

North Carolina's Integrated
HIV Prevention and Care Plan
including the Statewide
Coordinated Statement of Need,
CY 2017-2021



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Introduction to North Carolina's Integrated HIV Care and Prevention Plan

The purpose of this Integrated HIV Care and Prevention Plan is to recognize the important work that North Carolina is currently doing to address the HIV epidemic and to enhance those efforts in the coming years, in order to successfully get to zero new infections. Our work rests on three critical pillars: increasing viral suppression for all people living with HIV (PLWH) through treatment and screening, decreasing health inequities through the ongoing development of culturally competent care, and engaging consumer voices in every way possible. North Carolina's HIV and STD prevention and care efforts have been integrated since 2003 in the HIV/STD/Hepatitis Unit of the Communicable Disease Branch of the NC Division of Public Health. On-going efforts draw these programs closer together in light of the HIV care and prevention continua and the intense desire to assure that HIV disease be addressed as a continuous effort of prevention, linkage, re-engagement and viral suppression, through concentrated and focused testing, holistic care, consistent and deliberate use of excellent surveillance data analysis, and thoughtful attention to barriers to care and health inequities in the populations of PLWH who are most affected by this epidemic.

This past year, viral hepatitis prevention and care efforts have been added to this integrated work. Ryan White Part B services are delivered to 95 of the state's 100 counties via the 10 Regional Networks of Care and Prevention (RNCP) that form the safety net of services offered by a variety of service providers from each region. The Charlotte/Mecklenburg Transitional Grant Area (TGA) provides Ryan White Part A services to the remaining 5 NC counties, plus York County, SC. HIV/STD Prevention services (primarily funded through CDC 12-1201, AAPPS and related awards) are provided to all 100 counties, also through the HIV/STD/Hepatitis Unit. Our data shows that North Carolina is serving at least 16,025 people annually through Ryan White Parts A, B, C, and D (excluding ADAP); over 9,000 annually in Medicaid, and nearly 8,000 annually in ADAP (some duplication is likely). North Carolina has reached the National HIV/AIDS Strategy (NHAS) 2020 goal that at least 90% of people living with HIV will know their serostatus. Of those who have been diagnosed and reported, 40% are documented virally suppressed (likely an under-estimate due to incomplete reporting at last report.)

At this time, North Carolina has not elected to expand Medicaid via the Affordable Care Act (ACA) and does not operate a state-run ACA Exchange for enrollment. The majority of people who are served through Ryan White care and CDC prevention services have not seen a significant change in insurance status under ACA. (In fact the Medical Monitoring Project indicates that people in care who were also part of the Ryan White program significantly increased, from 15% in 2009 to 20% in 2013.) The AIDS Drug Assistance Program provides services to eligible clients (PLWH with incomes at/below 300% FPL) in all 100 counties, and is also managed through the HIV/STD/Hepatitis Unit. Nearly 8,000 people are being served in ADAP including those co-insured by Medicare and those receiving co-payment assistance who are insured through the ACA. In July of 2016, North Carolina's General Assembly provided the first approval for ADAP to pay ACA health insurance premiums for eligible ADAP clients; steps are now being

taken to begin this work and contract with a vendor for services, hire staff and assess the start of this new service.

This Integrated HIV Care and Prevention Plan covers the entire state of North Carolina, the TGA and all 100 counties, delivering integrated HIV and STD prevention and care services.

SECTION I: Statewide Coordinated Statement of Need/Needs Assessment

A. Epidemiologic Overview

Sociodemographic Characteristics of North Carolina

Knowledge of sociodemographic characteristics is paramount to fully understanding the health of a risk population. Sociodemographics can be used to identify certain populations that may be at greater risk for morbidity and mortality. This knowledge can also assist in identifying underlying factors that may contribute to a health condition. Population characteristics will be explored in this section, including basic demographics, geography, income, and poverty.

Population Demographics

According to the 2014 U.S. Census, North Carolina was the 9th most populous state and one of the most rapidly expanding states during the previous decade.¹ Between 2010 and 2014, North Carolina gained more than 400,000 residents, the 5th largest numeric gain among the states, and grew by 4.3%, the 13th highest growth rate.² The 2014 North Carolina *provisional* population estimate was 9,943,964, with county populations ranging from 4,115 (Tyrrell County) to 1,012,539 (Mecklenburg County).³ More than one-half of North Carolina's population lived in only 16 counties (Mecklenburg, Wake, Guilford, Forsyth, Cumberland, Durham, Buncombe, Gaston, New Hanover, Union, Onslow, Cabarrus, Johnston, Pitt,

¹United States Census Bureau. (2016). *Annual estimates of the resident population for the United States, regions, states, and Puerto Rico: April 1, 2010 to July 1, 2014*. [Data file]. Revised May 19, 2016. Accessed June 13, 2016. Retrieved from http://www.census.gov/popest/data/historical/2010s/vintage_2014/index.html.

²Tippett, R. (2016). *Population growth in the Carolinas: projected vs observed trends*. Carolina Demography. December 8, 2015. Accessed June 13, 2016. Retrieved from <http://demography.cpc.unc.edu/2015/12/08/population-growth-in-the-carolinas-projected-vs-observed-trends/>

³National Center for Health Statistics. *Vintage 2014 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010-July 1, 2014), by year, county, single-year of age (0, 1, 2, ..., 85 years and over), bridged-race, Hispanic origin, and sex*. [Data file]. Updated March 7, 2016. Accessed July 2015. Retrieved from http://www.cdc.gov/nchs/nvss/bridged_race.htm.

Davidson and Iredell).¹ In 2014, there were 120,948 births and 85,212 deaths in the state, and the average life expectancy for North Carolinians was 78.3 years.⁴

Age and gender play an important role in public health planning and in understanding the health of a community. These characteristics are significant indicators in the prevalence of certain diseases, especially human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs). In 2014, the median age for people living in North Carolina was 38 years old¹, with 25.7% under the age of 20 years old, and 14.7% were 65 years and older. Approximately 49.0% of the population were men and 51.0% were women, and the majority of people in North Carolina are White/Caucasian, followed by Black/African Americans, and Hispanic/Latinos (Table 1).

Table 1. North Carolina Bridged-Race Population Estimates by Gender, Age, and Race/Ethnicity, 2014

Demographics	Men		Women		Total	
	Cases	%	Cases	%	Cases	%
Age (Year)						
Less than 13	836,089	17.3	802,319	15.7	1,638,408	16.5
13-14	135,352	2.8	130,475	2.6	265,827	2.7
15-19	333,645	6.9	319,296	6.3	652,941	6.6
20-24	376,049	7.8	342,212	6.7	718,261	7.2
25-29	324,122	6.7	330,353	6.5	654,475	6.6
30-34	312,509	6.5	325,266	6.4	637,775	6.4
35-39	305,953	6.3	319,560	6.3	625,513	6.3
40-44	331,038	6.8	346,207	6.8	677,245	6.8
45-49	327,819	6.8	340,552	6.7	668,371	6.7
50-54	338,657	7.0	360,537	7.1	699,194	7.0
55-59	314,339	6.5	344,034	6.7	658,373	6.6
60-64	273,695	5.6	310,524	6.1	584,219	5.9
65 and older	635,326	13.1	828,036	16.2	1,463,362	14.7
Race/Ethnicity						
American Indian/Alaska Native*	57,573	1.2	62,098	1.2	119,671	1.2
Asian/Pacific Islander*	135,181	2.8	145,445	2.9	280,626	2.8
Black/African American*	1,026,016	21.2	1,164,077	22.8	2,190,093	22.0
Hispanic/Latino	469,971	9.7	424,305	8.3	894,276	9.0
White/Caucasian*	3,155,852	65.1	3,303,446	64.8	6,459,298	65.0
Total	4,844,593	100.0	5,099,371	100.0	9,943,964	100.0

*Non-Hispanic/Latino.

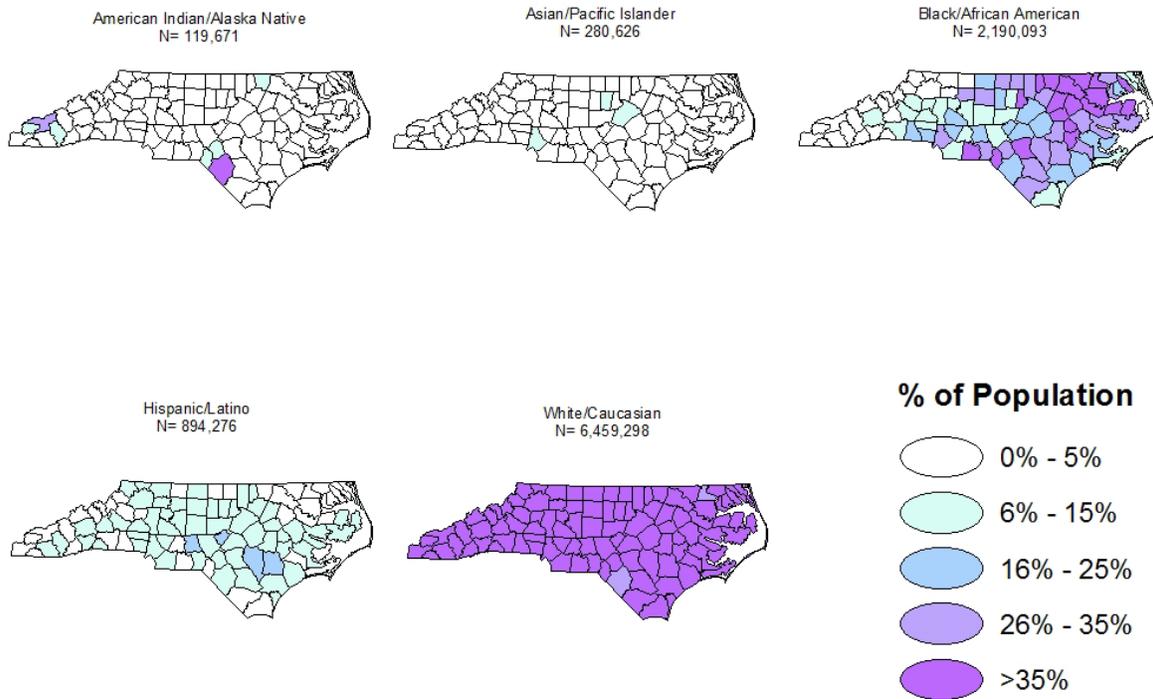
Data Source: National Center for Health Statistics, Bridged-Race Population Estimates (Accessed July 2015).

⁴North Carolina State Center for Health Statistics. (2014). *North Carolina vital statistics, volume 1: population, births, deaths, marriages, and divorces & life expectancy*. [Data file]. Updated October 8, 2014. Accessed June 13, 2016.

<http://www.schs.state.nc.us/data/vital.cfm>

The racial and ethnic differences within the state's population play an important role in interpreting gaps in access to health care among groups. These health and health care differences are documented using public health surveillance and are shown to be especially large in terms of HIV infection morbidity and intervention. Previous HIV infection surveillance has shown that HIV disproportionately affects ethnic minorities in North Carolina. Figure 1 shows the race/ethnic distribution across the state, based on the overall proportion of the race/ethnic group. While the White/Caucasian population is widely distributed throughout the state, other race/ethnic groups are concentrated in certain areas. The American Indian/Alaska Native population is one of the largest in the United States, and the Hispanic/Latino population in North Carolina has increased by 75.6% since 2004 (from 508,851 to 894,276).³

Figure 1. North Carolina Population Demographics by Race/Ethnicity, 2014



Data Source: National Center for Health Statistics, Bridged-Race Population Estimates (Accessed July 2015).

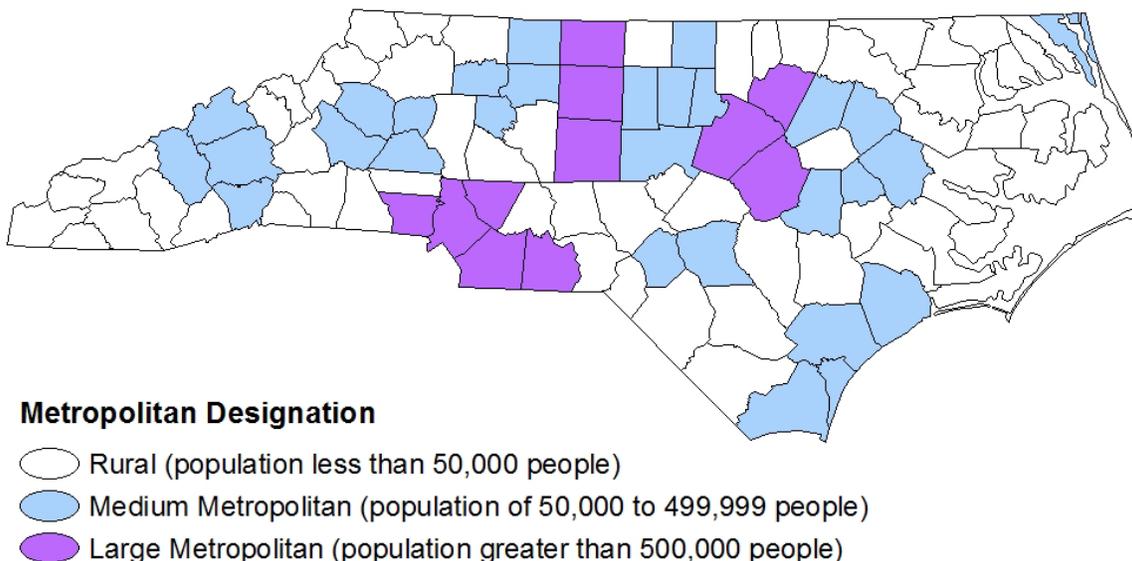
Geographic Regions

Metropolitan statistical areas are population areas that represent the social and economic linkages and commuting patterns between urban cores and outlying integrated areas. These geographic designations are managed by the Office of Management and Budget (OMB) in order to have nationally consistent areas for developing federal statistics. These areas are collectively referred to as core based statistical areas with a metropolitan area containing a core urban area population of 50,000 or more. In the *HIV/AIDS Surveillance Supplemental Report, Volume 13 Number 2*, the Centers for Disease Control and Prevention (CDC) divided urban/metropolitan areas into large- (population greater than or equal to 500,000) and medium-sized urban/metropolitan areas (population 50,000 to 499,999), which are all defined as urban areas. Areas other than metropolitan areas are defined as rural areas.⁵ Eleven North Carolina counties (Anson, Cabarrus, Franklin, Gaston, Guilford, Johnston, Mecklenburg, Randolph, Rockingham, Union and Wake) are classified as large urban/metropolitan areas. Twenty-nine North Carolina counties (Alamance, Alexander, Brunswick, Buncombe, Burke, Caldwell, Catawba, Chatham, Cumberland, Currituck, Davie, Durham, Edgecombe, Forsyth, Greene, Haywood, Henderson, Hoke, Madison, Nash, New Hanover, Onslow, Orange, Pender, Person, Pitt, Stokes, Wayne, and Yadkin) are classified as medium urban/metropolitan areas. The remaining 60 counties are classified as rural.

⁵Centers for Disease Control and Prevention. (2006). Cases of HIV infection and AIDS in urban and rural areas of the United States, 2006. *HIV Surveillance Supplement Report. 13(2)*, 4.

Data from the U.S. Census showed that in 2010, 80.7 percent of the general population of the United States was living in urban areas and 19.3 percent in rural areas.⁶ Using the most current estimate for 2014, North Carolina remains more rural than the United States (U.S.) as a whole, with 70.0% living in urban areas, and 30.0% percent in rural areas.³ Figure 2 displays the metropolitan designations for North Carolina, which is separated by rural, medium metropolitan, and large metropolitan areas.

Figure 2. North Carolina Metropolitan Designations



Data Source: National Center for Health Statistics, Bridged-Race Population Estimates (Accessed July 2015).

Household Income and Poverty

Contextual factors such as poverty and income, as well as racial segregation, discrimination, and incarceration rates, influence sexual behavior and sexual networks. These factors contribute substantially to the persistence of marked racial disparities in STD rates.⁷

According to the U.S. Department of Commerce’s Bureau of Economic Analysis, the 2014 per capita income for North Carolina was \$43,332, or 88.3% of the national average (\$49,091).⁸ The 2014 annual unemployment rate in North Carolina was 5.5, down from a rate of 6.9 in 2013.⁹ In 2013, the median

⁶United States Census Bureau. (2010). 2010 Census Urban and Rural Classification and Urban Area Criteria. Revised February 9, 2015. Accessed November 6, 2014. Retrieved from <https://www.census.gov/geo/reference/ua/urban-rural-2010.html>.

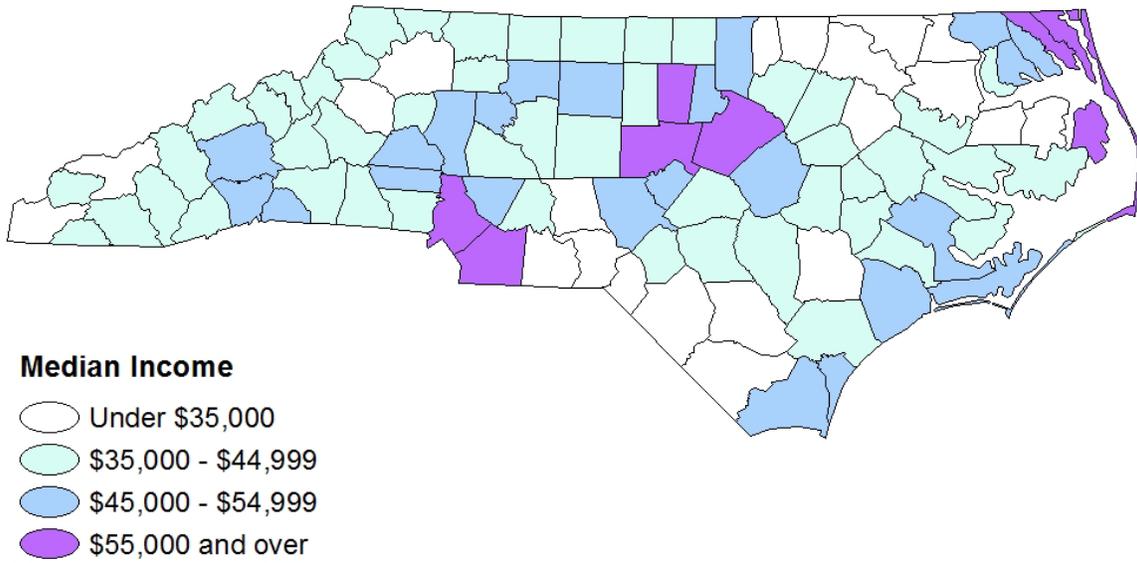
⁷Adimora, A. & Schoenbach V. (2005). Social context, sexual networks, and racial disparities in rates of sexually transmitted infections. *Journal of Infection Diseases*, 191 Suppl 1, S115-122.

⁸United States Department of Commerce: Bureau of Economic Analysis. (2014). *Regional data: GDP and personal income*. [Data file]. Updated June 14, 2016. Accessed June 14, 2016. Retrieved from <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1#reqid=70&step=1&isuri=1>

⁹United States Department of Labor: Bureau of Labor Statistics. (2016). *Regional and State Employment and Unemployment, December 2014*. Accessed June 14, 2016. Retrieved from http://www.bls.gov/news.release/archives/laus_01272015.pdf

household income in North Carolina was \$46,693, lower than the national median of \$53,482.¹⁰ The median household income distribution by county can be seen in Figure 3. The higher median household incomes (\$55,000) are located in the Charlotte area, Raleigh/Durham area, and the northeastern part of the state, including the Outer Banks (Figure 3).

Figure 3. North Carolina Median Household Income by County, 2014



Data Source: American FactFinder, Compare Counties for Median Household Income, 2014 (Accessed June 14, 2016).

In 2014, 17.6% of North Carolina households were below the federal poverty level (FPL), which is slightly higher than the national percent below the FPL, 15.6%.¹⁰ Women, children (less than 18 years of age), and Hispanic/Latinos had a higher percentage living below the FPL through 2014 (Table 2). In total, 36.0% of the population are considered low income (199% FPL or below).¹¹

¹⁰American FactFinder. (2016). *Community facts for North Carolina and United States, 2014*. [Data file]. Accessed June 14, 2016. Retrieved from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹The Henry J. Kaiser Family Foundation. (2016). *Distribution of the Total Population by Federal Poverty Level (above and below 200% FPL)*. [Data file]. Updated 2016. Accessed June 14, 2016. Retrieved from <http://kff.org/other/state-indicator/distribution-by-fpl/>.

Table 2. North Carolina and United States Individual Poverty Rate by Gender, Age, and Race/Ethnicity, 2014

Demographics	North Carolina	United States
	%	%
Gender		
Men	16.1	14.3
Women	18.9	16.8
Age (Year)		
Children (0-18 years)	25.0	21.9
Adults (19-64 years)	16.5	14.6
Elderly (65 years and older)	9.9	9.4
Race/Ethnicity		
American Indian/Alaska Native*	30.1	28.8
Asian/Pacific Islander*	13.4	12.7
Black/African American*	27.6	27.3
Hispanic/Latino	33.4	24.8
White/Caucasian*	11.9	10.8
Multiple Race	26.7	20.3
Total	17.6	15.6

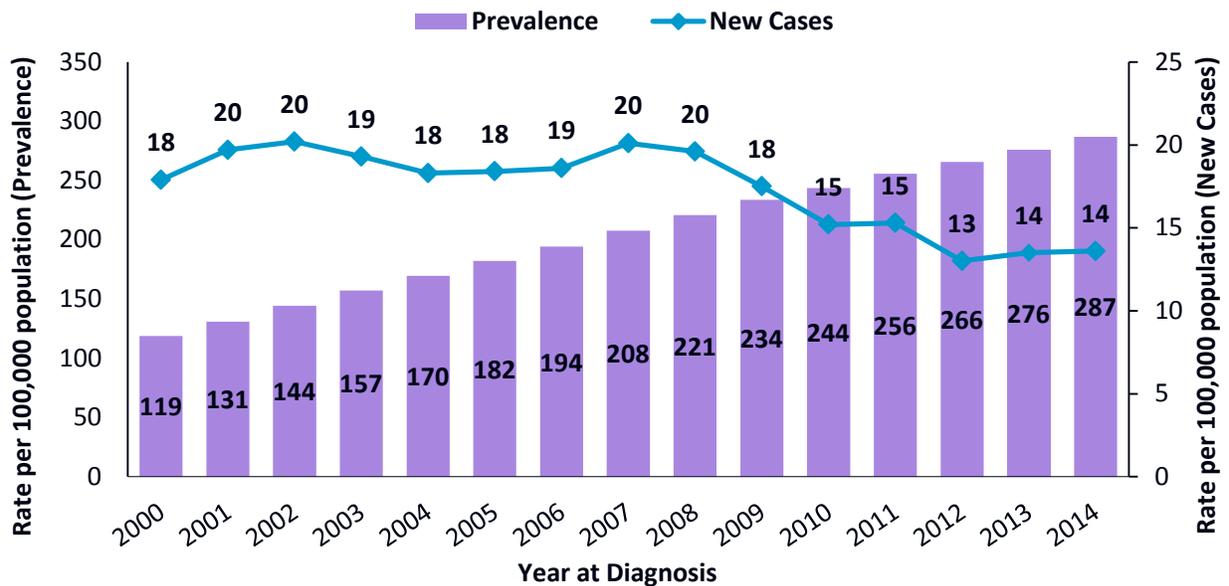
*Non-Hispanic/Latino.

Data Source: American FactFinder (2016). Poverty status in the past 12 months: 2010-2014 American Community Survey 5-year estimates. Accessed June 14, 2016. Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

Overall HIV Trends in North Carolina

The overall rates for both prevalence and newly diagnosed HIV infections from 2000 to 2014 in North Carolina, by the year of HIV diagnosis for the individual, is presented in Figure 1. While the rate of people living with HIV infection has steadily increased as new diagnoses continue and people survive longer, the rate of newly diagnosed HIV infections has been decreasing since 2008. Newly diagnosed HIV infection peaks occurring in 2007 and 2008 may be attributed to the Communicable Disease Branch's effort to increase HIV testing, including the *Get Real. Get Tested. Get Treatment.* campaign and may not necessarily represent an increase in cases. Since 2012, the rate of newly diagnosed HIV infections has remained relatively stable (Figure 4).

Figure 4. HIV Infection* Rates for People Diagnosed in North Carolina, 2000–2014



*HIV infection includes all newly reported HIV infected individuals by the year of first diagnosis, regardless of the stage of infection (HIV or AIDS).

Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

HIV Prevalence in North Carolina

Demographics

Using an analysis program created by the Centers for Disease Control and Prevention (CDC) to calculate jurisdiction-based undiagnosed population, it is estimated that 36,700 people were living in North Carolina with HIV at the end of 2014. Of those, an estimated 4,900 people (13.4%) were unaware of their infection.¹² (CDC creates mathematical estimates of the proportion undiagnosed in each state, based on testing history and state prevalence; as a result we can observe the estimated proportion over time. By testing those people at highest risk and providing frequent testing we will be able to see a decrease in the undiagnosed; since NC’s proportion is already low, indications are that we are diagnosing most people.)

At the end of 2014, there were 28,526 people diagnosed with HIV and still living in North Carolina. More men, 71.5%, were diagnosed with HIV and living in North Carolina than women (28.5%). Black/African Americans comprised the majority (64.8%) of cases, followed by White/Caucasians (25.2%) and Hispanic/Latinos (6.5%). Individuals older than 50 years of age represented the majority (41.0%) of people living with HIV, as people can live for many years on ART after an HIV diagnosis. The large percentages of men and Black/African Americans living with HIV infection indicates that these groups are most affected by the HIV epidemic in North Carolina (Table 3).

¹²HIV infection fact sheet 2014 (<http://epi.publichealth.nc.gov/cd/stds/factsheets.html>)

Table 3. People Diagnosed and Living in North Carolina with HIV Infection^a as of 12/31/2014 by Gender, Current Age, Race/Ethnicity, and Hierarchical Risk of Exposure (Unknown Risk^b Redistributed)

Demographics	Men			Women			Total		
	Cases	%	Rate ^b	Cases	%	Rate ^b	Cases	%	Rate ^b
Current Age (Year)									
Less than 13	45	0.2	5.4	34	0.4	4.2	79	0.3	4.8
13-14	9	0.0	6.6	8	0.1	6.1	17	0.1	6.4
15-19	89	0.4	26.7	65	0.8	20.4	154	0.5	23.6
20-24	988	4.8	262.7	179	2.2	52.3	1,167	4.1	162.5
25-29	1,746	8.6	538.7	414	5.1	125.3	2,160	7.6	330.0
30-34	1,818	8.9	581.7	576	7.1	177.1	2,394	8.4	375.4
35-39	1,810	8.9	591.6	879	10.8	275.1	2,689	9.4	429.9
40-44	2,339	11.5	706.6	1,266	15.5	365.7	3,605	12.6	532.3
45-49	3,196	15.7	974.9	1,354	16.6	397.6	4,550	16.0	680.8
50-54	3,454	16.9	1,019.9	1,354	16.6	375.6	4,808	16.9	687.6
55-59	2,409	11.8	766.4	1,003	12.3	291.5	3,412	12.0	518.2
60-64	1,438	7.1	525.4	581	7.1	187.1	2,019	7.1	345.6
65 and older	1,041	5.1	163.9	431	5.3	52.1	1,472	5.2	100.6
Race/Ethnicity									
American Indian/Alaska Native ^c	147	0.7	255.3	64	0.8	103.1	211	0.7	176.3
Asian/Pacific Islander ^c	118	0.6	87.3	49	0.6	33.7	167	0.6	59.5
Black/African American ^c	12,307	60.4	1,199.5	6,187	76	531.5	18,494	64.8	844.4
Hispanic/Latino	1,465	7.2	311.7	396	4.9	93.3	1,861	6.5	208.1
White/Caucasian ^c	5,905	29.0	187.1	1,291	15.9	39.1	7,196	25.2	111.4
Multiple Races ^d	407	2.0	--	152	1.9	--	559	2.0	--
Unknown ^d	33	0.2	--	5	0.1	--	38	0.1	--
Exposure Category^e									
Heterosexual-All ^f	4,277	21.0	--	6,757	83.0	--	11,034	38.7	--
IDU ^g	1,537	7.5	--	1,094	13.4	--	2,630	9.2	--
MSM ^g	13,541	66.4	--	N/A	N/A	--	13,541	47.5	--
MSM/IDU ^g	777	3.8	--	N/A	N/A	--	777	2.7	--
Other Risks ^h	250	1.2	--	293	3.6	--	544	1.9	--
Total	20,382	100.0	420.7	8,144	100.0	159.7	28,526	100.0	286.9

^aAll people living with HIV infection, regardless of the stage of infection (HIV or AIDS).

^bRate is expressed per 100,000 population.

^cNon-Hispanic/Latino.

^dRates are not available due to the lack of overall population data for the multiple race/ethnic group or the unknown race/ethnic group.

^eRates could not be calculated for "Exposure" category due to the lack of population data for specific exposure groups.

^fHeterosexual-all includes those individuals reporting heterosexual contact with a known HIV-positive or high risk individual and cases redistributed into the heterosexual classification from the "Unknown" risk group.

^gIDU = injection drug use; MSM=men who report sex with men; MSM/IDU=men who report sex with men and injection drug use.

^hOther risks include exposure to blood products (including adult hemophilia) and pediatric risk.

Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Information about risk or exposure categories of HIV is very useful for disease prevention efforts focusing on behavior change. Successful behavior change reduces HIV transmission. Exposure categories (referred to by the CDC as modes of transmission) are determined using a presumed hierarchical order

of probability of potential risk factors as defined by the CDC.¹³ If a person's exposure category was unknown (not identified or not reported), we redistributed those cases according to the distribution of reported risk in order to estimate exposure category and reclassify these cases. Reassigning these cases to an exposure category allows for a more complete picture of trends over time.

After reassigning the "unknown" risk of exposure group among persons living with HIV infection in North Carolina as of December 31, 2014, 47.5% were exposed through men who report having sex with men (MSM) activities, 38.7% through heterosexual contact, 9.2% through injection drug use practices (IDU), and 2.8% reported both MSM and IDU; these risks are considered to be equal and this category is referred to as MSM/IDU (Table 3).

Geographic Distribution of HIV Prevalence in North Carolina

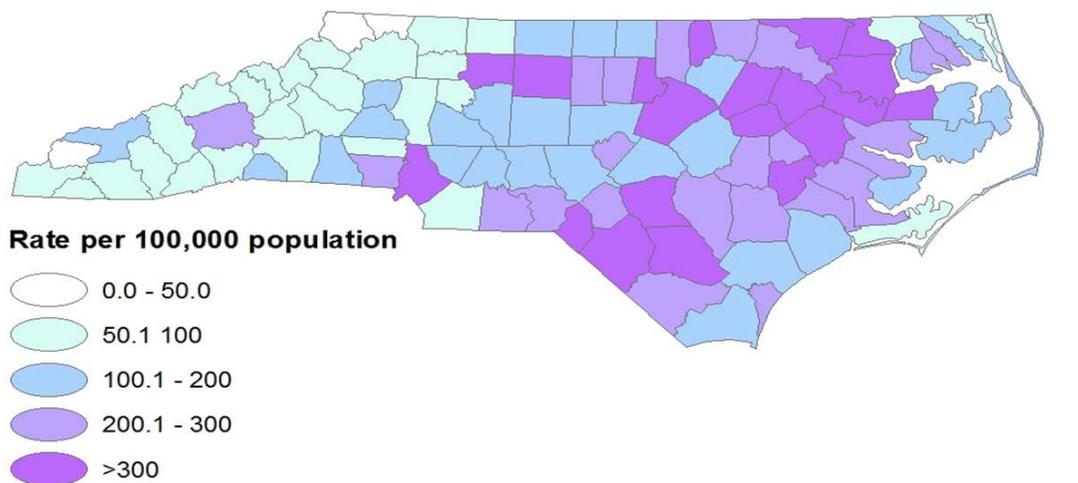
Cases are assigned to the county of residence at first diagnosis. People may move to other areas in the years after diagnosis. Assuming no significant difference between the numbers of HIV infection cases moving in and out of the original residence county, the statistics still indicate roughly the number and rate of living HIV disease cases in the corresponding counties. The HIV prevalence in North Carolina is presented by rural/urban areas, county rates, and regional networks of care and prevention (RNCPs).

The distribution of HIV infection is uneven across North Carolina. This uneven distribution can be partly explained by the population distribution, as the epidemic tends to be concentrated in urban areas. It is estimated that about 20.0 percent of people diagnosed with HIV infection in North Carolina were diagnosed in rural areas.

At the end of 2014, HIV prevalence in North Carolina was 286.9 per 100,000 population. The top 10 counties with the highest rate of HIV prevalence in 2014 were Edgecombe County (597.1 per 100,000 population), Durham County (542.7 per 100,000 population), Mecklenburg County (526.8 per 100,000 population), Lenoir County (448.0 per 100,000 population), Cumberland County (426.3 per 100,000 population), Guilford County (424.3 per 100,000 population), Washington County (421.6 per 100,000 population), Wilson County (418.9 per 100,000 population), Vance County (407.9 per 100,000 population), and Forsyth County (387.0 per 100,000 population). The highest rates of HIV prevalence in North Carolina at the end of 2014 were mainly in the eastern part of the state. In Figure 5, the darker purple color denotes rates greater than 300 per 100,000 population.

¹³Centers for Disease Control and Prevention. *HIV Surveillance Report, 2014*; vol. 26. <http://www.cdc.gov/hiv/library/reports/surveillance/>. Published November 2015. Accessed March 4, 2016.

Figure 5. People Diagnosed and Living in North Carolina with HIV Infection* Rates by County of Diagnosis, as of 12/31/2014



*HIV infection includes all newly reported HIV infected individuals by the year of first diagnosis, regardless of the stage of infection (HIV or AIDS).
Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Ninety-five counties in North Carolina are divided into 10 RNCs, with the remaining five counties making up the Charlotte Transitional Grant Area (TGA). These areas ensure that HIV care, support, and prevention services are available in an integrated fashion to all individuals who qualify for the Ryan White Part B program, as well as to anyone at-risk for HIV/STD seeking screening services. Table 4 represents the overall HIV prevalence in North Carolina broken up HIV infection classification by these RNCs, including the Charlotte TGA.

