were not able to identify how many HIV-positive clients they served within the past year or how many HIV-positive clients they could potentially serve. Of those agencies that were aware of their HIV-positive population, 38.5% claimed to have an unlimited capacity, 30.8% are close to reaching their capacity, 15.4% are at capacity, 7.7% are over capacity, and 7.7% are not near reaching their capacity.

Over one-quarter (26.2%) of agencies stated they do not need anything to increase capacity to serve PLWHA because it is a population they are not able to serve. Nineteen percent (18.5%) of agencies reported that they do not need anything more to increase their capacity for this population. Of those agencies reporting gaps in serving PLWHA, the most commonly reported needs were increased partnerships with HIV/AIDS specialty agencies (29.2%), training in HIV/AIDS social issues (27.7%), and funds to develop new capacity (27.7%).

Service Accessibility

Almost two-thirds (64.6%) of the agencies reported that public buses run within one-quarter mile of all of their organization's locations. Seventeen percent (16.9%) do not have a public bus within one-quarter mile of any of their locations.

The majority (76.1%) of organizations have weekday hours, roughly 8am-5pm. Thirteen percent (13.4%) have weekday evening hours, after 5pm, and 11.9% have weekend hours. Twenty-one percent (20.9%) are open 24 hours/7 days a week or have someone on call at all times.

Handicap accessibility features are at 78.8% of the agencies and free parking at 75.8% of the agencies.

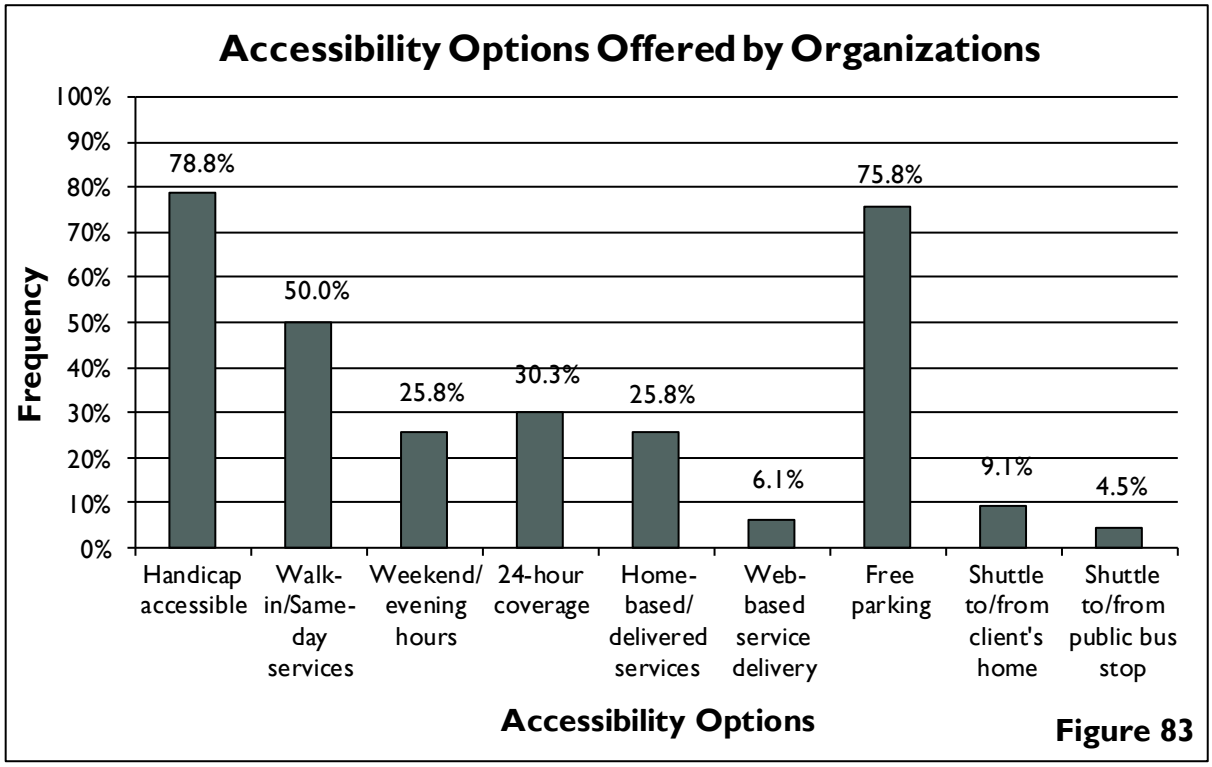


Figure 83

Different agencies allow different payment plans for the same services; and sometimes within the same agency they will allow multiple payment plans for different services. Two-thirds (67.7%) of the agencies provide free services, 27.7% use a sliding fee scale, 24.6% have insurance reimbursement (including private insurance, Medicare, Medicaid), and 10.8% charge a minimal fee. Some people (18.5%) pay the full payment of services.

In order to serve clients who do not speak English or do not speak English well, over half (51.5%) of the agencies have staff members who speak other languages in addition to English. Half (50.0%) of the agencies ensure that translators/interpreters are available when needed and 33.3% of the agencies translate patient materials into different languages. Some agencies also reported having clients bring someone in with them who can translate for them, using internet translation, and making referrals to agencies with staff/ volunteers who speak other languages. Ten of the organizations (15.2%) are not able to serve persons who do not speak English.

Only nine agencies reported having difficulties meeting the language needs of all of their clients. The languages included African languages, Arabic, Hindi, Karen, Kurdish, Laotian, languages of Somalia, Spanish, Sudanese, and Vietnamese.

Barriers to Care

Forty percent (40.0%) of responding agencies reported encountering barriers other than lack of funding in providing services to HIV-positive persons. The most common barriers were that the agency does not provide all of the services a person needs (21.5%), staff training in HIV/AIDS is limited (16.9%), there are not enough resources at the agency (15.4%), there is an insufficient number of specialty care providers (12.3%), and missed appointments (12.3%). Twenty percent (20.0%) of respondents stated that they have

not encountered any barriers; and 40.0% stated that the question was not applicable to them.

Other barriers specified by respondents included transportation, stigma, limited referral options for substance abusers, a lack of understanding among clients about what services they are eligible for, immigration issues associated with clients being illegal aliens, as well as a range of housing related barriers, including lack of affordable housing, homelessness, unstable housing, and limited shelters.

The System of HIV/AIDS Care

Varying opinions were given about which three special populations living with HIV disease are in greatest need of having their HIV-related needs assessed at this time. The most frequently noted group was youth age 13-24 (38.2%), followed by persons with alcohol and/or substance abuse problems (32.4%), African Americans/Blacks (29.4%), and persons with a mental illness (29.4%). Persons aged 50 and older (26.5%) and homeless persons (26.5%) were also frequently mentioned. Recommendations for ways to improve the provision of HIV-related care and support services included increasing HIV education for the general population to reduce stigma, broadening and expanding support services so that they are more easily accessible, and creating a more unified, coordinated system of care.

11. TOWN HALL MEETINGS

BACKGROUND

In 2012, the MPHD Research Analyst and Needs Assessment Committee created questions for Town Hall meetings on access to HIV testing and treatment. It is recognized that people from all different sectors of the community are impacted by, at risk of, or infected with HIV disease. In order to better serve this community, it was desirable to gain an improved understanding of the community's awareness of HIV testing and treatment services. Therefore, with the number of new infections still rising and many people unaware of their HIV-positive status, it is important for members of this community to get tested for HIV and for those people who are HIV-positive to enter into and remain in care. By hearing from members of this community, a more comprehensive understanding of the knowledge, attitudes, and experiences of the community can be used to improve access to testing and treatment services.

METHODOLOGY

Question Development: The town hall questions were created by the Research Analyst and reviewed by the Needs Assessment Committee. The questions were adapted from the Town Hall Meeting Series Summary Report generated by the New Jersey HIV/AIDS Planning Group. A guide was then developed to assure parity between the town hall meetings.

Locations: Two town hall meetings were held by the Ryan White Part A Program, one in each of two geographic regions in the Nashville TGA:

Nashville

Murfreesboro

Recruitment: People of any background were invited to attend the town hall meetings, including people aware of their HIV-positive status, those working in the HIV field, persons interested in HIV, as well as anyone from the general public wishing to contribute attitudes and experiences or gain additional knowledge. The Ryan White Part A Program created and delivered town hall flyers for advertisement at Ryan White Part A providers. The program also sent email invitations out to non-profit and private organizations providing services that may be applicable to HIV-positive individuals. Lastly, members of the Planning Council were asked to personally invite persons to the meetings.

Moderation: The town hall meetings were run by two different Planning Council members. Joseph Interrante moderated the Nashville meeting and Jessica Lyons conducted the Murfreesboro meeting.

Participants: A total of 21 individuals participated in the two town hall meetings, 19 at the Nashville meeting and 2 at the Murfreesboro meeting. From observation, participants were 52.4% (11) female and 47.6% (10) male. They were also 57.1% (12) white and 42.9% (9) black; ethnicity data was not observed.

ANALYSIS

WHY DO YOU THINK PEOPLE MAY NOT GO FOR HIV TESTING? AND, WHAT FACTORS DO YOU THINK CONTRIBUTE TO A PERSON DECIDING TO GET HIV TESTED?

A common theme as to why people choose to not get tested for HIV disease is that they actually do not want to know if they are HIV-positive. People believe in the thought "what I don't know won't hurt me." People do not want to face the disease, so if they do not know they are HIV-positive then they do not have to acknowledge it. They are also afraid to tell partners and family members, so if they are not tested then they do not have to disclose anything to these people. Many people, especially young people, do not recognize the risk factors; in not seeing the behaviors putting them at risk for the disease they do not see a reason to be tested. Education plays a role in this attitude. People who are not sufficiently educated about the disease may not know that they are at risk. For instance, if they think HIV is generally spread through sexual contact and they are not promiscuous, they feel they are not at risk and therefore do not think they need to be tested. What they do not realize is that HIV is spread through many other means unrelated to sexual contact, but that even sexual contact with only one person has its risks. They may think that vaginal sex is the only mode of transmission through sexual contact, so they engage in oral or anal sex instead, not realizing that they are still at risk. These two divergent thought processes, denial compared to lack of education, can lead people down the same path–not getting tested for HIV disease.

Another common belief is the idea of "the other". People often feel that things like HIV disease happen to "other" people and not to people like them. They feel that by engaging in risky behaviors only one time or infrequently that they will not contract the disease.

There is a lack of understanding about the testing process as well, that while it may not deter people from being tested, is not promoting testing either. Many people do not know that they can receive their test results within 15 minutes; people do not like the idea of having to return to the testing location a second time. It is also not widely known that free testing is available. Many people do not want to spend possibly the little money they have on being tested for a disease that they feel they are not at risk of. Therefore, they simply choose to not be tested.

Lastly, being in the Bible belt, there is a great deal of stigma surrounding HIV disease, as well as lifestyle factors that may place people at greater risk for the disease. Asking someone if they would like to be tested can be considered offensive because it is suggesting that the person might have HIV or that they engage in behaviors of an alternative lifestyle.

