

Ryan White Part A
Nashville Transitional Grant Area
2014 Needs Assessment



*Ryan White
Planning Council*

Metro Public Health Department
Nashville/Davidson County

Acknowledgements

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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.

This year the needs assessment has a new format and structure, allowing the content contained in previous versions to be grouped around four thematic cores defined by the HIV Continuum of Care. These four cores – Our Community, Linked to Care, Maintained in Care, and Key Benchmarks and Outcomes – allow for a more concentrated way to present information, and allow Ryan White Part A staff and Planning Council to focus on highlighting disparities and other emergent issues.

In the “Our Community” section, which contains population data (e.g. incidence, prevalence, and death statistics) and information on disparities in the TGA, there were a few trends that stand out. First, as it has been in the past, we see that the overall prevalence statistic (number of people living with HIV disease) has increased from the last year, while the incidence rate (number of newly diagnosed persons) has gone down. We found that there are two unique groups that are emerging in the TGA: The youngest group, non-White MSMs aged 13-24, who make up 12 percent of the total prevalence (and growing), and an older group of White MSMs aged 55 and older who also make up about 12 percent of the total prevalence. These are groups that are becoming their own demographic categories, and they also have very different health care and support needs.

In addition to the changes in the demographic composition of prevalence in the TGA, there are also a number of disparities that are discussed. For instance, the rate of HIV disease is 5 times higher for African American men as it is for White men, and 12 times higher for Black Women when comparing Black and White women. It was also found that non-Hispanic Whites were 12 percent higher on measures of viral suppression than non-Hispanic Blacks in the TGA.

The next section, Linkage to Care, contained information on HIV testing numbers and locations, diagnosis lag for the TGA, the number of PLWHA who are linked to care after their initial diagnosis date and other relevant testing information. We found that in 2013, 61 percent of newly diagnosed people with an unknown or unreported risk transmission category experienced a diagnosis lag in the TGA, as did one-third of all MSMs and approximately half of non-Hispanic Whites.

We were also able to determine that 47.2 percent of all newly diagnosed individuals saw a medical practitioner (144 people) within 3 months of their diagnosis, the HRSA definition for being linked to care. However, 26 percent of newly diagnosed PLWHA never saw a medical practitioner in 2013. This group that remains out of treatment is very problematic for our community, as these people may not be virally suppressed. Improving our process of linking people to care should be a top priority.

The third section of this report, Maintained in Care, contains a breakdown of those who are retained in care in the TGA, the total service usage for Ryan White Part A services, the unmet need for the community, and gaps in services and capacity. There are two major take away points from this section: First, the TGA has an unmet need of about 35.4 percent (which is down 6 percent from last year), meaning that 35 percent of the people who are aware of their HIV positive status did not see an HIV medical provider in the last year. While we did lower this score over the past year, there is still much to be done with regard to engaging all HIV positive persons into routine HIV medical care.

Second, 23 percent of people who received a Part A service had no visit with an HIV medical practitioner in 2013 that we have data for. If the purpose of the Ryan White Part A program is to provide medical services to a vulnerable population – this figure indicates that this is not being done in about a quarter of all cases. As such, starting a conversation that will improve this statistic is very important.

The last chapter, Key Outcomes and Benchmarks, serves to highlight how the Nashville TGA performs on measures from the HIV/AIDS Bureau (HAB) and National HIV/AIDS Strategy (NHAS), as well as allowing us to compare our outcomes to national standards.

The Nashville TGA has either already met or is on track to meet the majority of the 2015 goals set in the National HIV/AIDS Strategy. However more information is necessary to determine if the TGA is on track to have an appropriate increase in the percentage of persons with stable or permanent housing, and the estimated number of PLWHA in our community with undetectable viral loads.

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. Improving racial disparities in HIV care and service utilization
2. Looking into emerging groups within the HIV positive community in the TGA
3. Improving coordination with testing entities to improve diagnosis lag and disease awareness
4. Addressing ways to improve linkage to care, engagement and retention in care, and viral suppression

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.

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Glossary

Ryan White Program Terminology:

ADAP: (AIDS Drug Assistance Program) This Ryan White funded program managed by the Tennessee Department of Health assists with the purchase of specific HIV and HIV-related drugs for HIV-positive individuals with a low-income and no other source of health coverage.

ASO: (AIDS Service Organization) Entities that primarily provide HIV prevention or treatment services.

CAREWare: A software program used for managing and monitoring HIV disease medical and support services.

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

IAP: (Insurance Assistance Program) Ryan White funded program that assists eligible HIV-positive persons with health insurance premiums, co-pays, and deductibles.

MAI: (Minority AIDS Initiative) This Part of the Ryan White Program provides core medical and related support services to non-Hispanic blacks and other disproportionately impacted communities, to improve access to care and reduce disparities in health outcomes in metropolitan areas most effected by HIV disease.

Part A: This Part of the Ryan White Program provides funding to local governments for HIV disease core medical services and related support services in areas most severely affected by HIV disease (eligible metropolitan areas and transitional grant areas).

Planning Council: A body of community representatives with the responsibility of allocating Ryan White Part A grant dollars for services. They are also responsible for establishing best practices and guidelines for Ryan White Part A services.

Ryan White Program: Comes from legislation called the Ryan White HIV/AIDS Treatment Extension Act of 2009 (Public Law 111-97, October 30, 2009). The legislation was first enacted in 1990 as the Ryan White CARE (Comprehensive AIDS Resources Emergency) Act. It has been amended and reauthorized four times: in 1996, 2000, 2006, and 2009. The Ryan White legislation has been adjusted with each reauthorization to accommodate new and emerging needs, such as an increased emphasis on funding of core medical services and changes in funding formulas. This program is mean for people who have no other means to access the services that are covered – Ryan White funds are considered a “payment of last resort.”

TGA: (Transitional Grant Area) A TGA is a Part A region that reported 1,000-1,999 new AIDS diagnoses in the most recent five years at the time it was designated, and has a population of at least 50,000 people. The Nashville TGA, which began receiving Part A funding in 2007, is comprised of the following 13 counties in Middle Tennessee: Cannon, Cheatham, Davidson, Dickson, Hickman, Macon, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson, and Wilson.

General Terminology:

AIDS: Acquired Immune Deficiency Syndrome.

CDC: Centers for Disease Control and Prevention.

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

Frequency: The number of occurrences of an event per unit of time (example: once a year).

HIV: Human Immunodeficiency Virus.

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 preferred term to be used when referring to HIV/AIDS.

HRSA: Health Resources and Services Administration.

IDU: Intravenous/Injection Drug Use.

Incidence: This term refers to the number of events that occur in a specified time, usually one year.

HIV Disease Incidence: The number of new HIV disease diagnoses in a particular geographic area in a specified time frame. 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: The number of new AIDS diagnoses in a geographic area in a specified time frame. 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.

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

MPHD: Metropolitan Public Health Department of Nashville/Davidson County (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.

PLWHA: People Living With HIV/AIDS.

Prevalence: 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 number of persons in the population. Changing raw numbers into rates allows comparisons to be made.

STD: Sexually Transmitted Disease.

STI: Sexually Transmitted Infection.

TDOH: Tennessee Department of Health.



Introduction

Objective

The objective of the 2014 Needs Assessment is to provide information about the needs of persons living with HIV/AIDS (PLWHA), and current resources available to meet the needs of these individuals, including both Ryan White funded services and other (non-Ryan White funded) services. The Needs Assessment also examines the gaps in care and barriers that PLWHA face in access to care and resources, examines how the Transitional Grant Area (TGA) compares to national benchmarks on outcomes related to the HIV Continuum of Care and other standards, and then serves as guidance for proposing recommendations on ways to enhance the system of HIV care in the Nashville TGA. The purpose of Ryan White services is to fill the gaps in care by helping PLWHA remain in care, or to get people not currently in care access to care and services. The Ryan White Planning Council uses the data and recommendations from this report 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.

The assessment is meant to build on data presented in prior needs assessments and is not meant to replace previous information. However, the most recent epidemiological analysis should always be considered the most accurate. The 2014 Needs Assessment incorporates data compiled in previous needs assessments, such as surveys and interviews, as well as new analyses and studies. Since data collected on people is updated, and may alter as time progresses, and as data analysis methods and practices change, the information contained in this document about prior years may also change. This is not a cause for alarm, nor does it discredit previous work. The changes contained in this document simply reflect the most up-to-date and accurate information that is available for the Nashville TGA at the time of publication.

New Format

One of the major differences in the 2014 Needs Assessment is a new format for the document. This new format follows the HIV Continuum of Care model presented by the Centers for Disease Control and Prevention (CDC) Division of HIV/AIDS Prevention. Formatting the document after the HIV Continuum of Care will improve the organization of content, allowing for a shorter, more program-focused document.

Although this will be discussed in more detail at the beginning of each section in the Needs Assessment, the new structure will reflect four aspects of the Continuum:

- 1) The Community – what does the current Nashville TGA look like in terms of HIV-disease prevalence and incidence, including disparities, and what resources are available?;
- 2) Entry to Care – what percentage of PLWHA in the TGA are linked to care, what is the diagnosis lag for the area, and what does testing data look like in the community?;

- 3) Engagement in Care – what are the services that are used in the community, what percentage of PLWHA are maintained in regular HIV medical care, what is the unmet need for PLWHA, that is, how many HIV+ persons have not accessed HIV medical care during the past year and lastly;
- 4) Benchmarks and Outcomes – what do the outcomes for the TGA look like? How do we compare on national benchmarks like viral load suppression and other HIV/AIDS Bureau (HAB) core outcomes?

We believe this reorganization represents a crucial step forward for the community in terms of how data are presented, shared, and utilized by Ryan White Part A funding consumers, the Planning Council, provider sites, and MPH. We firmly believe that the new structure of this Needs Assessment better facilitates community decision making, planning, grant-writing, and comprehension. Thank you for the support, and we hope that this document is as interesting and exciting for you as it is for those of us creating it.

Methods

The Needs Assessment was conducted in several stages. A profile of the epidemic was captured using eHARS, a disease surveillance database maintained by the Tennessee Department of Health (TDOH). Analysis was conducted using the SAS 9.3 software system¹. The analyzed data included prevalence (the total number of cases of HIV disease) and incidence (new cases of HIV disease) statistics for the TGA as a whole. In addition, prevalence and incidence statistics have been calculated by sub-population groups and demographic variables to check for disparities between groups. Rates were calculated for HIV disease incidence and prevalence based on United States Census population reports.

Data were also gathered on service utilization in the TGA using CAREware, a database of those PLWHA accessing Ryan White funded services. National and statewide data were also gathered in order to allow for comparison between the Nashville TGA, Tennessee, and the United States. A new version of the CAREware software client has enabled the ability to create customized and special reports that were not included in earlier versions. These new features, mostly used to tabulate performance indicators, are a great resource of the community and we are happy to be able to include them in the 2014 Needs Assessment.

Data collected from eHARS and CAREware use encrypted unique identification numbers (eUINs) instead of the names of PLWHA, so that people can remain anonymous. This report respects and maintains the confidentiality of people who have HIV disease.

Points of Consideration

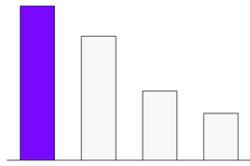
It is important to note that this Needs Assessment uses the term HIV disease to indicate the entire class of infections caused by the human immunodeficiency virus. It is used when referencing both HIV and AIDS. It is also important to mention that once a person is diagnosed with AIDS, he or she will always have an AIDS diagnosis. Put another way, a person's diagnosis will not revert back to HIV once they have 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 false picture of the community's actual HIV care needs. Therefore, this report includes additional data through special studies from consumers, HIV service providers, key informants, and the general Nashville community. The most recent data available from each source have been used in this report. All of the epidemiological data and survey utilization data were analyzed between March and April 2014. The survey data have been gathered and analyzed over the last several years, but each study included is the most recent of its kind. Please keep in mind that all data presented are preliminary and are only good through the date on 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:

- 1) Some PLWHA in the Nashville TGA receive services that are not funded by Ryan White Part A, and the grantee does not have access to full or comprehensive service information about them. **These individuals and their needs consequently may not be captured in this assessment.**
- 2) The eHARS database that supplies data for the epidemiological section of the report and viral load data is constantly being updated. The snapshot of the community presented in this needs assessment should be considered the most up to date information for the Nashville TGA at this time.
- 3) A significant number of persons do not know their HIV disease status and are therefore not represented in this profile. Their needs are not known and are consequently not well accounted for in the Needs Assessment data.
- 4) Some data sources are based on the perceptions of participants and are therefore only representative of those people's perceptions. The perceptions of persons not contributing are not known and there is no way to determine what characteristics may vary between those who participated and those who did not.
- 5) 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 also have inherent weaknesses.
- 6) Special surveys and interviews are normally conducted in order to gain experiential data from consumers, providers, key informants and the community at large, but many of these items were not conducted this year. Supplemental information from these items conducted in past years will be referenced briefly, and will return in the Needs Assessment for 2015.
- 7) Any data that is pulled from CAREware only includes those persons who meet the scope conditions of specific analytic queries (i.e. if an individual did not have a medical visit in the previous year, they will be included in prevalence, but not may not be included as part of the analysis done in CAREware).

It is important to remember that the purpose of the Needs Assessment is to provide a well-rounded picture of the current HIV disease epidemic in the Nashville TGA to allow the Ryan White Planning Council to make informed decisions about how to improve HIV disease services for their constituency. It is not realistic to obtain information on every individual living with HIV disease in the TGA or every service utilized. However, this Needs Assessment is able to give an accurate impression of the system of HIV care, despite not having access to comprehensive data on all persons living with HIV disease in the TGA.



Our Community

The “Our Community” section is intended to reflect the information in the first segment of the HIV Continuum of Care. Included in this section are:

- 1) The number of individuals thought to be HIV positive in the Nashville TGA;
- 2) A demographic profile of the TGA as a whole, and the statistics on both prevalence and incidence of HIV disease in the Nashville TGA, including the disparities that are found within these two categories (more detailed epidemiological information like rates of co-infection with HIV-disease and other STDs and chronic conditions will be included every third year);
- 3) Information on the service capacity of the community, and any resource audits that are completed.

Much of the information that has historically been included in the Needs Assessment is now only going to be included on a 3-year cycle. The analysis for this information is still done by the Ryan White Part A program every year and is available upon request. The next “full profile” report will be done in 2016.

Nashville TGA Demographic Information

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

The TGA has a nearly equal proportion of PLWHA relative to the percentage of the total population of the state that lives here. According to the U.S. Census Bureau, the TGA had an estimated population of 1,674,151 in 2013 (25.7 percent of the state’s total population). The total number of PLWHA who were living in Tennessee at the end of 2013 was 22,933. The Nashville TGA represents 23.5 percent (5,407) of the state’s PLWHA population, and 25.7 percent of the state’s total population. While about 39 percent of the TGA’s total population lives in Davidson County, 76.5 percent of the PLWHA population resides in Davidson County.

Non-White MSMs represent nearly 70 percent of 15-34 year olds living with HIV disease, while Whites represent nearly 70 percent of MSMs over the age of 45. These two groups have very different needs - how can we identify and address the needs of these two distinct groups?

29% of new HIV cases in 2013 were unknown/no reported risk. This group has lowest viral suppression rates of any transmission group, and over 60% experience diagnosis lag. How can we better engage this group in care?

For every Non-Hispanic White male with HIV disease in the TGA, there are 5 Non-Hispanic Black men.