Table 4. People Diagnosed and Living in North Carolina with HIV Infection^a as of 12/31/2014 by Regional Network of Care and Prevention

Regional Networks of Care and Prevention (Counties)	TOTAL
Charlotte-Transitional Grant Area (TGA) <i>(Anson, Cabarrus, Gaston, Mecklenburg, and Union)</i>	6,394
Region 1 <i>(Avery, Buncombe, Cherokee, Cleveland, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, and Yancey)</i>	1,134
Region 2 <i>(Alexander, Alleghany, Ashe, Burke, Caldwell, Catawba, Lincoln, Watauga, and Wilkes)</i>	541
Region 3 <i>(Davidson, Davie, Forsyth, Iredell, Rowan, Stokes, Surry, and Yadkin)</i>	2,179
Region 4 <i>(Alamance, Caswell, Guilford, Montgomery, Randolph, Rockingham, and Stanly)</i>	3,008
Region 5 <i>(Bladen, Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, and Scotland)</i>	2,833
Region 6 <i>(Chatham, Durham, Franklin, Granville, Johnston, Lee, Orange, Person, Vance, Wake, and Warren)</i>	6,103
Region 7 <i>(Brunswick, Columbus, Duplin, New Hanover, Onslow, and Pender)</i>	1,411
Region 8 <i>(Edgecombe, Halifax, Nash, Northampton, and Wilson)</i>	1,182
Region 9 <i>(Bertie, Camden, Chowan, Currituck, Dare, Gates, Hertford, Hyde, Pasquotank, Perquimans, and Tyrrell)</i>	382
Region 10 <i>(Beaufort, Carteret, Craven, Greene, Jones, Lenoir, Martin, Pamlico, Pitt, Washington, and Wayne)</i>	1,802
Unassigned^b	1,557
North Carolina	28,526

^aAll people living with HIV infection, regardless of the stage of infection (HIV or AIDS).

^bUnassigned includes cases with unknown county of residence at diagnosis or cases that were diagnosed in long-term residence facilities, including prisons.

Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Newly Diagnosed HIV in North Carolina

Note: The HIV infection case totals and rates discussed in this section (except for geographic distribution) are restricted to adults and adolescents only, for comparability across states and with national data reported by the CDC.

Demographics

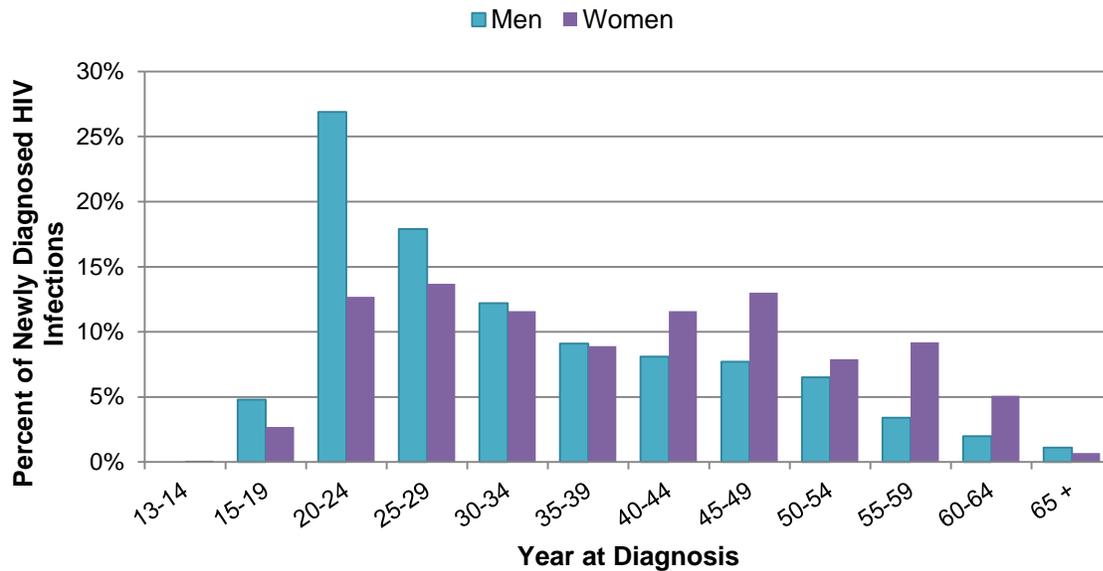
Newly diagnosed HIV infections include all newly diagnosed HIV infections, regardless of the stage of infection (HIV or AIDS) reported to North Carolina in 2014. In 2014, 1,351 (13.6 per 100,000 population) individuals were newly diagnosed with HIV infection in North Carolina. Of the newly diagnosed people, 1,341 of them were over 13 years old, which makes the rate of newly diagnosed HIV infection among adults and adolescents 16.3 per 100,000 adult and adolescent population. The overall rate for newly diagnosed HIV infections among males in 2014 was 26.5 per 100,000 population, while the rate for females was 1.7 per 100,000 population.

Age Distribution

Diagnoses in adults and adolescents made up most 2014 HIV diagnoses, with 10 newly diagnosed infections in people younger than 13 years old. Overall, the majority of newly diagnosed HIV infections in 2014 were among the 20 to 24 years old (N=319; 44.9 per 100,000 population), 25 to 29 years old (N=228; 35.6 per 100,000 population), and 30 to 34 years old (N=162; 25.5 per 100,000 population) age groups. These three age groups account for over 50 percent of the newly diagnosed HIV infections in North Carolina in 2014.

Figure 6 displays the age differences between men and women newly diagnosed with HIV infection in 2014. The proportion of new diagnoses among men was highest between 20 through 29 years old (44.8%), while the proportion of new diagnoses among women was highest for 25 to 29 years old (13.7%) and 45 to 49 years old (13.0%). For the last few years, the largest proportion of newly diagnosed HIV infections among women occurred in the 40 to 49 year old age group, therefore we may be seeing an age shift in the epidemic among women. In recent years, new diagnoses of HIV infections have been increasing among younger men in North Carolina, unlike previous years when the HIV epidemic was primarily increasing among an older population. Young Black/African American men (13-24 years old) represented 19.8% of new cases in 2014 compared to 8.0% in 2004 and 13.0% in 2009 (Figure 6).

Figure 6. North Carolina Newly Diagnosed Adult and Adolescent HIV Infections* by Gender and Age, 2014



*HIV infection includes all newly reported HIV infected individuals diagnosed in 2014, regardless of stage of infection (HIV or AIDS).
Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Race/Ethnicity

Among individuals newly diagnosed with HIV infection in 2014, the majority of cases were reported among men, specifically Black/African American men. Among the adult and adolescent newly diagnosed population in 2014, Black/African Americans made up the majority of cases (64.1%), followed by White/Caucasian (22.2%), Hispanic/Latinos (9.5%), multiple race (1.9%), Asian/Pacific Islander (1.4%), and American Indian/Alaska Native (0.9%).

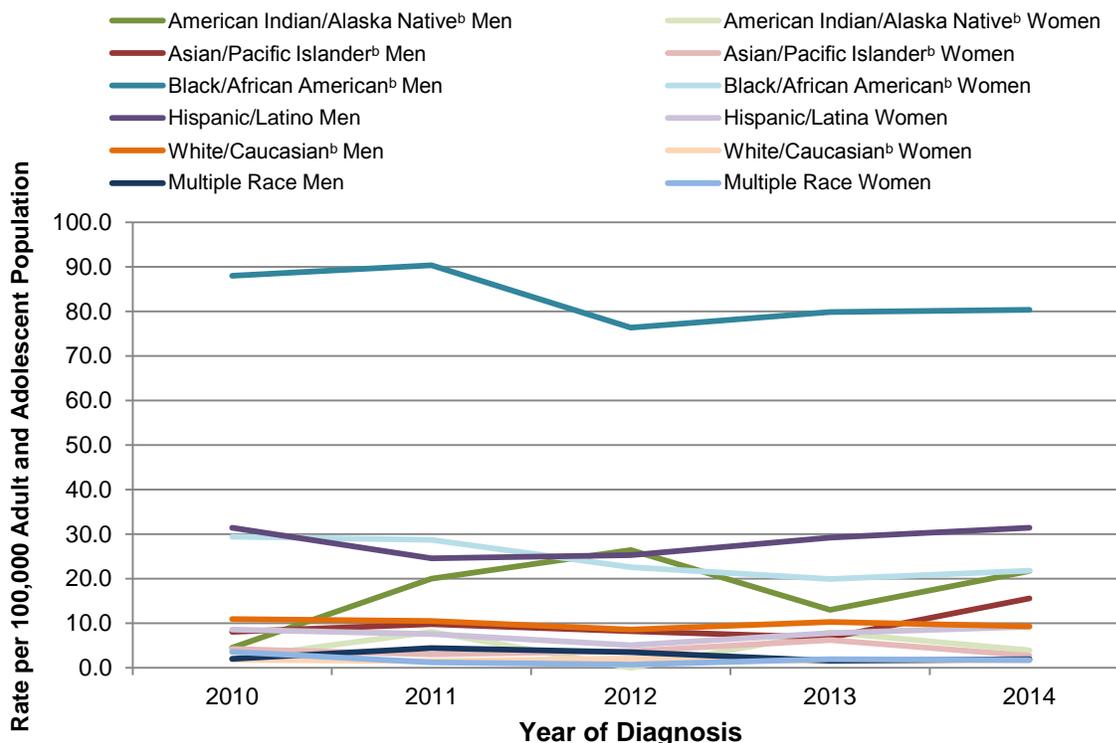
HIV infection rates are related to poverty, as well as race/ethnicity. HIV rates are higher in low-income areas¹⁴, and Black/African Americans and Hispanic/Latinos are more likely to live in these areas. The highest rate of newly diagnosed HIV cases was among Black/African American men (80.4 per 100,000 adult/adolescent population), over eight times that for White/Caucasian men (9.3 per 100,000 adult/adolescent population; see Figure 4). The newly diagnosed HIV infection rate among adult/adolescent Black/African American women (21.8 per 100,000 adult/adolescent population) was nearly 13 times the rate for adult/adolescent White/Caucasian women (1.7 per 100,000 adult/adolescent population), which represented the largest disparity noted between gender and race/ethnicity categories (Figure 4).

Disparities also existed for Hispanic/Latinos as compared to White/Caucasians. The rate for adult/adolescent Hispanic/Latino men (31.4 per 100,000 adult/adolescent population) was three times that for White/Caucasian men, and Hispanic/Latino males ranked third highest among the gender and race/ethnicity rates. The rate for adult/adolescent Hispanic/Latina women (8.1 per 100,000

¹⁴Centers for Disease Control and Prevention. (2015). *Communities in Crisis: Is There a Generalized HIV Epidemic in Impoverished Urban Areas of the United States?* Accessed March 7, 2016. <http://www.cdc.gov/hiv/group/poverty.html>.

adult/adolescent population) was more than triple that for White/Caucasian women. Finally, the newly diagnosed HIV infection rate for American Indian/Alaska Native men (22.0 per 100,000 adult/adolescent population) and the rate among Asian/Pacific Islander men (16.0 per 100,000 adult/adolescent population) were higher than that for White/Caucasian men in 2014 (Figure 7).

Figure 7. North Carolina Newly Diagnosed Adult and Adolescent HIV Infection^a Rates by Gender and Race/Ethnicity, 2010-2014



Note: Rates for unknown and other race/ethnicity categories are not calculated due to lack of population data.

^aHIV infection includes all newly reported HIV infected individuals by the year of first diagnosis, regardless of the stage of infection (HIV or AIDS).

^bNon-Hispanic/Latino.

Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

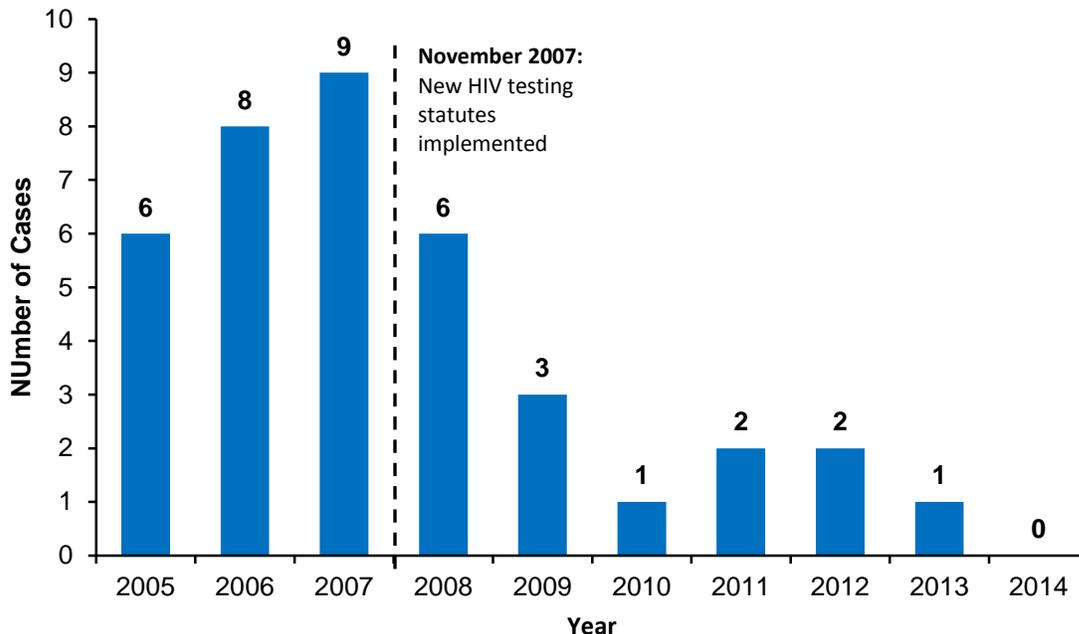
Women of Child-Bearing Age and Perinatal HIV Transmission

Perinatal transmission of HIV is generally preventable if mothers receive appropriate treatment during pregnancy and delivery. For this reason, special emphasis is placed on follow-up with HIV-infected pregnant women in North Carolina. In 2014, 179 women of child-bearing age (15 to 44 years old) were newly diagnosed with HIV in North Carolina (approximately 60% of total HIV cases among women).

Note that the number and proportion of HIV diagnoses among North Carolina infants has decreased in recent years, since the new HIV testing statutes were implemented in 2007, requiring every pregnant woman be offered at HIV test by her attending physician both at her first prenatal visit and in the third trimester (if no HIV result on record at delivery, the woman and infant should be tested at delivery).

Since 2008, there has been a very large decrease in perinatal HIV transmission reported to North Carolina. In 2014, there were no reported perinatal transmissions (Figure 8).

Figure 8. Perinatal HIV Infections* Reported to North Carolina by Year of Birth, 2005-2014



*HIV infection includes all newly reported HIV infections by year of first diagnosis.
Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Hierarchical Risk of Exposure for HIV Infection

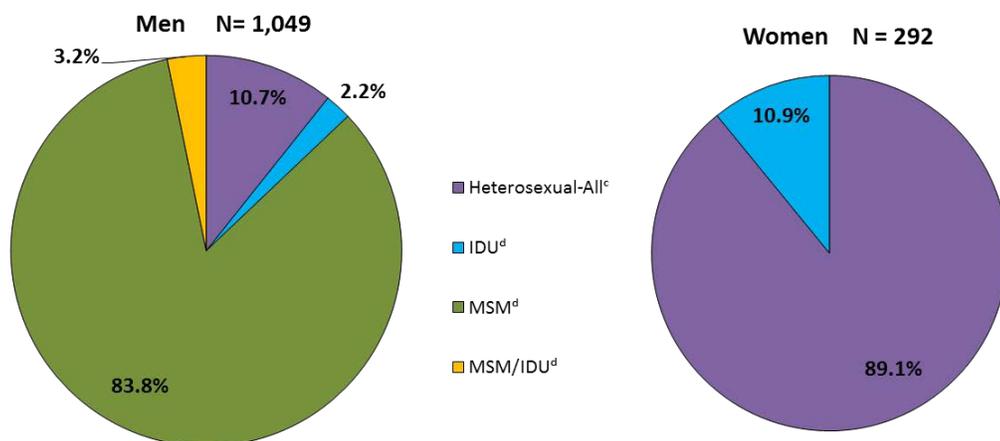
As part of HIV surveillance activities, a great deal of importance is placed on determining the key HIV risk factors associated with each case. Interviewing the patient, their partners and the treating physician are all methods used to determine risk/exposure factors. Ultimately, each case is assigned to one primary risk category based on a hierarchy of disease exposure developed by the CDC and others. In this section like in the *HIV Prevalence* section, all “unknown” risks have been redistributed to the overall newly diagnosed group. Therefore, all risks described include a proportion of the “unknown” risk group.

The majority of newly diagnosed HIV infections among adults and adolescents were likely exposed to HIV via sex, either homosexual or heterosexual. Over the period from 2010 to 2014, people classified as MSM and MSM/IDU exposures made up the largest proportion of newly diagnosed North Carolina HIV infections, increasing from 60.0% in 2010 to 68.1% in 2014. During this same time period, the proportion of people reporting heterosexual exposure decreased from 39.6% in 2010 to 27.8% in 2014. IDU exposure was reported by the smallest group (4.1% in 2014) and has not fluctuated drastically in the past five years. However, IDU remains an important mode of exposure for new HIV infection cases (Figure 9), and is of significant concern when considering new HCV transmission.

Differences exist in the reported exposures for men and women. For men, sex with men (MSM) was reported by for 83.8% of newly diagnosed with HIV among men in 2014; sex with women only was reported by 10.8% of the newly diagnosed; and IDU was reported by 2.3% (Figure 9). The proportion of diagnoses among men reporting sex with men has risen in recent years, from 75.6% in 2010 to 83.8% in 2014. The proportion of males reporting IDU has remained the same (around 3.0%) over the five-year time period.

Heterosexual contact was reported for 89.1 percent of newly diagnosed HIV women, while IDU was reported for 10.9 percent of women in North Carolina for 2014 (Figure 9). For women, the proportion of heterosexual contact reports has fluctuated between 89.1 and 94.8%, and proportion of IDU exposure varied randomly between 5.2 and 10.9% during the last five years.

Figure 9. North Carolina Newly Diagnosed HIV Infections^a among Adults and Adolescents by Gender and Hierarchical Risk (Unknown^b Risk Redistributed), 2014



^aHIV infection includes all newly reported HIV infected individuals by the date of first diagnosis, regardless of the stage of infection (HIV or AIDS).

^bNIR = no identified risk; NRR = no reported risk. For distribution calculations, see “Appendix C: Technical Notes, HIV Risk of Exposure Categories and Distribution” for more information .

^cHeterosexual-All includes those individuals reporting heterosexual contact with a known HIV-positive or high risk individual and cases redistributed into the heterosexual classification from the “Unknown” risk group.

^dIDU = injection drug use; MSM = men who report sex with men.

Data Source: enhancedHIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

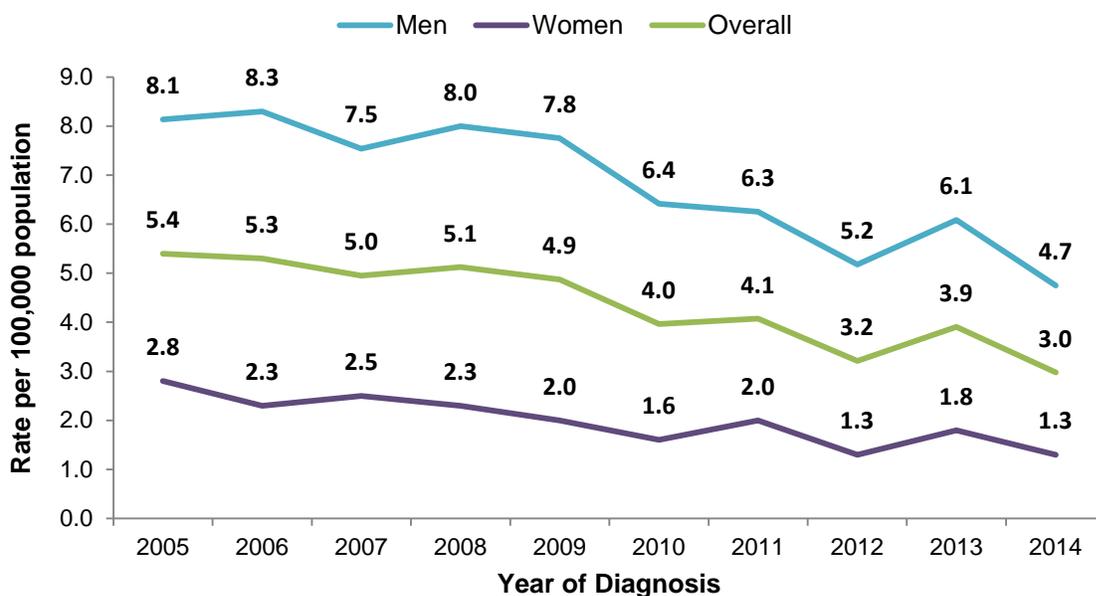
Newly Diagnosed HIV Infections Diagnosed Late in North Carolina

Persons who are diagnosed with AIDS (Stage 3) within six months of the initial HIV-positive screening (concurrent diagnosis) are generally referred to as receiving a late diagnosis. Late diagnoses represent a significant proportion of new HIV diagnoses in North Carolina, indicating the continued need for increased HIV testing and linkage to medical care. People who test late in the course of HIV infection may already have serious HIV-associated complications and are not able to benefit fully from antiretroviral therapy (ART) to remain healthy and to prevent opportunistic infections. Late testing also

results in missed opportunities for preventing new HIV infections, as research has shown that knowledge of positive HIV status promotes adoption of safer sex practices and ART adherence.¹⁵

In North Carolina, late diagnoses account for about one-quarter of all newly diagnosed HIV infections annually in the last five years. In 2014, 22.1% of all newly diagnosed HIV infections were diagnosed late, indicating that they had probably had HIV for at least five to seven years.¹⁶ This is a decrease from 2010, where late diagnoses made up 26.0% of all newly diagnosed HIV infections. While the majority of late diagnoses occur among males, the rate of late diagnoses has been decreasing since 2005. The rate among females has steadily decreased from 2005 to 2010, but has remained stable over the past few years (Figure 10).

Figure 10. North Carolina Newly Diagnosed HIV and AIDS within Six Months (Late Diagnoses) Rates among Adult and Adolescents by Year of Diagnosis, 2005-2014



Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Table 5 shows the demographics of individuals who were diagnosed late in their HIV infection from 2010 to 2014. The majority of late diagnoses were among men, people ages 45 to 49 years, Black/African Americans, and MSM. From 2011 to 2014, there was an increase of late diagnoses among Hispanic/Latinos, reflecting an increase in the Hispanic/Latino population across the state.

¹⁵Centers for Disease Control and Prevention. (2015). The role of STD detection and treatment in HIV prevention: CDC fact sheet. Accessed March 8, 2016. <http://www.cdc.gov/std/hiv/stdfact-std-hiv-detailed.htm>.

¹⁶Centers for Disease Control and Prevention. (2006). Revised recommendations for HIV testing of adults, adolescents, and pregnant female in health-care settings. *Morbidity and Mortality Weekly Report Recommendations and Reports*. 55(RR14), 1-17.

Table 5. North Carolina Newly Diagnosed HIV and AIDS within Six Months (Late Diagnoses) Rates among Adult and Adolescents by Selected Demographics and Year of Diagnosis, 2010-2014

Demographics	Year of Diagnosis														
	2010			2011			2012			2013			2014		
	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a	Cases	%	Rate ^a
Gender															
Men	299	78.9	6.4	294	74.8	6.3	246	78.6	5.2	292	75.8	6.1	230	77.7	4.7
Women	80	21.1	1.6	99	25.2	2.0	67	21.4	1.3	93	24.2	1.8	66	22.3	1.3
Age at Diagnosis (Year)															
13-14	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
15-19	8	2.1	1.2	11	2.8	1.7	4	1.3	0.6	5	1.3	0.8	4	1.4	0.6
20-24	24	6.3	3.6	38	9.7	5.6	23	7.4	3.3	29	7.5	4.1	21	7.1	2.9
25-29	35	9.2	5.6	43	10.9	6.8	32	10.2	5.1	43	11.2	6.7	38	12.8	5.8
30-34	47	12.4	7.5	40	10.2	6.4	38	12.1	6.0	36	9.4	5.7	39	13.2	6.1
35-39	41	10.8	6.2	42	10.7	6.6	24	7.7	3.8	43	11.2	6.9	39	13.2	6.2
40-44	46	12.1	6.9	51	13.0	7.5	46	14.7	6.7	54	14.0	7.9	39	13.2	5.8
45-49	63	16.6	9.0	58	14.8	8.4	49	15.7	7.2	59	15.3	8.8	47	15.9	7.0
50-54	41	10.8	6.1	45	11.5	6.6	48	15.3	7.0	47	12.2	6.8	30	10.1	4.3
55-59	35	9.2	5.8	32	8.1	5.2	18	5.8	2.8	30	7.8	4.6	19	6.4	2.9
60-64	21	5.5	3.9	17	4.3	3.0	14	4.5	2.5	20	5.2	3.5	9	3.0	1.5
65 +	18	4.8	1.4	16	4.1	1.3	17	5.4	1.3	19	4.9	1.4	11	3.7	0.8
Race/Ethnicity															
American Indian/Alaska Native ^b	1	0.3	0.9	5	1.3	4.2	2	0.6	1.7	2	0.5	1.7	1	0.3	0.8
Asian/Pacific Islander ^b	3	0.8	1.3	1	0.3	0.4	1	0.3	0.4	4	1.0	1.5	3	1.1	1.1
Black/African American ^b	227	59.9	10.9	245	62.3	11.3	195	62.3	9.1	236	61.3	10.9	165	55.8	7.5
Hispanic/Latino	46	12.1	5.7	33	8.4	3.8	32	10.2	3.8	38	9.9	4.4	45	15.2	5.0
White/Caucasian ^b	95	25.1	1.5	91	23.2	1.4	74	23.6	1.2	97	25.2	1.5	76	25.7	1.2
Multiple Race ^c	7	1.9	--	18	4.6	--	9	2.9	--	8	2.1	--	6	2.0	--
Mode of Exposure^d															
Heterosexual-high ^e	41	10.8	--	44	11.2	--	37	11.8	--	35	9.1	--	29	9.8	--
Heterosexual-other ^f	51	13.5	--	62	15.8	--	20	6.4	--	0	0.0	--	0	0.0	--
IDU ^g	13	3.4	--	13	3.3	--	8	2.6	--	11	2.9	--	10	3.4	--
MSM ^g	143	37.7	--	163	41.5	--	131	41.9	--	131	34.0	--	104	35.1	--
MSM/IDU ^g	5	1.3	--	0	0.0	--	2	0.7	--	4	1.0	--	2	0.7	--
Unknown ^h	126	33.3	--	111	28.2	--	115	36.7	--	204	53.0	--	151	51.1	--
Total	379	100.0	4.0	393	100.0	4.1	313	100.0	3.2	385	100.0	3.9	296	100.0	3.0

^aRates are presented per 100,000 population.

^bNon-Hispanic/Latino.

^cRates are not available due to the lack of overall population data for the multiple race/ethnic group or the unknown race/ethnic group.

^dRates could not be calculated for the "Exposure" category due to the lack of population data for the specific exposure groups.

^eHeterosexual-high risk is defined as a person who does not report IDU or MSM, but does report sexual contact with a partner of opposite sex, who is IDU, MSM, or known HIV-positive status. Also, if a person is a victim of sexual assault, exchanges sex for drugs/money, has had a recent STD or has sexual contact while using drugs, they are classified as high risk.

^fHeterosexual-other is defined as individuals classified as people who reports sex with an opposite sex partner and does not report IDU, MSM, or any other potential "high risk" behaviors.

^gIDU = injection drug use; MSM = men who report sex with men; MSM/IDU = men who report sex with men and injection drug use.

^hUnknown risk is defined as individuals classified as no identified risk (NIR) and no reported risk (NRR) individuals.

Data Source: enhanced HIV/AIDS Reporting System (eHARS)(data as of June 25, 2015).

Late Diagnoses among Women

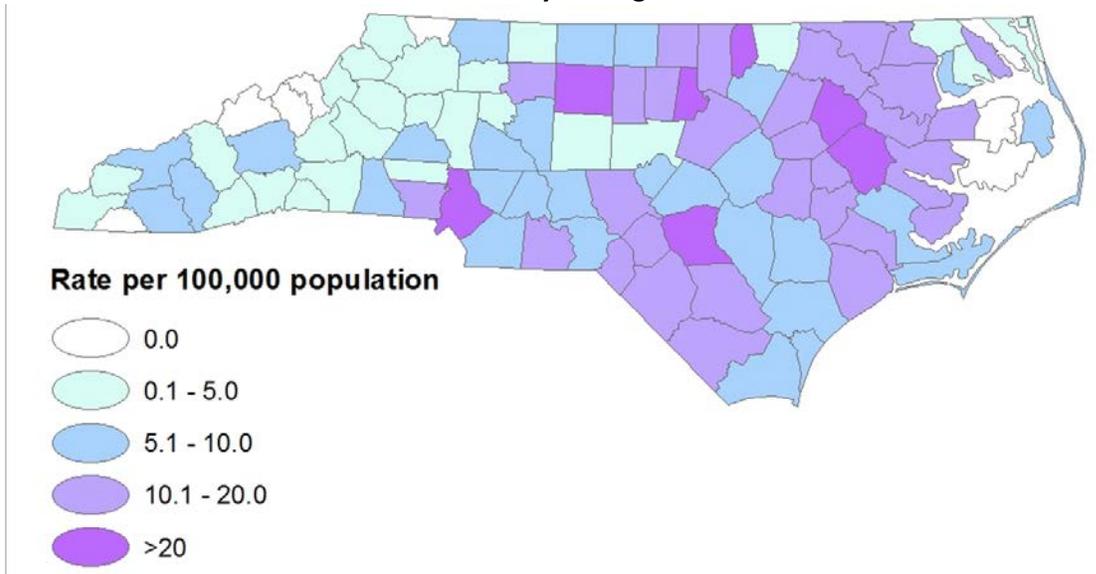
Since the rate of women who tested late for HIV has been stable over the last five years (compared to the rate among men, which is decreasing), further analysis was done to explore this population. The goal of this analysis was to identify populations of females that would benefit from targeted early diagnosis and linkage to care strategies. From 2010 to 2014, women diagnosed late were older (the mean age of female diagnosed late was 45 years old) and of minority race/ethnicity. Women reporting IDU and no known risk made up a higher proportion of women diagnosed late than those diagnosed earlier in infection from 2010 to 2014. The largest proportion of women diagnosed late were tested in an emergency department, hospital, or physician's office, and the majority of women diagnosed late were also diagnosed in urban areas. Nearly 60.0 percent of women diagnosed late were tested due to clinical symptoms consistent with AIDS-associated illnesses, and 4.0 percent were diagnosed during prenatal screening.

Because late diagnoses of HIV infection account for between 19.0 and 28.0 percent of all newly diagnosed HIV infections among females, there is a need for improved access to medical health care and public health efforts to identify infections earlier. Testing in both inpatient and outpatient settings should be emphasized, particularly among emergency departments. Efforts also need to be made to either revise or explore new prevention strategies that target women, particularly minorities, for earlier diagnosis and linkage to care efforts.

Geographic Distribution of Newly Diagnosed HIV Infections in North Carolina

Newly diagnosed HIV infections occurred in 91 of the 100 counties in North Carolina in 2014. The top five counties that had the highest three-year average rate of newly diagnosed HIV infections (2012 -2014) were Edgecombe (28.9 per 100,000 population), Mecklenburg (27.3 per 100,000 population), Durham (23.5 per 100,000 population), Vance (23.1 per 100,000 population), and Cumberland (21.9 per 100,000 population) (Figure 8). Rankings are not based on one-year rates because most counties have small numbers (generally less than 20 cases), making a single-year rate unreliable (Figure 11).

Figure 11. North Carolina Newly Diagnosed HIV Infection* Three-Year Average Rate (2012 to 2014) by County of Diagnosis



*HIV infection includes all newly reported HIV infected individuals by the year of first diagnosis, regardless of the stage of infection (HIV or AIDS).
 Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Like the HIV prevalence data, newly diagnosed HIV infection data is also presented by North Carolina’s RNCPs, including Charlotte TGA. In 2014, the highest rates of newly diagnosed HIV infections were in Charlotte TGA, Regions 4, 5, 6, 8 and 10. Over the last five years, these same regions have had the highest newly diagnosed HIV infection rates in North Carolina (Table 6).

Table 6. North Carolina Newly Diagnosed HIV Infection* Rates by Regional Networks of Care and Prevention (RNCP) (County of Residence at Diagnosis) by Year of Diagnosis, 2010-2014

Regional Networks of Care and Prevention (Counties)	2010		2011		2012		2013		2014	
	Cases	Rate ^b								
Charlotte-Transitional Grant Area (TGA) (Anson, Cabarrus, Gaston, Mecklenburg, and Union)	364	23.7	383	24.5	306	19.2	300	18.4	374	22.5
Region 1 (Avery, Buncombe, Cherokee, Cleveland, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, and Yancey)	46	5.3	55	6.3	48	5.5	47	5.3	47	5.3
Region 2 (Alexander, Alleghany, Ashe, Burke, Caldwell, Catawba, Lincoln, Watauga, and Wilkes)	27	4.5	23	3.8	35	5.8	27	4.5	22	3.7
Region 3 (Davidson, Davie, Forsyth, Iredell, Rowan, Stokes, Surry, and Yadkin)	103	10.2	107	10.5	86	8.4	100	9.7	80	7.7
Region 4 (Alamance, Caswell, Guilford, Montgomery, Randolph, Rockingham, and Stanly)	151	15.3	173	17.4	132	13.2	153	15.2	144	14.2
Region 5 (Bladen, Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, and Scotland)	151	17.0	180	20	127	14.1	134	14.7	151	16.5
Region 6 (Chatham, Durham, Franklin, Granville, Johnston, Lee, Orange, Person, Vance, Wake, and Warren)	324	17.7	263	14.1	273	14.4	306	15.8	270	13.7
Region 7 (Brunswick, Columbus, Duplin, New Hanover, Onslow, and Pender)	63	9.5	58	8.7	66	9.8	53	7.7	65	9.3
Region 8 (Edgecombe, Halifax, Nash, Northampton, and Wilson)	63	20.3	70	22.6	64	20.8	46	15	62	20.4
Region 9 (Bertie, Camden, Chowan, Currituck, Dare, Gates, Hertford, Hyde, Pasquotank, Perquimans, and Tyrrell)	27	13.2	16	7.8	9	4.4	22	10.8	17	8.3
Region 10 (Beaufort, Carteret, Craven, Greene, Jones, Lenoir, Martin, Pamlico, Pitt, Washington, and Wayne)	76	11.7	85	12.9	83	12.6	100	15.2	92	14.0
Unassigned^c	60	---	61	---	40	---	42	---	27	---
North Carolina	1,455	15.2	1,474	15.3	1,269	13.0	1,330	13.5	1,351	13.6

^aHIV infection includes all newly diagnosed HIV infected individuals by the year of first diagnosis, regardless of stage of infection (HIV or AIDS).

^bRate is expressed per 100,000 population.

^cUnassigned includes cases with unknown county of residence at diagnosis or cases that were diagnosed in long-term residence facilities, including prisons.

Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Sexually Transmitted Diseases (STD) and Tuberculosis Co-infections with HIV in North Carolina

The North Carolina Division of Public Health has a fully integrated electronic disease surveillance system, North Carolina Electronic Disease Surveillance System (NC EDSS), which allows for the rapid identification of HIV-positive individuals experiencing or at risk for overlapping epidemics. Due to behaviors and environmental conditions that increase risk for multiple diseases, HIV-positive individuals are at increased risk for comorbid infections such as syphilis, gonorrhea, and tuberculosis (TB). Our measurement of co-infection is subject to imperfect reporting, and we measure co-infection differently for each disease, as detailed in the sections below.

