Delaware Integrated HIV Prevention & Care Plan

2017-2021

Authors:

Stanley Waite, Delaware Ryan White Part B Grantee
Robert Vella, HIV Prevention Administrator
Tyler Berl, HIV Community Planning Manager
Jim Dowling
Fred MacCormack
Glen Pruitt
Brad Shannon
Suzanne Tait

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Testing & Linkage to Care Working Group
Retention & Viral Suppression Working Group
Systems of Care Working Groups

Introduction

The *Delaware Integrated HIV Prevention & Care Plan: 2017-2021* is the sum of the work of the state's HIV community planning and needs assessment processes performed by the Delaware HIV Planning Council, the Delaware Division of Public Health, Bureau of Communicable Diseases, and the Delaware HIV Consortium. This *Integrated Plan* serves to identify Delaware's HIV prevention and care needs, existing resources, barriers and gaps. It concludes by outlining the state's strategic plan for addressing gaps in needed HIV services and for improving all steps along the HIV Care Continuum. This document includes and draws upon epidemiologic data, direct input from Delawareans living with HIV, a wide variety of other community stakeholders, survey research, focus groups, geographic evidence and service utilization data. Furthermore, this plan provides for ongoing coordination and future collaboration between Delaware's Ryan White HIV/AIDS Program Part B, HIV Prevention Program, other state agencies, and the state's community-based organizations and medical community. Finally, the *National HIV/AIDS Strategy 2020* (NHAS) guides all HIV community planning work in Delaware, including this *Integrated Plan*. Section II of this document uses the first three NHAS goals as the framework that structures the state's Integrated Plan activities over the next five years.

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Section I: Statewide Coordinated Statement of Need/Needs Assessment

A. Epidemiologic Overview

As of 2015, a total of 3,449 Delawareans were known to be living with Human Immunodeficiency Virus (HIV) of which 2,119 had progressed to Acquired Immune Deficiency Syndrome (AIDS). In that same year, the cumulative number of HIV/AIDS cases ever diagnosed in Delaware reached 5,878. As noted in the CDC, HIV/AIDS Surveillance Report of 2014, Delaware's HIV incidence rate (14.9 per 100,000) was the 14th highest in the United States and the AIDS incidence rate (8.9 per 100,000) ranked eighth highest in the nation. The five year average number of new infections diagnosed in Delaware currently stands at 116 cases per year (2011-2015).

The distribution of HIV cases in Delaware mirrors county-level population distribution. New Castle County – the most populous of Delaware's three counties – has the largest number of cases with most confined to the densely populated Wilmington metropolitan area. There exists a disparity. While Wilmington comprises 14% of the New Castle County population, it accounts for 40% of the county's individuals living with HIV/AIDS.

African-Americans are disproportionately affected by the HIV/AIDS burden. Twenty-one percent of Delaware's total population is African-American but this group account for 65% of all HIV/ AIDS cases ever diagnosed in the state. This racial disparity is more pronounced in Delaware compared to the general U.S population, and persists even when HIV and AIDS are considered separately. African-Americans account for 36% of all male AIDS cases living in the U.S., but 55% of those living in Delaware. Similarly, African-American women comprise 60% of all female AIDS cases living in the U.S., but nearly 77% of those living in Delaware.

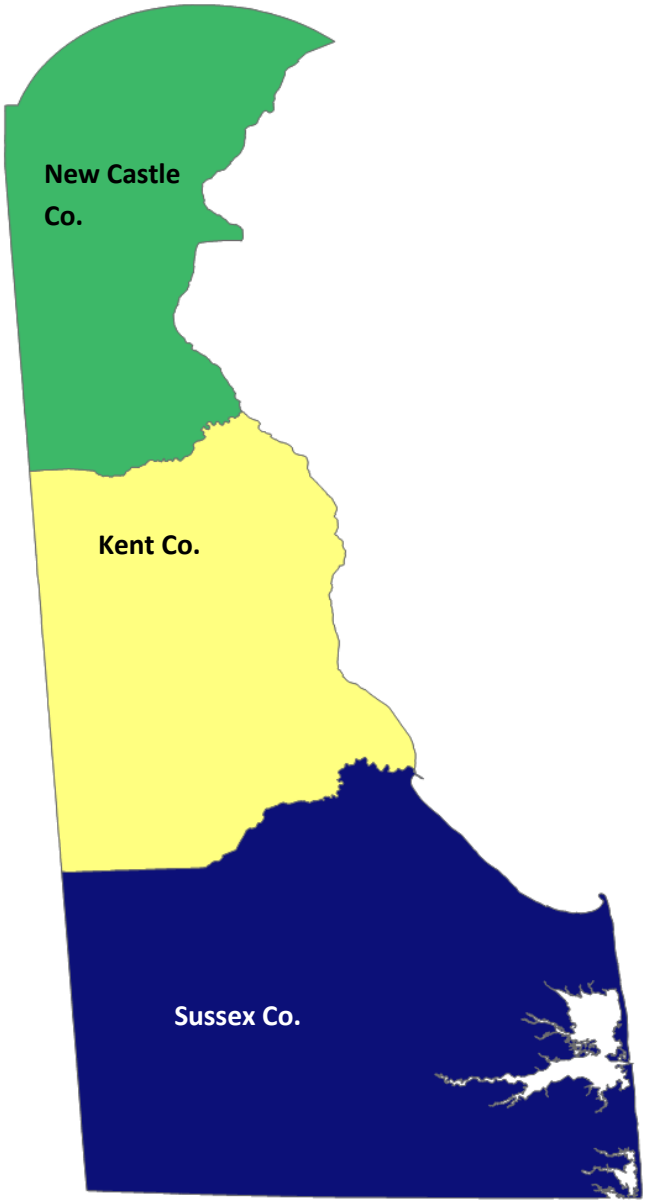
Among new HIV infections diagnosed in Delaware in 2015, the largest proportion (47%; N=51) were attributable to men who have sex with men (MSM). Heterosexual transmission and injection drug use (IDU) accounted for 31% (N=34) and 4% (N=4), respectively while 5% (N=5) were attributable to both MSM and injection drug use. Thirteen percent (N=14) fell into the "Other Risk" or "No Risk Identified" behavioral categories.

From 1981 through December 2015, 2,650 Delawareans with AIDS died. In the past two decades, the survival of those living with AIDS has increased significantly as has the slowing of progression from HIV to AIDS. Earlier diagnosis of HIV infection and advances in medical management have all contributed to the marked improvements in HIV/ AIDS quality of life and survival rates.

a. Delaware's geographic region. Delaware is the second smallest state in the U.S., measuring 100 miles from north to south and 30 miles from west to east. The state is comprised of three counties: New Castle County, located to the north, is the most densely populated and is home to 60% of the state population. Almost 12% of New Castle County residents live in the city of Wilmington. Centrally-located Kent County, home to 18% of Delawareans, includes a blend of urban, suburban, and agricultural zones. Dover Air Force Base and the state capital (Dover) are located in Kent County. Sussex County, the southernmost of the three counties where 22% of Delawareans live, is generally rural and home to a large number of poultry,

dairy, and crop-growing operations. Eastern Sussex County includes the beach communities, which draws a large number of retirees and tourists.

Figure 1 Delaware County Map



b. Socio-demographic characteristics. In 2015, Delaware's population was estimated to be 943,879, representing 0.3% of the total U.S. population. The majority of Delawareans (64%) are Caucasian; African-Americans and Hispanics comprise 21% and 9%, respectively. Approximately 6% of Delawareans are Asian, Pacific Islander, Native American or multi-race. Females account for 52% of the population, which is similar to the national gender distribution. See Table 1, below, for racial distributions at the county-level.

Table 1 Delaware racial distribution by county, 2015

County	Caucasian N (%)	African-American N (%)	Hispanic N (%)	Other N (%)	Total N (County %)
New Castle	327,625 (59%)	133,135 (24%)	53,636 (10%)	41,383 (7%)	555,779 (59%)
Sussex	160,112 (75%)	26,033 (12%)	20,296 (9%)	7,634 (4%)	214,075 (23%)
Kent	109,421 (63%)	41,938 (24%)	12,419 (6%)	10,247 (7%)	174,025 (18%)
Delaware	597,158 (64%)	201,105 (21%)	86,351 (9%)	59,264 (6%)	943,879 (100%)

Source: U.S. Census Bureau; Rows sum to 100%

The median age in Delaware is 40. Compared to the general U.S. population, Delaware has a slightly higher median annual household income ($60,231 vs. $52,250, respectively) and similar patterns of educational attainment. Approximately 88% have a high school diploma compared to 86% of the U.S. population. Twenty-nine percent have earned a bachelor's degree or higher which is equivalent to the U.S. population. Thirteen percent of Delaware residents report speaking a language other than English in the home.

c. Scope of HIV/AIDS in Delaware. Between 1981 and 2015, 5,878 Delawareans were diagnosed with HIV or AIDS. Cumulatively, males account for 72% of all cases diagnosed in the state. African-Americans account for 65% and represent a disproportionate share of the state's HIV/AIDS burden. Caucasian and Hispanic Delawareans account for 28% and 6% of all cases, respectively. The largest percentage of HIV/AIDS cases have been diagnosed among adults ages 30-39. New Castle County accounts for the majority of cases.

Table 2 shows the distribution of Delaware's HIV and AIDS cases by gender, race, age, and county.

Table 2 Delaware reported HIV/AIDS cases, 1981-2015*

	HIV Cases N (%)	AIDS Cases N (%)	Total Cases N (%)
Total Cases	**1,441 (100%)**	**4,437 (100%)**	**5,878 (100%)**
Gender			
Males	997 (69%)	3,206 (72%)	4,203 (72%)
Females	444 (31%)	1,231 (28%)	1,675 (28%)
Race			
Caucasian	438 (30%)	1,200 (27%)	1,638 (28%)
African-American	882 (61%)	2,949 (67%)	3,831 (65%)
Hispanic	96 (7%)	245 (5%)	341 (6%)
Other / Unknown	25 (2%)	43 (< 1%)	68 (1%)
Age Group (Years at initial HIV Diagnosis)**			
< 13			56 (1%)
13-14			1 (<1%)
15-19			159 (3%)
20-24			532 (9%)
25-29			825 (14%)
30-34			1,059 (18%)
35-39			1,062 (18%)
40-44			856 (15%)
45-49			619 (11%)
50-54			330 (6%)
55-59			180 (3%)
60-64			107 (2%)
65+			92 (1%)
County			
New Castle (NCC)	1021 (71%)	3,319 (75%)	4340 (74%)
NCC, City of Wilmington	*604 (42%)*	*2,180 (49%)*	*2,784 (47%)*
NCC, non-Wilmington	*388 (29%)*	*1,139 (26%)*	*1,556 (27%)*
Kent County	163 (11%)	479 (11%)	642 (11%)
Sussex County	257 (18%)	639 (14%)	896 (15%)

Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

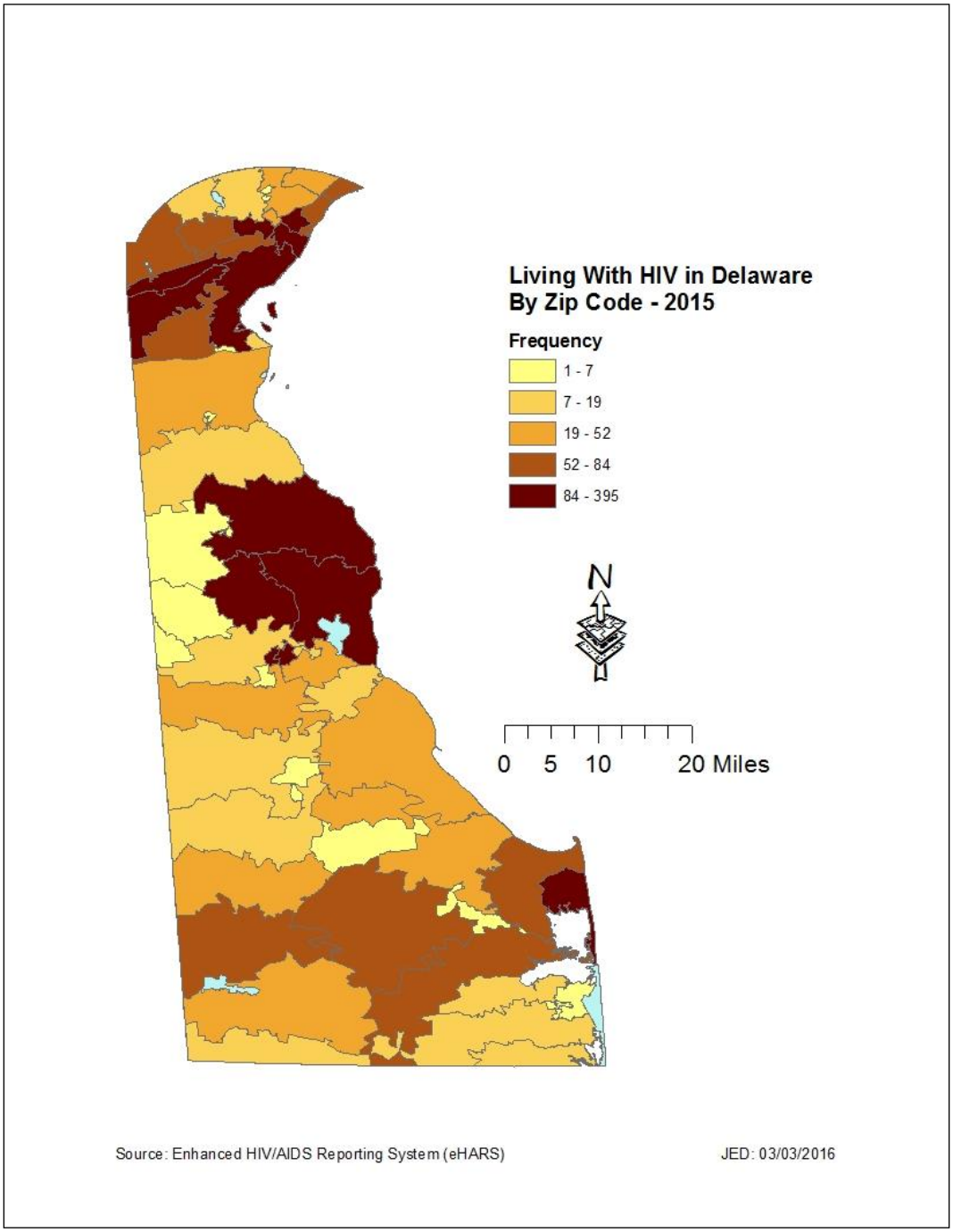
Note: In Delaware, AIDS and HIV surveillance efforts began in 1981 and 2001, respectively.

*Chart represents cumulative Delaware diagnosed cases regardless of current vital status.

**HIV and AIDS are two separate disease states thus the age at HIV diagnosis is represented as a total

Delawareans Living with HIV/AIDS. In 2015, a total of 3,449 Delawareans were living with HIV of which 2,119 (61%) had progressed to AIDS. Approximately 15% of these arrived in the state after diagnosis. Figure 2 below gives an indication of where the concentrations of these cases are by zip code.

Figure 2 Concentration of Persons Living with HIV Disease in Delaware



Note: Frequency data is represented in quantile divisions.

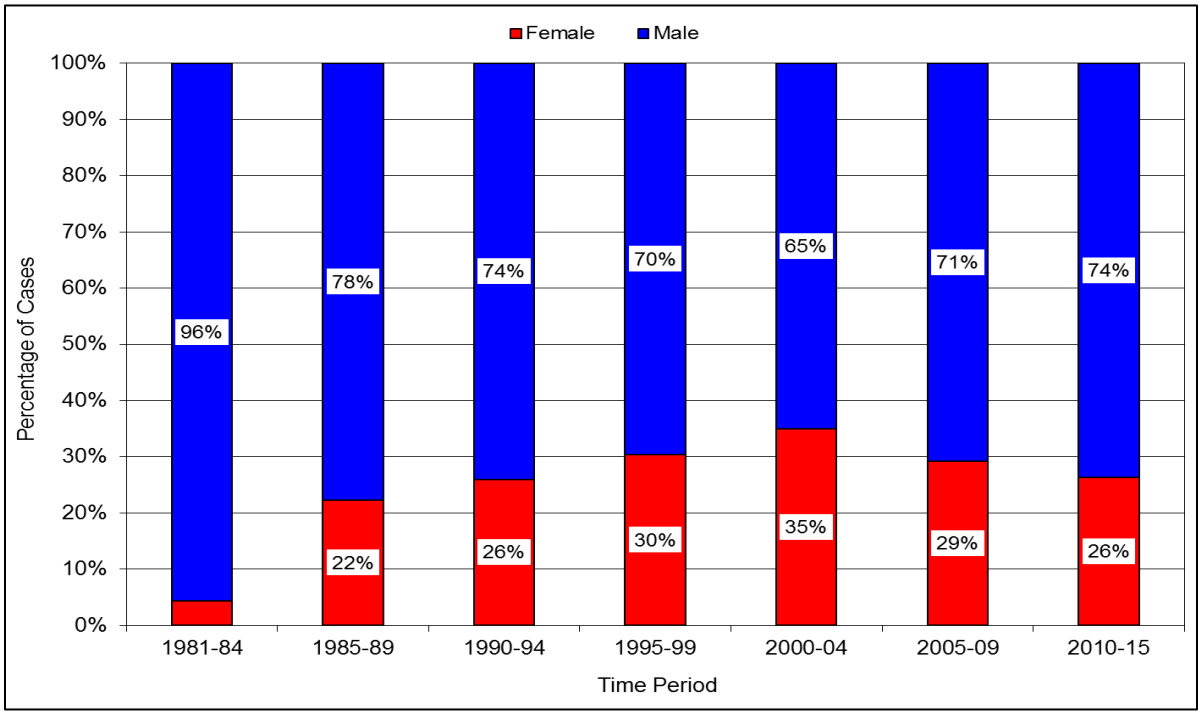
Prevalence and Incidence. The 2014 U.S. HIV and AIDS prevalence rates were 295.1 and 163.2 per 100,000, respectively. In comparison, Delaware's HIV and AIDS prevalence rates were 141.8 and 225.9 per 100,000, respectively. Therefore, while Delaware's HIV prevalence rate is 52% less than that of the U.S., Delaware's AIDS prevalence rate is 28% greater than the U.S. rate.

As reported in the *CDC 2014 HIV Surveillance Report*, Delaware's 2014 HIV incidence rate of 14.9 per 100,000 is higher than the overall 2014 U.S rate of 13.8 per 100,000. Delaware's AIDS incidence rate of 8.9 per 100,000 is higher than the overall 2014 U.S. rate of 6.6 per 100,000. In 2014, Delaware HIV and AIDS incidence rates ranked 14th and eighth, respectively, compared to other states.

HIV and AIDS prevalence and incidence data are unavailable for smaller, hard-to-reach populations, such as the homeless, transgender, and the mentally ill. Additionally, some HIV and AIDS cases are diagnosed through routine screenings (e.g., blood donations) and little additional information is available regarding the risk category.

Gender. Since the initiation of AIDS surveillance in 1981 and HIV surveillance in 2001, males have accounted for the majority of cases diagnosed in Delaware. From 2010 through 2015, females accounted for 26% of persons diagnosed with HIV in Delaware. Only one female HIV or AIDS case was diagnosed in Delaware prior to 1984 (Figure 3).

Figure 3 Delaware HIV/AIDS cases, by gender, 1981-2015 (N=5,878)

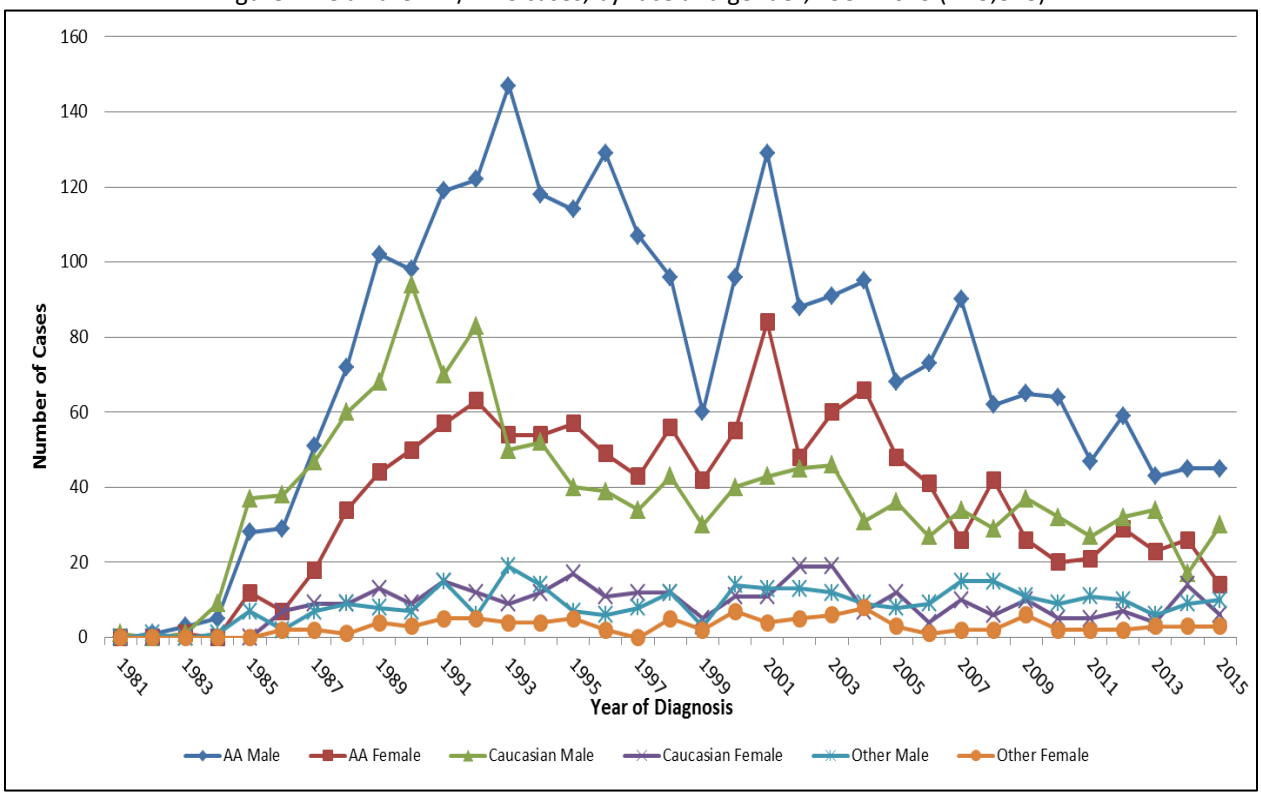


Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Race/Ethnicity. Delaware's HIV epidemic disproportionately affects the African-American population which comprises 21% of the Delaware population, but accounts for 61% and 67% of the State's HIV and AIDS cases, respectively.

Males account for the majority of cases within all categories (i.e., Caucasian, African-American, Hispanic, and Other) (Figure 4).

Figure 4 Delaware HIV/AIDS cases, by race and gender, 1981-2015 (N=5,878)

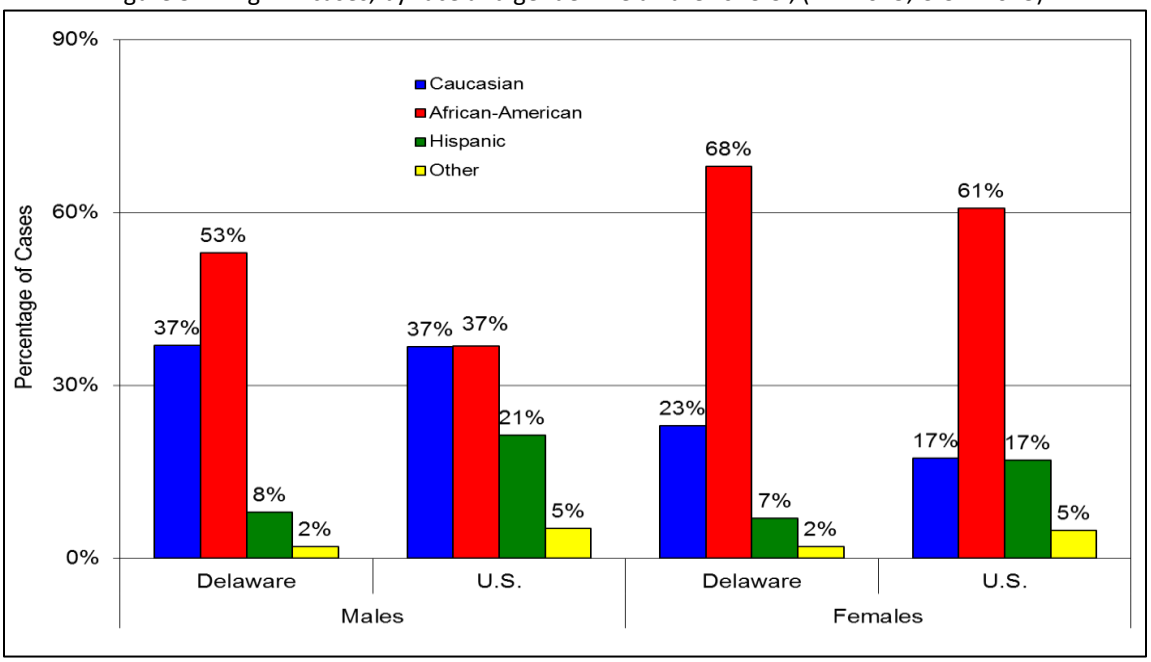


Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Figures 5 and 6, with the accompanying data tables, indicate that the magnitude of HIV and AIDS racial disparity in Delaware is greater than that in the U.S. African-American male's account for 37% of all males living with HIV (non-AIDS) in the U.S., and represent 53% in Delaware.

African-American females account for 61% of all females living with HIV (non-AIDS) in the U.S., and 68% in Delaware. African-Americans account for 69% of Delaware's pediatric cases living with HIV. No racial breakdown data is available for U.S. pediatric cases.

Figure 5 Living HIV cases, by race and gender. Delaware vs. U.S., (DE=2015, U.S. =2013)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS) & CDC, 2014 HIV Report

Table 3 Persons living with HIV in Delaware 2015, by race and gender (N=1,330)

Race	Male N (%)	Female N (%)	Total N (%)
Caucasian	350 (37%)	89 (23%)	439 (33%)
African-American	491 (53%)	270 (68%)	761 (57%)
Hispanic	71 (8%)	28 (7%)	99 (8%)
Other	22 (2%)	9 (2%)	31 (2%)
Total	934 (100%)	396 (100%)	1330 (100%)

Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Table 4 Persons living in the U.S. with HIV by race and gender 2013 (N=927,732)

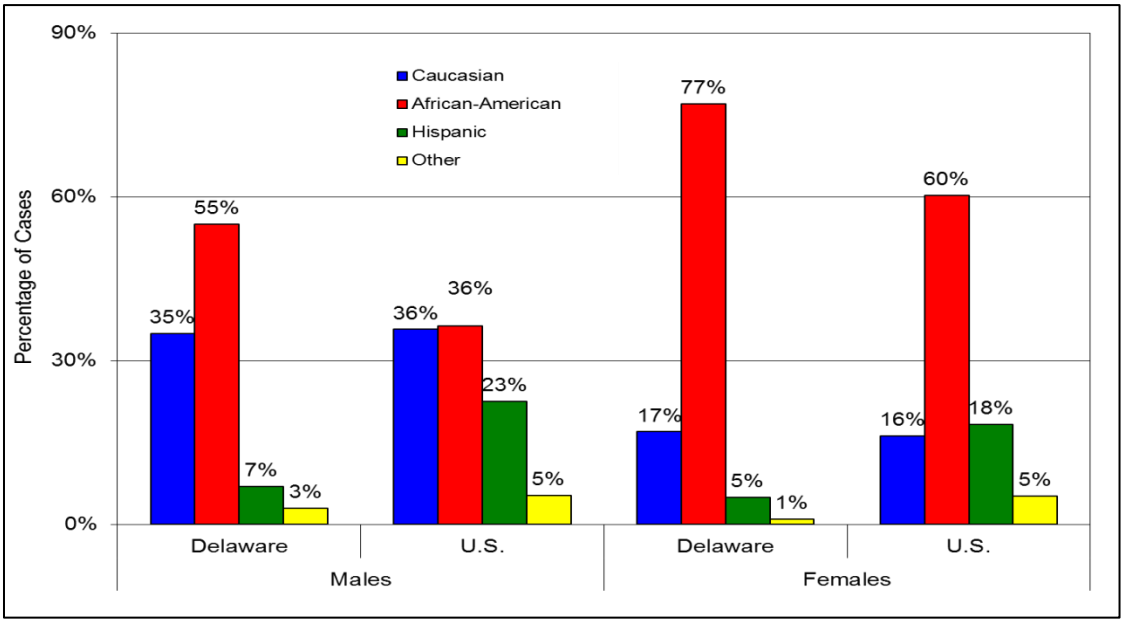
Race	Male N (%)	Female N (%)	Total N (%)
Caucasian	258,326 (37%)	39,181 (17%)	296,695 (32%)
African-American	257,514 (37%)	136,979 (61%)	395,305 (43%)
Hispanic	150,018 (21%)	38,478 (17%)	188,496 (20%)
Other	36,262 (5%)	10,974 (5%)	47,236 (5%)
Total	702,120 (100%)	225,612 (100%)	927,732 (100%)

Source: CDC, 2014 HIV Surveillance Report

Delaware's racial disparity for AIDS is more pronounced than that for HIV. African-American males account for 36% of males living with AIDS in the U.S.; while in Delaware, this figure is 55%. African-American females

account for 60% of females living with AIDS in the U.S. In Delaware; this figure is 77%. African-Americans account for 80% of Delaware's pediatric cases living with AIDS.