Number Estimated to be HIV+ (Individuals Unaware of their HIV-positive status)

According to the Centers for Disease Control and Prevention (CDC), the formula for calculating the estimated number of persons who are 13 years or older who do not know they are HIV positive is the following:

$$\frac{0.21 * Prevalence}{0.79}$$

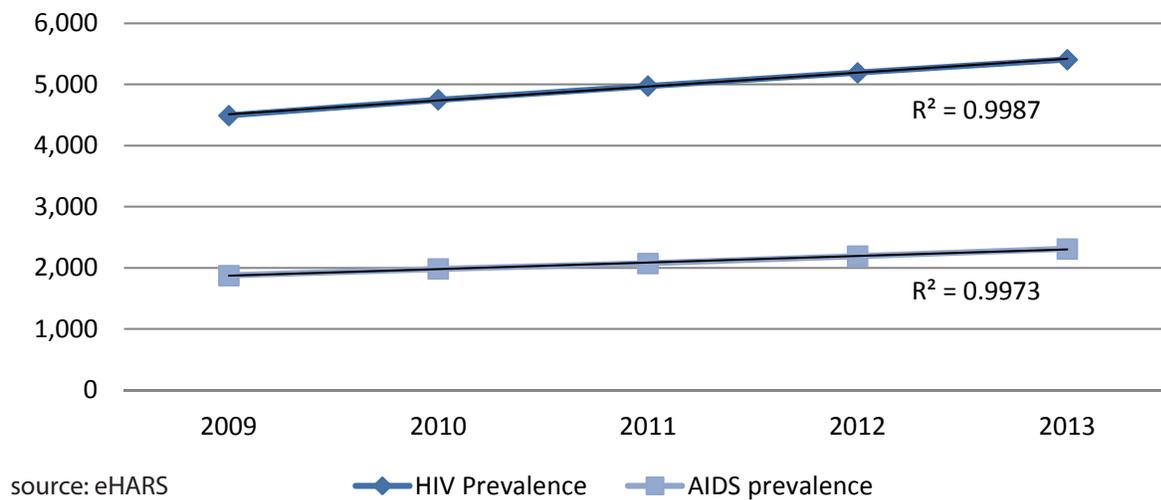
The numerator (0.21*Prevalence) represents the portion of the population over the age of 13 that the CDC estimates to be unaware of their status. The denominator represents the portion of the population that is aware of their HIV disease status. At the time of this report, the total prevalence in the Nashville TGA was 5,407, which means the estimate for the number of individuals who are HIV positive and unaware of their status is (0.21*5407)/0.79 or 1,437 people.

According to a national study done by the CDCⁱⁱⁱ, half of the new HIV infections are transmitted by people who do not know they are infected. Table 1 in the Appendix contains a more detailed breakdown of this estimated group. Additionally, the longer a person remains unaware of his or her status, the more likely he or she is to advance to AIDS prior to identification and treatment. This information on the persons unaware of their HIV positive status could help guide testing efforts funded by HIV prevention programs in our community and can identify points of collaboration between HIV prevention and treatment services funded by the Ryan White Part A program.

Prevalence

There were 5,407 persons living with HIV/AIDS (PLWHA) in the Nashville TGA at the end of the 2013 calendar year. Since 2009, the number of persons living with HIV disease has increased steadily from 4,492, which is roughly a 17 percent increase in the total number of PLWHA in the Nashville TGA over this five year span.

Figure 1.1 HIV Disease and AIDS Prevalence, 2009-2013



source: eHARS

Note: An R² value is used to estimate future data values. The closer the R² value is to 1.0, the greater the ability to predict data points.

Why Does Prevalence Look Different?

When looking at prevalence statistics, it is important to understand how things change from one needs assessment to the next. One important change between this needs assessment and the one we produced in 2013 is the overall HIV disease prevalence numbers. Last year, we reported that the end of the year prevalence for 2012 was 5,921 people (see page 20 of that report), yet the 2012 prevalence in this year's report is 5,192. The overall prevalence rates for each year, back to 2009, are also lower than what was reported in past needs assessment.

These differences reflect the nature of the data that are available at the time of the analysis. The Tennessee Department of Health (TDOH), from September 2013 to March 2014, took on the task of reconciling client records in the eHARS database (where many of the statistics in this report are generated) with other state databases. In reconciling and combining those databases with eHARS records, TDOH found nearly 1,000 individuals who had either moved out of the state or are deceased. This mass updating of records accounts for some of the decreases in prevalence rates in this year's report. It is unlikely that such a large change will occur again in the future, as this was a result of many institutions switching to electronic record keeping, which allowed for this matching to take place.

Nashville TGA HIV Disease Prevalence Data

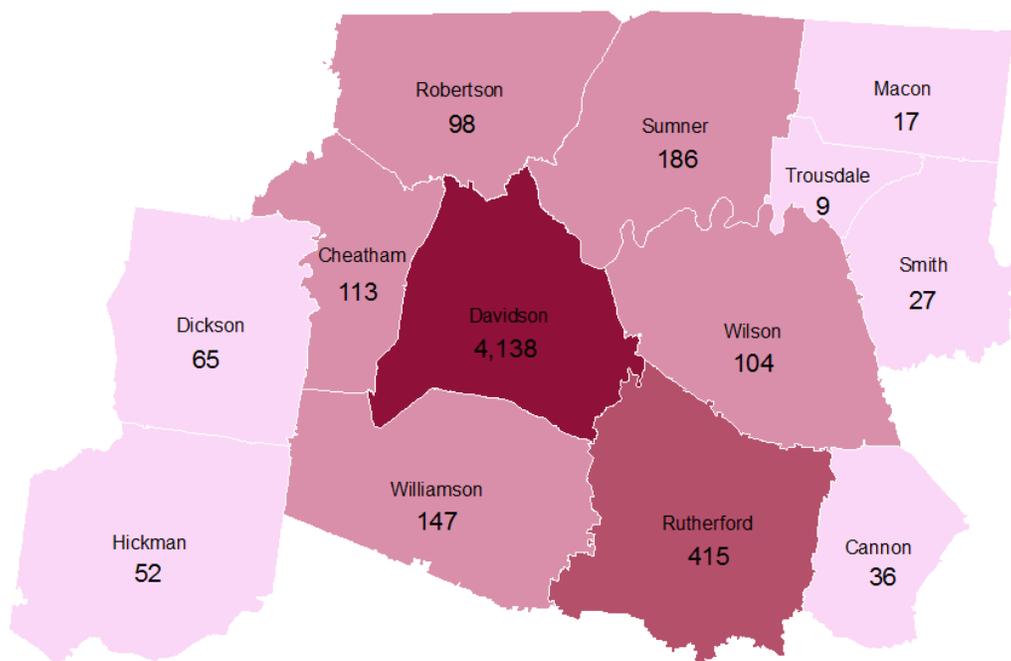
The following prevalence statistics have not changed significantly over the last year, so please refer to the 2013 Needs Assessment^{iv} for more detailed information on:

- HIV Disease prevalence by County (pg. 20)
- Prevalence for HIV Disease for Race/Ethnicity and Gender (pg. 21)
- Prevalence by Age Category (pg. 22)
- Prevalence by Transmission Category (pg. 22)

This information can be found online at: <http://nashvilleryanwhiteparta.com/resources/key-documents/>

Although Transmission Category is listed above, there was a change that is important to recognize in this year's report. In 2013, 14.7 percent (795) of people had the unknown/no risk reported transmission category at the time of their diagnosis. The 795 people reporting no or unknown risk has increased (although not in a statistically significant way) since the last Needs Assessment, and could significantly impact the picture of HIV transmission if their transmission category was known. With so many persons being in this transmission category, a complete picture of how the HIV disease epidemic is changing cannot be fully understood.

Figure 1.2: HIV Disease Prevalence in the Nashville TGA, 2013



source: eHARS

Focus on Prevalence Disparities in the TGA

In order to address some of the disparities that exist inside the Nashville TGA, this section highlights trends in prevalence data. Two prevalence trends have been selected that stood out to the Ryan White Part A staff and community members:

- 1) The rates of HIV disease among non-Hispanic Blacks compared to other racial groups;
- 2) The prevalence statistics for men who have sex with men (MSM) by race.

Before addressing these disparities, it is important to frame the intersecting issues of race, sexual activity, and disease transmission in a way that facilitates changing the root causes of these issues. There has been a long history, especially in the Southeastern United States, of framing the sexuality of black men and women as dangerous, predatory, and prolific – in short, something that needs to be policed and controlled.^v This way of thinking, dating back nearly 160 years, is a root cause of many of the problems that actually lead to the disparities in disease prevalence among non-white populations: racism, poverty, social exclusion, and policies and practices that restrict access to needed services and interventions.^{vi} When looking at the following disparities in the prevalence of HIV disease in the Nashville TGA, please remember that these issues are rooted in the structure of our city, our caregiving, our social services and a culture of fear that grew out of Jim Crow politics and practices in the post-Civil War era and are not reflective of the morality or sexual tendencies of the people we are serving.

Rates of HIV Disease: Even though the largest number of PLWHA were non-Hispanic White males, non-Hispanic Black males (1,656.0 cases per 100,000 persons) had an HIV disease prevalence rate over five times that of non-Hispanic White males (317.5 cases per 100,000 persons). The rate for Hispanic males was 490.2 cases per 100,000 persons. Non-Hispanic Black females had an HIV disease prevalence rate (648.6 cases per 100,000 persons) that is 5.4 times larger than that of Hispanic females (119.2 cases per 100,000 persons) and over 12 times that of non-Hispanic White females (53.3 cases per 100,000 persons).

Table 1.1: Rates of Disparities in Prevalence, Non-Hispanic Whites and Non-Hispanic Blacks

	Non-Hispanic White	Non-Hispanic Black
Prevalence Cases (Total Cases) of HIV Disease	1 person icon	5 person icons
Prevalence of HIV Disease - Males	1 person icon	5 person icons
Prevalence of HIV Disease - Females	1 person icon	12 person icons
Prevalence of AIDS	1 person icon	6 person icons
Prevalence of AIDS - Males	1 person icon	5 person icons
Prevalence of AIDS - Females	1 person icon	12 person icons

source: eHARS

Based on the rates depicted above, it is clear that there is a disproportionately large burden of HIV disease in the non-Hispanic Black community. In terms of population, this group represented roughly 13 percent of all people living in the Nashville TGA at the end of 2013, yet they represented 46 percent of all HIV disease cases at that time. Non-Hispanic Whites, who make up approximately 82 percent of the total population of the Nashville TGA and represent another 46 percent of all HIV disease cases, have much lower rates of HIV disease prevalence.

MSM Risk Prevalence by Race and Age: The other issue that stood out when looking at HIV disease prevalence data in the Nashville TGA was the MSM risk prevalence by age and racial group. In total, there were 2,854 individuals who were identified as having an MSM risk category at the end of the year in 2013. Over half of these individuals were non-Hispanic Whites (58.3 percent, 1665) and the majority of the rest were non-Hispanic Black (34.5 percent, 985) and Hispanic individuals of any race (5.5 percent, 157).

Looking at the young MSM cohort in the Nashville TGA, persons aged 15-34 years represent the smallest percentage of HIV disease among all MSMs.

Table 1.2: MSM Risk Prevalence by Race and Age Group

	15-24	25-34	35-44	45-54	55-64	65+
Hispanic, all races	5	39	48	44	18	3
Non-Hispanic Black	74	264	209	285	122	31
Non-Hispanic White	10	169	363	708	328	87
Total	89	472	620	1037	468	121
Percentage	3.1	16.5	21.7	36.3	16.3	4.2
	19.6%		58%		20.5%	

source: eHARS

Note: some individuals in eHARS have a missing age, so numbers may not equal total prevalence figures.

Of particular note about this group is that non-Hispanic Blacks account for 60 percent of the total prevalence, indicating a disparity among younger MSMs in the TGA.

The next group, those 35-54 years of age, contains the majority of MSMs in the TGA; nearly 1.5 times larger than all other ages combined and nearly three times larger than either the young or older age cohorts. The 35-54 year old cohort is disproportionately non-Hispanic White at nearly 65 percent, but this group also contains 59 percent of all Hispanic MSMs and half of non-Hispanic Black MSMs in the TGA.

The oldest MSM cohort, those aged 55 and up, make up 20.5 percent of the total MSM population in the Nashville TGA, just slightly more than the youngest MSM cohort. Again, this group is disproportionately non-Hispanic White with 70.4 percent of all individuals in the cohort. The oldest cohort also contains the smallest percentage of both non-Hispanic Blacks (15.5 percent) and Hispanics of any race (13.3 percent). When thinking about the numbers presented above, questions should be asked:

- 1) How are the younger MSMs today, a majority of whom are Non-Hispanic Black and Hispanic of all races, going to fit into institutions that were established in this community by Non-Hispanic White MSMs?
- 2) Are there cultural issues or other barriers that will dissuade these younger MSMs from seeking care and services?
- 3) As the older MSM group ages and we, as a community, see the demographic transition in MSMs, what capacity do we need to build to accommodate their needs?
- 4) As the Non-Hispanic White MSM population ages, are there services in place for this group to accommodate the needs of the larger number of HIV positive people living longer?

Incidence

HIV disease incidence refers to people who were newly diagnosed with HIV disease in the past year, regardless of the stage of the disease (HIV or AIDS). 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 215 new cases of HIV disease diagnosed in the Nashville TGA in 2013. This is a modest 1.9 percent decrease in the number of new cases from the previous year, but there has been a 17.7 percent reduction in the number of new HIV disease cases since 2009.

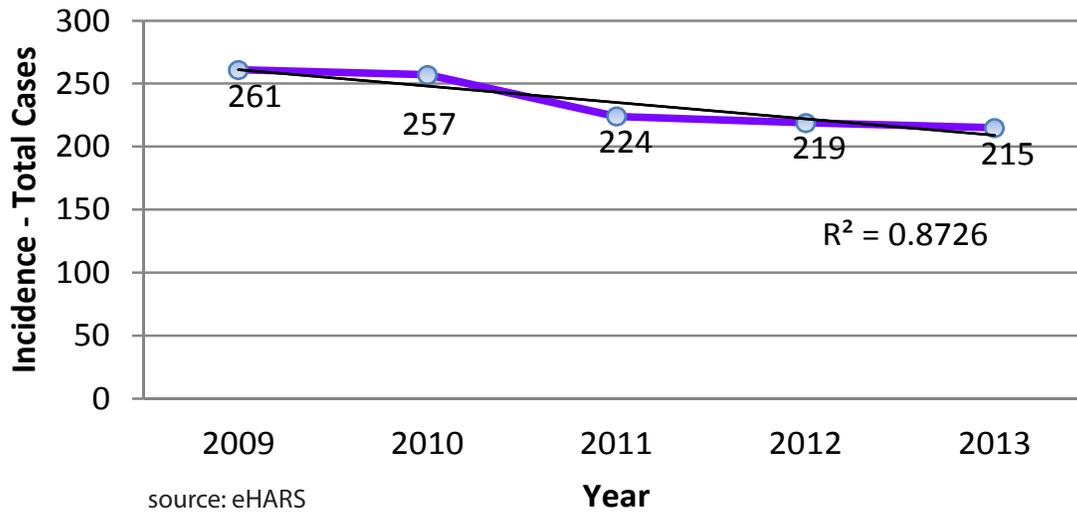
Nashville TGA HIV Incidence Data

The 2014 data for incidence show that while there are a number of incidence trends that have changed since last year, there are a few that have remained somewhat constant and will not be covered. That majority of new cases (92 percent) occurred in Davidson (78 percent), Rutherford (6 percent), Cheatham and Sumner counties (4 percent each). Here are some of the trends that have not changed much since the last needs assessment, and where more information on these topics can be found:

- HIV Disease Incidence by Race/Ethnicity and Gender (pgs. 25-26)
- In Depth Review of 15-24 year olds (pgs. 28-30)
- AIDS Incidence for Gender, Race, and Age (pg.31)
- Trends in Incidence (pgs. 32-34)

This information can be found online at: <http://nashvilleryanwhiteparta.com/resources/key-documents/>

Figure 1.3: HIV Disease Incidence 2009-2013



Gender: The majority of new HIV disease diagnoses occurred among males, accounting for 82.3 percent (177) of new cases. The percentage of new cases of HIV disease for men has fallen since 2012, while the new cases for women have gone up.