On the other hand, many people do not want to be thinking "what could have been" once they have HIV disease and are seriously ill. People who are educated about the disease, understand the symptoms and that they do not always appear or may only appear after the disease has progressed, may decide to get tested. They do not want to be faced with the realization once it is too late, that there was something they could have done to protect themselves.

Another common theme was that people do not usually get tested because they are trying to be preventive, but rather because someone reminds them to do it. Visibility of the disease and testing for it can gain someone's attention. Therefore, it may not be that people are deciding to not get tested, but that they are not being tested because they do not think about it. They may only make a conscious decision to be tested once they are presented with the idea. This theme was acknowledged by multiple people. They feel that people just do not think about the disease and so they are not tested for it–whether it is that their doctor does not ask them if they want to be tested or they are not faced with education that reminds them of the importance of doing so–but as a result they do not get tested. However, once they are presented with the idea they are understanding of the importance of being tested and only do so at that point.

Where would you send someone to get HIV testing or treatment services?

The most common responses were the health department, Nashville Cares, the VA, and college/university health centers. However, because many of the participants of the town hall meetings were people who are involved in the HIV care system already (staff, consumers), they may have knowledge that general community members do not.

It was acknowledged that young people often have significant barriers with testing, particularly because they do not trust as many people, do not have access, and do not know how to access services. Stigma and financial status may affect the decisions of anyone as to where to get testing or treatment services. If a person feels he does not have the financial means to pay for the services, he may decide to not receive them rather than attempting to access financial assistance which would then allow him to utilize the services. Regarding stigma, a person may not want to get tested by or receive treatment services from his primary care physician if he does not trust that the doctor will keep his status confidential; this seemed to be a bigger issue in small communities where a person's doctor may know the client's family and friends.

Why may individuals decide not to receive treatment for their HIV? Or why may they not stay in treatment?

There were three main themes given for why people do not enter HIV care once they learn they are HIV-positive: emotions, finances, and stigma.

The first theme, emotions, can significantly impact whether or not a person enters into HIV treatment. Many people are emotionally shocked when they first learn they are HIV-positive. If they are not ready to deal with the disease or are in disbelief that they even have it, they are less likely to enter into care. The moment an individual enters into care, is the moment he has to admit something is wrong and face the disease. The person who tells the individual that he is HIV-positive has a great deal of influence on whether or not the person enters into care. If the tester offers support and education and can answer the individual's questions, it is more likely that the person will enter into care.

Financial reasons also significantly affect whether or not a person enters into treatment. Many people do not realize that programs are available for persons with low-incomes and therefore if they feel they cannot afford the services they simply do not engage in the system of care. If people were aware of the resources available to assist them in getting care, possibly free care and medications, they would be more likely to enter into treatment.

Again, stigma plays a big role in whether or not someone enters into treatment services. If a person lives in a small community, stigma and fear are likely to play a bigger role. People worry that others will see them going in for a doctor's appointment and will then be identified as being HIV-positive. They do not want to be targeted or presumed as being HIV-positive and so feel avoiding anything related to HIV disease is the answer. People also worry because they do not trust the system and think that once they enroll in care that they will be placed on a "list".

Some people enter into care, but then drop out. A common reason suggested by town hall participants was that people do not like the medications–they make them feel ill, they have side effects, they do not appear to make a difference. Some people will stop taking their medications and going to their doctor because they do not want to deal with it and then only re-engage in the system once they start to feel sick again.

People often get angry, frustrated, and exhausted with the treatment process. It can be an emotional roller coaster. It can also be difficult to understand the system of care and its functionality, making them frustrated when the system does not work as quickly as they would like it to.

Access to services may also impact a person dropping out of care. If doctors' offices are not open at times that work with an individual's schedule, or if the office is located in an inconvenient or far away place, people are more likely to fall out of care. And if the individual is busy and is not able to regularly commit to appointments or stay on top of his care, receiving treatment may fall to the wayside.

What would you recommend to help us get people HIV tested? Do you have any ideas how to get HIV-positive people into HIV care?

Improving access to testing and treatment services was a common theme expressed at the town hall meetings. Having offices open in the evenings and on weekends when people with 9am-5pm jobs can more easily attend appointments would be helpful. Also, having a Center of Excellence and more HIV doctors in the rural areas could improve engagement in the system. For rural people, transportation can be a major barrier. Currently the bus system is very limited for people in rural areas and with gas prices being so high having another person drive the individual to appointments is not always an option. Therefore, improving transportation services is essential in getting people from the rural areas to get tested, enter into care, and stay in care.

Another significant theme discussed was education. Education on the disease can help people to recognize the importance of knowing one's status, as well as the difference that can be made by entering into care if a person is HIV-positive. This can teach people that they can live longer and healthier lives if they get into care; it can also open up the conversation more and help to reduce stigma associated with the disease. Education about services is also important. Many people are not aware of all the services available to them, nor are they aware that many services are free for person's with low incomes.

CONCLUSIONS

While nothing significantly new was proposed in the town hall meetings, it was learned that stigma and education are still problems in this community. More education is needed for the community on HIV disease and the HIV system of care. Many people do not have a sufficient level of knowledge of HIV disease and therefore do not recognize the importance of reducing one's risk factors, getting tested, and entering into and remaining in care if they are HIV-positive. However, because stigma is so high in this community, many people are not willing to discuss HIV; they also have the belief that only people engaging in alternative lifestyle behaviors are at risk. If stigma in this community can be reduced and therefore education about HIV disease be improved, it is likely that more people will get tested and enter into treatment if they are found to be HIV-positive.

Persons living in the rural areas are also at an increased disadvantage because not only does stigma tend to be greater, but they have less access to the HIV system of care. There are fewer HIV providers and agencies in the rural areas, in part due to stigma, which leads many people to come into Davidson County for services; however, because transportation from these areas is scant and infrequent, many opportunities to engage people in the system are lost. By working to improve transportation services from these areas, as well as bring new providers into these areas, more people are likely to receive care and remain in care.

Many of the issues surrounding HIV testing and treatment in this community stem from stigma. If this can be addressed, even one person at a time, differences can be made that will impact education and knowledge and accessibility of services. This in part will then help lead more people to be tested for HIV disease, as it will help get more people into care and stay in care if they learn they are HIV-positive.

12. KEY INFORMANT INTERVIEWS

BACKGROUND

In 2011, key informant interviews were conducted by the MPHD Research Analyst, examining the types and availability of HIV services in the Nashville TGA. The interviews were aimed at understanding the full system of HIV care, including those secondary services that are indirectly related to a person's HIV care, but directly impact one's overall health.

METHODOLOGY

Interview Development: In order to get a good understanding of the current system of HIV care in the Nashville TGA, interview questions were centered on the strengths and weaknesses of available services. Some questions were taken and modified from other surveys, including the Indiana Provider Survey (2009) and Central Florida's Provider Survey (2005).

Key Informant Identification: Key informants were initially identified by the type of service provided. A comprehensive list of HIV-related service categories was created and key informants were identified for each kind. Categories selected include:

- Federally-funded health center
- HIV medical provider
- HIV/AIDS service organization
- Mental health provider/substance abuse provider
- Rural provider
- Women and families provider
- Youth-oriented provider

Speaking with knowledgeable persons associated with the field of HIV was desirable for getting insightful and informed opinions and experiences.

Interview Administration: The interviews were conducted by the MPHD Research Analyst via telephone. The Research Analyst sent informants the interview questions in advance, however asked the informant each question as well. Seven interviews were conducted.

Data Entry and Data Cleaning: Responses were recorded by the Research Analyst using modified short-hand as the informants answered questions. Responses were then reviewed and cleaned immediately following each interview to ensure recording accuracy and completeness.

Analysis: Each question, except one, was open-ended allowing respondents to provide specific opinions and details. These responses were coded for themes and analyzed as such. Anecdotal information was also noted to provide qualitative meaning to informants' views on the current system of HIV care.

KEY FINDINGS

WHAT IS WORKING WELL WITH THE SYSTEM OF CARE IN KEEPING PERSONS FROM CONTRACTING HIV DISEASE?

Various aspects of the current system of care were listed as working well in keeping people from contracting HIV. Three informants stated that testing has done well to keep people from contracting HIV; conducting rapid testing and expanding testing services to allow more people access to testing has been key. A mental health/substance abuse key informant, who believes testing has been very important, noted that his organization goes out and looks for people to be tested. He added, "People with addiction disorders are certainly at higher risk of contracting HIV." Taking the added step of actively looking for people to be tested can reduce the number of persons contracting the disease. Increased HIV disease education and cultural relevance were other aspects of the system mentioned by informants.

Early intervention services (EIS) was mentioned by three informants as being a good way of preventing HIV. While EIS does not actually do prevention services, it helps to link people who are HIV-positive to care, lowering the community viral load, which in turn lowers the risk of contracting HIV for people who are not HIV-positive.

The rural key informant stated that her organization does not really provide any prevention services because they do not have the staff or resources for these services. Therefore, they are only able to provide treatment for those individuals who are already HIV-positive.

It is important to note that some individuals listed services that are not prevention services; they are not services directed at persons who are HIV-negative, but rather services for people who are already HIV-positive. Perhaps there is a disconnect between prevention and treatment and HIV-negatives and HIV-positives. A number of the informants seemed to skip over prevention for people who are HIV-negative and immediately focus on those who are HIV-positive. In order to reduce the number of people needing treatment, we must recognize the need for reaching people while they are still HIV-negative.

WHERE ARE THE MAJOR GAPS IN PROVIDING SERVICES TO KEEP PERSONS HIV-NEGATIVE?

Six of the seven informants stated that education is a major gap in preventing persons from contracting HIV. Two individuals noted that they believe people have become complacent with HIV and that they do not fully appreciate the severity of the disease because current treatment and medications have greatly improved the course of the disease. They believe people are not seeing the side of the disease that kills so

callously and therefore they have adopted attitudes towards the disease that are simply not compatible with the reality of the disease. People need to be appropriately educated about the truths of the disease. And while one informant proposed that greater focus needs to be on educating high risk populations, another person questioned the need for educating other groups as well. She said, "Individuals with high-risk see messages all the time, but other groups don't necessarily."

Aside from educating people specifically on HIV disease, one informant discussed the importance of educating people on how to disclose their status to their partners in order to prevent spreading the disease to them. "The lack of these skills can inhibit people from doing these things and they can't make informed decisions about risk." Learning to talk about the disease is important on the individual level, but also on the community level. One informant noted that certain aspects of the disease are ignored or not discussed in our community because of religious and racial factors. She said, "If you create a space where people are comfortable to talk about it then they will, but if there's too much stigma they won't."

Not surprisingly, funding was pointed out as a major gap by four informants. Without sufficient funding there are staff that cannot be hired and services that cannot be provided.

Prevention services directed at ethnic communities were also noted by two informants. There are language and cultural needs of these communities beyond the general prevention services. And while many ethnic communities are present in Nashville, the Hispanic and Kurdish communities were specifically mentioned.

Other services such as housing, food, and mental health were also pointed out. Without these services a person cannot even begin to think about HIV, whether they are HIV-positive or HIV-negative. A person's basic life needs must first be met before he can begin worrying about HIV. Therefore, people need greater access to basic services in order to put them in a position to even be concerned about HIV disease.