Figure 6 Living AIDS cases, by race and gender: Delaware vs. U.S., (DE=2015, U.S. =2013)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS) & CDC, 2014 HIV Report

Table 5 Persons living in Delaware with stage 3(AIDS) at year end 2015, by race and gender (N=2,119)

Race	Male N (%)	Female N (%)	Total N (%)
Caucasian	507 (35%)	111 (17%)	618 (29%)
African-American	801 (55%)	513 (77%)	1,314 (62%)
Hispanic	106 (7%)	36 (5%)	142 (7%)
Other	35 (3%)	10 (1%)	45 (2%)
Total	1,449 (100%)	670 (100%)	2,119 (100%)

Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Table 6 Persons living in the U.S. with AIDS at year end 2013, by race and gender (N=514,843)

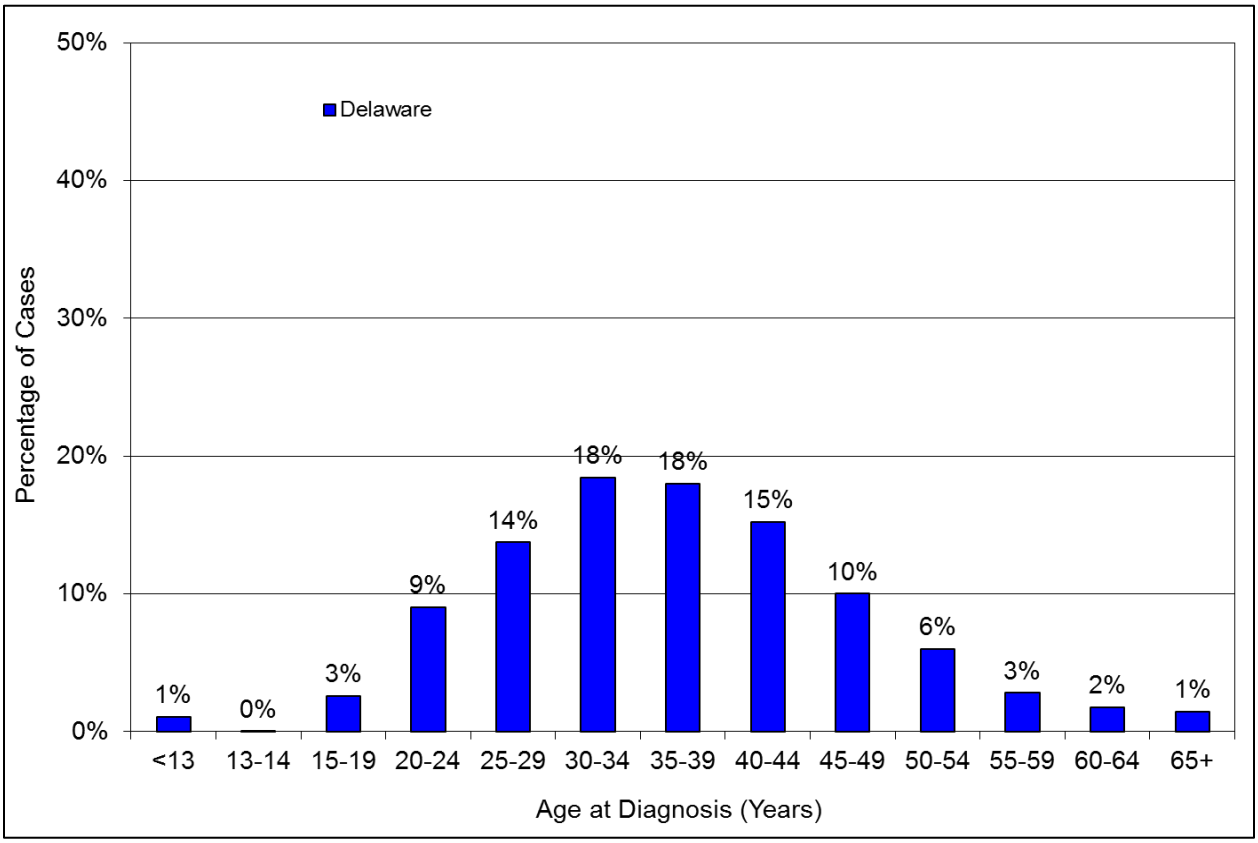
Race	Male N (%)	Female N (%)	Total N (%)
Caucasian	140,476 (36%)	19,671 (16%)	160,147 (31%)
African-American	143,141 (36%)	73,275 (60%)	216,416 (42%)
Hispanic	88,502 (23%)	22,263 (18%)	110,765 (22%)
Other	21,152 (5%)	6,363 (5%)	27,515 (5%)
Total	393,271 (100%)	121,572 (100%)	514,843 (100%)

Source: CDC, 2014 HIV Report

Hispanics represent approximately 9% of the state's population and account for 7% of persons living with HIV/AIDS in Delaware.

Age at Diagnosis. The majority of persons diagnosed with HIV in Delaware were between the ages of 30-39 at the time of their diagnosis (Figure 7). In Delaware, as in the U.S., only 1% of AIDS cases are diagnosed among those under the age of 13. Adults age 50 and older account for 16% and 15% of AIDS cases in Delaware and nationwide, respectively (Figure 8).

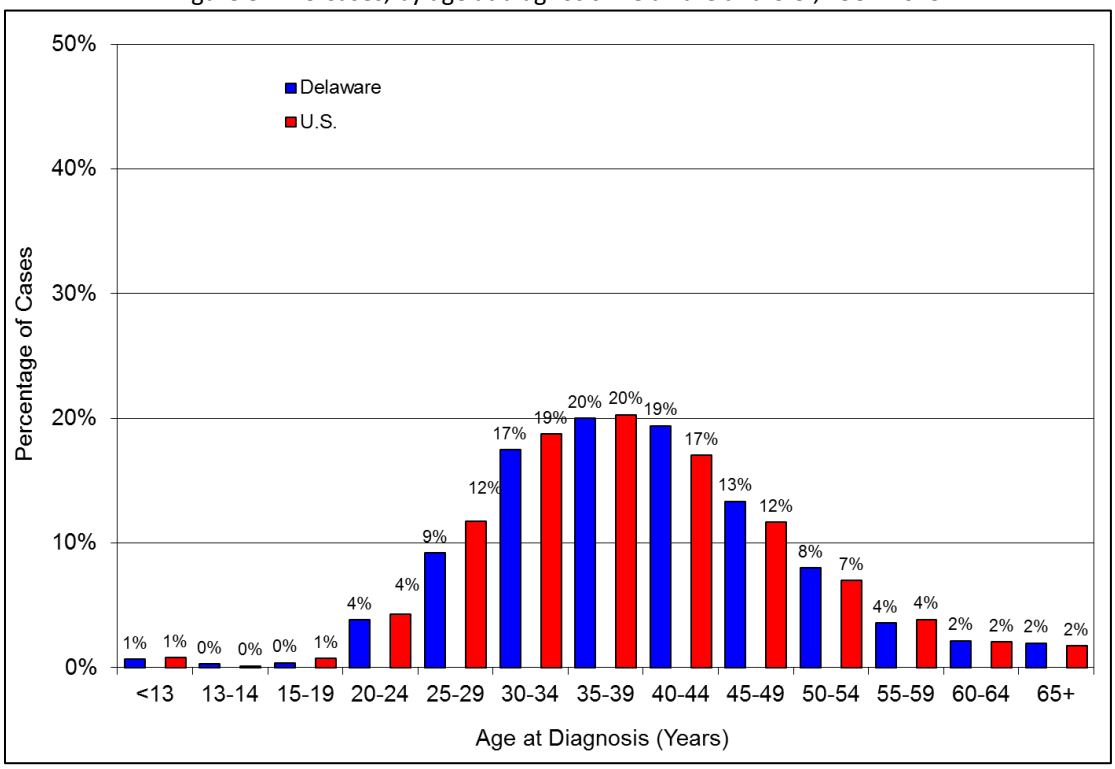
Figure 7 Delaware HIV cases, by age at diagnosis, 1981-2015*



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

*Cumulative HIV disease diagnosis date information not available for U.S. data

Figure 8 AIDS Cases, by age at diagnosis: Delaware and U.S., 1981-2015



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS) & CDC, 2014 HIV Report

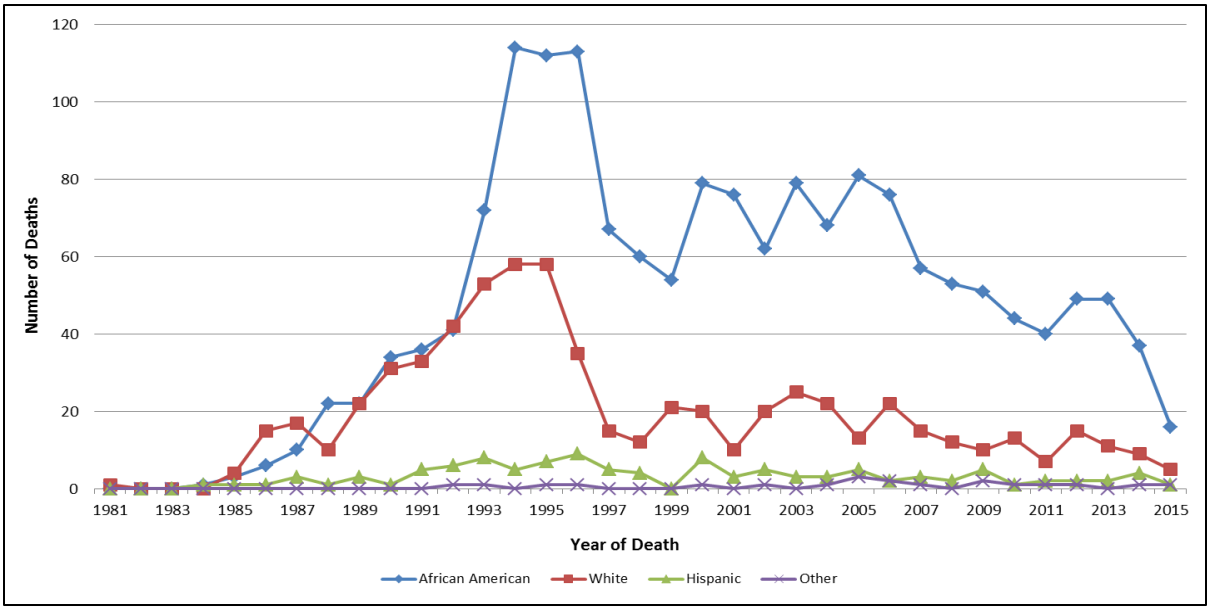
Mortality. A total of 2,471 Delawareans with AIDS died between 1981 and 2015. The AIDS death rate in Delaware has declined in recent years (Figure 9).

Figure 9 Delaware AIDS deaths, 1981-2015 (N=2,471)

Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Following a peak in the mid-1990s, the number of AIDS deaths in Delaware decreased among all races (Figure 10).

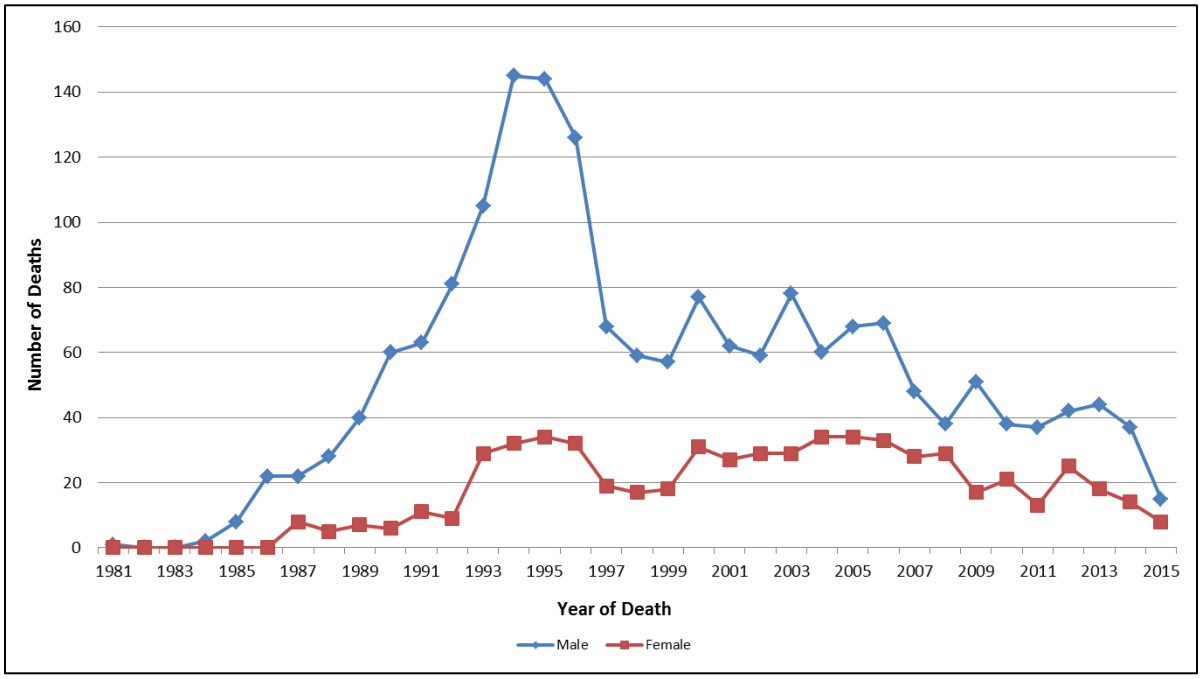
Figure 10 Delaware AIDS deaths by race, 1981-2015 (N=2,471)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Deaths among both sexes in Delaware have declined. This decline has been more significant among males (Figure 11).

Figure 11 Delaware AIDS deaths by gender, 1981-2015 (N=2,471)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Delaware's trends in AIDS deaths are similar to those observed nationally. Factors contributing to this decline include earlier diagnosis and progress in the medical management of HIV/AIDS. As survival rates increase, society will face increased costs associated with chronic disease management.

The AIDS mortality figures noted in this profile reflects data from the Delaware eHARS system and may not be a true reflection of Delaware Vital Statistics information. At the time of this writing, Delaware is in the fifth year of National Death Index (NDI) matching and data importation which allow for better expression of primary and secondary causes of death.

As of 2015, HIV was the underlying cause of death in 79% of all Delawareans who died with AIDS. Twenty-five percent of these persons died of other causes and the underlying cause was not determined in 5% of the cases (please note the NDI data was complete through 2013 as of this writing). The importation of NDI matched records into eHARS is the only method for assigning underlying cause of death. This means that some deaths occurring in 2014 and 2015 will appear as undetermined underlying cause of death.

Mode of disease transmission, transmission category hierarchy. All diagnosed HIV/AIDS cases are assigned to a CDC HIV transmission risk categories from the hierarchy shown below. Case assignment indicates the risk factor most likely associated with HIV transmission. If a case reports more than one suspected mode of HIV transmission, it is assigned the higher of the identified categories in the hierarchy. The one exception to this rule involves males with a history of both sexual contact with other men and injecting drug use; these individuals comprise a separate exposure category (Risk Category 3).

1. Men who have sex with men
2. Injecting drug user
3. Men who have sex with men and inject drugs
4. Heterosexual contact "sex partner at risk"
    a. Sexual contact with an injecting drug user
    b. Sexual contact with a bisexual male
    c. Sexual contact with a person with hemophilia
    d. Sexual contact with a transfusion recipient with HIV
    e. Sexual contact with a transplant recipient with HIV
    f. Sexual contact with a person with HIV/AIDS; with a risk unspecified
5. Transfusion of blood/blood components
6. Transplant of tissue/organs or artificial insemination
7. Worked in a health care or laboratory setting

Some reported HIV cases are assigned a "no identified risk" (NIR) category. The NIR category generally includes cases for which the reporting source does not have the risk information available. For example, private laboratories and blood banks generally do not capture information on individuals' risk behaviors.

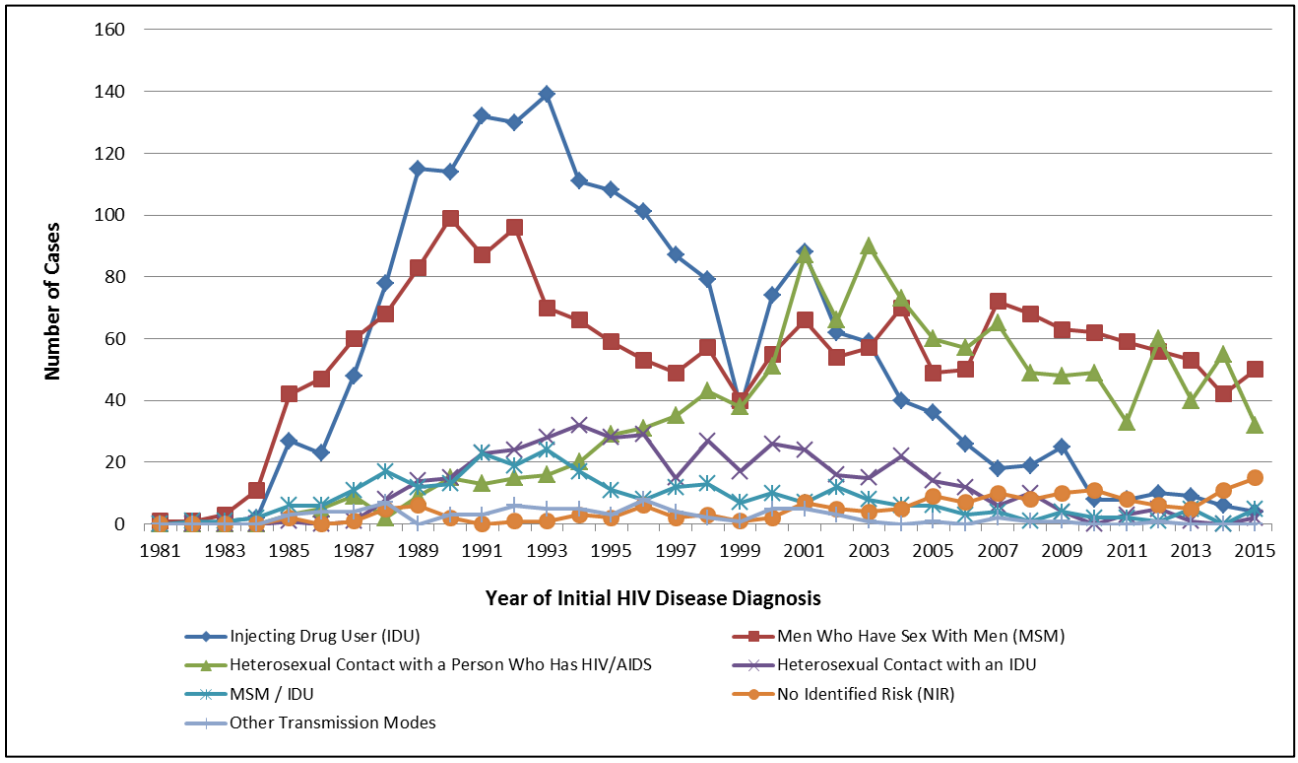
As per CDC-established standards, no more than 15% of HIV/AIDS cases should be classified as NIR. In Delaware, only 2.7% of cases are in the NIR classification.

Mode of HIV Transmission. Patterns of HIV transmission may shift over time and the predominant mode of transmission in Delaware at the beginning of the HIV/AIDS epidemic (1981-1994) differs from current patterns of disease transmission (Figure 12). Furthermore, it is not unusual for cases that were attributable to one risk factor to be later re-assigned to a different risk category if it is determined that the sexual partner who has HIV is also an IDU and/or bisexual.

In 1993, 49% of HIV/AIDS cases diagnosed among Delawareans were attributable to IDU. This percentage has fallen to 4% in 2015. The proportion of Delaware's HIV/AIDS cases diagnosed among men who have sex with men (MSM) in 2015 is 46%. MSM as a risk factor has been resurgent since 1999 and is currently the highest ranking risk factor for HIV infection accounting for 33% of PLWH in Delaware.

In Delaware, the percentage of cases attributable to heterosexual contact increased from 1985 until 2004. Since 2004, with some points of fluctuation, HIV infections attributable to heterosexual contact has decreased significantly. Cases attributable to "other modes of transmission" include perinatal exposure, transfusion recipients, and those infected from working in a health care or laboratory setting. Cases representing "other modes of transmission" account for a very small percentage of all HIV/AIDS cases in the state.

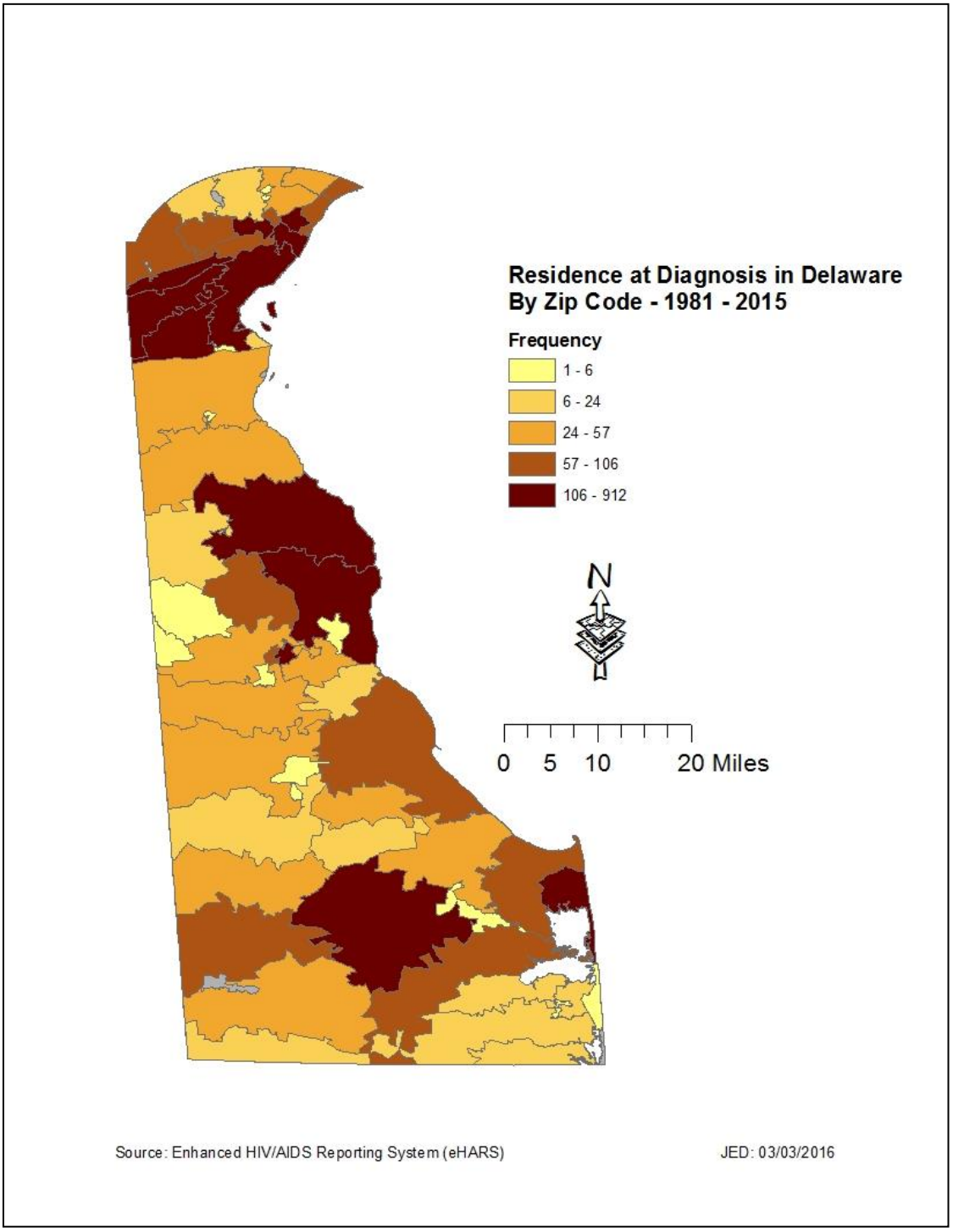
Figure 12 Delaware HIV/AIDS cases, by mode of transmission, 1981-2015 (N=5,878)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

The following map (Figure 13) is a visual representation of where Delawareans diagnosed with HIV were residing at the time of their initial HIV diagnosis. The map constitutes those diagnosed with HIV from 1991 through 2015.

Figure 13 Residence at initial HIV disease diagnosis, by Zip Code, 1981-2015



Note: Frequency data is represented in quantile divisions.

Table 7 Delaware HIV/AIDS cases, by mode of transmission, 2011-2015 and cumulative (N=5,878)

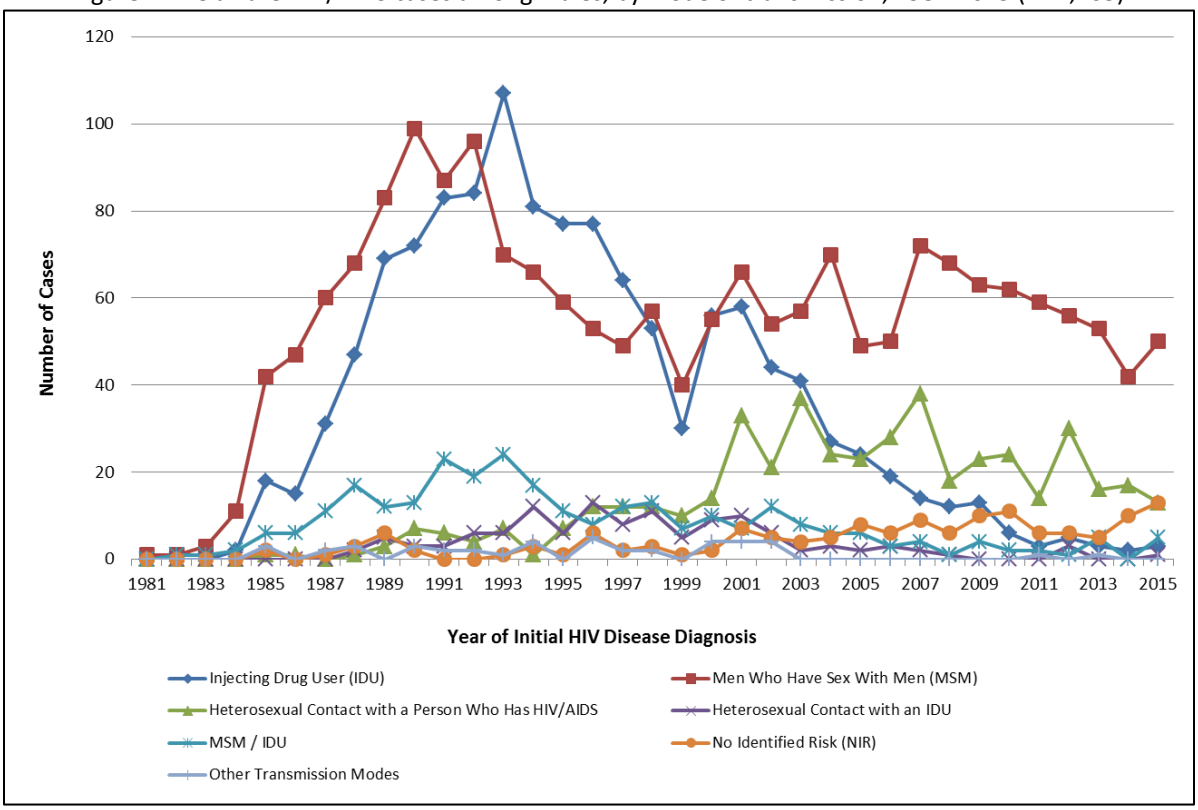
	2011 N (%)	2012 N (%)	2013 N (%)	2014 N (%)	2015 N (%)	Cumulative N (%)
Mode of Transmission						
Injection Drug Use (IDU)	8 (7%)	10 (7%)	9 (8%)	6 (5%)	4 (4%)	1,825 (31%)
Men Who have Sex with Men (MSM)	59 (52%)	56 (40%)	53 (47%)	42 (37%)	50 (46%)	1,918 (33%)
Heterosexual contact with PWH/A	33 (29%)	60 (43%)	40 (35%)	55 (48%)	32 (30%)	1,198 (20%)
Heterosexual contact with an IDU	3 (3%)	5 (4%)	1 (1%)	0 (0%)	2 (2%)	422 (7%)
IDU and are MSM	2 (2%)	1 (1%)	5 (4%)	0 (0%)	5// (5%)	279 (5%)
No Identified Risk (NIR)	8 (7%)	6 (4%)	5 (4%)	11 (10%)	15 (14%)	161 (3%)
Other Modes	0 (0%)	1 (1%)	0 (0%)	0 (0%)	0 (0%)	75 (1%)
Totals	113 (100%)	139 (100%)	113 (100%)	114 (100%)	108 (100%)	5,878 (100%)

Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Cumulatively, the majority (69%) of all HIV/AIDS cases diagnosed in Delaware has been related to risky sexual behavior; the remaining 31% were related to injection drug use (Table 7). Five-percent of those classified as risky sexual behavior were MSM's who also engaged in injection drug use. It is also important to note that trends in the mode of HIV transmission among Delawareans also differ by gender.

HIV Transmission among Delaware Males. Between 1990 and 2015, the percentage of male HIV/AIDS cases attributable to IDU and MSM/IDU in Delaware declined. As shown in Figure 14, IDU-attributable cases among males fell by 97% from 107 in 1993, to three in 2015. MSM cases as a percentage of total cases among males, has been resurgent since 2000 and has accounted for over 50% of all new cases among males since 2007. MSM has been the highest ranking exposure risk among males since 1999 and the highest overall exposure risk since 2006 with only two years (2011 and 2014) as exceptions. MSM/IDU-attributable cases fell from 24 in 1993 to five in 2015, a decrease of 79%. In Delaware, the percentage of male HIV/AIDS cases attributable to heterosexual contact has increased from one in 1994 to peak at 38 in 2007, ending 2015 at 13 total cases. The decline from 2007 to 2015 reflects a 66% decrease. However, the current heterosexual exposure counts remain higher than the levels in the 1980s or the 1990s.