Sexually Transmitted Diseases (STD) and HIV Infection

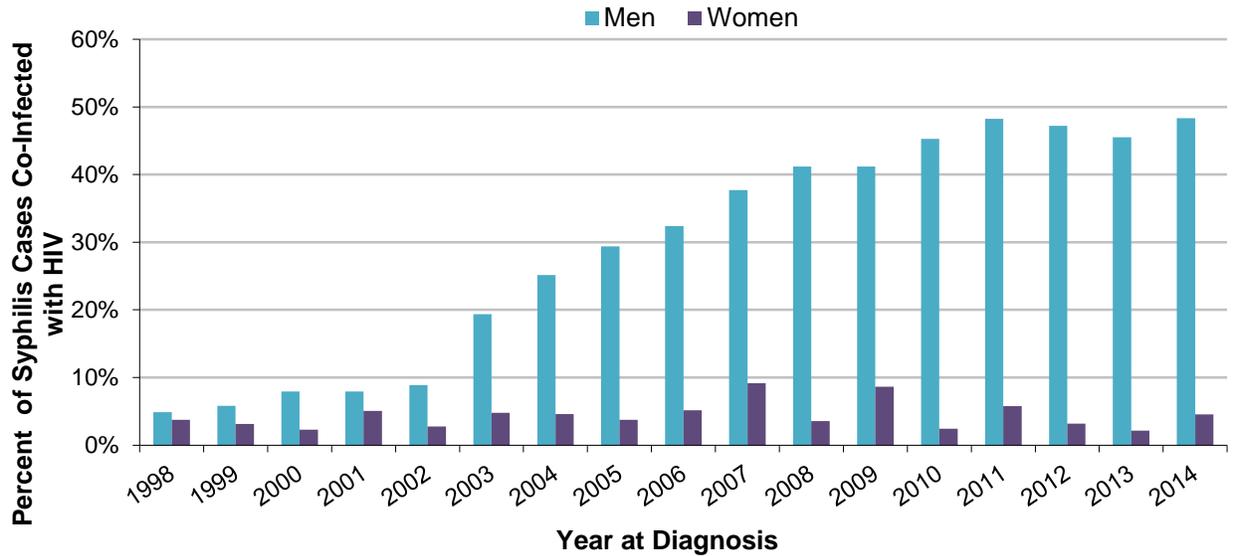
The North Carolina Communicable Disease Branch supports free and confidential testing for HIV and other sexually transmitted diseases (STD). Because of shared risk behaviors and modes of transmission, the Communicable Disease Branch mandates that all local health departments provide comprehensive on-site STD diagnostic and treatment services to all clients seeking STD services. This includes ensuring that clients are evaluated and screened for all possible STDs at the time of their clinic visit. For example, clients who present to the clinic requesting HIV testing will also be evaluated and offered testing for other related STDs such as syphilis, gonorrhea, and chlamydia.

Syphilis and HIV

In mid-2014, the Communicable Disease Branch noticed a jump in early syphilis (primary, secondary, and early latent syphilis) infections diagnosed in North Carolina. At the end of 2014, there were a total of 1,113 newly diagnosed early syphilis infections (rate: 11.2 per 100,000 population) in North Carolina, a 61.8 percent increase from 2013 (N=688; rate: 7.0 per 100,000 population). We define early syphilis co-infection with HIV as having an HIV diagnosis prior to or within 30 days of the syphilis diagnosis. Of the 1,113 diagnosed early syphilis infections, 483 (43.4%) were co-infected with HIV, compared to the 272 (39.5%) co-infections in 2013. Of the 483 people with co-infected with early syphilis and HIV, 424 were diagnosed with HIV before their syphilis diagnosis, while 59 were diagnosed with HIV at the same time or within 30 days of their syphilis diagnosis.

The proportion of people co-infected with early syphilis and HIV has been increasing since 2003, with the largest increase occurring among men. Early syphilis co-infections with HIV among men increased from 25.2% in 2004 to 48.3% in 2014. While the proportion of women co-infected with HIV has remained low, it has increased from 2.4% in 2010 to 4.6% in 2014 (Figure 12).

Figure 12. Newly Diagnosed Early Syphilis (Primary, Secondary, and Early Latent Syphilis) Co-Infections with HIV* by Gender, 1999-2014



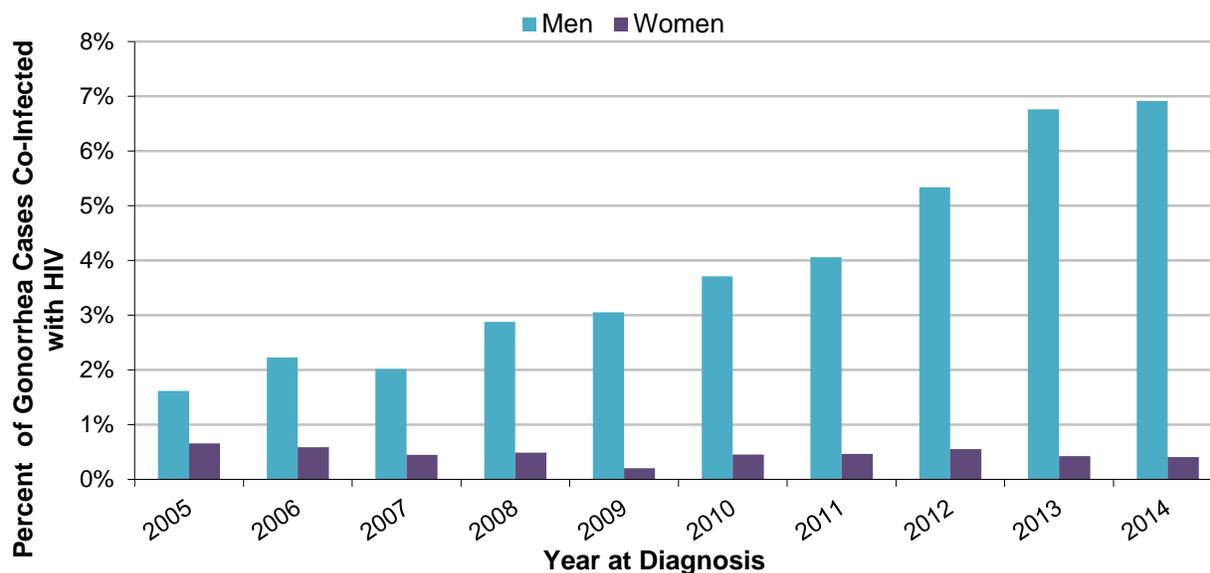
*HIV diagnosed prior to OR within 30 days of syphilis diagnosis.

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of July 6, 2015) and enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Gonorrhea and HIV

While gonorrhea cases have not seen as dramatic an increase as syphilis, the number of newly diagnosed gonorrhea infections did increase from 14,114 (rate: 140.9 per 100,000 population) in 2013 to 14,952 (rate: 150.4 per 100,000 population) in 2014. In 2010, the overall proportion of newly diagnosed gonorrhea co-infections with HIV (HIV diagnosis prior to or within 30 days of the gonorrhea diagnosis) was less than 2.0%. In 2014, the proportion was 3.4%. The majority of newly diagnosed gonorrhea co-infections occur among males. In 2014, 6.9% of all men newly diagnosed gonorrhea were co-infected with HIV, while 0.4% of women had gonorrhea and HIV co-infection (Figure 13).

Figure 13. Newly Diagnosed Gonorrhea Co-Infections with HIV* by Gender, 2005-2014



*HIV diagnosed prior to OR within 30 days of gonorrhea diagnosis.

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of July 6, 2015) and enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

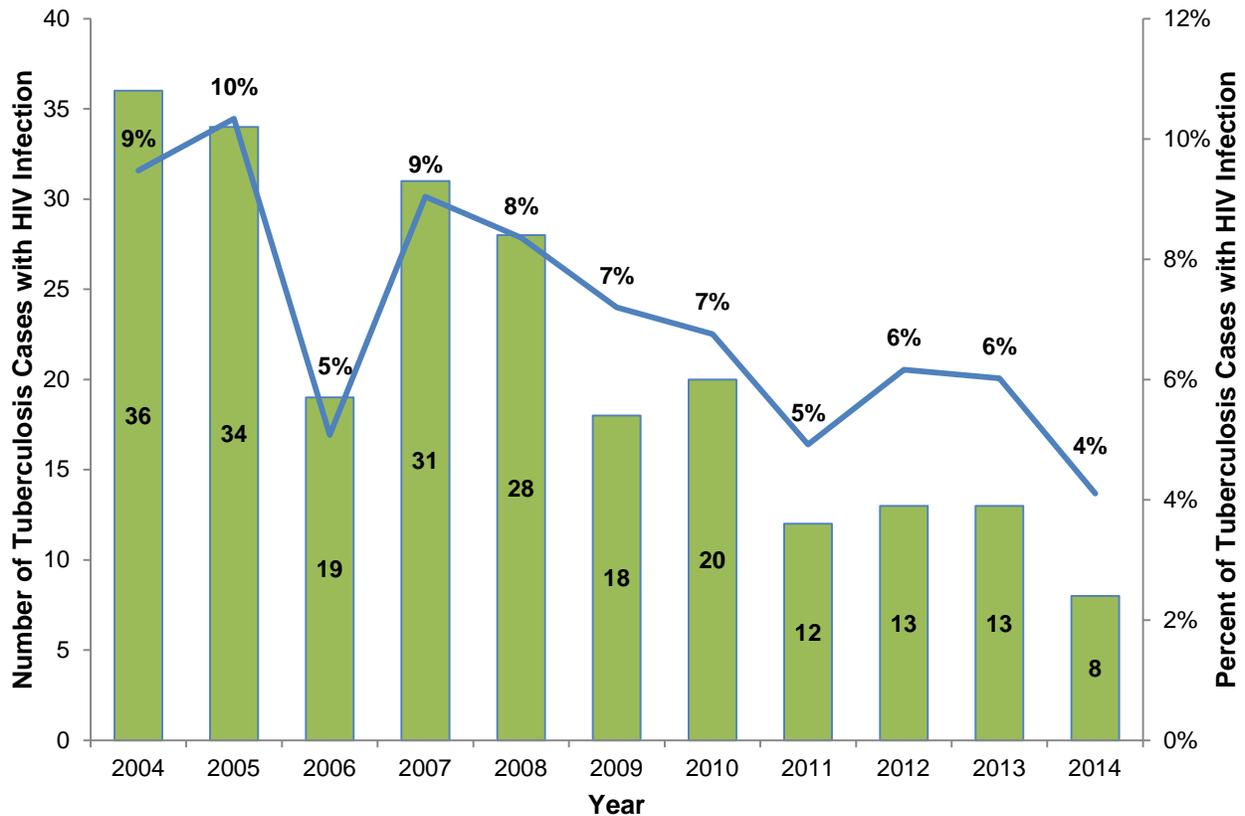
Tuberculosis (TB) and HIV Infection

While tuberculosis (TB) disease is preventable and in most cases curable, it maintains a grim historical notoriety as one of the leading infectious causes of death in North Carolina. In 1980, North Carolina was ranked third in the nation for TB case rates. Since that time the number of new TB cases has declined. The number of newly diagnosed TB cases in North Carolina decreased 49 percent between 2004 and 2014, dropping from 380 cases to 195 cases. While the number of TB cases reported annually in the US steadily decreased for 20 years, TB rates have decreased more quickly in North Carolina than in the nation as a whole. As of 2014, North Carolina ranks 27th in the nation for TB case rates.¹⁷

An individual with TB is considered to have co-infection with HIV if they have an HIV diagnosis prior to, or have an HIV-positive test at time of, the TB diagnosis. Figure 14 shows the number and percentage of North Carolina TB cases reported between 2004 and 2014 that were known to have TB/HIV comorbidity. In 2014, a total of eight (4%) TB cases were co-infected with HIV (Figure 14). Of the eight 2014 TB cases with HIV co-infection, exactly half were male, seven were Black/African American, six were US-born, and the average age was 47 years old (range: 39 – 57 years).

¹⁷Centers for Disease Control and Prevention. (2015). Reported Tuberculosis in the United States, 2014. Atlanta, GA: US Department of Health and Human Services. <http://www.cdc.gov/tb/statistics/reports/2014/pdfs/tb-surveillance-2014-report.pdf>.

Figure 14. Reported Cases of Tuberculosis Disease in North Carolina with HIV Co-Infection*, by Year, 2004-2014



*Co-infection is defined as having an HIV diagnosis prior to or having an HIV-positive test at time of the TB diagnosis.
 Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS), updated June 2016.

Medical Monitoring Project: People with HIV in Care in North Carolina

The Medical Monitoring Project (MMP) is an ongoing locally and nationally representative supplemental surveillance system, supported by the CDC. MMP collects data on a representative sample of HIV-diagnosed adults who are in care in the United States. MMP also monitors sociodemographics, behavioral and clinical characteristics, supportive service needs, use of healthcare and prevention services, and adherence to clinical care guidelines among HIV-diagnosed persons. The project describes “met and unmet needs” for HIV care and prevention services. For more MMP program information, visit: <http://www.cdc.gov/hiv/statistics/systems/mmp/>.

Locally, North Carolina MMP also functions as a secondary evaluation tool to ensure that physicians, medical facilities, and applicable laboratories continue to report HIV-positive cases and HIV-related lab results. North Carolina MMP ensures that the randomly selected patients are documented in our HIV surveillance systems. MMP data are a valuable addition to eHARS, providing information on those in

care on socioeconomic factors, such as income, health insurance, education, and housing status that are not captured in standard surveillance data. While these data are representative of North Carolina HIV-infected people in care, there are some differences between the MMP participants and our general HIV population from surveillance data. The largest difference is that less than 37.4% of MMP participants were MSM, while our surveillance data shows that 52.0% of our population (crude numbers, not redistributed risk estimates) of people living and diagnosed with HIV were classified as MSM. In this section, we make the assumption that our MMP sample represents people receiving care for HIV in North Carolina.

Socioeconomic Data, 2009-2013

These data are presented as weighted percentage estimates for the state. From 2009 to 2013, the majority of people in care had more than high school education (54.6%) and had not been homeless in the past 12 months (92.4%). The majority of people in care had not been in jail in the past 12 months. People in care in North Carolina had an annual household income of less than \$20,000 (62.5%), and 45.5% of participants were at or below the poverty level (Table 7). None of these socioeconomic variables had changed significantly from year to year during the five years.

Table 7. Socioeconomic Information for People in Care in North Carolina, 2009-2013

Variable	%*	95% Confidence Interval	
Education			
Less than High School	18.7	15.4	22.0
High School diploma or equivalent	26.7	21.5	31.9
More than High School	54.6	48.6	60.6
Homeless^a at any time in the past 12 months			
Yes	7.6	5.6	9.7
No	90.3	90.3	94.4
Incarcerated for longer than 24 hours in the past 12 months			
Yes	5.6	4.3	6.9
No	94.4	93.1	95.7
Combined yearly household income from all sources before taxes last calendar year (dollars)			
\$0 - \$19,000	62.6	57.7	67.4
\$20,000 - \$39,000	21.3	18.6	24.1
\$40,000 - \$74,999	11.1	8.3	14.0
\$75,000 or more	5.0	3.2	6.8
Poverty guidelines^b			
Above poverty level	54.5	50.0	58.9
At or below the poverty level	45.5	41.1	49.8

*Weighted percentages for 2009-2013 data.

^aLiving on the street, in a shelter, in a single-room-occupancy hotel, or in a car.

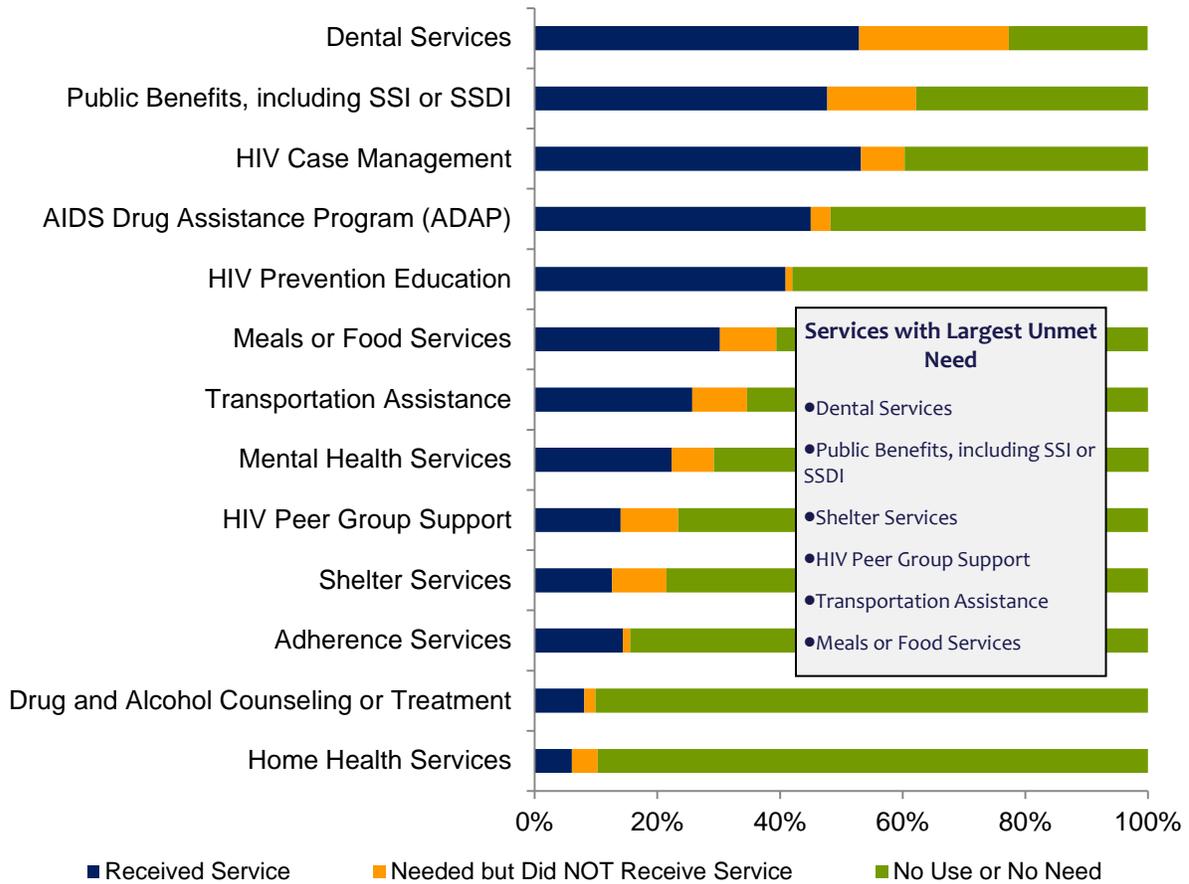
^bPoverty guidelines as defined by the Department of Health and Human Services (HHS); the 2009 guidelines were used for patients interviewed in 2010 and the 2010 guidelines were used for patients interviewed in 2011. More information regarding the HHS poverty guidelines can be found at <http://aspe.hhs.gov/poverty/faq.cfm>.
Data Source: 2009-2013 Weighted North Carolina MMP data (data as of September 25, 2015).

Almost everyone in HIV care had some sort of health insurance coverage (including Ryan White and AIDS Drug Assistance Program (ADAP) assistance). When looking at primary insurance (some noted having more than one source of insurance), 26.5% had Medicare, 24.4% had private insurance, 21.5% had Medicaid, 22.5% were Ryan White participants, 4.3% had no insurance, 0.3 % had other insurance, 0.3% had TRICARE, 0.1% were ADAP participants, and 0.1% had other public funds for insurance coverage. A trend analysis was conducted to determine if any changes from year to year had occurred with health insurance coverage. There was only one significant change. People in care who were also part of the Ryan White program had a significant increase from year to year, meaning with each year, more people in HIV care were also participants with Ryan White (from 15% in 2009 to 20% in 2013).

Met and Unmet Need for People in Care in North Carolina, 2009 -2013

During the interview, MMP participants are asked about care services. There are three categories: received the service, needed but did not receive the service, and did not use or did not need the service. Figure 15 shows the proportion of people receiving and needing select care services, which include dental services, HIV case management, ADAP, HIV prevention education, transportation assistance, drug and alcohol counseling or treatment, and home health services. The services with the smallest “needed but did not receive” (small orange section) were HIV case management, HIV prevention education, ADAP, adherence services, and drug and alcohol counseling or treatment (Figure 15). The five largest “needed but did not receive” (large orange section) are highlighted in the grey box in Figure 15. Dental services is the largest unmet need care service among people in care in North Carolina.

Figure 15. Met and Unmet Needs for Care Services for People in Care in North Carolina, 2009-2013



Data Source: 2009-2013 Weighted North Carolina MMMP data (data as of September 25, 2015).

Survival and HIV-Related Deaths in North Carolina

Survival

Advances in treatment of HIV with ARTs have been associated with a major increase in life expectancy for people diagnosed with HIV infection. From a recent study following a United States cohort from 1996 to 2011, the average life expectancy after HIV diagnosis increased from 19 to 53 years post-infection.¹⁸ Individuals diagnosed with AIDS (Stage 3) have also experienced increases in life expectancy; among

¹⁸Marcus J., Chao, C. Leyden, W., Xu, L., Quesenberry, C.P., Klein, D.B., Towner, W.J., Horberg, M.A., &Silverberg, M.J. (2016). *Narrowing the gap in life expectancy for HIV+ compared with HIV- individuals*. CROI 2016, February 22-25, 2016. Boston, MA . Abstract#54.

individuals diagnosed with AIDS (Stage 3) within six months of their initial HIV diagnosis, the average survival time nearly quadrupled from 1996 to 2005 (5.5 years in 1996 to 19.4 years in 2005).¹⁹

In North Carolina, survival (the estimated proportion of persons surviving a given length of time after diagnosis) was highest for those diagnosed with HIV infection in 2011 (determined by those living greater than 36 months after diagnosis), although year-to-year differences were small (Table 6). Survival was longest for people under 13 years old and 13 to 24 years old. Survival was lowest among American Indian/Alaska Natives. Among men, survival was greater among MSM and lowest among people with unknown risk. For women, survival was greatest among those exposed through heterosexual contact and lowest through IDU exposure (Table 8).

Table 8. Survival for More than 12, 24, and 36 Months after Initial HIV Diagnosis, 2007-2011

Demographics	Number of People	Percent Survived			
		<=12 months	>12 months	>24 months	>36 months
Year of HIV Diagnosis					
2007	1,823	96.3	94.7	93.3	93.1
2008	1,826	95.0	93.6	92.2	92.2
2009	1,633	95.7	94.7	93.7	93.7
2010	1,465	96.2	94.9	93.7	93.7
2011	1,473	96.1	95.0	94.4	94.4
Age at Diagnosis (Year)					
less than 13	44	100.0	100.0	100.0	100.0
13-24	1,656	99.6	99.4	99.3	99.3
25-44	3,948	97.5	96.5	95.6	95.6
45-64	2,421	92.0	89.5	87.6	87.7
65 and older	151	73.5	68.2	61.6	61.6
Race/Ethnicity					
American Indian/Alaska Native ^a	42	95.2	90.5	90.5	90.5
Asian/Pacific Islander ^a	50	100.0	96.0	94.0	94.0
Black/African American ^a	5,270	95.7	94.3	93.2	93.2
Hispanic/Latino	652	96.3	95.4	94.8	94.8
White/Caucasian ^a	2,000	96.0	94.7	93.3	93.3
Multiple Race	206	97.6	97.1	95.6	95.6
Men Hierarchical Risk of Exposure					
Heterosexual-high risk ^b	426	95.5	93.7	91.1	91.1
Heterosexual-other ^c	603	97.3	96.2	94.7	94.7
IDU ^d	150	92.0	90.0	88.0	88.0
MSM ^d	3,514	98.4	97.7	97.0	97.0
MSM/IDU ^d	150	98.7	97.3	97.3	95.0
Unknown ^e	1,302	89.6	87.3	86.0	86.0
Other Risks ^f	28	100.0	100.0	100.0	100.0
Women Hierarchical Risk of Exposure					
Heterosexual-high risk ^b	623	97.4	96.1	94.5	94.5
Heterosexual-other ^c	543	99.1	97.8	97.4	97.4
IDU ^c	88	96.6	92.0	87.5	87.5
Unknown ^e	842	90.9	89.2	87.9	87.9
Other Risks ^f	21	100.0	100.0	100.0	100.0
Total	8,220	95.9	94.5	93.4	93.4

^aNon-Hispanic/Latino.

¹⁹Centers for Disease Control and Prevention. (2006). Missed opportunities for earlier diagnosis of HIV infection-South Carolina, 1997-2005. *Morbidity and Mortality Weekly Report*. 55(47), 1269-1272.

^bHeterosexual-high risk is defined as a person who does not report IDU or MSM, but does report sexual contact with a partner of opposite sex, who is IDU, MSM, or known HIV-positive status. Also, if a person is a victim of sexual assault, exchanges sex for drugs/money, has had a recent STD or has sexual contact while using drugs, they are classified as high risk.

^cHeterosexual-other is defined as individuals classified as people who reports sex with an opposite sex partner and does not report IDU, MSM, or any other potential "high risk" behaviors.

^dIDU = injection drug use; MSM = men who report sex with men; MSM/IDU = men who report sex with men and injection drug use.

^eUnknown risk is defined as individuals classified as no identified risk (NIR) and no reported risk (NRR) individuals.

^fOther risks include blood products (adult hemophilia) and pediatric risk.

Data Source: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

HIV-Related Deaths

Note: Information on HIV-related deaths was only available through North Carolina State Center for Health Statistics in 2014. National Death Index (NDI) and Social Security Death Master File (SSDMF) files for matching to the North Carolina HIV population, as well as the national HIV population, were not available.

Death among patients diagnosed with AIDS (Stage 3) mostly occurs from opportunistic infections or malignancies associated with the progressive failure of the immune system.²⁰ Vital status may not be determined or reported for all cases; however, the reporting of deaths for persons reported as having AIDS (Stage 3) is estimated to be more than 90.0 percent complete. Nationally, HIV-related deaths ranks 15th for leading cause of death in the United States, and HIV infection is a leading cause of death for those aged 25 to 44.²¹

The North Carolina State Center for Health Statistics reported 218 HIV-related deaths in 2014 (2.2 per 100,000 population), making it the 22nd leading cause of death in North Carolina for 2013.¹¹ HIV was among the leading causes of death for those aged 25 to 44 in North Carolina in 2014. Using data from the North Carolina State Center for Health Statistics, 70.6% of deaths were among men, while 29.4% were among women. With regards to race/ethnicity, 45.9% of the HIV-related deaths were among Black/African American men, and 22.5% were among White/Caucasian men. Black/African American women accounted for 22.0% of the HIV-related deaths, while White/Caucasian females accounted for 1.8%.²²

Indicators of Risk

In this section, data from multiple sources were compiled to present particular populations of risk for acquiring HIV in North Carolina. Survey data from the Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavioral Surveillance System (YRBSS) are presented to show particular patterns of HIV testing, substance abuse, drug use, sexual behavior, and tobacco use. Additional MMP data, representing people with HIV in care in North Carolina, are presented to show certain demographics, including substance and drug use, of those with HIV. Surveillance data (for HIV, STDs, TB, and Hepatitis

²⁰ University of California, San Francisco. Opportunistic infections and AIDS-related cancers. Retrieved from <http://hivinsite.ucsf.edu/hiv?page=pb-diag-04-00#S5X>.

²¹ Heron, M. (2013). Deaths: Leading Causes for 2013. *National Vital Statistics Reports*. 65(2); pages 3 and 10.

²² North Carolina State Center for Health Statistics. (2015). NC vital statistics volume 2: Leading causes of death-2014. Retrieved from <http://www.schs.state.nc.us/data/vital.cfm>.

C) are also presented in this section to show populations that are being infected with HIV, and populations with similar high-risk behaviors or potential infections that can be comorbidities with HIV. HIV testing data examines the demographics and positivity rates of the populations tested through conventional HIV tests conducted at the North Carolina State Laboratory of Public Health. The final data source in this section is Ryan White Parts A and B and the AIDS Drug Assistance Program (ADAP) enrollee demographics.

Indicators of Risk for North Carolina Population

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS has information about a variety of health behaviors and preventative health practices both on a national and state level. Using 2014 survey data from the BRFSS in North Carolina, 41.9% of participants said that they received an HIV test in 2014.²³ Of the study participants who received an HIV test in North Carolina in 2014²³:

- 41.2% were men;
- 80.4% had health insurance;
- 22.1% were current smokers;
- 14.3% reported binge drinking;
- 26.1% had a disability; and
- 28.3% had two or more chronic diseases.

These results vary from those that did not receive an HIV test. More study participants that did not receive an HIV test in 2014 had health insurance (90.0%), were not current smokers (13.5%), and were not binge drinkers (4.3%). The study participants not receiving an HIV test also had a higher proportion of participants who had a disability (27.8%) and two or more chronic diseases (35.6%)

Youth Risk Behavioral Surveillance System (YRBSS)

The YRBSS looks at health-risk behaviors that contribute to the leading causes of death and disability among youth and adults, including sexual behaviors, alcohol and other drug use, and tobacco use.²⁴ Survey data is available for both middle school and high school students, and using 2013 data, the results for these variables are²⁵:

- For Middle School students:
 - 26.2% (25.9% of women and 26.5% of men) ever drank alcohol;

²³North Carolina State Center for Health Statistics. (2015). 2014 BRFSS Survey Results: North Carolina, HIV/AIDS-by Risks, Conditions, and Quality of Life Measures. Accessed March 23, 2016. Retrieved from <http://www.schs.state.nc.us/data/brfss/2014/nc/risk/hivtst6.html>.

²⁴Centers for Disease Control and Prevention (2015). Youth Risk Behavior Surveillance System (YRBSS). Accessed June 2, 2016. Retrieved from <http://www.cdc.gov/HealthyYouth/data/yrebs/index.htm>.

²⁵Centers for Disease Control and Prevention (2016). 1995-2013 Middle School and High School Youth Risk Behavior Survey Data. Accessed June 2, 2016. Retrieved from <http://nccd.cdc.gov/youthonline/>.

- 12.7% (9.7% of women and 15.7% of men) ever used marijuana;
 - 2.4% (1.7% of women and 3.1% of men) ever used any form of cocaine;
 - 5.1% (3.3% of women and 6.8% of men) ever took prescription drugs without a prescription;
 - 6.1% (4.7% of women and 7.6% of men) currently smoked cigarettes;
 - 11.4% (6.8% of women and 16.0% of men) have ever had sexual intercourse; and
 - 32.9% (36.3% of women and 29.6% of men) were never taught in school about HIV or AIDS.
- For High School students:
 - 32.2% (32.4% of women and 31.8% of men) currently drank alcohol;
 - 14.6% (12.2% of women and 17.1% of men) were binge drinkers;
 - 23.2% (19.5% of women and 26.5% of men) currently use marijuana;
 - 4.9% (2.5% of women and 7.4% of men) ever used cocaine;
 - 17.2% (16.4% of women and 17.8% of men) ever took prescription drugs without a prescription;
 - 15.0% (11.8% of women and 18.0% of men) currently smoked cigarettes;
 - 47.3% (45.4% of women and 49.2% of men) ever had sexual intercourse;
 - 39.2% (47.4% of women and 30.6% of men) did not use a condom at last sexual intercourse; and
 - 21.2% (18.2% of women and 24.1% of men) drank alcohol or used drugs before last sexual intercourse.

Indicators of Risk among HIV-Positive Population

Medical Monitoring Project (MMP)

In a previous section, sociodemographic and care service information collected through MMP were presented. Additional information about the North Carolina MMP participants can be useful in understanding the overall population in North Carolina infected with HIV, specifically information about sexual behavior, STD screening, dose adherence, and other behavioral outcomes.

The 2009 to 2013 weighted data shows that people in care in North Carolina were the following:

- 59.3% were heterosexual;
- 37.4% were men who reported sex with other men;
- 13.1% reported unprotected sex;
- 48.4% of those sexually active were screened for syphilis;
- 16.2% of those sexually active were screened for gonorrhea;
- 16.2% of those sexually active were screened for chlamydia;
- 39.5% of those sexually active received HIV prevention education from a health care professional;

- 87.0% were adherent to their medication for the past three days (self-reported);
- 43.7% were current smokers;
- 25.6% reported any drug use in the past 12 months;
- 15.6% reported binge drinking; and
- 9.8% reported major depression (based on Kroenke and Spitzer’s algorithm, PHQ-9 depression scale).

Clearly this information provides areas to focus on in the future, such as increasing the number of sexually active PLWH who are receiving STD screening by their medical providers.

HIV Surveillance Data

Overall, 66.0% of people newly diagnosed with HIV infections in 2013 were linked to care within one month. The percentage linked to care within one month did vary by gender (a higher proportion of women were linked to care), race/ethnicity (White/Caucasians had a higher proportion), and age (young MSM population had a lower proportion). Over one-third of people diagnosed with HIV through 2013 and living in North Carolina at the end of 2014 were retained in care (having two or more care visits at least three months apart). This percentage does not vary by gender, race/ethnicity, or age. With regards to viral suppression, 40.0% (prevalence-based HIV continuum) of people diagnosed with HIV through 2013 and living in North Carolina at the end of 2014 were virally suppressed, and 45.0% (diagnosis-based HIV continuum) were virally suppressed. Viral suppression does not vary by gender, race/ethnicity, or age. For more information about the HIV continuum of care, including information on linkage to care, retention in care, and viral suppression, see section *B. HIV Continuum of Care in North Carolina*.

HIV Testing Data

In North Carolina, HIV testing is offered at no charge to clients in all local health departments and in a number of community-based organizations (CBOs). In addition, the North Carolina Department of Health and Human Services provides resources and technical support to community health centers, emergency departments, non-traditional test sites (NTS), substance abuse centers, and state prisons to expand HIV testing in clinical and jail settings.

Testing programs supported by North Carolina Department of Health and Human Services have integrated HIV and STD prevention efforts. For 2014, North Carolina funded 23 community based organizations and 15 county health departments to conduct testing in a variety of outreach settings. In addition to community outreach, these agencies conduct testing in 26 county jails and 82 substance abuse centers. In addition to providing HIV testing, many of these agencies also test for syphilis, gonorrhea, chlamydia, and hepatitis C (HCV).

In 2014, a total of 208,373 conventional HIV tests were performed through the North Carolina State Laboratory of Public Health (North Carolina SLPH). Of these, 969 tests were confirmed positive (0.5%). These numbers include HIV tests submitted to the North Carolina State Laboratory of Public Health

(North Carolina SLPH), rapid HIV tests conducted by health departments and CBOs, and tests conducted through the expanded testing program in emergency departments and community health centers. Some duplication of the number of persons tested is inevitable because an individual may be tested multiple times throughout the year, and therefore counted more than one time.