What is working well with the system of care in getting HIV medical treatment and other HIV support services for persons who are HIV-positive?

Informants gave very different responses for what aspects of the system of care are working well for providing care to HIV-positive individuals. And while some services were mentioned by one informant as a service that is working, others mentioned it as a service that was not working very well. One informant noted the vast number of people working in the HIV field. "One of the things working well is the multitude of people doing work. I'm continually learning about all of the services places are providing, all of the places doing work, the grassroots organizations…" Another informant commented that collaborations between some organizations have been very beneficial. These collaborations can be helpful when considering the loss of care population. Connections between organizations can help to build connections with clients and keep them in care.

Other services brought up by informants included medical care, providing comprehensive care, EIS, case management, and medications. Although these services are working pretty well given the limits, they are not enough. Almost all of the informants believed that some services are helping, but felt the need to quantify them as still lacking.

Excluding lack of funding, what are the top 3 challenges you have faced when providing HIV medical treatment and other HIV support services to people living with HIV or AIDS?

Some informants answered this question with the challenges that they are directly faced with when providing care to consumers, while others answered with challenges that they are only indirectly faced with, but are more so challenges for the consumer. The most common challenge given was transportation, stated by four informants. Without transportation consumers cannot get the services they need. Referring a consumer elsewhere may be a moot point if the consumer does not have any means of getting there. It is more difficult to get people in care and get them to stay in care if transportation is a problem. The rural informant stated her average client must travel 45 minutes to an hour to get to the clinic. Public transportation is not an option for consumers in much of the rural area. Accessibility to services, such as timing, is also closely related. If a person is not available to get the service when the provider is open, then he may not be able to get that service.

Stigma was mentioned by two informants as creating challenges to giving HIV care. There is still a lot of judgment with the disease amongst the community and churches. If people are concerned about being stigmatized they may choose to not receive services. This can make it difficult for getting people in care, as well as keeping them in care. An individual's denial of the disease is also problematic. If a person just ignores their HIV disease diagnosis hoping it will go away, he risks his own health, as well as the health of others if he spreads the disease.

An informant located within Davidson County noted the limited resources that exist outside of Davidson County. This was also noted by the key informant from the rural clinic. She discussed the challenges with mental health services in the rural areas. There is only one mental health provider and so if a patient does not like that provider or does not "gel" with them, there is not anywhere else for them to go unless they drive all the way into Nashville.

Some of the challenges directly faced by providers include staffing issues and the unit system in which medical care is built on. Sometimes patients have multiple co-morbidities and the 15-minute increments for doctors to be able to bill by can make it very difficult to give sufficient care. The informant from the rural clinic noted that staffing is a major issue. She discussed the problem of not having sufficient staff members. "I'm a nurse; I'm not a social worker. But I'm put in situations that I have to provide social work services to people, so it's an injustice to people. It's not that I can't do the job, but I'm just not trained in the proper way."

Other challenges include insufficient housing; the strictness of guidelines/limitations of resources in employment and housing for individuals who have had problems in their past (such as substance abuse or jail); not enough peer services; insufficient education; changes that occur in relationships when a person is diagnosed with HIV disease; not having medical providers that have experience with HIV; people not being comfortable talking about HIV, talking about HIV and sexuality, condom negotiation and refusal skills; and waiting lists. It was also mentioned that the networking between organizations needs to be improved. In addition, having a more comprehensive sense of who is providing what services, as well as what services are actually available, is needed. There may be resources that are available to consumers that even some service providers are not aware of.

For the services that Ryan White funds, are there services that are not available at all or not enough of? If yes, what specific services?

The most commonly reported service that is insufficient was medical case management. Informants discussed the heavy case loads of medical case managers. "Most case managers' case loads are so large they have difficulty finding adequate time taking care of all of those [cases] and [the] case manager at times can be overloaded and can't do what is needed." Another informant proposed that the case load could be alleviated to a degree if medical case managers had peers working with them.

Adequate housing was once again discussed, along with food and transportation. Insufficient dental care and mental health services, including mental health providers who are experienced with mental health as it pertains to HIV, were also mentioned. Some other services that were brought up include outpatient/ ambulatory care, services for women and children, substance abuse, treatment on demand, and respite type services. Employment needs were also mentioned, including assistance directed towards returning to work, moving out of unemployment or underemployment, and disclosing status to an employer, etc.

What are the five most important services a person needs in order to successfully manage and live with HIV disease?

Medical case management (MCM) and housing were the most frequently listed services needed by a person to successfully manage HIV disease; these were each listed by four informants. Medical case management, including linking into resources and treatment adherence, were considered to be very important. Affordable and decent housing was also felt to be critical to a person successfully living with HIV. Interestingly, the four individuals listing housing were the individuals working in the clinics and community health centers; this is likely a reflection of the services their clients are lacking or have difficulty getting. Along the same lines of basic life needs, three informants listed food/nutrition services. These were three of the same informants listing housing.

Education was listed by three informants. Informants stated that education was necessary for both the HIV -positive individual, as well as for his family, and needed to include understanding the disease, how to manage it, building skills, and how to become actively engaged in one's HIV care. An informant of an AIDS service organization (ASO) said, "People are comfortably passive around those issues and sometimes that's okay and sometimes not okay, because it creates extra stress on the people and services. And that's not a good way to manage the disease because they are lacking complex knowledge, especially with new treatments. But that becomes an excuse for people. They could be trained to ask questions."

Adequate and comprehensive dental services were listed by three informants. Similarly, medical and prescription benefits/financial support were listed by two informants. One informant discussed the need for individuals to have sufficient insurance coverage or funding. She commented that some clients have insurance, but it does not cover all of the service costs. She calls them "'the working poor.' They are out there working, but they make too much to qualify for the programs. And it might only be by like $100, but they don't qualify."

Employment assistance was also listed by two informants. A way of increasing the employability of individuals would be beneficial for them to successfully live with HIV. "A lot of people are on disability,

but they could still make something to contribute back to the community." A support system, whether it is familial or community based, is also important for individuals living with HIV.

Other services listed by informants as being important for individuals living with HIV included transportation, accessible and open care, counseling, mental health and substance abuse services, a peer network, and planning.

How would the system of HIV care need to change in the next 3 to 5 years in order to keep persons HIV-negative and provide quality care to persons who are HIV-positive?

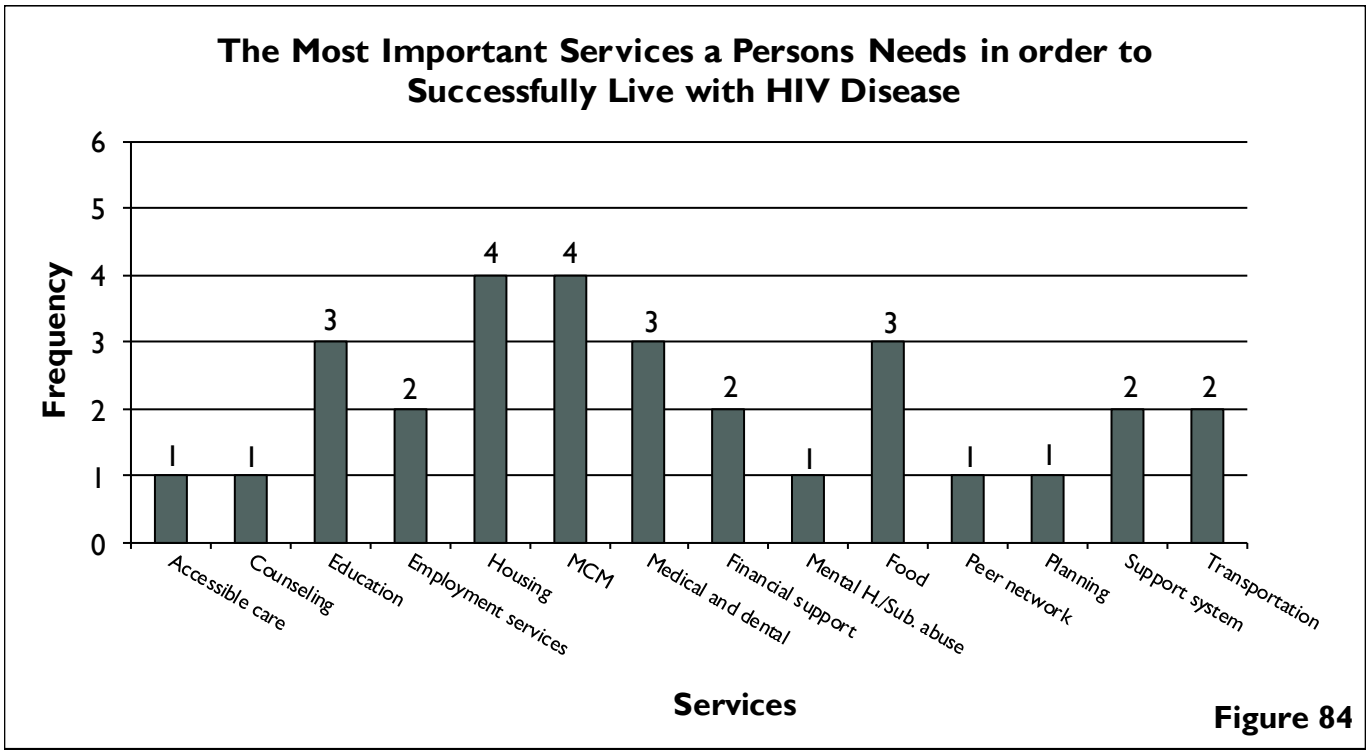


Figure 84

It is important to note that one informant did not answer this question because she felt she could not presume the needs of other people since everyone is different.

The most common responses for how we would need to change the system of care to keep people HIV-negative and treat those who are HIV-positive were increasing education, reducing stigma, and integrating biomedical research and advances into the community. One informant mentioned sero-positive studies and the need to be able to incorporate results into care.

An informant from an ASO proposed that the way to keep people HIV-negative is by impacting those who are HIV-positive. Again he emphasized the importance of skills building. "The ability of HIV-positive people to prevent transmission is through skills, risk reduction, maintaining their health, getting the services they need." The informant in the rural clinic said that staffing would need to be improved for them to successfully provide quality HIV care to persons who are already HIV-positive. She said, "We've gone from 85 to 120 patients. We can get them meds and to appointments, but not other things like social services. We don't have the staffing to support all of their needs. Eventually we're going to see a decline in patients."

Additional changes proposed to improve the system of HIV care include increasing prevention and outreach, placing a greater focus on African American women, improving networking between medical providers so that they can more easily determine if a client has dropped out of care, having health care providers who are knowledgeable and experienced with HIV, not building parallel programs that chop up resources and waste money and people, and better integration of HIV services into social services (i.e. housing, food, education, job opportunities).

WHICH OF THE FOLLOWING POPULATIONS DO YOU BELIEVE IS MOST IMPORTANT TO HAVE THEIR HIV-RELATED NEEDS ASSESSED AT THIS TIME? THAT IS, WHICH POPULATIONS ARE THE MOST UNDERSERVED AND/OR DO WE KNOW THE LEAST ABOUT?