Figure 14 Delaware HIV/AIDS cases among males, by mode of transmission, 1981-2015 (N=4,203)

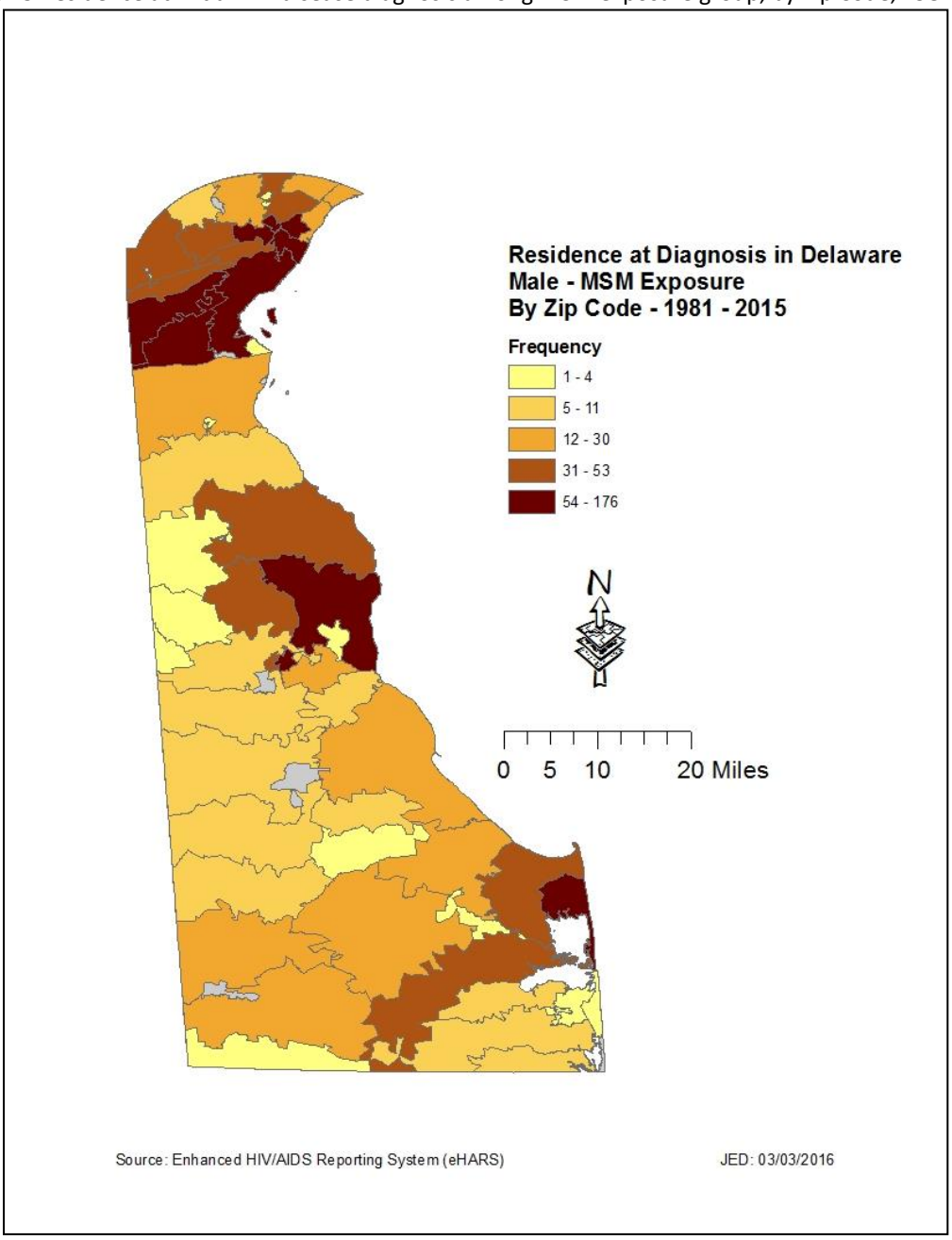


Source: Delaware Evaluation HIV/AIDS Reporting System (EHARS)

HIV/AIDS cases attributable to different modes of transmission (i.e., IDU, MSM, MSM/IDU, and heterosexual contact) often differ among demographic groups. The sub-population of Delawarean men diagnosed with HIV/AIDS and the mode of infection transmission is explored in detail below.

Men Who Have Sex with Men (MSM). Since 1981, a total of 1,918 MSM-attributable cases have been diagnosed in Delaware and account for 46% of all HIV/AIDS cases diagnosed among males. The majority (65%) have been from New Castle County, while Kent and Sussex Counties have accounted for 12% and 23% of cases, respectively. These figures are displayed by zip code in Figure 15 on the following page.

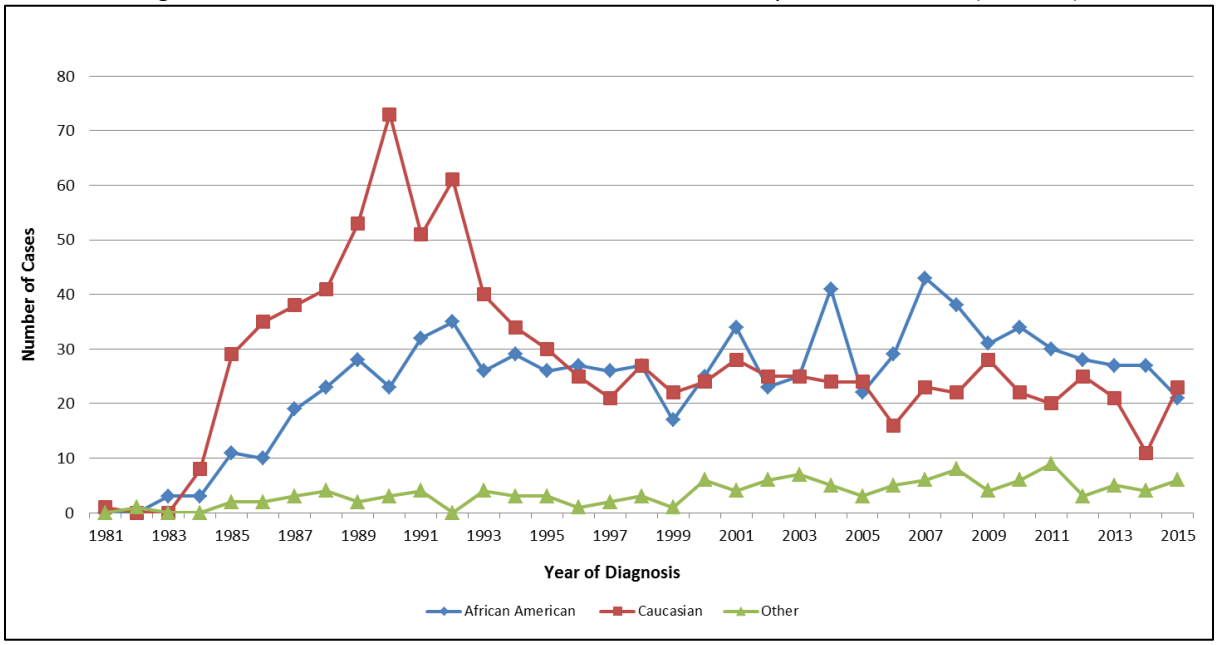
Figure 15 Residence at initial HIV disease diagnosis among MSM exposure group, by Zip Code, 1981-2015



Note: Frequency data is represented in quantile divisions.

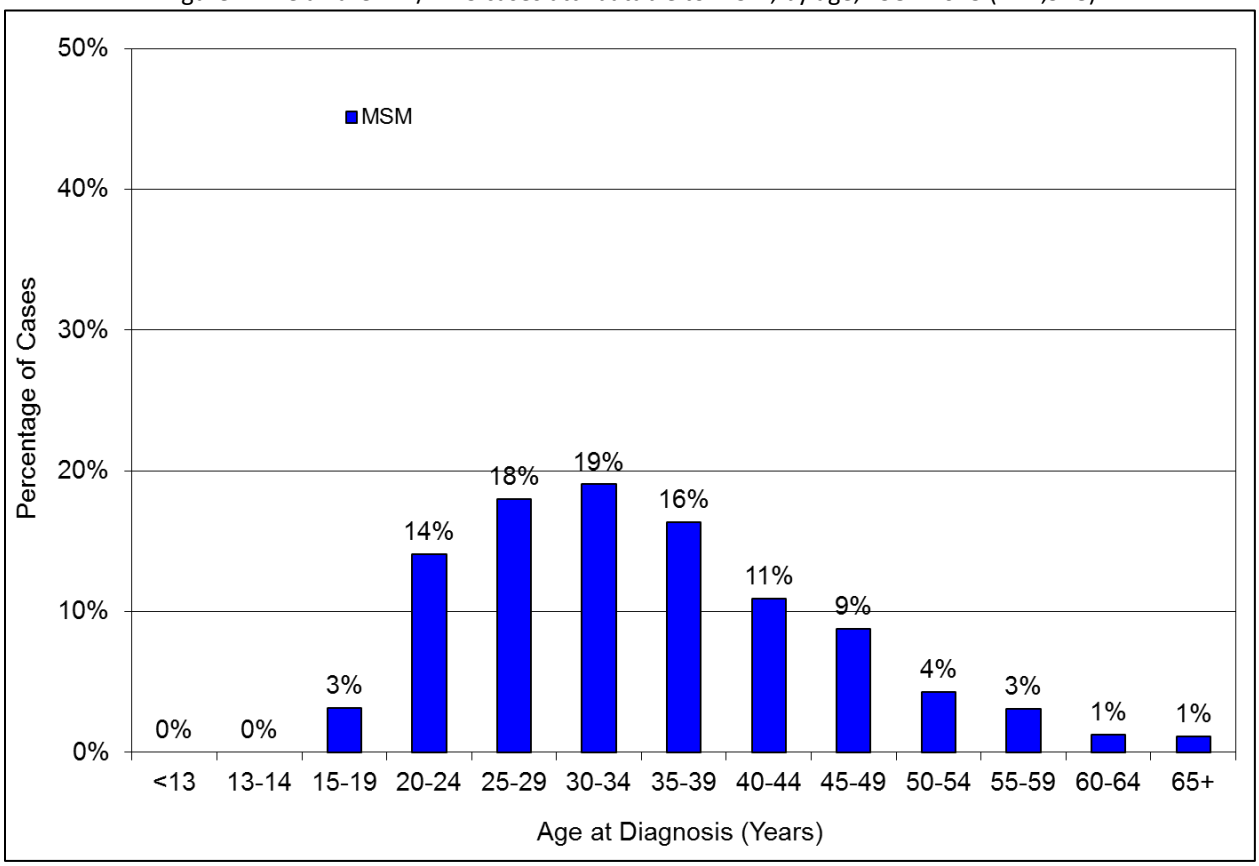
As shown in Figure 16 and Table 8, the demographic composition of HIV/AIDS cases attributable to MSM has shifted with time. In the early 1990's, African-Americans accounted for 171 (37%) of MSM cases. From 2010-2015 that number decreased to 167, however, this was a total 53% of all MSM during this timeframe. Over the same period, the average of MSM cases for Caucasians fell from 289 (59%) in the early 1990s to 122 (38%) from 2010 to 2015. The proportion of MSM-related cases among Hispanic Delawareans has remained fairly stable since 1981. As shown in Figure 17, the majority of MSM-related cases were diagnosed among men ages 25-39.

Figure 16 Delaware HIV/AIDS cases attributable to MSM, by race, 1981-2015 (N=1,918)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Figure 17 Delaware HIV/AIDS cases attributable to MSM, by age, 1981-2015 (N=1,918)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Table 8 Delaware HIV/AIDS cases attributable to MSM, by race and age, 2011-2015 and cumulative (N=1,918)

	2011 N (%)	2012 N (%)	2013 N (%)	2014 N (%)	2015 N (%)	Cumulative* N (%)
Total Cases	59	56	53	42	50	1,918
Race						
Caucasian	20 (34%)	25 (45%)	21 (40%)	11 (26%)	23 (46%)	950 (50%)
African-American	30 (51%)	28 (50%)	27 (51%)	27 (64%)	21 (42%)	43 (44%)
Other	9 (15%)	3 (5%)	5 (9%)	4 (10%)	6 (12%)	125 (7%)
Age Group (Years at Diagnosis)						
<13	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
13-14	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
15-19	5 (8%)	1 (2%)	2 (4%)	3 (7%)	2 (4%)	60 (3%)
20-24	13 (22%)	18 (32%)	13 (25%)	7 (17%)	10 (20%)	270 (14%)
25-29	16 (27%)	13 (23%)	13 (25%)	7 (17%)	11 (22%)	345 (18%)
30-34	9 (15%)	8 (14%)	5 (9%)	11 (26%)	9 (18%)	365 (19%)
35-39	3 (5%)	4 (7%)	4 (8%)	5 (12%)	4 (8%)	314 (16%)
40-44	3 (5%)	4 (7%)	2 (4%)	2 (5%)	1 (2%)	209 (11%)
45-49	3 (5%)	3 (5%)	5 (9%)	1 (2%)	5 (10%)	168 (9%)
50-54	3 (5%)	2 (4%)	5 (9%)	3 (7%)	2 (4%)	82 (4%)
55-59	2 (3%)	2 (4%)	1 (2%)	1 (2%)	5 (10%)	59 (3%)
60-64	0 (0%)	0 (0%)	2 (4%)	1 (2%)	0 (0%)	24 (1%)
65+	2 (3%)	1 (2%)	1 (2%)	1 (2%)	1 (2%)	22 (1%)

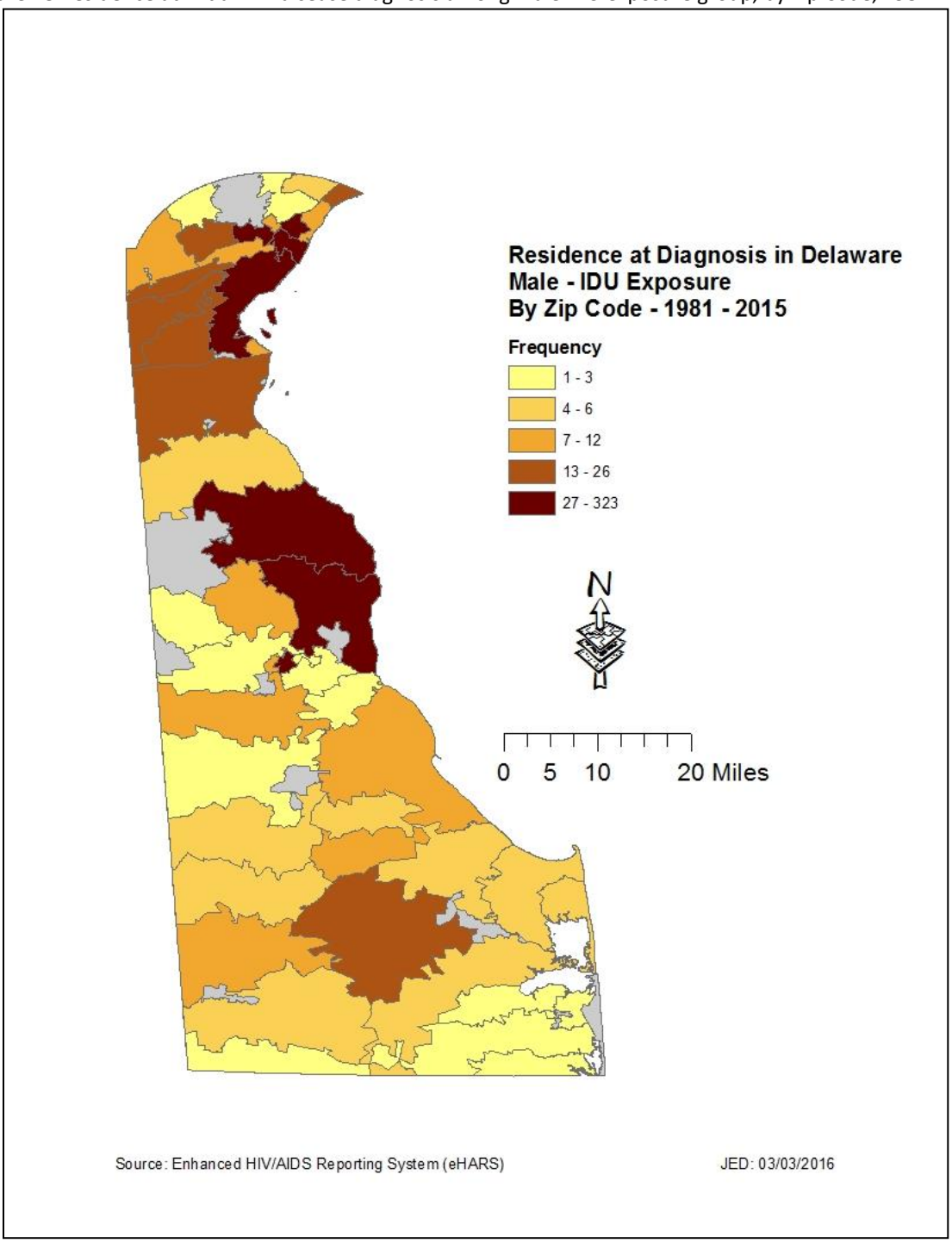
Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

*The cumulative total represents all persons in the category 1981 - 2015

Male Injecting Drug Users (IDU). From 1981-2015, 1,240 IDU-attributable cases of HIV/AIDS were diagnosed among Delaware males and cumulatively accounted for 30% of all cases diagnosed among Delaware men. Eighty-five percent were in New Castle County, while Kent and Sussex Counties accounted for 7% and 8%, respectively.

The majority (80%) of all IDU-attributable cases among Delaware men were within the African-American population. In 1993, 92 (86%) IDU related HIV cases were diagnosed among African-American men. In 2015, this number had declined to 2 (80%) cases. As shown in Figure 19, among males, the percentage of African-American men in Delaware having an HIV diagnosis attributable to IDU remains high; however, the total number of cases has dropped significantly. The number of IDU cases among Caucasian males and those listed in the "other" category (including Hispanics) have remained stable since 1987. The majority of IDU-related cases were diagnosed among men ages 35-44 as shown in Figure 20 and Table 9.

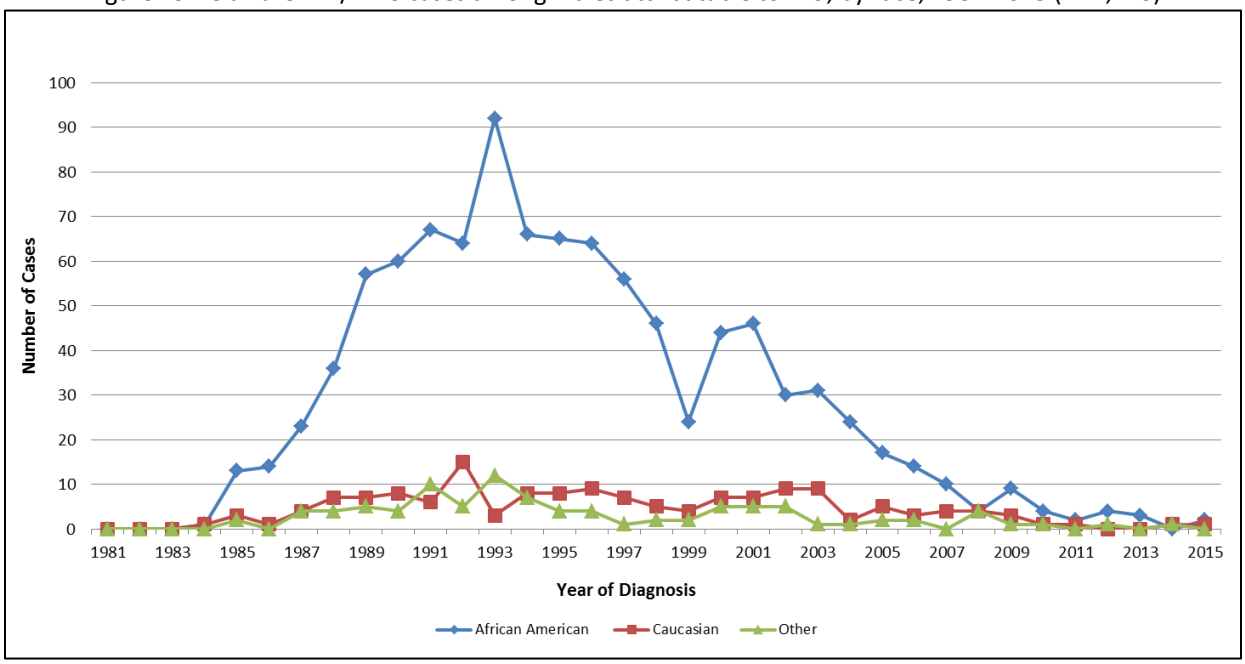
Figure 18 Residence at initial HIV disease diagnosis among male IDU exposure group, by Zip Code, 1981-2015



Note: Frequency data is represented in quantile divisions.

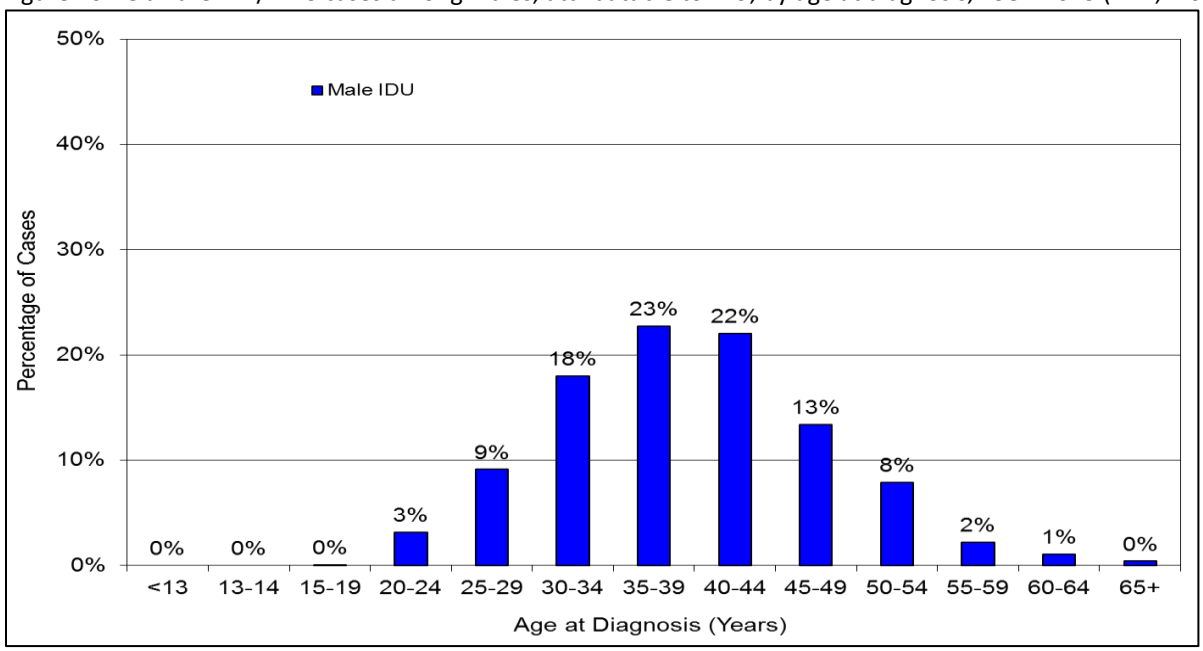
Figure 19 shows that the annual number of IDU-attributable cases diagnosed among Delaware men has declined steadily since the mid-1990s. The apparent peak in male IDU cases in 1993 is a reflection of the expanded AIDS definition that year.

Figure 19 Delaware HIV/AIDS cases among males attributable to IDU, by race, 1981-2015 (N=1,240)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Figure 20 Delaware HIV/AIDS cases among males, attributable to IDU, by age at diagnosis, 1981-2015 (N=1,240)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Table 9 Delaware HIV/AIDS cases among males, attributable to IDU, by race and age, 1981-2015 (N=1,240)

	1981-2015 N (%)
Total Cases	1,240
Race	
Caucasian	153 (12%)
African-American	992 (80%)
Hispanic/Other	95 (8%)
Age Group (Years)	
<13	0 (0%)
13-14	0 (0%)
15-19	1 (<1%)
20-24	39 (3%)
25-29	113 (9%)
30-34	223 (18%)
35-39	282 (23%)
40-44	273 (22%)
45-49	166 (13%)
50-54	98 (8%)
55-59	27 (2%)
60-64	13 (1%)
65+	5 (<1%)

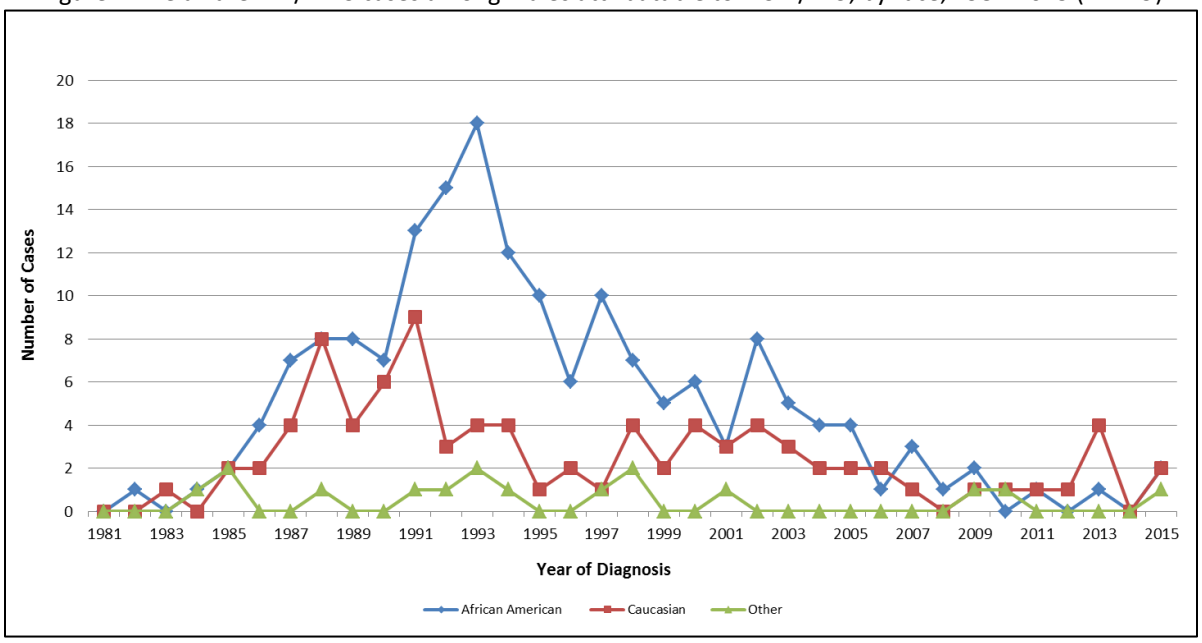
Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

*Due to low annual numbers this table is limited to cumulative figures for this category

Men Who Have Sex with Men and Who Also Inject Drugs (MSM/IDU). Since 1981, 279 MSM/IDU-attributable cases of HIV/AIDS were diagnosed among Delaware men, accounting for 7% of all male HIV/AIDS cases diagnosed in the state. The majority of MSM/IDU cases (79%) were diagnosed among males in New Castle County; Kent and Sussex Counties accounting for 9% and 12% of cases, respectively.

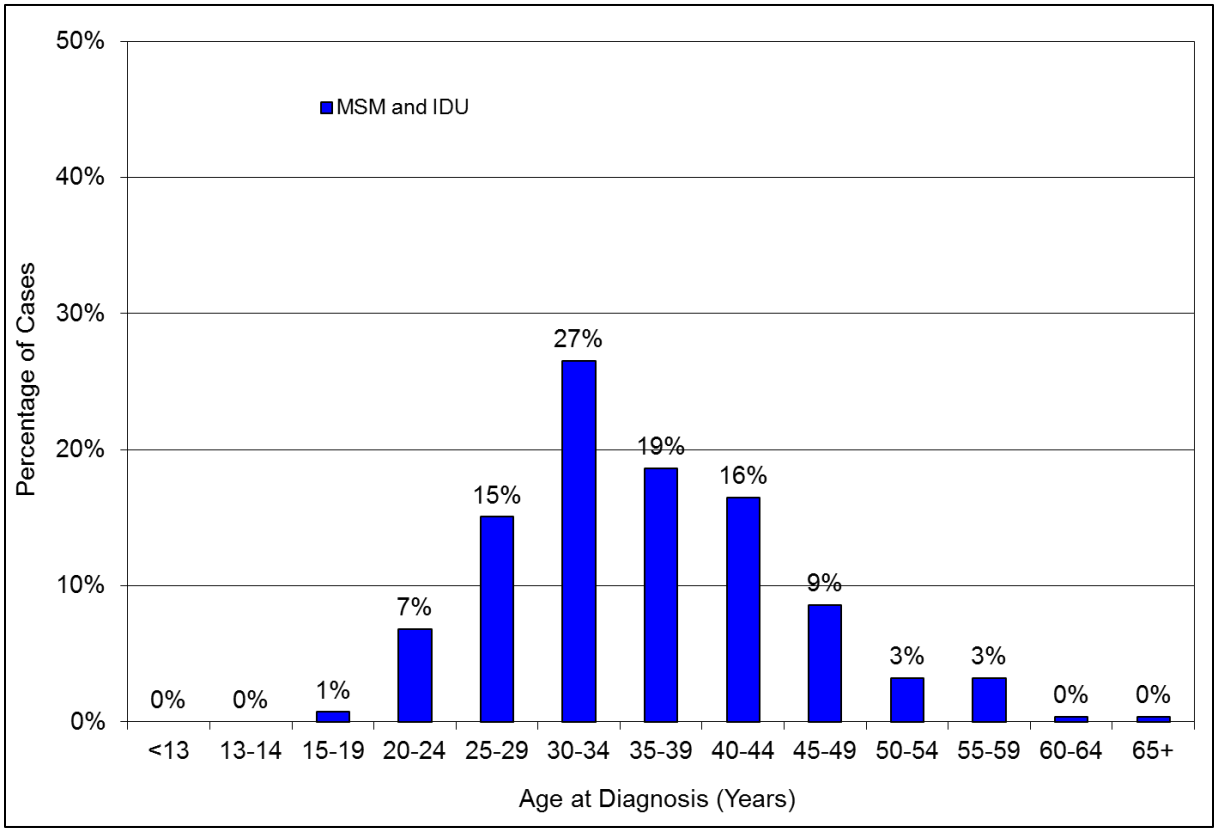
As shown in Table 10, approximately 63% of all MSM/IDU cases diagnosed in the state were among African-Americans, while Caucasians account for 32%. MSM/IDU has declined from a high of 24 cases in 1993 to five in 2015 (Figure 21). Men between the ages of 30-39 at diagnosis are most likely to be affected through MSM/IDU exposure (Figure 22).