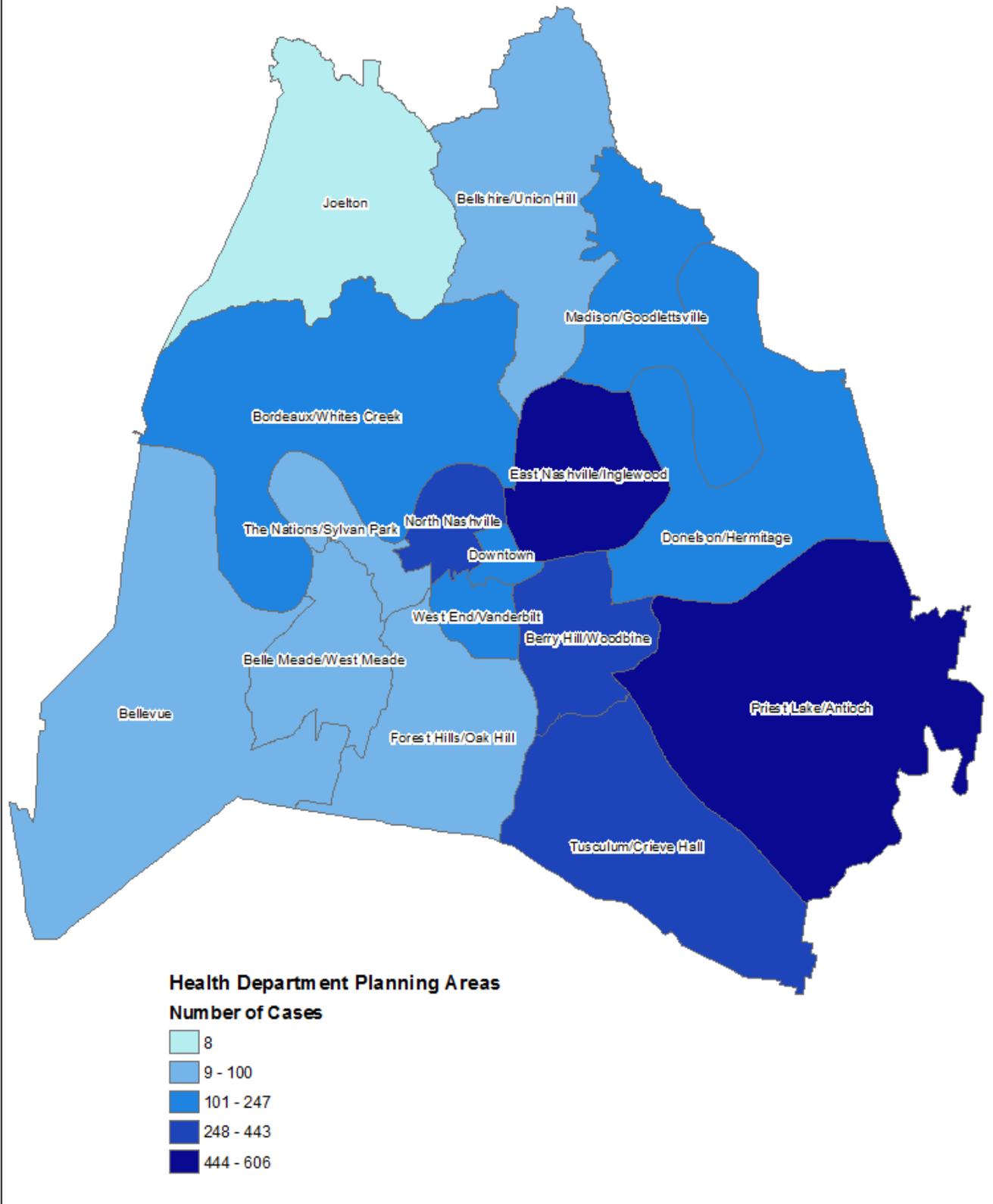
Race/Ethnicity: The racial breakdown of incidence for 2013 is as follows: Non-Hispanic Blacks represent just over half (54.8 percent, 118 people) of all new cases, followed by Non-Hispanic Whites (35.8 percent, 77 people). Hispanic persons of all races made up approximately 7 percent (15) of the 2013 incidence.

Age: The largest number of new cases is for PLWHA under the age of 35, which accounts for 55.3 percent (119) of the incidence from last year. PLWHA under the age of 45 make up 74 percent of new incidence, and this increases to 90 percent when people under the age of 55 are addressed. This trend marks a departure from previous years in which the youngest age group tended to account for more new cases.

Transmission Category: Fifty-eight percent (124) of new HIV disease cases in 2013 were from the MSM transmission category. What is problematic for the Nashville TGA is that the next highest group is the “Unknown Exposure/Other” category, which accounts for 29 percent (62) of new incidence. When a large percentage of people have unknown exposure and transmission categories, it can lead to delays in entry to care and faster progression of HIV disease among these persons. An example of why this is problematic is presented in the “Diagnosis Lag” section of the “Entry to Care” chapter, which highlights the relationship between unknown transmission category and late diagnosis. Heterosexual contact (23) accounts for another 10.6 percent of new incidence.

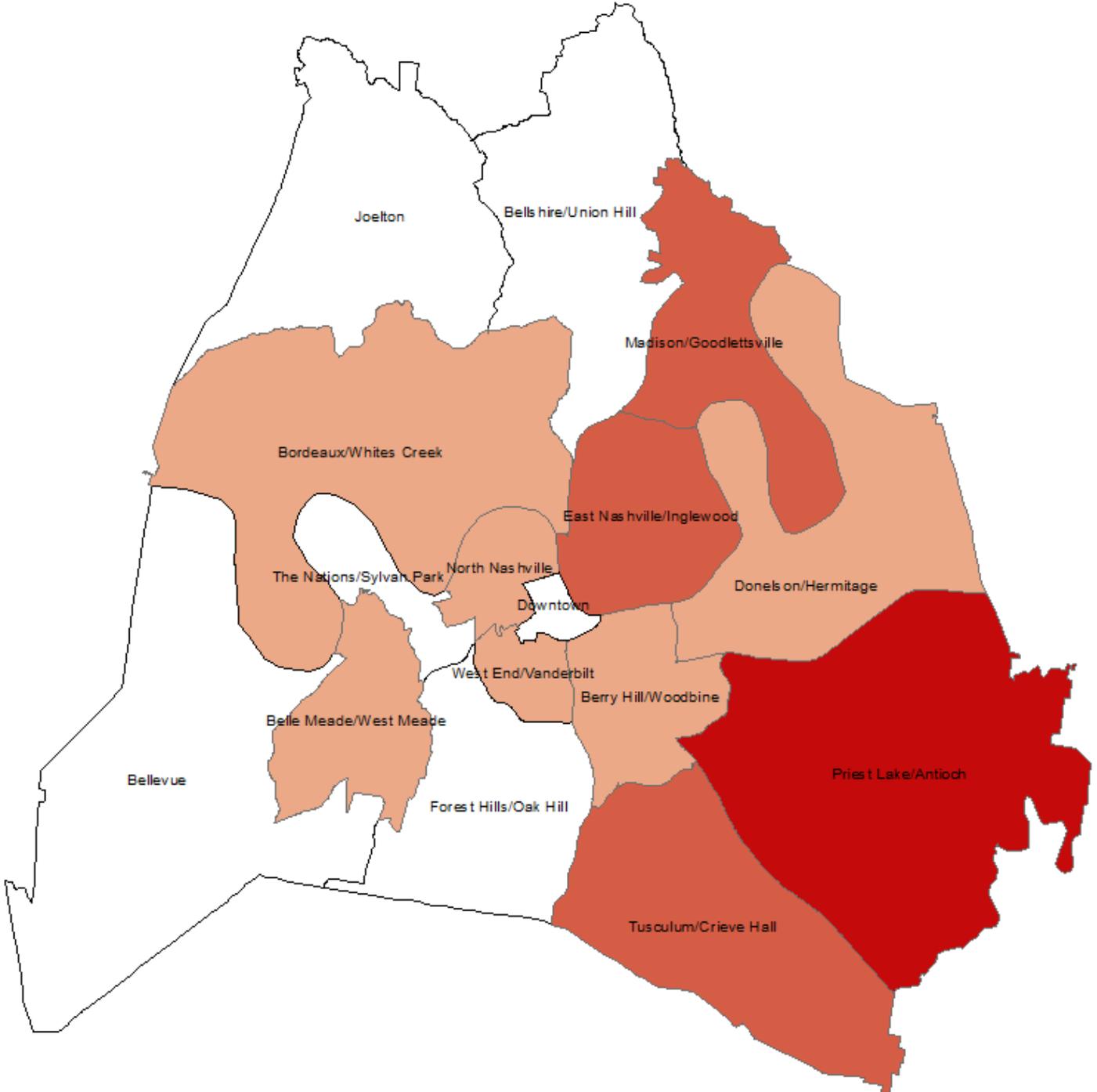
AIDS Incidence: Of the 215 new cases of HIV disease there were 65 new (30.2 percent) AIDS diagnoses in the Nashville TGA in 2013; this is a 12 percent increase from the year before.

Figure 1.4: Prevalence for Davidson County, 2013



source: eHARS

Figure 1.5: Incidence for Davidson County, 2013

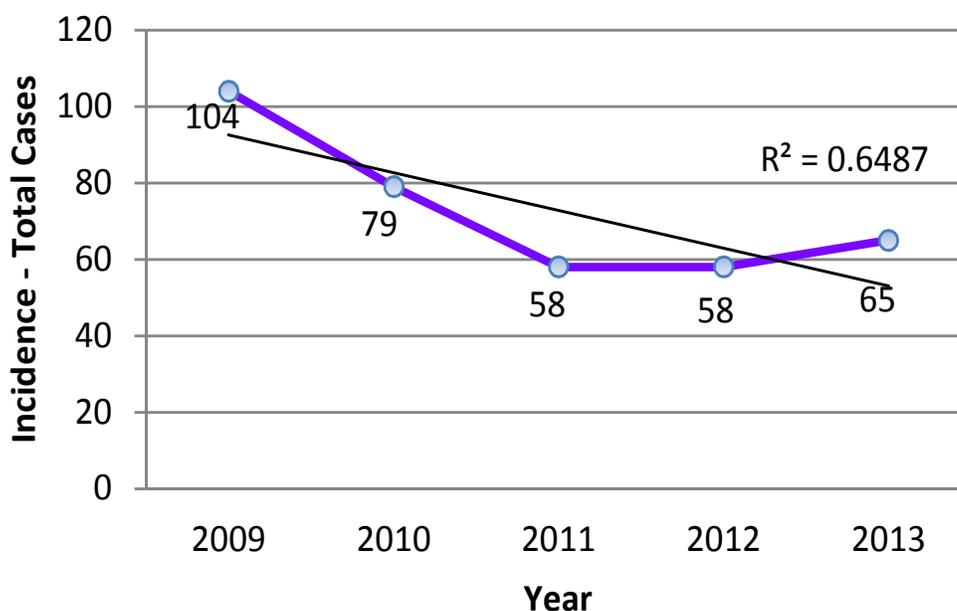


**Health Department Planning Areas
Number of Cases**

- 0 - 4
- 5 - 13
- 14 - 22
- 23 - 35

source: eHARS

Figure 1.6: HIV Disease Incidence 2009-2013



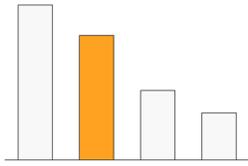
source: eHARS Note: an R^2 of .65 indicates moderate confidence in the results presented. The closer to 1 the R^2 value is, the more reliable the results are

Deaths

A total of 269 people living with HIV disease in the Nashville TGA were identified as having died in 2013. Their deaths were not necessarily related to their HIV disease, because this information is not captured in the available data. This is nearly 13 times higher than the number of deaths reported in the 2013 Needs Assessment. Such a drastic increase is related to the data cleaning efforts undertaken by TDOH that were discussed earlier. All death data was retrieved from eHARS.

The majority of 2013 deaths occurred among males (78.8 percent, 212); females accounted for 21.2 (57) of deaths. People who were 45 years of age or older represented 85.5 percent (230) of all the deaths reported in 2013, while those who were between 15 and 34 years old accounted for only 3.3 percent (9) of deaths. People with an AIDS diagnosis represented 75.5 percent (203) of all deaths in 2013, while those with only and HIV diagnosis accounted for 24.4 percent (66) of deaths. Even though the numbers of deaths are higher in each of these categories, the group percentages for deaths conform to trends and patterns established in previous years.

One demographic category that looks different with regard to the number of deaths is race. Non-Hispanic whites represented 51 percent (137) of deaths, while non-Hispanic blacks represented 45 percent (121). In past needs assessments, non-Hispanic whites accounted for a much higher percentage of reported deaths, and non-Hispanic blacks accounted for a much lower percentage.



Entry and Linking to Care

The “Entry to Care” section is intended to reflect the information in the second column of the HIV Continuum of Care. Included in this section are:

- 1) Estimates on the number of people who have ever gotten an HIV test;
- 2) Statistics on the individuals that are tested and where individuals tested positive in the Nashville TGA;
- 3) The diagnosis lag for the Nashville TGA;
- 4) People linked to care (i.e., persons who had labs done [CD4 count or Viral Load test] and persons who met with a medical practitioner);
- 5) Other relevant testing information related to individuals entering care.

HIV Testing Percentage of Adults Who Are Tested

According to the CDC, the number of adults in the United States that has been tested for HIV disease has increased about 9 percent in the past 10 years, but more than half of American adults have not yet been tested for HIV disease.^{viii} The National HIV/AIDS Strategy (NHAS) requires at least 79 percent of all adults to be aware of their serostatus by 2015 – a goal that seems unlikely to be met at the national level. The TGA does not have local data on this point; national data can be used to provide an estimation of the number of people who are tested. Figure 2.1 contains the estimates for the percentage of adults who received an HIV disease test. These numbers are representative of the national testing trends, and there is no reason to believe that the Nashville TGA does not follow a similar pattern.

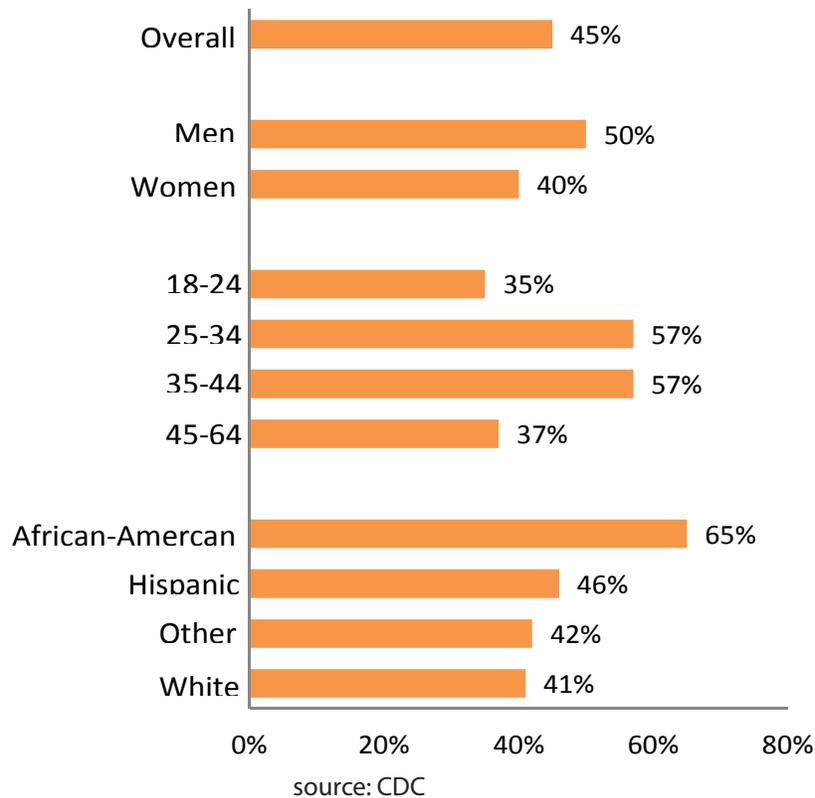
26% of newly diagnosed persons were concurrently diagnosed with AIDS within a year of their first HIV test - half of these people were concurrently diagnosed with HIV and AIDS.

47% of the newly diagnosed PLWHA in the TGA were linked to care (saw a medical practitioner) within 30 days of their diagnosis.

23% of the newly diagnosed PLWHA were not linked to care in any way (getting labs or having a medical visit)

33.3% of all newly diagnosed MSMs experienced diagnosis lag in the TGA in 2013.

Figure 2.1: Percentage of Adults Who Received an HIV Test, 2010



HIV testing patterns in the TGA

We are also able to use the eHARS database to determine where individuals are being identified as HIV positive for the first time in the community. We found that in 2013, a majority of the new cases were identified by hospitals and private physicians (27.8 percent, 61 people and 28.7 percent, 63 people, respectively). Figure 2.2 contains more detailed information about the types of facilities that people are going to when they are initially diagnosed as HIV positive in the TGA.

Table 2.1 contains information on the total number of HIV testing events that occurred in 2013 in the state of Tennessee by region. The information in this table is useful in that it allows a way for us to understand some of our other findings in relation to other TGAs and out state as a whole.