Informants were asked to choose three of the following groups:

Persons co-infected with Hepatitis C	Incarcerated/recently released	Persons with alcohol and substance abuse problems
Sex workers	The mentally ill	Homeless persons
Hispanics/Latinos	African Americans	Women
Men who have sex with men	Heterosexual men	Transgender persons
Youth age 13-24	Persons age 50 and older	Other (specify)

Each group was selected by at least one informant, with the exception of Transgender persons, which was not selected by anyone. There was no consensus as to what three groups most need to have their HIV-related needs assessed at this time. Each group was only selected by one or two informants. No informants listed a group that was not provided.

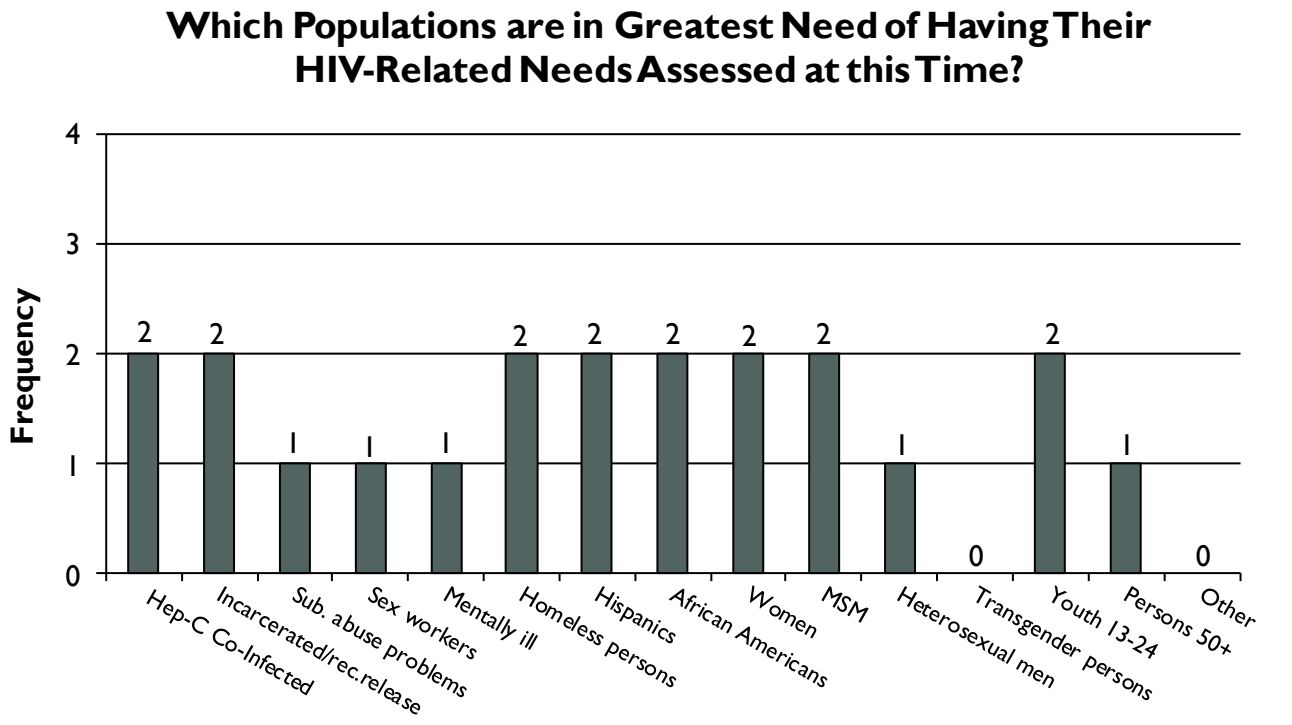


Figure 85

Briefly discuss the single most important change aside from increased funding, that you would recommend for improving the provision of HIV-related care and/or support services for PLWHA in the Nashville TGA.

All of the key informants stated a different change that they would recommend for improving the provision of HIV-related care and support services for PLWHA. MCM was noted as a lynch pin within the system. The informant stated that while we need to identify primary activities for medical case managers, it should not be so monolithic. Also, we need to have a better understanding of where EIS ends and MCM begins. Another informant stated that social work and social services need to be more accessible, at least for individuals living in rural areas; and a different informant emphasized the importance of integrating HIV medical services into social services.

Other changes listed to help improve the provision of HIV services included treatment adherence, reducing inequality among community based organizations, education and outreach, and improving community attitudes towards HIV disease.

Two informants provided a second, additional change that they would recommend if they were allowed two changes. These included improving transportation in the rural areas and improving the infrastructure of services available outside of Davidson County.

Is there anything else you would like to add regarding HIV disease services in the Nashville TGA, the overall system of care, or suggestions regarding improvements to the system?

A couple of informants added a few additional thoughts and concerns.

There is tremendous interest in the use of peers, however most organizations do not have the resources to reimburse them or have very limited resources for this.

There are many organizations that have staff members who are HIV-positive, but they have not thought about using them as peers. "Being HIV-positive yourself, regardless of whether a consumer or not, gives certain insight; how do we play that up and build it into the system? A lot of us make an effort to attract and hire HIV-positive individuals, but then don't integrate them into the system or give them a unique role to put those skills to use."

Testing needs to be expanded in the outlying, rural counties to identify those people who are positive and do not even know it.

Certain counties are served by the TGA and others are not. The rural area informant described the difficulties of serving clients that live within the TGA, as well as a significant number who do not. "There are certain counties that are served by the TGA, but there isn't anyone to serve them and there are few people that even need services. Clarksville has a lot of people with HIV, but they aren't eligible for your services."

CONCLUSIONS

Overall it appears as if the key informants feel the services that are in place are doing a good job, however there are just not enough of them. Not surprisingly, many of the problems with the system of care go back to insufficient funding. However, as was suggested by a few informants, we need to find ways of improving the system without requiring additional funding; we need to more effectively and efficiently use the funding that is available.

The services mentioned the most often by informants as being critical to the system of HIV care are medical case management, housing, food, education, and transportation. Access to medical services, either through adequate health insurance or other funding, was also highly regarded.

These key informant interviews did not reveal a great deal of consensus. This is perhaps because each informant works in a different part of the HIV medical or social service field and therefore encounters different challenges related to the different types of clients they serve. However, it could also be presumed that the lack of strong consensus is the result of many areas of need existing within the HIV system of care.

13. RECOMMENDATIONS

1. Review continuum of care to identify, develop, and implement strategies to address current barriers and needs as appropriate and feasible.

Barrier/Need	Strategy(ies)	Recommendation			
		Funding	Directive	System	Prevention
Not accessing HIV medical services	For services identified via data, require providers (MCM, EIS) to enhance tools for engaging PLWHA in medical care (e.g., consumer education, readiness assessment, motivational interviewing).		X		
Increased demand on Ryan White Services	Increase funding for HIV outpatient/ambulatory care services.	X			
Inadequate resources for permanent housing	Coordinate meetings between HIV and housing providers to identify strategies for improved collaboration so that HIV-positive persons who need housing are quickly identified and connected with services.			X	
	Arrange meetings between housing funders to identify strategies to maximize housing resources.			X	
Homelessness	Coordinate meetings between HIV and homeless providers to identify strategies for improved collaboration so that HIV-positive homeless persons are quickly identified and connected with services.			X	
Limited access to Medicaid	Work with other health advocates to ensure a health benefit package in Tennessee that meets the needs of PLWHA (including insurance exchange and Medicaid benchmark program).			X	
	Develop an initial plan to address challenges of a new enrollment process for health insurance.			X	

Barrier/Need	Strategy(ies)	Recommendation			
		Funding	Directive	System	Prevention
Substance Use	Strengthen relationships between EIS and substance abuse treatment providers to identify and link HIV-positive persons to care.			X	
	Use data from new TDMHSAS HIV funding to inform service enhancement for substance users.			X	
Incarceration	Maintain EIS jail services.	X			
	Coordinate with TDOH regarding the prison program. (EIS and MCM)		X	X	
Not in care because do not feel sick	Continue client education by prevention and treatment staff.		X		
	Develop a peer strategy to educate other consumers about the benefits of treatment.			X	
Need more involvement in health decision-making	Increase tools to teach consumer decision-making skills for managing their health.		X		
	Fund a peer model that complements existing programs to focus on helping consumers self-manage their HIV disease and maintain wellness.	X			
	Request AETC to provide education to providers on how to enhance integration of self-management into practice.			X	
Need peer support	Continue to fund peer positions in EIS, MCM, and psychosocial.	X			
	Strengthen the capacity of the Planning Council's Community Access Committee.			X	
Need support from clergy	Work with entities connected with faith based communities to increase collaboration.			X	
Transportation	Collaborate with existing resources in order to maximize the use of existing resources.			X	
	Charge the Consumer Access Committee to develop information on transportation options for PLWHA.			X	
Insufficient food	Enhance practices designed to improve client's nutritional skills. (CM, Food)		X		
	Increase collaboration with other food resources.			X	

2. Coordinate prevention and treatment systems in order to enhance efforts to assure persons, particularly high-risk populations, know their status, and to assure that newly identified HIV-positive persons are quickly engaged in care.

Barrier/Need	Strategies	Recommendation			
		Funding	Directive	System	Prevention
Need to enhance testing strategies and address stigma	Monitor data to assess ongoing trends.			X	X
	Increase targeted messaging and testing to high-risk populations through varied strategies.			X	X
	Implement strategies to address stigma in the community.			X	X
HIV incidence in 18-24 year old population	Make recommendations to TDOH for enhanced testing strategies targeted towards 18-24 year olds.			X	X
	Identify and fund an outreach strategy specifically for young, non-Hispanic black MSM's that complements existing programs.	X			
People are unaware they are HIV-positive	In collaboration with Prevention, review prevention/testing/ treatment services and identify new strategies to address stigma and fear, particularly in non-Hispanic black communities.			X	X
An estimated 45.4% of HIV-positive persons are not in HIV medical care	Work collaboratively with Prevention to ensure that there is a strong link between testing/screening and linkage to medical care. (Focus on EIS.)			X	X
	Use data to guide development of strategic interventions to identify and link people to care.			X	X
Increase utilization of HIV testing data for planning and service development	Collaborate with TDOH on data collection, analysis and reporting (including trends) to help guide planning and funding decisions.			X	X
Enhance HIV prevention measures in the TGA	Collaborate with TDOH to identify areas for additional data collection in order to focus, refine, and improve HIV prevention in the TGA.				X

3. Increase service capacity when funds are available in areas where significant gaps and limited resources are identified (excludes services mentioned above-outpatient, housing).

Barrier/Need	Strategies	Recommendation			
		Funding	Directive	System	Prevention
Mental health needs	Maximize the use of other community resources, particularly TennCare and the State block grant. (CM, EIS, MH)		X		
	Increase collaboration with State mental health authority to identify resources and improve screening and referral.			X	X
	If unallocated funds become available, consider using funds for this service.	X			
Substance abuse needs	Maximize the use of other community resources, particularly TennCare and the State block grant. (CM, EIS, SA)		X		
	Increase collaboration with State substance abuse authority to improve screening and referral.			X	X
	If unallocated funds become available, consider using funds for this service.	X			
Limited access to dental care	Maximize the use of other community resources, particularly safety net dental providers. (CM, EIS)		X		
	Increase collaboration with safety net dental providers.			X	
	If unallocated funds become available, consider using for this service.	X			

Note: The above recommendations were proposed by the Needs Assessment Committee, although the decision to implement them is up to the Planning Council.