Figure 21 Delaware HIV/AIDS cases among males attributable to MSM/IDU, by race, 1981-2015 (N=279)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Figure 22 Delaware HIV/AIDS cases among males, attributable to MSM/IDU, by age at diagnosis, 1981-2015 (N=279)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Table 10 Delaware HIV/AIDS cases attributable to MSM/IDU, by race and age, 1981-2015 (N=279)*

	1981 – 2015 N (%)
Total Cases	279
Race	
Caucasian	88 (32%)
African-American	175 (63%)
Hispanic/Other	16 (6%)
Age Group (Years at Diagnosis)	
<13	0 (0%)
13-14	0 (0%)
15-19	2 (1%)
20-24	19 (7%)
25-29	42 (14%)
30-34	74 (27%)
35-39	52 (19%)
40-44	46 (16%)
45-49	24 (9%)
50-54	9 (3%)
55-59	9 (3%)
60-64	1 (<1%)
65+	1 (<1%)

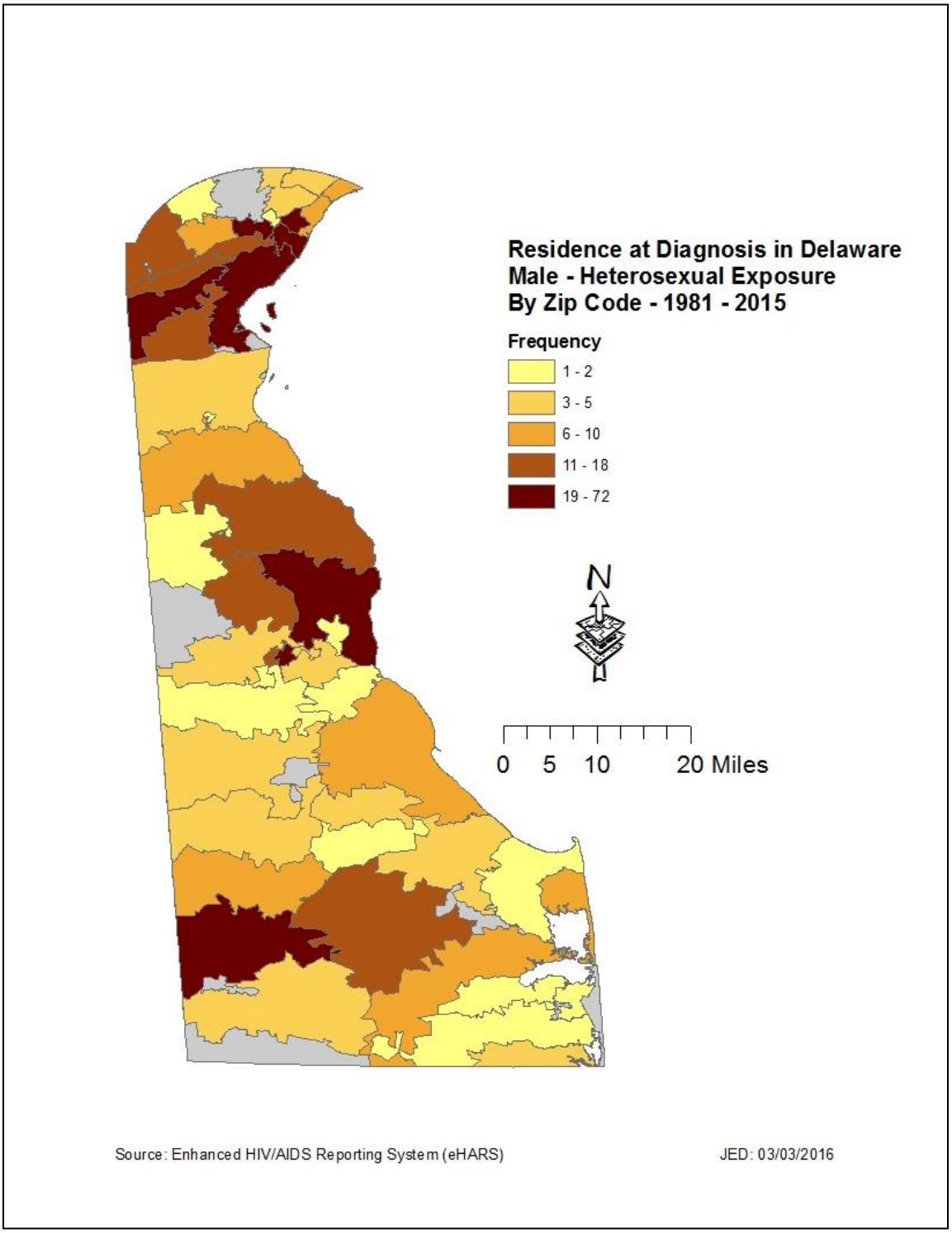
Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

*Due to low annual numbers this table is limited to cumulative figures for this category

Male Heterosexual Transmission. Heterosexual transmission accounted for 585 HIV/AIDS cases diagnosed among Delaware males since 1981, representing 14% of all HIV/AIDS cases diagnosed in this group. Twenty-one percent of male heterosexual cases had sexual contact with a female IDU partner. Seventy percent of all male heterosexual HIV/AIDS cases were diagnosed in New Castle County, 17% were in Sussex County, and 13% were in Kent County.

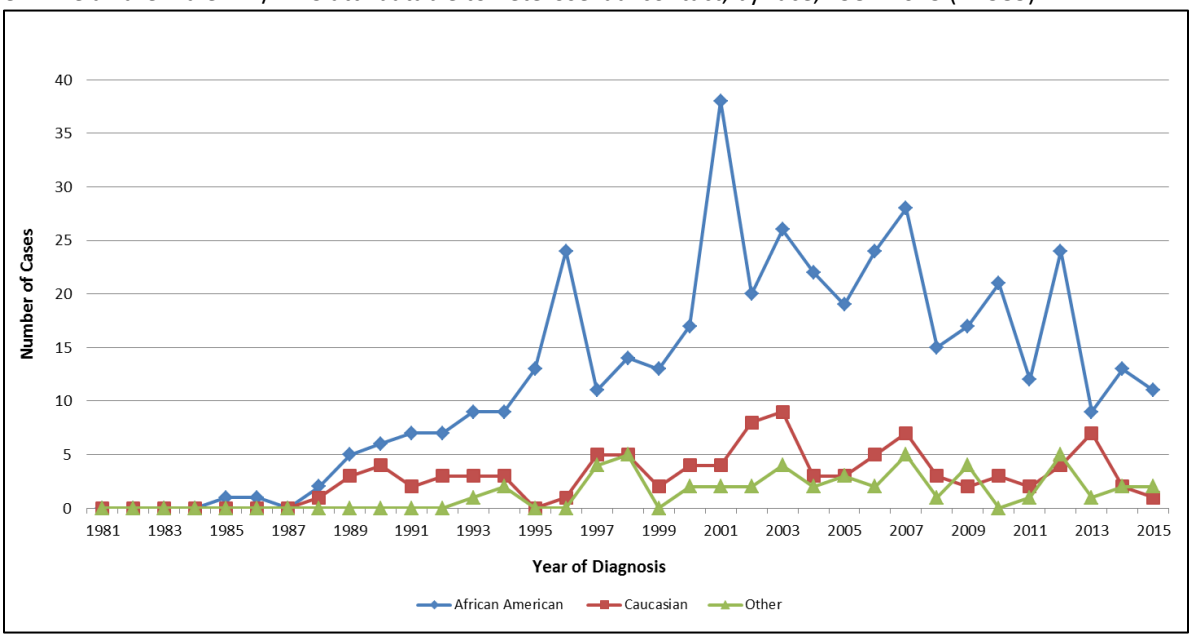
In 2001, there were 44 cases of HIV/AIDS attributable to male heterosexual contact (the highest number in a single year). In 2015, this number fell to 14. This is a significant drop (from 23% to 16%). As shown in Table 11, African-American males account for 75% of heterosexually transmitted cases. Caucasians and Hispanics/Others accounted for 17% and 8%, respectively. The majority of males diagnosed with HIV through heterosexual contact in Delaware have been between the ages of 30 through 44 (figure 25).

Figure 23 Residence at initial HIV disease diagnosis among male heterosexual exposure group, by Zip Code, 1981-2015



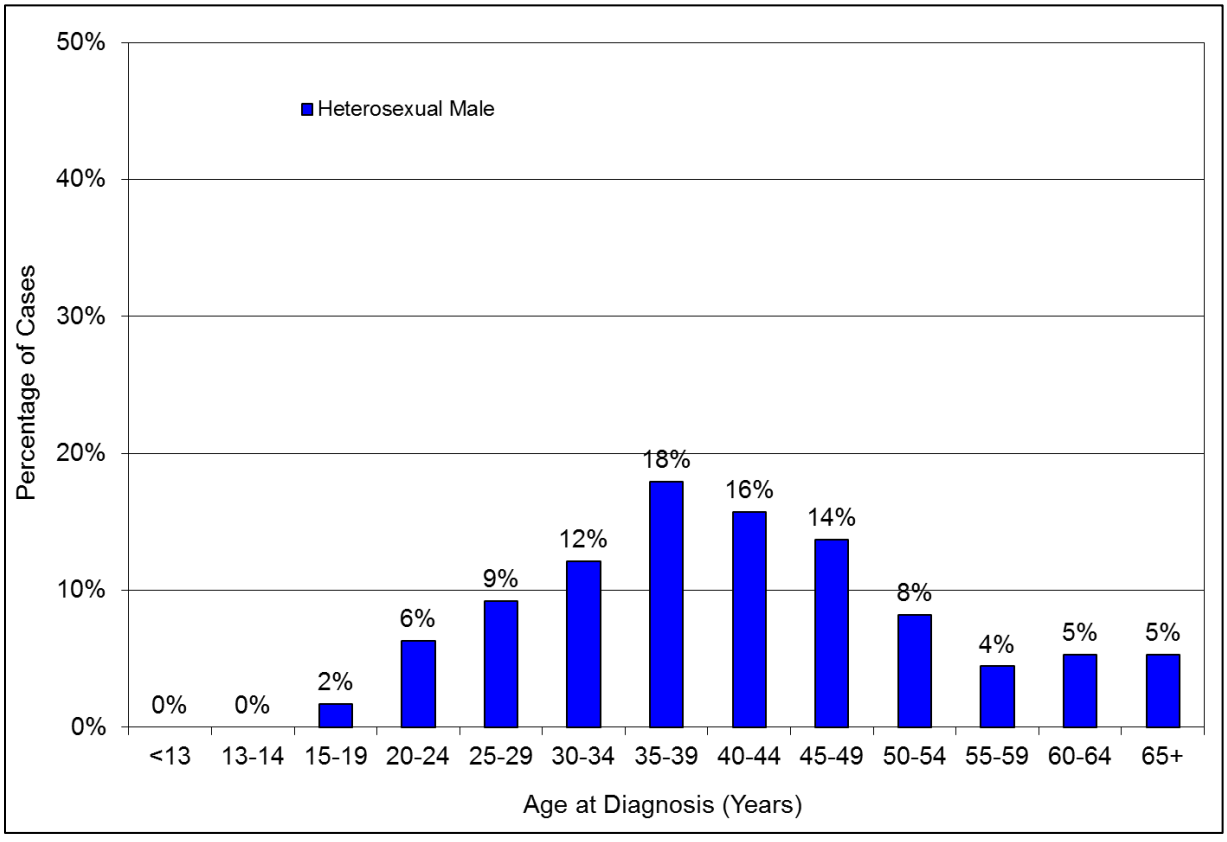
Note: Frequency data is represented in quantile divisions.

Figure 24 Delaware male HIV/AIDS attributable to heterosexual contact, by race, 1981-2015 (N=585)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Figure 25 Delaware male HIV/AIDS attributable to heterosexual contact, by age at diagnosis, 1981-2015 (N=585)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Table 11 Delaware male HIV/AIDS attributable to heterosexual contact, by race and age, 1981-2015 (N=585)*

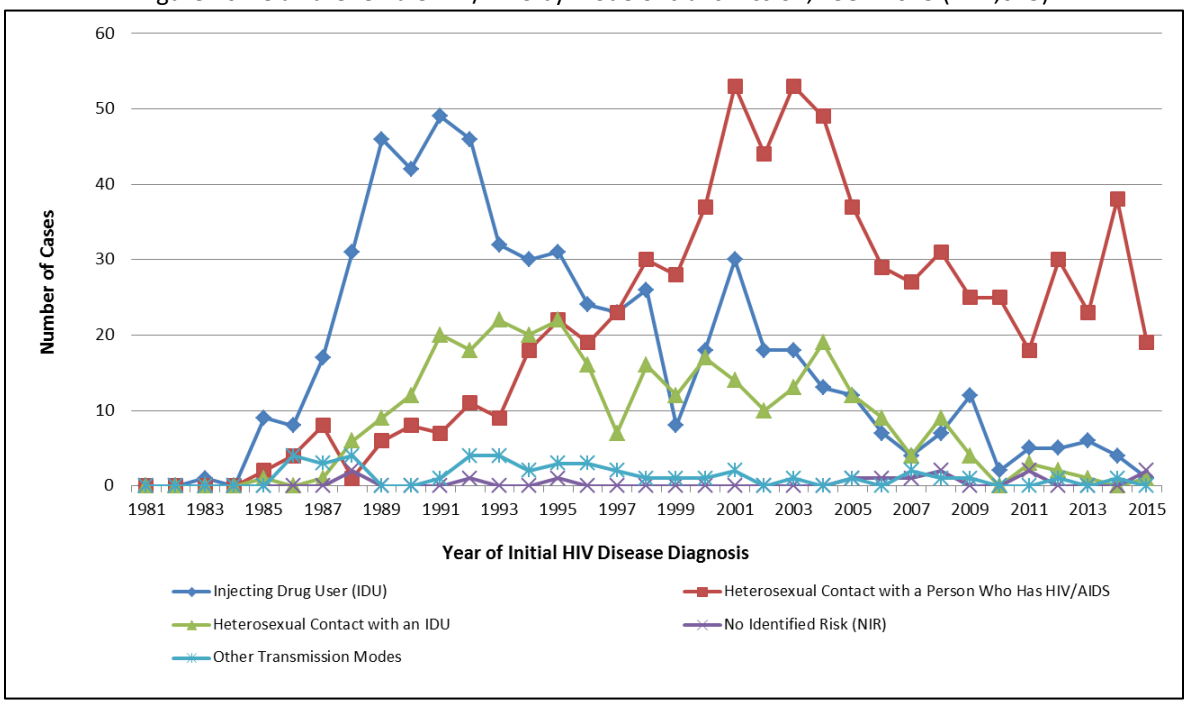
	1981 - 2015 N (%)
Total Cases	585 (100%)
Race	
Caucasian	97 (17%)
African-American	438 (75%)
Hispanic/Other	50 (8%)
Age Group (Years at Diagnosis)	
<13	0 (0%)
13-14	0 (0%)
15-19	10 (2%)
20-24	37 (6%)
25-29	54 (9%)
30-34	71 (12%)
35-39	105 (18%)
40-44	92 (16%)
45-49	80 (14%)
50-54	48 (8%)
55-59	26 (4%)
60-64	31 (5%)
65+	31 (5%)

Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

*Due to low annual numbers this table is limited to cumulative figures for this category

HIV Transmission among Delaware Females. Between 1991 and 2007, the number of Delaware female HIV/AIDS cases attributable to IDU declined. An increase from 2007-2009 is likely a reflection of increased testing through the Delaware Needle Exchange Program. The success of this program is also reflected in the drop in the number of cases from 2010 through 2015 after the initial case discoveries were made in 2008 and 2009. In 1986, heterosexual contact with an HIV-positive male accounted for 4 (25%) of all female HIV/AIDS cases. In 2010, this number was 25 (93%), and in 2015 the number was 19 (83%).

Figure 26 Delaware female HIV/AIDS by mode of transmission, 1981-2015 (N=1,675)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Female Injecting Drug Users (IDUs). Since 1981, 585 IDU-attributable cases of HIV/AIDS were diagnosed among Delaware females, accounting for 35% of all cases in this group. At the time of their diagnosis, 88% of females with HIV due to injection drug use were residing in New Castle County, 6% were residing in Kent County; and, the remaining 6% were in Sussex County.

As shown in Figure 28, the highest number of cases in Delaware occurred in 1991 with 49 cases recorded (64% of the total for that year). By 2007 this number had decreased to four cases (11%). Overall, the number of IDU-attributable cases among Delaware females decreased 99% from 1991-2015, with only one IDU attributable case in 2015. Table 12 shows that African-American females account for 79% of cases in this category, while Caucasians and Hispanics/Others account for 16% and 5%, respectively. Females between the ages of 30-39 at diagnosis represent the largest group within this category (Figure 29).

Figure 27 Residence at initial HIV disease diagnosis among female IDU exposure group, by Zip Code, 1981-2015

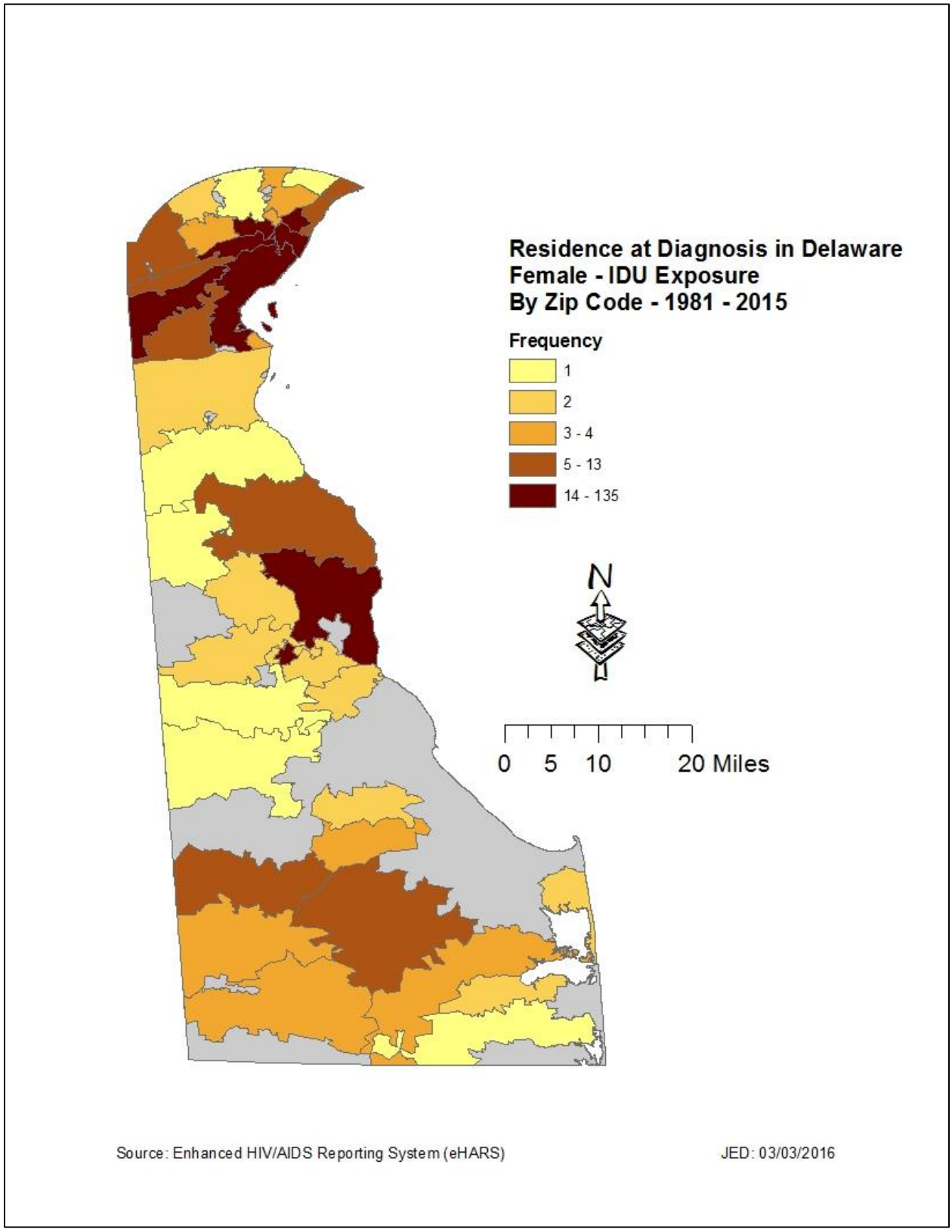
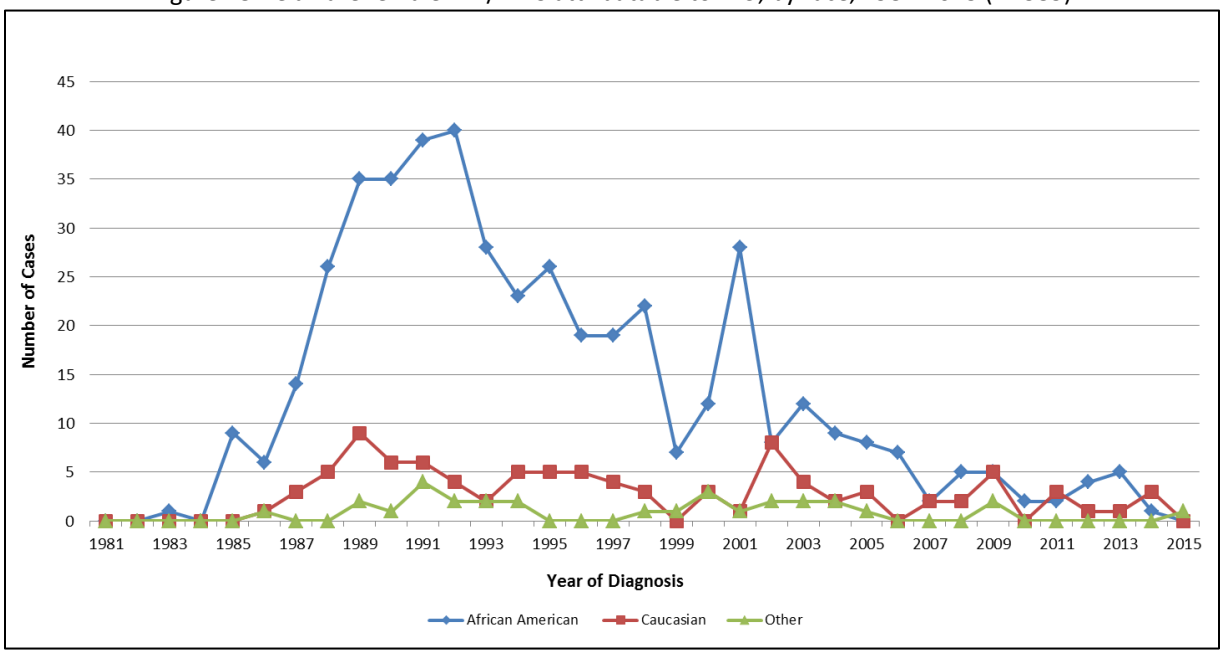
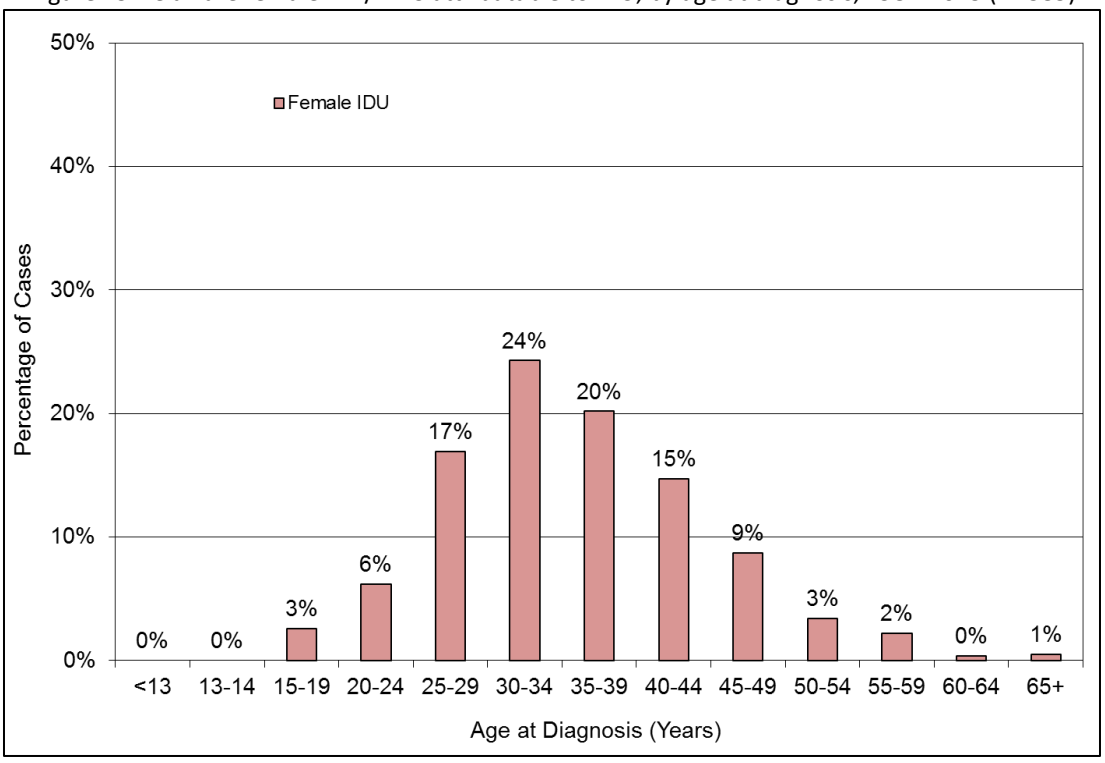


Figure 28 Delaware female HIV/AIDS attributable to IDU, by race, 1981-2015 (N=585)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Figure 29 Delaware female HIV/AIDS attributable to IDU, by age at diagnosis, 1981-2015 (N=585)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Table 12 Delaware female HIV/AIDS attributable to IDU, by race and age, 1981-2015 (N=585)*

	1981 - 2015 N (%)
Total Cases	585
Race	
Caucasian	96 (16%)
African-American	459 (79%)
Hispanic/Other	30 (5%)
Age Group (Years at Diagnosis)	
<13	0 (0%)
13-14	0 (0%)
15-19	15 (3%)
20-24	36 (6%)
25-29	99 (17%)
30-34	142 (24%)
35-39	118 (20%)
40-44	86 (15%)
45-49	51 (9%)
50-54	20 (3%)
55-59	13 (2%)
60-64	2 (<1%)
65+	3 (1%)

Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

*Due to low annual numbers this table is limited to cumulative figures for this category

Female Heterosexual Transmission accounted for 1,035 HIV/AIDS cases diagnosed among Delawarean females since 1981, representing 62% of all HIV/AIDS cases diagnosed among this group. Twenty-nine percent of female heterosexual cases had sexual contact with a male IDU partner. Seventy-two percent of all female heterosexual HIV/AIDS cases were in New Castle County, 15% in Sussex County, and 13% in Kent County.

In 2001, there were 67 cases of HIV/AIDS attributable to female heterosexual contact (the highest number in a single year). In 2015 the number was 20; a 70% decrease in the category. As a percentage of total HIV/AIDS cases among Delawarean females from 2001 to 2015, heterosexual exposure increased from 68% to 87%. This was the result of a fall in IDU attributable infections as well as the fact that females may now be presumed heterosexually exposed if no other risk factor is determined. As shown in Table 13, African-American females have accounted for approximately 75% of female heterosexual transmission cases. Caucasians and Hispanics/Others accounted for 18% and 7%, respectively. As shown in Figure 32, females between the ages of 30-39 at diagnosis are primarily affected.