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 the individual's initial HIV diagnosis. Late diagnosis is significant because the earlier an HIV infection is diagnosed the better the chance of the individual entering medical care and treatment, starting antiretroviral therapy, maintaining good health and preventing further transmission.

As HIV disease progresses individuals become sicker, risks for opportunistic infections and comorbidities increase, individuals have less successful responses to medications, more aggressive medications and more extensive medical services may be necessary (which increases costs), and survival rates decrease.^{viii}

Table 2.1: HIV Testing Results for Nashville, Memphis, and Other Tennessee Counties, 2013

Facility	Total # of Test Events*	Newly-Diagnosed Positives						Previously Diagnosed Positives			
		Number of New Positives	Results Received	Referred to Care	Linked to Care	Received or Referred for Prevention Counseling	Received Partner Services	Number of Prior Positives	Number Out of Care	Referred to Care	Re-Engaged in Care
Nashville TGA	40,594	103 (0.3%)	93 (90%)	74 (72%)	76 (74%)	87 (84%)	85 (83%)	89 (0.2%)	35 (39%)	24 (69%)	29 (83%)
Memphis TGA	50,971	193 (0.4%)	166 (86%)	160(83%)	145 (75%)	163 (84%)	160 (83%)	434 (0.9%)	165 (38%)	107 (65%)	106 (64%)
Remaining Counties	47,890	115 (0.2%)	108 (94%)	102 (89%)	94 (82%)	107 (93%)	102 (89%)	113 (0.2%)	40 (35%)	31 (78%)	32 (80%)
Statewide TOTAL	139,455	411 (0.3%)	366 (89%)	336 (82%)	315 (77%)	357 (87%)	347 (84%)	636 (0.5%)	240 (38%)	162 (68%)	167 (70%)

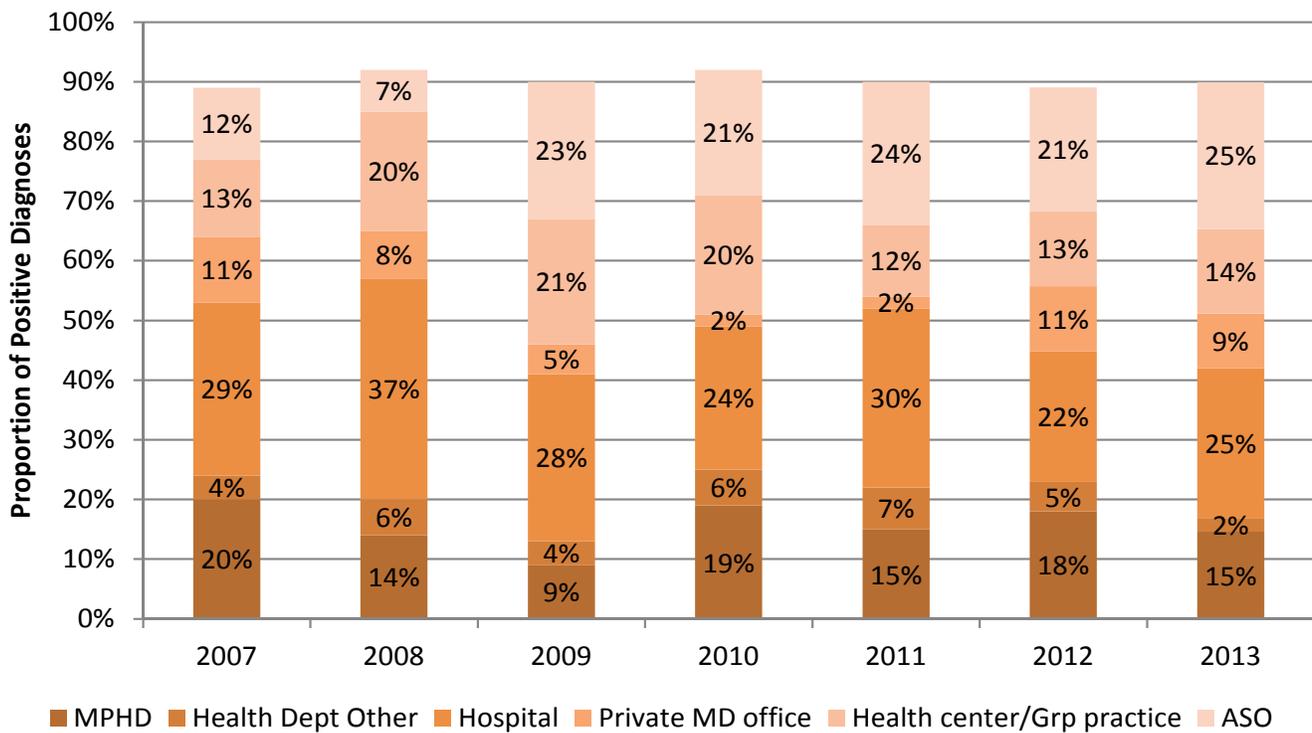
*Includes tests conducted through HIV Prevention and CAPUS.

source: TDOH

Nashville TGA (Cannon, Cheatham, Davidson, Dickson, Hickman, Macon, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson, and Wilson Counties)

Memphis TGA (Fayette, Shelby, and Tipton Counties)

Figure 2.2: Location of Initial HIV Disease Diagnosis, 2007-2013



source: eHARS

It is therefore important that individuals be tested and diagnosed early in the course of the disease so that they may enter care as soon as possible. It should also be noted that people who are infected with HIV disease may be asymptomatic for many months, even years, which can lead to a delay in their seeking treatment, causing diagnosis lag.

In a 2010 issue of Morbidity and Mortality Weekly Report, the CDC reported that 32.3 percent of new HIV disease diagnoses in 2007 (37 states were included) were late diagnoses; 25 percent of new HIV disease diagnoses in Tennessee in 2007 were considered to be late diagnoses.

Late diagnosis cannot be analyzed until a full 12 months has passed from the end of the reporting cycle in order to allow the necessary time to see if a person diagnosed late in the year advances to AIDS within 12 months. 2012 data are being used for this measure because a full year has not yet lapsed for those individuals diagnosed in the latter part of 2013.

Incidence

In 2012, 219 individuals were newly diagnosed with HIV disease, and of these persons 26 percent (57) were simultaneously diagnosed with HIV and AIDS or progressed to AIDS within 12 months of their initial HIV diagnosis. Of these persons, 47.3 percent (27) were concurrently diagnosed with HIV and AIDS, while 52.6 percent (30) progressed to AIDS within 12 months of their initial HIV diagnosis. Fifteen of these individuals advanced to AIDS within two months. Persons progressing to AIDS within 12 months of their initial HIV diagnosis did so because they were likely diagnosed at a late stage of the disease, not because of lack of or delay of care. If people are tested and diagnosed early on in the course of the disease they are not likely to progress through the stages of the disease as rapidly. Table 2.2 contains the demographic information for the 57 individuals who experienced diagnosis lag in the Nashville TGA in 2012.

The percentage of newly diagnosed PLWHA in the Nashville TGA with a diagnosis lag, 26 percent, is lower than the national average of 32.3 percent. This indicates 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, because this national average of 32.3 percent is based on data from 2007, it is possible that the average has decreased for the country.

Table 2.2: Incidence and Prevalence Demographics for Individuals with Diagnosis Lag, 2012

Gender	Incidence		Prevalence	
	Percentage	Number	Percentage	Number
Male	80.7	46	78.2	4061
Female	19.3	11	21.8	1131
Race				
Non-Hispanic White	49.1	28	46.5	2413
Non-Hispanic Black	38.6	22	45.7	2374
Hispanic (all races)	10.5	6	5.7	297
Other Races	1.7	1	2.1	108
Transmission Category				
MSM	33.3	19	52.6	2730
IDU	1.7	1	11	568
Heterosexual	3.5	2	18.1	941
Other/Unknown	61.4	35	18.3	953
Age Group				
15-24	12.3	7	3.7	196
25-34	19.3	11	13.3	690
35-44	21.0	12	25.3	1313
45-54	36.8	21	36.6	1901
55-64	7.0	4	16.9	878
65+	3.5	2	4.1	214

source: eHARS

Prevalence

Of the 5,192 PLWHA in the Nashville TGA at the end of 2012, 1,448 of them had been diagnosed with HIV and AIDS simultaneously or progressed to AIDS within one year of their initial HIV diagnosis; these persons accounted for 27.9 percent of PLWHA at that time. Of these persons, 57 percent (824) were concurrently diagnosed with HIV and AIDS, while 43.1 percent (624) progressed to AIDS within 12 months of their initial HIV diagnosis (369 of these individuals advanced to AIDS within two months). Table 2.2 above contains the demographic information for the 1,448 people who experienced diagnosis lag with regard to prevalence in the Nashville TGA.

Linkage to Care

Linkage to care is an aspect of the HIV Care Continuum that focuses on getting individuals with a new HIV disease diagnosis into care as quickly as possible. There are two ways that we evaluate linkage to care in the TGA, and two different benchmark measures we are comparing those evaluations against.

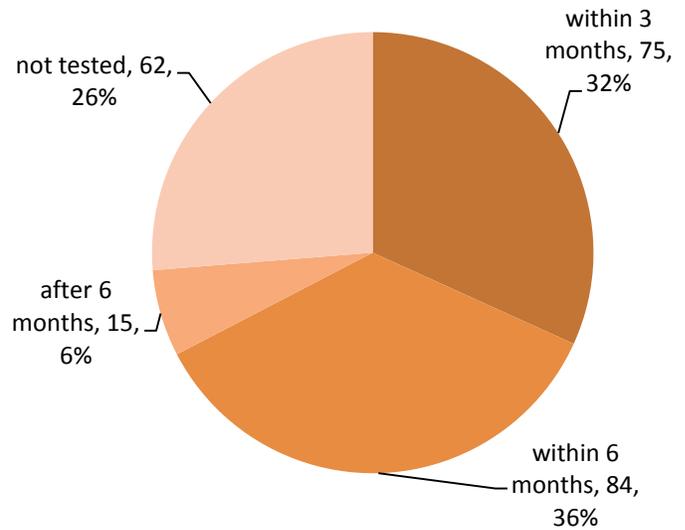
HRSA defines linkage to care as the percentage of patients, regardless of age, with a diagnosis of HIV who had at least one medical visit within the first 30 days of their new diagnosis. The benchmark for this measure, 83 percent of newly diagnosed persons being linked to care within 30 days, comes from HIVQUAL because HRSA does not have an established goal for this item.

There were a total of 159 Ryan White Part A patients (72 percent) who had at least one medical visit in the year that they were diagnosed. The Nashville TGA had an overall linkage to care rate of 47.2 percent (75 people) in 2013, and HIVQUAL estimates that 80 percent of those who are newly diagnosed should have a medical visit within 30 days. The TGA is 33 percent lower than the HIVQUAL benchmark for linking individuals to care, which indicates that we have much room for improvement. The 30 day measure is something that we, as a community, decided was appropriate. Given that, it is important to note that 90.5 percent (144 people) of PLWHA are linked to care within 3 months – the definition that HRSA recommends.

Second, there is the CDC measure of linkage to care which looks at whether newly diagnosed individuals have gotten CD4 or Viral Load tests. This is compared against a recommended standard in the medical community of 80 percent of the newly diagnosed getting one or both of those tests. Of the 215 PLWHA newly diagnosed in 2013, about 67 percent were considered to be linked into care. While there are no formal national standards for linkage to care, the argument has been made that communities should reach about 80 percent linkage to care within 3 to 6 months of a new diagnosis.^{ix} The TGA had 73 percent of newly diagnosed individuals linked to care after 6 months, which is very close to the proposed benchmark.

Twenty-six percent (55) of those who were newly diagnosed did not receive any testing at all. If the TGA is going to improve its score on the proposed benchmark for linkage to care, we need to focus on the 26 percent who went untested after their diagnosis with HIV disease.

Figure 2.3: Percentage Linked to Care (HRSA definition), 2013



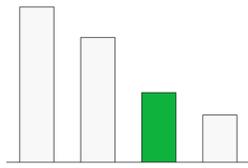
source: CAREware

Table 2.3: Linkage to Care: CDC and HRSA Benchmarks and TGA Scores, 2013

CDC Benchmark (had viral load or CD4 labs): 80 percent linked in 3 months	HRSA Benchmark (saw medical provider): 83 percent linked in 30 days
National Average: 62 percent linked in 3 months	National Average (HIVQUAL): 83 percent linked
TGA score: 74 percent linked in 3 months	TGA score: 47.2 percent linked in 30 days

source: TDOH

source: CAREware



Maintained in Care

This section includes statistics on:

1. Those who are retained in care.
2. The service utilization for the Nashville TGA;
3. Unmet need for the community and data on those individuals who are out of care;
4. Gaps in services, capacity and community need.

Retained in Care

Retention in care is an aspect of the HIV Care Continuum that focuses on individuals seeing an HIV medical practitioner on a routine basis. Knowing the number of individuals who are linked to and then retained in care gives us an understanding of how the TGA is doing in terms of care for HIV Disease. The CDC and HRSA/HAB each have different, but complementary, definitions for retention in care. These two organizational definitions will be calculated for the TGA, and then compared to the appropriate national benchmarks to establish how well we are retaining PLWHA in care.

1. HRSA defines retention in care in a different way than the CDC. HIV Medical Visit Frequency is defined as the percentage of patients, regardless of age, with a diagnosis of HIV who had at least one medical visit where a medical practitioner was seen in each 6-month period of a 24-month measurement period with a minimum of 60 days between medical visits. The data for this analysis comes from CAREware.
2. According to the CDC, a person is retained in care if they had at least 2 CD4 or viral load tests performed at least 3 months apart during a 12 month observation period.^x Of the 3,009 PLWHA in care in 2013, about 41.6 percent (1,253) were considered to be retained in care according to the CDC definition of retention. The CDC estimates that the national number of people who are retained in care is about 51 percent. The TGA is about 10 percent below the national average for those PLWHA who are retained in care. The data for this analysis comes from eHARS.

Only 44.6% of PLWHA in the Nashville TGA saw an HIV medical practitioner enough to meet the national “best practice” guidelines. We are about 25% lower than the national average on this outcome.

23% of persons receiving a Part A funded service received only support services - meaning that they didn't see an HIV medical practitioner.

68% of eligible PLWHA in Middle Tennessee did not enroll in insurance programs created by the ACA.

The unmet need in the TGA is 35% meaning these are persons who are HIV positive did not receive an HIV lab (CD4 count, viral load test) in the last year.

The Nashville TGA had an overall HIV Medical Visit Frequency rate of 44.6 percent in 2013, but the in+care Campaign^{xi} estimates that in June 2013, the top 25 percent of communities had an HIV Medical Visit Frequency of 90 percent. The TGA is also about 24 percent lower than the national average for the year, suggesting that there is much room for quality improvement in this area because we are in the bottom half of all communities.

Table 3.1 Retention in Care: CDC and HRSA Benchmarks and TGA Scores, 2013

CDC Benchmark (had CD4 or Viral Load test): 60 percent with 2 or more tests	HRSA Benchmark (saw medical practitioner): (top 25%) 90 percent saw provider
National Average: 51 percent with 2 or more tests	National Average: 69 percent saw provider
TGA score: 58 percent with 2 or more tests	TGA score: 44.6 percent saw provider

source: TDOH

source: CAREware

Service Utilization

Service utilization data are collected electronically from all Ryan White Part A funded medical and support service providers (First Response Center, Meharry Wellness Clinic, Metro Public Health Department STD Clinic, Nashville CARES, Street Works, and the Vanderbilt Comprehensive Care Clinic) on a quarterly basis. These data are input into a centralized CAREware database maintained at MPH. 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, de-duplicated, and analyzed for the calendar year. All service utilization data for this report were compiled in April 2014.

Service Use: Part A Funded Medical Providers

A total of 2,863 PLWHA received HIV medical services at least one time in 2013. This represents 53 percent of all PLWHA who resided in the Nashville TGA. Individuals were included in this group if they received any outpatient/ambulatory medical care service for their HIV disease in 2013. Table 3.2 details the demographic breakdown of those PLWHA who accessed services from Part A funded medical providers in 2013.

Frequency: Almost 15 percent (416) of the PLWHA who received a medical service from a Ryan White Part A provider in 2013 had not received HIV medical care from a Part A provider previously.