FUTURE DATA NEEDS:

In order to reduce the gaps in knowledge, and better define service gaps and existing barriers to care, more information about demographics, service utilization patterns and needs, etc. is needed on a range of topics, including:

1. Aging population: culturally tailored services available and needed, barriers to accessing HIV medical care and services, and assessment of service needs and gaps.
2. Diagnosis lag incidence: monitor over time.
3. Hispanics: culturally tailored services available and needed, barriers to accessing HIV testing and services, and assessment of service needs and gaps.
4. HIV disease incidence: monitor over time by subpopulation, particularly Hispanics and persons 15-24 years old.
5. Homeless persons: increase knowledge of number of people who are homeless and HIV-positive, testing resources for homeless, services available and needed, barriers to accessing HIV medical care and services.
6. Housing: increase knowledge of housing costs (percent of income spent on housing), types of housing available and needed, barriers to accessing safe and affordable housing, and assessment of service needs and gaps.
7. Medical service utilization at non-Part A funded providers; potential sources of data include: private providers, support service providers, reported HIV lab data in eHARS, etc.
8. Mental health: increase knowledge of number of people who have mental health disorders, level of services available and needed, barriers to accessing HIV medical care and services, and assessment of service needs and gaps.
9. Peers: increase knowledge of consumers' need/desire to talk with peers.
10. Persons 15-24 years old: culturally tailored services available and needed, barriers to accessing HIV medical care and services, and assessment of service needs and gaps.
11. Persons living in rural/non-urban areas: increase knowledge of service needs and barriers to accessing HIV medical care and services.
12. Persons not accessing any HIV services: demographic information, reasons for not utilizing services, and service needs.
13. Substance abuse: increase knowledge of number of people who have substance abuse disorders, level of services available and needed, barriers to accessing HIV medical care and services, and assessment of service needs and gaps.
14. Unmet need: improve access to resources for determining unmet need.

14. SOURCES

Campsmith, M., Rhodes, P. & Hall, H.I. Estimated Prevalence of Undiagnosed HIV Infection in the United States at the End of 2006. (Centers for Disease Control and Prevention Publication No. CS125213).

Centers for Disease Control and Prevention. (2012). Trends in Tuberculosis–United States, 2011. *MMWR* 61(11), 181-185. Retrieved April 12, 2012 from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6111a2.htm?s_cid=mm6111a2_e%0d%0a

Centers for Disease Control and Prevention. (2010). Diagnoses of HIV Infection and AIDS in the United States and Dependent Areas, 2010. HIV Surveillance Report, Volume 22. Retrieved May 21, 2012 from http://www.cdc.gov/hiv/surveillance/resources/reports/2010report/index.htm

Centers for Disease Control and Prevention. (2008). HIV Prevalence Estimates–United States, 2006. *MMWR* 57(39), 1073-1076. Retrieved April 24, 2012 from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5739a2.htm#tab

Centers for Disease Control and Prevention. (2007). HIV/AIDS Risk Factor Reporting Alarmingly Low. Retrieved May 22, 2012 from http://www.cdc.gov/hiv/topics/prev_prog/ahp/resources/other/pdf/Sample_Article.pdf

Dey, A. (2010). Town Hall Meeting Series Summary Report. Retrieved December 21, 2011 from http://hpcpsdi.rutgers.edu/NJHPG/downloads/NJHPG%20Town%20Hall%20Meeting%20Series%20Report%209[1].13.10.pdf

Foote, C., Pessagno, R., & Lynn, S. (2009). Final Results: Indiana Provider Survey. Retrieved March 30, 2011 from http://www.policyresourcegroup.com/documents/2009_Provider_NA_Report_Final_August_31_2009.pdf

George, S. (2010, February 5). Homelessness Up Slightly in Nashville, Agency Finds. *The City Paper*. Retrieved May 8, 2012 from http://nashvillecitypaper.com/content/city-news/homelessness-slightly-nashville-agency-finds

Harms, J., & Walker, R. (2006). 2005 Epidemiological Profile for Iowa: HIV, AIDS, and Sexually Transmitted Diseases. Iowa Department of Public Health. Retrieved May 10, 2012 from http://www.idph.state.ia.us/search/search.aspx?q=epidemiological+profile

Health Council of East Central Florida. (2005). Provider Survey. Central Florida Ryan White CARE Act 2005 Needs Assessment: Title I and Title II. Retrieved March 30, 2011 from http://www.hcecf.org/index.html

Highleyman, L., Dieterich, D., & Sherman, K. (2012, March 12). HIV*/HCV Coinfection News from CROI 2012*. [Video]. Retrieved April 12, 2012, from http://www.hivandhepatitis.com/hepatitis-c/hepatitis-c-topics/hcv-treatment/3500-croi-hivhcv-coinfection-news-from-croi-2012-video

Key Alliance, The & Metropolitan Homelessness Commission. (2011). Homelessness in Downtown Nashville. Retrieved May 8, 2012 from http://www.nashville.gov/sservices/docs/hc/Briefs/HomelessnessInDowntownNashville.pdf

Las Vegas TGA, Ryan White Part A HIV/AIDS Program. Las Vegas TGA Needs Assessment Survey of People Living with HIV/AIDS. Retrieved March 18, 2011 from http://www.lasvegasema.org/images/Appendix_A_Consumer_Survey.pdf

Lieb, S., Thompson, D. R., Misra, S., Gates, G. J., Duffus, W. A., Fallon, S. J., & Malow, R. M. (2009, November 13). Estimating Populations of Men Who Have Sex with Men in the Southern United States. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, *86*(6), 887-901. doi: 10.1007/s11524-009-9401-4. Retrieved May 21, 2012 from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2791823/

Mabli, J., Cohen, R., Potter, F., & Zhao, Z. (2010, February 1). Hunger in America 2010: National Report Prepared for Feeding America. *Mathematica Policy Research Inc.* Retrieved September 1, 2011 from http://feedingamerica.issuelab.org/research/listing/hunger_in_america_2010_national_report

National Alliance to End Homelessness. (2006, August 10). Fact Sheet: Homelessness and HIV/AIDS. Retrieved June 11, 2012 from http://www.endhomelessness.org/content/article/detail/1073

National Coalition for the Homeless. (2009, July). HIV/AIDS and Homelessness. Retrieved May 8, 2012 from http://www.nationalhomeless.org/factsheets/hiv.html

National Coalition for the Homeless. (2007, August). HIV/AIDS and Homelessness, NCH Fact Sheet #9. Retrieved May 8, 2012 from http://www.nationalhomeless.org/publications/facts/HIV.pdf

National Rural Health Association. (2006, December). Rural HIV Care: Transportation. Retrieved September 1, 2011 from http://www.ruralhealthweb.org/

New York State Department of Health AIDS Institute. (2002, March). Patient Satisfaction Survey for HIV Ambulatory Care (PSS-HIV). Albany, NY: New York State Department of Health AIDS Institute.

Operation Stand Down Nashville, Inc. (2009). Retrieved May 8, 2012 from http://www.osdnashville.org/

U.S. Census Bureau, 2010 Census. (2011). Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data in Nashville_Davidson)Murfreesboro_Franklin, TN Metro Area. Retrieved May 24, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table

U.S. Census Bureau, 2010 Census. (2011). Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data in United States. Retrieved May 24, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table

U.S. Census Bureau, American Community Survey. (2011). 2010 American Community Survey 1-Year Estimates, Hispanic or Latino Origin by Race: Total Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_B03002&prodType=table

U.S. Census Bureau, American Community Survey. (2010). 2009 American Community Survey 1-Year Estimates, Hispanic or Latino Origin by Race: Total Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_1YR_B03002&prodType=table

U.S. Census Bureau, American Community Survey. (2011). 2010 American Community Survey 1-Year Estimates, Selected Population Profile in the United States, Black or African American Alone, Not Hispanic or Latino Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_S0201&prodType=table

U.S. Census Bureau, American Community Survey. (2010). 2009 American Community Survey 1-Year Estimates, Selected Population Profile in the United States, Black or African American Alone, Not Hispanic or Latino Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_1YR_S0201&prodType=table

U.S. Census Bureau, American Community Survey. (2011). 2010 American Community Survey 1-Year Estimates, Sex by Age, Hispanic or Latino Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_B01001I&prodType=table

U.S. Census Bureau, American Community Survey. (2010). 2009 American Community Survey 1-Year Estimates, Sex by Age, Hispanic or Latino Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_1YR_B01001I&prodType=table

U.S. Census Bureau, American Community Survey. (2011). 2010 American Community Survey 1-Year Estimates, Sex by Age, White Alone, Not Hispanic or Latino Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_B01001H&prodType=table

U.S. Census Bureau, American Community Survey. (2010). 2009 American Community Survey 1-Year Estimates, Sex by Age, White Alone, Not Hispanic or Latino Population in Nashville-Davidson-Murfreesboro-Franklin, TN Metro Area. Retrieved May 18, 2012 from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_1YR_B01001H&prodType=table

U.S. Department of Veterans Affairs. (2012, March 26). HIV Infected Veterans in VHA Care by State-2011. Retrieved April 18, 2012 from http://www.publichealth.va.gov/quality/reports/hiv-in-care-by-state-2011.asp

U.S. Department of Veterans Affairs. (2012, February 14). HIV Infected Veterans in VHA Care by State-2010. Retrieved April 18, 2012 from http://www.publichealth.va.gov/quality/reports/hiv-in-care-by-state-2010.asp

U.S. Department of Veterans Affairs. (2011). National HIV/AIDS Strategy Operational Plan, 2011. Retrieved April 18, 2012 from http://www.aids.gov/federal-resources/policies/national-hiv-aids-strategy/nhas-operational-plan-va.pdf

U.S. Department of Veterans Affairs. (2009). The State of Care for Veterans with HIV/AIDS. Retrieved April 17, 2012 from http://www.hiv.va.gov/provider/state-of-care/index.asp

15. APPENDIX

HIV DISEASE INCIDENCE RATE TABLES

HIV Disease Incidence Rate by Age Group, 2009-2011

	2009	2010	2011
Under 5	1.9	1.0	0.0
5-17	0.4	2.3	0.0
18-24	39.5	42.8	42.1
25-34	32.9	35.0	28.8
35-44	33.7	32.5	25.6
45-54	23.3	23.1	17.7
55-64	14.3	8.6	8.0
65 and over	2.5	4.1	0.6

HIV Disease Incidence Rate by Race/Ethnicity, 2009-2011

	2009	2010	2011
Non-Hispanic Black	62.3	62.8	45.9
Non-Hispanic White	9.9	9.4	9.3
Hispanic	21.0	23.8	11.4

HIV Disease Incidence Rate by Gender, 2009-2011

	2009	2010	2011
Female	8.0	7.3	5.5
Male	30.6	31.8	26.2

HIV Disease Incidence Rate by Race/Ethnicity and Gender, 2009-2011

	2009	2010	2011
Non-Hispanic Black Female	34.9	29.6	17.9
Non-Hispanic Black Male	92.8	99.5	77.0
Non-Hispanic White Female	2.3	1.8	2.8
Non-Hispanic White Male	17.7	17.4	16.0
Hispanic Female	6.9	10.5	2.1
Hispanic Male	32.8	34.8	19.2