Figure 30 Residence at initial HIV disease diagnosis among female heterosexual exposure group, by Zip Code, 1981-2015

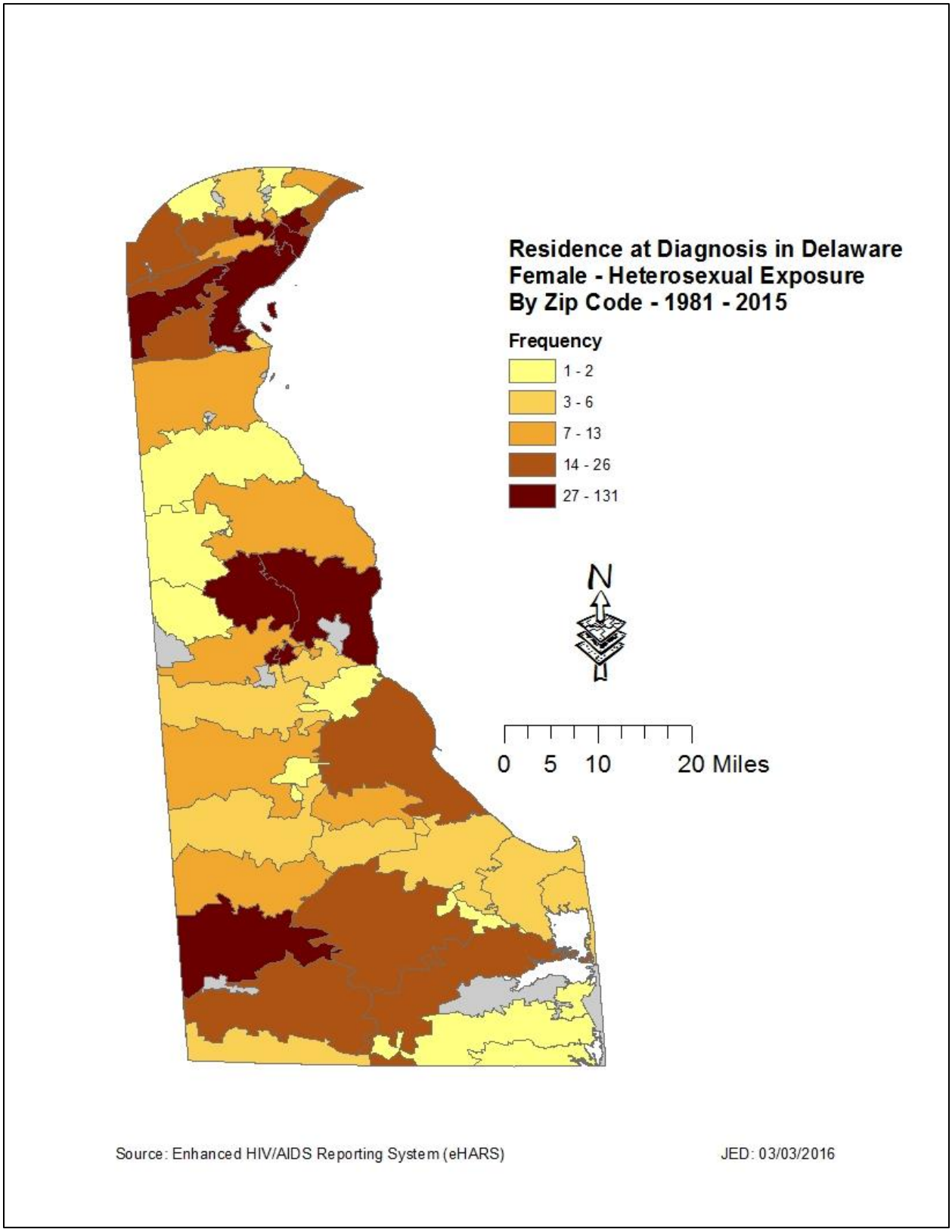
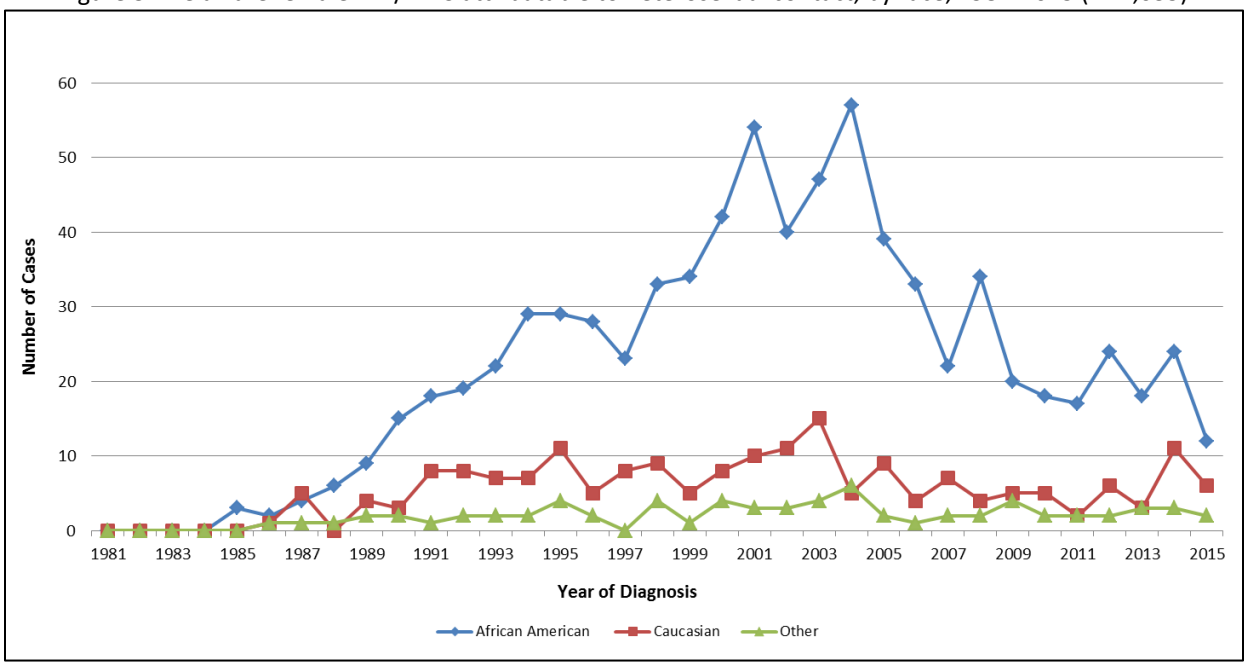
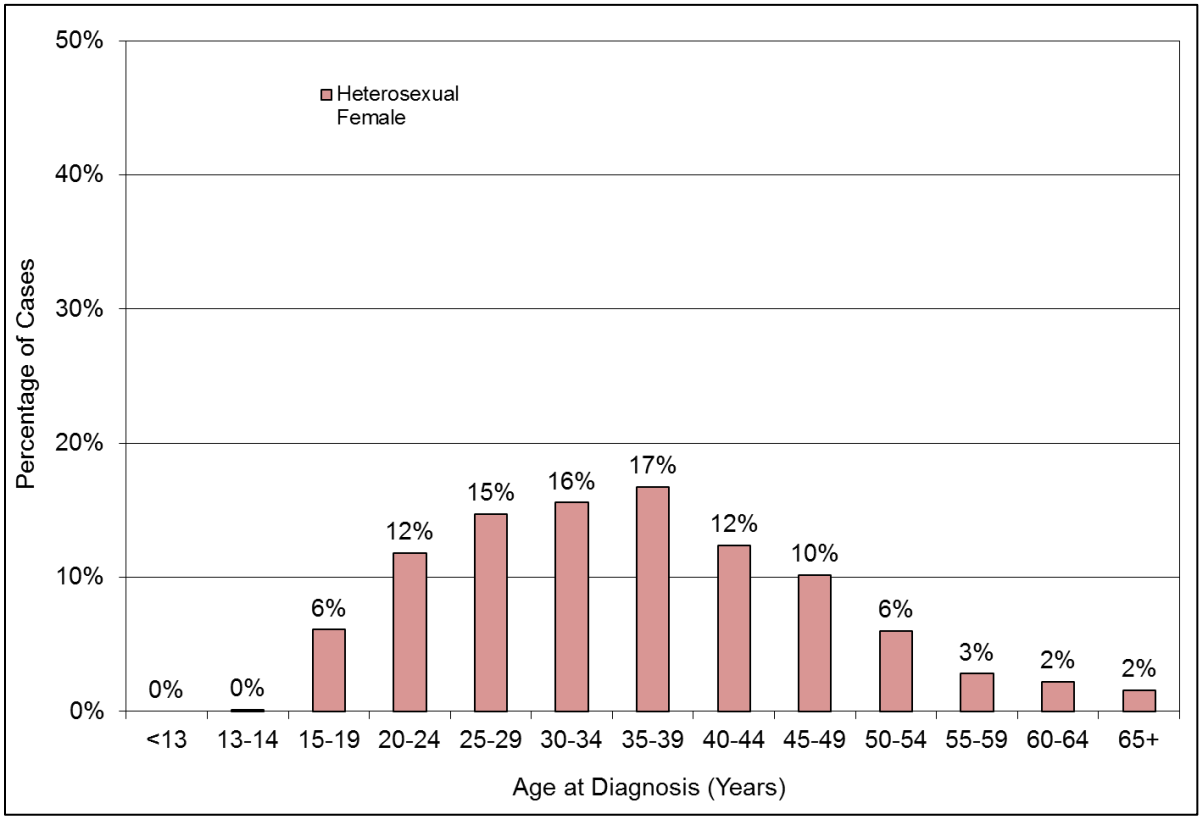


Figure 31 Delaware female HIV/AIDS attributable to heterosexual contact, by race, 1981-2015 (N=1,035)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

Figure 32 Delaware female HIV/AIDS attributable to heterosexual contact, by age at diagnosis, 1981-2015 (N=1,035)



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS)

Table 13 Delaware female HIV/AIDS attributable to heterosexual contact, by race and age, 1981-2015 (N=1,035)*

	1981 - 2015 N (%)
Total Cases	1,035
Race	
Caucasian	192 (19%)
African-American	773 (75%)
Hispanic/Other	70 (7%)
Age Group (Years at Diagnosis)	
<13	0 (0%)
13-14	1 (<1%)
15-19	63 (6%)
20-24	122 (12%)
25-29	152 (15%)
30-34	161 (16%)
35-39	173 (17%)
40-44	128 (12%)
45-49	105 (10%)
50-54	62 (6%)
55-59	29 (3%)
60-64	23 (2%)
65+	16 (2%)

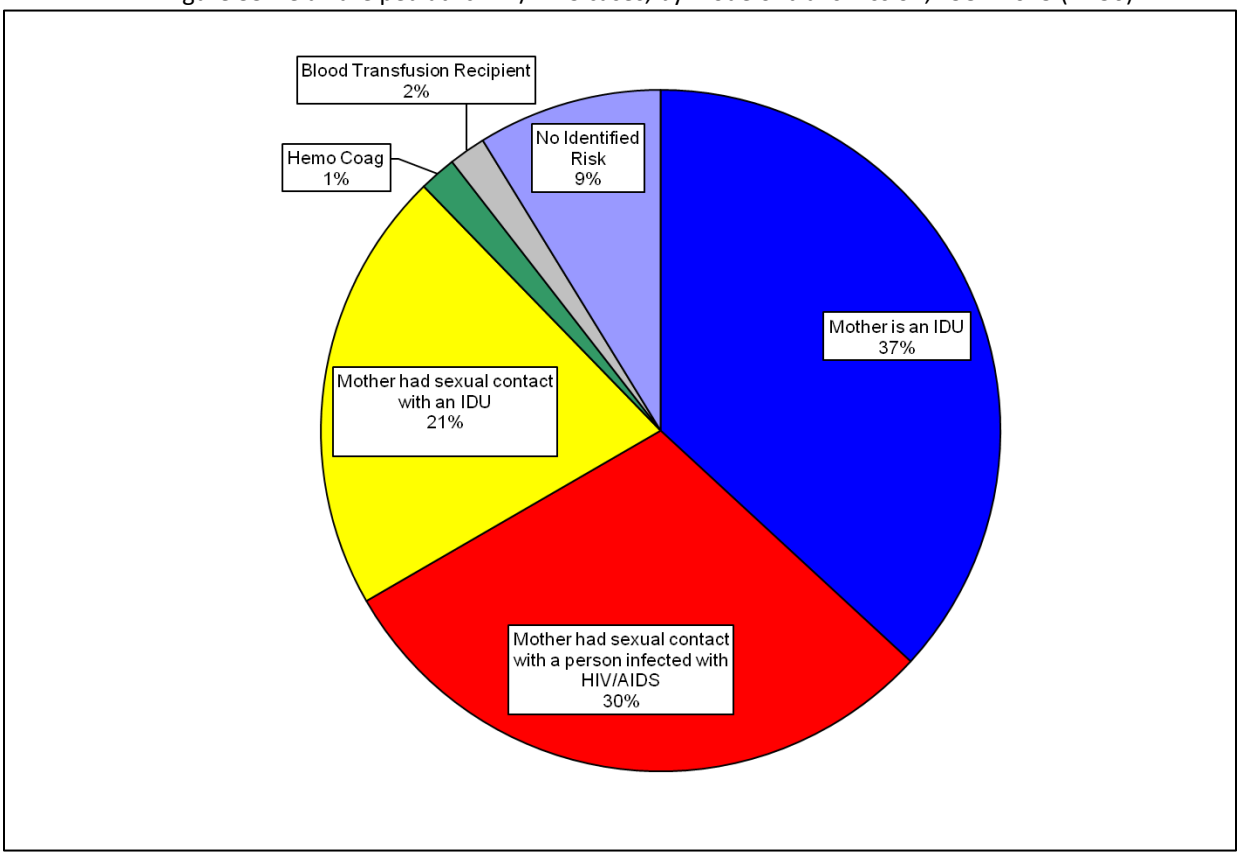
Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

*Due to low annual numbers this table is limited to cumulative figures for this category

Pediatric HIV/AIDS Cases in Delaware. Perinatal exposure accounts for nearly 90% of all pediatric HIV/AIDS cases diagnosed in the state. Thirty-seven percent of the mothers were IDUs; 30% had sexual contact with a person infected with HIV/AIDS; and, 21% had sexual contact with an IDU. Three percent of pediatric cases diagnosed in Delaware since 1981 contracted the disease through transfusions of blood or blood products, while 9% percent had no identifiable risk.

From 1981-2015, 56 children under the age of 13 were diagnosed with HIV/AIDS in Delaware of whom 13 have died. African-Americans accounted for 77% of the pediatric HIV/AIDS cases in Delaware, while Caucasians and Hispanics accounted for 16% and 7%, respectively. Seventy-five percent were from New Castle County while Kent and Sussex County accounted for 15% and 10% respectively.

Figure 33 Delaware pediatric HIV/AIDS cases, by mode of transmission, 1981-2015 (N=56)



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS)

d. HIV risk indicators.

Mental health. According to the 2013-2014 *National Survey on Drug Use and Health* (NSDUH), an estimated 19.06% of Delawareans over the age of 18 experienced mental illness in the year before the survey; 3.92% had a serious mental illness over that time. Furthermore, the NSDUH estimated that 6.85% of Delawareans over the age of 18 had a major depressive episode in the previous year.

A higher percentage of Delaware's youth population experiences mental distress than does the state's adult population. According to the *Youth Risk Behavior Survey* (YRBS) for 2015, 24.2% of the state's high school had population felt sad or hopeless almost every day for two or more weeks at some point over the previous year; 14% had seriously considered attempting suicide in that span.

Mental illness diagnoses were more common among people living with HIV/AIDS than in the general public. The 2013 Medical Monitoring Project (MMP) found that 49% with HIV/AIDS had accessed mental health services over the 12-month period prior to the survey; 5.3% of those interviewed for the MMP enrolled in an inpatient mental health facility over that span.

Substance use. The 2013-2014 *NSDUH* estimated that in the month prior to the survey period, 24.67% of Delawareans above the age of 18 had binge drank, having five or more drinks on the same occasion. The NSDUH estimates that 10.62% of adult Delawareans used illicit drugs in the month prior to the survey period while 3.80% used illicit drugs other than marijuana over that span. Furthermore, the NSDUH estimates that 4.31% of Delawareans over the age of 18 used nonmedical pain relievers over the previous 12 months.

A large percentage of Delaware's high school population is participating in illicit substance use. The *YRBS* (2015) estimates that 41.5% of Delaware high school students have used marijuana; 23.3% had used marijuana in the 30 days prior to the survey. The YRBS estimates that 12.6% of Delaware high school students have taken prescription drugs without a doctor's prescription; 2.4% had injected an illegal drug.

In recent years Delaware has experienced a growth in illicit opioid use. The Philadelphia Field Division of the U.S. Drug Enforcement Agency (DEA) reports that there was a 32.5% rise in drug overdose deaths from 2012-2015 (from 172 overdoses in 2012 to 228 in 2015). This rise in opioid use in Delaware is largely attributable to an expansion in heroin use, which is being transported in mass quantities from nearby Philadelphia and being sold cheaply in a high purity. From 2011-2014 there was a 152% rise in adult admissions for heroin treatment at Division of Substance Abuse and Mental Health (DSAMH) funded substance abuse treatment programs. Adults treated for substance abuse through DSAMH are largely male (67.4% in 2014), white non-Hispanic (77.7%), and between the ages of 18-34 (75.1%).

In 2014 the Delaware General Assembly passed two pieces of legislation that approved Delaware law enforcement officers to carry naloxone, and allowed community members to purchase naloxone. That year Delaware emergency medical providers administered 1,236 doses of naloxone to patients experiencing symptoms of drug overdose; in 2015 naloxone administrations rose 12% to 1,389 doses. Since the passage of naloxone legislation, roughly 50% of patients experienced an improved outcome as a result of receiving the drug.

Sexual behaviors. Delaware ranks high among states for the rate of several sexually transmitted diseases. According to the CDC *Sexually Transmitted Disease Surveillance Report, 2014*, Delaware ranks 10th highest for the gonorrhea infection rate (138.2 per 100,000 population), 15th for chlamydia (488.9 per 100,000 population), and 19th for syphilis (5.1 per 100,000).[1]

While the incidence of gonorrhea in Delaware has declined in recent years, chlamydia has increased (Figure 34). In 1998, 2,608 cases of chlamydia were diagnosed. In Delaware, cases of chlamydia peaked in 2013 at 5,213. Since that time the state has experienced a modest reduction with 4,604 cases diagnosed in 2015. As shown in Figure 35, females accounted for the majority of chlamydia cases. Figure 36 shows the upward trend of syphilis infections from 1998-2015.

[1] Centers for Disease Control and Prevention. (2015). *Sexually Transmitted Disease Surveillance 2014*. Atlanta: U.S. Department of Health and Human Services.

Figure 34 Annual cases of Chlamydia and Gonorrhea among Delawareans, 1998-2015

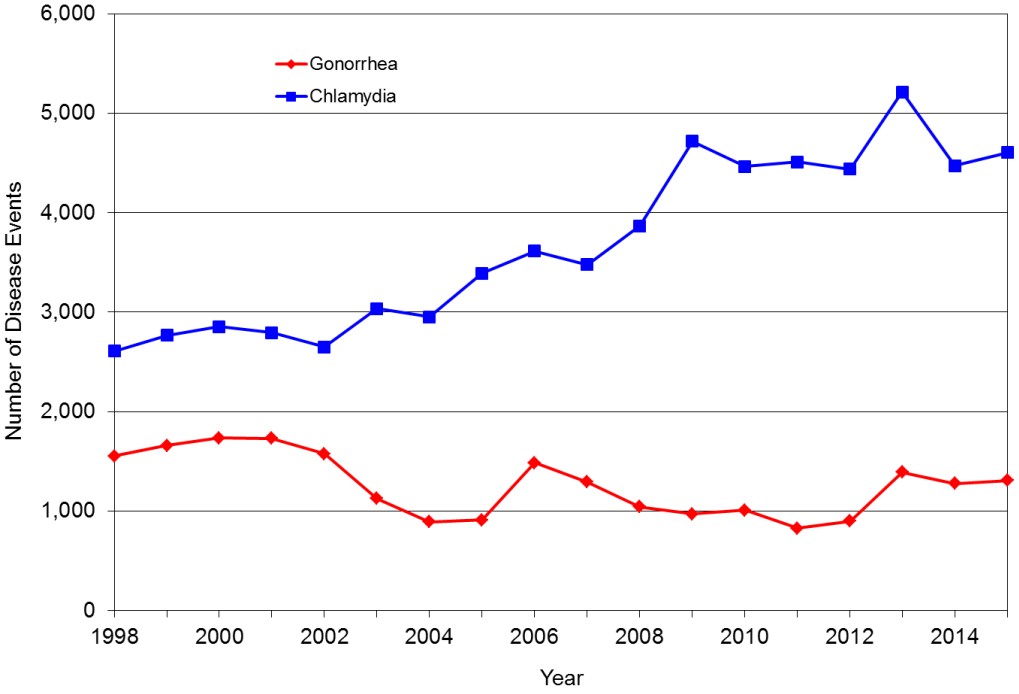


Figure 35 Chlamydia cases among Delawareans, by gender, 1998-2015

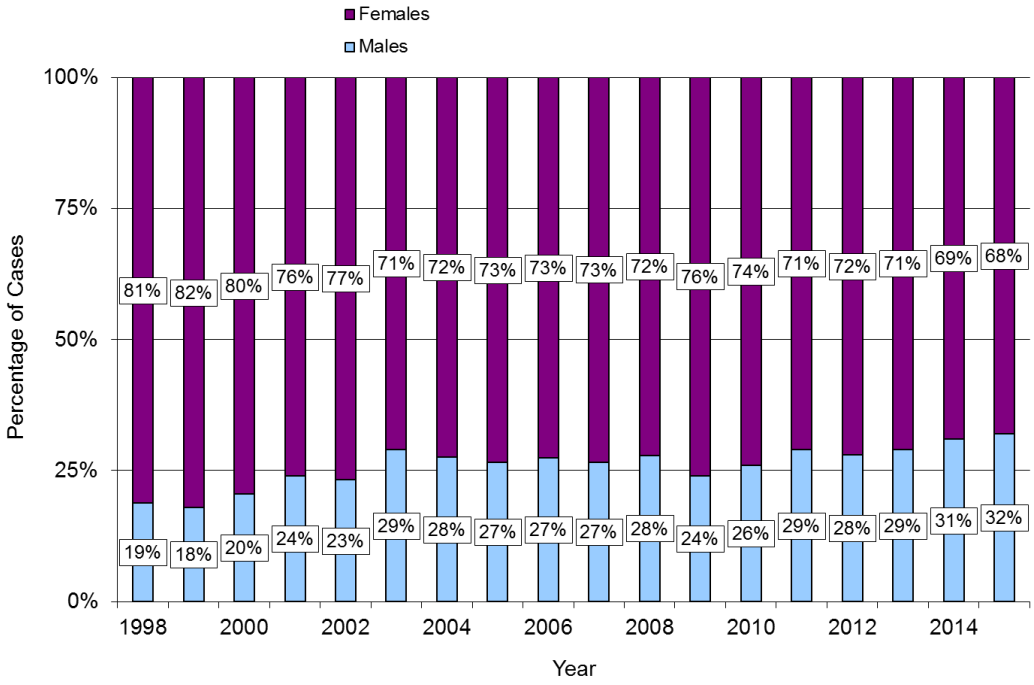
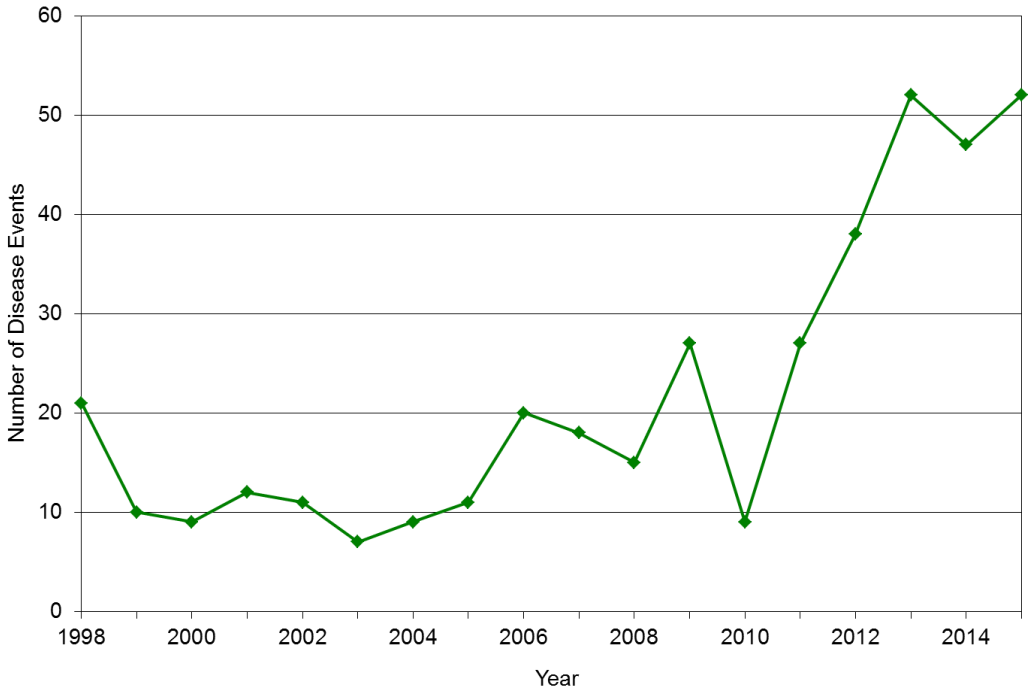


Figure 36 Primary and Secondary Syphilis among Delawareans, 1998-2015



The state's high school population ranks above the national average on several indicators of risky sexual behaviors. According to the *YRBS* (2015), 46.8% of Delaware high school students had participated in sexual intercourse (compared 41% nationally); 6.8% of Delaware high school students had sexual intercourse before the age of 13, which is higher than the national average of 4%. Forty-three percent of Delaware high school students did not wear a condom the last time they had sex.

HIV screening. According to the *Behavioral Risk Factor Surveillance System* (BRFSS) (2014), an estimated 39.1% of Delawareans over the age of 18 had been tested for HIV at least once. African-Americans were more likely to have had an HIV test (62.2%) than were non-Hispanic Whites (32.6%). Persons who had an income less than $15,000 per year had the largest percentage of any income group to have been tested for HIV (48.9%); those who made an income over $75,000 per year had been screened for HIV in the smallest proportion (36.6%). The *YRBS* (2015) estimates that 13.3% of Delaware high school students have been tested for HIV; a higher percentage of males had been screened (13.6%) than did females (12.2%).

There were 19,919 Delawareans who received HIV testing services through the state's 83 testing and counseling sites from 2014 through 2015. Of those, 55 tested positive for HIV (a positivity rate of 0.35%). Females accounted for 48% of testing services performed, which yielded 12 new positive tests during the period (22% of all new diagnoses).

Fifty-one percent of those receiving HIV testing services were African-American, while Caucasians accounted for 36%. The proportion of HIV positive tests were 58% and 31%, respectively.

Those 20-29 years of age were most likely to seek testing services. This age group accounted for 42% of those receiving these services and 29% of all new positive tests.

Those at risk of infection through heterosexual contact comprised the largest group seeking HIV testing services, though less than 1% of those screened for HIV tested positive. Heterosexual contact did account for 51% of all new HIV cases (28 positive cases) diagnosed through Delaware Public Health sites funded from 2014-2015.

Housing insecurity. According to the Delaware Housing Coalition, Delaware is the 12th most costly rental market in the United States, and is one of just four states where the average one-bedroom rent exceeds 100% of Supplemental Security Income (SSI) in every part of the state. The fair market rent for a two-bedroom apartment in Delaware varies by county, from $952 in Kent County, to $1,012 in Sussex County, and $1,210 in New Castle County. In Delaware, a person must make $21.70 per hour to be able to afford a two-bedroom apartment, at 30% of their income. Of the 103,775 renter households in Delaware, 25,521 households (24.6%) are severely cost-burdened by their rental fees, spending 50% of their income on housing.

According to the Homeless Planning Council of Delaware, 8,300 Delawareans experience homelessness annually. There were 1,070 homeless adults and children who were sheltered in weather-related shelters, emergency shelters, transitional housing, or were unsheltered during the Homeless Planning Council's last Point in Time Count. The Point in Time Count is an estimate of homelessness on any given night. During this Point in Time Count, which occurred on the night of January 27, 2016, 62% of persons experiencing homelessness were male; 75% were over the age of 24; 58% were African-American, and 38% were white. It is estimated that 7% of Delaware's nightly homeless population is chronically homeless, or have been homeless on the street for more than one year, or four or more times in a three year period for a cumulative length of a year or longer. An estimated 48% have a disabling condition making it difficult to sustain steady housing; an estimated 1% was living with HIV/AIDS.

B. HIV Care Continuum

The HIV Care Continuum, or HIV treatment cascade, is a model used by the National HIV/AIDS Strategy (NHAS) and the HIV Care Continuum Initiative to critically analyze how a jurisdiction is doing at controlling its HIV epidemic. The model shows the proportion of individuals living with HIV who are engaged at each step or stage of HIV medical care: aware of their HIV status; engaged in regular HIV care; receiving and adhering to effective antiretroviral therapy; and virally suppressed. Critically analyzing how population groups are performing at each stage along the care continuum allows the jurisdiction to dedicate HIV resources to areas that need it most, and work to overcome barriers that contribute to engagement in each stage of the continuum.

Delaware used a prevalence-based model in the development of its HIV Care Continuum. The model shows each step of the continuum in relation to the estimated total number of persons living with HIV (PLWH) in

Delaware. In developing the total number of PLWH in Delaware, this model takes into account both the number of people who have been diagnosed with HIV and the estimated number of those who are living with the disease but are undiagnosed. The Delaware HIV Planning Council (HPC) and the Delaware Division of Public Health (DPH) use this data to make HIV planning decisions.

HIV Care Continuum definitions.

HIV Prevalence is an estimate of the total number of PLWH in Delaware. The HIV Prevalence estimate is based on CDC statistical modeling.

HIV Diagnosed is defined as the number of PLWH in Delaware who have been diagnosed with HIV regardless of AIDS status. The data source for this stage of the care continuum is Delaware HIV surveillance data. The denominator for this indicator is HIV Prevalence.

Engaged in Care is defined as the number of diagnosed PLWH in Delaware who had at least one documented viral load or CD4+ test within the observation year. The data source for this indicator was in-care pattern data from all major HIV clinics in the state, from eHARS and from other minor sources such as CAREWare and MMP data. The denominator for this indicator is HIV-diagnosed individuals.

Prescribed Antiretroviral Therapy is defined as the number of diagnosed PLWH in Delaware who have documentation of a prescription for antiretroviral therapy. MMP medical record abstraction data were used to estimate the percentage of persons in care prescribed ART. The denominator for this indicator is engaged in care individuals.

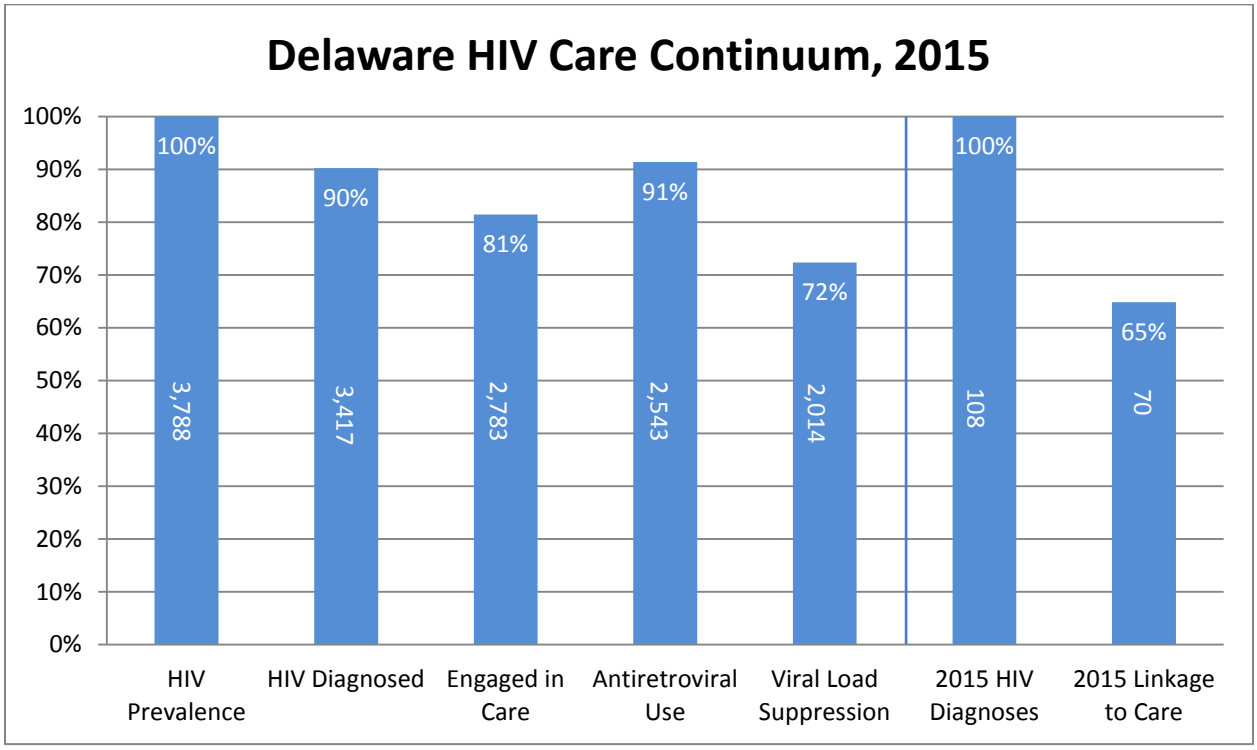
Virally Suppressed is the number of PLWH in Delaware whose most recent viral load in 2015 was below 200 copies/mL. Data for this indicator was abstracted from eHARS and electronic medical record data from all major HIV care provider systems statewide. The denominator for this stage is engaged in care individuals.

Linkage to Care is defined as the percentage of people diagnosed with HIV in 2015 that had one or more documented viral load or CD4+ tests within the first 30 days of diagnosis. The data source for this indicator is provided from the Delaware HIV Surveillance system, eHARS. The denominator for this indicator is 2015 HIV diagnoses.

a. HIV Care Continuum. According to estimates from the Centers for Disease Control and Prevention (CDC), 3,788 Delawareans are currently living with HIV/AIDS. Of these, 90% (n=3,417) have been diagnosed and are aware of their HIV status. Delaware is one of just five states with an estimated 10% or less of its population living with HIV/AIDS who are unaware of their status.