Table 3.2: Demographic Information for PLWHA Using Medical Services at Part A Funded Agencies, 2013

PLWHA Receiving Services = 2,863		
Sex	Percentage	Number
Male	74.0	2120
Female	25.3	723
Transgender	0.7	20
Risk Factor		
MSM	52.1	1466
Heterosexual	37.2	1049
IDU	6.8	191
All Other Risk Factors	3.8	108
Race/Ethnicity		
Non-Hispanic White	44.2	1,264
Non-Hispanic Black	49.8	1,427
Hispanic (all races)	4.7	135
Other Races/Ethnicities	1.3	37
Age Group*		
13-24	5.0	145
25-44	41.0	1170
45-64	51.3	1470
65+	2.7	78

* No one under the age of 12 received medical care from a Part A provider. It is likely that a significant number of persons in the youngest groups are receiving medical care from Vanderbilt pediatrics; MPH however does not have access to this data for verification.

source: CAREware

Of the 2,814 persons who received a medical service, the largest portion of persons had five or more visits (office visit or lab) (37 percent, 1,054), followed closely by three to four visits (32 percent, 896). Persons with two visits and one visit, representing 20 percent (566) and 11 percent (298), respectively, accounted for less than one-third of individuals who received medical services. Since 2010 there has been a gradual shift in clients having more outpatient visits; the percentage having five or more visits have grown from 34.7 percent in 2010 to 37.4 percent in 2013.

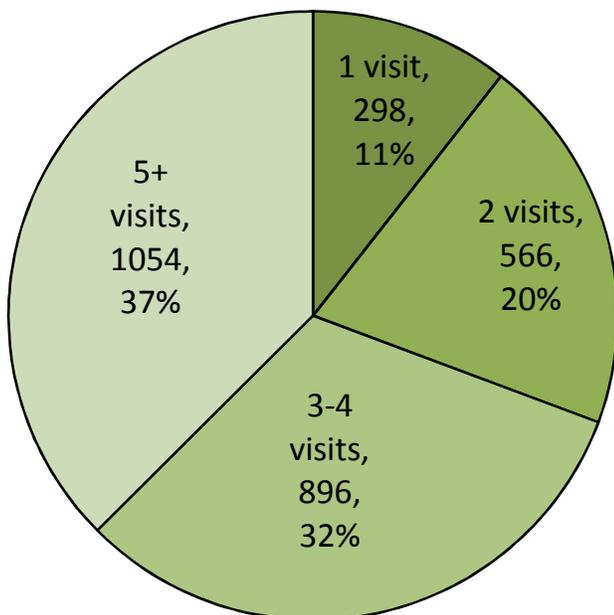
The demographics of those persons receiving HIV medical services through Ryan White varied slightly from the demographics of all PLWHA in the TGA. Females are slightly over-represented among persons receiving medical care (25.3 percent) compared to their proportion within the general HIV-positive population of the TGA (21.3 percent). While non-Hispanic blacks represented the largest proportion of PLWHA who received HIV medical care (49.8 percent), they accounted for only 46 percent of all PLWHA in the TGA; likewise, non-Hispanic whites represented 44.2 percent of those who received medical care, but accounted for the largest percentage of PLWHA in the TGA (46 percent). Hispanics of all races accounted for 4.8 percent of all individuals who received medical care in the TGA in 2013.

It is possible that non-Hispanic whites appear to be under-represented in terms of those receiving medical services because their care is not funded by Part A, even if they are going to the same medical providers. This could then affect the proportion of non-Hispanic blacks, making it appear as if they are over-represented, when in fact they may only be over-represented at Part A providers. Females may be overrepresented because in general females tend to be more likely to engage in medical care than are males.

Service Use: Total Service Use

A total of 3,657 PLWHA in the Nashville TGA received at least one Ryan White Part A service in 2013. These people received a variety of Ryan White Part A funded services. The most common service provided to the community was medical case management, with 86 percent (3,269) of those receiving any kind of service utilizing this resource. Outpatient and ambulatory medical care was the second most commonly utilized service, with 77 percent (2,910) of the population who received a Part A funded service accessing those resources.

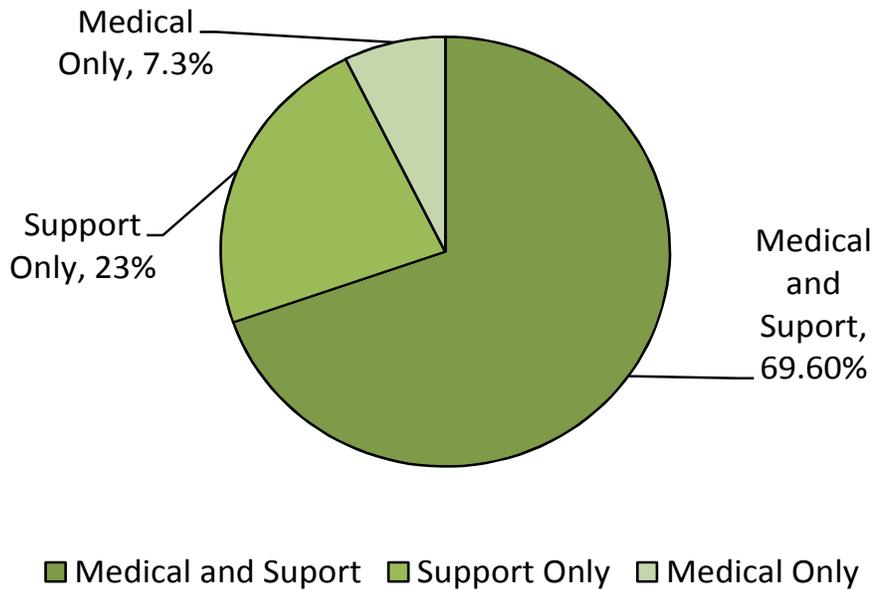
Figure 3.1: Medical Visit Frequency for PLWHA from Part A Funded Medical Providers, 2013



Of the 3,657 PLWHA who utilized services, 2,545 people received both HIV medical and support services, representing 69.6 percent of those who received services. This number represents 47 percent of HIV-positive persons in the TGA. Eight hundred forty three (843) PLWHA only received support services from a Ryan White Part A funded provider. This group accounts for 23 percent of the people who utilized services in 2012 and 15.6 percent of the total number of PLWHA in the Nashville TGA. Two hundred sixty nine (269) persons received only HIV medical services from a Ryan White Part A funded provider, accounting for 7.3 percent of those receiving services and 5 percent of all people living with HIV disease in the TGA.

One thing that our community should focus on with this information is the 23 percent of people who only received support services. When nearly one fourth of all of the people who received services in our community are not linked to medical care in addition to social support services, we are not adequately retaining individuals in care. For instance, of the 843 people that received only support services, we know that only 10 of them got a viral load test, and only 3 of those that were tested had achieved viral suppression. While we recognize that some of these people may be getting care in other places, the data we have available shows that 98.8 percent of the people who only received support services in the last year did not have a viral load test reported in CAREware.

Figure 3.2: Ryan White Part A Funded Service Providers: Consumer Service Utilization, 2013



source: CAREware

Table 3.3 details all of the core and support services offered to the community by Part A, the number of individuals partaking of those services, and the total number of units of service rendered between January 1, 2013 and December 31, 2013.

Table 3.3: All Part A Core and Support Service Utilization, 2013

Core Services	Number of people Served	Total Units	Units per Person
	Part A		
Outpatient/Ambulatory Medical Care	1090	18596	17.06
Oral Health Care	389	621	1.59
Early Intervention Service	430	8097	18.83
Mental Health	151	623	4.12
Medical Case Management	3165	32260	10.19
Substance Abuse	51	223	4.37
Support Services			
Transportation	76	261	3.43
Emergency Financial Assistance	102	151	1.48
Food Bank	1834	7154	3.89
Housing	78	123	1.57
Psychosocial Support	254	6500	25.29

source: CAREware

Insurance Assistance Program (IAP) Utilization

There were 626 PLWHA in the Nashville TGA who received insurance assistance in 2013. The majority of IAP recipients were male (75 percent, 470), followed by 24.3 percent (152) female, and 0.6 percent (4) transgender. Over half of the recipients were non-Hispanic white (56 percent, 350); 40.7 percent (255) were non-Hispanic black, and 2.7 percent (17) were Hispanic.

One-third of IAP recipients were living at or below 100% of the poverty level (32.7 percent, 205); 32.2 percent (202) were at 101-200% of the poverty level and 34.8 percent (218) were at 201-300% of the poverty level. Only 3.6 percent (23) of IAP recipients were new to the program in 2013, compared to 6.1 percent of recipients in 2011. (Source: Tennessee Department of Health)

AIDS Drug Assistance Program (ADAP) Utilization

A total of 1,216 people living with HIV disease in the Nashville TGA utilized ADAP services in 2012. Table 3.4 contains more detailed demographic information about this group.

Between the 1,216 ADAP recipients, a total of 57 different antiretrovirals (ARVs)/dosages were received. Drugs were dispensed to recipients between 1 and 12 times within the year. The most commonly taken antiretrovirals provided through ADAP included Complera, Fluconazole, Atripla, Reyataz (300mg), and Prezista (800mg). These five drugs accounted for 63 percent of the ARVs taken by ADAP recipients. (Source: Tennessee State Department of Health)

Table 3.4: Demographic Information for PLWHA Receiving ADAP, 2013

PLWHA Receiving ADAP = 1,216		
Sex	Percentage	Number
Male	79.0	960
Female	20.5	250
Transgender	0.5	6
Poverty Level		
Less than 100%	59.0	718
100-150%	14.2	173
151-200%	10.6	129
201-250%	7.3	89
251-300%	7.2	88
Over 300%	1.5	19
Race/Ethnicity		
Non-Hispanic White	40.0	485
Non-Hispanic Black	47.8	582
Hispanic (all races)	8.6	105
Other Races/Ethnicities	3.6	44
Top 5 ARTs		
Atripla	24.7	300
Reyataz 300	18.2	221
Prezista 800	10.4	126
Complera	5.2	63
Fluconazole	4.8	58

source: TDOH

Affordable Care Act

Beginning in March 2014, the Tennessee Department of Health began using Ryan White ADAP funds to purchase health insurance for select categories of Ryan White clients. Purchasing ACA insurance for this population provides access to HIV and non-HIV medical services; therefore, these individuals no longer need Part A funds to cover HIV medication, HIV outpatient, mental health and substance abuse treatment. As described in Table 3.5, it is estimated that 147 PLWH who had their HIV outpatient care paid for by Ryan White Part A will no longer need Part A for outpatient care. This outpatient care currently costs an estimated \$1,000 per person for the Part A program.

Table 3.5: ACA Enrollment Estimates, 2014

	Middle TN (TGA + 26 additional counties)		Estimated Number in TGA
	Number Eligible	Number Enrolled	
100-300% FPL	559	181	147
Other	40	40	32

Source: TDOH *Numbers only good as of 4/25/14

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 antiretroviral therapy. Unmet need focuses on HIV primary medical care and does not include support services in its assessment.

To calculate the 2013 unmet need estimate for the Nashville TGA the eHARS database was used. All entities (Part A, private doctors/hospitals, VA, etc.) completing viral load testing must report viral load information to TDOH. The majority of information is directly downloaded into the eHARS database, although TDOH manually enters some data. Although this reporting requirement has been in place since January 2012, this is the first year that the needs assessment has used eHARS data only to compute unmet need.

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 at least one HIV medical care service (e.g. lab, office visit, anti-retroviral) from the total number of prevalence cases residing in the TGA in 2013. The remaining PLWHA are those persons without viral load values who represent unmet need. A review completed by Mosaica in 2007 estimated the national unmet need to be 37 percent for Ryan White Part A and 43 percent for Ryan White Part B.^{xii}

Unmet Need Estimate

In 2013 the estimated unmet need in the Nashville TGA is 35.4 percent.^{xiii} A total of 1,917 people did not receive HIV primary medical care in 2013. Unmet need decreased 5.6 percent from the 2012 total of 41 percent. While it is likely that more PLWHA are receiving HIV medical care each year (the HIV medical care service utilization has been increasing from year to year, meaning lower scores on unmet need), improvements in unmet need are also attributable to the growing accuracy of collected data and increased access to it.

Table 3.6: Estimated Unmet Need for Nashville TGA, 2013

Category	Number of Cases	Data Source
Population Size		
A. Number of persons in the Nashville TGA living with HIV Disease, 2013	5407	eHARS, Metro Public Health Department Division of Epidemiology
Case Patterns		
B. Number of PLWHA who received primary medical care services in 2013	3490	eHARS
Calculated Results		
C. Number of PLWHA who did not receive primary medical care services in 2013	1917	Box A – Box B
Percentage of HIV+ individuals aware of their status, but not receiving HIV primary medical care services	Unmet Need: 35.4%	Box C / Box A

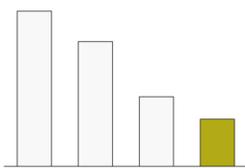
Service Needs and Gaps in Care

In order to most effectively serve HIV-positive persons in our community, it is necessary to get a better understanding of whether or not the needs of HIV-positive persons are being met. Therefore, the Service Needs and Gaps Survey was created in 2012 to determine the areas in which the needs of this group are being met, as well as areas in which there are gaps in services, meaning the need for a service is greater than the availability or is hindered by accessibility. The primary aims of the study that was conducted was to ascertain awareness of services, services needed and received by individuals, barriers to accessing services, and whether or not the services are meeting clients' needs.

The following information has not changed significantly over the last year, so please refer to the 2013 Needs Assessment for more detailed information on:

- Service Needs and Gaps (pgs. 86-87)
- Resource Audit (pgs. 92-93)

This information can be found online at: <http://nashvilleryanwhiteparta.com/resources/key-documents/>



Benchmarks and Key Outcomes

In addition to the outcomes of linking and maintaining in care, this section will serve to highlight how the Nashville TGA performs on measures from the HIV/AIDS Bureau (HAB) and National HIV/AIDS Strategy (NHAS), as well as allowing us to compare our outcomes to national standards. This section should not be viewed as a report card, but as a conversation starter on what we are already doing well in the Nashville TGA and what we can do better.

HIV/AIDS Bureau Core Measures

The HIV/AIDS Bureau (HAB) has a wide array of measures to assess and evaluate outcomes for Ryan White Programs of all types. HAB has identified five core performance measures that “emphasize the essential aspects of HIV care and treatment and align with milestones along the HIV care continuum.” Of these five core measures, there are three that we have sufficient data to address in the 2014 Needs Assessment: 1) HIV Viral Load Suppression, 2) HIV Medical Visit Frequency and 3) the Gap in HIV Medical Visits. The other two measures will be represented in future iterations of the Needs Assessment. For the core measures that are included in the following sections, we will present the Nashville TGA data for both 2012 and 2013, and how we compare to national benchmarks on each of the measures.

Core Measure 1: HIV Viral Load Suppression

HIV viral load suppression is defined as the percentage of patients, regardless of age, with a diagnosis of HIV who had a viral load less than 200 copies/mL at their last HIV viral load test during the measurement year. This information was collected from providers in the Nashville TGA who offer medical services to PLWHA. Information in this section may not match with the overall prevalence numbers because it only reflects people who received services from a Ryan White Part A provider who had a viral load test in a given calendar year.

53.9% of all 13-24 year olds were virally suppressed in the last year, and 39.1% of all people with temporary housing were virally suppressed. - these are two of the groups with the lowest viral suppression percentages in the TGA.

Despite some groups being low, the TGA has 79% viral suppression for persons in care - nearly ranking in the top 25% of communities nationwide.

The Nashville TGA has, or is on track to meeting 6 of the 9 National HIV/AIDS Strategy goals for the year 2013.

Overall Viral Suppression: In 2012 the Nashville TGA had an overall viral suppression rate of 78.6 percent (2573 of 3274 people - these are people who are in HIV care),^{xiv} which did not meet the cutoff score (84 percent) for being in the top 25 percent of communities in the country according to the December 2012 estimates from the in+care Campaign. The percentage of individuals who were virally suppressed in the Nashville TGA increased to 79.4 percent in 2013, which is an improvement, but still leaves us outside the top 25 percent of communities for the year. The in+care Campaign estimates that in June 2013, the top 25 percent of communities had a viral suppression rate of 85 percent.

Table 4.2 on the following page contains a detailed breakdown of viral suppression by demographic variables and categories of interest.