Of the 969 positive tests, 488 newly identified cases of HIV (not previously reported to the North Carolina HIV surveillance program). During this same time period, there were 1,351 new HIV cases reported to the North Carolina Department of Health and Human Services. That is, 36.1% of all new cases reported to surveillance in 2014 were identified through conventional HIV tests performed at the North Carolina SLPH.

Of the 208,373 conventional HIV tests performed at the North Carolina SLPH, 136,131 (65.3%) people tested were women, 71,211 (34.2%) were men, and 64 were transgender (0.03%). The remaining 967 (0.5%) had no information on gender. The positivity rate of new HIV cases was higher for men compared to women (1.1% versus 0.1%). Since a majority of the women were tested in family planning/OB clinics (45.1%) as part of their routine or prenatal healthcare, they represented a lower risk group than the men who were tested. Most of the men were tested in an STD clinic (49.5%) or in jail/prison (22.4%) and represented a population at higher risk for HIV (Table 7).

The highest positivity rate for those newly positive was among men younger than 25 years of age, Black/African American males, and men who report MSM. The highest positivity rate of new HIV cases (6.1%) was observed among the tests conducted through Disease Intervention Specialist (DIS) field visits. These tests were done by state or county DIS as part of partner notification, counseling, and referral services. This high positivity rate is expected because DIS test partners and other contacts of people with HIV or syphilis. HIV positivity rates were also elevated for those tested in HIV counseling and testing sites (57 new positives, 1.4% positivity). Most of the new cases identified were tested in STD clinics (278 new positives), in outreach testing (11 new positives), in HIV counseling and testing sites (57 new positives), and in jails/prisons (32 new positives) (Table 9).

Table 9. North Carolina HIV Testing Positivity Rates by Selected Demographics and Testing Site, 2014

Variable	Men			Women			Total ^a		
	Tested	Positive (%)	New Positive (%)	Tested	Positive (%)	New Positive (%)	Tested	Positive (%)	New Positive (%)
Age (Year)									
Less than 25	25,442	270 (1.1)	178 (0.7)	57,165	25 (0.05)	17 (0.03)	83,069	301 (0.4)	196 (0.2)
25 and older	45,741	501 (1.1)	230 (0.5)	78,894	154 (0.2)	52 (0.07)	125,200	668 (0.5)	292 (0.2)
Missing Age	28	0	0	72	3 (0.2)	0	104	0	0
Total	71,211	771 (1.1)	408 (0.6)	136,131	182 (0.1)	69 (0.05)	208,373	969 (0.5)	488 (0.2)
Race/Ethnicity									
Black/African American ^b	39,347	535 (1.4)	275 (0.7)	59,990	123 (0.2)	46 (0.08)	99,713	668 (0.7)	327 (0.3)
Hispanic/Latino	6,657	56 (0.8)	38 (0.6)	28,626	8 (0.03)	4 (0.01)	35,344	65 (0.2)	42 (0.1)
White/Caucasian ^b	18,871	116 (0.6)	65 (0.3)	37,448	27 (0.07)	12 (0.03)	56,420	143 (0.3)	77 (0.1)
Other Races	2,371	15 (0.6)	7 (0.3)	3,160	6 (0.2)	2 (0.06)	5,549	21 (0.4)	9 (0.2)
Missing Race	3,965	49 (1.2)	23 (0.6)	6,907	18 (0.3)	5 (0.07)	1,1347	72 (0.6)	33 (0.2)
Total	71,211	771 (1.1)	408 (0.6)	136,131	182 (0.1)	69 (0.05)	208,373	969 (0.5)	488 (0.2)
Risk of Exposure									
Heterosexual ^c	43,934	189 (0.4)	82 (0.2)	100,821	121 (0.1)	45 (0.04)	144,765	310 (0.2)	127 (0.1)
IDU ^d	1,639	6 (0.4)	2 (0.1)	1,201	6 (0.5)	2 (0.2)	2,841	12 (0.4)	4 (0.1)
MSM ^d	6,129	384 (6.3)	234 (3.8)	--	--	--	6,158	389 (6.3)	237 (3.9)
MSM/IDU ^d	107	8 (7.5)	4 (3.7)	--	--	--	108	8 (7.4)	4 (3.7)
Other Risk	2,442	33 (1.4)	9 (0.4)	3,345	16 (0.5)	5 (0.2)	6,359	57 (0.9)	20 (0.3)
Missing Risk	16,960	151 (0.9)	77 (0.5)	30,764	39 (0.1)	17 (0.06)	48,142	193 (0.4)	96 (0.2)
Total	71,211	771 (1.1)	408 (0.6)	136,131	182 (0.1)	69 (0.05)	208,373	969 (0.5)	488 (0.2)
Testing Site									
HIV CTS ^e	2,277	88 (3.9)	55 (2.4)	1,606	11 (0.7)	1 (0.06)	3,957	101 (2.6)	57 (1.4)
STD ^e Clinic	35,268	381 (1.1)	241 (0.7)	48,276	69 (0.1)	33 (0.07)	83,927	455 (0.5)	278 (0.3)
Family Planning/OB ^e	271	0	0	61,396	18 (0.03)	9 (0.01)	61,671	18 (0.03)	9 (0.01)
TB ^e Clinic	893	3 (0.3)	2 (0.2)	981	2 (0.2)	2 (0.2)	1,881	5 (0.3)	4 (0.21)
Jail Screening	16,004	105 (0.7)	28 (0.2)	3,386	19 (0.6)	4 (0.1)	19,559	125 (0.6)	32 (0.2)
Drug Treatment	2,499	20 (0.8)	6 (0.2)	1,431	11 (0.8)	1 (0.07)	3,955	32 (0.8)	7 (0.2)
CHCs ^e	2,491	9 (0.4)	6 (0.2)	3,418	2 (0.06)	2 (0.06)	5,945	11 (0.2)	8 (0.1)
Outreach	1,959	12 (0.6)	8 (0.4)	3,084	18 (0.3)	2 (0.06)	5,197	20 (0.9)	11 (0.2)
DIS Field Visit	186	37 (19.9)	14 (7.5)	71	6 (8.5)	1 (1.4)	261	44 (16.9)	16 (6.1)
Other	7,134	97 (1.4)	40 (0.6)	6,739	26 (0.4)	6 (0.09)	13,988	128 (0.9)	50 (0.4)
Missing Site	2,229	19 (0.9)	8 (0.4)	5,743	11 (0.2)	45 (0.04)	8,032	30 (0.4)	16 (0.2)
Total	71,211	771 (1.1)	408 (0.6)	136,131	182 (0.1)	69 (0.05)	208,373	969 (0.5)	488 (0.2)

^aTotal includes 64 tests from individuals who identify as transgender, and 967 tests that had missing gender information.

^bNon-Hispanic/Latino.

^cHeterosexual is defined as a person who does not report IDU or MSM, but does report sexual contact with a partner of opposite sex, who is IDU, MSM, or known HIV-positive status. Also, if a person is a victim of sexual assault, exchanges sex for drugs/money, has had a recent STD or has sexual contact while using drugs, they are classified as heterosexual. Heterosexual is also defined as a person who reports sex with an opposite sex partner and does not report IDU, MSM, or any other potential high risk behaviors.

^dIDU = injection drug use; MSM = men who report sex with men; MSM/IDU = men who report sex with men and injection drug use.

^eAbbreviations: CTS = counseling and testing services; STD = sexually transmitted diseases; OB = obstetrics; TB = tuberculosis; CHC = community health center.

Data Source: North Carolina Division of Public Health supported HIV testing data (conventional tests performed by North Carolina State Laboratory of Public Health) (data as of February 27, 2015).

Ryan White HIV/AIDS Program and AIDS Drug Assistance Program (ADAP) Data

Table 10 compares demographic distributions for the Ryan White Part A (Charlotte TGA-five counties in North Carolina and one county in South Carolina), Ryan White Part B base program (95 counties in North Carolina), and the AIDS Drug Assistance Program (ADAP) program enrollees, to the people living with HIV in North Carolina as of December 31, 2014. Looking at the demographic breakdown of people enrolled in each program, the proportion of people enrolled does match the overall proportion of people living and diagnosed with HIV living in North Carolina. Therefore, the populations with more people living with HIV are enrolling in programs aimed to help people with HIV services, including care and treatment.

Table 10. Proportion of North Carolina Ryan White Part A and Part B Clients, ADAP clients, and People Diagnosed with HIV and Living in North Carolina, 2014

Demographics	Ryan White Part A Clients N=2,464	Ryan White Part B Clients N=8,682	ADAP Enrollees ^c N=7,341	People Living with HIV Infection N=28,526
Gender				
Men	72.9%	69.1%	72.4%	71.5%
Women	26.1%	30.1%	27.0%	28.5%
Transgender ^a	1.0%	0.8%	0.6%	--
Race/Ethnicity				
American Indian/Alaska Native ^b	0.5%	0.8%	0.8%	0.7%
Asian/Pacific Islander ^b	0.9%	0.4%	0.2%	0.6%
Black/African American ^b	71.5%	64.0%	63.7%	64.8%
Hispanic/Latino	8.0%	6.5%	7.7%	6.5%
White/Caucasian ^b	18.1%	25.9%	25.9%	25.2%
Multiple Race	1.0%	1.0%	0.3%	2.0%
Unknown	0.0%	1.2%	1.7%	0.1%
Age Group (Year)				
Less than 13	0.0%	0.8%	0.0%	0.3%
13-24	8.2%	5.7%	4.9%	4.7%
25-44	46.2%	38.3%	43.4%	38.0%
45-64	43.3%	51.2%	47.4%	51.8%
65 and older	2.3%	4.0%	4.3%	5.2%

^aTransgender available for Ryan White Part B and ADAP data only; not recorded for persons living with HIV infection.

^bNon-Hispanic/Latino.

^cIncludes clients in the ADAP Pharmacy Program (APP) and State Pharmaceutical Assistance Program (SPAP)

Data Sources: CAREWare (Ryan White Part A, Part B clients) (data from January 1, 2014 to December 31, 2015), ADAP (Cross Section from September 30, 2014), and enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

Risk Factors Based on Surveillance Data from Other Diseases

STD, Tuberculosis, and Hepatitis C Surveillance Data

Due to behaviors and environmental conditions that increase risk for multiple diseases, HIV-positive individuals are at increased risk for comorbid infections such as syphilis, TB, and hepatitis C (HCV). The presence of comorbid infections can detrimentally impact both the health and life expectancy of HIV-positive individuals. HIV-positive persons with comorbidities may need special care and treatment. Therefore, surveillance of potential HIV comorbidities is very important.²⁶

More than half of all newly diagnosed syphilis infections were among men under the age of 30, almost two-thirds were Black/African American, and almost half were also co-infected with HIV (had HIV prior to or within 30 days of syphilis diagnosis). Syphilis rates have also been increasing among women. From 2012 to 2014, the rate of newly diagnosed syphilis infections among women increased from 1.3 per 100,000 population to 2.6 per 100,000 population.

The majority of TB disease cases in North Carolina in 2014 were among men (56%), over 40 years of age (64%), and were Black/African American (43%). Almost half of the TB disease cases in 2014 were among people born outside of the US, and 4.1% of people with TB disease had been homeless within the past year (Table 11).

²⁶Samji, H., & Hogg, R. (2014). Life expectancy trends in HIV. *Physician's Weekly*. Retrieved from <http://www.physiciansweekly.com/hiv-life-expectancy-trends/>

Table 11. Tuberculosis Disease Cases in North Carolina by Selected Demographics, 2014

Demographics	Number	Percent
Gender		
Women	85	43.6%
Men	110	56.4%
10 Year Age Group (Calculated)		
0-9	7	3.6%
10-19	8	4.1%
20-29	29	14.9%
30-39	27	13.9%
40-49	43	22.1%
50-59	29	14.9%
60-69	22	11.3%
70-79	12	6.2%
80 and Older	18	9.2%
Race/Ethnicity		
American Indian/Alaskan Native	5	2.6%
Asian/Pacific Islander	26	13.3%
Black/African American	84	43.1%
Hispanic/Latino	38	19.5%
White/Caucasian	38	19.5%
Multiple Race	4	2.1%
Country of Origin		
U.S.	110	56.4%
Non-U.S.	85	43.6%
Homeless Within Past Year		
Yes	8	4.1%
No	187	95.9%
Total	195	100.0%

Data Source: North Carolina Electronic Disease Surveillance System (data as of June 2016).

Acute, but not chronic, HCV is reportable in North Carolina. Most cases of HCV are not identified in the acute stage or the first six months of infection, and therefore are never reported. In 2014, the majority of people with acute Hepatitis C infections were men (53%), under 30 years of age (48%), White/Caucasian (85%), and were missing risk factor information (56%). Over one-third reported injection drug use as a risk factor. At this time, North Carolina surveillance data cannot provide a representative picture of acute or chronic HCV co-infection with HIV.

Chronic Hepatitis C will be reportable via electronic lab report at the beginning of 2017. Recent analysis based on acute reporting and vulnerability data has indicated that there are at least 110,000 people living with chronic Hepatitis C in the state. Therefore, NC has inaugurated the NC HCV: TLC program (Test, Link, Cure) focused on western and southeastern counties believed to be at greatest risk for HCV

transmission, primarily as a result of the opioid and injecting drug epidemic both nationally and in the state. Clean syringe programs have recently been legalized in North Carolina; standing orders for opioid reversals are now available at all pharmacies; increased efforts to educate the medical work force in preparation for a growing population in need of treatment and cure are underway.

B. HIV Care Continuum in North Carolina

The HIV care continuum is a concept developed within the past few years that describes the various stages of engagement for a person receiving HIV medical care.^{27,28} The HIV care continuum addresses the question, “What proportion of the population diagnosed and reported with HIV infection in my state are believed to be in care during a given year?” Variations on the continuum include different stages, but major stages often include: undiagnosed HIV infection, diagnosed HIV infection, linked to HIV care, in care (measured various ways), prescribed ART, and virally suppressed. The HIV continuum serves as a useful framework for conceptualizing progress made toward achieving the National HIV/AIDS Strategy (NHAS) goal of increasing access to care and optimizing health outcomes, such as ensuring that people with HIV infection are virally suppressed.²⁹ In 2013, President Barack Obama issued an executive order establishing the HIV Care Continuum Initiative, which highlights the important role the HIV care continuum plays in national HIV/AIDS policy.^{30,31}

There are several key points that should be considered when interpreting the North Carolina HIV care continuum (both prevalence- and diagnosed-based, Figures 16-21):

- The North Carolina HIV care continuum is based on both surveillance and Medical Monitoring Project (MMP) data, in accordance with CDC protocols. CDC protocols:
 - Use reported laboratory tests for CD4+ T-lymphocyte cell counts and viral loads as surrogate markers for evidence of HIV care;

²⁷Gardner, E., McLees, M., Steiner, J., Del Rio, C., & Burman, W. (2011). The Spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clinical Infectious Diseases*. 52(6), 793-800. doi: 10.1093/cid/ciq243.

²⁸AIDS.gov. (2013). *HIV/AIDS care continuum*. Revised December 18, 2013. Accessed November 8, 2014. Retrieved from <http://www.aids.gov/federal-resources/policies/care-continuum/>

²⁹President Barack Obama. (2010). *National HIV/AIDS strategy for the United States*. (July 2010). Accessed November 8, 2014. Retrieved from <http://aids.gov/federal-resources/national-hiv-aids-strategy/nhas.pdf>

³⁰President Barack Obama. (2013). *Executive Order -- HIV care continuum initiative*. *The White House, Office of the Press Secretary*. Created July 15, 2013. Accessed November 8, 2014. Retrieved from <http://www.whitehouse.gov/the-press-office/2013/07/15/executive-order-hiv-care-continuum-initiative>

³¹Office of National AIDS Policy. (2013). *National HIV/AIDS strategy improving outcomes: accelerating progress along the HIV care continuum*. Created December 2013. Accessed November 8, 2014. Retrieved from http://www.whitehouse.gov/sites/default/files/onap_nhas_improving_outcomes_dec_2013.pdf

- Calculate the number of people diagnosed and reported with HIV infection between the beginning of the HIV epidemic and a given end date (e.g., December 31, 2013) and then evaluate whether the person received care during the subsequent calendar year (e.g., January 1, 2014 – December 31, 2014);
- Estimate percentage of people receiving medical care who have a documented antiretroviral (ARV) prescription is based on the 2009-2013 weighted MMP data for North Carolina. This percentage is applied to the number of people with at least one care visit to determine the overall estimated percentage of those prescribed ART in North Carolina;
- A care visit is based on having a documented CD4+ T-lymphocyte (CD4) cell count test or viral load test; and
- Data for 2014 are provisional only and should be interpreted with extra caution because state and national death matches have not been completed.

The North Carolina HIV care continuum shows data for evaluation year 2009 and 2014, allowing us to look at progress over time. The North Carolina HIV care continuum has been calculated based on the number of people with last known residence in North Carolina, regardless of where the person was initially diagnosed with HIV infection. As a result, the total population diagnosed and reported through the end of 2013 presented in this section is larger than the HIV prevalence based solely on people on diagnosed in North Carolina.

Prevalence-Based HIV Care Continuum for North Carolina

North Carolina's prevalence-based HIV care continuum shows each step of the continuum as a percentage of the total number of people living with HIV, which includes people diagnosed and reported with HIV and those that are unaware of their status.³² The estimated total number of people living in North Carolina with HIV infection in 2015 was 35,600. Ninety percent (90%) of the estimated total number of people living in North Carolina were diagnosed and reported with HIV through December 31, 2013, while the remaining 10.0% were unaware they are HIV-positive (Figure 16). North Carolina has reached the National HIV/AIDS Strategy (NHAS) 2020 goal of at least 90.0% of people living with HIV who know their serostatus.³³

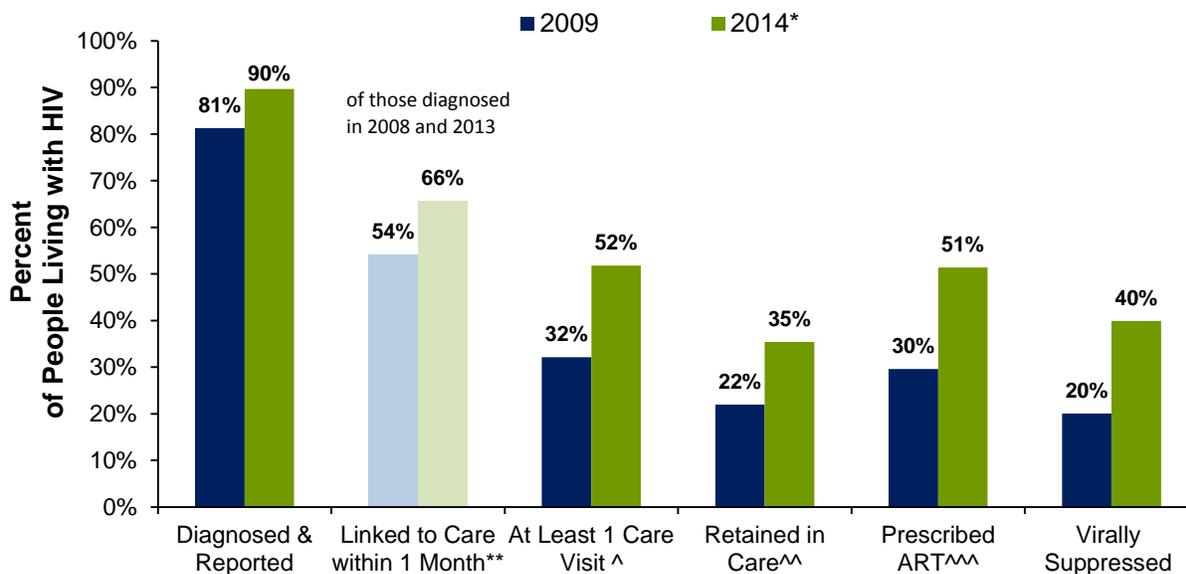
Care outcomes and data completeness have improved since 2009, as seen in Figure 16. Over half of the people living with HIV in North Carolina diagnosed through 2013 and living in 2014 had at least one care visit. The NHAS 2020 goal for linkage to care within one month for newly diagnosed HIV individuals is 85.0%.³³ For the newly diagnosed HIV infections in 2013 in North Carolina, 66.0% were linked within one

³²Centers for Disease Control and Prevention. (2014). *Understanding the HIV care continuum*. Accessed March 14, 2016. Retrieved from http://www.cdc.gov/hiv/pdf/dhap_continuum.pdf

³³AIDS.gov. (2015). Overview: NHAS Updated. Accessed March 14, 2016. Retrieved from <https://www.aids.gov/federal-resources/national-hiv-aids-strategy/overview/>

month. For this population, viral suppression was documented for an estimated 40.0% of total cases (Figure 16). In states with complete lab reporting, 50.0% of people with HIV are virally suppressed.³⁴ In North Carolina, reporting is incomplete, so the 40.0% is likely an underestimation of the true viral suppression. However, both the national and North Carolina percentages are still below the NHAS 2020 goal of having 80.0% of people diagnosed with HIV virally suppressed.³³

Figure 16. North Carolina HIV Care Continuum for All People Infected with HIV, 2009 and 2014



*2014 data are preliminary (do not include vital records or national death matches).
 **Linked to care within 1 month-only looking at those diagnosed in either 2008 (2009 bar) and 2013 (2014 bar); this cannot be directly compared to the other steps as it uses a different denominator, therefore these bars are lighter than the others.
 ^At least 1 care visit in a given year.
 ^^Retained in care is defined as having 2 or more care visits at least 3 months apart in a given year.
 ^^Prescribed ART: based on the 2009-2013 weighted percentage of those with ART prescription documented in their medical records (from the Medical Monitoring Project) and the number of people in care (with at least 1 care visit in 2014).
 Data Sources: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

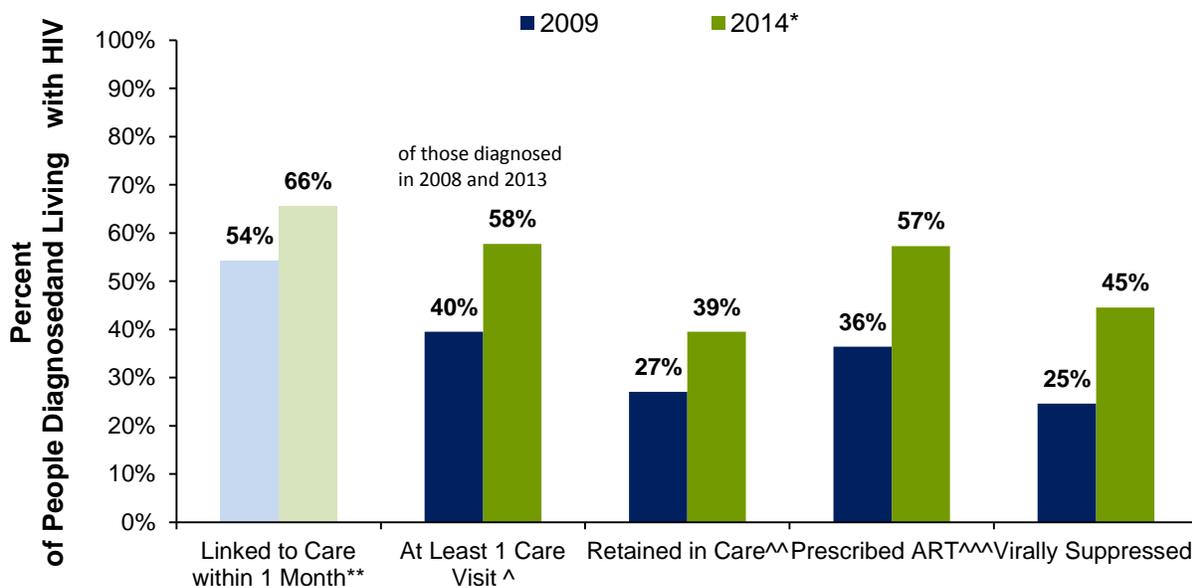
Diagnosed-Based HIV Care Continuum for North Carolina

North Carolina typically presents the continuum from a diagnosed-based standpoint. The diagnosed-based HIV care continuum shows each step of the continuum as a percentage of the number of people living with HIV who have been diagnosed in North Carolina and are currently living in the state.²¹ Of the people diagnosed in North Carolina through 2013 and living through 2014 (N=31,934), 58.0% had at least one care visit in the year, while 39.0% had two or more care visits at least three months apart (Figure 17). These are significant increases from the 40.0% and 27.0% for those outcomes for people

³⁴Centers for Disease Control and Prevention. (2015). Monitoring selected national HIV prevention and care objectives by using HIV surveillance data-United States and 6 dependent areas-2013. *HIV Surveillance Supplemental Report 2015*; 20(2). <http://www.cdc.gov/hiv/library/reports/surveillance/>

diagnosed through 2008 and living in 2009 (N=26,744). Using the diagnosed-based method, 45.0% of people diagnosed and living in North Carolina with HIV were virally suppressed in 2014 (Figure 17). This, again, is a likely underestimation due to North Carolina having incomplete lab reporting, and still below the NHAS 2020 goal of 80.0% viral suppression.³³

Figure 17. North Carolina HIV Care Continuum for People Diagnosed with HIV, 2009 and 2014

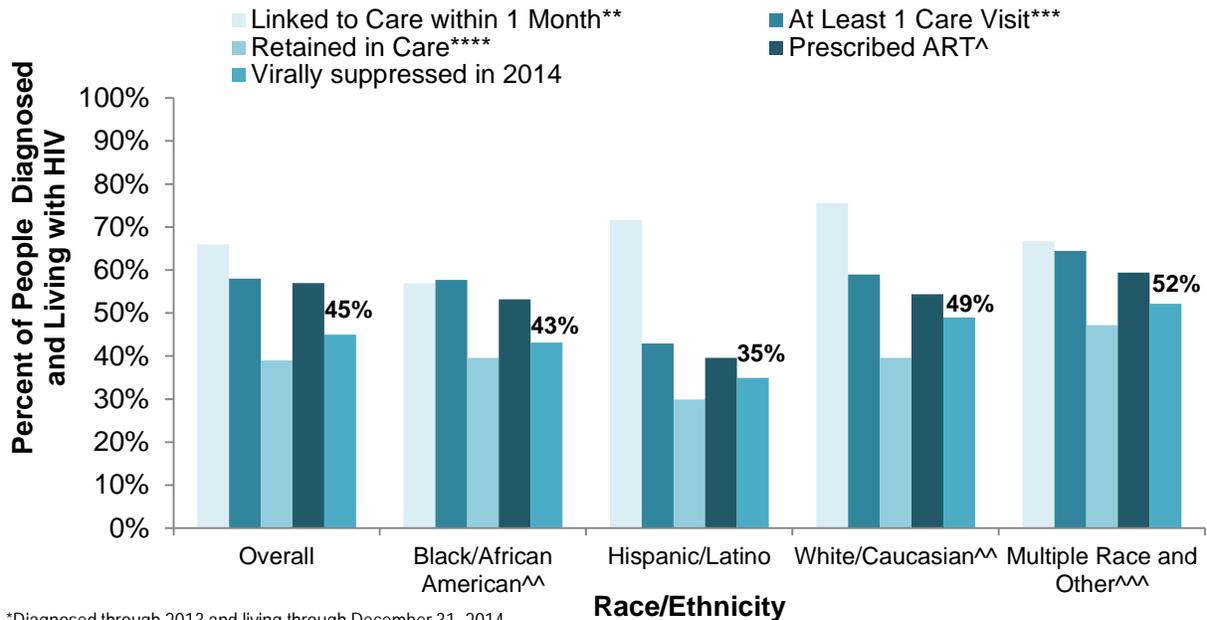


*2014 data are preliminary (do not include vital records or national death matches).
 **Linked to care within 1 month-only looking at those diagnosed in either 2008 (2009 bar) and 2013 (2014 bar); this cannot be directly compared to the other steps as it uses a different denominator, therefore these bars are lighter than the others.
 ^At least 1 care visit in a given year.
 ^^Retained in care is defined as having 2 or more care visits at least 3 months apart in a given year.
 ^^Prescribed ART: based on the 2009-2013 weighted percentage of those with ART prescription documented in their medical records (from the Medical Monitoring Project) and the number of people in care (with at least 1 care visit in 2014).
 Data Sources: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

North Carolina Diagnosed-Based HIV Care Continuum: Men

Figure 18 displays the diagnosed-based HIV care continuum for men in North Carolina diagnosed through 2013 and living through 2014 (N=22,009) by race/ethnicity. Comparing the overall continuum to the racial breakdown for men, the proportions are very similar. The proportion of men linked to care within one month, the proportion of men having at least one care visit in 2014, and the estimated proportion of being prescribed ART did vary by race/ethnicity. Viral suppression did not vary significantly by race/ethnicity, but the proportion of Hispanic/Latino males that are virally suppressed is lower than the statewide 45.0% (Figure 18).

Figure 18. North Carolina Diagnosed-Based HIV Care Continuum for Men by Race/Ethnicity, 2014*



*Diagnosed through 2013 and living through December 31, 2014.

**Linked to care within 1 month-only looking at those diagnosed in 2013; this cannot be directly compared to the other steps as it uses a different denominator, therefore these bars are lighter than the others.

***At least 1 care visit in a given year.

****Retained in care is defined as having 2 or more care visits at least 3 months apart in a given year.

^Prescribed ART: based on the 2009-2013 weighted percentage of those with ART prescription documented in their medical records (from the Medical Monitoring Project) and the number of people in care (with at least 1 care visit in 2014).

^^Non-Hispanic/Latino.

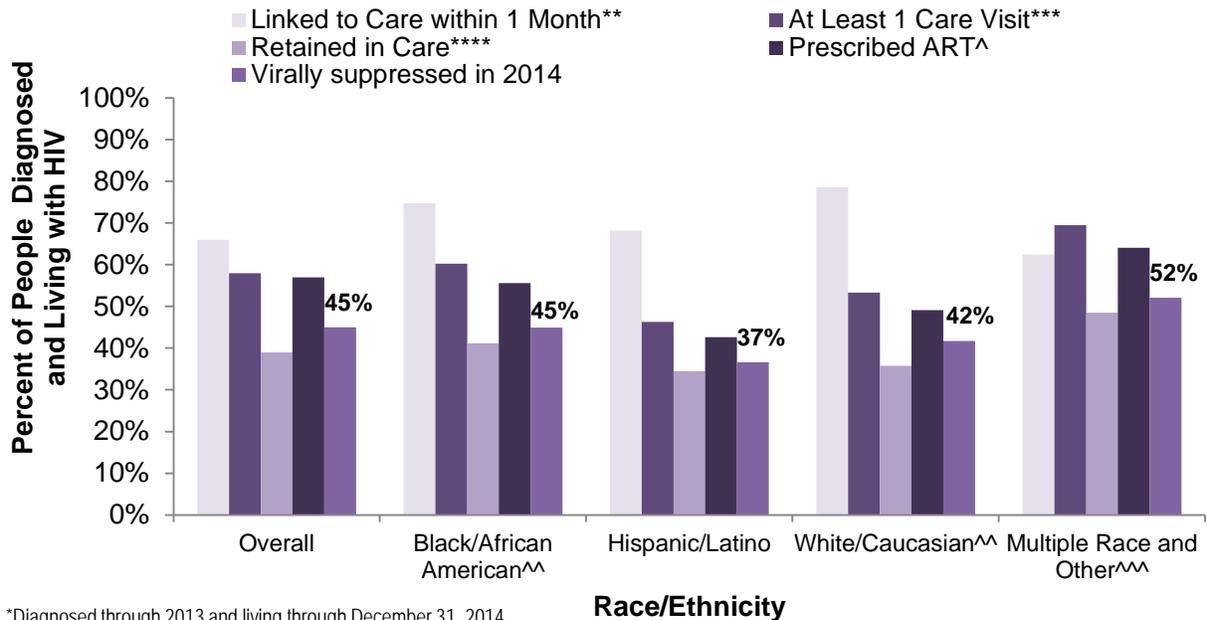
^^^Other includes American Indian/Alaska Native and Asian/Pacific Islander.

Data Sources: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

North Carolina Diagnosed-Based HIV Care Continuum: Women

Figure 19 displays the diagnosed-based HIV care continuum for women in North Carolina diagnosed through 2013 and living through 2014 (N=9,925) by race/ethnicity. Comparing the overall continuum to the racial breakdown for women, the proportions are very similar, except there are more women linked to care within one month compared to the overall state population. The proportion of women linked to care within one month, the proportion of women having at least one care visit in 2014, and the estimated proportion of being prescribed ART did vary by race/ethnicity. Viral suppression did not vary too much by race/ethnicity, but like among males, the proportion of Hispanic/Latina women that are virally suppressed is lower than the statewide 45.0% (Figure 19).

Figure 19. North Carolina Diagnosed-Based HIV Care Continuum for Women by Race/Ethnicity, 2014*



*Diagnosed through 2013 and living through December 31, 2014.

**Linked to care within 1 month-only looking at those diagnosed in 2013; this cannot be directly compared to the other steps as it uses a different denominator, therefore these bars are lighter than the others.

***At least 1 care visit in a given year.

****Retained in care is defined as having 2 or more care visits at least 3 months apart in a given year.

^Prescribed ART: based on the 2009-2013 weighted percentage of those with ART prescription documented in their medical records (from the Medical Monitoring Project) and the number of people in care (with at least 1 care visit in 2014).

^^Non-Hispanic/Latino.

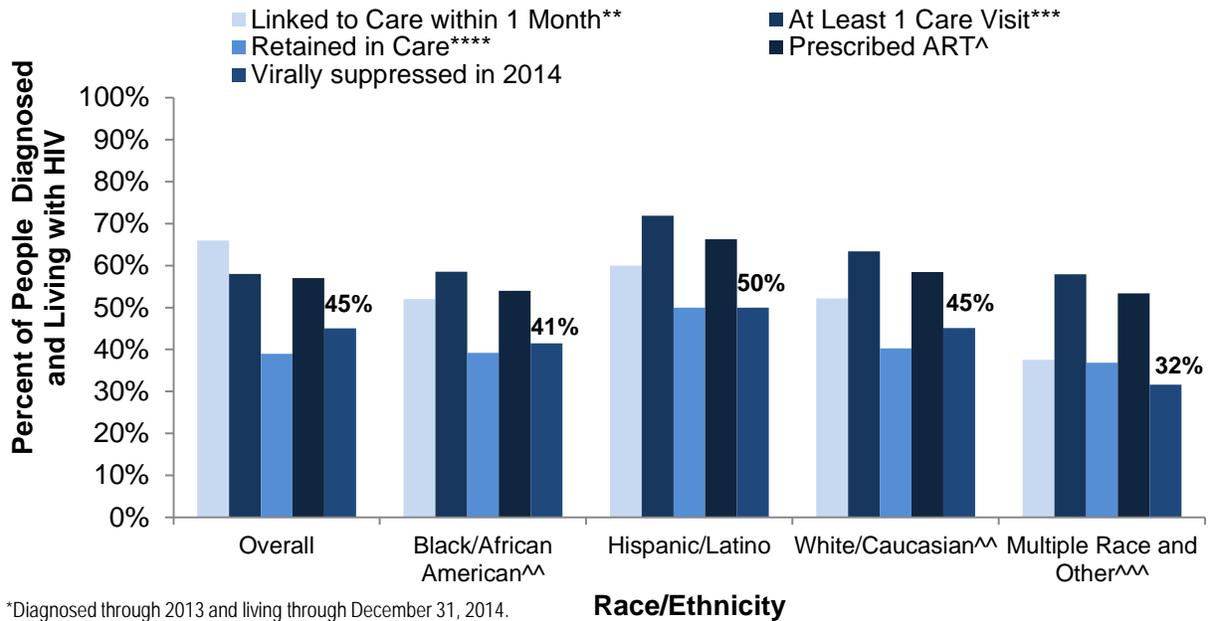
^^^Other includes American Indian/Alaska Native and Asian/Pacific Islander.