AIDS INCIDENCE RATE TABLES

AIDS Incidence Rate by Age Group, 2009-2011

	2009	2010	2011
Under 5	0.0	0.0	0.0
5-17	0.0	0.4	0.0
18-24	8.5	8.0	5.4
25-34	20.1	13.3	8.4
35-44	27.8	18.7	18.3
45-54	19.7	20.4	12.4
55-64	7.7	6.3	8.0
65 and over	3.1	2.9	0.6

AIDS Incidence Rate by Race/Ethnicity, 2009-2011

	2009	2010	2011
Non-Hispanic Black	44.7	31.6	18.9
Non-Hispanic White	5.2	5.2	4.8
Hispanic	12.6	4.8	5.7

AIDS Incidence Rate by Gender, 2009-2011

	2009	2010	2011
Female	5.6	4.1	3.9
Male	18.7	15.2	10.7

AIDS Incidence Rate by Race/Ethnicity and Gender, 2009-2011

	2009	2010	2011
Non-Hispanic Black Female	23.8	17.2	12.5
Non-Hispanic Black Male	68.0	47.6	26.0
Non-Hispanic White Female	1.7	1.2	1.8
Non-Hispanic White Male	8.9	9.4	7.8
Hispanic Female	6.9	4.2	4.2
Hispanic Male	17.3	5.2	7.0

HIV DISEASE PREVALENCE RATE TABLES

HIV Disease Prevalence Rate by Age Group, 2009-2011

	2009	2010	2011
Under 5	6.5	5.0	4.0
5-17	8.1	10.0	8.0
18-24	102.3	111.0	115.1
25-34	278.6	298.1	307.9
35-44	683.2	667.3	643.5
45-54	758.7	812.5	858.2
55-64	348.2	385.7	443.4
65 and over	80.0	95.3	117.0

HIV Disease Prevalence Rate by Race/Ethnicity, 2009-2011

	2009	2010	2011
Non-Hispanic Black	881.9	916.3	956.5
Non-Hispanic White	200.6	209.8	218.2
Hispanic	223.9	222.5	231.0

HIV Disease Prevalence Rate by Gender, 2009-2011

	2009	2010	2011
Female	129.2	133.9	137.6
Male	502.7	528.9	553.2

HIV Disease Prevalence Rate by Race/Ethnicity and Gender, 2009-2011

	2009	2010	2011
Non-Hispanic Black Female	494.1	509.2	524.0
Non-Hispanic Black Male	1313.9	1368.1	1436.5
Non-Hispanic White Female	53.2	54.6	55.9
Non-Hispanic White Male	353.4	372.7	388.5
Hispanic Female	101.7	100.5	100.5
Hispanic Male	325.7	323.8	339.5

AIDS PREVALENCE RATE TABLES

AIDS Prevalence Rate by Age Group, 2009-2011

	2009	2010	2011
Under 5	0.0	0.0	0.0
5-17	3.5	3.1	1.9
18-24	27.5	26.1	20.1
25-34	94.4	94.4	90.4
35-44	345.0	329.5	316.3
45-54	456.8	488.1	509.0
55-64	223.4	243.4	277.1
65 and over	46.8	55.9	72.3

AIDS Prevalence Rate by Race/Ethnicity, 2009-2011

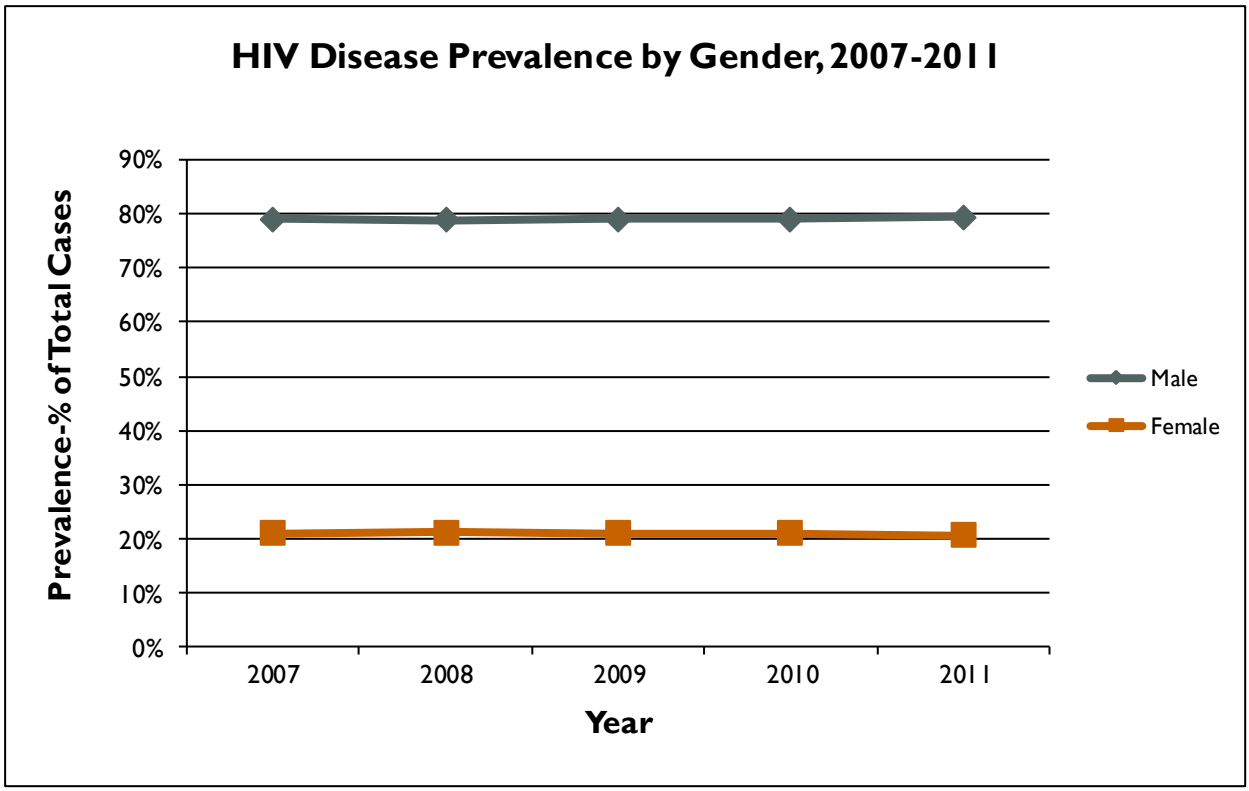
	2009	2010	2011
Non-Hispanic Black	448.9	461.0	476.6
Non-Hispanic White	108.6	112.7	116.1
Hispanic	121.9	113.1	116.9

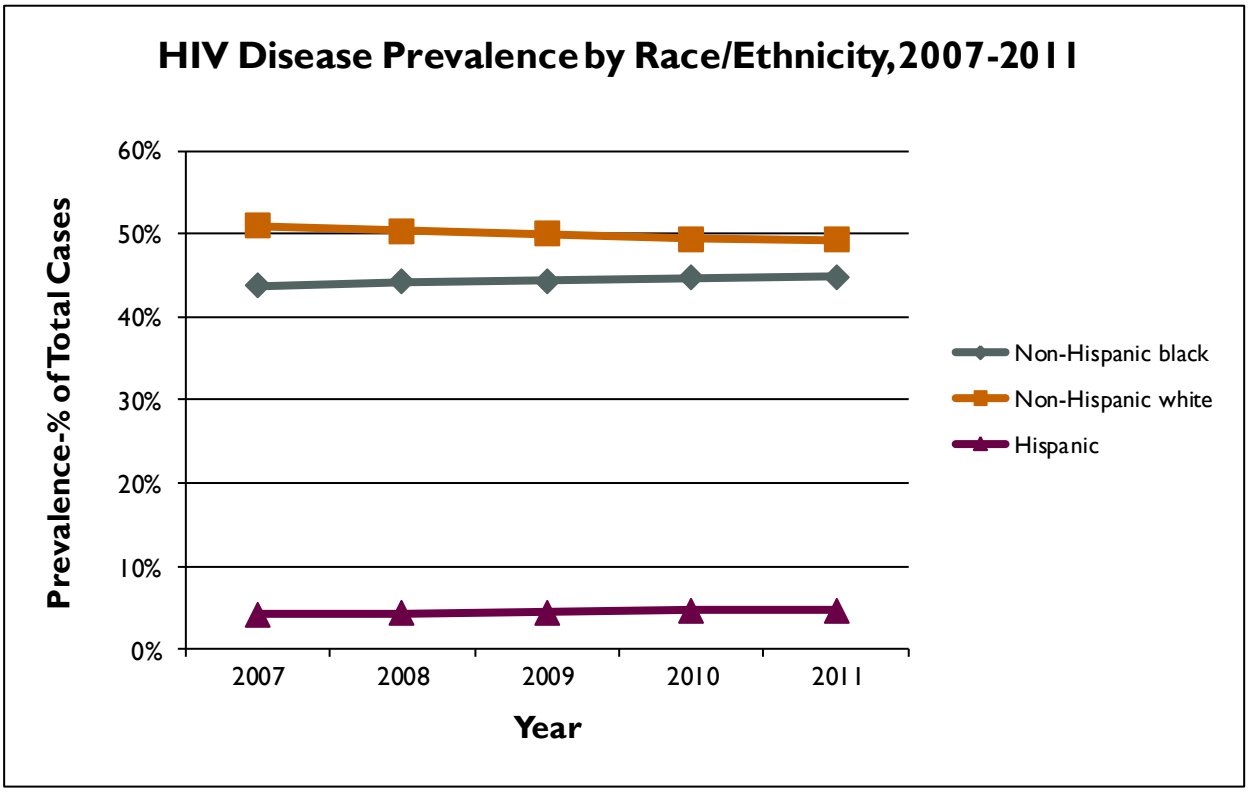
AIDS Prevalence Rate by Gender, 2009-2011