Of particular note in Table 4.2 are the groups with low rates of viral suppression in 2013. The two stand-out categories are the PLWHA aged 13-24 that only have a viral suppression rate of about 54 percent, and those persons who have temporary housing situations that have a viral suppression rate of only 39 percent. It is not surprising that one of the two of the most vulnerable groups, those with transient housing statuses, have the lowest rates of viral suppression. If these individuals are worried about finding and keeping shelter, or are unable to afford rent, it is unlikely that they have the time or discretionary income to get to medical providers for lab work and antiretroviral therapy.

The 13-24 age group having low viral suppression may be a result of still living at home and an unwillingness to disclose HIV+ status, a lack of resources, or any other number of issues. That this group could be in care and virally suppressed is something that the community should address.

Table 4.1: Viral Suppression: CDC^{xv} and HRSA Benchmarks and TGA Scores, 2013

CDC Benchmark: 40 percent virally suppressed	HRSA Benchmark: 85 percent virally suppressed
National Average: 25 percent virally suppressed	National Average: 72 percent virally suppressed
TGA score: 60 percent virally suppressed	TGA score: 79.3 percent virally suppressed

source: TDOH

source: CAREware

Table 4.2: TGA Viral Suppression Data by Demographic Category, 2012-2013^{xvi}

<i>TGA Total vs. Benchmark</i>	2012		2013	
	TGA Total	Benchmark*	TGA Total	Benchmark
	78.58%	84%	79.35%	85%
<i>Race</i>	% Virally Suppressed	Total Suppressed	% Virally Suppressed	Total Suppressed
Non-Hispanic Black	72.4	1094	72.7	1139
Asian	85.2	23	79.4	27
Non-Hispanic White	82.5	1383	84.8	1473
Hispanic (all races)	68	100	79.6	121
Other/Unspecified	77.6	45	60	--
<i>Gender</i>				
Male	78.7	1920	80.2	2008
Female	75.6	612	75.9	624
Transgender	57.1	8	66.7	--
Other/Unspecified	50	--	56.3	9
<i>Age Group</i>				
13 to 24	50	51	53.9	83
25 to 44	72.8	923	74.6	997
45 to 64	82.1	1477	83.9	1477
65 and older	88.7	94	91.7	88
<i>Housing Status</i>				
Institution	44.9	35	75	12
Non-permanent	63.4	135	71	375
Stable/Permanent	78.3	1670	80.3	1710
Temporary	51.3	20	39.1	18
Unknown/Other	82.8	671	82.8	519
<i>Insurance Status</i>				
Insured	79.6	1234	80.6	1157
Not Insured	71.9	1311	77.8	1488
<i>HIV Risk Factor</i>				
Heterosexual	77.3	947	76.6	921
IDU	69.5	141	76.1	166
MSM	79.7	1375	81.2	1454
MSM+IDU	85.2	23	81.5	44
Transfusion	60.5	23	79.2	19
Other/Unspecified	66.7	36	70	41
<i>Poverty Level</i>				
Equal or Below FPL	75.9	980	75.6	1543
101-200%	84.7	353	84.1	370
201-300%	89.9	240	89.4	168
Over 300%	87.2	34	85.4	35

* Viral suppression benchmark is for the top 25 percent of communities, not the national average (which is 72 percent for both 2012 and 2013).

** Cell counts for 10 or fewer respondents have been suppressed (--), percentage virally suppressed still reported

source: CAREware

Core Measure 2: HIV Medical Visit Frequency

HIV Medical Visit Frequency is defined as the percentage of patients, regardless of age, with a diagnosis of HIV who had at least one medical visit where a medical practitioner was seen in each 6-month period of a 24-month measurement period with a minimum of 60 days between medical visits. For clarification, the 2012 numbers that will be discussed includes people with at least 1 medical visit every six months for the two year period of January 1, 2011 to December 31, 2012, where at least 60 days (3 months) separates each visit. The frequency of visits is a recommendation of federal treatment guidelines.

The date range for the 2013 statistics is January 1, 2012 to December 31, 2013. This information is gathered from all Ryan White Part A providers in the Nashville TGA. Information in this section may not match up with the overall prevalence numbers because it only reflects people receiving Ryan White funded medical services who had at least one medical visit in the previous 24 months of calendar year of interest and does not include all persons who are HIV positive (e.g., VA patients).

HIV Medical Visit Frequency: In 2012 the Nashville TGA had an overall HIV medical visit frequency of 40.7 percent (2079 out of 5104 people), which was less than half of the cutoff score (88 percent) for being in the top 25 percent of communities in the country according to the December 2012 estimates from the in+care Campaign. The HIV medical visit frequency in the Nashville TGA improved 3.9 percent to 44.6 percent in 2013, but the in+care Campaign estimates that in June 2013, the top 25 percent of communities had an HIV medical visit frequency of 90 percent. The TGA is also about 24 percent lower than the national average for both years (65 percent and 69 percent, respectively), suggesting that there is much room for quality improvement in this area because we are in the bottom half of all communities.

Table 4.3: HIV Medical Visit Frequency with Breakout by Subpopulation, 2013

<i>Total</i>	TGA	Benchmark
	44.6%	90%
<i>Race</i>	MVF %	total
Non-Hispanic Black	43	1220
Asian	43.2	19
Hispanic (all races)	48.4	106
Non-Hispanic White	45	1171
Other/Unspecified	22.2	4
<i>Gender</i>		
Male	43.2	1714
Female	45.7	683
Transgender	23.3	7
<i>Age Group</i>		
13 to 24	23.9	27
25 to 44	39	815
45 to 64	47.7	1487
65 and older	51.7	77
<i>Housing Status</i>		
Institution	3.8	3
Non-permanent	42.6	340
Stable/Permanent	46.4	1713
Temporary	5.9	1
Unknown/Other	39.4	350
<i>Insurance Status</i>		
Insured	42	877
Not Insured	45	1537
<i>HIV Risk Factor</i>		
Heterosexual	43.5	912
IDU	45.5	215
MSM	44.8	1222
MSM+IDU	37.3	37
Transfusion	25.6	11
Other/Unspecified	25.4	17
<i>Poverty Level</i>		
Equal or Below FPL	40.6	1301
101-200%	50.1	575
201-300%	42.5	228
Over 300%	33.3	12

Note: HIV Medical Frequency visit benchmark is for the top 25 percent of communities, not the national average (which was 90 percent in 2013).

source: CAREware

Table 4.3 contains a detailed breakdown of HIV medical visit frequency for 2013 by demographic variables and categories of interest. The rates for categories do not change significantly from 2012 to 2013, so those numbers are not included. Any cell in the table with 10 or fewer people is suppressed.

The TGA as a whole does poorly on HIV medical frequency, so every group could use an improvement in some way. How can we better link people to care and ensure that they are retained over time? Is there a reason that so many individuals in the TGA are not receiving at least two medical visits a year?

Those are important questions that need to be addressed, and depending on the answer this issue can be framed in a different way.

However, there are a few groups that are especially worrisome with regard to this outcome. For example, when looking at the housing status breakout variable, we see that the two lowest scores for HIV medical visit frequency are found here among those that are institutionalized and those with temporary housing. As with viral suppression, temporary housing is problematic in terms of medical visit frequency because of a lack of stability in a person's life. Assistance for finding and maintaining a stable housing situation seems paramount to improving TGA outcomes these measures.

Another group that has a low HIV medical visit frequency is the 13-24 age group. While the potential reasons for this group having a low medical visit frequency are speculative, we believe that a lack of transportation options, insurance, and money may all lead to their lower rates as a group. Another anecdotal point that was raised in the community is that clinics and medical providers are not open in times that are conducive to getting this group into care.

Core Measure 3: Gap in HIV Medical Visits

The gap in HIV medical visits is defined as the percentage of patients, regardless of age, with a diagnosis of HIV who did not have a medical visit in the last 6 months of the measurement year. This means that any individual, who had a medical visit prior to July 1 in either 2012 or 2013, but not after that date during that same calendar year, is counted as having a gap in HIV medical visits. This measure serves as a counterpart to the one mentioned above.

This information is gathered from all Ryan White Part A providers in the Nashville TGA. Information in this section may not match up with the overall prevalence numbers because it only reflects individuals who had at least one medical visit in the calendar year of interest and does not include all persons who are HIV positive (e.g., VA patients).

Gap in HIV Medical Visits: In 2012 the Nashville TGA had an overall gap in HIV medical visit rate of 13.4 percent (732 out of 5432 people), which was more than two times higher than the cutoff score (6 percent) for being in the top 25 percent of communities in the country according to the December 2012 estimates from the in+care Campaign. The gap in HIV medical visit rate in the Nashville TGA increased 1.7 percent to 15.1 percent in 2013, which puts the TGA at a rate three times higher than the rate for the top 25 percent of communities. Despite not meeting the benchmarks for the top quartile of communities, we do perform at the mean (average) level nationally for both years. We are uncertain whether the gaps in HIV medical visits that we have in the TGA are due to clinical practices at our medical providers. More information on this subject could help to define a strategy for this outcome.

HAB Performance Measure Discussion

With regard to the HAB performance measure benchmarks, the Nashville TGA has opportunities for quality improvement in each of the areas mentioned above. While we are higher than the national average in terms of viral suppression rates and are at the national average for gaps in HIV medical care, our scores on HIV medical visit frequency are 24 percent lower than the national average, and nearly 50 percent lower than the top 25 percent of communities in the country. Table 4.4 depicts how the TGA relates to national benchmarks on each of the measures discussed above.

Table 4.4: Summary of TGA outcomes on Select HAB Core Performance Measures, 2012-2013

HAB Performance Measure	Nashville TGA (Percentage)		National Average (Percentage)		Top 25% Average (Percentage)	
	2012	2013	2012	2013	2012	2013
Viral Suppression	78.58	79.35	72 (↑6.58)	72 (↑7.53)	84 (↓5.42)	85 (↓5.65)
Frequency of HIV Medical Visit	40.7	44.6	65 (↓24.3)	69 (↓24.7)	88 (↓47.3)	90 (↓45.4)
Gap in HIV Medical Visit	13.4	15.1	15 (↓1.6)	14 (↑1.1)	6 (↑7.4)	5 (↑10.1)

source: CAREware

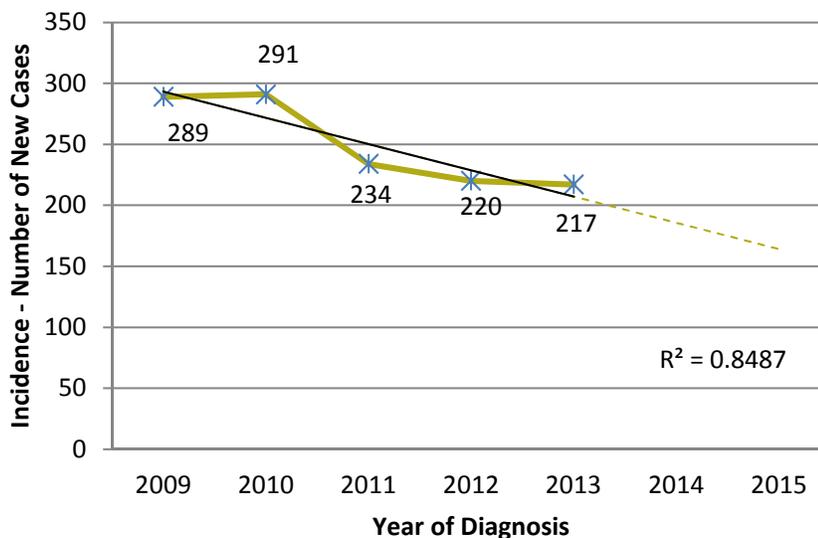
Comparison to National HIV/AIDS Strategy Goals

In addition to the HAB performance measures, there are a number of strategies set forth by the National HIV/AIDS Strategy that set goals and are benchmarks for how good HIV care is in a community, and where we should be with HIV care and outcomes as a nation by 2015. These goals are for everyone in a community, not just Ryan White providers, as they are set by the National HIV/AIDS Strategy and capture the total state of HIV disease outcomes for the entire country. There are nine strategies that we will address in this section of the report, separated into three focal areas: 1) Reducing new HIV infections, 2) increasing access to care and improving the health outcomes for PLWHA, and 3) Reducing HIV-related health disparities.

Goal 1: Reducing New HIV Infections

From 2010 to 2015, lower the annual number of new infections by 25 percent (STATUS = TARGET MET): In 2010 the Nashville TGA had 291 individuals newly diagnosed with HIV disease. In order to meet the 2015 goal of reducing new infections by 25 percent, the TGA incidence would need to fall to no more than 218 new infections in 2015. In 2013 the TGA exceeded the goal of reducing new infections by 25 percent; so far there has been a 25.5 percent decrease in new cases since 2010. Based on HIV disease incidence data for the last five years, it is projected that new infections will drop to about 200 in 2015; this would be a 31.3 percent reduction in new infections.

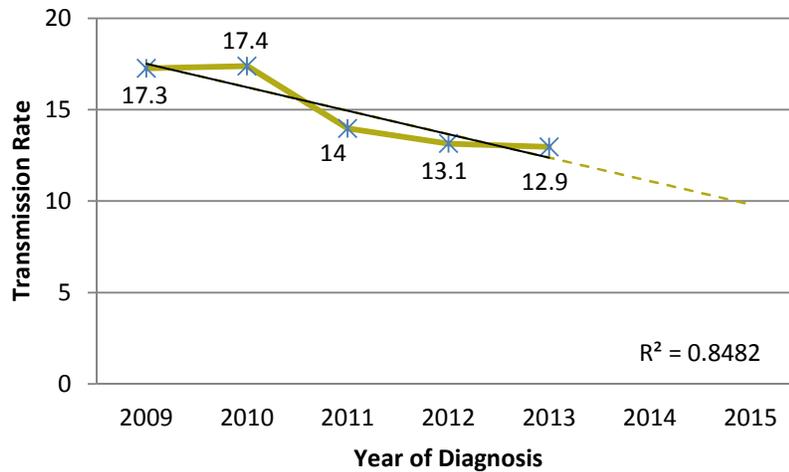
Figure 4.1: HIV Disease Incidence Projections, 2009-2015



source: eHARS

From 2010 to 2015, reduce the HIV transmission rate by 30 percent (STATUS = ON TARGET): The Nashville TGA had an HIV transmission rate (the rate at which individuals in the community are infected with HIV disease) of 17.4 infections per 100,000 persons in 2010. To reduce the transmission rate by 30 percent, no more than 12.2 individuals per 100,000 persons should be newly infected per year by 2015. In 2013 the TGA reached a transmission rate of 12.9 new cases per 100,000 persons; there has been a 25.5 percent decrease in the transmission rate since 2010. Based on transmission rate data from the last five years, it is projected that the HIV transmission rate will decrease to about 11.9 cases per 100,000 persons by 2015; this would be a 31.5 percent drop in rate of transmission.

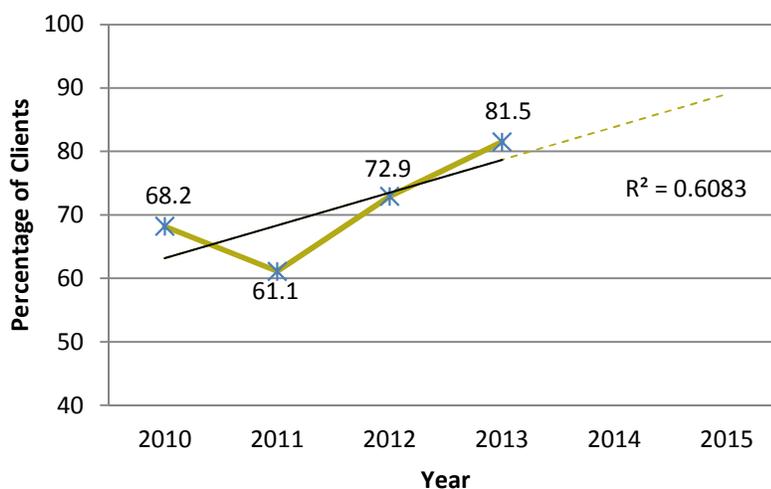
Figure 4.2: HIV Disease Transmission Rate Projections, 2009-2015



source: eHARS

From 2010 to 2015, increase the percentage of people living with HIV disease who know their serostatus from 79 percent to 90 percent (STATUS = CANNOT DETERMINE). A national estimate is used to measure the percentage of people who are unaware that they are HIV-positive using complex models. However, to examine this purely on a TGA level, diagnosis lag serves as a reasonable indicator. With the proportion of people with a diagnosis lag decreasing and consequently fewer people advancing to AIDS within 12 months of their initial diagnosis, it can be surmised that the percentage of people who know their serostatus is increasing.