Data Sources: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

North Carolina Diagnosed-Based HIV Care Continuum: Young (13 to 24 years of age) MSM

Figure 20 displays the diagnosed-based HIV care continuum for young (13 to 24 years of age) MSM in North Carolina diagnosed through 2013 and living through 2014 (N=830) by race/ethnicity. Comparing the overall continuum to the racial breakdown for Young MSM, the proportions are very similar, except more have at least one care visit compared to the overall population. The proportion of young MSM linked to care within one month, the proportion of young MSM having at least one care visit in 2014, and the estimated proportion of being prescribed ART did not vary too much by race/ethnicity. Viral suppression did vary by race/ethnicity, and the proportion of the multiple race and other group had an overall viral suppression lower than the statewide 45.0% (Figure 20).

Figure 20. North Carolina Diagnosed-Based HIV Care Continuum for Young (13 to 24 years) MSM by Race/Ethnicity, 2014*



*Diagnosed through 2013 and living through December 31, 2014.

**Linked to care within 1 month-only looking at those diagnosed in 2013; this cannot be directly compared to the other steps as it uses a different denominator, therefore these bars are lighter than the others.

***At least 1 care visit in a given year.

****Retained in care is defined as having 2 or more care visits at least 3 months apart in a given year.

^Prescribed ART: based on the 2009-2013 weighted percentage of those with ART prescription documented in their medical records (from the Medical Monitoring Project) and the number of people in care (with at least 1 care visit in 2014).

^^Non-Hispanic/Latino.

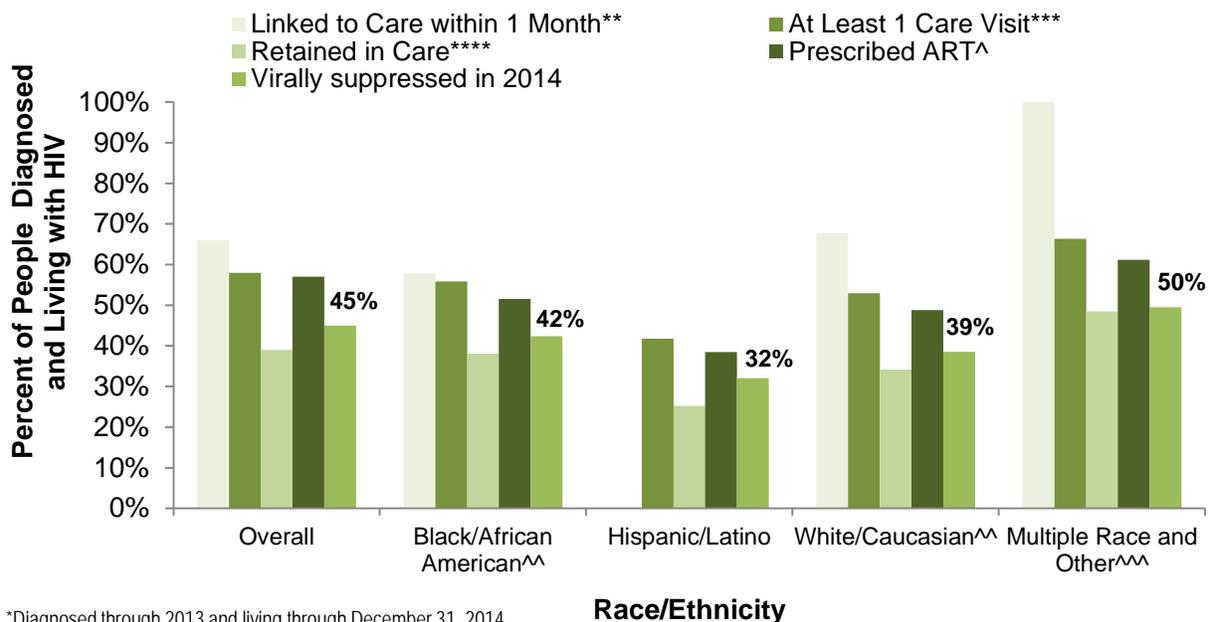
^^^Other includes American Indian/Alaska Native and Asian/Pacific Islander.

Data Sources: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

North Carolina Diagnosed-Based HIV Care Continuum: IDU

Figure 21 displays the diagnosed-based HIV care continuum for people reporting IDU in North Carolina diagnosed through 2013 and living through 2014 (N=3,090) by race/ethnicity. Comparing the overall continuum to the racial breakdown for IDU, the proportions were lower for the IDU population. The proportion of people reporting IDU linked to care within one month, the proportion of people reporting IDU having at least one care visit in 2014, and the estimated proportion of being prescribed ART did vary by race/ethnicity. These proportions are lower than the proportions for the overall HIV diagnosed population in North Carolina, seen in Figure 17. Viral suppression did vary by race/ethnicity, and most groups have an overall viral suppression lower than the statewide 45.0% (Figure 21).

Figure 21. North Carolina Diagnosed-Based HIV Care Continuum of People reporting IDU by Race/Ethnicity, 2014*



*Diagnosed through 2013 and living through December 31, 2014.

**Linked to care within 1 month-only looking at those diagnosed in 2013; this cannot be directly compared to the other steps as it uses a different denominator, therefore these bars are lighter than the others.

***At least 1 care visit in a given year.

****Retained in care is defined as having 2 or more care visits at least 3 months apart in a given year.

^Prescribed ART: based on the 2009-2013 weighted percentage of those with ART prescription documented in their medical records (from the Medical Monitoring Project) and the number of people in care (with at least 1 care visit in 2014).

^^Non-Hispanic/Latino.

^^^Other includes American Indian/Alaska Native and Asian/Pacific Islander.

Data Sources: enhanced HIV/AIDS Reporting System (eHARS) (data as of June 25, 2015).

North Carolina HIV Care Continuum Limitations

- North Carolina law did not require laboratory reporting of all CD4 cell count and viral load laboratory tests until halfway through the 2013. Consequently, all measures of care for 2009 (at least one care visit during the evaluation year, two or more care visits during the evaluation year, and viral suppression) are underestimates of what would be observed if North Carolina had full laboratory reporting during the evaluation time period.

- A recent study by Dombrowski et al. suggests that reliance on surveillance data only, even if the surveillance data are complete, may underestimate the true measure of the population in care.³⁵

HIV Care Continua for the Regional Networks of Care and Prevention (RNCP)

North Carolina's HIV surveillance system is constantly improving in regards to complete lab reporting across the state. At the end of 2014, there were a few large hospitals who were not reporting viral loads on a regular basis to the state. By mid-2015, we were receiving those labs, therefore, we know that the surveillance data at the end of 2014 was incomplete. For this reason, we have not presented the HIV continuum of care by the RNCs, including the Charlotte-TGA. Since the addition of these hospital labs, we plan to present regional HIV continua of care in late 2016. In regions that we know have complete lab reporting, the average viral suppression was 48.3% at the end of 2014. This is slightly higher than the statewide viral suppression. Analyzing the HIV continuum of care by RNCP will be helpful in identifying potential gaps in not only surveillance data, but also help with knowing what regions around the state may need to address linkage and retention issues.

Uses of HIV Care Continuum

The North Carolina HIV Care Continuum is being used to inform care and prevention programs in the areas where the state is meeting the NHAS 2020 goals, and where improvement is needed. It is also used to identify gaps in services across the state, mainly linkage and retention issues, which help inform the State Bridge Counselors (SBCs) around the state what areas need more assistance. The continuum has potential to also identify gaps in surveillance data, since the parameters are based solely on laboratory reporting. The HIV/STD Prevention and Care Program in North Carolina has used the continuum for framework to develop programs to address the gaps identified in the continuum.

C. Financial and Human Resources Inventory

- a. Table format of Inventory of resources

All ten NC Regional Networks of Care and Prevention plus the Charlotte TGA were instructed to submit resource inventories that included all required elements. Two did not respond and we will be working

³⁵Dombrowski, J., Buskin, S., Bennett, A., Thiede, H., & Golden, M. (2014). Use of multiple data sources and individual case investigation to refine surveillance-based estimates of the HIV care continuum. *Journal of Acquired Immune Deficiency Syndromes*. 67(3), 323-330. doi: 10.1097/QAI.0000000000000302.

with them; all others have been compiled into one document which is included in this plan as Appendix A.

b. Description of the HIV Workforce Capacity, how it impacts the HIV prevention and care service delivery system.

State resources for HIV workforce capacity include the Epidemiology Section, the Communicable Disease Branch, the State Laboratory for Public Health, and collaborative work with the Office of Minority Health and the Mental Health, Developmental Disabilities and Substance Abuse Services Departments. In the HIV/STD/Hepatitis Unit staff are tasked with contract development and oversight, TA to funded entities, oversight of funded entities' performance plans and objectives/deliverables, and participation in all RNCP quarterly meetings in order to assure that agencies are working together and continuously managing/improving the network safety net. The Field Services Unit within the CDB is responsible for all DIS work, which includes Partner Services, client notification for HIV and syphilis and initial linkage efforts for those newly diagnosed with HIV. We have found in recent years that there is a high turnover of NC's DIS; many have left state employment for higher pay in the local sector or in other departments of state government. North Carolina has 100 counties and all have health departments or jurisdictions that include STD clinics, which provide routine HIV counseling, testing and referral (CTR) services. HIV CTR is also conducted in local health department family planning clinics. The CDB maintains registered nurses as part of its Technical Assistance and Training Program (TATP) whose role is to provide technical assistance and quality assessment to local health departments' STD Clinics. All 100 counties are assessed on a regular basis and provided with training, education and observed competency assessments for enhanced role nurses in the clinics. This is a critical resource in continuing to assure that STD clinic patients across the state receive appropriate, quality care and follow up.

The CD Branch also funds or supports over 70 agencies for HIV/STD prevention activities to include CTR, HERR for high risk negatives and prevention for positives as well as 10 regional networks of care and prevention and the Charlotte TGA for HIV Care and HOPWA services. All of these agencies have roles in providing HIV prevention and care services in NC. Understanding local or regional workforce capacity for HIV prevention and care is best described by the RNCPs and is highlighted in the resource inventory in Appendix _____. It is very important to keep in mind, however, that the resources of large urban areas are substantially different than resources in small, rural or under-resourced areas who often struggle to provide comparable care. This in turn continues to affect the quantity and sometimes the quality of available services to PLWH and those at risk.

In reviewing the needs assessments from the RNCP and in consulting CD Branch staff, we have determined that one of the most significant work force issues for NC is the difficulty in attracting qualified individuals to work in rural areas. HIV care has been a specialized area for many years now, and there is still a scarcity of individuals who have the requisite skills to provide such services; even when seeking primary care providers who feel comfortable treating PLWH, the challenge is real. Rural areas

have even greater difficulty in attracting and keeping such individuals. More assistance is needed in getting qualified individuals to agree to work in these areas, and in providing the specialty training needed to improve and maintain their skills. Another workforce issue brought up in our needs assessments was the need for identifying and training peer educators, both MSM and non-MSM. Peer educators are an excellent mechanism for engaging community-based individuals in working with the populations we serve, overcoming shame and stigma, and assuring that PLWH will link to care. Provider education is a critical component of ensuring that clients receive the best possible care. But current, up-to-date knowledge is not only important for the medical care practitioners who serve our clients. Individuals in all aspects of the HIV/AIDS workforce require improved education and practice skills so that their clients can get the best possible service to keep them healthy, virally suppressed and functioning at the highest possible levels.

c. Description of interaction of different funding sources to ensure continuity of HIV prevention, care, and treatment services

As indicated in Appendix _____, North Carolina has a variety of different funding sources that support HIV prevention, care, housing and treatment services across the state. We realize that HIV prevention and care are interrelated and inextricable and we have taken steps to integrate HIV prevention and care programs across the State. HRSA and CDC have placed increased emphasis on better coordination and programming between the two activities as HRSA stresses that prevention be an active partner in developing and maintaining effective care practices, and CDC similarly emphasizes the need to ensure that prevention activities have a strong focus on identifying positive individuals and linking them into care so as to minimize future infections. In response, North Carolina has empowered our Regional Networks of Care and Prevention (RNCs) and the Charlotte Transitional Grant Area (TGA) to use resources to the best of their ability to integrate prevention and care activities and have worked with them to ensure that resources are leveraged to bring about the most “bang for their buck”.

Federal (CDC, HRSA, SAMHSA) and state appropriated funds are used to support the 10 NC RNCs and the TGA in providing HIV prevention, HOPWA and HIV Care activities. In August of 2016 the CD Branch released an RFA to fund prevention, care and HOPWA activities across the state. This is a combined RFA that requires each RNC and the TGA (for prevention) to submit one application per network for these funds. This was done in order to require RNCs to work together to conduct a resource inventory, a needs assessment, and a gaps analysis to address barriers and opportunities and to plan together about how to address identified gaps and fund needed programs in their jurisdictions. CD Branch staff worked very closely with the RNCs for the past year to ensure that they understood the philosophy of this method and worked together with the RNCs to address their HIV prevention, care and HOPWA, as well as STD, needs as a whole.

Participants in the needs assessment and planning processes contributed well-conceived ideas about how to improve resource management in our Regional Networks of Care and Prevention. One of the most significant challenges is the insufficiency of resources to meet all client service needs. We are well

aware that there are never enough resources to address client needs. However, it is essential that we learn to use the resources we have in the most efficient and effective manner possible. ADAP has made significant strides in this direction, instituting policies and procedures which ensure that all other payee sources are utilized before the Program pays for medications. In addition, intensive efforts are being made to streamline all of the processes required to process clients and provide medications in order to serve the maximum number of individuals with available resources. The RNCPs are the primary mechanism to accomplish the same task with regard to all other client services. Greater coordination between service providers helps to ensure that PLWH receive the services they require with a minimum of duplication. However, more can certainly be done in this regard, and every opportunity will be taken to realize this, particularly through data sharing and integration of health information systems regionally. One idea that is favored by both clients and practitioners is the establishment of “one stop shops,” whereby clients can get many or all of the services they need in one location. This results in more efficient use of transportation resources, and means the client is more likely to have his/her service needs met. This can be a very difficult challenge, particularly given the requirement of large changes in infrastructure, both physical and organizational, to bring this about. Several of the Regional Networks have begun to implement this concept with excellent results, and we will continue to encourage this development as we move forward in the ongoing development of the Regional Network system.

Substance abuse and mental health programs are primarily a State prerogative, and have been undergoing reorganization for some time now. Each Regional Network is required to maintain contact with its local coordinating agency to ensure the provision of substance abuse and mental health services for its clients, and this requirement will be maintained, particularly since substance abuse and mental health services are considered as high priority components of this plan. The challenges of providing mental health and substance abuse services are significant however: many people in need have no source of payment for long-term treatment or in-patient care, but an even greater challenge is the few providers and treatment entities who exist in many areas of the state. Often clients cannot receive the care they need because there is no one to provide it (at the rates allowed under Ryan White), too few beds exist for detox and the barriers to accessing this care while maintaining a job or family can be overwhelming.

We continue to encourage participation by substance abuse/mental health providers in both State and local needs

assessment and planning processes. Each RNCP is also required in the new RFA to develop a specific plan to ensure that HIV/syphilis and HCV CTR is offered at all substance abuse treatment facilities in their jurisdiction. With the advent of a new NC law allowing clean needle exchange, RNCPs are also required to identify all existing needle exchange sites in their regions and ensure that HIV/Syphilis and HCV CTR is offered at each one. All of these efforts are undertaken in order to maximize the funding available by collaborating with existing infrastructure in order to offer the most services possible and appropriate.

NC also ensures that different funding sources interact by requiring all agencies funded for HIV CTR to additionally test for syphilis and HCV as appropriate and vice versa. All CD Branch agencies funded for HIV prevention test for STDs and HCV as appropriate and all CD Branch agencies funded for STD prevention test for HIV and HCV as appropriate.

Medicare is a major provider of HIV medications through the Part D program. ADAP has worked closely with Medicare to establish and continue operating the State Pharmaceutical Assistance Program (SPAP). We will continue to look for additional opportunities to collaborate with the Medicare system. Medicaid is the largest single payer in the State for services to HIV-infected individuals. The AIDS Care Program continues to maintain close contact with the Medicaid program to ensure coordination of services. RW Part B clients are required to apply for Medicaid annually, or when their situation changes, to ensure that RW remains the payer of last resort. Medicaid is likely to be a central element of any future health care system changes pertaining to this population, so it will be necessary to maintain close ties in order to optimize service to PLWH. Medicaid and the Division of Public Health meet regularly to discuss issues of mutual concern, and HIV/AIDS has and will continue to be one of the common issues for discussion. In 2015, approximately 9,000 PLWH received Medicaid services, in addition to the 7,910 served in ADAP (of whom 1,639 are also on Medicare, as of 9/27/16). The newly formed CMS/HIV Affinity group will be an additional opportunity for collaboration and sharing resources in the coming year.

The Children's Health Insurance Program is also part of the Division of Public Health, and so coordination primarily occurs at the Division level. Those providers who serve children are the most likely to have contact with this program. Community Health Centers in North Carolina, with some notable exceptions, have traditionally not served the HIV population. Several of our current sub-grantees and provider agencies are FQHCs. However, a renewed emphasis by HRSA may lead to more participation by this sector of the health care system. In addition, future health care reform may increase these possibilities, and we are prepared to work with these organizations to assist in their integration into the established health care system for PLWH and those at risk.

STD programs are a function of the Communicable Disease Branch, and coordination occurs as a result of our integrated unit's ongoing discussions concerning common problems and activities, and the continuation of this combined needs assessment and planning process. All HIV prevention agencies are required to meet quarterly with their regional DIS staff to collaborate with them on newly identified risk populations, "hot spots", screening activities, linkage to care processes and all other HIV/STD issues that are germane to both groups.

d. Description identifying any needed resources and/or services which are not being provided, and steps taken to secure them.

All RNCPs and the TGA conducted needs assessments and worked to identify needed resources and services in their jurisdictions. After analyzing these and adding state level issues, the following concerns were noted:

Medications - Access to non-HIV medications is a significant issue mentioned in our assessments. ADAP can only pay for those medications listed on its official formulary, and these are primarily for the treatment of HIV and some associated conditions. Individual providers try to provide fill-in assistance for the purchase of non-HIV medications as resources allow, but these are generally at levels far below what is needed, and are provided in limited situations. And, per RW rules, there is limited support for over-the-counter treatments. Thus, both clients and providers have identified a need for non-ADAP medications, particularly for those people not covered by Medicaid.

Provision of Medical Care-The situation with regard to infectious disease and specialty care appears to be a confusing issue. A great proportion of clients have indicated that there is difficulty in accessing these types of care. It is unclear at this point whether this might be a client misperception as to the need for such care, a shortage of qualified providers capable of providing such care, or a scarcity of resources to support such care (most likely, it is a combination of all three). This is obviously an area which will require further study.

Transportation- As has been the case in the past, transportation is one of the highest ranked needs by PLWH, those at risk, and providers. North Carolina is a very large state geographically, and much of the state is considered rural, with few if any public transportation options. Much of the state's transportation is based on the automobile, which is not an option for individuals who are economically challenged. In addition, transportation is designated as a support service, and therefore subject to the maximum 25% limitation allowable for support services under Ryan White guidelines. This is far below what the need would dictate. **The State of North Carolina again calls for a reevaluation of this legislative language, and requests that transportation to medical care be considered as a core service.** Without such change, rural areas are continually penalized. In this regard, one of the suggestions to institute mobile care vans as a means of making care more available in the community would far exceed the availability of the limited resources.

Housing-The resources to address this issue are very limited. As with transportation, housing is a Ryan White support service, with the funding limitations of that designation. In addition, the types of activities which can be supported by RW are limited primarily to short-term emergency types of support. Housing is a very expensive proposition, and not something that the RW program is well equipped to address. While HOPWA services to address the need for housing, the RNCP continue to be challenged to locate willing landlords, affordable and safe housing, and housing that meets minimal standards in many areas of the state. People at high risk for HIV/STDs are not, of course, eligible for HOPWA or Ryan White services but we know that their risk of HIV is greatly increased where stable and affordable housing stock is out of their reach and homelessness is a true risk. This is particularly true for the transgender population who often lack any kind of safe housing.

Oral Health Care-This is a service that is increasingly being identified by both clients and providers as a high need service, in part because HIV-infected individuals are living longer and healthier lives. The link between oral health and general health has been increasingly stressed, and this linkage has had an impact within the HIV community. All evidence points to a lack of resources and providers to meet this identified need. Although the Regional Network guidance requires all Networks to assure the provision of oral health care, there appears to be a lack of dental practitioners who are willing to treat PLWH, particularly in rural areas. Supply is not adequate to meet demand, particularly dentists enrolled in Medicaid (it should be noted that obtaining dental care is a problem for all populations in the State).

Food and Nutritional Care-Providers are also increasingly aware of this connection, and are seeking ways to provide this information within the context of their program structures. Again, there is a limited amount that Ryan White can do in this regard. Food banks and home delivered meals, as a support service, are limited to the maximum 25% expenditure rate. Additionally, due to the impact of the economic crisis on the availability of alternative resources, the capacity to access this service has become increasingly more difficult. Nutritional counseling services when delivered by certified providers allow for the distribution of nutritional supplements as part of core services, but again scarce resources limit a program's ability to match the need which exists.

Effective Case Management-As both clients and providers have gained more experience with Medical Case Management, they have come to see the advantages of this more comprehensive, better coordinated service. Clients want to know that their case managers are doing all they can to ensure that the services they receive are provided in the most complete and effective manner possible. Many now seem to be aware that the case management services they had been receiving under previous systems were not as helpful as could have been expected, and that these revised methods could help to improve their health outcomes. Providers similarly recognize that they are playing a more central role in the supportive care of the clients they serve, and that these activities can lead to enhanced health outcomes for their clients.

Emergency Financial Assistance-Clients at the lower end of the socio-economic spectrum have always had a need for this type of assistance, and this continues to be an identified need. Given the current state of the economy, it is not surprising that this need persists. However, the limitations caused by the 25% maximum on expenditures for support services greatly constrains the ability to address the level of need which PLWH voice.

Mental Health/Substance Abuse- These two service needs are often identified together. This is because the two needs are frequently co-identified in PLWH and those at risk, the treatments are often considered in a combined context, and in many instances, the practitioner is the same. In addition, while it is very possible for an individual with mental health issues to be free of substance abuse issues, it is highly unusual for a substance abuser to not have a mental health issue. As has been true for a number of years now, North Carolina's mental health/substance abuse system has been in a state of flux, with the availability of services highly dependent on local systems operated by the State. As is the case with much of health care that is supported through State auspices, services tend to be fragmented and

under-resourced, and constantly undergoing change. But there is no doubt that mental health and substance abuse have a large impact on the capacity of PLWH to address their medical conditions. Persons with mental health/substance abuse issues are less likely to maintain medical visit appointments, or comply with complex medication regimens. In addition, they are more likely to engage in behaviors which increase the likelihood of HIV transmission, including falling out of care.

Prevention for Positives-Increasing prevention for positives programming is an identified need. More funding is needed to support evidence based programs that work with HIV positive persons, possibly also engaging peer mentors. Efforts to reduce HIV transmission by reducing risky behavior by those infected with HIV is seen as a valuable service, and currently there is limited funding and programming available for these activities. The Branch will fund four agencies in 2014 to conduct HIV prevention for positives services using either CDC approved interventions or local interventions with data showing that they are effective.

Bilingual Services-With the increase in non-English speakers in NC, more bilingual services are needed in testing venues, social marketing campaigns and in the provision of HERR, case management and clinical services. In order to effectively reach high risk populations, bilingual, especially Spanish, services are important.

Stigma/Prejudice-The reduction of stigma around HIV was strongly identified in the needs assessment process. Stigma was seen as a major barrier to people getting tested and using venues associated with HIV. Many high risk people refuse to get tested in their areas or travel out of their jurisdictions to get testing or HERR services. Social media and other training of the public, church leaders and health care providers are needed in order to increase the likelihood of high risk persons receiving HIV prevention services. Training health care providers on cultural competence was specifically stressed as important for providers serving men who have sex with men and people who inject drugs (PWID).

Health Education/Risk Reduction/HIV Prevention Education-There is a greater focus on the part of both PLWH and providers to learn about techniques to avoid spreading HIV infection, and how to employ them. PLWH continue to need a better understanding of viral suppression, and that there are risk reduction techniques that they could adopt to avoid HIV transmission. Similarly, there are many providers whose responsibilities could include providing health education, risk reduction education and/or HIV prevention education to infected individuals or those who are at high risk of contracting HIV. It is important to identify who these individuals are, and ensure that they have the knowledge, skills and resources to provide these services.

There is also a need to ensure that appropriate sexual health education is being taught in NC public schools and that students have access to sexual health information to include HIV and STD prevention messages. The CD Branch collaboration with the Department of Public Instruction is important in ensuring that these services exist. Every effort will be made by the Branch to encourage increased educational efforts on sexual health information throughout the public education system in North Carolina.

Increased Testing Services-A need to increase HIV testing programs was identified through the needs assessment process. There is a clear need for more funding to support local health departments and nonprofit organizations in conducting testing among persons at risk for HIV. Increased testing should be done in jails, hospital emergency rooms, substance abuse treatment centers, community health centers and other venues in which high risk persons can be located. Usage and availability of rapid HIV testing methodologies should be increased and nontraditional testing hours and services should be increased. Transportation for these populations to access testing was also identified as a need.

Increased Social Marketing Efforts-A need to develop statewide social marketing strategies was identified, to address stigma and to increase testing behavior focused on priority populations with emphasis on African American males, (especially MSM) as well as Latinos. Internet interventions should be included. Social marketing campaigns geared towards increasing healthy behaviors for people living with HIV/AIDS should be developed.

D. Assessing Needs, Gaps and Barriers

Within the Communicable Disease Branch the HIV/STD Prevention and Care Unit has been integrated since 2003. In 2009 the consortium model of care in the community was transitioned to a regional network model in order to assure that all funded care entities were also service providers and to build a better safety network of services for PLWH. By 2013 the Unit was strongly encouraging that funded prevention agencies also come to the regions' network meetings in order to more closely align with the goals of the National HIV/AIDS Strategy and to use the continuum care to address the needs of those most at risk of new infection. In 2015 it became mandatory that HIV/STD prevention, care and housing entities funded through the Unit would all fully participate in the Regional Networks of Care and Prevention (RNCP) and that the RFA released in August 2016 would be a joint prevention, care, and housing funding action, requiring that each RNCP work to assure a testing, care and housing safety network that covered their entire region through either funded or non-funded entities. While the care and housing needs of the Charlotte TGA are managed through the Part A, they also integrate prevention efforts that are funded by the state and work in partnership for linkage and retention efforts.

a. Process used to identify HIV prevention and care service needs of people at high risk for HIV and PLWH

North Carolina's 10 Regional Networks of Care and Prevention (RNCP) and the Charlotte TGA have all been required to conduct an annual Needs Assessment of their regions for many years, gathering input from PLWH, providers, testers and other interested parties; much of that feedback is incorporated in this document . In order to address the guidance of the Integrated Plan, additional steps were taken: regional input sessions were held throughout the state in June and July of 2016, with a wide variety of

interested parties invited to join the discussion (Medicaid, Medicare, Veteran's Administration, HIV medical providers and primary care providers, case managers, Ryan White all parts providers, HIV/STD counselors and testers, testing agencies, linkage specialists, housing providers, mental health and substance abuse providers, social workers, faith community members, and of course PLWH). Particular care was taken to assure that PLWH were aware of these sessions by publicizing them through the RNCP, through the Care and Prevention in the US (CAPUS) Safe Spaces, Men's Clinics, Patient Navigators, and the CAPUS list serve, and by encouraging clinics to tell PLWH and testers in clinics and CBOs to invite people at high risk for infection.

These meetings were held with great attention to geographic reach across the state in Charlotte, Hickory, Greensboro, Raleigh/Durham, Fayetteville, Greenville and Wilmington, and several locations held both daytime and evening meetings in order to provide an opportunity for those with less flexible schedules to attend. All of the RNCPs and the TGA were engaged to publicize the sessions, assist in taking notes, assist PLWH to attend, and urge their advocates and staff to attend. In order to protect confidentiality, PLWH were not asked to identify themselves although some chose to do so. It is often a challenge to engage service providers who are not directly serving PLWH, and this proved to be the case in these sessions. While we reached out to VA, housing, Medicaid and other relevant providers, they did not, for the most part, attend the sessions. Over 225 people attended the regional input meetings: 59% were minority; at least 17 people were living with HIV (who identified themselves publicly).

The same questions were posed in all 9 regional input sessions: where do people get information about health, what could agencies do better to help PLWH, how can HIV prevention, care and housing agencies get their messages across to people in your community, what HIV/STD prevention, care and housing needs are not being met in your community, which HIV or STD prevention, care or/and housing services are most effective in your community, which ones are least effective, what role does stigma play in your access to HIV/STD prevention, care or housing services, what other programs would you like to see in your community and why, what communities could greatly benefit from additional HIV prevention, care and housing activities, and where would you like to see more prevention, care and housing funding go in your community?

b. HIV prevention and care service needs of persons at risk for HIV and PLWH

PLWH and those at risk have continued to have many of the same service needs that have been expressed in the Statewide Coordinated Statement of Need and the Prevention Plan for a number of years. While some of these services may have improved in some areas, issues such as flat-funding, rurality, and large, sometimes unwieldy systems (such as Medicaid), continue to contribute to the needs expressed. These needs are particularly voiced for:

Dignified and empowering health care that respects racial diversity, LGB clients, and the transgender community;

Transportation, in rural and some urban areas;

A 'normalizing' of HIV, so that stigma no longer impedes care, treatment and testing;

Providers of mental health and substance abuse services; while funds are often available, providers who will accept the required Ryan White rate of reimbursement are not;

Housing and assistance in locating housing: affordable stock and landlords willing to accept HOPWA or other types of assistance is often very limited;

Safe Spaces to learn empowerment, life skills, how to talk to providers, how to disclose one's status safely, how to speak to family;

Increased opportunities for testing: those at risk worry about confidentiality and express the desire to test in non-traditional locations such as driver's license offices or church settings;

Members of the Eastern Band of the Cherokee expressed the need for testing in middle and high schools, in the new hospital Emergency Department, and in needle exchange sites (which may exist in the near future);

Clinics specializing in men who have sex with men and transgender people, for both HIV care and testing.

c. Service gaps identified by and for persons at high risk for HIV and PLWH

There is a great deal of overlap between service needs and service gaps, and many of the voiced concerns could move between the two categories.

Racial and sexual minority PLWH and those at risk for HIV express intense and frequent need for culturally competent providers, support staff, case managers, financial workers and even receptionists, who will treat them with dignity and respect, and without judgement or stigma; without such treatment they are clear that seeking care or screening is often "not worth the effort";

Transportation in rural areas: cabs are often not available, friends may not be trusted to transport, bus/train lines are non-existent or don't access the locations needed and while efforts are made to bring providers to a region ('circuit rider docs') it is difficult to maintain the provider's willingness to travel great distances;

Peer support and training: People living with HIV are often the most trusted to educate and empower other PLWH, but there is a tremendous gap in availability of trained peers, often due to lack of funding for them;

Sufficient medical care in rural areas, including infectious disease providers: medical providers do not want to live in very rural areas (Lumberton, Ahsokie) and therefore care is fragmented since providers travel to an area for one day/week or an afternoon clinic, etc., and sometimes it isn't possible to providers even to do that.

d. Barriers to HIV prevention and care services

These statements come directly from the regional input meetings we held across the state, with added input from people who participated in our CAPUS (Care and Prevention in the US) interventions. Throughout this section we have incorporated notes taken during the regional input sessions into word clouds. The word clouds illustrate common themes identified in the various geographic meeting locations by increasing the font size of the common themes that were mentioned the most.

i. Social and structural barriers

Social/structural barriers to testing and care have become the greatest hindrance to controlling the epidemic and ending HIV. The health inequities we are working to solve are deeply held, systemic, pervasive, and nationally rooted in white power and privilege. As in the US as a whole, the great majority of people living with HIV in North Carolina are racial and sexual minorities; the direct opposite of the general population, thus highlighting the health inequity that HIV disease has become both in the state and across the nation. It is both likely and obvious that HIV health inequity is the result of the social and structural barriers that minority people encounter in all walks of life and that, as a nation, we have not yet done enough to address.

ii. Federal, state, local legislative/policy barriers

While many policies have changed over the years on all levels, there continue to be policies, laws and accepted norms that hinder testing, care and linkage to services. While viral suppression is the ultimate goal for all HIV care, and frequent and comprehensive HIV and STD screening is now recommended practice, some policies and laws have not kept up with these advances. Community input made clear that the following issues continue to be cause of significant barriers:



iii. Health department barriers

While the caseload of PLWH has continued to rise with better care and fewer resulting deaths, more case managers, medical providers, data analysts and administrators are needed but cannot be hired due to flat funding. Capacity is simply not keeping up with demand. Prevention programs face similar challenges as more innovative testing strategies for hard-to-reach people also require more intensive and costly interventions, and tools such as PrEP, PEP and syringe exchange are strongly encouraged but completely unfunded.



iv. Program barriers

Flat-funding has resulted in a stagnant infrastructure in many of the programs of the Regional Networks of Care and Prevention (RNCP), including local health departments who are part of –and often lead–the Networks. Available data is quite good, and novel data-sharing agreements across Networks have resulted in the ability to manage the care and collaborative services for PLWH in a more efficient manner, however services provided by community-based organizations often lack access to health information systems and sometimes also lack up to date IT solutions. The twice/annual Ryan White certification and accompanying requirements at both the federal and state level have resulted in case managers solely working to authorize PLWH for services across Ryan White Parts A and B, rather than actually providing services, which in turn has become its own barrier to care and a critical point where PLWH fall out of care.

v. Service provider barriers

Primary care providers (PCPs) are often still unwilling to provide care to PLWH or to offer routine testing or take sexual histories; this is particularly troublesome as our Infectious Disease specialists are aging out of employment and we see fewer ID providers coming in. Great effort is needed to teach PCPs to provide routine HIV care and testing in medical schools and to engage them at the state and network level. Efforts to routinize or “normalize” HIV in medical school and other trainings will be critical to assuring adequate HIV care and prevention in community health centers, federally qualified health centers and private practices in the years to come, if we are to end new infections. Overall, social service structures and ‘safety net services’ are stretched very thin on all levels, not only in HIV care/prevention work. As a result, such providers rarely participate in RNCP meetings or assist in planning for HIV continua interventions, unless receiving funding that mandates participation. It would be extremely useful to see greater participation by: mental health/substance abuse providers, housing authorities, Medicaid, Affordable Care Act navigators, and veteran’s services.



vi. Client barriers

Barriers for PLWH and those at risk are increasingly divided between racial/sexual minorities and those who are not a minority demographic. As in other diseases and in many other aspects of daily life, social and structural barriers to testing and care are far greater for racial minorities and gay/lesbian/transgender people than for heterosexual Caucasian men and women.