In the past several years the Delaware Division of Public Health, Christiana Care Health Services, and the Delaware HIV Planning Council have taken great effort to understand the state's HIV Care Continuum, and through the Ryan White HIV/AIDS Program Quality Management Team have worked to establish evidence-based improvement plans to make progress along every stage of the HIV Care Continuum. Delaware

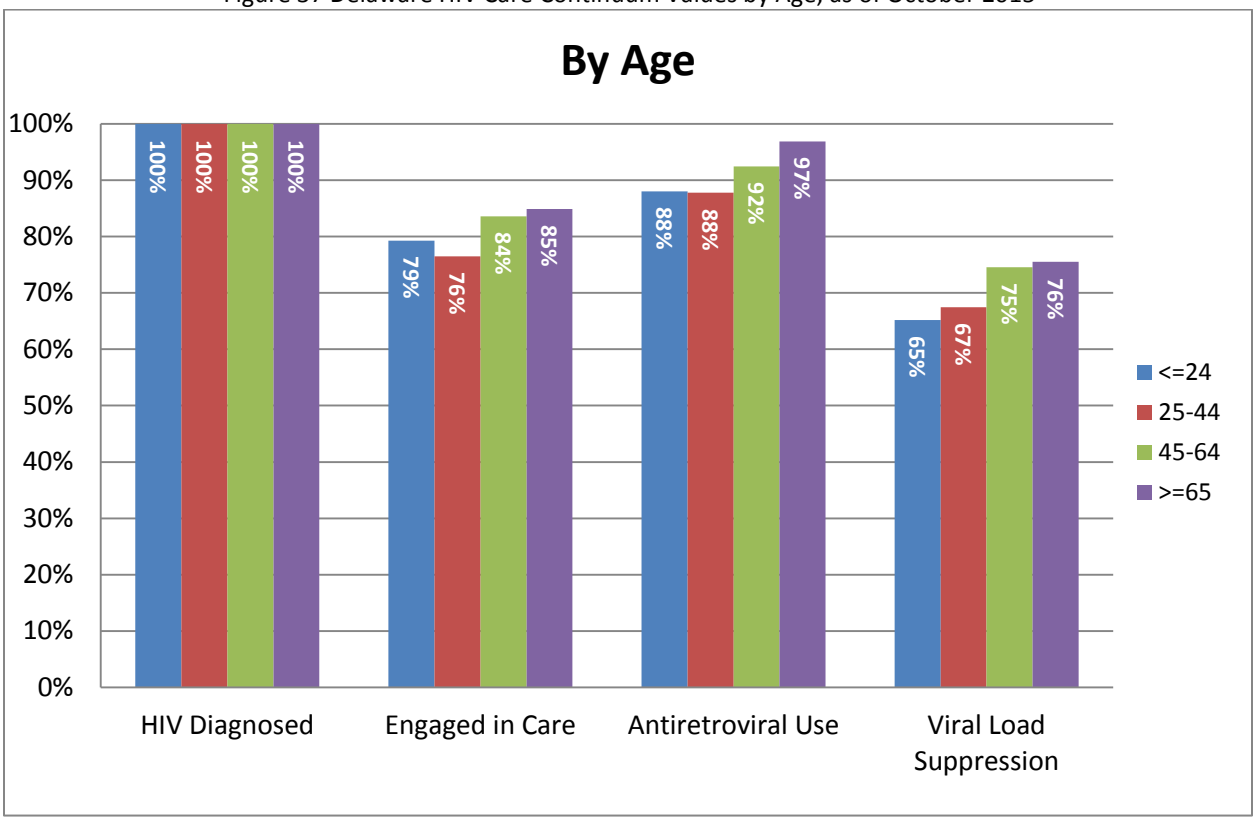
currently exceeds the national averages on all stages along the HIV Care Continuum. According to the state's Enhanced HIV/AIDS Reporting System (eHARS), 81% of diagnosed PLWH in Delaware were engaged in care, having at least one documented CD4+ or viral load lab over the previous 12 months; this compares to an estimated 40% of PLWH engaged in care, nationally. Ninety-one percent (n=2,543) of PLWH engaged in care in Delaware were prescribed ART and 72% (n=2,014) were considered virally suppressed; compared to 37% and 30%, respectively.



b. Disparities along the HIV Care Continuum.

Disparities by age. As shown in Table 14, the age group 25-34 is receiving care at the lowest level at 73%. Persons aged 55-64 years are receiving the highest level of care at 86%. Persons aged 25-34 years are at the lowest level of those prescribed antiretroviral medications (ART) at 83%, while persons ages 65 and older are at the highest level at 97%. Persons 18-24 years of age are at the lowest level for viral suppression at 64%, while persons 44-64 years of age are at the highest level of viral suppression at 77%.

Figure 37 Delaware HIV Care Continuum Values by Age, as of October 2015



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey, MMP 2009-2013 interview and medical records abstraction data.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care (see Table 14).

Table 14 Delaware HIV Care Continuum Values by Age, as of October 2015

Current Age	Living With HIV/AIDS	% Living With HIV/AIDS	Engaged in Care	% in Care *	Prescribed ART	% Prescribed ART **	Virally Suppressed	% Virally Supressed **
<18	12	100%	9	75%	8	91%	7	78%
18-24	104	100%	83	80%	73	88%	53	64%
25-34	421	100%	306	73%	254	83%	200	65%
35-44	587	100%	465	79%	423	91%	320	69%
45-54	1192	100%	980	82%	902	92%	714	73%
55-64	836	100%	715	86%	665	93%	550	77%
>=65	265	100%	225	85%	218	97%	170	76%
Total	3417	100%	2783	81%	2543	91%	2014	72%

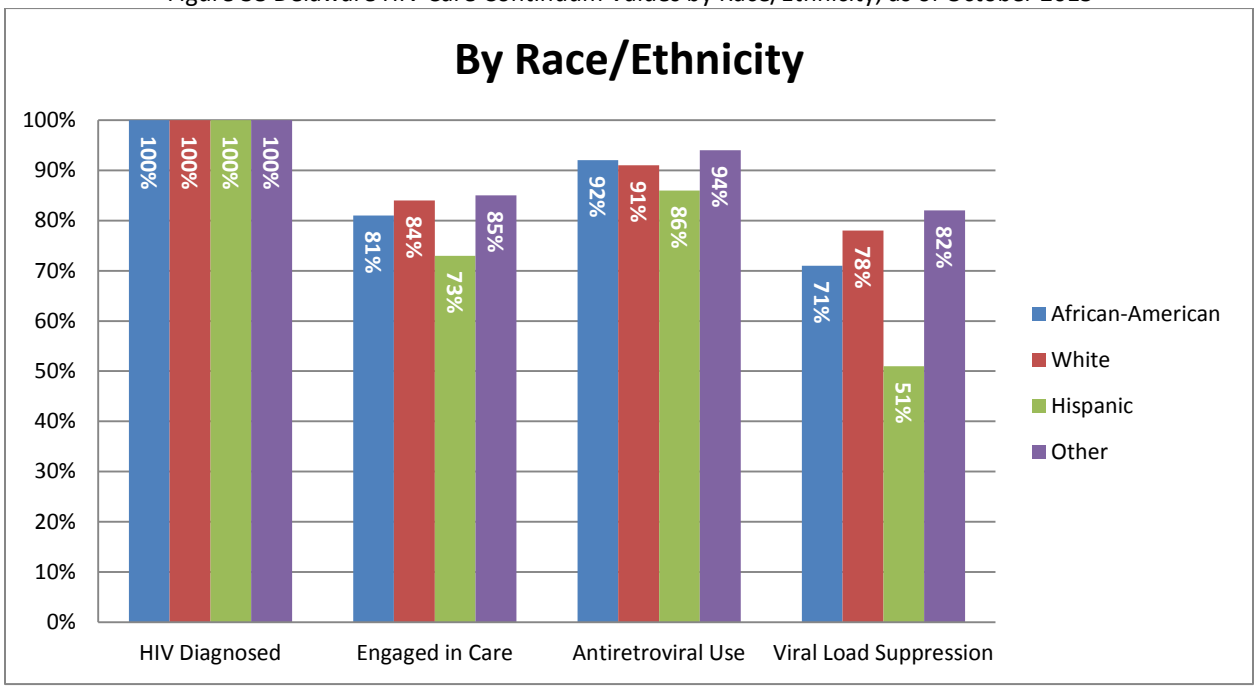
Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey, MMP 2009-2013 interview and medical records abstraction data.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care.

Disparities by race/ethnicity. As shown in Figure 38 and Table 15, Hispanics are receiving the lowest level of care at 73% while African-American and Whites are at 81% and 84%, respectively. Hispanics are at the lowest level of those prescribed antiretroviral medications at 86%, while African-Americans

represent the highest level of identified persons prescribed ART at 92%. Hispanics are also at the lowest level for viral suppression, at 51%, while African-Americans and Whites are at 71% and 78%, respectively.

Figure 38 Delaware HIV Care Continuum Values by Race/Ethnicity, as of October 2015



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey, MMP 2009-2013 interview and medical records abstraction data.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care (see Table 15).

Table 15 Delaware HIV Care Continuum Values by Race/Ethnicity, as of October 2015

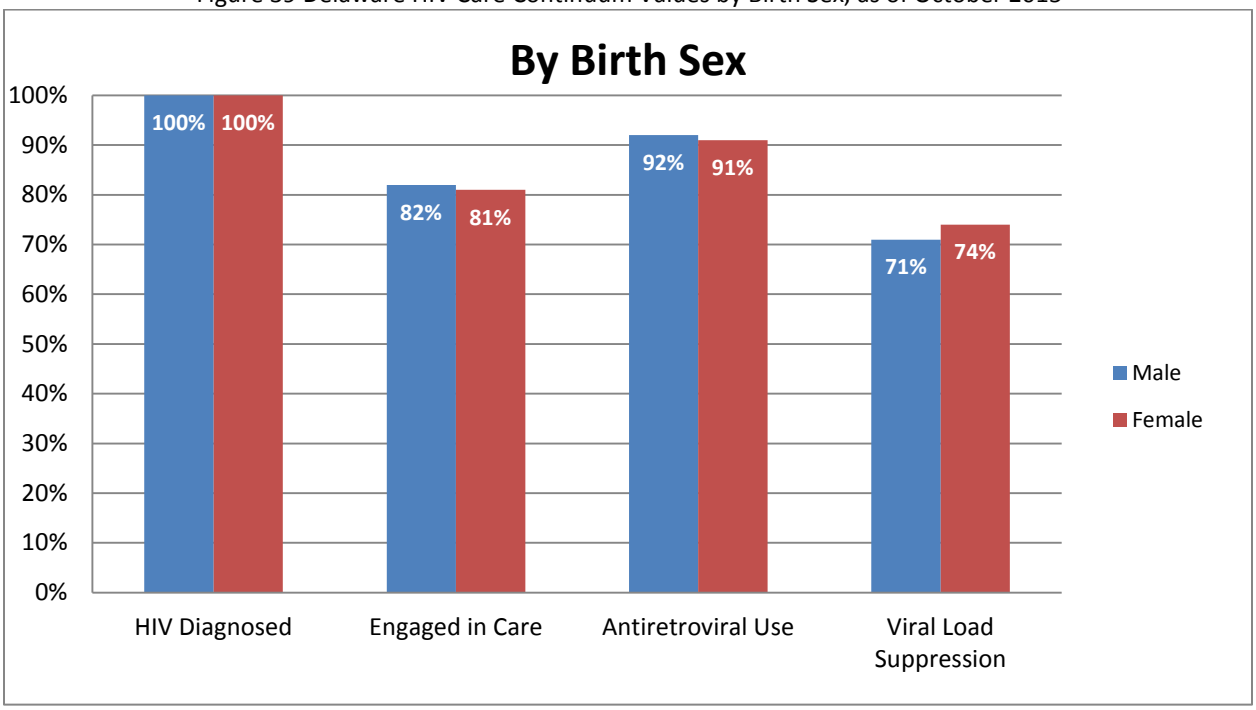
Race/Ethnicity	Living With HIV/AIDS	% Living With HIV/AIDS	Engaged in Care	% in Care *	Prescribed ART	% Prescribed ART **	Virally Suppressed	% Virally Supressed **
African American	2079	100%	1681	81%	1547	92%	1199	71%
White	1036	100%	872	84%	794	91%	678	78%
Hispanic	230	100%	169	73%	145	86%	87	51%
Other	72	100%	61	85%	57	94%	50	82%
Total	3417	100%	2783	81%	2543	91%	2014	72%

Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care.

Disparities by gender. As Shown in Figure 39 and Table 16, males and females are receiving care, and are prescribed ARTs, at a nearly identical rate. Males are virally suppressed at a slightly lower percentage than females, 71% and 74%, respectively.

Figure 39 Delaware HIV Care Continuum Values by Birth Sex, as of October 2015



Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey, MMP 2009-2013 interview and medical records abstraction data.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care (see Table 16).

Table 16 Delaware HIV Care Continuum Values by Birth Sex, as of October 2015

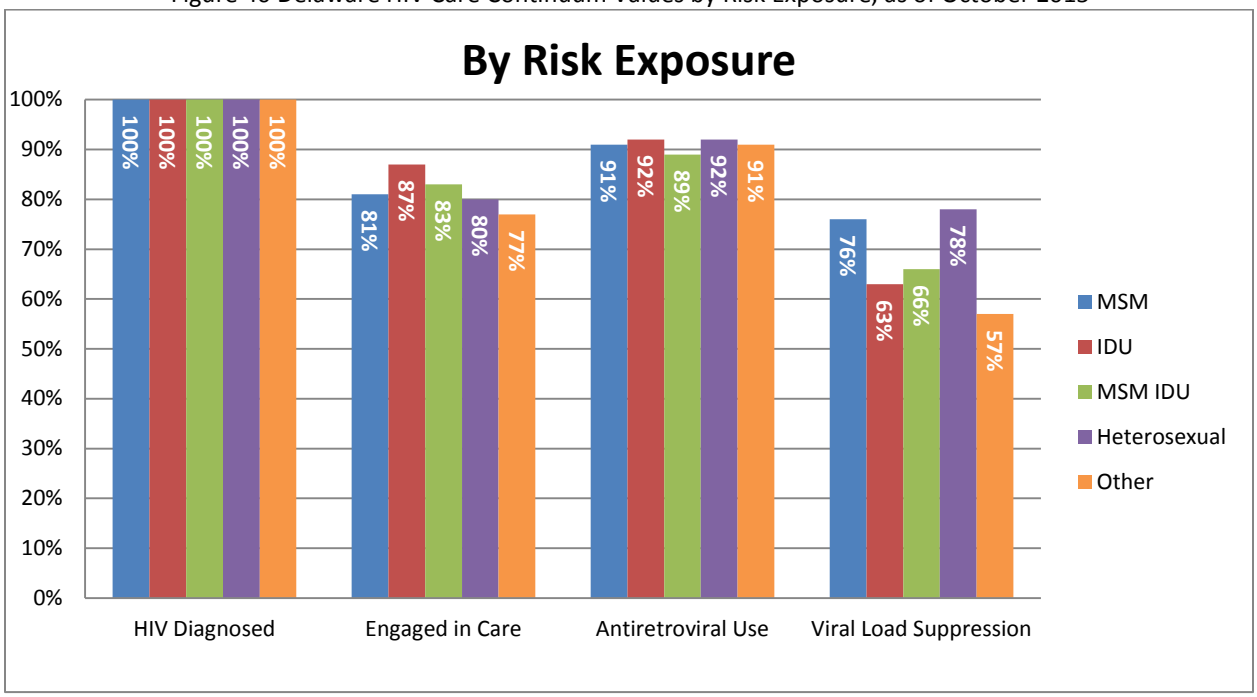
Birth Sex	Living With HIV/AIDS	% Living With HIV/AIDS	Engaged in Care	% in Care *	Prescribed ART	% Prescribed ART **	Virally Suppressed	% Virally Supressed **
Male	2349	100%	1919	82%	1757	92%	1371	71%
Female	1068	100%	864	81%	786	91%	643	74%
Total	3417	100%	2783	81%	2543	91%	2014	72%

Source: Delaware Enhanced HIV/AIDS Reporting System (EHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care.

Disparities by transmission risk exposure. As shown in Figure 40 and Table 17, MSMs and Heterosexual risk groups are receiving care at a nearly identical rate, 81% and 80% respectively. IDU's are receiving care at a slightly increased level at 87%. ARTs are being prescribed among all the risk groups at a comparable rate with only MSM-IDU being slightly lower at 89%. IDUs are experiencing the lowest level of viral suppression at 63%, while MSMs and Heterosexuals are at 76% and 78%, respectively.

Figure 40 Delaware HIV Care Continuum Values by Risk Exposure, as of October 2015



Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care (see Table 17).

Table 17 Delaware HIV Care Continuum Values by Risk Exposure, as of October 2015

Risk Group	Living With HIV/AIDS	% Living With HIV/AIDS	Engaged in Care	% in Care *	Prescribed ART	% Prescribed ART **	Virally Suppressed	% Virally Supressed **
MSM	1231	100%	997	81%	907	91%	757	76%
IDU	672	100%	582	87%	533	92%	365	63%
MSM IDU	133	100%	110	83%	98	89%	73	66%
Heterosexual	1165	100%	928	80%	854	92%	724	78%
Other	216	100%	166	77%	151	91%	95	57%
Total	3417	100%	2783	81%	2543	91%	2014	72%

Source: Delaware Enhanced HIV/AIDS Reporting System (eHARS), Christiana Care Health Systems (Centricity), CDC, And Delaware Health Department Infectious Disease Clinic Survey.

*Percentage calculated from Living W. HIV/AIDS ** Percentage calculated from Engaged in Care.

c. Continuum use in planning. The HIV Care Continuum is used in Delaware as the framework to plan, prioritize, target and monitor available HIV resources so as to have the greatest impact on reducing new infections and achieving viral suppression for those who are currently living with HIV/AIDS. Research has shown that achieving viral suppression lowers the morbidity and mortality of persons living with HIV, and lowers the risk of transmission to others. Therefore, it is imperative that the HIV Care Continuum be used to understand areas requiring the greatest focus of resources and populations experiencing disparities in HIV-related health outcomes along the continuum.

Through the HIV planning process, the HPC is used as a forum to discuss how existing direct medical and supportive services impact each step along the HIV Care Continuum. Furthermore, the needs assessment process allows the HPC to identify areas that require an enhancement of existing services or the initiation of new services to meet the unmet need of PLWH in Delaware. The HPC has no responsibility in public fund allocation but both the RWHAP Part B and HIV Prevention Program use the findings of the care continuum and the needs assessment process to direct resources towards underserved communities and services. For example, in spring 2016, HPC discussions regarding the rise in heroin and other injection drug use in western Sussex County led the HIV Prevention Program to extend a contract to Brandywine Counseling & Community Services, Inc., for HIV testing services in these communities using a mobile HIV screening van.

C. Financial and Human Resource Inventory

The following section provides an inventory of the identifiable financial and service delivery resources available for persons living with and at risk for HIV in Delaware. CDC-funded high impact prevention services, HRSA-funded core medical and support services, state funded services, and services available through other private and public funding sources have been provided in table format. All funds provided in the following tables are for FY2015 of the funding source.

a. Financial Resource Inventory Table

Table 18 Delaware HIV Services Financial Resource Inventory FY2015, fund amount & percent of total fund

Funding Source	Fund Amount	%of Fund Total
Medicaid - AIDS Waiver	**$ 25,842,135.00**	**65.0%**
Managed Care Organization Capitation Payments	$ 24,763,369.00	
Transportation Broker Capitation Payment	$ 25,678.00	
Other Fee-for-Service	$ 1,053,088.00	
Ryan White HIV/AIDS Program - Part B	**$ 5,971,284.00**	**15.0%**
Base Funding	$ 2,097,349.00	
AIDS Drug Assistance Program (ADAP) Funding	$ 2,631,273.00	
Emerging Communities	$ 205,352.00	
Minority AIDS Initiative	$ 41,460.00	
Carryover Funds	$ 995,850.00	
Ryan White HIV/AIDS Program - Part C	**$ 913,088.00**	**2.3%**
Ryan White HIV/AIDS Program - Part D	**$ 482,070.00**	**1.2%**
Ryan White HIV/AIDS Program - Part F	**$ 220,000.00**	**0.6%**
Center for Disease Control and Prevention: HIV/AIDS, Viral Hepatitis, STI and TB Prevention Œ	**$ 1,472,365.00**	**3.7%**
HIV/AIDS Surveillance; Medical Monitoring Project	$ 562,000.00	
Comprehensive HIV Prevention Projects for Health Departments	$ 910,365.00	
HOPWA: Housing Opportunities for Persons with HIV/AIDS Program ⍰	**$ 1,404,239.00**	**3.5%**
Formula Grant	$ 876,402.00	
Competitive Grant	$ 527,837.00	
Substance Abuse and Mental Health Services Administration Discretionary Funds	**$ 1,276,629.00**	**3.2%**
State of Delaware	**$ 326,130.00**	**0.8%**
Grant-in-Aid (HB230)	$ 95,630.00	
Operating Budget (HS1 for HB 225)	$ 230,500.00	
Private Funds	**$ 1,849,234.00**	**4.7%**
Fundraising	$ 489,745.00	
Non-governmental Grants	$ 57,489.00	
Other	$ 1,302,000.00	
Total Delaware HIV Prevention and Care Funding	**$ 39,757,174.00**	**100.0%**

Table 19 Delaware HIV Services Financial Resource Inventory FY 2015, services provided through funding source

Funding Source	Services Delivered
Medicaid - AIDS Waiver	
Managed Care Organization Capitation Payments Transportation Broker Capitation Payment Other Fee-for-Service	Dental care (up to age 21), doctor visits, home health care, inpatient and outpatient hospital care, lab tests, medical equipment and supplies, medical transportation services, mental health and substance abuse services, routine shots for children, prescription drugs, x-rays.
Ryan White HIV/AIDS Program - Part B	
Base Funding	Core Services - Ambulatory Medical Care, Oral health care, Early intervention services, Home and Community-based Health Services Hospice services, Medical nutrition therapy, Medical Case Management services. Support Services - : Case Management (non-medical), Emergency financial assistance, food bank, Health education/risk reduction, Housing services, Medical transportation, Outreach services.
AIDS Drug Assistance Program (ADAP) Funding	Core Services – ADAP Services, AIDS Drug Assistance Program, Health Insurance Premium.
Emerging Communities	Support Services: Case Management (non-medical), Emergency financial assistance, Housing Services, Medical Transportation.
Minority AIDS Initiative	Outreach & Education.
Carryover Funds	Core Services - AIDS Drug Assistance Program.
Ryan White HIV/AIDS Program - Part C	
	Early Intervention Services, HIV medical care, mental health assessment and treatment to HIV Program Patients.
Ryan White HIV/AIDS Program - Part D	
	Primary HIV medical care for women, infants, children, and youths; women's wellness for women living with HIV/AIDS.
Ryan White HIV/AIDS Program - Part F	
	Targeted, multidisciplinary education and training programs for health care providers treating people living with HIV.
Center for Disease Control and Prevention: HIV/AIDS, Viral Hepatitis, STI and TB Prevention	
HIV/AIDS Surveillance; Medical Monitoring Project	HIV Surveillance, Medical Monitoring Project
Comprehensive HIV Prevention Projects for Health Departments	HIV Testing & Counseling in health care setting; HIV Testing & Counseling in community setting; Risk Reduction Counseling; Condom Distribution; HIV Community Planning.
HOPWA: Housing Opportunities for Persons with HIV/AIDS Program	
Formula Grant Competitive Grant	TBRA (Tenant Based Rental Assistance), PSH (Permanent Supportive Housing), STRMU (Short Term Rent, Mortgage, & Utility Assistance).
Substance Abuse and Mental Health Services Administration Discretionary Funds	
	Comprehensive risk counseling and reduction services, Linkage to care, outreach, education, testing, and referrals.
State of Delaware	
Grant-in-Aid (HB230)	HIV Counseling & Testing, Education & Outreach, CRCS.
Operating Budget (HS1 for HB 225)	Syringe Services Program.
Private Funds	
Fundraising Non-governmental Grants Other	Early Intervention Services, HIV medical care, mental health assessment and treatment to HIV Program Patients.

Table 20 Delaware HIV Services Financial Resource Inventory FY 2015, Continuum Steps, Fund Recipient & Sub-recipients

Funding Source	Continuum Steps	Recipient	Sub-Recipient
Medicaid - AIDS Waiver			
Managed Care Organization Capitation Payments Transportation Broker Capitation Payment Other Fee-for-Service	Retained in Care; Antiretroviral Use; Viral Load Suppression.	Executive Office of the Governor of Delaware	Delaware maintains two Managed Care Organizations: United Health Care Community Plan; Highmark Health Option
Ryan White HIV/AIDS Program - Part B			
Base Funding AIDS Drug Assistance Program (ADAP) Funding Emerging Communities Minority AIDS Initiative Carryover Funds	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	Executive Office of the Governor of Delaware	AIDS Delaware, Inc.; Beautiful Gate Outreach Center; Christiana Care Health Services, Inc.; Delaware HIV Consortium; Generations Home Care; Ramsell Public Health RX
Ryan White HIV/AIDS Program - Part C			
	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	Christiana Care Health Services, Inc.	
Ryan White HIV/AIDS Program - Part D			
	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	Christiana Care Health Services, Inc.	
Ryan White HIV/AIDS Program - Part F			
	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	University of Pittsburg	Christiana Care Health Services, Inc.
Center for Disease Control and Prevention: HIV/AIDS, Viral Hepatitis, STI and TB Prevention			
HIV/AIDS Surveillance; Medical Monitoring Project	HIV-Diagnosed; Linkage to Care.	Delaware Division of Public Health; Delaware State Department of Education.	
Comprehensive HIV Prevention Projects for Health Departments	HIV-Diagnosed; Linkage to Care.	Delaware State Department of Education; Delaware Division of Public Health.	AIDS Delaware, Inc.; Beautiful Gate Outreach Center; CAMP Rehoboth; Delaware HIV Consortium.
HOPWA: Housing Opportunities for Persons with HIV/AIDS Program			
Formula Grant	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	Delaware State Housing Authority; City of Wilmington, Real Estate & Housing.	Delaware HIV Consortium; Ministry of Caring; Catholic Charities.
Competitive Grant		Delaware HIV Consortium; Ministry of Caring.	

Funding Source	Continuum Steps	Recipient	Sub-Recipient
Substance Abuse and Mental Health Services Administration Discretionary Funds			
	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression	Brandywine Counseling & Community Services, Inc.	
State of Delaware			
Grant-in-Aid (HB230)	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	AIDS Delaware; CAMP Rehoboth; Delaware HIV Consortium; Latin American Community Center.	
Operating Budget (HS1 for HB 225)	HIV-Diagnosed; Linkage to Care; Viral Load Suppression.	Delaware Division of Public Health	Brandywine Counseling & Community Services, Inc.
Private Funds			
Fundraising	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	AIDS Delaware, Inc.; Beautiful Gate Outreach Center; Delaware HIV Consortium	
Non-governmental Grants	HIV-Diagnosed; Linkage to Care; Retained in Care; Antiretroviral Use; Viral Load Suppression.	AIDS Delaware, Inc.	
Other	Retained in Care; Antiretroviral Use; Viral Load Suppression.	Christiana Care Health Services, Inc.	

b. HIV Workforce Capacity. Delaware's HIV workforce is a diverse body made up of public, private and non-profit employees working across sectors ranging from HIV medical care to housing assistance to PrEP education, and from small community-based organizations of four or five employees to large health care systems employing thousands. The Delaware HIV Planning Council used both quantitative and qualitative research to define the scope of Delaware's HIV workforce and to analyze how this workforce affects HIV service delivery across the state. Employment estimates were provided by the Bureau of Labor Statistics, Occupational Employment Statistics. Shortages in the health care workforce were assessed using the Health Resources and Services Administration's Health Professional Shortage Area (HPSA) designations, and from needs assessments performed by the Delaware Health Care Commission. To augment information from these national data systems, the Delaware HIV Planning Council held targeted interviews with hiring managers of eight HIV service providers from across the state.

Several key conclusions were found during this workforce capacity assessment process, which will be explored in greater detail below and again in Section I, D: Assessing Need, Gaps, and Barriers. First, when considered as a whole, Delaware maintains an adequate level of health care providers to meet the needs of the state's population (including PLWH). However, these health care providers are unevenly distributed across the state, which make access to care difficult, or impossible, for certain population groups. Shortages in health care professionals particularly impact the behavioral health system, which limits the system's capacity to provide timely service to persons in need. Delaware's limited training resources hamper the state's ability to recruit new professionals to the area and meet the needs of the community. Finally, limitations in the HIV workforce capacity are expected to grow into the future as the state's aging workforce enters retirement.

Delaware HIV workforce. The state of Delaware has defined its HIV workforce as the aggregate of all professionals that provide either direct service, assistance in the provision of service, or employment training to professionals who provide direct service or assistance in health care or support to PLWH in Delaware, or HIV/STD prevention for persons at increased risk of HIV infection. Delaware's HIV workforce is estimated to be made up of 42,760 professionals, including: physicians and care teams (PAs, APNs, RNs, LPNs, etc.), behavioral health professionals, pharmacists, educators, lawyers, and many others. See the Appendix (pp. 114-121) for a full description of Delaware's HIV workforce.

Delaware's health care delivery system consists of six private health systems (including a children's hospital), the Veteran's Administration hospital, three Federally Qualified Health Centers, 2,100 active patient care physicians (including 715 primary care physicians), and nearly 12,000 additional members of care teams.[2] The state's health care system is fragmented, with over 75% of physicians providing care in practices of five or fewer physicians. While such a fragmented system has been proven to limit the state's ability to provide coordinated clients' care, this may not have a significant impact on PLWH in Delaware. PLWH in Delaware largely receive HIV medical care through the Christiana Care Health System (60% of PLWH in Delaware in 2013), which coordinates care for its patients across its robust multidisciplinary staff including physicians, nurse practitioners, primary care and research nurses, pharmacists, Licensed Clinical Social Workers, and OB/GYNs.