Figure 4.3: Ryan White Clients Engaged in Continuous Medical Care 2010-2015

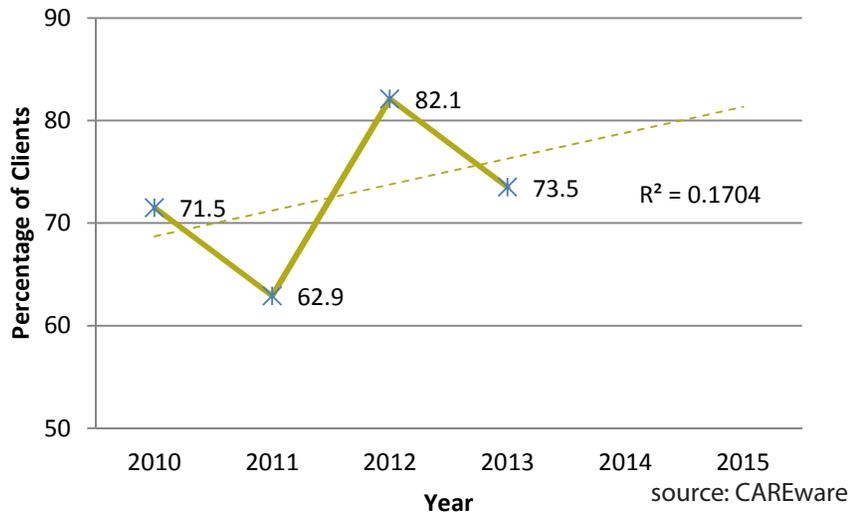


source: CAREware

Goal 2: Increasing Access to Care and Improving Health Outcomes for PLWHA

From 2010 to 2015, increase the proportion of newly diagnosed patients linked to care within three months of their HIV diagnosis from 65 percent to 85 percent (STATUS = NOT ON TARGET): In 2010, 64.6 percent of newly diagnosed persons in the Nashville TGA were linked to HIV medical care within three months of their initial HIV diagnosis. However, of persons newly diagnosed in 2011, only 45.8 percent were linked to HIV medical care within three months. Of the newly diagnosed in 2013, only 53.8 percent were linked to HIV medical care within three months. Therefore, based on current data, there is little evidence that the Nashville TGA will meet the 2015 goal of 85 percent of newly diagnosed persons being linked to medical care within three months of their initial HIV diagnosis.

Figure 4.4: Ryan White Clients with Stable/Permanent Housing, 2010-2015



Note: An R^2 value of .17 is very low, so the line is not an accurate predictor of future trends or tendencies in the data.

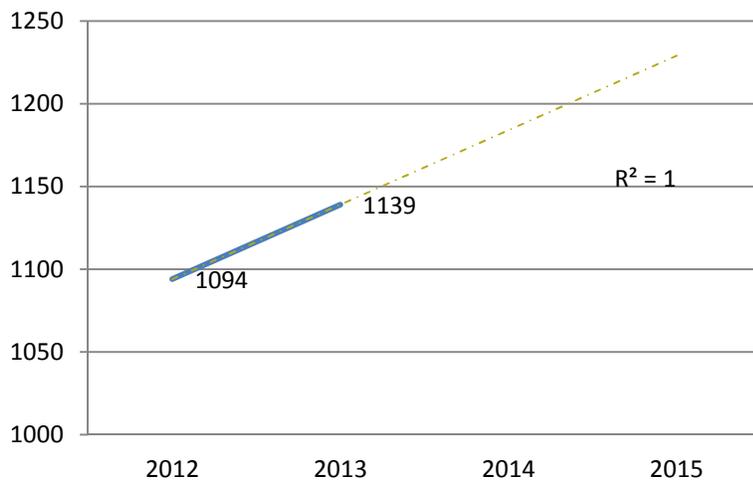
From 2010 to 2015, increase the proportion of Ryan White clients who are in continuous care (at least 2 medical visits in a 12 month period at least 3 months apart) from 73 percent to 80 percent (STATUS = ON TARGET): The Nashville TGA only had 68.2 percent of Ryan White Part A clients in continuous care in 2010, compared to the 73 percent nationally. This number increased to 72.9 percent for 2012, and is currently at 81.5 percent for 2013. While this data is not complete because persons being diagnosed in 2013 or entering into medical care in 2013 have not yet had a full 12 month period to receive two medical appointments in order to be considered “in continuous care,” we have exceeded the goal of 80 percent this year. Therefore, it is likely that the TGA has an even higher proportion for 2013 and should continue to exceed the goal until 2015.

From 2010 to 2015, increase the percentage of Ryan White clients with permanent housing from 82 percent to 86 percent (STATUS = CANNOT DETERMINE): In 2013 73.5 percent of Ryan White Part A clients had stable/permanent housing, compared to 82.1 percent in 2012, 62.9 percent in 2011 and 71.5 percent in 2010. With a national goal of having 86 percent of Ryan White clients in stable/permanent housing by 2015, the Nashville TGA still needs to improve. With four years of data on housing status showing no clear trend, projections of housing status for the next two years are not likely to have much accuracy.

Goal 3: Reducing HIV-Related Health Disparities

From 2010 to 2015, increase the proportion of HIV-diagnosed gay and bisexual men with undetectable viral loads by 20 percent (STATUS = ON TARGET): In general, information about sexual orientation is not captured. Therefore, transmission category data must be used to analyze this measure. At the end of 2013, 51 percent (1,454) of all MSMs in the Nashville TGA who were diagnosed with HIV disease had a viral load less than or equal to 200 copies/mL. Reliable data on this measure are available for the past two years (2012 and 2013), so we cannot predict the five year change. However, if we assume that this estimate expects a 4 percent drop per year, we can estimate that change from 2012 to 2015. If we expect an 8 percent reduction over the next two years, then the percentage of MSMs who are viral suppressed should increase from 1,454 to 1,570. The change from 2012 to 2013 was a 5.4 percent increase in viral suppression (1375 to 1454); if this trend continues the TGA should be on target to meet this goal in 2015.

Figure 4.5: Estimation of Undetectable Viral Loads for non-Hispanic Blacks, 2012-2015



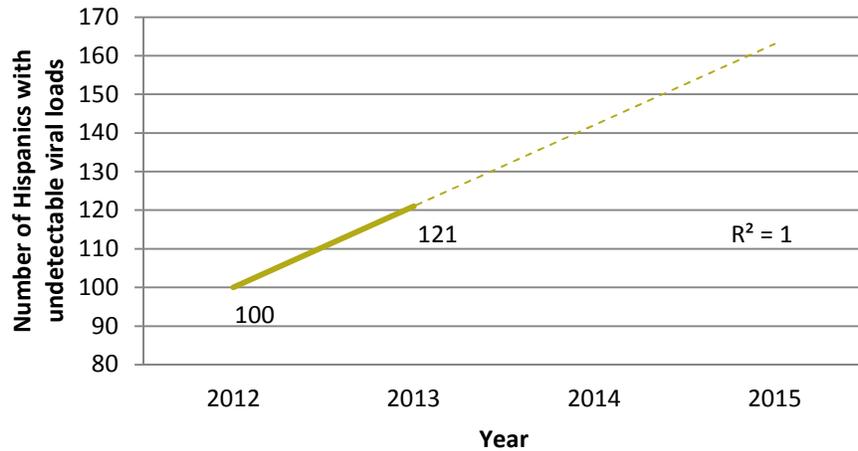
Note: An R² value of 1 has occurred here because there were only 2 data points used in the estimation. More data points will give an accurate estimation coefficient

source: CAREware

From 2010 to 2015, increase the proportion of HIV-diagnosed non-Hispanic Blacks with undetectable viral loads by 20 percent (STATUS = ON TARGET): At the end of 2013 45.7 percent (1,139) of all non-Hispanic blacks in the Nashville TGA who were diagnosed with HIV disease had an undetectable viral load (≤ 200 copies/mL). In order to meet the goal of the National HIV/AIDS Strategy, the proportion of HIV-diagnosed non-Hispanic blacks with an undetectable viral load would need to increase by 20 percent. Because the data for this measure are only reliable since 2012, we estimated an 8 percent increase for this measure. By 2015 if 49.3 percent (1,230) of all non-Hispanic blacks had an undetectable viral load, the TGA would be on target for this benchmark.

From 2010 to 2015, increase the proportion of HIV-diagnosed Latinos with undetectable viral loads by 20 percent (STATUS = ON TARGET): Only 38.8 percent (121) of all HIV-diagnosed Hispanics in the Nashville TGA had an undetectable viral load at the end of 2013. So that the proportion of Hispanics with a viral load ≤ 200 copies/mL is increased by 20 percent from 2010-2015, 51 percent of Hispanics would need to have a viral load of 200 copies/mL or less by 2015. Because the data for this measure are only reliable since 2012, we estimated an 8 percent increase for this measure. By 2015 if 42 percent (131) of all non-Hispanic blacks had an undetectable viral load, the TGA would be on target for this benchmark.

Figure 4.6: Estimation of Undetectable Viral Loads for Hispanics (all races), 2012-2015



Note: An R^2 value of 1 has occurred here because there were only 2 data points used in the estimation. More data points will give an accurate estimation coefficient

source: CAREware

Table 4.5: Summary of TGA outcomes on Select NHAS Performance Measures, 2012-2013

	Reduce New HIV Cases			Increase Access to Care for PLWHA			Reduce HIV-Related Health Disparities		
	Goal 1	Goal 2	Goal 3	Goal 1	Goal 2	Goal 3	Goal 1	Goal 2	Goal 3
Goal Met	X								
On Target		X			X		X	X	X
Not on Target			X	X		X			

source: CAREware

Recommendations

Barrier/Need	Recommendation Strategy(ies)	Funding	Directive	System	Prevention	Policy	To Grantee
<p>1. Minorities are disproportionately impacted by HIV disease compared to other racial groups.</p> <ul style="list-style-type: none"> • Non-Hispanic Black prevalence is 5-12 times higher & incidence rate is 8 times higher. • Viral suppression for Blacks (72.7%) and Hispanics (79.6%) is lower than for Whites (84.8%). • Minorities represented 61.8% of new incidence in 2013. More likely to be young, black MSMs and a higher proportion have AIDS at time of diagnosis. 	<p>ADDRESS DISPARITIES IN CARE:</p> <ol style="list-style-type: none"> 1. Evaluate existing TGA programs to document the model and indicate effectiveness. 2. Identify strategies used in other communities that address health disparities by race and ethnicity and have shown positive outcomes. 3. Share results with Planning Council and determine which strategies/services are a best fit for our community and develop a plan for implementation. 	X	X	X			X
<p>2. Two distinct emerging HIV positive populations: Young (15-24) and aging (55+).</p> <ul style="list-style-type: none"> • 43.7% of PLWHA are 55 years of age and older. • 25.8% of PLWHA are ages 15-24. 	<p>DEVELOP A COMPREHENISVE UNDERSTANDING OF THE TWO POPUATION AND NEEDS.</p> <ol style="list-style-type: none"> 1. Conduct a special study to determine needs and issues, including assessment of concurrent health care conditions that impact older HIV population and general health status. 2. Review local and national studies that have been conducted. 3. Share results with the Planning Council and determine next steps. 			X			X X X
<p>3. The number of people who receive an HIV test is limited and a segment of those getting an HIV test, receive a test late.</p> <ul style="list-style-type: none"> • It is estimated that 20% of persons who are HIV positive are unaware of their status. • CDC estimates that 55% of adults do not receive an HIV test – the National HIV/AIDS Strategy recommends 79% receive an HIV test. • Of the new HIV diagnoses in 2013, 30.2% were diagnosed with AIDS (majority concurrently diagnosed). • Incident cases more likely to be young, black and MSM, and a higher proportion have AIDS at diagnosis. • Persons with unknown or no reported exposure category have the highest percentage of diagnosis lag than any other exposure category. 	<p>INCREASE THE NUMBER OF PERSONS, WITH AN EMPHASIS ON HIGH RISK POPULATIONS, GETTING ROUTINE HIV TESTS.</p> <ol style="list-style-type: none"> 1. Educate Planning Council on current prevention efforts, <u>including</u> targeted awareness/screening /testing campaigns, evaluation of existing programs and existing partnering with groups/organizations that have strong ties to <u>high risk</u> populations. 2. Collaborate with TDOH and support their prevention and testing efforts. 3. Meet with key Part A providers (MCM, EIS) and testing entities to inform of findings and identify strategies that could be enhanced that would improve linkage to care. 4. Share results with Planning Council and determine which strategies/services are a best fit for our community and develop a plan for implementation. 5. Educate Planning Council on TDOH strategies for improving linkage to care and testing. 	X X			X X	X	X

Barrier/Need	Recommendation Strategy(ies)	Funding	Directive	System	Prevention	Policy	To Grantee
<p>4. New HIV cases with unknown or no reported exposure category at time of 1st HIV test (29% of new diagnosis for 2013) have the lowest viral suppression of any other transmission/risk category AND they have the highest percentage of diagnosis lag.</p>	<p>DEVELOP A PLAN TO INCREASE ENGAGEMENT IN HIV MEDICAL CARE.</p> <p>1. Inform key stakeholders (testing, MCM, EIS and outpatient providers) of this finding and work with the stakeholders to enhance strategies to improve linkage, retention, adherence in order to improve viral suppression.</p> <p>2. Share results with Planning Council and determine which strategies/services are a best fit for our community and develop a plan for implementation.</p>			X	X		
<p>5. Delayed entry in seeing an HIV medical practitioner.</p> <ul style="list-style-type: none"> 53% of newly diagnosed persons do not see an HIV medical practitioner within 30 days of their initial diagnosis. 	<p>INCREASE THE NUMBER OF NEWLY DIAGNOSED PERSONS WHO SEE AN HIV MEDICAL PRACTITIONER WITHIN 30 CALENDAR DAYS.</p> <p>1. Continue to fund services that promote early engagement in care (MCM, EIS, peer services).</p> <p>2. Identify characteristics of these individuals and develop directives and fund efforts for these populations as appropriate.</p> <p>3. Continue activities of HIVQUAL project.</p> <p>4. Develop a directive in Outpatient Standards of Care that requires newly diagnosed persons to be seen by a medical practitioner within 30 calendar days.</p> <p>5. Identify options for expanded accessibility in to outpatient care including times of operation and location of services</p> <p>6. Conduct analysis on PLWHA who were in care in the previous year and lost to care in the current year – present this to the planning council for recommendations</p>	X					X
<p>6. Eligible TGA Ryan White clients are not accessing health insurance through the Marketplace.</p>	<p>INCREASE THE NUMBER OF ELIGIBLE PLWHA WHO ENROLL IN ACA.</p> <p>1. Develop directive within MCM Standards of Care to require all MCM to implement strategies defined by TDOH.</p> <p>2. Identify and require other strategies that Part A providers can implement to increase awareness of and enrollment in ACA.</p>		X		X		
<p>7. Engagement in HIV medical care.</p> <ul style="list-style-type: none"> 23% of persons who receive a Part A funded service receive other services but do not see an HIV medical practitioner. 	<p>INCREASE THE NUMBER OF PLWHA WHO ENGAGE IN HIV MEDICAL CARE.</p> <p>1. Meet with Part A funded providers to inform them of these finding and work with the stakeholders to enhance strategies to improve engagement in HIV medical care.</p>			X			

Appendix

Table A.1: Estimated Undiagnosed HIV-Positive Individuals ≥13 Years by Demographics, 2013

	CDC percentage	TGA adjusted percentage*	Projected TGA Prevalence	Actual TGA Prevalence	Combined Prevalence
Gender					
Male	77.1	76.8	1103	4238	5341
Female	22.9	23.2	334	1169	1503
Race/Ethnicity					
Black	48.6	57.9	832	2492	3324
White	30.9	34.3	493	2490	2983
Hispanic	18.0	6.9	99	312	411
Other	2.4	0.9	13	113	126
Age Group					
13-24	9.9	9.4	135	246	381
25-34	21.4	23.0	331	760	1091
35-44	32.7	33.5	481	1353	1834
45-54	23.3	23.0	331	1935	2266
55+	12.6	11.1	159	1113	1272
Risk Factor [†]					
Heterosexual	30.3	-	435	965	1400
IDU	12.5	-	180	570	750
MSM	53.7	-	772	2854	3626
MSM/IDU	2.9	-	42	189	231
Other [‡]	0.7	-	8	829	837

source: eHARS

Table A.2: Viral Suppression Table From eHARS, 2013

<i>TGA Total vs. Benchmark</i>	2013	
	TGA Total	Benchmark
	22.3%	85%
<i>Race</i>	% Virally Suppressed	Total Suppressed
Non-Hispanic Black	21.9	283
Asian	11.8	2
Non-Hispanic White	23.3	309
Hispanic (all races)	20.4	30
Other/Unspecified	17.5	10
<i>Gender</i>		
Male	23.7	515
Female	17.8	119
<i>Age Group</i>		
13 to 24	19.3	29
25 to 34	18.6	78
35 to 44	21	137
45 to 54	22	223
55 to 64	27.4	138
65 and older	29	29
<i>HIV Risk Factor</i>		
Heterosexual	19.5	103
IDU	22.6	59
MSM	22.7	345
MSM+IDU	25.8	25
Other/Unspecified	23.4	102

source: eHARS

Viral suppression is defined by the CDC as any HIV positive person who, at their most recent viral load test in a given time span (in our case, one year), had a viral load count less than 200 copies/mL.