E. Data: Access, Sources, and Systems

Core HIV Infection Surveillance

Enhanced HIV/AIDS Reporting System (eHARS)

Disease surveillance reports are forwarded to the state's Communicable Disease Branch through the North Carolina Electronic Disease Surveillance System (NC EDSS), by way of electronic or paper-based lab reporting, or by disease intervention specialist (DIS) interviews of all positive cases of HIV and acquired immunodeficiency syndrome (AIDS) (Stage 3) in the state, which is maintained in all 85 local health departments serving in the state's 100 counties. These surveillance reports include demographic and clinical information for the patient, as well as mode of exposure and vital status. Next, the reports are transferred to the enhanced HIV/AIDS Reporting System (eHARS). Morbidity surveillance data represent the most complete and comprehensive single source of information available about HIV infection and AIDS in the state.

These data provide estimates of HIV infection. As with other disease surveillance, reporting is not complete. (Some people infected with HIV have not been tested for the infection, and these cases remain undiagnosed and are not included in surveillance data.) An internal evaluation (using a program created by the Centers for Disease Control and Prevention [CDC]) was conducted to examine the completeness of HIV infection reporting data in North Carolina. The 2014 analysis indicated that reporting completeness was approximately 90 to 95% statewide. This estimate is used to adjust prevalence estimates.

The HIV Care Continuum uses data from eHARS, and there are no data policies that serve as barriers to developing the continuum. Incomplete lab reporting does exist in North Carolina, but surveillance is always improving. Because research has shown that the HIV Care Continuum based solely on surveillance data is an underestimation, the HIV/STD Surveillance Unit is currently working on incorporating other data sources in the development of the HIV Care Continuum.

For more information, please refer to the Communicable Disease Branch surveillance and reporting website: <http://epi.publichealth.nc.gov/cd/report.html>.

North Carolina State Center for Health Statistics: Leading Cause of Death Data

All deaths and fetal deaths that occur in North Carolina are reported to the state by the State Center for Health Statistics. The process involves a statewide system of hospitals, funeral directors, registers of deeds, local health department staff and others who register vital events. Statewide vital events are registered and maintained by the North Carolina Department of Public Health Vital Records Unit. Death

information includes the primary cause and underlying causes of death, but some causes of deaths, including HIV-related deaths, may be under-reported.

More information concerning the leading cause of death can be found at:

<http://www.schs.state.nc.us/schs/data/lcd/lcd.cfm>.

Medical Monitoring Project (MMP) Data

The Medical Monitoring Project (MMP) is a supplemental surveillance endeavor designed to learn more about the experiences and needs of adults receiving care for HIV in the US and Puerto Rico. It is supported by several government agencies and conducted by state and local health departments, along with the CDC. MMP describes met and unmet needs for HIV care and prevention services through patient interviews and medical record abstractions. It provides comprehensive clinical and behavioral information from patient samples randomly selected to represent the health status of people living with HIV infection. This information is used to evaluate healthcare services and guide policy and funding decisions aimed at improving the quality of care for people living with HIV infection throughout the US.

Since MMP's estimates are nationally representative, data collected from MMP are used to evaluate the White House Office of National AIDS Policy indicators. In addition, MMP data are used by prevention planning groups, policy leaders, health care providers, and people living with HIV infection to highlight care and services disparities, as well as to advocate for additional resources.

Please see the following website for additional information:

<http://www.cdc.gov/hiv/statistics/systems/mmp/index.html> .

HIV Testing Data

State-Supported HIV Testing Data

The Communicable Disease Branch receives funding from both federal and state sources to pay for a variety of HIV testing programs. Most of this funding comes from the CDC, but the State of North Carolina supplies additional HIV prevention monies and the federal Substance Abuse and Mental Health Services Administration (SAMHSA) supports testing in substance abuse centers. The Communicable Disease Branch then distributes money and resources (rapid test kits) to partners across the state that test the public for HIV, STDs and HCV. The Expanded HIV Testing program supports HIV testing in clinical settings such as community health centers and hospital emergency departments. These entities conduct their own tests and provide self-reported data to the CDB describing the number of tests performed and the number of positives. However, the majority of the HIV testing budget is allocated to HIV testing in public settings. These include more than 150 traditional test sites in local health department clinics, university health centers, community-based organizations (CBO), and 22 Integrated and Targeted Testing Services (ITTS) or non-traditional test sites (NTS). The purpose of the NTS program is to serve

difficult to reach populations through mobile outreach or extended office hours. Most of the tests conducted are processed by the North Carolina State Laboratory of Public Health (North Carolina SLPH) in Raleigh. This collaboration with the SLPH is a critical one, in order to assure on-going screening and access to testing for the uninsured. The CDB continues to be deeply grateful to the SLPH for its commitment and dedication to this work.

The Communicable Disease Branch collects data on HIV tests conducted through this effort on the counseling, testing and referral (CTR) form, which includes information on client demographics, risk factors, and reasons for HIV testing, and setting of HIV test. A much smaller number of tests are conducted using point of care (rapid) HIV tests for which data similar to that found on the CTR form are collected on a separate form.

Data collected on the CTR form are analyzed regularly and are used to improve HIV testing programs. It cannot be used to estimate statewide HIV incidence or prevalence for a number of reasons. The data cover only publicly-funded clinics and therefore do not reflect all the HIV tests done in the state. In fact, only about 30 percent of new HIV cases reported to the state come from the CTR. Patients tested are either self-selected for HIV testing, agree to testing after presentation to a counselor at a CTR site, or have been approached by the DIS through contact tracing and therefore do not constitute a population-based survey. Despite these limitations, the data are useful in monitoring testing trends and positivity rates among key subpopulations reached through public testing venues.

HIV Care and Treatment Data

Ryan White Care Act and Parts A and B Base Program Data

Congress enacted the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act in 1990 to provide funding for states and territories, eligible metropolitan areas (EMAs), and individual providers to offer primary medical care and support services for people living with HIV disease who lack health insurance and financial resources for care. At the federal level, the program is administered by the US Department of Health and Human Services (US DHHS), Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). It has five main parts: Part A (directly funds selected metropolitan areas), Part B (directly funds US states, territories, and the District of Columbia), Part C (directly funds clinics and hospitals), Part D (directly funds individual organizations to provide family-centered care for women, infants, children and youth with HIV infection), and Part F (funds several different targeted programs). Part F funding streams include: Special Projects of National Significance (SPNS), AIDS Education and Training Centers, Dental Programs, and Minority AIDS Initiative. Congress reauthorized the Ryan White CARE Act in 1996 and in 2000. The Ryan White Modernization Act of 2006 (which superseded the CARE Act) made significant changes to the HIV/AIDS care system in the United States and had a major impact on services in North Carolina and other southern states. While the Parts (formerly Titles) of the Act remained essentially the same as the previous CARE Act, new definitions adopted for Part A created North Carolina's only directly-funded locality: the Charlotte Transitional

Grant Area (TGA). The Charlotte TGA consists of five North Carolina counties in the Charlotte-Gastonia-Concord metropolitan area, including Mecklenburg County, and one county in South Carolina. In 2009, Congress reauthorized the Ryan White program once again.

In North Carolina, the Ryan White Part B base program is administered by the North Carolina Department of Health and Human Services (DHHS), Communicable Disease Branch (CDB), AIDS Care Program (ACP), in the HIV/STD/Hepatitis Unit. North Carolina's Ryan White Part B base program organizes 95 of the state's 100 counties into 10 Regional Networks of Care and Prevention (RNCP). The remaining five counties are part of the TGA, Ryan White Part A. Within each RNCP, groups of partnering agencies coordinate with each other to provide a range of necessary services, such as medical care, oral health care, case management, and other core and support services.

The ACP uses the HRSA-sponsored computer software program CAREWare to store and manage data for the Ryan White Part B base program. Ryan White Part B providers across the state input their data to a server maintained by ACP. CAREWare's data sharing feature allows providers serving the same client to access information on the client that another provider has entered. As a result, providers have a more comprehensive understanding of the services the client receives, and can see where potential gaps may exist in the person's care. While ACP mandates use of CAREWare for Part B program data, a number of providers also use CAREWare to store data for their Part C or Part D clients.

CAREWare data are an invaluable resource used in many ways. CAREWare facilitates the completion of annual reports required by HRSA, and it can be used to measure markers of clinical quality management. Four times a year, the ACP extracts data from CAREWare that are used for routine analyses, such as demographic reports, eligibility analyses, and the unmet need analysis. The dataset extracted each quarter includes information for clients who received at least one service during a one-year period. Data are extracted one month following the completion of the one year period. Data are extracted in May, August, November, and February.

Ryan White Part B base program data maintained in CAREWare are subject to limitations that make the data an incomplete representation of the population receiving care in North Carolina. First, only the Part B program recipients are required to be reported to the state, so clients served through other HRSA funded programs (such as the TGA and Part C and Part D programs) are not included. As a result, the data do not represent all clients receiving Ryan White services statewide. Second, Ryan White Part B eligibility is restricted to low-income residents of the 95 covered counties, so higher income individuals who are in care are not represented in the CAREWare data. It is becoming increasingly clear that while CAREWare is a valuable tool, it is not able to perform all tasks that are needed for HIV care monitoring, most importantly serving as a tool for eligibility determination.

AIDS Drug Assistance Program (ADAP)

The North Carolina AIDS Drug Assistance Program (ADAP) uses a combination of state funds, federal funds, and medication rebates to provide low-income residents of North Carolina with essential

medications for the treatment of HIV, related conditions, and other co-morbidities as well as prevention and/or treatment of related opportunistic infections. The ADAP Program Manual, available from the program's website (<http://epi.publichealth.nc.gov/cd/hiv/adap.html>), is the most up-to-date and comprehensive description of the program. The ADAP Program Manual includes information about eligibility requirements, the application process, federal poverty level guidelines, pharmacy locations, medication formulary, and contact information for program staff. In addition, the ADAP website contains the ADAP application forms. ADAP clients are required to renew their eligibility every six months, and ongoing documentation is a required component. There are three sub-programs within ADAP that pay for medications. The ADAP Pharmacy Program (APP) purchases medications directly from a contracted Pharmaceutical Wholesaler and distributes medications through a contracted Dispensing Pharmacy. The State Pharmaceutical Assistance Program (SPAP) uses a Pharmacy Benefits Manager to coordinate with Medicare Prescription Drug Plans to pay all out of pocket costs for any medications covered by the primary Medicare Prescription Drug Plan (Medicare Part D Plan or Medicare Advantage Plan). The Insurance Copayment Assistance Program (ICAP) uses a Pharmacy Benefits Manager to coordinate with Qualified Health Plans purchased on the Federal Marketplace (Healthcare.gov) to pay all out of pocket costs for any medications covered by the primary Qualified Health Plan. The ADAP program data are maintained at the state level using several different electronic systems, which are linked together as needed. ADAP data are a good source of information for the population of low-income HIV-positive North Carolinians needing medication assistance, and are also one source used to describe the population of people receiving HIV care.

More information can be found at: <http://epi.publichealth.nc.gov/cd/hiv/adap.html>.

North Carolina Electronic Disease Surveillance System (NC EDSS)

All North Carolina local health departments use NC EDSS to communicate new diagnoses of reportable conditions to the Communicable Disease Branch. The Communicable Disease Branch fully integrated sexually transmitted disease (STD) and HIV infection reporting into NC EDSS in December 2012. Integration of all nationally notifiable diseases in NC EDSS makes identification of comorbidities much easier. Electronic systems also allow for quicker communication of data between the state and local health departments, which may reduce reporting delay. While a few diseases or conditions are still reported using other CDC required reporting systems, such as the National Electronic Telecommunications System for Surveillance (NETSS) for animal rabies reporting, NC EDSS is a powerful tool for disease surveillance.

The transition to NC EDSS also included the integration of partner counseling and referral services data and referral data into NC EDSS. Therefore, NC EDSS includes not only morbidity information but also patient interviews of persons newly diagnosed with HIV infection or syphilis and information on care referrals and attendance.

SECTION II: Integrated HIV Prevention and Care Plan

A. Integrated HIV Prevention and Care Plan

In creating the following goals and objectives we have used the long history and experience of the CDB and the HIV/STD/Hepatitis Unit, as well as the experience of the Charlotte TGA, and the input of our providers, committed partners and most importantly the community of PLWH and those at risk to determine our priorities and goals for the next five years. They are itemized here.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch funded or supported agencies	CD Branch supported agencies and health departments will test at least 248,000 persons at risk for HIV in healthcare settings annually	<ul style="list-style-type: none"> • Young AA MSM • People who inject drugs (PWID) and other substance abusers • AA and Latino men and women • AA women 	<ul style="list-style-type: none"> • Number of HIV tests performed
By the end of 2021:	CD Branch funded or supported agencies	CD Branch supported agencies and health departments will test at least 43,000 persons at risk for HIV in non- healthcare settings annually and will achieve a positivity rate of at least 1%	<ul style="list-style-type: none"> • Young AA MSM • PWID and other substance abusers • AA and Latino men and women • AA women 	<ul style="list-style-type: none"> • Number of HIV tests performed • Number of newly diagnosed HIV positive persons

Strategy #2: Disseminate at least 5,000,000 condoms to persons at high risk for HIV annually through CD Branch funded condom distribution sites by 2021

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch funded or supported agencies	CD Branch supported agencies will distribute at least 400,000 condoms to people living with HIV annually	<ul style="list-style-type: none"> • Young AA MSM • PWID and other substance abusers • AA and Latino men and women • AA women • people living with 	<ul style="list-style-type: none"> • Number of Condoms distributed to people living with HIV

			HIV	
By the end of 2021:	CD Branch funded or supported agencies	CD Branch supported agencies will distribute at least 600,000 condoms to high risk HIV negative persons annually	<ul style="list-style-type: none"> • Young AA MSM • PWID and other substance abusers • AA and Latino men and women • AA women 	• Number of Condoms distributed to high risk HIV negative persons

Strategy #3: Ensure that 100% of local health departments (LHDs) in NC routinely test for HIV in STD and family planning clinics and are able to bill for HIV testing services

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch East Carolina University (ECU) contractors	ECU staff will assess all LHDs to determine current billing and HIV routine screening activities	<ul style="list-style-type: none"> • 100 NC LHDs 	<ul style="list-style-type: none"> • Number of LHDs assessed • Findings of assessments
By the end of 2021:	East Carolina University (ECU) contractors	ECU staff will deliver training on billing and HIV routine screening activities to LHDs not currently billing for HIV/STD testing	<ul style="list-style-type: none"> • NC LHDs requiring training 	<ul style="list-style-type: none"> • Number of trainings completed
By the end of 2021:	East Carolina University (ECU) contractors	ECU staff will evaluate post training HIV/STD billing and screening services for trained LHDs	<ul style="list-style-type: none"> • NC LHDs trained 	<ul style="list-style-type: none"> • Number of LHDs evaluated post training

Strategy #4: Ensure that NC DPH public health statutes and CD Branch policies align with the National HIV/AIDS Strategy.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	CD Branch staff will review current public health statutes and CDB policies relating to HIV prevention activities annually to ensure that they align with CD Branch goals and the NHAS.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	<ul style="list-style-type: none"> • Reviews of current statutes, policies

By the end of 2021:	CD Branch	CDB Staff will submit changes to public health statutes and CDB policies relating to HIV prevention activities that don't align with NHAS and CD Branch goals.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	• Policy change submissions
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Strategy #5: Ensure that RNCPs actively participate in sharing needle exchange and PrEP activities with PLWH that are served in their regional networks

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	CD Branch will require that all RNCPs develop MOAs with all identified needle exchange and PrEP providers within their regional networks.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	• Reviews of current MOAs
By the end of 2021:	CD Branch	CD Branch staff will collect and review RNCPs MOAs with needle exchange and PrEP providers within their regional networks.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women .	• Reviews of current MOAs
By the end of 2021:	CD Branch	CD Branch staff will review each RNCPs policy on sharing needle exchange and PrEP programs with PLWH on all site visits.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	• Site visits

Objective: Ensure that viral load suppression in PLWH is increased by 20% from 40% in 2014 to 60% by 2021.

Strategy #1: Ensure HIV medications are accessible to all PLWH.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	CD Branch staff will support insurance assistance for insured clients and ADAP assistance for uninsured clients to obtain ARVs to ensure that they align with CD Branch goals and the NHAS.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	• Reviews of current access and adherence to ARVs via NC ECHO, NC ADAP and RW Part B client records.

Strategy #2: Ensure all PLWH are continually linked, engaged, and retained in care.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	CD Branch staff will assist consumers with linkage, engagement, and retention to care to ensure that the activities implemented by contracted agencies keep clients enrolled in the system of care and to ensure that the activities are aligned with CD Branch goals and the NHAS.	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	<ul style="list-style-type: none"> • NC ECHO and lost to care client data.

Strategy #3: Ensure all PLWH who receive housing services through HOPWA are strongly encouraged to be engaged in care.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	CD Branch staff and contractors will assess where HOPWA clients receive medical care and assist with linkages to medical care when needed.	People living with HIV	<ul style="list-style-type: none"> • CW data, the CAPER, NC ECHO.

Strategy #4: Ensure that 100% of the HOPWA eligible individuals receiving Tenant-Based Rental Assistance (TBRA) and Short-Term Rent, Mortgage and Utility Assistance (STRMU) are entered in CAREWare including all pertinent medical information in order to measure Viral Load Suppression.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	Contractors will enter all HOPWA clients' medical information into CAREWare to include viral suppression rates.	People living with HIV	<ul style="list-style-type: none"> • CW data.

NHAS Goal: Increasing access to care and improving health outcomes for PLWH 2017 – 2021.

Objective: By 2021, increase the percentage of HIV positive people linked to care to 85% from the currently benchmark of 66%.

Strategy #1: Ensure that at least 85% of people identified with new HIV infections keep an initial HIV primary care appointment within 30 days of being diagnosed as HIV positive

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch funded or supported agencies	CD Branch supported agencies, bridge counselors, patient navigators, DIS and health departments will ensure that at least 85% of those testing newly positive for HIV will keep an HIV primary care appointment within 30 days of being diagnosed	<ul style="list-style-type: none"> People newly diagnosed with HIV 	<ul style="list-style-type: none"> Number of newly diagnosed HIV positive persons linked to care within 30 days of HIV diagnosis

Strategy #2: Ensure that at least 90% of those newly identified as HIV positive receive interviews and are offered partner services.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	DIS and Field Services Staff	CD Branch staff will ensure that at least 90% of all persons newly diagnosed with HIV are given their test results	Persons newly infected with HIV	<ul style="list-style-type: none"> Number of newly-identified HIV positive test results returned to clients
By the end of 2021:	DIS and Field Services Staff	CD Branch staff will ensure that at least 90% of all persons newly diagnosed with HIV will be interviewed and will be offered partner services and HIV testing for partners of those infected.	Persons newly infected with HIV	<ul style="list-style-type: none"> Number of clients with a newly identified HIV-positive test result referred to and interviewed for Partner Services
By the end of 2021:	DIS and Field Services Staff	CD Branch staff will ensure that at least one person is initiated for partner services for every HIV positive interviewed for HIV	Persons newly infected with HIV	<ul style="list-style-type: none"> Number of newly-identified HIV positive test results returned to clients

Strategy #3: Ensure that the percentage of HIV positive people retained in care increases by 20% from 35% to 55%.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
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By the end of 2021:	CD Branch	CD Branch staff will support Patient Navigation activities for minorities through funding via contracts with agencies in at least 5 regions and the TGA to ensure that they align with CD Branch goals and the NHAS.	People living with HIV	<ul style="list-style-type: none"> • Reviews of CERS/MERs, RSR data, and CW data.
By the end of 2021:	CD Branch	CD Branch staff will utilize state bridge counselors to assist PLWH with linkage, engagement, and retention to care to ensure that the activities implemented by contracted agencies keep clients enrolled in the system of care and to ensure that the activities are aligned with CD Branch goals and the NHAS.	People living with HIV	<ul style="list-style-type: none"> • NC ECHO and lost to care client data.
By the end of 2021:	CD Branch	CD Branch staff will track medication adherence and viral suppression rates for PLWH enrolled in the ADAP program.	People living with HIV	<ul style="list-style-type: none"> • ADAP data.
By the end of 2021:	CD Branch	CD Branch staff will assist PLWH with obtaining stable housing thru HOPWA TBRA vouchers and STRMU assistance.	People living with HIV	<ul style="list-style-type: none"> • CERS/MERs, HUD CAPER, and CW data.

Strategy #4: Ensure that at least 85% of PLWH are screened for Syphilis (annually) and Hepatitis B and C (one time of diagnosis).

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch funded or supported agencies	CD Branch supported agencies will conduct annual screenings on PLWH for syphilis and one time screenings for Hepatitis B and C	<ul style="list-style-type: none"> • People diagnosed with HIV 	<ul style="list-style-type: none"> • CAREWare

NHAS Goal: Reducing HIV-related health disparities and health inequities

2017 – 2021 Objective: By 2021, decrease the prevalence of non-white HIV cases in NC to 60% from the current benchmark of 71%.

Strategy #1: Ensure that 100% of Regional networks of care and prevention (RNCP) and the Charlotte TGA develop approved prevention for positives plans.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch funded or supported agencies	The CD Branch will require each RNCP and the TGA submit a plan to address HIV prevention for positives in each application submitted for the 2016 Prevention and Care RFA	HIV positive young AA MSM, PWID and other substance abusers, as well as AA and Latino men and women, and AA women	<ul style="list-style-type: none"> • Number of applications including prevention for positives plans
By the end of 2021:	CD Branch funded or supported agencies	The CD Branch will create an infrastructure to support the implementation of the Safe Spaces Intervention within each RNC and the TGA by delivering the curriculum based support group to HIV positive men and women to boost health literacy, medication adherence and retention in care by self-reported data of the Safe Spaces participants (SSP)	HIV positive young AA MSM, IVDU and other substance abusers, as well as AA and Latino men and women, and AA women	Number of SSP who enroll and complete SS from each RNC and the TGA

Strategy #2: Ensure that at least 5 agencies are funded statewide to conduct CDC approved prevention for positives interventions.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch funded or supported agencies	The CD Branch will support at least 5 agencies to provide high quality HIV prevention for positives interventions	HIV positive young AA MSM, PWID and other substance abusers, as well as AA and Latino men and women, and AA women	<ul style="list-style-type: none"> • Number of agencies funded for P4P
By the end of 2021:	CD Branch funded or supported agencies	CDB funded agencies will meet all contractual outcomes for prevention for positive interventions	HIV positive young AA MSM, PWID and other substance abusers, as well as AA and Latino men and women, and AA women	<ul style="list-style-type: none"> • Contractually mandated outcomes achieved

Strategy #3: North Carolina will maintain statewide and local social marketing campaigns promoting HIV testing and linkage to care messages to North Carolinians at high risk for HIV and other STDs.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	The CD Branch will maintain one statewide social marketing campaign encouraging HIV primary prevention, testing, and linkage to care	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	<ul style="list-style-type: none"> • Number of TV, print and radio ads • Number of calls to HIV hotline
By the end of 2021:	CD Branch	The CD Branch will require all agencies funded for HIV CTR activities to maintain a local social marketing campaign to support HIV testing, and linkage to care services	Young AA MSM, PWID and other substance abusers. AA and Latino men and women, AA women, people living with HIV	<ul style="list-style-type: none"> • Number of local social marketing campaigns implemented as indicated by agency quarterly reports and CD Branch site visit reports

Strategy #4: Ensure that all CD Branch staff and all staff supported for HIV prevention, care, and housing activities by the CD Branch completes a state sponsored cultural competence training (Culturally Competent Care- C3).

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	The CD Branch will offer a three part cultural competence class that all CD Branch staff and contractors involved in HIV prevention, care, and housing will complete	CD Branch staff and all CD Branch contractors involved in conducting or monitoring HIV CTR	<ul style="list-style-type: none"> • Number CD Branch staff involved in monitoring HIV CTR completing the course • Number of contracted staff involved in monitoring or implementing HIV CTR completing the course

Strategy #5: Ensure that all PLWH and housing providers participate in fair housing trainings offered across NC.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
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By the end of 2021:	CD Branch	The CD Branch will send fair housing invitations to the RNCPs, announce fair housing trainings at all quarterly network meetings, and incorporate the requirement for Fair Housing Training in contractual Scopes of Work.	Housing providers and people living with HIV.	<ul style="list-style-type: none"> • Number of housing providers and PLWH who attend fair housing trainings.
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Strategy #6: Ensure that MAI activities are provided in each RNCP and the TGA on an ongoing basis.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	The CD Branch will fund each RNCP and the TGA for MAI activities to enroll/re-enroll PLWH into the ADAP.	AA and Latino men and women, AA women, people living with HIV	<ul style="list-style-type: none"> • Number of PLWH receiving MAI services, RSR data, and CW data.

Objective: By 2021, the CD Branch will conduct at least 15 Culturally Competent Care trainings across the state for a minimum of 500 HIV care medical, para-professional providers and other clinic staff to raise awareness around recognizing personal biases, the importance of cultural responsiveness for patients on an individual level and the role public health and clinic policies and practices play in improving health equity for racial and ethnic minorities in NC.

Strategy #1: Ensure that all HIV care medical, para-professional providers and other clinic staff are invited to participate in C3 training.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	The CD Branch will send invites to the C3 trainings via the HIV prevention, care, and housing list serves.	CD Branch staff and all CD Branch contractors	<ul style="list-style-type: none"> • Number of list serves and individuals receiving the C3 invitations.

Strategy #2: Ensure that all RNCPs announce C3 trainings at quarterly network meetings.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	The CD Branch and TGA staff will announce C3 trainings at all RNCs quarterly network meetings.	CD Branch and TGA staff	<ul style="list-style-type: none"> Number individuals from RNCs that register and attend C3 trainings.

Strategy #3: Ensure that all HIV prevention, care, and housing contractors are required per their contract to attend C3 training.

Timeframe	Responsible Parties	Activity	Target Population	Data Indicators
By the end of 2021:	CD Branch	The CD Branch will mandate that all contracted and sub-contracted agencies attend C3 trainings.	CD Branch contractors and sub-contractors	<ul style="list-style-type: none"> Number individuals contracted and sub-contracted agencies who attend C3 trainings.

Charlotte TGA (Part A)

Based on the 2014 Unmet Need Framework, it is estimated that throughout the TGA there are 4,996 PLWH/non-AIDS/aware who did not receive primary medical services. This number represents 75% of the total population living with HIV/AIDS. We know that that is not the reality in our area. The real percentage is around 26% PLWH/non-AIDS who do not receive primary medical services. However, the new methodology utilized as instructed in the Part A FOA is giving us an unrealistic percentage. The 26% is realistic when concluded from all of our data resources.

The table below exhibits the planned activities of the TGA including the following:

- Target populations
- Priority needs by target population
- Activities that will be undertaken, responsible parties and timeline
- Major collaborations with other programs and agencies, including HIV prevention and surveillance programs.

TARGET: Tested in the Past 12 Months	
Priority Needs	<ul style="list-style-type: none"> Psychological support to cope with imminent positive result EIS/Case management support to help navigate the service delivery network
Cultural Challenges	<ul style="list-style-type: none"> Stigmatization faced by PLWHA Fear of disclosure to their family/friends due to cultural beliefs and misconceptions about the virus

Activities to address the barriers that obstruct awareness of HIV status		Implementation Timeline	Responsible Parties
Provide HIV testing in non-traditional settings, or settings that do not typically offer healthcare or testing services such as clubs or events.		Ongoing	Part A Grantee/EIS Providers and Prevention/ Intervention Partners
Addresses disparities by ensuring access and services among affected subpopulations and historically underserved communities in the TGA.		Ongoing	Part A Grantee/EIS Providers and Prevention/ Intervention Partners
TARGET: MSM (African American, Hispanic, Youth 13-24)			
Priority Needs	<ul style="list-style-type: none"> • Health insurance • Supportive Services • Psychosocial support (Youth 13-24) • Bilingual providers 		
Cultural Challenges	<ul style="list-style-type: none"> • Distrust of medical system, underrepresented in healthcare workforce, homophobia, fear of discrimination, concerns about confidentiality, lack of health insurance 		
Activities to address the barriers that obstruct awareness of HIV status		Implementation Timeline	Responsible Parties
Ensure collaboration with providers specialized in providing services to Lesbian, Gay, Bisexual, Transsexual and Transgender (LGBTT) groups and has the availability of bilingual personnel, for Spanish speaking clients.		Ongoing	Grantee/ Part A Providers
HIV/AIDS Community Resource directory distribution at churches, homeless shelters, gay bars, public housing, local jails, mental health and substance abuse treatment centers.		Ongoing	Grantee/Part A EIS Providers and Prevention/ Intervention Partners
Provide health literacy/health education at LGBT centers, homeless shelters, substance abuse treatment centers, mental health clinics, and local jails.		Ongoing	Part A EIS Providers and Prevention/ Intervention

		Partners
Develop and implement a Ryan White marketing campaign that includes components targeting African American, Hispanic and Youth MSM's.	Ongoing	Grantee/Part A EIS Providers and Prevention/ Intervention Partners
TARGET: Women (African American, Hispanic and Youth 13-24)		
Priority Needs	<ul style="list-style-type: none"> • Health insurance • Supportive Services • Psychosocial support (Youth 13-24) • Bilingual providers • Child Care • Interpretation Services 	
Cultural Challenges	<ul style="list-style-type: none"> • Commercial sex workers, single parents, fear of loss of work or partner, fear of abuse, language barrier, and concern about immigration status. 	
<i>Activities to address the barriers that obstruct awareness of HIV status</i>	<i>Implementation Timeline</i>	<i>Responsible Parties</i>
Provide HIV testing locations at community health centers, STD clinics, emergency departments, urgent care centers, public housing, homeless shelters, and women's shelters.	Ongoing	Grantee/Part A EIS Providers and Prevention/ Intervention Partners
Ryan White HIV/AIDS Service Directory distribution (including bi-lingual) at homeless shelters, Hispanic community centers, public housing, local jails, mental health and substance abuse treatment centers.	Ongoing	Grantee/Part A EIS Providers and Prevention/ Intervention Partners
Develop and implement a Ryan White marketing campaign that includes components targeting Youth, African American and Hispanic Women	Ongoing	Grantee/Part A EIS Providers and Prevention/ Intervention Partners

TGA (Part A) FY16 EIIHA Plan contributes to the goals of the National HIV/AIDS Strategy: The specific goals, and the consistency with NHAS goals, to identify and attach unaware individuals to care involves the following five primary mechanisms:

1) Universal HIV testing

NHAS Goal: Reducing New HIV Infections; Expand targeted efforts to prevent HIV infection using a combination of effective, evidence-based approaches.

TGA Goal: Increase the number of individuals who are aware of their HIV status.

2). Early Intervention Services/Outreach with extant provider

NHAS Goal: Reducing HIV-Related Health Disparities; Improve access to prevention and care services for all Americans.

TGA Goal: Increase the number of HIV positive individuals who are in medical care.

3. Health Literacy/Health Education with peer involvement

NHAS Goal: Reducing New HIV Infections; educate all Americans about the threat of HIV and how to prevent it.

TGA Goal: Increase the number of HIV negative individuals referred to services that contribute to keeping them HIV negative.

4. Partner Notification

NHAS Goal: Reducing New HIV infections; achieving a more coordinated national response to the HIV epidemic.

TGA Goal: Increase the number of individuals who are aware of their HIV status.

5. Linkage to Care

NHAS Goal: Increasing Access to Care and Improving Health Outcomes for People Living with HIV; establish a seamless system to immediately link people to continuous and coordinated quality care when they learn they are infected with HIV.

TGA Goal: Increase the number of HIV positive individuals who are in medical care.

B. Collaborations, Partnerships and Stakeholder Involvement

a. Contributions of stakeholders and key partners' to the development of the Plan

Stakeholders and key partners have contributed to the development of the Joint Plan in various formats. The state HIV Prevention and Care Advisory Committee (HPCAC) and TGA Advisory Committee played an integral role in soliciting feedback from HIV prevention and care providers and consumers across our state by distributing surveys and contributing ideas to how we can improve upon NC's care, prevention and housing systems and services across the state. Many of the Regional Networks of Care and Prevention (RNCP) assisted with logistics for the listening sessions with major contributors and community stakeholders who were able to come to the table and voice their concerns. Many of those concerns were transformed into activities that help drive the goals and objectives of our Integrated Plan. HPCAC and the TGA Advisory Committee will further support the efforts by assisting in carrying out the goals, objectives, and activities that are included in the Plan. These collaborative efforts will ensure the

success of the plan from a grass roots level. With the communities' involvement, success of the Plan is more likely to evolve over time.

Other plans for collaborations will also assist in these efforts. A group of representatives from Medicaid and the Ryan White Part B program have come together to form one of the recognized CMS/HIV Affinity Groups. The focus of this group is on HIV positive recipients who receive services from both Medicaid and the Part B program. The group is in the early stages of forming, but we are optimistic about the future and what plans will come within HIV services across our state.

The North Carolina Office of Minority Health and Health Disparities (OMH) is a valuable partner in our efforts and we look forward to continual collaboration with them in our newly formed Health Equities program. The North Carolina AIDS Action Network (NCAAN) is an invaluable statewide asset and we continue to collaborate with them on strategies related to HIV prevention and care. RW Parts A and B are focusing their efforts over the next year on combining the twice a year recertification process into an identical frame work. By doing so Part A clients who receive ADAP services will be able to submit the same information to both entities rather than gather information on two separate recertification processes. Thus duplicative efforts will be minimized and a barrier will be removed for clients in an effort for them to receive services in a more efficient manner. We intend to continue such collaborations, including our search for an electronic process for clients to apply for RW services and be deemed eligible. Stakeholders and partners not involved in the planning but needed to improve outcomes

We took notice of the agency representatives that minimally participated in the planning process. While efforts were made to be inclusive of these agencies, invitations to participate were not accepted from the following:

Medicaid

Affordable Care Act navigators

Veterans service agencies

Also, minimal participation occurred from the following type agencies:

Mental health/substance abuse providers,

Housing authorities

Our attempts to become fully inclusive to effectively improve the health outcomes of those at high risk and along the HIV Care Continuum will have more success if stakeholders and communities that receive services from these agencies become fully involved with our Joint Plan process. Many of these stakeholders can play a critical role in helping to overcome the structural barriers to care and assist in decreasing stigma and normalizing HIV. We will continue to brainstorm on bringing these representatives to the table.

c. Letters of Concurrence See Appendix C People Living with HIV (PLHA) and Community Engagement

This Integrated Plan includes both the 10 Regional Networks of Care and Prevention (RNCP) that receive the Ryan White Part B funds through the State of North Carolina and the Charlotte Transitional Grant Area (TGA) that receives Ryan White Part A funds directly from HRSA. Therefore, there are two planning and approval bodies involved in community engagement. Membership in the TGA Advisory Group encompasses a vast representation of the TGA's service providers and is enhanced by consumer involvement, increasing efficiency, and reflective of the diversity of the epidemiology in the TGA.