Since an estimated half of all PLWH in Delaware have a previous history of mental health treatment, the state's behavioral health workforce has an increasingly important role in support of the state's HIV medical care. It is the responsibility of the Division of Substance Abuse and Mental Health (DSAMH) to meet the needs of adult Delawareans with behavioral health issues. DSAMH provides services through four community health clinics. One clinic is located in both Kent and Sussex Counties, and two are in New Castle County. Through these clinics clients can access psychiatric crisis intervention, short-term and long-term counseling, psychiatric evaluation and treatment, medication management, as well as referral services. DSAMH operates a mobile crisis unit in each county, the Crisis and Psychiatric Emergency Services (CAPES), for crisis intervention services. Persons who are in need of in-patient care

[2] Delaware Health Care Commission. (2013). State Health Care Innovation Plan. Retrieved from http://dhss.delaware.gov/dhss/dhcc/cmmi/files/choosehealthplan.pdf

for their mental health diagnosis can receive treatment at the Delaware Psychiatric Center; the sole state administered psychiatric hospital in Delaware. Mental health services can also be accessed through the state's three Federally Qualified Health Centers and at several private facilities.[3] In total, there are approximately 1,004 mental health professionals actively practicing in Delaware.[4]

The state's HIV prevention system largely relies on the administration of public funding from the Division of Public Health, HIV Prevention Program, through a network of community-based service providers located in communities with a high prevalence of HIV. HIV screening is provided for free at 83 testing and counseling sites across the state. Following 2012 legislation by the Delaware General Assembly, opt-out HIV testing can be obtained in all health care settings as a part of a normal blood panel. Beautiful Gate Outreach Center provides outreach and education for persons at high risk for HIV infection in the Wilmington area. Risk reduction counseling for PLWH and those at high-risk for HIV infection is provided by AIDS Delaware (Choose Life: Empowerment! Action! Results!), and CAMP Rehoboth (Sexual Health Counseling), in Wilmington and Rehoboth. DPH has partnered with 23 organizations, including State Service Centers, community-based organizations, sexual wellness clinics and schools, to distribute condoms for free to the community, and has contracted with the Delaware HIV Consortium to run a free mail-order condom distribution program. AIDS Delaware teaches HIV/STD Education in New Castle County high schools. Finally, the Delaware Division of Substance Abuse and Mental Health funds Brandywine Counseling and Community Services to run a syringe exchange program in the Wilmington area. No federal funds are utilized to support this program. In 2016, the Delaware General Assembly approved legislation to allow for the expansion of syringe services programs statewide.

Health Professional Shortage Areas. The Health Resources and Services Administration (HRSA), Bureau of Health Workforce has created the designation of Health Professional Shortage Area (HPSA) to identify areas and population groups within the United States experiencing a shortage of health professionals. HPSA designations fall into three categories based on the health discipline that is experiencing a shortage: 1) primary medical; 2) dental; and, 3) mental health. HPSA designations are determined based on the population-to-provider ratio. Based on federal regulations a shortage of primary care physicians occurs when the population-to-provider ratio is greater than 3,500:1; for dentists, a shortage occurs at a population-to-provider ratio of 5,000:1; and, a mental health care shortage exists at a population-to-provider ration of 30,000:1.

As of December 31, 2015, Delaware had 25 designated HPSA (Table 21). To meet the federally mandated population-to-provider ratios necessary to eliminate all HPSA designations the state would need to hire 40 additional health care providers (4 physicians, 31 dentists, 5 psychiatrists).

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[3] Delaware Division of Public Health, Bureau of Health Planning and Resources Management. (2009). *Delaware Rural Mental Health Assessment Summary.* Retrieved from http://dhss.delaware.gov/dhss/dph/hsm/files/2009ruralmentalhealthassessment.pdf

[4] Toth, T. (2014). Mental Health Proffessionals in Delaware, 2014. Retrieved from the Center for Applied Demography & Survey Research, University of Delaware: http://dhss.delaware.gov/dhss/dph/hsm/files/mhpinde2014.pdf

Access to care is not uniform across the state, and even within and among a HPSA, some individuals may have adequate access to primary health care, while others may have limited or no access to needed care. To gauge this access to care, the Health Resources and Services Administration has come up with a measure of the "percent of need met by the current supply" of health care providers, which is based on the number of providers available to serve the covered population divided by the number of providers that would be needed based on the current federal regulations. Based on this measure, there is a 6% unmet need for primary care physicians, 53% unmet need for dentists, and 86% unmet need for psychiatrists (Table 21).

Table 21 HRSA Health Professional Shortage Area Statistics for Delaware, as of 12/31/2015

HPSA Category	Total HPSA Designations	Percent of Need Met by Current Supply	# of Practitioners Needed to Remove HPSA Designations
Primary Care	9	93.84%	4
Dental Care	6	47.08%	31
Mental Health Care	10	13.94%	4

According to HRSA's HPSA designations behavioral health care is experiencing the greatest shortage of professionals of any health care sector in the state. This finding is consistent with the responses received from targeted interviews held by the Delaware HIV Planning Council with the hiring managers from HIV service providers across the state regarding the capacity of Delaware's existing workforce. When asked, "Are there referrals given to clients by your staff that have been hard to fulfill due to limited staffing or agency capacity at other CBOs, ASOs, or state agencies?" half of the eight respondents noted severe shortages for mental health and substance abuse counseling, which leads to excessive wait times for appointments with qualified providers.

The Director of the Christiana Care HIV Community Program explained that substance abuse treatment has the greatest success when the client is able decide for themselves that they both want to, and are ready to enter into treatment. She stated that in many instances, there is a finite window of time to get a patient into in-patient care after this decision is made before the client loses the resolve to do so. Due to the current limitations in the workforce capacity for substance abuse treatment many patients are experiencing delays in entry; on average the wait for entry into treatment in New Castle County is between 7-10 days. The Christiana Care HIV program statewide has worked to overcome these current barriers for behavioral health services by employing a Licensed Clinical Social Worker for clients in need, and by offering tele-psychiatry to clients who reside in Sussex and Kent County.

Access to care. Figures 41 through 43, below, highlight the geographic disparity in access to health care experienced in the state of Delaware. These maps, from HRSA's Data Warehouse, show the HPSAs for primary care health (Figure 41), dental health (Figure 42), and mental health care (Figure 43) in Delaware. What these figures indicate is that except for portions of the Wilmington metropolitan region there is an adequate supply of health professionals in New Castle County, whereas all of Delaware's lower two counties, Kent and Sussex, are considered HPSAs for primary care and dental care.

The entirety of Sussex County is considered a HPSA for mental health care, dental health, and primary health care.

When approached for targeted interviews on the HIV workforce capacity, all four hiring managers operating in Kent and Sussex Count noted the difficulty in recruiting qualified candidates for positions in their area and meeting the overall health care needs of PLWH with the existing health care workforce. The Director of Community Services for Kent Sussex Community Services, Inc., a community-based organization that provides mental health and substance abuse treatment along with HIV case management, noted that over the past 18 months she has had to hire five case managers for their two locations in Kent County and Sussex County. She stated that while case manager turnover is typically high, that she has consistently found it more difficult to fill positions in Sussex County, particularly in positions that require high proportions of travel.

Hiring managers cited multiple reasons for the increased difficulty in finding qualified candidates to take positions in Delaware's lower two counties, particularly in Sussex County. The commercial structure, topography, and population distribution in Sussex County make HIV service provision difficult. Eastern Sussex County is a resort beach community with heightened rates of HIV transmission in MSM populations, particularly YMSMs. The Program Director for CAMPsafe at CAMP Rehoboth, a community-based organization that does targeted outreach and HIV testing in the LGBT community in Rehoboth Beach, found that because of the seasonal nature of the beach community, it was difficult to find age-appropriate outreach staff who could fit part-time outreach activities around summer restaurant jobs that serve as their primary source of income. Alternatively, most of middle and western Sussex County is rural and experience elevated levels of heterosexual and IDU HIV transmission. The few HIV service providers operating in Sussex are spread across great distances. Because of this, staff and clients alike have to spend more time traveling to the agency than has to be done in New Castle County.

Figure 41 Delaware Primary Care HPSA Map, as of 12/31/2015

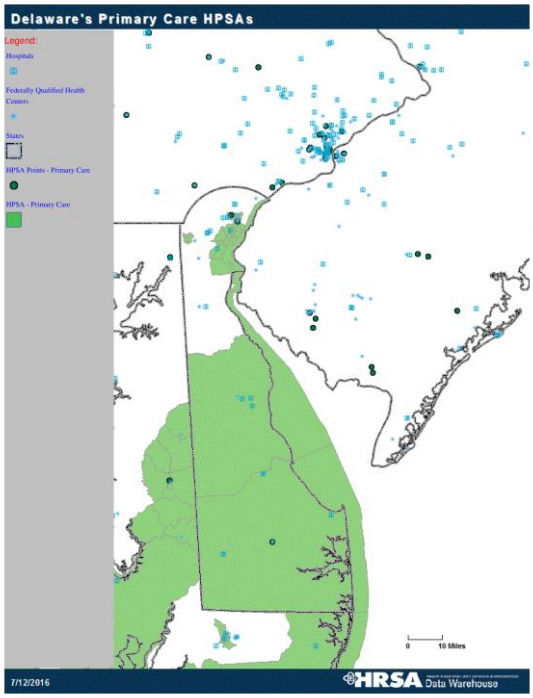


Figure 42 Delaware Dental HPSA Map, as of 12/31/2015

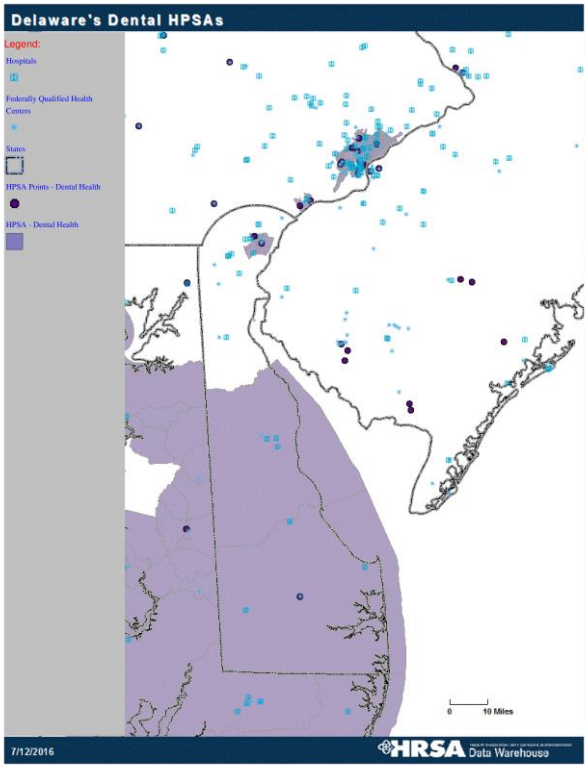
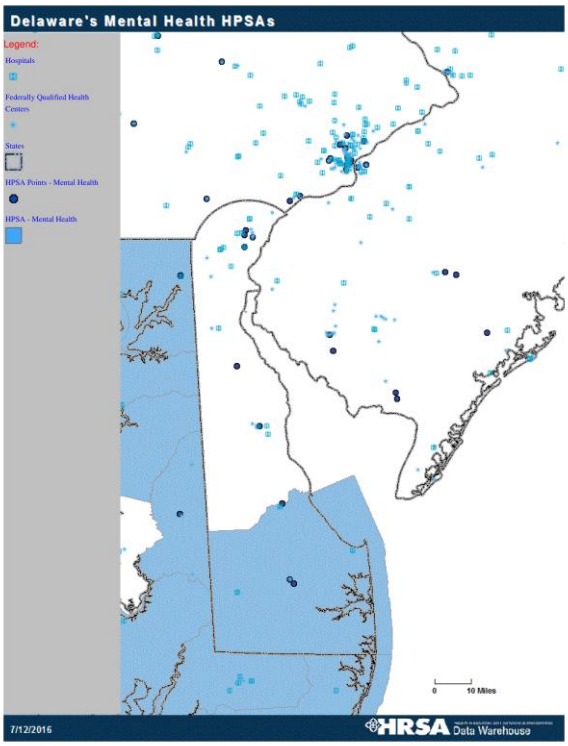


Figure 43 Delaware Mental Health HPSA Map, as of 12/31/2015



The impacts of Delaware's HIV workforce on service delivery. The eight hiring managers who participated in the targeted HIV workforce capacity interviews highlighted several additional limitations in the existing HIV workforce that either impair the effectiveness of HIV service provision in Delaware, or could hinder HIV services in the near future. Both the Director of the Christiana Care HIV Community Program, and the Executive Director of the Delaware HIV Consortium found that, as with the aging population of PLWH in Delaware, the professionals providing HIV services are also getting older and are approaching retirement age; including several key Director-level positions in both agencies. Both interviewees expressed concern that as the leaders in the field of HIV in Delaware retire the state will lose the institutional knowledge of HIV prevention and treatment gained over thirty years of work in the field. The Director of the Christiana Care HIV Community Program stated, "While the AIDS Education Training Center does an extremely good job at continuing HIV education with the health care workforce, agencies and health care professionals need to continue nurturing the next generation of HIV professionals to replace the aging employee population in the field."

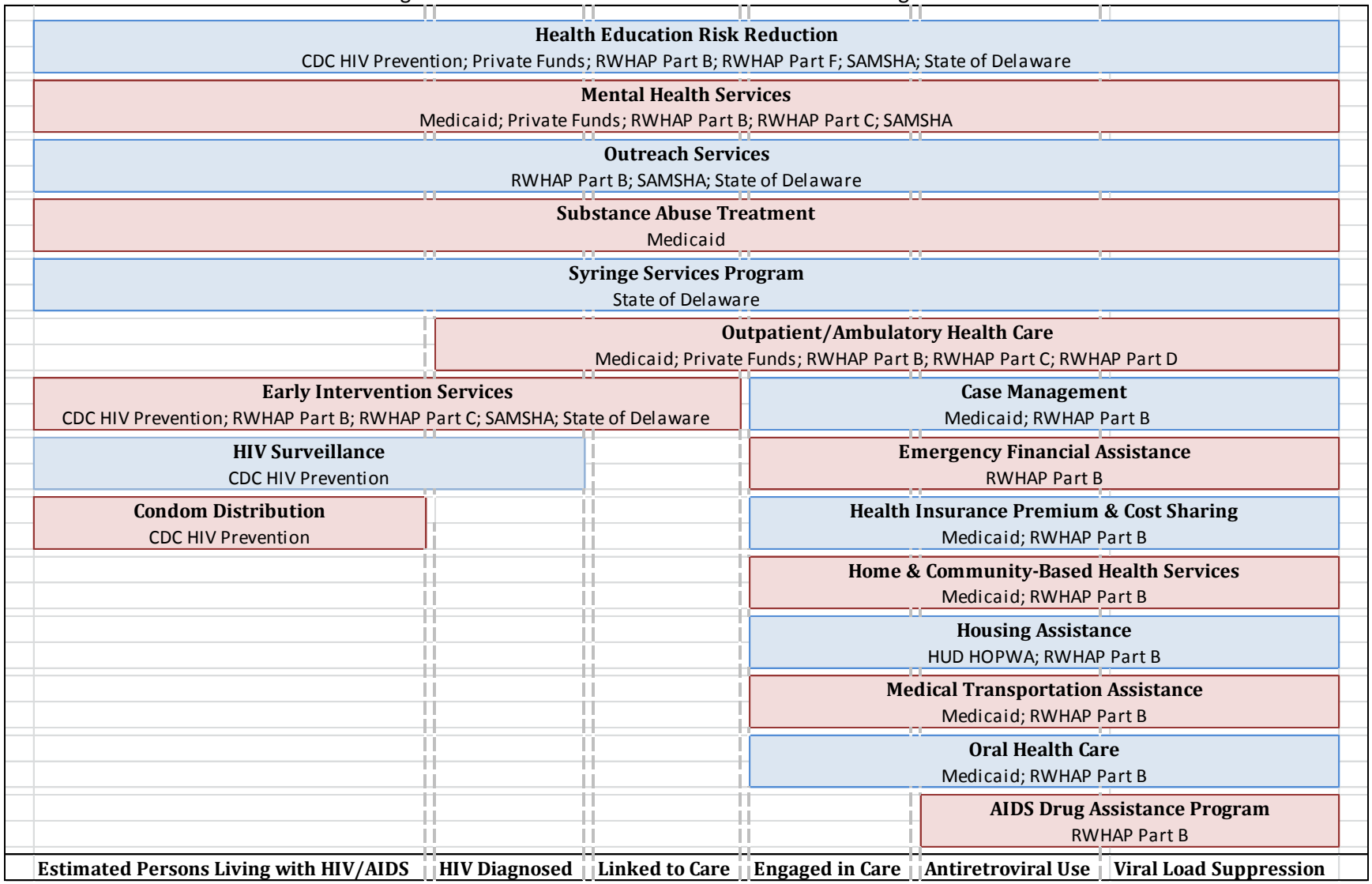
Similarly, many of those interviewed indicated that they felt that there were limitations in HIV-specific training resources that hindered the effectiveness of HIV services in Delaware. All eight interviewees stated that it was extremely rare to receive candidates with previous HIV-related experience. As the Director of the Christiana Care HIV Community Program stated, "HIV treatment is extremely complex, especially in traditionally underserved communities that experience higher levels of co-occurring conditions, the infrastructure that governs HIV care – the Ryan White HIV/AIDS Program, and Medicaid – is extremely complex in terms of reporting requirements, and the billing and IT systems are hard to operate and manage." According to the DPH Contractor for Quality Management Activities for the

RWHAP Part B the state currently offers two forms of uniform training to HIV service providers: first, all HIV testers for sub-recipients with HIV testing contracts receive counseling and testing training through the Division of Public Health; and secondly, through a DPH contractor, continuing education is provided to HIV case managers in areas of reported need, such as cultural competency and diagnosing co-occurring conditions in PLWH. Outside of these training activities, the responsibility for HIV service training is left to each agency. This gap in training resources in Delaware is typically filled with free online webinars, presentations from the representatives of pharmaceutical companies, and Continuing Education Credits provided by the Medical Society of Delaware. Several interviewees were concerned that placing the burden of training on the HIV service provider leads to discrepancies in service provision from agency to agency, and from professional to professional.

c. Funding interactions. Like many other jurisdictions in the United States, Delaware finances its continuum of HIV services by blending resources from a variety of funding sources. These sources include federal, state, local and private dollars. Separately, these sources rarely provide enough funding to meet program and service needs. Though when combined, the dollars make it largely possible for Delawareans to receive high quality HIV prevention, care and treatment services throughout the state. Figure 44, below, is provided to give a representation of the HIV services which make up the state's continuum of HIV prevention, care and treatment services, and the funding sources which are combined to pay for them.

Federal funding. Ryan White Part B funding from the Health Resources and Services Administration (HRSA) is the single largest funding source solely dedicated to HIV treatment services in Delaware. In 2016, Delaware received approximately $5.5 million for HIV medical care, medications and wraparound support services. Delaware also receives Ryan White Parts C and D funding (for clinical services for targeted populations) and Ryan White Part F funding (for the local Performance Site of the Mid-Atlantic AIDS Education Center). Similarly, HIV Prevention and Surveillance Services in Delaware are funded through an award to the Delaware Division of Public Health from the Centers for Disease Control (CDC). Delaware also receives Housing Opportunities for Persons Living with AIDS (HOPWA) funding from the Department of Housing and Urban Development (HUD), dollars that are administered by the City of Wilmington and the Delaware State Housing Authority. The Substance Abuse and Mental Health Services Administrations (SAMSHA) provides funds for targeted risk reduction services, education, outreach, and linkage to care services for persons dealing with behavioral health problems, are living with or at risk for HIV infection.

Figure 44 Delaware HIV Service Continuum and Funding Sources



State funding. The Delaware General Assembly allocates resources through its annual operating budget to fund key HIV services along the state's Continuum of Care. Since 2006, the State has provided financial support to Delaware's syringe services program (currently under the name, Needle Exchange Program), which operates within the Wilmington city limits. The Department of Correction funds HIV medical care and medications for incarcerated persons living with HIV disease. The State provides space in state facilities for Christiana Care Health Services to operate an HIV Wellness Clinic in each of Delaware's two southern counties. The state also provides financial support for HIV/AIDS case management services. As of December 31, 2015 Delaware employees provided case management to 107 individuals (about 10% of the total number of PLWH receiving that service in the state), services that are not reimbursed by any funding source. These workers also provide case management services to another 61 individuals that are funded by the state's Medicaid Program. The Medicaid Program also provides funding for HIV/AIDS case management services to four community-based organizations to provide service to an additional 254 persons (24% of the total number of PLWH receiving that service in Delaware). Reimbursement rates from the Medicaid Program have historically been more generous than that of Delaware's Part B Program, reducing the amount of financial support that needed to be funded through the RWHAP.

Local and Private Funding. Rarely do contracts for HIV services in Delaware cover all of the costs of providing those services. Delaware's continuum of care relies on the generosity of the service providers to generate their own funding to augment their federal and state funding. Christiana Care, which operates HIV Wellness Clinics throughout Delaware, matches its Ryan White Part B dollars with its own private funding. Delaware's AIDS services organizations (ASOs) mount robust fundraising efforts each year, including grant development and fundraising events such as an annual AIDS Walk. In the past several years, the ASOs have also started participating in 340B Drug Discount Programs to bring increased access dollars to Delaware's continuum of care.

In Delaware, the leveraging of federal, state, local and private funding is so complete that it is difficult to consider any funding source independent of the others. For many years, Delaware's continuum of care has worked effectively in this fiscal environment. Indeed, without this blending, Delaware would not be able to offer the wide variety of HIV prevention, care and treatment services it currently provides to its residents. However, it does come with some challenges. Federal reporting policies often require Service Providers to report service provision based on funding source, and in a blended system like Delaware's, that can be difficult to do. Furthermore, in a world in which HIV/AIDS is not seen as the health crisis it once was, community support of HIV/AIDS fundraisers is decreasing. This is also coupled with a continued decrease in federal dollars for HIV prevention, care and treatment, particularly for HIV Prevention and Surveillance efforts in Delaware. In a blended system, changes in the availability of funds from one funding source can have implications for all of the funding sources in the continuum. Ultimately those changes could impact the array of services provided and the number of persons served by those programs.

d. Needed resources.

Housing. Existing state resources are unable to meet the housing needs of PLWH in Delaware. As of September 2016, there were 106 people on the HOPWA waiting list, with an average wait time of two years. This need is a result of limitations in both the funds for housing assistance for PLWH in Delaware, and the state's supply of affordable housing for low income populations. All five of Delaware's public housing authorities maintain long wait lists for their Housing Choice Voucher Program (formerly known as Section 8), and four have closed their lists to new applicants. The current wait list for the Housing Choice Voucher Program run by the Delaware State Housing Authority, the state's largest public housing authority and the only one that has not closed its list to new applicants, is 7,700 persons, with a wait time of just over two years.

In 2015, in an effort to mitigate some of the unmet housing need of PLWH, the Delaware Ryan White HIV/AIDS Program Part B increased funding for housing assistance by 48% over FY14 funding. This increase of $87,000 in housing assistance funds was able to support 25 families participating in the program.

HIV Testing Kits. Delaware's CDC HIV Prevention funding has been reduced consistently since FY2006, when the budget was $2.1 million. Following budget reductions from FY2015 ($976,000) to FY2016 ($912,000) there was a concern that there would not be enough resources to provide HIV testing kits to Division of Public Health funded Title X Family Planning Services agencies, which includes the Delaware State University, Planned Parenthood of Delaware, Children and Families First, Delaware Family Wellness, and 13 public school-based health centers. On average, Title X agencies provide 2,400 HIV screenings per year. In the wake of these concerns, the Division of Public Health, Family Health Systems, agreed to purchase 3,000 HIV test kits annually, allowing DPH to expand its HIV testing service to two Federally Qualified Health Centers in high-HIV incidence areas in Wilmington: Henrietta Johnson Medical Center and Westside Family Healthcare.

Syringe Services Programs (SSP). In 2006, the Delaware General Assembly passed legislation allowing for the operation of a Syringe Services Program (SSP) in the Wilmington metropolitan area, and allocated $200,000 per year in state funding for its operation. Brandywine Counseling & Community Services, Inc. has been operating an SSP throughout Wilmington since 2007. From 2007 through June 30, 2015 the SSP has enrolled 2,532 clients in the program and has exchanged 352,372 used needles for clean ones. The program has screened 4,004 clients for HIV/Hepatitis-C and linked 278 PLWH to HIV medical care and HIV case management services. In June 2016, the Delaware General Assembly passed legislation allowing for the SSPs to be operated statewide, expanding boundaries from the Wilmington area. No increased state funding was appropriated for the expansion of the SSP statewide. Furthermore, federal regulation prohibits the use of federal funds for the purchase of sterile hypodermic needles for use in SSPs. The Division of Public Health, HIV Prevention Program is currently drafting a "Determination of Need" point paper, requesting approval for the use of federal funds for program administration statewide.

D. Assessing Needs, Gaps, and Barriers

a. Needs Assessment Process. Stakeholder input was sought using multiple channels throughout the HIV community planning process. The Delaware HIV Planning Council (HPC), the state's joint HIV prevention and care community planning body, meets six times per year to act as a forum to analyze the state's continuum of HIV prevention, care and treatment services, and to allow for the discussion of the impact of emerging trends in HIV on PLWH and those at increased risk for infection. Community participation is encouraged in all of the work completed by the HPC and meetings are open to the public. The membership of the HPC, and its four standing working groups, is representative of the HIV epidemic in Delaware and the HIV service providers across the state. On an on-going basis the HPC's Membership and Community Engagement (MCE) Working Group recruit members to join the HPC to fill existing gaps in the representativeness of the body. In June 2016, the HPC voted to establish a fifth standing working group solely for PLWH in Delaware, to be known as the Positive Action Committee (PAC). While not operational for the development of this Integrated Plan, in the future, the PAC will be an additional channel of communication for community members to provide direct input into the development of the needs assessment process, and in the decisions of the HPC.

The Delaware HIV Consortium (DHC) and the Delaware Division of Public Health (DPH), HIV Surveillance Program, support the HPC in its assessment of needs, gaps and barriers by providing and analyzing local and nation HIV data, and by conducting original research on the current needs and utilization of HIV care and prevention services statewide. Substantive needs assessment activities conducted by the HPC, DHC, and DPH during this planning cycle included the development of the state's 2015 HIV epidemiologic profile, a 2015 resource inventory survey of Executive Directors and Chief Financial Officers of the state's HIV service providers, a 2015 PLWH need assessment survey of Delaware's HIV case managers and social workers, a 2016 needs assessment survey of persons at increased-risk for HIV infection, and focus groups with PLWH in Wilmington regarding needs, gaps and barriers for HIV services. The results of the activities were presented to the HPC for comment, and were used in the development of all HIV planning activities, including the creation of the state's HIV service priorities and RWHAP Part B and CDC HIV Prevention grant applications.

HPC needs assessment activities. In the fall of 2015, the HPC invited the Executive Directors and Chief Financial Officers of all organizations listed in the state's *HIV Resource Guide*, a catalogue of the state's HIV service providers, to participate in the *HIV Services Resource Inventory Survey, 2015*. The survey asked respondents to provide information on the HIV services provided at their agency, the agency's financial and human resources dedicated to HIV services, the demographics of the clients that are served, and the agencies capacity to grow in the future. This information was used in the development of the *Integrated HIV Prevention and Care Plan: 2017*-2021 Human and Financial Resource Inventory section, as well as in the HPC's assessment of gaps in the state's continuum of HIV services. In all, 38 HIV service providers responded to the survey; or, 21% of all providers approached for participation (n=178).

In fall 2015, all HIV-specific case managers and social workers in Delaware were recruited to participate in the *2015 HIV Services Provider Perspective Survey*. The survey asked respondents to provide information about the demographics of their caseload, their clients' physical and mental health, and their clients' needs, gaps, and barriers for HIV care and treatment services. This survey was developed based on a similar survey instituted by the HPC in 2008 for inclusion in the *2009-2014 Comprehensive Plan* for Delaware. In total, 20 case managers and social workers (44% of the all HIV-specific case managers and social workers in Delaware) responded to the HPC's survey; survey respondents maintained a caseload of 1,627 clients, or 47.7% of all PLWH in Delaware. Subsequent PLWH needs assessments surveys are planned for 2017 to include not only input from case managers and social workers on the needs of their clients, but also direct input from the community itself.

In the winter of 2016, the HPC partnered with 12 agencies, at 30 locations across the state, to administer the *2015 HIV Prevention Needs Survey*. The survey, which targeted individuals in populations traditionally at increased-risk for HIV infection in Delaware, asked respondents to provide information about their participation in HIV-risk behaviors, their knowledge of HIV prevention services offered in the state, their previous use of such services, and their willingness to use these services in the future. An iteration of this survey was also completed in 2008. In all, 644 surveys were collected in the period the survey was active, of which 582 were deemed eligible for analysis. Furthermore, demographic information collected in the survey allowed findings to be analyzed based on the important subpopulations race, gender, age and place of residency.

To supplement the findings of the *2015 PLWH Needs Assessment Survey2015 PLWH Needs Assessment Survey,* the HPC conducted two focus groups with PLWH in the Wilmington area. Discussion in the first focus group centered on the need for and barriers to accessing HIV medical services; the second meeting focused on HIV supportive services. The average focus group size was 18 members. The population for the two focus groups were largely African-Americans and mostly male, mirroring the HIV epidemic in the region. Additional focus groups are planned for 2016-2017 to expand the geographic scope of the research, and to target specific trends found in the initial focus groups.

Division of Public Health and other Data Sources. The Delaware Division of Public Health, HIV Surveillance Program, is responsible for annually conducting the state's Medical Monitoring Project (MMP) assessment. The MMP is a locally representative, population-based surveillance system that analyzes the behavioral and medical experiences, as well as the needs of PLWH, both in and out of care, in the jurisdiction. From 2009-2013 the HIV Surveillance Program interviewed an average of 216 PLWH annually. Information collected from the MMP has been used by the HPC, and the state's Ryan White HIV/AIDS Program Part B and HIV Prevention Program to prioritize funding for HIV services.