Table A.3. HIV Disease Prevalence Cases by Davidson County and Non-Davidson County, 2013

Demographic	Davidson County		Other TGA Counties		Total	
	N	%	N	%	N	%
Cases						
HIV Disease cases	4138	76.5	1269	23.5	5407	100
Gender						
Female	908	77.7	261	22.3	1169	100
Male	3230	76.2	1008	23.8	4238	100
Race/Ethnicity						
Non-Hispanic Black	2119	85	373	15	2492	100
Non-Hispanic White	1704	68.4	786	31.6	2490	100
Hispanic (all Races)	240	76.9	72	23.1	312	100
Other Races	23	63.9	13	36.1	36	100
Multiple Races	52	67.5	25	32.5	77	100
Current Age						
Under 15	15	60	10	40	25	100
15-24	164	74.2	57	25.8	221	100
25-34	580	76.3	180	23.7	760	100
35-44	1026	75.8	327	24.2	1353	100
45-54	1479	76.4	456	23.6	1935	100
55-64	704	78.7	190	21.3	894	100
65+	170	77.6	49	22.4	219	100
Transmission Category						
Heterosexual	792	82.1	173	17.9	965	100
IDU	464	81.4	106	18.6	570	100
MSM	2187	76.6	667	23.4	2854	100
MSM/IDU	144	76.2	45	23.8	189	100
Perinatal	21	61.7	13	38.3	34	100
Other/Unknown Risk	530	66.7	235	33.3	795	100

source: eHARS

Table A.4. HIV Disease Prevalence Cases by Region, 2013

Demographic	Davidson County		Rutherford and Williamson Counties		Robertson and Sumner Counties		Cheatham, Dickson and Hickman Counties		Cannon, Macon, Smith, Trousdale and Wilson Counties	
	N	%	N	%	N	%	N	%	N	%
Cases										
HIV Disease cases	4138	76.5	562	10.4	284	5.2	230	4.2	166	3.1
Gender										
Female	908	77.7	112	9.6	61	5.2	49	4.2	33	2.8
Male	3230	76.2	450	10.6	223	5.3	181	4.3	133	3.1
Race/Ethnicity										
Non-Hispanic Black	2119	85	195	7.8	72	2.9	77	3.1	29	1.1
Non-Hispanic White	1704	68.4	313	12.6	189	7.6	138	5.5	146	5.8
Hispanic (all Races)	240	76.9	33	10.6	18	5.8	10	3.2	11	3.5
Other Races	23	63.9	9	25	0	0	2	5.5	2	5.5
Multiple Races	52	67.5	12	15.6	5	6.5	3	3.9	5	6.5
Current Age										
Under 15	15	60	8	32	1	4	1	4	0	0
15-24	164	74.2	30	13.6	8	3.6	10	4.6	9	4.1
25-34	580	76.3	95	12.5	37	4.9	27	3.5	21	2.8
35-44	1026	75.8	149	11	83	6.1	54	4	41	3
45-54	1479	76.4	182	9.4	107	5.5	85	4.4	82	4.2
55-64	704	78.7	80	8.9	40	4.5	41	4.6	29	3.4
65+	170	77.6	18	8.2	8	3.6	12	5.5	11	5.4
Transmission Category										
Heterosexual	792	82.1	74	7.7	38	3.9	32	3.3	29	3
IDU	464	81.4	37	6.5	24	4.2	22	3.8	20	3.5
MSM	2187	76.6	306	10.7	146	5.1	113	4	102	3.6
MSM/IDU	144	76.2	18	9.5	13	6.9	9	4.7	8	4.2
Perinatal	21	61.7	7	20.6	2	5.9	2	5.9	2	5.9
Other/Unknown Risk	530	66.7	120	15.1	61	7.7	52	6.5	32	4

source: eHARS

Table A.5. Linkage to Care for newly Diagnosed by Service Category, 2013

	3 months	6 months	9 months	12 months
Outpatient (n=170)	155	163	169	170
MCM (n=202)	170	186	197	202
EIS (n=88)	81	83	86	88

source: CAREware

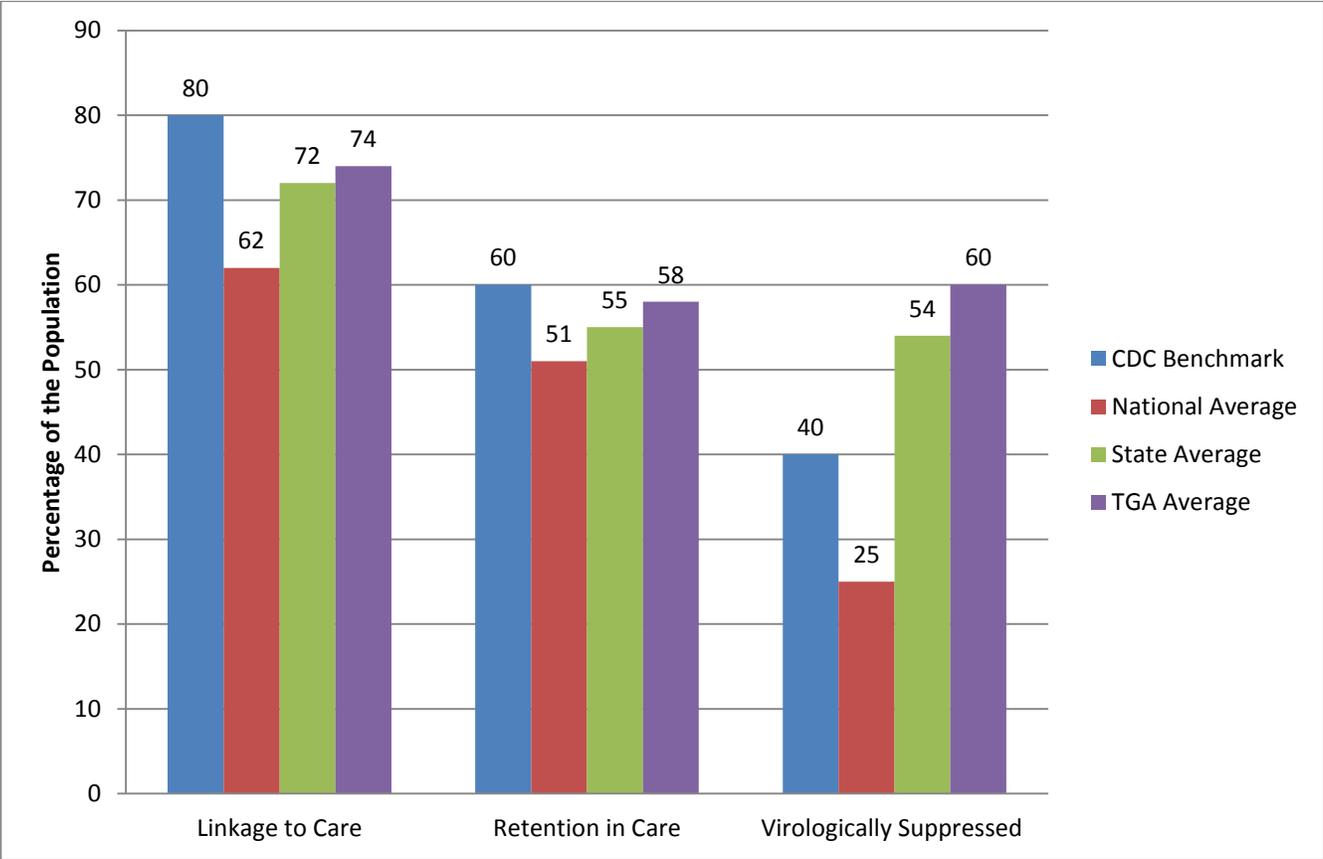
Table A.6. Viral Suppression by Service Category, 2013

Outpatient	83.7% (2615/3121)
ADAP*	0
Dental	55.5% (404/728)
EFA	61.7% (63/102)
EIS	53.8% (174/323)
Mental Health	79.2% (766/967)
MCM	67.1% (2126/3165)
Substance Abuse	54.9% (28/51)
Food	62.9% (967/1536)
Housing	61.5% (48/78)
Psychosocial	57.7% (813/1408)

source: CAREware

This is the number of individuals who were virally suppressed in 2013 (n=2619 source: Careware) who received one of the following services. Careware was used for the prevalence figure in this analysis because we were looking at service utilization. The total number of people who are virally suppressed from this sample is 77.6 percent (2619 of 3377). The figures in the table above are the number of people who are virally suppressed, divided by the total number of people who received that service in CAREware (# virally suppressed receiving service/ # receiving service).

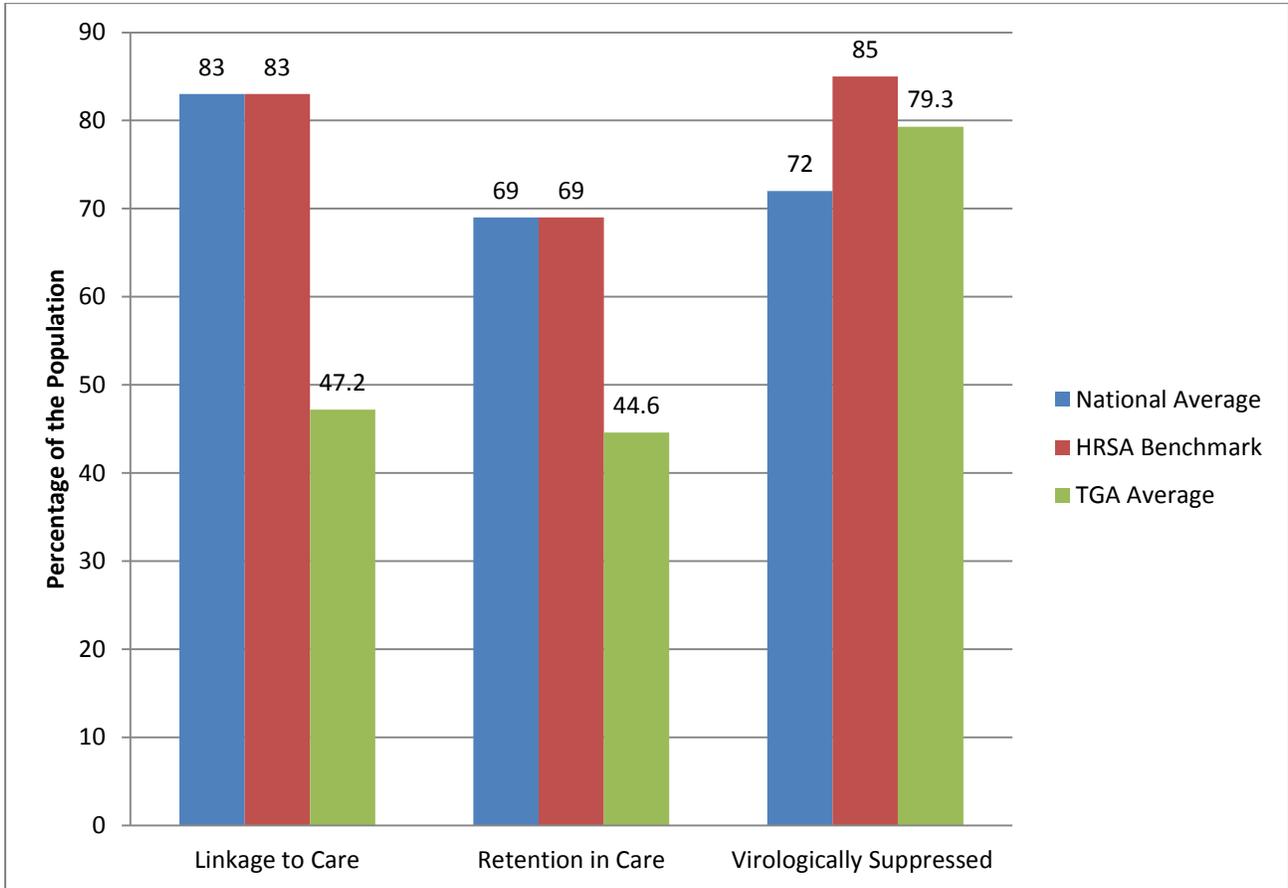
Figure A.1. CDC Continuum of Care, 2013^{xv}



source: TDOH

The CDC definitions involve an HIV positive person receiving a CD4 or Viral Load test in a given observation period.

Figure A.2. HRSA Continuum of Care, 2013



source: CAREware

The HRSA definitions involve an HIV positive person having at least one visit with HIV medical provider in a given observation period.

Endnotes

- ⁱ SAS Institute Inc. 2011. Base SAS® 9.3 Procedures Guide. Cary, NC: SAS Institute Inc.
- ⁱⁱ The Nashville TGA is different from the 14-county Metropolitan Statistical Area defined by the U.S. Census Bureau. More details on this can be found on page 41 of this document: <http://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b-13-01.pdf>
- ⁱⁱⁱ Centers for Disease Control and Prevention. 2013. Challenges in HIV Prevention. Atlanta, GA: Centers for Disease Control and Prevention.
- ^{iv} Maurer, LA, Thomas-Trudo, SD. 2013 Ryan White Part A Nashville TGA Needs Assessment. Nashville, TN; Metro Nashville Public Health Department, 2013.
- ^v Collins, Patricia Hill. 2005. Black Sexual Politics. Chapter 1, pgs. 53-86.
- ^{vi} Center for Infectious Diseases. 2009. “Fact Sheet: African Americans and Sexually Transmitted Diseases in California.”
- ^{vii} Centers for Disease Control and Prevention. HIV Testing Trends in the United States, 2000-2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; January 2013.
- ^{viii} Department of Health and Human Services. (2012, March 27). Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents. Retrieved April 18, 2014 from <http://aidsinfo.nih.gov/contentfiles/lvguidelines/adultandadolescentgl.pdf>
- ^{ix} Mugavero et al. 2011. Health Care System and Policy Factors Influencing Engagement in HIV Medical Care. *Clinical Infectious Diseases*, 52(supplemental 2):S238-S246.
- ^x CDC. Vital Signs: HIV Prevention Through Care and Treatment — United States. *MMWR*. 2011;60(47):1618–1623.
- ^{xi} The in+care Campaign is a collaboration between HRSA and the National Quality Center that collects data on and sets national benchmark measures for key HIV outcomes and performance standards. They calculate the national average and the average for the top 25% of communities – the later benchmarks are used throughout this report.
- ^{xii} This is an older estimation that has not been updated since 2007. It is possible that the national unmet need numbers have changed over time. There is no central source of information for how other communities around the country are doing, so this is the best available estimate for this measure.
- ^{xiii} This number may be lower based on the number of PLWHA receiving medical visits – right now, it is based only on those PLWHA receiving lab results.
- ^{xiv} This number reflects the viral suppression rate using only CAREware. In the future we would like to work with our partners at the state and federal levels in an attempt to reconcile the Ryan White Program data with the eHARS database and other sources to capture a fuller picture of viral suppression in the community.
- ^{xv} MPH results vary from the TDOH results in this table. Further analysis is being conducted.
- ^{xvi} Non-permanent housing is housing such as homeless shelters or halfway homes – they are not meant for long term occupancy. Temporary Housing is defined as any living situation where a person will be in the residence for less than a one –year period.