The TGA Advisory Board includes representation from

- North Carolina Department of Health
- Union County Department of Human Services
- Support Service providers
- Health Care Providers
- Affected Community
- Ryan White Part C providers
- Ryan White Part D provider
- Non-elected Community Leaders
- Substance Abuse / Mental Health Providers

The TGA encourages the participation of PLWH in the planning and resource allocation process: increased outreach efforts to consumers, to explain the program, explore their role and establish relationships of trust have resulted in the relationships and structures that facilitated consumer involvement. PLWH are informed of the progress of the Ryan White Program, questions are answered and concerns addressed. The TGA facilitates the participation of PLWH by providing them with transportation (van services) and meals.

The state's HIV Prevention and Care Advisory Committee (HPCAC) is governed by by-laws, and assures two seats for membership from each of the Part B RNCP and may include medical and case manager providers, family members affected by HIV, and PLWH; members serve for a two year term. Meetings are open to the public and occur three times/year; only members who have been voted into HPCAC may vote on procedural issues or letters of concurrence. There are currently 32 voting members of NC HPCAC and include MSM, PLWH, transgender individuals, LGBTs, professionals, and faith community members; currently 25% are PLWH. They are racially/ethnically diverse with 7 black men, 12 black women, 2 Latino men and 1 Native American. Achieving geographic diversity has sometimes been a challenge and it is not uncommon that not all voting seats are filled. Similarly, participation by PLWHA is also challenging, due to schedules, transportation across a large state, and the fact that, unlike HIV providers, PLWH are often not working in a field that will allow them to attend such meetings.

HPCAC's mission is to provide advice, support and communication regarding HIV/STD Prevention and Care Unit concerns to the HIV/STD Prevention and Care Program and the communities at-large infected, affected and impacted by the plight, perils and challenges of HIV/AIDS and other STIs. HPCAC members elect officers (Community Co-chair, Vice Chair and Secretary) to serve with the HIV/STD Prevention and Care Unit Co-Chair. HPCAC members develop policies and procedures, disseminate annual surveys to evaluate HPCAC's effectiveness and orient new members through structured trainings. Letters of either concurrence, concurrence with reservation or non-concurrence are submitted on behalf of HPCAC to support HRSA, HUD, CDC and other State and federal funding source requirements. HIV Prevention and Care planning is a critical process by which local health departments (LHDs) work in partnership with the community and key stakeholders to enhance access to HIV prevention, care, and treatment services for the highest-risk populations.

As stated in Section I, D, 8 regional listening sessions were held around the state, in addition to the written plans submitted by most of the Regional Networks, which assessed gaps, barriers and needs and included both provider and stakeholder input. 17 PLWH publicly identified themselves during these sessions; we are confident that others were present but did not wish to disclose in a group setting. 59% of attendees were minorities. Providers were urged and encouraged to advertise these sessions widely and to bring PLWH and those at risk with them to the meetings and assessments. As is often the case, while the demographics of participants was reflective of the epidemic in North Carolina, continued efforts must be made to extend greater inclusion to PLWH and young minority MSM at risk for infection. Meetings were held both during business hours and after-hours. A number of PLWH made a point to talk to management staff at other times and through email, further enabling staff to gain valuable insight about needs and barriers.

In developing this Integrated Plan, we also felt it was important to seek the feedback of our State Bridge Counselors (SBCs): these are staff who work every day with PLWH and whose specific task is to re-engage people who have fallen out of care. Their experience and input, on behalf of PLWH with whom they work were as follows:

Barriers to care include transportation, limited access to care due to distance to providers, concern about losing jobs if they are out due to medical appointments, decent housing, landlord stigma about HIV, legal issues, caring for sick parents or children and putting self last, religious teachings, lack of insurance;

Policy barriers include cuts to programs that provide screening and prevention on the local level, required co-payments for care, necessary documents to obtain services or financial assistance, seemingly minor criteria that disqualify for needed services, HIPAA sometimes seen as a barrier, felony prohibition for housing;

Client experiences that contribute to remaining out of care include families refusing shelter to PLWH, insensitive clinic staff, long waits for appointments and in waiting rooms, case management not offering enough assistance, crippling fear of others finding out status, denial about need for care

Because it can be challenging to gain critical insight from impacted communities and particularly from PLWH, and to then develop and viable solutions to identified problems, the HIV/STD/Hepatitis Unit has made the decision to begin a new process to engage PLWH in the fall of 2016: listening sessions will be held throughout the state solely for attendance by PLWH with the HIV/STD/Hepatitis Director, Jacquelyn Clymore, and the Health Equity Program Coordinator, Nicole Beckwith. The current co-chair of the CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment (CHACHSPT), Peter Byrd, has offered to assist in these sessions, using his considerable experience in community engagement and his expertise as a PLWH. We anticipate that the listening sessions will be held outside of traditional work hours and with the intention of seeking further input from PLWH about the barriers they experience and potential solutions they would like to see. We anticipate that after the initial sessions are completed, a regular PLWH Community Advisory Board (CAB) will be inaugurated formally, to meet at least twice/year, to advise the state about needs, services and issues of health equity. To date, there has not been a CAB comprised solely of PLWH (as opposed to one that includes providers or families also) so this is a new effort and an experimental one.

North Carolina was one of 8 awardees of the national CAPUS awards (Care and Prevention in the US) from CDC and HRSA, from 2012-2016, and the interventions developed and the outcomes achieved through that work have significantly shaped the work of the HIV/STD/Hepatitis Unit going forward. It has become clear, both through our CAPUS work and in the regional listening sessions held in advance of this Plan that issues around stigma, judgement, racism, and white power and privilege are continuing to shape the lives of the great majority of PLWH and those who should be tested. It is also clear that until we all address these issues, we will not be successful in 'getting to zero' and achieving viral suppression for the great majority of People Living With HIV. Therefore as CAPUS ends, we will carry forward the work of three effective interventions with existing funding (there are insufficient funds to carry all of the work forward) and the CAPUS Manager has been hired as the new Health Equity Coordinator to manage the effort. The Program will include Safe Spaces (regional support and education groups across the state for young minority MSM, most of whom are PLWH, using a curriculum developed with input by both PLWH and those at high risk), Men's Clinics (providing care and support services in two locations in the Raleigh/Durham area to minority MSM and those at high risk for infection) and the Culturally Competent Care (C3) curriculum, which was created by CAPUS staff, the ATEC and PLWH, and focuses on meaningful change of attitudes and beliefs for any type of provider who interacts with any racial or sexual minority PLWH. C3 will be contractually required training for funded entities under Part B and prevention funding, and for all HIV/STD state staff members as well. To date, the impact of these three interventions is as follows, and we anticipate being able to better tie these efforts to linkage/engagement and viral suppression in the future:

Safe Spaces: 595 client participants; 303 graduates; 65% viral suppression among all

Men's Clinics: 230 patients; 80% retained in care

C3: 615 providers trained across 50 of the state's 100 counties

It is also important to note that, through the 4 years of the CAPUS project, all of the interventions, curricula and trainings were developed by minority people and/or people living with HIV. More than any other activity, this project has been very intentionally driven and designed by members of the community it was designed to reach.

We believe that the efforts of CAPUS and the new Health Equity program will play a key role in addressing many of the concerns voiced by the communities of PLWH and those at risk, most particularly concerns about stigma of living with HIV or being tested for it, judgement by providers for being gay, MSM or transgender, issues of racial inequity and white privilege, access to PrEP, empowerment for young minority MSM and medical literacy around viral suppression and the importance of care.

It is also important to make note here of a new and exciting tool that North Carolina has inaugurated to assist clients in staying in care, and assist providers, DIS and State Bridge Counselors in re-engaging those people who fall out of care. NC ECHO (Engagement in Care for HIV Outreach) is a real-time database that draws in elements from the databases for CAREWare, ADAP, Medicaid and NCEDSS (North Carolina's electronic integrated disease surveillance system). Through the work of an on-site epidemiologist, a regular monthly out-of-care list will be generated and distributed to state bridge counselors, who will engage the providers in locating and returning PLWH to care, overcoming barriers to care and engaging with a case manager. We anticipate that NCECHO will be a critical tool in the work of linkage, engagement, retention, including helping people connect to antiretroviral therapy and becoming virally suppressed.

SECTION III: Monitoring and Improvement

- a. Process for regularly updating planning bodies and stakeholders on the progress of plan implementation, soliciting feedback, and using the feedback from stakeholders for plan improvements.**

North Carolina's Care and Prevention programs have been part of a single integrated organizational entity for more than 10 years, and the two programs have always worked cooperatively. As the HIV Care Continuum has continued to evolve, and Federal funding partners have placed a growing emphasis on the integration of care and prevention, moving forward in incorporating participation from our disparate prevention and care partners has been a natural part of this evolution.

North Carolina's Public Advisory Planning Process has not changed in the last year. Care and Prevention Advisory Committees were merged into a single entity in 2013 (HPCAC), and have maintained and improved the same close working relationship that the 2 program staffs have demonstrated.

HPCAC is comprised of the following elected representatives:

A care and a prevention representative from each of the 10 regional networks and the TGA; A Ryan White Part A/TGA representative; Eleven (11) consumers from various parts of the state; Four (4) members-at-large; A state co-chair from the HIV Prevention and Care Unit; and Members from the first four groups listed above are elected as a 1) Community Co-Chair; 2) Vice Chair; and 3) Secretary to serve CY terms each year. HPCAC general membership ends after a two year term followed by vacancy elections.

HPCAC continues to be an integral contributor when updates are warranted to the plan. Many of our stakeholders are members of HPCAC and continue to be heavily involved with process of the Joint Plan. The members have played a major role in completing the statewide needs assessment and continually play a role in brainstorming for new HIV prevention and care activities across our state. Our plan is to continue this relationship so that major community players always have a say and influence programs of HIV prevention and care. The HPCAC silos are how we purpose to implement the plan and improve upon the plan when necessary.

b. Describe the plan to monitor and evaluate implementation of the goals and SMART objectives from Section II: Integrated HIV Prevention and Care Plan.

Care

Monitoring has always been a key component of North Carolina's Part B program. Our monitoring activities involve a mix of office-based and field-based strategies, which have become more detailed and time-consuming as both State and Federal requirements have increased. Office-based activities include review of budgets and contracts, review of monthly expenditure reports and quarterly progress reports, discussing and responding to issues raised by contractors and subcontractors, and review of CAREWare generated statistical reports and quality management reports and activities. The State's Subrecipient Monitoring Plan requires that each contractor receive at least two onsite visits per year. During these visits, AIDS Care Program (ACP) staff conduct detailed reviews of fiscal reports, including matching expenditures to source documents. Staff also conduct detailed chart reviews to ensure that services are being appropriately provided and recorded. Additional site visits may be made to contractors if issues arise which cannot be settled over the phone or through email, or if technical assistance needs to be presented to contractor staff. The detailed chart reviews and quarterly progress reports will provide the tools necessary to monitor and evaluate the implementation of the goals and SMART objectives from the Integrated HIV Prevention and Care Plan.

During twice a year site visits staff also review charts to ensure that eligible Part B clients are reauthorized for RW Part B services every 6 months during the specified reauthorization periods (January – March and July – September). The ACP does not allow clients who are not authorized to receive Part B services. This guideline mirrors the NC ADAP which also does not allow clients to receive medications through the program unless they are reauthorized during the same reauthorization periods specified above. New clients and clients that are reentering the RW Part B and ADAP service spectrum can reauthorize at any time, but must be RW and ADAP authorized prior to receiving any services.

Prevention

Program Monitoring - CD Branch staff monitor all funded and supported agencies through the NC subrecipient monitoring policy which requires regular monitoring of their activities. This NC Department of Health and Human Services policy is on file and available upon request. Through this policy, CD

Branch staff monitors ensure that the most effective technologies and strategies and methodologies are used to maximize HIV testing, HERR and PCRS services. Program Monitors conduct at least two site visits during the contract period. Monitors ensure that all agencies report data and outcome measures required of each agency at least quarterly and ensure that these outcome measures are met or plans are made to achieve unmet outcomes. Monitors ensure that project staff have current knowledge of HIV and STDs and are able to provide appropriate counseling, testing, referral, PCRS and HERR services by ensuring staff attend trainings provided by the Communicable Disease Branch. In addition, they observe project staff conduct counseling sessions and educational presentations and ensure that staff provide participants with prevention intervention activities in a respectful manner compatible with their cultural health beliefs, practices, and preferred language. Monitors ensure that all services are delivered in a manner consistent with the CDC 2006 Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings.

Not all agencies supported by the HIV/STD/Hepatitis Unit receive funding or enter into contractual agreements with the Branch. Thirty four agencies in NC participate in the NC HIV Rapid Test Program. The NC HIV Rapid Test Program supplies HIV rapid test kits to eligible agencies to use in testing high risk populations. These agencies must complete and submit an application to the Rapid Test Program and meet certain criteria including training on HIV CTR and the use of rapid test technologies, an HIV Testing Certificate, a CLIA Waiver, Standing Orders from a physician licensed to practice medicine in North Carolina, and they must enroll in the CDC's Model Performance Evaluation Program. Eligibility Requirements for the NC HIV Rapid Test Program are on file and are available upon request. CD Branch monitors ensure that these sites submit required data and use supplied test kits appropriately. All 53 agencies participating in our rapid HIV testing program sign MOUs with the CD Branch detailing operating procedures and outcomes expected which are assessed by program monitors.

Continued efforts are made to identify high-prevalence, nontraditional venues and identify a positivity rate of at least 1.0% in non-clinical settings, and confirm linkages of care for 80% of their clients. Branch staff works with funded agencies to discuss program operations and needs, successes and weaknesses, and make recommendations for improvement. Analysis of counseling, testing and referral patient data is used to guide agencies to make adjustments to their programs and monitors require improvement plans for sites realizing positivity rates of below 1%. Clinical sites supported by the CD Branch are monitored via the same contractual agreements as non-clinical sites and report testing data on a quarterly basis. This data is analyzed by CD Branch staff and clinical sites with an HIV positivity yield of less than .1% are required to work with program monitors to develop a plan to increase their positivity rates. PCRS and bridge counseling (linkage to care) services are monitored by the Field Services Branch and are conducted by DIS in seven regional offices across the state. HIV linkage to an initial HIV primary care visit is coordinated by Bridge Counselors assigned to five HIV/STD regional offices. Monitoring for these activities consists of quarterly STD/MIS reports detailing all PCRS outcomes and monthly data reports from Bridge Counselors that capture linkage to care for all newly report HIV positives reported to those regions. DIS and Bridge Counselors are held accountable to state standards for these activities which are available upon request. DIS and Bridge Counselors not meeting state objectives are counseled and provided additional training or capacity building to increase their productivity.

Data Monitoring - The HIV Prevention Program collects data on HIV testing performed by entities and agencies supported by the Communicable Disease Branch (CDB). All data is reviewed on at least a quarterly basis and is used to assess program activities as well as progress towards both overall program and agency specific objectives. Here is a brief list of data sources:

- Self Report – CBOs, health departments, and other agencies who receive funding under certain testing programs (including Non-traditional Test Sites and Expanded Testing) send in quarterly self-reports for the number of tests performed and the number of positives. These can later be verified against other sources.
- NC State Laboratory of Public Health – Health departments in 100 counties and many CBOs send their samples to the SLPH in Raleigh for testing. The required HIV testing data is collected right on the laboratory submission form and is entered at the SLPH. North Carolina has its own HIV testing data forms and data entry system. The forms are scanned using Teleform and then verified by data entry clerks at the SLPH. The HIV Prevention Program receives data directly from the lab once per quarter. This data is converted to a SAS dataset and is cleaned and processed by Epidemiologists in the HIV Prevention Program. This data is also converted to a csv file and submitted to CDC via Evaluation Web.
- Rapid Testing – Agencies that receive rapid testing kits from the CDB fill out a separate form that comes directly to the Prevention Unit for data entry. The CD Branch has a similar Teleform scanning system for these forms but all are handled directly within the HIV Prevention Program. North Carolina is currently making revisions to the forms sent to the SLPH. The new form will accommodate both conventional blood tests sent to the SLPH for processing and rapid tests all on the same form. All of this data will be entered at the SLPH and there will no longer be a need for separate rapid testing forms or a separate database. These changes are slated to take place in the Fall of 2012.
- Clinical Datasets – One of the challenges in working with clinical settings under the HIV Expanded Testing Initiative (ETI) was reducing data burden. For most of the Community Health Center and Emergency Department sites, we agreed to let them send us a quarterly spreadsheet exported from their clinic database rather than filling out paper forms. These spreadsheets are managed in MS-Excel and in SAS by HIV Prevention Program Epidemiologists.

Surveillance Data

In North Carolina, both medical providers and laboratories are required to report positive HIV test results to the Health Department. At this point, a majority of reports reach us via electronic laboratory reporting but medical providers sometimes use paper forms as well. The Surveillance Unit at the DHHS Communicable Disease Branch processes all reports to determine whether or not they are already in the system. Any new diagnoses or previous diagnoses that are new to North Carolina will be forwarded to the geographically appropriate Regional Office for Partner Services follow-up. The HIV case information for surveillance purposes is housed in an EHARS database at the CD Branch in Raleigh. Partner services follow-up data is housed in one of seven separate STD-MIS databases in the seven regional offices. None of these databases is currently linked. However, North Carolina is moving to a single, statewide electronic surveillance system (NCEDSS). The system is currently operating for nearly all infectious diseases. The last two to be added will be HIV and syphilis in Fall 2012. This new system will replace and combine the function of the 7 stand-alone STD/MIS databases. This system is being designed to better track subsequent referrals to care, medical appointments, etc. Reporting/Matching Data Sources HIV Testing data from the SLPH dataset is prepared for quarterly (now biannual) submission to CDC via EvaluationWeb. Data is converted to the required variable formats using SAS software and then the entire file is converted to xml format for upload to EvaluationWeb. Additional reporting is required under the HIV Expanded Testing Initiative (ETI). In the past this was for PS-10-1038 but this will now fall under 12-1201 Part B. These reports were in the form of tables in the report narrative, rather than as submitted datasets. In order to report on all tests performed under ETI, it is

necessary to combine information from SLPH testing, rapid testing, clinical testing datasets, and some of the special datasets. The CD Branch is moving toward doing more of this electronically but for now, most data sources are analyzed individually and results are tallied by hand for the final tables. The CD Branch matches screening data to surveillance twice a year to determine whether or not HIV positive cases are new diagnoses. This is time-consuming and currently requires a lengthy delay to ensure that surveillance information is up to date at the time of the match. Right now it is not possible to perform this match before CDC reports are due so the “new” vs. “previous” case status is based on patient self-report. The switch to NCEDSS should improve this process. Currently screening data is not matched up to the partner services data at all. It would require a huge time gap and the combination of at least 8 datasets, this problem should be fixed in the move to NCEDSS.

Quality Assurance Description:

The Field Services Unit (Partner Services) and the HIV/STD Prevention Program will continue to use a variety of means to enhance and determine the skills and knowledge necessary to successfully carry out program activities. These programs use state developed training curricula (CTR training, DIS module training, ISTD etc.) based on, but separate from the CDC training options. After completion of formal training, Field Services and HIV/STD Prevention Program staff evaluates participants to assess the delivery and quality of the training, and provide opportunities for feedback to enhance existing services. Newly trained staff works in tandem with existing staff until management is confident of their abilities to conduct their duties according to state standards and do such in a culturally and linguistically appropriate manner.

The Field Services Unit training team meets quarterly with Field Services management to provide updates on activities and set priorities. Currently, a four person statewide training team consists of one assistant Field Services Manager, the training coordinator, a former DIS supervisor, and a lead DIS. The benefit of having a statewide training team allows the Unit to focus on training needs and not be affected by fluctuation of regional training resources around daily DIS priority work. Also, the training team provides support to the regional supervisor to accomplish training goals of their team. The training coordinator has the primary responsibility for resource assessment and development and is constantly monitoring training needs and ways to most effectively accomplish training needs and is in contact with CDC’s training staff and National Network of Prevention Training Centers (NNPTC). Current efforts to reach disproportionately affected populations such as MSMs and Latinos has allowed the Unit to work with long time representatives of these communities. DIS with special skills, Senior DIS and Regional Supervisors are a part of the local training teams used to present courses for the staff. The Branch will continue to offer capacity building trainings for HIV prevention service providers and staff throughout North Carolina in 2014. The HIV/STD Prevention Program requires all supported agency staff conducting HIV CTR to complete a two day state sponsored CTR class and also provides evidence based intervention trainings annually based on the unmet needs. The trainings are prioritized per the data collected on regular needs assessments of supported agencies. Other regular trainings include: organizational infrastructure, fiscal management, DEBI interventions, CTR, Rapid Testing, logic models, STD/HIV101, and reaching priority populations, capacity building is also conducted at the contract monitor level. CD Branch staff also work closely with the CDC CRIS system to request needed HIV prevention training for agencies needing it. All sites funded by the CD Branch for HIV prevention and CTR activities receive at least two site visits annually and routine capacity building and TA from their monitors. CD Branch staff ensures that all positive HIV test reports are reported to the appropriate state and local agencies according to NC statutes. The Division of Public Health, Department of Health and Human Services, is authorized by law (N.C. G.S. § 130A-134 through 130A-143) to collect reports of HIV cases. North

Carolina General Statute § 130A-135 requires licensed physicians to report cases and suspected cases of reportable communicable diseases and conditions in persons who have consulted them professionally. Cases of HIV infection and AIDS are reported on the communicable disease report card (DHHS 2124) and the surveillance form appropriate for the age of the patient: adult (DHHS4114) or pediatric (CDC Form 50.42B.) Physicians forward case reports to the local health department in which they are consulted. Cases are then reported to the local and to the state health department through a number of mechanisms, including direct communication like phone calls, mail, electronic laboratory reporting, and via a standardized DHHS disease questionnaire and reporting form (DHHS 2124). Once these reports are received they are investigated by CD surveillance and DIS staff to determine if they are new cases and if so are forwarded to the HIV/STD Regional offices for follow up and PCRS services.

c. Describe the strategy to utilize surveillance and program data to assess and improve health outcomes along the HIV Care Continuum which will be used to impact the quality of the HIV service delivery system, including strategic long-range planning. We ultimately aim to utilize surveillance and program data to target ways to increase viral load suppression along the HIV Care Continuum. This is accomplished through various surveillance reporting systems including the new NC ECHO (our out-of-care database). NC ECHO went live in August 2016 and allows Medicaid, NC EDSS, CAREWare, NC ADAP, and the Charlotte TGA to work together to identify clients that have fallen out of care. The state bridge counselors then work with RNCPs and medical providers to locate these individuals and link them back in to care if it is determined that they remain as residents of NC. Once these clients are identified, then efforts to get them back into care and on medications begin immediately. Medication adherence ultimately leads to viral load suppression and decreases the risk of individuals spreading HIV/AIDS.

All contractors and subcontractors are required to use CAREWare, which is housed on a central State server. All contractors enter client level data into the CAREWare system, and that data is available to providers throughout the State who may provide services to that client. RSRs have been routinely completed and submitted by each contractor with 100% of contractors able to report CY 2015 client level data. Our CAREWare Coordinators remain current with all CAREWare/RSR developments, and continuously provide technical assistance to contractors to ensure that they utilize the system appropriately.

ADAP collects program data through its own systems, and has appropriately completed and submitted ADAP Data Reports.

The AIDS Care Program does not engage in clinical quality improvement projects. The QMT reviews Performance Measure results and consults with others in the CDB about trends which may be relevant to our contractors. The quality committee of each RNC develops quality improvement projects relevant to their regional needs, taking into consideration how they are doing with each of the required performance measures. They report to the ACP on these projects in their quarterly narrative reports.

The Regional Quality Council (RQC), our Cross-Part Collaborative, has been meeting since 2009. Over the years, the RQC members have chosen Quality Improvement projects that the whole group would work on. Projects require teamwork between clinical staff, pharmacists, case managers and ancillary staff. In other words, people who enroll clients in ADAP, pharmacists who counsel patients on adherence, case managers who help clients in many ways and provide treatment adherence counseling, nurses and prescribing

providers. The projects that RQC members as a group have worked on include efforts to increase cervical cancer screening, efforts to keep people in care before they are considered lost to care, tracking retention, testing increases in support services, viral load suppression and recently, increasing rates of STI screening. The successful viral load suppression QI projects included: developing chart review tools to help identify patients with high viral loads, identifying patient barriers, developing person-centered plans, providing pill boxes or other methods to help patients track daily intake, increasing the involvement of medical case managers and pharmacist in treatment adherence activities, training medical case manager on treatment adherence counseling and co-locating behavioral health and substance abuse services. We have yet to develop QI projects for O/A services or MCM, we develop QI projects to improve viral load suppression or STI screening and all relevant team members in a clinic or provider agency will participate.

We engage in several activities to monitor contractors' engagement in Quality Improvement. First, we require 10 clinical performance measures. QI projects to improve the measures typically take several months to fully implement and show results. Therefore, we stopped running the CW performance measures module every 3 months and moved to extracting the data 2 times each year and developing reports that help our contractors see how they are doing in comparison to everyone else. We also chart their progress over time. As a follow-up, we discuss how they are doing and what steps they are taking to meet goals and improve performance.

Second, when program monitors make site visits, they always look at a sample of client charts to determine if the clients received the services required to meet performance goals.

A significant way that we support our contractors and other grantees is through the RQC. Our meetings typically involve some "training" or new material, as well as, reporting on efforts to implement projects, results and challenges. We also try to schedule statewide trainings on QI.

The NC RQC consists of all of the clinical providers in the state who receive funds from one or more Ryan White Parts. All of these providers are engaged in Quality Improvement Projects to improve viral load suppression and have been involved in these projects since August of 2012. The National Quality Center has an online repository in which our RQC and other cross-part collaboratives have their own group space to save and share materials. There are approximately 40 different presentations from our providers describing their work to improve viral suppression rates in their clinics. Some document the efforts they have made to zero down on the data so they could determine what categories of patients need intensive assistance, while others describe pairing a navigator, case manager, or a pharmacist with high risk patients for treatment adherence. These activities follow the goal of the HIV Care Continuum and are ultimately the goal of HIV prevention and care activities across our state.

Appendix A

Regional Networks of Care and Prevention Financial and Human Resources Inventory

Region 1

Funding Source	Funding for Care/Prevention	Impact on HIV Care Continuum	Amount Funded	Percent of Overall Funding for Care and Prevention
SAMHSA	No		NA	0%
HUD	No		NA	0%
Indian Health Services	No		NA	0%
Office on Women's Health	No		NA	0%
Office of Minority Health	No		NA	0%
Office of Rural Health	No		NA	0%
Office of Population Affairs	No		NA	0%
FQHC	No		NA	0%
Ryan White Part C HRSA (WNCCHS)	Care	Link, Engaged and Retained, Prescribed ARV, VL Suppression	\$641,714	31%
Ryan White Part D HRSA (WNCCHS)	Care	Link, Engaged and Retained, Prescribed ARV, VL Suppression	\$445,696	21%
County Funding	No		NA	0%
City Funding	No		NA	0%
State Funding Ryan White Part B (WNCCHS)	Care	Linked to Care, Engaged/Retained in Care, Prescribed ARV, VL Suppression	\$604,259	29%
State Funding Ryan White Part B (WNCAP)	Care	Linked to Care, Engaged/Retained in Care, VL Suppression	\$186,000	09%
Non-Part B State Funding	No		NA	0%
Private Funding	No		NA	0%
CDC (WNCAP)	Prevention	Diagnosed with HIV	\$146,000	07%
Sisters of Mercy Foundation (WNCAP)	Care	Linked to Care, Engaged/Retained in Care, VL Suppression	\$49,000	02%
Elton John Foundation (WNCAP)	Prevention	Diagnosed with HIV	\$10,000	<1%
United Way (WNCCHS)	Care	Engaged/Retained in Care, Prescribed ARV's, VL Suppression	\$19,000	01%
Total			\$2,101,669	100%

Region 2

Public / Private Funding Source	2016 fiscal Year Amount RECEIVED and % of total available funds	Provider Agencies Name, address, contact info	Services Funded/Delivered	Continuum Steps Impacted
Ryan White - Part B	\$417,054 / \$934,647 = 44.5%	Catawba Valley Medical Center 810 Fairgrove Church Rd SE Hickory, NC 28602 Michelle Lusk (828) 326-3467 (828) 326-2922 (Fax) mlusk@cvmc.us	Medical Care Dental Care Mental Health Emergency Financial Assistance Food Bank Transportation Medical Case Management Psychosocial Support	<ul style="list-style-type: none"> • Linked to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Ryan White - Part C	\$373,043 / \$934,647 = 40%	Catawba Valley Medical Center 810 Fairgrove Church Rd SE Hickory, NC 28602 Michelle Lusk (828) 326-3467 (828) 326-2922 (Fax) mlusk@cvmc.us	Medical Care Dental Care Mental Health Substance abuse HIV Counseling and Testing Outreach	<ul style="list-style-type: none"> • HIV Counseling and Testing • Diagnosed with HIV • Linked to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression

NC Care Branch- Prevention Grant	\$65,000 / \$934,647 = 7%	ALFA 1120 Fairgrove Church Rd SE St 28 Hickory, NC 28602 Christina Kliesch (828) 322-1447 (828) 322-8795 alfadirect@alfainfo.org	HIV Counseling and Testing Outreach	<ul style="list-style-type: none"> • HIV Counseling and Testing • Diagnosed with HIV • Linked to Care
HOPWA	\$79,550 / \$934,647 = 8.5%	ALFA 1120 Fairgrove Church Rd SE St 28 Hickory, NC 28602 Christina Kliesch (828) 322-1447 (828) 322-8795 alfadirect@alfainfo.org	Long term Housing Assistance Emergency Housing Assistance Emergency Utilities Assistance	<ul style="list-style-type: none"> • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression

Region 3

Organization	Services Provided	Funding Sources & Amounts	Continuum of Care
AIDS Care Service	HOPWA (STRMA and TBRA) Ryan White Medical Case Management, Food Pantry, support groups, transitional housing, intermediate care facility.	Ryan White Part B \$60,000; HOPWA \$259,483; City of Winston-Salem Housing Authority funding	Linked to Care Engaged/Retained in care Viral load suppression
Carolina Cares Partnership	HIV testing (SAC), Rowan & Iredell counties	State HIV prevention, \$unknown	HIV testing Linked to care

Center Point Human Services	Mental Health Services – Local management entity (Davie, Forsyth, and Stokes Counties)	State funding; third party reimbursement	Linked to Care Engaged/Retained in care Viral load suppression
Crossroads Behavioral Health	Mental Health Services – Local management entity (Iredell, Surry, and Yadkin Counties)	State funding; third party reimbursement	Linked to Care Engaged/Retained in care Viral load suppression
Duke Legal Services	Legal Aid	Ryan White \$100,000	
Forsyth County Health Department	HIV/STD Prevention and Testing	HIV Testing Federal \$150,000; Syphilis Elimination Federal \$81,637; Jail Screening Federal \$160,000; State AIDS \$25,000; County \$42,756	HIV testing Linked to care
Infectious Disease Specialists, Winston-Salem	HIV Medical Care	3 rd Party reimbursements	Linked to Care Viral Load Suppression
Housing Authority of Winston-Salem Winston-Salem, North Carolina	HOPWA Tenant-based Rental Assistance	HOPWA \$58,422	Linked to Care Engaged/Retained in care Viral load suppression
Lexington Housing Authority	HOPWA Tenant-based Rental Assistance	HOPWA \$62,988	Linked to Care Engaged/Retained in care Viral load suppression
NIA Community Action	HIV Testing (ITTS), Forsyth County	State HIV prevention, \$16,000	HIV testing
PBH (Cabarrus Family Medicine)	Mental Health Services (Davidson and Rowan Counties)	Third party reimbursements	Linked to Care Engaged/retained in care Viral load suppression
Positive Wellness Alliance	HOPWA, Ryan White Medical Case Management/Support Services, Support Groups, HIV Education	Ryan White Part B \$120,000; HOPWA \$125,400; United Way \$25,650; Other Grants \$15,000	Linked to care Engaged/retained in care Viral load suppression
R.I.C.H C.D.C Winston-Salem, North Carolina	HOPWA STRMU, Medicaid HIV CMS	HOPWA \$10,000; Medicaid reimbursements	Linked to Care Engaged/Retained in care Viral load suppression
Rowan Housing Authority	HOPWA Tenant-based Rental Assistance	HOPWA \$6,420	Linked to Care Engaged/Retained in care Viral load suppression
Statesville Family Practice	Primary care, dental care	Ryan White Part B \$7,500	Linked to Care Engaged/Retained in care Viral load suppression

Wake Forest University Health Sciences	Ryan White Part B, C, and D HIV Medical Care and Medical Case Management/ Support Services	Ryan White Part B \$967,255; Part C \$501,453, Part D \$436,213;	Linked to Care Engaged/Retained in care Prescribed ARVs Viral load suppression
WECHAHN	HIV testing (SAC) Rowan county	State prevention, funding for this region alone unknown	HIV testing Linkage to care

Region 4

Public / Private Funding Source	2016 fiscal Year Amount RECEIVED and % of total available funds	Provider Agencies Name, address, contact info	Services Funded/Delivered	Continuum Steps Impacted
Ryan White-Part D HOPWA –HUD - City of Greensboro) Private Funding	$\$34,202 / \$ 35,654 = 96\%$ $\$176,410 / \$528,148 = 34\%$ $\$33,551 / \$ 161,617 = 21\%$	Central Carolina Health Network 301 E. Wendover Ave., Suite 113 Greensboro, NC 27401 Kent Gammon 336-292-0665 kent.gammon@cchn4.org	Bridge Counseling-Medical Case Management Housing TBRA/Referrals Oral Health	<ul style="list-style-type: none"> • Linked to Care • Engaged/Retained to Care
Ryan White- Part D	$\$16,300/\$25,459 = 64\%$	Access Dental Care 125 South Park Street Asheboro, NC 27203 Bill Milner (336) 626-7232 bmilner@accessdentalcare.org	Oral Health	<ul style="list-style-type: none"> • Engaged/Retained in Care
Ryan White-Part D	$\$7,700/\$13,469 = 57.17\%$	Alcohol Drug Services of Guilford, Inc. 301 East Washington Street, Suite 101 Greensboro, NC 27401 Jackie Butler (336) 333-6860 jbutler@adsyes.org	Substance Abuse: Assessment/Counseling/Case Consultation/Referral/Case Management	<ul style="list-style-type: none"> • Engaged/Retained In Care • Linked to Care
Ryan White-Part D Private Funding	$\$3,500/\$6,000 = 58\%$ $\$5,000/\$30,000 = 17\%$	Family Service of the Piedmont 902 Bonner Rd. Jamestown, NC 27277 Tom Campbell 336.889.6105 TCampbell@fspcares.org	Mental Health Counseling/screenings	<ul style="list-style-type: none"> • Engaged/Retained in Care • Linked to Care • HIV Counseling and Testing

NC Communicable Disease Branch	\$372,489/\$372,489 = 100%	Guilford County Department of Health and Human Services 1203 Maple Street Greensboro, NC 27405 Anita Ramachandran 336-641-3136 336-641-6971 (fax) aramach@myguilford.com	Integrated Targeted Testing Services	<ul style="list-style-type: none"> • Education • Prevention • Testing • Linkage to Care
NC Communicable Disease Branch	\$146,814/\$146,814 = 100%		Jail Testing	
NC Communicable Disease Branch	\$0/\$62,912 = 0%		Gonorrhea Partner Services	
Ryan White- Part D	\$25,340.50 / \$43,034.00 = 59%	HomeCare Providers of Alamance 3025 S Church St. Burlington, NC 27215 Michelle White 336-538-8632 Michelle.White@conehealth.com	Testing	<ul style="list-style-type: none"> • Prevention • Awareness • Linkage to Care
NC Communicable Disease Branch	\$25,364.57 / \$68,000= 37%		Counseling Outreach Integrated Targeted Testing	
Ryan White- Part C, D	\$31,281/\$31,281 =100%	Piedmont Health Services, Inc. - Burlington Community Health Center 1214 Vaughn Road Burlington, NC 27217 Abigail DeVries 336-506-5840 devriesa@piedmonthealth.org	Primary Medical Care Specialty Infectious Disease Clinic Rapid HIV testing	<ul style="list-style-type: none"> • HIV counseling and testing • Diagnosed with HIV • Linked to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Ryan White- Part D	\$38,790/\$60,923 =64%	Piedmont Health Services and Sickle Cell Agency 1102 East Market Street Greensboro, NC 27401 Kathy Norcott (336) 274-1507 knorcott@piedmonthealthservices.org	Outreach & Testing	<ul style="list-style-type: none"> • HIV counseling and testing • Early Diagnosis • Increase awareness • Linkage to care and/or treatment
Guilford County Dept of Public Health	\$147,100/\$229,845 = 64%		Street/Community Outreach Pre/Post test Counseling Screening for HIV, syphilis, gonorrhea, Chlamydia,	
NC Communicable Disease Branch	\$51,200/\$80,000 = 64%		Education, counseling and testing in Substance Abuse Treat Facilities	
Ryan White – Part C,D	\$11,205/\$23,067 =48%	Randolph Hospital 364 White Oak Street Asheboro, NC 27205 Susan Nichols (336) 633-7705	Medical Care Primary Care Medication assistance Mental health services Referral coordination	<ul style="list-style-type: none"> • Diagnosed with HIV • Linked to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression

		snichols@randolphhospital.org		
Ryan White – Part C,D Private Funding NIH Funding	\$211,575 / \$ 259,917 = 81% \$114,636/\$229,272 = 50% \$251,379/\$633,609 = 40%	Regional Center for Infectious Disease 301 E. Wendover Ave, Suite 111 Greensboro, NC 27401 Dave Jenkins Phone 336.832.7840 Fax 336.832.3285 Dave.jenkins@conehealth.com	Medical Care Primary Care Medication assistance Mental health services Referral coordination AIDS Clinical Trials	<ul style="list-style-type: none"> • HIV testing in ED and partner testing in clinic • Linked to Care • Engaged/retained in care • Prescribed ARV's • Viral Load Suppression

Note: Some duplication in that some of our Network Partners subcontract with other Network Partners.