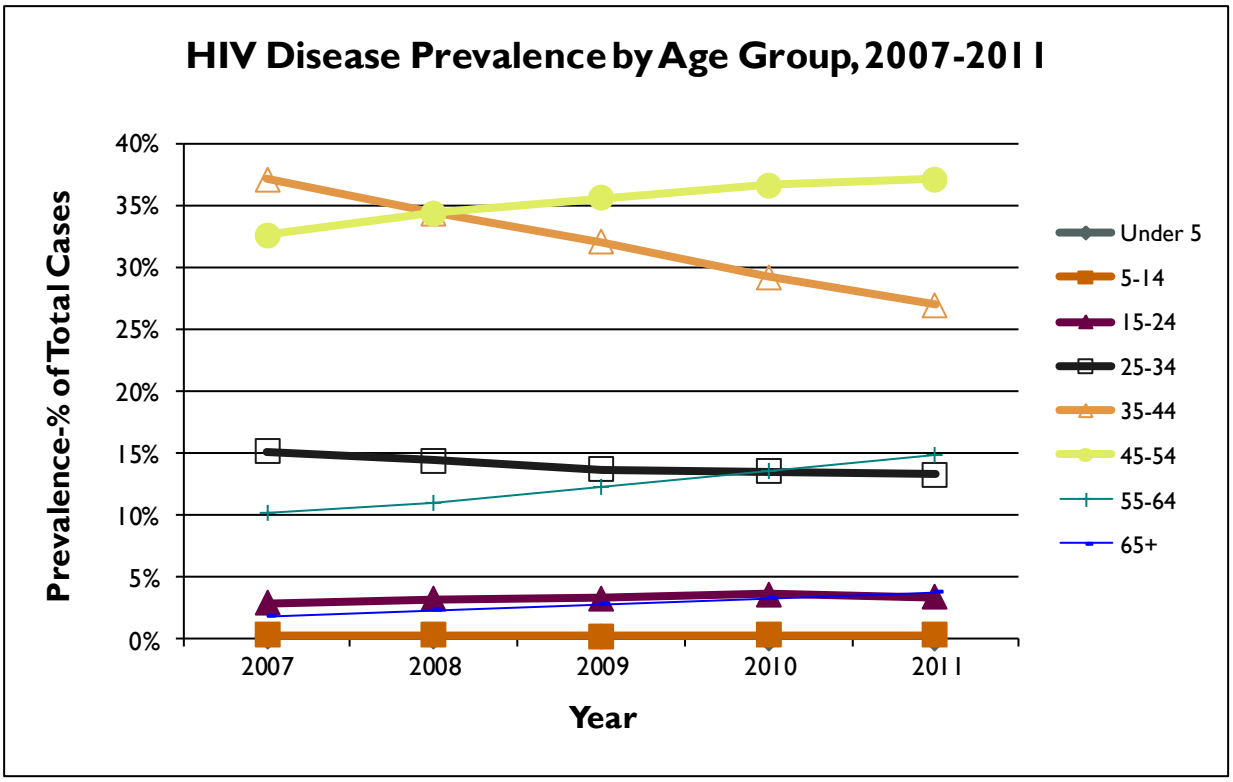
	2009	2010	2011
Female	64.0	65.2	67.7
Male	269.5	280.0	288.7

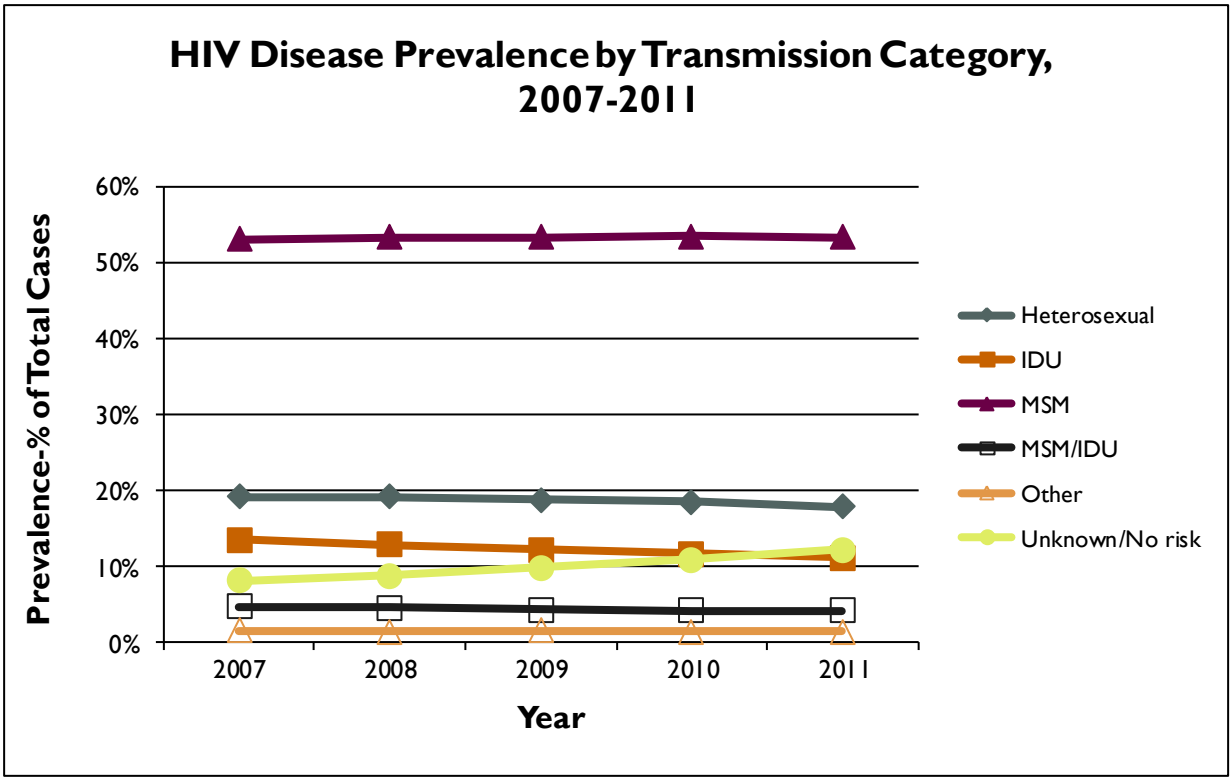
AIDS Prevalence Rate by Race/Ethnicity and Gender, 2009-2011

	2009	2010	2011
Non-Hispanic Black Female	241.9	246.4	255.0
Non-Hispanic Black Male	679.5	699.2	722.6
Non-Hispanic White Female	26.7	26.9	27.9
Non-Hispanic White Male	193.6	202.7	208.6
Hispanic Female	53.2	50.3	52.4
Hispanic Male	179.2	165.4	170.6


HIV Disease Prevalence by Gender, 2007-2011
Prevalence-% of Total Cases
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2007
2008
2009
2010
2011
Year
Male
Female


HIV Disease Prevalence by Race/Ethnicity, 2007-2011
Prevalence-% of Total Cases
60%
50%
40%
30%
20%
10%
0%
2007
2008
2009
2010
2011
Year
Non-Hispanic black
Non-Hispanic white
Hispanic


HIV Disease Prevalence by Age Group, 2007-2011
Prevalence-% of Total Cases
40%
35%
30%
25%
20%
15%
10%
5%
0%
2007
2008
2009
2010
2011
Year
Under 5
5-14
15-24
25-34
35-44
45-54
55-64
65+


HIV Disease Prevalence by Transmission Category, 2007-2011
Prevalence-% of Total Cases
60%
50%
40%
30%
20%
10%
0%
2007
2008
2009
2010
2011
Year
Heterosexual
IDU
MSM
MSM/IDU
Other
Unknown/No risk

Rates of Disparities, 2011: Incidence

	Non-Hispanic White	Non-Hispanic Black*
Incidence Cases (% of New Cases) of HIV Disease	1	5
Incidence Cases of HIV Disease-Males	1	5
Incidence Cases of HIV Disease-Females	1	6
Incidence Cases of AIDS	1	4
Incidence Cases of AIDS-Males	1	3
Incidence Cases of AIDS-Females	1	7
Incidence Cases of Late Diagnosis of HIV and AIDS (2010)	1	5

*Rates were rounded to the nearest whole number for illustration purposes.

Rates of Disparities, 2011: Prevalence

	Non-Hispanic White	Non-Hispanic Black*
Prevalence Cases (% of Total Cases) of HIV Disease	1	5
Prevalence Cases of HIV Disease-Males	1	4
Prevalence Cases of HIV Disease Females	1	9
Prevalence Cases of AIDS	1	4
Prevalence Cases of AIDS-Males	1	3
Prevalence Cases of AIDS-Female	1	9
Prevalence Cases of Late Diagnosis of HIV and AIDS (2010)	1	4

*Rates were rounded to the nearest whole number for illustration purposes.

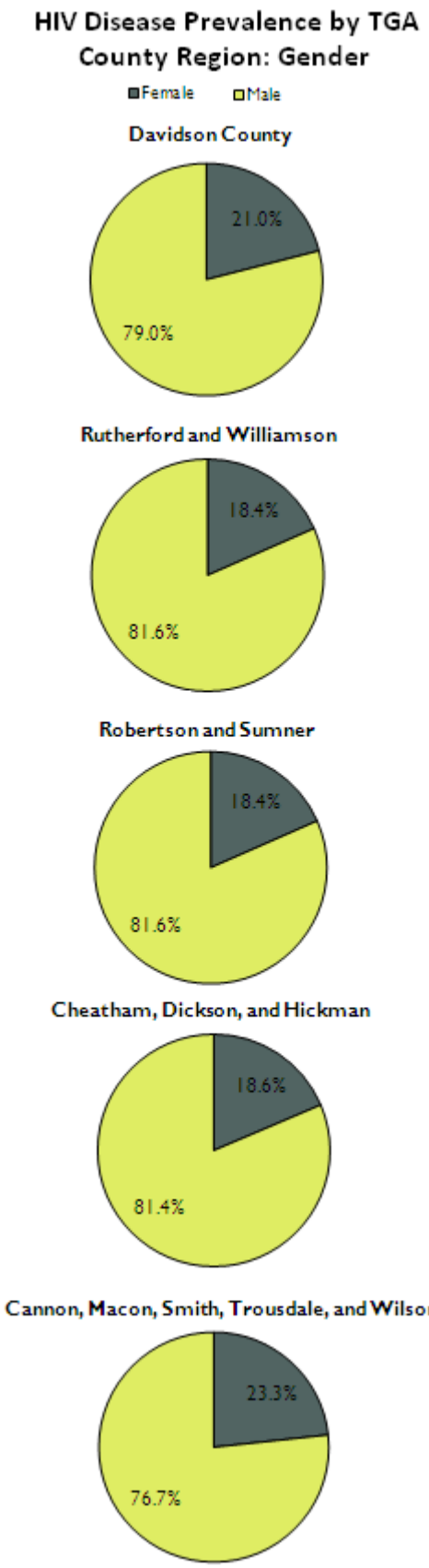
The *Rates of Disparities, 2011* tables depicts the differences in rates of occurrence of HIV disease and AIDS between non-Hispanic whites and non-Hispanic blacks. Using rates allows groups of different sizes to be compared. The rate of HIV disease and AIDS for a group is determined by taking the number of people in a group affected by the condition and dividing it by the number of persons in that group who are at risk of experiencing that condition. Rates therefore, measure the occurrence within the population, relative to the population size.