Region 5

Public / Private Funding Source	2016 fiscal Year Amount RECEIVED and % of total available funds	Provider Agencies Name, address, contact info	Services Funded/Delivered	Continuum Steps Impacted
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RW Part C RW Part D SPNS 330€(g)	\$321,307 \$451,572 \$299,935 \$47,500	CommWell Health Chris Vann PO Box 227 Newton Grove, NC 28366 910-567-7006 910-567-5678 (fax)	Medical, Dental, Behavioral Health, Support Services, Case Management, Transportation Medical Home Model for Homeless HIV+ Targeted outreach and testing	Linked to Care Engage/Retain in Care Prescribe AVR's Viral Load Suppression Identification of Positives
RW Part C	\$514,188	Robeson Health Care Corp. Carla Monds 402 N. Pine St. Lumberton, NC 28358 910-738-2110 910-738-2988 (fax)	Support Group Medical Care Outreach Substance Abuse Mental Health Transportation Medical Case Management	Linked to Care Engage/Retain in Care Prescribe AVR's Viral Load Suppression
Grants/Donations	\$10,000	Border Belt AIDS Resources Team Brenda Hunt PO Box 945 Lumberton, NC 28359 910-739-6167 910-739-6169 (fax)	Transportation Emergency Financial Assistance Case Management	Link to Care Engage/Retain in Care
Office Of Minority Health	\$43,000	Community Health Interventions and Sickle Cell Agency, Inc. Elazzoa McArthur 2409 Murchison Rd. Fayetteville, NC 28301 910-488-6118 910-488-6810 (fax)	HIV/HCV CTR for persons of color in non-clinical settings.	Identification of Positive/Reactive person Linage to Care and Treatment

Region 6

Public / Private Funding Source	2016 fiscal Year Amount RECEIVED and % of total available funds	Provider Agencies Name, address, contact info	Services Funded/Delivered	Continuum Steps Impacted
CAPUS		Advance Community Health 1001 Rock Quarry Road Raleigh NC 27610 919-833-3111	Outpatient/ambulatory care	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Ryan White	\$1080.00	AIDS Community Residence Association, Inc. PO Box 25265 Durham, NC 27702 Brenda Ruffin 919.229.4406-Office/Fax bruffin@acradurham.org	Transitional Shelter Case Management Transportation	<ul style="list-style-type: none"> • Linked to Care • Engaged/Retained in Care
State Prevention	\$255,000/\$1,350,880 = 18.9%	Alliance of AIDS Services-Carolina 1637 Old Louisburg Rd. Raleigh, NC 27604 (919) 834-2437	Integrated Targeted Testing Services (ITTS)	<ul style="list-style-type: none"> • Testing • Linkage to care
State Prevention	\$75,000/\$1,350,880 = 5.6%	Alliance of AIDS Services-Carolina 1637 Old Louisburg Rd. Raleigh, NC 27604 (919) 834-2437	Substance Abuse Centers (SAC) Testing	<ul style="list-style-type: none"> • Testing • Linkage to care
State Prevention	\$110,000/\$1,350,880 = 8.1%	Alliance of AIDS Services-Carolina 1637 Old Louisburg Rd. Raleigh, NC 27604 (919) 834-2437	Effective Behavioral Intervention Services (EBIS) Program: CLEAR	<ul style="list-style-type: none"> • Risk reduction for individuals living with HIV • Medication compliance • Treatment Adherence • Substance Abuse/Mental Health • One-on-one counseling
Not directly funded	\$0	Alliance of AIDS Services-Carolina 1637 Old Louisburg Rd. Raleigh, NC 27604 (919) 834-2437	Food Pantry	<ul style="list-style-type: none"> • Food and nutritional services for individuals living with HIV and/or low income households
Ryan White Part B	\$37,526	Community Alternative Housing 304 S. Steele Street Sanford, NC 27330	Medical Case Management Administration	<ul style="list-style-type: none"> • Engaged/Retained in Care • Link to Care • Viral Suppression

Emerging Communities	\$35,222	CommWell Health 3331 Easy Street Dunn, NC 28334 910-567-6194	Medical Case Management	<ul style="list-style-type: none"> Engaged/Retained in Care Diagnosis Link to Care Viral Suppression
Ryan White Part B	\$119,585	Duke Adult ID	Mental Health Counseling Substance Abuse Counseling Referral Healthcare/Support Outpatient/ambulatory care Administration	<ul style="list-style-type: none"> Engaged/Retained in Care Prescribed ARVs Viral Load Suppression
Emerging Communities	\$27,230	Duke Adult ID	Mental Health Counseling	<ul style="list-style-type: none"> Engaged/Retained in Care Prescribed ARVs Viral Load Suppression
HOPWA – Vance Granville, Warren, Lee, Durham, Wake, Orange, Chatham (Six months) eff 1/1/16, Granville, Lee, Vance, Warren	\$271,000	Duke Partners In Caring Duke University Medical Center 200 Trent Drive DUMC 3112 Durham, NC 27710 919-684-3211 919-681-7338	STRMU TBRA Resource Identification Supportive Services	<ul style="list-style-type: none"> Short-term housing and utilities assistance Housing Stability
HOPWA – eff 1/1/16 Durham, Person, Orange, Chatham	\$140,663	Duke Partners In Caring Duke University Medical Center 200 Trent Drive DUMC 3112 Durham, NC 27710 919-684-3211 919-681-7338	STRMU TBRA Resource Identification Supportive Services	<ul style="list-style-type: none"> Short-term housing and utilities assistance Housing Stability
Ryan White – Part B – WCHS	\$56,218	Duke Partners In Caring Duke University Medical Center 200 Trent Drive DUMC 3112 Durham, NC 27710 919-684-3211 919-681-7338	Eligibility Psycho-social Case management	<ul style="list-style-type: none"> Engaged/Retained in Care Spiritual care

Substance Abuse Center Testing – HIV/STD program	\$75,000	Duke Partners In Caring Duke University Medical Center 200 Trent Drive DUMC 3112 Durham, NC 27710 919-684-3211 919-681-7338	Bundled testing (HIV, HCV, syphilis)	<ul style="list-style-type: none"> • CTR • Linkage-to-care • Re-engaged to care
SABG HIV set-aside funding – Alliance Behavioral Healthcare	\$119,850	Duke Partners In Caring Duke University Medical Center 200 Trent Drive DUMC 3112 Durham, NC 27710 919-684-3211 919-681-7338	HIV testing in substance abuse centers	<ul style="list-style-type: none"> • CTR • Linkage-to-care • Re-engaged to care
Ryan White – Part B	\$148,296.00.	D.U.M.C. Pediatric Infectious Diseases Coleen Cunningham MD, Division chief T915, Children's Health Center Erwin Road, Durham, NC 27710 DUMC Box 3499 Durham, NC 27710 919-668-4851 fax: 919-668-4859	Medical Care Medical Case Management Psychosocial Support Medical Transportation Oral Health Care FFS Medical Care FFS	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Emerging Communities	\$15,679	Healing with CAARE., Inc 214 Broadway Street Durham, NC 27701 919-688-5300	Psychosocial Support	<ul style="list-style-type: none"> • Engage/Retained in Care •
Minority AIDS Initiative	\$29,054	Healing with CAARE., Inc 214 Broadway Street Durham, NC 27701 919-688-5300	Referral Healthcare/Support	Engaged/Retained in Care
CAPUS: Navigator	\$22,665	Healing with CAARE., Inc 214 Broadway Street Durham, NC 27701 919-688-5300	Medical Case Management	<ul style="list-style-type: none"> • Linkage to Care • Engaged/Retained in Care Viral Load Suppression
CAPUS Men's Clinic TBD		Healing with CAARE., Inc 214 Broadway Street Durham, NC 27701 919-688-5300	Outpatient/ambulatory care	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs Viral Load Suppression

Ryan White Part B	\$129,878/0%	Lincoln Community Health Center 414 East Main Street Clinic #7 Durham NC 27701 Sandra Gomez (919) 560-7688 (919)560-7687 (Fax) sandra.gomez@duke.edu	Outpatient ambulatory health services Oral health care Mental Health services Substance abuse services-outpatient Medical Case Management(including treatment adherence)	<ul style="list-style-type: none"> • Linked to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Ryan White Part C	\$461,563/0%	Lincoln Community Health Center 414 East Main Street Clinic #7 Durham NC 27701 Sandra Gomez (919) 560-7688 (919)560-7687 (Fax) sandra.gomez@duke.edu	Outpatient ambulatory health services Medical Case Management(including treatment adherence) Health education/risk reduction Linguistic services Transportation services Referral for health care/supportive services	<ul style="list-style-type: none"> • Linked to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Total funding: RWB-State RWB-Region 6 RWC RWD – sub Duke	TBD (Region 6 contract pending for this period)	UNC-Chapel Hill	Health care referral/benefits couns	Linkage to care ARV Rx, Med Access, CM impacting VL suppression rates
Ryan White Part B Ryan White Part C Janssen Pharmaceuticals	\$337,862.00 50% \$324,188.00 45% \$28,600 5%	Warren-Vance Community Health Center, Inc. 511 Ruin Creek Road, Suite 105 Henderson, NC 27536 (252) 572-2610 mdenise.ogle@gmail.com	Comprehensive Medical Care Access to Dental Health Services Referral for Substance / Mental Health In House MC Management In House Non MC Management HIV / STI Screening in County Jails Medical Transportation Community HIV Testing Targeted Digital HIV Outreach	<ol style="list-style-type: none"> 1. Aware of HIV Status 2. Directly linked into medical care 3. Retention into medical care 4. Viral Load Suppression

Ryan White Part B	\$58,986	Wellness and Education Community Action Health Network (WECAHN) 401-B N. Ivey Avenue Siler City, NC 919-799-0055	Medical Case Management Administration	Engaged/Retained in Care Link to Care Viral Suppression
Ryan White Part B: WCHS Clinic B	\$735,245	Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481	Outpatient/ambulatory care Oral Health Care Medical Case Management Referral Healthcare / support Administration Planning / evaluation	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Ryan White Part B: WCHS Network Services	\$239,162	Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481	Outpatient/ambulatory care Oral Health Care Health Insurance/Cost Sharing Medical Case Management Emergency Financial Assistance Food Bank / home delivered meals Medical Transportation Referral Healthcare / support Administration Planning / evaluation	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Emerging Communities : WCHS Clinic B	\$203,019	Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481	Outpatient/ambulatory care Oral Health Care Medical Case Management Referral Healthcare / support Administration	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Emerging Communities : WCHS Network	6,500	Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481	Emergency Financial Assistance	<ul style="list-style-type: none"> • Engaged/Retained in Care • Viral Load Suppression

Ryan White Part C	\$503,025	Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481	Outpatient/ambulatory care Oral Health Care Medical Case Management Substance Abuse Counseling Medical Nutritional Therapy Referral Healthcare / support Administration Continuous Quality Improvement	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
Wake County – Clinic B	\$597,817 (on paper at the start of the fiscal year. Incoming revenue is taken off that total as it comes in. Last year’s revenues were \$244,963 bringing the county’s net contribution to \$352,854)	Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481	Outpatient/ambulatory care Medical Case Management Substance Abuse Counseling Patient Registration Administration	<ul style="list-style-type: none"> • Diagnosis • Linkage to Care • Engaged/Retained in Care • Prescribed ARVs • Viral Load Suppression
State Funded: ITTS		Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481		•
State Funded: SAC		Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481		•
Wake County:		Wake County Human Services 10 Sunnybrook Road Raleigh NC 27610 919-250-4481		•

Agency Name	Description	Funding Source & Amount
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Region 8

Wilson County Health Department	The Wilson County Health Department offers maternity, family planning, child health, STD screening, WIC, primary health care and home health services. There is also a part-time Social Worker on staff. Spanish interpreting is also provided (sign language, upon need). The Wilson County Health Department provides STD screening and referral for positive result patients. Community outreach and education is offered through a Health Educator which partners with health agencies for HIV/STD testing, education, and prevention. The Wilson County Health Department receives block grant funding from the NCDHHS for testing and prevention in the community, jails, and schools. Medicaid, Medicare, Uninsured/Self Pay, and Private Insurance are accepted.	Funding source not known
Nash County Health Department	The Nash County Health Department offers Spanish interpreting, child health, WIC, maternity, family planning, women's health, sickle cell counseling, health education, primary care, home health, nutritional, animal control, environmental health, and adolescent health. Blood pressure, drug screening, cholesterol, and HIV/STD testing are also available. The Nash County Health Departments provides a referral service to HIV positive patients. It receives funding for testing services from the NC STD/HIV Branch.	\$95,000
Edgecombe County Health Department	Edgecombe County Health Department offers WIC, maternity, dental, health education, and a number of other services. This health department does not directly provide for HIV positive patients but do provide a referral service to the nearest ID specialist. There is also an HIV/STD outreach testing and educational program which serves the populace of Edgecombe County. This health department receives Title X funding for family planning, testing, and integrated targeted testing services (ITTS) grant money which revolves around testing outside of the clinical setting in areas such as local jails, hospital emergency departments, and outreach. The Edgecombe County Health Department accepts Medicaid, Medicare, Uninsured/Self Pay, and Private insurance.	\$60,000
Northampton County Health Department		\$58,587
Halifax County Health Department		Funding source not known
OIC of Rocky Mount	The OIC of Rocky Mount is a federally qualified health center that provides medical services to clients. A mobile unit is available and is used for HIV testing and community outreach within service areas A staff case manager handles patient assistance programs and a referral specialist for specialty referrals. The OIC of Rocky Mount provides a sliding fee scale to uninsured individuals.	\$170,000
OIC of Wilson	The OIC of Wilson is a community based organization and provides HIV/STD outreach and testing, and medical transportation to clients. Counseling and referral service is provided to clients to test positive for HIV/AIDS. A Spanish interpreter is readily available. The OIC of Wilson receives funding through DHHS and ITTS. All services are provided at no cost to clients.	\$100,000
Carolina Family Health Centers, Inc.	CFHC, Inc. is a Federally Qualified Health Centers which operates three clinics, one in Edgecombe, Nash and Wilson counties in Eastern North Carolina. The following services are provided at each of the three locations: primary health care, dental services, pharmacy, medical transportation, mental health, substance abuse counseling, Spanish medical interpreting, application assistance for the Affordable Care Act, Ryan White and HOPWA services for people living with HIV/AIDS, migrant farmworker outreach and care. CFHC, Inc. accepts Medicaid, Medicare, private insurance and for those uninsured provides a sliding fee for services.	Ryan White Part B Total: \$390,740 RHG, Inc. \$83,833 CFHC, Inc. \$306,907 Ryan White Part C CFHC \$560,500

		HOPWA \$53,400 STRMU \$53,400 TBRA \$95,397 RI \$6,714 Supportive Services \$44,894
Rural Health Group, Inc.	RHG, Inc. is a Federally Qualified Health Center, with 12 clinics serving six counties in eastern and north central NC. HIV clinics are held regularly at three of the 12 sites; however, patients can and will be seen at any RHG site, as is necessary. Besides primary health care, all RHG sites offer the following services: dental services, behavioral health, case management, and nutrition services, medical Spanish translation, WIC, health education, application assistance for the Affordable Care Act and migrant farmworker outreach and care. RHG has 2 in-house pharmacies, a medication assistance program and contracts with local pharmacies near all of its sites through the 340b program. HIV services include: Ryan White services, case management and medical transportation. RHG accepts Medicaid, Medicare, private insurance and, for the uninsured, provides a sliding fee for services.	Portion received as a sub-grantee of Carolina Family Health Centers, Inc. Ryan White Part B \$83, 833
Eastpointe	Eastpointe is a Managed Care Organization provides access to behavioral health care (Mental Health, Substance Abuse and Developmental Disabilities). A referral service is also provided to clients. Eastpointe coordinated with Community Care of N.C. to ensure coordination of care for members with significant health concerns and UHISA Diagnoses. This agency has access to Spanish interpreters for non-English speaking clients. Eastpointe provides periodic cultural competency training and attends Region 8 Network meetings regularly. Eastpointe accepts Medicaid, Medicare, Tricare/Prime, Uninsured/Self Pay, and Private Insurance.	Funding Source not known
NuVizations, LLC	NuVizations, LLC provides referrals to community agencies for emergency funds, food banks, substance abuse, housing, and mental services. There is also an in-house psychiatrist who provides medication management. A psychosocial rehabilitation and supportive employment services are also available to clients through NuVizations, LLC. Moreover, NuVizations, LLC offers nutritional services, community education, non-medical case management, and transportation to clients. Medicaid and Medicare are accepted at this agency.	Funding source not known
East Carolina Behavioral Health (Northampton)		Funding source not known
Community Care Plan of N.C.		Funding source not known
Regional Disease		
Cardinal Innovative Health Solutions (Halifax)		Funding source not known

REGION 10

Public / Private Funding Source	2016 fiscal Year Amount RECEIVED and % of total available funds	Provider Agencies Name, address, contact info	Services Funded/Delivered	Continuum Steps Impacted
Care Funding				
Ryan White - Part C	\$465,049.00	East Carolina University 2300 Beasley Drive, Greenville NC Dr. Nada Fadul 252-744-4500	Outpatient /ambulatory medical care Oral health care Mental health services Substance abuse services-outpatient Medical nutrition services Medical case management Case management (non-medical) Medical transportation services Treatment adherence counseling	Linked to Care Engaged/Retained in Care Viral Load Suppression
Ryan White Part C Capacity Development	\$100,000	East Carolina University 2300 Beasley Drive, Greenville, NC Dr. Diane Campbell (252) 744-4500	Enhanced Health Management Information System development	Engaged/Retention in care

Ryan White Part D	\$565,665.00	East Carolina University 2300 Beasley Drive, Greenville NC Dr. Nada Fadul 252-744-4500	Outpatient /ambulatory medical care Oral health care Mental health services Substance abuse services-outpatient Medical nutrition services Medical case management Case management (non-medical) Health education/risk reduction Medical transportation services Outreach services – testing and counseling Treatment adherence counseling	HIV diagnosis - testing and counseling Linked to Care Engaged/Retained in Care Viral Load Suppression
CAPUS – Care and Prevention in US	\$62,500	East Carolina University 2300 Beasley Drive, Greenville, NC Dr. Diane Campbell	Medical case management – health system navigation and health education	Retention in Care
ASK4Care	\$22,141	East Carolina University 2300 Beasley Drive, Greenville, NC Dr. Diane Campbell	Client Health Education	Retention in Care
Ryan White part B		East Carolina University 2300 Beasley Drive, Greenville NC Dr. Nada Fadul 252-744-4500	Outpatient /ambulatory medical care Oral health care Medical case management Substance abuse services-outpatient Mental health services-outpatient Medical nutrition services Treatment adherence (support) Medical transportation services Emergency Financial Assistance	
Office of Minority Health	\$29,054		Non-Medical Case Manager/Treatment adherence support	
Prevention Funding				
Integrated Target Testing Services	\$90,000	Pitt County AIDS Service Organization (PiCASO) 1528 South Evans St. Ste C-2 Greenville, NC 27834 Deborah Savage (252) 830-1660 dsavage@picaso.org	HIV Testing	Knowledge of HIV status

Vidant Foundation	\$10,000	Pitt County AIDS Service Organization (PiCASO) 1528 South Evans St. Ste C-2 Greenville, NC 27834 Welton Rouse (252) 830-1660 wrouse@picaso.org	HIV Education and Prevention in high risk communities	Educating high risk communities of HIV
Grant Funded	\$103,999	Craven County Health Department 2818 Neuse Blvd New Bern, NC 28561 Krystal Hargett (252) 636-4920 khargett@cravencountync.gov	Craven Jail Pamlico Jail Carteret Jail Onslow Jail Lenoir Jail Community Outreach	Linkage to Care Counseling services
Public Funding	40,000/??	Beaufort County Health Department 1436 Highland Drive Washington NC 27889 Kimberly Matthews (252)940-6521 Kimberly.matthews@bchd.net	Evidence Based Intervention Services- VOICES/VOCES	HIV/STD Prevention
State/local funding	42,175.00	Greene County Health Department 227 Kingold Blvd., Suite B Snow Hill, NC 28580 (252) 747-8181, ext. 316 Lisa Daniels ldaniels@co.greene.nc.us	STD/HIV Program (testing, education, personnel)	Knowledge of HIV status
State/local funding	10,042	Carteret County Health Department 3820 A Bridges Street Morehead City, NC 28557 Diana Craft (252) 728-8550 x. 5763 Diana.craft@carteretcountync.gov	STD/HIV Program (testing, education, personnel)	Knowledge of HIV and STD status

Charlotte Part A TGA

Public / Private Funding Source	2016 fiscal Year Amount RECEIVED and % of total available funds	Provider Agencies Name, address, contact info	Services Funded/Delivered	Continuum Steps Impacted
Ryan White Part A	\$6,183,780/\$69,355,091 = 9%	Mecklenburg County Health Department 618 N. College St. Charlotte, NC 28202 Luis Cruz 980-314-1606 Luis.cruz@mecklenburgcountync.gov	- Medical Care - Medical Case Management - Health Insurance - Dental Health Care - Mental Health - Medical Transportation - Psychosocial Support - Youth	- Linkage to care - Engaged/retained in care - Prescribed ARV - Viral load suppression
State Funding/County Funding	\$1,084,955/\$69,355,091 = 1.5%	Mecklenburg County Health Department 2845 Beatties Ford Rd. Charlotte, NC 28216 Linda Flanagan 980-314-9307 Linda.Flanagan@mecklenburgcountync.gov	-Prevention/Education/Outreach - HIV/STD Testing - Counseling and referral - Risk reduction - Patient navigation - Linkage to care	-Diagnosed - Linkage to Care - Engaged/Retained in care -Viral Load Suppression
Ryan White Part D	\$94,829/\$1,580,483 = 6%	C.W. Williams 333 Wilkinson Blvd. Charlotte, NC 28202 Paul Rodas 704-393-1484 PRodas@cwwilliams.org	- Medical Care	- Engaged/Retained in Care - Viral Load Suppression - Prescribed ARV
Public-DHHS	\$97,144/\$20,383,544 =.47%	Gaston Family Health Services 200 E. Second Ave. Gastonia, NC 28052 Robert Spencer 704-853-5261 rspencer@gfhs.info	- HIV Testing	- Diagnosed - Linkage to Care
Viiv Healthcare	\$45,000/\$1.1 million =5%	RAIN 601 East 5 th Street Suite 470 Charlotte, NC 28202 704-372-7246	-Mental Health	-Retained in Care
University of North Carolina-Charlotte Research	\$69,000/\$1.1 million =6.2%	RAIN 601 East 5 th Street Suite 470 Charlotte, NC 28202 704-372-7246	-Latino Men newly diagnosed/OOC intervention to get in care	-Linkage to Care
University of North Carolina-Charlotte Research	\$18,000/\$1.1 million =1.8%	RAIN 601 East 5 th Street Suite 470 Charlotte, NC 28202 704-372-7246	-Young Black MSM	-Treatment Adherence - Retained in Care

United Way	\$99,000/\$1.1 million =9%	RAIN 601 East 5 th Street Suite 470 Charlotte, NC 28202 704-372-7246	-Case Management	-Linkage to care -Retained in Care
Housing Opportunities for Persons with AIDS	\$1.7 million/\$2.1 million =81%	Carolinas CARE Partnership 5855 Executive Center Drive Suite 101 Charlotte, NC 28212 704-531-2467	-TBRA -Housing Information Services -Supportive Services -SA treatment	-Retention in Care
North Carolina Communicable Disease Branch	\$240,000 /\$2.1 million =11%	Carolinas CARE Partnership 5855 Executive Center Drive Suite 101 Charlotte, NC 28212 704-531-2467	-Testing -Prevention Education -ARTAS	-Diagnosed -Linkage to care
Mecklenburg County	\$172,000/\$2.1 million =8.2%	Carolinas CARE Partnership 5855 Executive Center Drive Suite 101 Charlotte, NC 28212 704-531-2467	-Supportive Services – Chronically Homeless HIV +	-Retention in Care
Private Fundraising	\$16,500/\$2.1 million =.08%	Carolinas CARE Partnership 5855 Executive Center Drive Suite 101 Charlotte, NC 28212 704-531-2467	-HIV Testing	-Diagnosed -Linkage to Care -Retention in Care
Carolina Alcohol and Drug Resources	\$10,000/2.1 million =.05%	Carolinas CARE Partnership 5855 Executive Center Drive Suite 101 Charlotte, NC 28212 704-531-2467	-Testing and SA screening for YBMSM	-Diagnosed -Linkage to Care
Care and Prevention in the United States Demonstration Project	\$33,500/\$350,000 =9.6%	Different Roads Home 2320 North Davison Street Suite B Charlotte, NC 28205 704-237-8793	-MSM Safe Space	-Linkage to Care - Retained in Care
Private Fundraising	\$291,500/\$350,000 =83.2%	Different Roads Home 2320 North Davison Street Suite B Charlotte, NC 28205 704-237-8793	-Support groups -Food pantry -Community Education -Mentorship -MSM Safe Space -Mental Health	-Linkage to Care -Retained in Care
Ryan White Part C	\$240,167/\$888,032 = 27%	Quality Home Care Services 3552 Beatties Ford Rd. Charlotte, NC 28216 704-394-8968 lwigfall@qhcsnc.com	-Medical Care	-Engaged/Retained in Care -Viral Load Suppression -Prescribed ARV

Center for Disease Control	\$350,000/\$888,032 =39%	Quality Home Care Services 3552 Beatties Ford Rd. Charlotte, NC 28216 704-394-8968 lwigfall@qhcsnc.com	-Prevention	- Linkage to Care
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Appendix B

HPCAC Input

HIV Prevention and Care Provider and Community surveys were developed and administered electronically to HPCAC members representing local health departments, community based organizations, universities and colleges, AIDS Service Organizations, hospitals, medical centers and local communities established throughout North Carolina. Participants were asked to return the completed surveys either via USP, fax or email and the results were tallied. Approximately 27 participants completed the surveys and participant demographics included males, females, African American, White, Latino and Native Americans. HPCAC members attending scheduled HPCAC meetings were also asked to complete surveys in person and return them to designated staff. Basic demographic questions included: Counties served, programs and services offered, collaborations with other agencies, HIV/STD Prevention and/or Care services **most** effective and **least** effective in their respective communities. Participants were also asked to identify Prevention and/or Care needs being **met** as well as those **not** being met in their communities. Some of the most universal responses throughout the State were: transportation, effective, accurate and practical education needs, mental health and substance abuse/use services are not adequately addressed in focused populations and communities.

Met Needs throughout North Carolina:

- Testing
- Education
- HIV/AIDS
- Prevention services
- Client assistance with other needs
- Condom distributions at barber shops
- Relationships with medical providers
- Social media posts, announcements, ads, etc.
- Counseling programs for disease management
- Medical case management
- Shelter care and targeted housing
- Emergency STRUMU and HOPWA vouchers

Unmet Needs throughout North Carolina:

- Educating medical providers
- Mental health and substance abuse services

- PrEP providers, medication, education, treatment and care services and PrEP for undocumented persons at risk for HIV
- Adequate HIV/STI education
- Jail testing in adequate because most don't want to offer it because of extra expense and possibility of administering medicines
- Limited, inadequate or no transportation services
- HIV/STI education and awareness in ALL counties
- Refusal of services because don't want others to know
- Modifying services for illiterate or special needs clients
- Locating HIV+ clients
- Finding clients lost to Prevention and Care services
- Delayed or interrupted treatment when clients go to jail

Most effective HIV/STD Prevention, Care , HOPWA services identified:

- Testing
- Education
- HIV/AIDS
- Condom distributions
- Client house calls
- Medical case management
- One-on-one peers
- Partnerships with local health departments for screenings
- Jail programs
- Working with Networks and regions to enhance recruitment and retention efforts
- Non-traditional testing, during non-traditional hours (ITTS)
- Agencies meeting clients where they are

Least effective HIV/STD Prevention, Care, HOPWA services identified:

- Door-to-door Outreach
- Testing
- Education
- HIV/AIDS
- Not enough medical case managers
- Taking clients to appointments
- Keeping clients engaged in behavioral interventions
- Placing clients in housing but not offering/providing life skills training
- Travel/mileage expenses not covered by level funding
- Lack of public bus systems
- Offering tests as a stand-alone rather than bundling with other standard tests, i.e., blood glucose, blood pressure AND HIV
- Faith communities with resistant leaders

Ideal Community:

- Satellite clinics
- Increase testing
- Food costs to attract more participants
- Increase staffing for smaller agencies
- Increase transportation, support, education, incentives and housing opportunities
- PrEP
- Increase funding for program staff interventions
- ADAP Coordinators
- Patient Assistance Programs
- Psychological behavioral services
- Increase dental services/providers
- Fund community health centers with ID providers

Appendix C (Letters of Concurrence)



RICHARD O. BRAJER
Secretary

DANIEL STALEY
Director, Division of Public Health

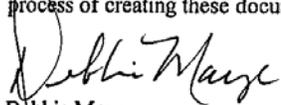
September 12, 2016

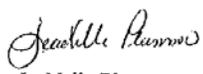
Centers for Disease Control and Prevention (CDC)
1600 Clifton Road
Atlanta Georgia, 30333

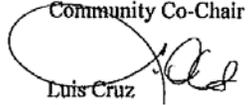
To Whom It May Concern:

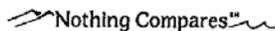
The Executive Committee of the North Carolina HIV Prevention and Care Advisory Committee (HPCAC) concurs with the state of North Carolina's Jurisdictional and Comprehensive HIV plans. The HPCAC believes that these documents are reflective of the priorities identified by the HPCAC and the community at large.

The HPCAC along with other community members worked closely with the NC Communicable Disease Branch to develop these documents and were given many opportunities to provide feedback and make revisions to them. We are satisfied with the process of creating these documents and agree with their contents.


Debbie Maye
Community Co-Chair


Jeanelle Plummer
State Co-Chair


Luis Cruz
Community Vice-Chair

Nothing Compares™

Department of Health and Human Services | Division of Public Health
1200 Front St., Suite 104 | 1933 Mail Service Center | Raleigh, NC 27609
919 733-2030 T | 919 733-2054 F



**MECKLENBURG COUNTY
Health Department**

**Marcus Plescia, MD, MPH
Health Director**

(704) 336-4700

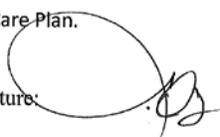
Anderson A Tesfazion
Health Resources and Services Administration
Public Health Analyst

Dear Mr. Tesfazion:

The Charlotte TGA Advisory Group concurs with the following submission by the North Carolina Department of Health and Human Services in response to the guidance set forth for health departments and HIV planning groups funded by the CDC's Division of HIV/AIDS Prevention (DHAP) and HRSA's HIV/AIDS Bureau (HAB) for the development of an Integrated HIV Prevention and Care Plan.

The Charlotte TGA Advisory Group has reviewed the Integrated HIV Prevention and Care Plan submission to the CDC and HRSA to verify that it describes how programmatic activities and resources are being allocated to the most disproportionately affected populations and geographical areas that bear the greatest burden of HIV disease. The planning body concurs that the Integrated HIV Prevention and Care Plan submission fulfills the requirements put forth by the Funding Opportunity Announcement PS12-1201 and the Ryan White HIV/AIDS Program legislation and program guidance.

The signature below confirms the concurrence of the planning body with the Integrated HIV Prevention and Care Plan.

Signature: 

Date: 9/28/2016

Luis A. Cruz
Senior Health Manager
Mecklenburg County Health Department
Ryan White Program Charlotte TGA

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