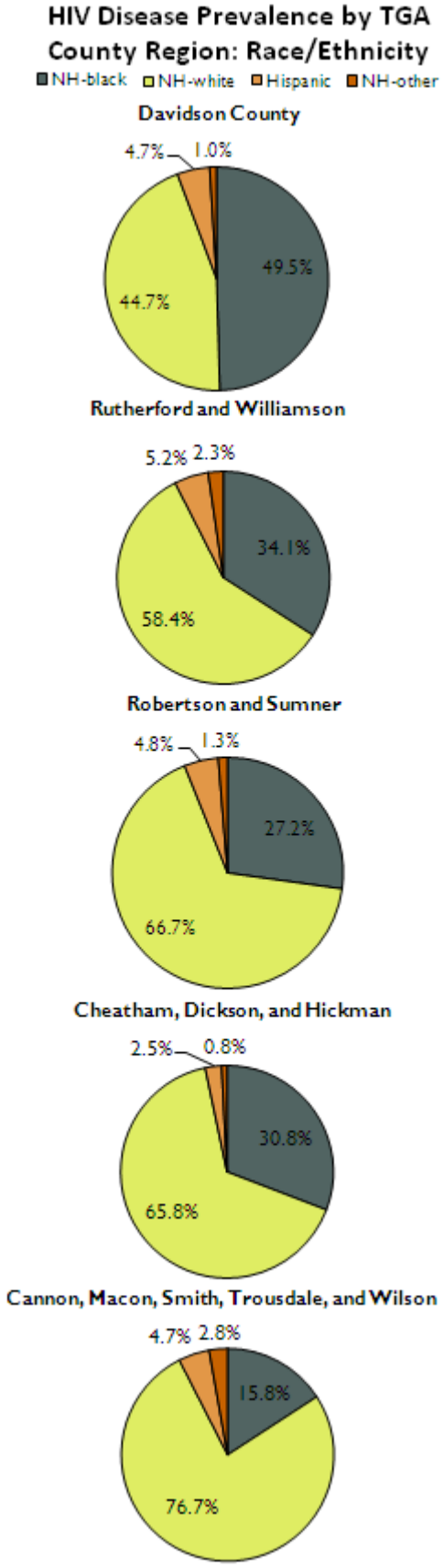
Looking at these tables, if there was no disparity between the non-Hispanic whites and non-Hispanic blacks, the ratio would be 1:1. However, in each subcategory, non-Hispanic blacks are affected at a much higher rate than are non-Hispanic whites, ranging from three to nine times the rate of non-Hispanic whites, depending on the specific subgroup.

Demographics: HIV Disease Prevalence Cases by Davidson County and Non-Davidson County, 2011						
Demographic	**Davidson County**		**Other TGA Counties**		**Total**	
	N	%	N	%	N	%
Cases						
HIV and AIDS cases	4,007	76.9%	1,202	23.1%	5,209	100.0%
Gender†						
Female	840	21.0%	232	19.3%	1,072	20.6%
Male	3,167	79.0%	970	80.7%	4,137	79.4%
Race/Ethnicity†						
Non-Hispanic Black	1,985	49.5%	347	28.9%	2,332	44.8%
Non-Hispanic White	1,792	44.7%	778	64.7%	2,570	49.3%
Hispanic	189	4.7%	54	4.5%	243	4.7%
Non-Hispanic Asian/Native Hawaiian/Pacific Islander	20	0.5%	17	1.4%	37	0.7%
Non-Hispanic American Indian/ Alaska Native	9	0.2%	3	0.2%	12	0.2%
Non-Hispanic Multiple Races	12	0.3%	3	0.2%	15	0.3%
Current Age†						
Under 5	2	0.0%	2	0.2%	4	0.1%
5-14	12	0.3%	2	0.2%	14	0.3%
15-24	133	3.3%	46	3.8%	179	3.4%
25-34	536	13.4%	159	13.2%	695	13.3%
35-44	1,082	27.0%	326	27.1%	1,408	27.0%
45-54	1,478	36.9%	456	37.9%	1,934	37.1%
55-64	610	15.2%	166	13.8%	776	14.9%
65+	154	3.8%	45	3.7%	199	3.8%
Exposure Category†						
Heterosexual contact	766	19.1%	166	13.8%	932	17.9%
IDU	476	11.9%	104	8.7%	580	11.1%
MSM	2,139	53.4%	639	53.2%	2,778	53.3%
MSM & IDU	156	3.9%	55	4.6%	211	4.1%
Perinatal	19	0.5%	9	0.7%	28	0.5%
Unknown/No risk	423	10.6%	211	17.6%	634	12.2%
Other	28	0.7%	18	1.5%	46	0.9%
Deaths						
2011 Deaths*	4	40.0%	6	60.0%	10	0.19%

†Variables were rounded to the nearest tenth. Therefore, subpopulation totals may not equal the respective total number of cases.
*Due to delays in reporting of deaths, the number of deaths occurring in 2011 may not have been complete at the time of analysis.

Demographics: HIV Disease Prevalence Cases by Region, 2011										
Demographic	Davidson County		Rutherford, Williamson Counties		Robertson, Sumner Counties		Cheatham, Dickson, Hickman Counties		Cannon, Macon, Smith, Trousdale, Wilson Counties	
	N	%	N	%	N	%	N	%	N	%
Cases										
HIV and AIDS cases	4,007	76.9%	522	10.0%	228	4.4%	237	4.5%	215	4.1%
Gender										
Female	840	21.0%	96	18.4%	42	18.4%	44	18.6%	50	23.3%
Male	3,167	79.0%	426	81.6%	186	81.6%	193	81.4%	165	76.7%
Race/Ethnicity										
Non-Hispanic Black	1,985	49.5%	178	34.1%	62	27.2%	73	30.8%	34	15.8%
Non-Hispanic White	1,792	44.7%	305	58.4%	152	66.7%	156	65.8%	165	76.7%
Hispanic	189	4.7%	27	5.2%	11	4.8%	6	2.5%	10	4.7%
Non-Hispanic Asian/Native Hawaiian/Pacific Islander	20	0.5%	10	1.9%	2	0.9%	1	0.4%	4	1.9%
Non-Hispanic American Indian/Alaska Native	9	0.2%	1	0.2%	1	0.4%	1	0.4%	0	0.0%
Non-Hispanic Multiple Races	12	0.3%	1	0.2%	0	0.0%	0	0.0%	2	0.9%
Current Age										
Under 5	2	0.0%	2	0.4%	0	0.0%	0	0.0%	0	0.0%
5-14	12	0.3%	1	0.2%	1	0.4%	0	0.0%	0	0.0%
15-24	133	3.3%	25	4.8%	7	3.1%	5	2.1%	9	4.2%
25-34	536	13.4%	90	17.2%	24	10.5%	26	11.0%	19	8.8%
35-44	1,082	27.0%	136	26.1%	74	32.5%	61	25.7%	55	25.6%
45-54	1,478	36.9%	181	34.7%	89	39.0%	97	40.9%	89	41.4%
55-64	610	15.2%	70	13.4%	28	12.3%	39	16.5%	29	13.5%
65+	154	3.8%	17	3.3%	5	2.2%	9	3.8%	14	6.5%
Exposure Category										
Heterosexual contact	766	19.1%	62	11.9%	31	13.6%	37	15.6%	36	16.7%
IDU	476	11.9%	33	6.3%	18	7.9%	27	11.4%	26	12.1%
MSM	2,139	53.4%	289	55.4%	119	52.2%	123	51.9%	108	50.2%
MSM & IDU	156	3.9%	20	3.8%	13	5.7%	14	5.9%	8	3.7%
Perinatal	19	0.5%	5	10.%	1	0.4%	2	0.8%	1	0.5%
Unknown/No risk	423	10.6%	104	19.9%	44	19.3%	32	13.5%	31	14.4%
Other	28	0.7%	9	1.7%	2	0.9%	2	0.8%	5	2.3%
Deaths										
2011 Deaths	4	40.0%	3	30.0%	2	20.0%	1	10.0%	0	0.0%

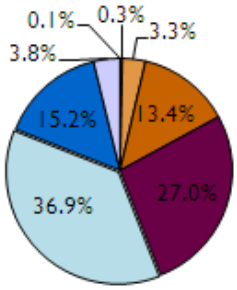

HIV Disease Prevalence by TGA County Region: Gender
Female
Male
Davidson County
21.0%
79.0%
Rutherford and Williamson
18.4%
81.6%
Robertson and Sumner
18.4%
81.6%
Cheatham, Dickson, and Hickman
18.6%
81.4%
Cannon, Macon, Smith, Trousdale, and Wilson
23.3%
76.7%


HIV Disease Prevalence by TGA County Region: Race/Ethnicity
NH-black
NH-white
Hispanic
NH-other
Davidson County
4.7%
1.0%
49.5%
44.7%
Rutherford and Williamson
5.2%
2.3%
34.1%
58.4%
Robertson and Sumner
4.8%
1.3%
27.2%
66.7%
Cheatham, Dickson, and Hickman
2.5%
0.8%
30.8%
65.8%
Cannon, Macon, Smith, Trousdale, and Wilson
4.7%
2.8%
15.8%
76.7%

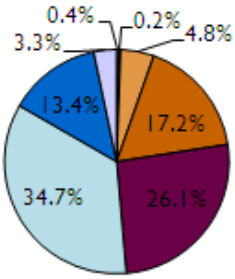
HIV Disease Prevalence by TGA County Region: Age Group

Under 5 | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+

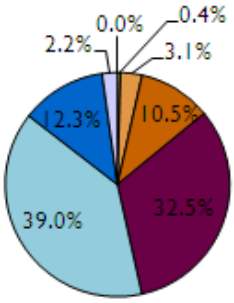
Davidson



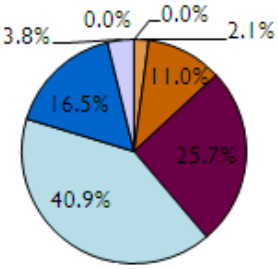
Rutherford and Williamson



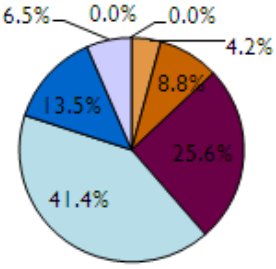
Robertson and Sumner



Cheatham, Dickson, and Hickman



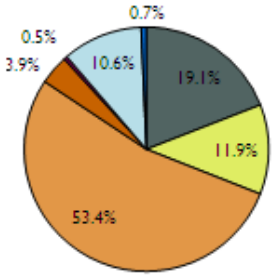
Cannon, Macon, Smith, Trousdale, and Wilson



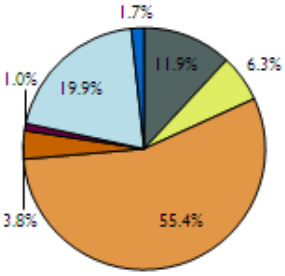
HIV Disease Prevalence by TGA County Region: Transmission Category

Heterosexual | MSM | Perinatal | Other | IDU | MSM & IDU | Unknown

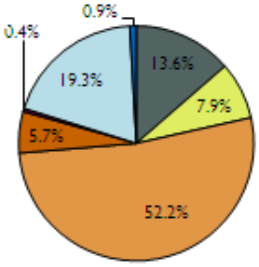
Davidson



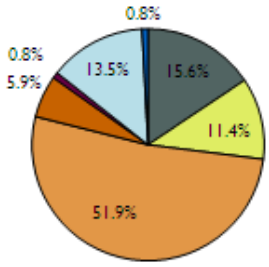
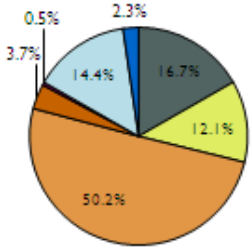
Rutherford and Williamson



Robertson and Sumner



Cheatham, Dickson, and Hickman



Cannon, Macon, Smith, Trousdale, and Wilson