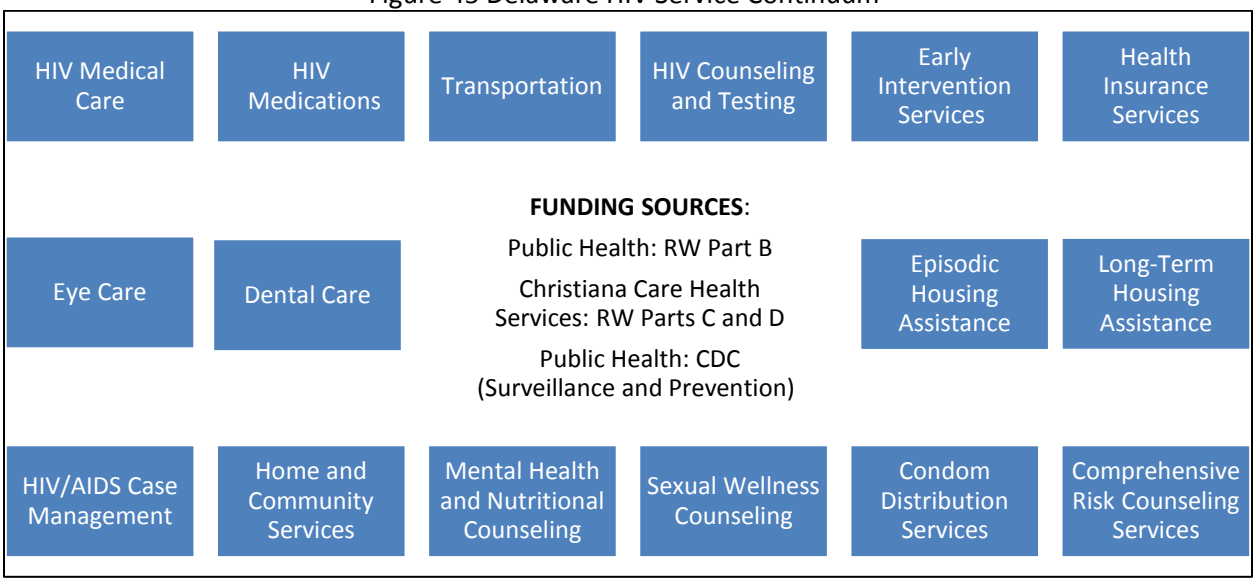
In 2014, Delaware was awarded a four-year $35 million State Innovation Model Testing Grant from the Center for Medicare and Medicaid Innovation to transform the states system of health care. The project, which was led by the Delaware Health Care Commission, used stakeholder input from across the state in the development of a strategic plan for change, the *State Health Care Innovation Plan*. The plan set out three ambitious goals: to improve the health of all Delawareans; to increase the quality of care received,

and the experience had while accessing the health care system; and, to lower the cost of care. Since the release of the Innovation Plan the Delaware Center for Health Innovation (DCHI), the organization founded to guide the implementation of strategies described in the plan, has regularly convened stakeholders to further progress on health care innovations in Delaware. DCHI has released eight whitepapers, based on community input, on a wide variety of areas of health care development in the state. These white papers have been used in the assessment of the state's health care system for this plan.

b. Service Needs: PLWH and Those at Most Risk. A small state geographically, Delaware has created a continuum of HIV prevention and care services that is cost-effective, efficient, and most importantly, answers to the service needs described by persons living with, and at risk for, HIV. The state's primary recipients of federal funding for HIV-specific services are the Delaware Division of Public Health (DPH) and Christiana Care Health Services (CCHS). Both DPH and CCHS provide direct services to persons living with HIV disease. In addition, DPH, either directly or indirectly, awards contracts to eight community-based organizations for the delivery of specific HIV services. These 10 organization work together to stop the spread of HIV infection in Delaware and to provide high quality care for persons already infected.

Figure 45, below, presents the HIV prevention, care, and treatment services which make up Delaware's HIV service continuum. The figure does not prioritize any service over another because each service is equally important to Delaware's HIV prevention and care efforts. Multiple factors have determined what services are provided through the state's current continuum of HIV services. One consideration is the prioritization of care services into "core" and "support" services as delineated by the Health Resources and Services Administration (HRSA). Delaware ensures that adequate funding is available to meet those service needs, either by allocating RWHAP Part B resources to them directly, or by monitoring the availability of other funding resources for them. A second factor contributing to the funding of the state's HIV service continuum is the review of utilization data. The Ryan White Program Administrator analyzes service utilization data annually to ensure the funds are being allocated efficiently to meet demonstrated service need.

Figure 45 Delaware HIV Service Continuum



Additionally, direct feedback from clients and service providers is considered when determining the allocation of funds for new and existing services. Annually, state-funded HIV service providers must engage in a self-evaluation process that has clients describe their experience in accessing each service. The results of this process are shared with the service provider and the grant administrator and are used in the development of quality improvement projects to better serve the needs of PLWH. In 2015, through this process AIDS Delaware, a local AIDS service organization, realized that its clients had a need for behavioral health care co-located with its case management services. Beginning in 2016 the organization will work to offer such services. A representative sample of PLWH is also formally interviewed through the Medical Monitoring Project to understand the met and unmet needs for services offered by the state. Less formally, during each Delaware HIV Planning Council meeting, meeting members and stakeholders participate in a conversation of emerging trends in the field of HIV in Delaware. This discussion provides an opportunity for the group to consider the evolution of service needs which results from the transformative nature of the state's HIV epidemic. It is this consideration of quantitative and qualitative data in both a one-on-one and group setting that ensures the state's continuum of care reflect the service needs of PLWH and those with the greatest risk for HIV infection.

c. Gaps in HIV Prevention and Care Services. Poverty is a significant driver of need for persons at risk for and living with HIV/AIDS in Delaware. Living in poverty limits an individual's ability to find suitable housing, make healthy decisions about behavior, nutrition, and exercise habits, remain adherent to a HIV medical regimen, and access transportation, a necessity for maintaining employment. Even nominal costs or copayments of a few dollars can prevent a person in poverty from accessing care and or taking medications. According to the Ryan White HIV/AIDS Program Service Report (RSR), 55% of the 1,663 PLWH who received HIV medical care through the Christiana Care Health System (2015) had an income below 100% of the Federal Poverty Level. All 142 households who receive rental assistance through the Delaware Housing Assistance Program, the state's administrator of Housing Opportunities for People with AIDS (HOPWA) funds, had a household income 50% Area Median Income in 2015; over

70% of which were unstably housed before receiving assistance through the program. Most of those receiving services through the Ryan White HIV/AIDS Program receive health coverage through social insurance programs, such as Medicaid or Medicare, or are uninsured; including 76% of those served through the Christiana Care health system in 2015.

This reliance on public systems for HIV prevention, treatment and care, is particularly important in light of a second driver of need for PLWH and those at risk for the disease: high levels of co-occurring medical conditions in such populations in Delaware. Of the PLWH in Delaware who receive HIV medical care through the Christiana Care Health System, 28% are co-infected with Hepatitis C; an estimated additional 50% of patients have at least one other significant medical co-morbidity – primarily cardiovascular disease or diabetes – that require additional health care; an estimate 40-45% have a mental health diagnosis. Persons with multiple health conditions tend to require resource intensive services. According to the Delaware Center for Health Innovation, individuals with a behavioral health condition have more than twice the total medical costs than those without a behavioral diagnosis.[5] These expenditures tax the state's public safety net programs, including those that service PLWH (i.e. Medicaid, Medicare, and RWHAP).

Delaware's coordinated and comprehensive HIV service continuum cannot meet all of the needs of all PLWH and those at-risk for HIV infection. Service gaps exist in Delaware due to, among other things, limitations in funding, an inadequate supply of professionals and educational resources, and contending political and executive priorities. DPH and the HPC assessed the needs, gaps and barriers in existing HIV resources and works to address identified unmet needs. Table 22 presents the unmet need identified through the 2015 needs assessment cycle; the table is not provided in any order of prioritization or level of need.

Table 22 Unmet Need

Unmet needs for HIV prevention services	**Unmet needs for HIV care, treatment and supportive services**
Access to condoms and other barriers from HIV through sexual intercourse	Childcare services
Access to syringe service programs (SSP)	Dental care
Accurate and accessible sexual wellness education in schools, communities, and in online communication	Drug or alcohol counseling or treatment
Drug or alcohol counseling or treatment	HIV peer group support
Education and outreach regarding the acceptability of condoms and proper condom usage	Meal or food services
Education and outreach regarding PrEP to the general population and populations at high-risk for HIV infection	Mental health services

[5] Delaware Center for Health Innovation. (2016). *Integration of Behavioral Health and Primary Care* [Issue Brief]. Retrieved from http://www.dehealthinnovation.org/Content/Documents/DCHI/DCHI-Behavioral-Health-Integration-Implementation-Plan.pdf

Mental health services	Public benefits including Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI)
Opt-out HIV education of health care providers and general population	Shelter or housing assistance
Strengthened network of health care providers willing to prescribe Pre-Exposure Prophylaxis (PrEP)	Transportation assistance
Targeted HIV testing in communities with high HIV incidence, and with populations with limited access to health care	

HIV medical care and primary health care. Delaware ensures that all members of the community have access to high-quality HIV medical care, regardless of an ability to pay, through the Christiana Care Health Services HIV Program, the sole Ryan White funded medical provider in the state. In 2013, 60% of PLWH engaged in care in Delaware sought HIV health care through the Christiana Care HIV Program; 35% of PLWH were seen by private physicians (including Primary Care Physicians, Infectious Disease physicians, internists and nurse practitioners), and 5% received treatment through the Department of Corrections. In order to meet the needs of those with HIV/AIDS statewide, the Christiana Care HIV Program operates clinical sites in each of the state's three counties. These sites are integrated into communities with high rates of HIV infection. Additionally, for PLWH in the New Castle County region who prefer not to receive their HIV treatment at the Wilmington Hospital Annex, the HIV Program's primary site, Christiana Care offers five satellite offices. Satellite offices are nested in the community through partnerships between Christiana Care, the Division of Public Health, and two community-based organizations. Yet, even with the existing public HIV medical resources, in 2013 there were an estimated 557 PLWH in Delaware (16%) with no evidence of viral load testing, CD4 count, or provision of anti-retroviral therapy over the previous 12 months, the current Health Resources and Services Administration, HIV/AIDS Bureau measure of "Unmet Need."

Provider capacity is the greatest challenge for meeting the needs for HIV medical care. In the *HIV Resource Inventory Survey, 2015* HIV service providers were asked if their agency could increase their caseload under their existing human and financial resources. Several of the state's largest health care providers, including Christiana Care, La Red Health Center, and Westside Family Health care, indicated that with existing resources they were either near capacity – capable of increasing capacity by a modest 5% - or were currently at or above the agency's capacity. According to several PLWH participating in the HPC's 2016 focus group, this taxation of the HIV medical system has led to long wait times to be seen for HIV medical care, an hour to three hours past the scheduled appointment time.

As a state, Delaware's supply of primary care physicians nearly meets recommendations put forward by the Council on Graduate Medical Education (CGME) for meeting the needs of a population. According to the Center for Applied Demography & Survey Research (CADSR) the state's provider-to-population

ration of 1:1,271 was only slightly higher than CGME recommendation of 1:1,250.[6] Yet, Delaware's primary care providers are distributed unevenly across the state, both between and within counties. The state's two southern counties experience a much higher provider-to-population ratio (Kent – 1:1,661; Sussex – 1:1,422) than its northern most county (New Castle – 1:1,146). The CADSR study found that 10 of the state's 27 census county divisions had either a "shortage," or "significant shortage" of primary care physicians, signified by a provider to population ratio of 1:3,000 or higher. Variances in the distribution of health care professionals make access to primary medical care difficult and increase the distances individuals have to travel, and increase the time required to be seen.

Delaware's shortage of health care professionals significantly impacts populations traditionally at risk for, and living with, HIV infection; especially low income individuals and persons in rural communities. Large portions of the state, particularly in Sussex and Kent Counties, but also in the urban cores of Wilmington and Newark, have been designated by HRSA as Health Professional Shortage Areas for primary care physicians, dentists, and psychiatrists serving low income communities. Furthermore, Delaware primary care physicians are less likely to accept new referrals for clients with public, as opposed to private, insurance coverage. According to the CADSR study, 86.2% of primary care physicians stated that they were accepting referrals for new clients; this proportion dropped to 67.5% and 76.7% of PCP's who were willing to take on new Medicare and Medicaid clients, respectively. Finally, much of the state's private practices are not large enough to maintain a multidisciplinary staff, important to providing quality care to patients with complicated co-morbidities. According to the Delaware Health Care Commission, 75% of physicians are affiliated with practices of five or fewer physicians, limiting the potential for care coordination.[7]

The shortage in health care professionals is expected to expand in Delaware. [8]The state is experiencing sustained growth in the size, age, and diversity of its population, which puts pressure on the state's healthcare system. Furthermore, as in most places in the United States, Delaware's population is generally unhealthy, experiencing rates of chronic disease that is above the national average. These rates are expected to continue to rise, considering over a quarter of the state's population (27%) lives a sedentary lifestyle and the rate of obesity in Delaware has doubled since 1992. Finally, as a result of the passage of the Affordable Care Act (ACA), many Delawareans are experiencing health care access for the first through the state's Medicaid expansion and state insurance marketplaces.

Delaware has a limited capacity to recruit new health care professionals to meet the rising needs of the community for health care services. Delaware is one of just five states without a medical school, and one of 15 states without a dental school. This is important in that research shows both the place where a

[6] Toth, T. (2014). *Primary Care Physicians in Delaware, 2013*. Retrieved from the Center for Applied Demography & Survey Research, University of Delaware: http://dhss.delaware.gov/dhss/dph/hsm/files/pcpinde2013.pdf
[7] Delaware Health Care Commission. (2013). *State Health Care Innovation Plan*. Retrieved from http://dhss.delaware.gov/dhss/dhcc/cmmi/files/choosehealthplan.pdf
[8] Ferry, T. (2012). *Report to the Delaware Health Care Commission: Health Care Workforce and Related Health Care Reform Perspectives.* http://dhss.delaware.gov/dhss/dhcc/files/healthcareworkforce.pdf

physician attends medical school and performs residency are a strong indicator of where she will practice following residency.

HIV risk reduction services. Delaware's population ranks high on several risk indicators for HIV infection, for both sexual and injection drug transmission risk. The state is consistently among the nation's highest for rates of sexually transmitted infections, a proxy measure for HIV risk. In 2014, according to the CDC, Division of STD Prevention, the state ranked 10th for gonorrhea infections rate (138.2 per 100,000 population), 15th for chlamydia (488.9 per 100,000 population), and 19th for syphilis (5.1 per 100,000).[9] Delaware is also in the top quintile nationally in terms of the populations "[use of illicit drugs] other than marijuana in the past month," and "[needed but not received] treatment for illicit drug use in the past year," ranking the 7th (3.75% of the population), and 8th (2.62% of the population) highest state, respectively.[10] Furthermore, a high proportion of the state's youth population is participating in behaviors that put them at-risk for HIV infection. According to the *Youth Risk Behavior Surveillance System* (YRBSS) (2015), Delaware student population ranks higher than the national average for the percent who have had sexual intercourse with four or more persons (12.9%; 12% respectively), the percent who drank or used drugs before there last sexual intercourse (22.8%; 22% respectively), and the percent who have used a needle to inject illegal drugs (2.4%; 2% respectively). Due to these high levels of HIV-infection risk behaviors, and continued reduction in public funding, the state is burdened to meet the demand for HIV prevention services.

In 2015, the Delaware HIV Planning Council performed a needs assessment of HIV prevention services in Delaware. Populations traditionally at increased-risk for HIV infection were surveyed through the needs assessment process to evaluate their knowledge of, use of, and willingness to use the state's HIV prevention services. In all 583 surveys were deemed appropriate for analysis. Results of the survey indicate that the existing knowledge and use of HIV prevention tools is uneven across the state's continuum of HIV prevention services.

HIV Testing & Counseling. The cornerstone of the state's HIV prevention strategy is HIV testing and counseling, which is provided both in health care and community-based settings. From 2014 through 2015, 19,919 Delawareans received HIV testing services through the state's 83 HIV testing and counseling sites. Of those tested, 55 persons (0.35%) were diagnosed with HIV. In 2012, the State of Delaware passed legislation to allow for Opt-out HIV testing in the health care setting. This was done in an effort to both normalize HIV screening as a standard of health care, and to reduce the burden on publicly funded HIV counseling and testing programs to screen only those at high-risk for infection or those without access to health care.

[9] Centers for Disease Control and Prevention. (2015). *Sexually Transmitted Disease Surveillance 2014*. Atlanta: U.S. Department of Health and Human Services.
[10] Substance Abuse and Mental Health Services Administration. (2016). 2013-2014 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia). Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

While over four-fifths of the survey population responded that they had previously received an HIV test, this is not the norm. According to the Behavioral Risk Factor Surveillance System, only 39% of Delawareans have ever been screened for HIV. [11] Delawarean is ranked 42nd nationally for concurrent diagnoses, with 34.5% of persons classified as AIDS within three months of their HIV diagnosis. To make progress on late-stage HIV diagnosis, more work needs to be done to promote HIV testing in both the health care setting and through targeted community-based testing of high-risk populations.

Condom distribution. Research shows that when condoms are made *available*, located in areas where high-risk populations interact; *accessible*, provided for cheap or for free; and are made *acceptable*, usage is normalized in the population, the risk of HIV-acquisition in high-risk populations is greatly reduced.[12] Because of this, the Delaware Division of Public Health provides condoms for free to several health care facilities, school wellness programs, and AIDS service organizations, and contracts with the Delaware HIV Consortium to run a free mail order condom and safer sex supply service targeting PLWH and high-risk negatives. In 2015, DPH provided over 250,000 condoms to the general public through these organizations. Close to three-quarters (73.3%) of respondents of the HPC's prevention needs assessment survey replied that they would use condoms during intercourse if they were made easily accessible. Yet, when asked "If you do not use condoms when having sex, why don't you use them?" three out of the top four responses indicated that when condoms aren't used it is because the respondent's perception of their of HIV-infection risk was lower than it would need to be to wear a condom.[13] Together, these findings would argue that in order to increase the percentage of persons at increased-risk for HIV infection who use condoms, HIV prevention services would need to be put into place that both increase the access to condoms, and the acceptability of their use.

Sexual wellness education, including, HIV/STD awareness, is fractured across the state of Delaware. Delaware does not require schools to provide a comprehensive sexual education course, and leaves it up to the state's 19 individual school districts to determine the health curriculum provided to their students. The CDC's *School Health Profile* describes mandatory health-related curricula in secondary schools by state and urban areas.[14] The 2014 survey included questions about whether each of sixteen HIV, STD and pregnancy prevention topics was taught as a part of a required health course. The topics included basic information on using condoms, the importance of limiting sexual partners, and how HIV and STDs are transmitted. Only 15.7% of Delaware public schools taught all 16 topics as a part of a required health course for students in 6-8th grade; 67.9% of public schools required it for students in 9-12th grade.

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[11] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2015). *BRFSS Prevalence & Trends Data* [online]. Retrieved from: http://wwwdev.cdc.gov/brfss/brfssprevalence/

[12] Charania, M. R., Crepaz, N., Gunther-Gray, C., Henny, K., Liau, A., Willis, L. A., Lyles, C. M. (2011). Efficacy of Structural-Level Condom Distribution Interventions: A Meta-Analysis of U.S. and International Studies, 1998-2007. *AIDS Behav*, 2011(15), 1283-1297.

[13] The top four responses were: 1. I trust my relationship partner (52%); 2. Condoms decrease the pleasure I feel (14.3%); 3. Don't like them (9.2%); and, 4. Didn't have any at the time of intercourse (7.7%).

[14] Center for Disease Control and Prevention. (2015). *School Health Profile 2014: Characteristics of Health Programs among Secondary Schools*. Retrieved from http://www.cdc.gov/healthyyouth/data/profiles/pdf/2014/2014_profiles_report.pdf

HIV/STD prevention education, done outside of the school setting, is left to individual health care providers and community-based organizations. While the AIDS Education Training Center provides the most up to date information on HIV, the organization has limited staff resources to provide training to all health care providers, and provides no HIV training to community partners outside of the health care setting. Limitation in education resources for providers leads to an uneven distribution of the latest HIV prevention information through the community. Over one-third of respondents (34%) of the *2015 HIV Prevention/At-Risk Needs Assessment Survey* indicated that they received no HIV/STD education over the previous six months, and only 31% of respondents received their information from an active information source, such as a health worker or at a health fair. Seventy percent of survey respondents were not aware of Pre-Exposure Prophylaxis (PrEP) for HIV prevention.

Mental health services. Delaware faces significant mental and behavioral health challenges. One-in-five Delaware residents (19.1%; 136,000 persons) suffered from mental illness in 2014.[15] While the majority of these cases were not debilitating, 28,000 Delawareans were categorized as having serious mental illness, the severest form of functional impairment as a result of their diagnosis. People with mental health and substance abuse issues are less likely than the general public to receive preventive services, and once in care, are less likely to be adherent to medical treatment.[16]

Persons with a mental health diagnosis are a vulnerable population for HIV infection in Delaware. Nationally, 68% percent of adults with a mental health disorder report having at least one co-occurring medical disorder, such as cardiovascular disease or diabetes, but also HIV.[17] Close to half of all PLWH surveyed (49%) by DPH for the Medical Monitoring Project in 2013 stated that they had accessed mental health services over the previous year. Similarly, an estimated 40-45% of the 1,663 clients receiving HIV medical care through the Christiana Care Health System have a mental health diagnosis.

Similar to primary health care, there is an inadequate supply of mental health professionals – psychiatrists, psychologists, and social workers - to meet the needs of the community. These provider shortages largely affect populations that are traditionally at risk for and living with HIV in Delaware, including rural and low-income communities. Sussex County is designated as a Mental Health Professional Shortage Area by the Health Resources and Services Administration. Further, because the state's only in-patient facility is located in New Castle County, persons with need for such care from the state's lower two counties must travel long distances to be seen. While only 20% of HIV-specific case managers and social workers who respond to the *HIV Services Provider Perspective Survey, 2015,* indicated that there was an unmet need for mental health services, health care providers from

[15] SAMHSA, Center for Behavioral Health Statistics and Quality. (2016). *National Survey on Drug Use and Health, 2013 and 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf
[16] Druss, B. G., and Walker, E. R. (2011). *Mental Disorders and Medical Comorbidity* (Research Synthesis Report No. 21). Retrieved from Robert Wood Johnson Foundation website: http://www.rwjf.org/en/library/research/2011/02/mental-disorders-and-medical-comorbidity.html
[17] Ibid.

Christiana Care Clinics in all three counties have stated that their patients routinely wait a week or more to be seen at public mental health clinics.

Substance abuse treatment. Substance abuse is a serious public health challenge throughout the state of Delaware. Rates of substance use are high in the state's general population but are significantly more common for PLWH. National Survey on Drug Use and Health (NSDUH) data indicates that 10.6% of Delawareans ages 12 and above participated in illicit drug use over the past month; 3.75% of the population used illicit drugs other than marijuana.[18] According to the latest data from Delaware's Medical Monitoring Project (2013), 24.8% of PLWH used non-injection drugs over the previous year; 5.3% of PLWH used injection drugs in that span. Drug use is a concern for both those who are at-risk for HIV and those living with the disease. Drug use affects an individual's ability to negotiate condom use, increases the chance of participating in risky sexual and drug use behaviors, and decreases a person's likelihood of staying adherent to their medical regimen.

Use and dependence on heroin and other opiates is an emerging concern throughout the state. In recent years the state has seen a steady rise in both overdose deaths, and treatment admissions for heroin and other opiates. Since 2012, there has been a 32.5% rise in drug-related overdose deaths in Delaware, from 172 (2012) to 228 (2015);[19] a rise largely seen in New Castle County. Treatment for heroin in DSAMH funded clinics has risen 152% since 2011 (from 1,529 admissions in 2011 to 3,182 in 2014). Naloxone administrations by emergency medical service personnel have also increased since it was approved by the Legislature in 2014. There was a 12% increase in naloxone administrations in 2015 (1,389 doses) over those performed in 2014.

Brandywine Counseling and Community Services, Inc. (BCCS), has operated a syringe services program in Wilmington since 2007. The program provides counseling and referrals to drug treatment, safe collection and disposal of used needles, and counseling and testing for HIV, and HCV, as well as pregnancy testing. Since 2007, BCCS has enrolled 2,532 clients into the program, has exchanged 352,372 needles, and has linked 278 PLWH to HIV medical care and case management services. In 2016, in response to the rise in opiate use in Delaware and BCCS's track record of success, the Delaware General Assembly passed legislation to allow needle exchange programs to operate statewide. The Delaware General Assembly did not appropriate any additional funds to meet the extra resource needs of the state's syringe services program resulting from program expansion.

The expansion of the syringe service program statewide is a momentous addition to the state's HIV prevention continuum. Thirty-seven percent of HIV case managers and social workers who responded to the *HIV Provider Perspective Survey, 2015* said that the PLWH in their caseload had an unmet need for drug or alcohol counseling and treatment. This mirrored the results of the *Prevention/At-risk Needs*

[18] SAMHSA, Center for Behavioral Health Statistics and Quality. (2016). National Survey on Drug Use and Health, 2013 and 2014. Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf
[19] Drug Enforcement Agency, Philadelphia Field Division. (2016). *DEA Intelligence Report: The Drug Situation in Delaware.* Retrieved from https://www.dea.gov/divisions/phi/2016/phi051816_attach.pdf

Assessment Survey, in which 52% of respondents who injected drugs said that they would use a needle exchange program if it was available.

Housing. Homelessness and housing insecurity is an immense challenge for persons at risk for HIV and PLWH in Delaware. For PLWH, lack of stable housing is linked with inadequate HIV health care, avoidable hospitalizations and suboptimal results throughout the HIV care continuum.[20] Research by the Delaware HIV Consortium (2012), found that PLWH in Delaware experiencing housing insecurity were less likely than their stably housed counterparts to be engaged in care and be adherent to their HIV medical regimen.[21] Persons who are homeless or are experiencing housing insecurity are more likely than stably housed persons to participate in high risk behaviors for HIV infection; they are more likely to have greater numbers of unprotected sex acts, to exchange sex for drugs or money, experience physical and sexual violence, and have substance abuse disorders.[22]

According to the most recent U.S. Department of Housing and Urban Development (HUD) required Point in Time Count, performed on January 27, 2016, by the Homeless Planning Council of Delaware, there is an estimated 1,070 people experiencing homelessness during any given night in Delaware. It is estimated that 7% of Delaware's nightly homeless population is chronically homeless, or have been homeless on the street or in emergency shelters for more than one year continuously or four or more times in three years for a cumulative length of time longer than one year. Forty-eight percent of Delaware's homeless population has a disabling condition that increase their difficulty in sustaining stable housing, including 1% that are diagnosed with HIV/AIDS. Approximately 8,300 households experience homelessness in Delaware each year.

Delaware has an unmet need for affordable housing options and a limited supply of housing resources to me the needs of households experiencing housing insecurity. According to the Delaware Housing Coalition, Delaware is the 12th most costly rental market in the United States. For a person to be able to afford a two bedroom apartment (30% of their income) in Delaware, they must make $21.70 per hour, or $45,000 annually. Because of this 25,521 renting households in Delaware are severely cost burdened, paying 50% of their income for housing.[23] All five of the state's public housing authorities have waiting lists for housing choice voucher program (formerly known as Section 8); this includes the Delaware State Housing Authority, which has 7,700 people on their wait list. Four out of the five public housing authorities in the state have closed their wait lists to new applicants. It is not unusual for eligible

[20] National Minority AIDS Council, and Housing Works. (2013). *Mass Incarceration, Housing Instability and HIV/AIDS: Research Findings and Policy Recommendations.* Retrieved from: http://nmac.org/wp-content/uploads/2013/02/Incarceration-Report-FINAL_2-6-13.pdf

[21] Delaware HIV Consortium. (2012). *Examining the Correlation Between Housing Status and Treatment Adherence Among HIV Positive Clients in Delware.*

[22] Dickson-Gomez, J., Hilario, H., Convey, M., Corbett, A. M., Weeks, M., and Martinez, M. (2009). The Relationship Between Housing Status and HIV Risk among Active Drug Users: A Qualitative Analysis. *Subst Use Msuse*, 44(2), 139-162.

[23] Delaware Housing Coalition. (2016). *Who Can Afford to Live in Delaware? Annual Report of Housing Affordability in Delaware.* Retrieved from http://housingforall.org/wp-content/uploads/2016/06/WhoCanAfford2016.pdf

applicants to wait several years for the opportunity to apply for subsidized housing then be placed on a waiting list for an additional multi-year timeframe.

PLWH in Delaware are able to access a number of housing services from a variety of organizations across the state, including the Delaware HIV Consortium *Delaware Housing Assistance Program (DHAP)*. There are five public housing authorities in Delaware that operate and administer subsidized public housing and Housing Choice Voucher programs for income eligible households. In addition, there are also several nonprofit agencies, such as Connections Community Support Programs and Ministry of Caring that operate emergency, transitional, and supportive housing programs for Delaware's low-income residents who are experiencing homelessness or living in unstable or unaffordable housing conditions. Not all of these programs are HIV specific, and access to all such programs is generally contingent on low income status.

The DHAP program is the state's largest tenant-based rental assistance program solely dedicated to serving low-income PLWH in Delaware. From July 2015 through June 2016 the DHAP program provides housing assistance to 142 households (249 persons) across the state, with the average housing subsidy equaling $6,700 annually. All of the households taking part in the DHAP program were at or below 50% Area Median Income (AMI), with 76% of households falling between 0-30% AMI. Over 70% of the households served by the program were unstably housed before entering the program. While the DHAP program has made vast strides in reducing both the size of its wait list (from 200 in January 2015, to just 74 in February 2016), as well as in the average time a person spends on the wait list (from a period of 5 years to now less than 3), it is unable to provide service to all PLWH in Delaware who need it.

Transportation assistance. Research shows that limited access to transportation acts as a significant barrier to health care access, particularly for those who are low income and those who are uninsured or underinsured.[24] Not having regular access to a reliable transportation source leads to higher rates of rescheduled or missed medical appointments, delayed care, and missed or delayed medication use. For persons living with a chronic illness, like HIV/AIDS, irregular and inconsistent treatment of their disease leads to poorer health outcomes and higher mortality rates.

Transportation assistance is provided for free to eligible PLWH in Delaware for trips to non-emergency medical appointments through the Division of Medicaid and Medical Assistance (DMMA) and the RWHAP Part B Program. DMMA contracts the coordination of its transportation services to LogistiCare Solutions, LLC, for all eligible Medicaid clients, regardless of HIV status. In 2015, the company was responsible for managing 125,000 trips per month across its network of 60 independent transportation providers; up from 50,000 trips per month in 2000. In Delaware, PLWH not eligible for Medicaid, or PLWH on Medicaid seeking transportation for dental or vision care, may be eligible for non-emergency medical transportation through the RWHAP. The Delaware HIV Consortium, as contract administrator for the RWHAP, contracts with three service providers, one in each county (AIDS Delaware, Beautiful

[24] Syed, S. T., Gerber, B. S., and Sharp, L. K. (2013). Traveling Towards Disease: Transportation Barriers to Health Care Access. *J Community Health*, 38(5), 976-993.

Gate Outreach Center, and Generations Home Care, Inc.) for such services. In Delaware, the RWHAP funds about 60 trips to-and-from non-emergency medical appointments for month. Yet, even with Delaware's existing transportation resources, 42.1% of the HIV-specific case managers and social workers who responded to the HPC's *HIV Services Provider Perspective Survey, 2015*, indicated that their caseload had an unmet need for transportation assistance services.

The transportation needs and barriers of PLWH in Delaware vary both by place of residency and level of income. Because RWHAP Part B has an established mandate to serve as "payer of last resort," the 41% of clients (2013) who access HIV services through the RWHAP who receive health coverage through Medicaid are required to access non-emergency medical transportation through LogistiCare Solutions, LLC. Participants in the HPC focus groups universally shared having similar adverse experiences with LogistiCare. Participants stated contracted service providers were inconsistent, oftentimes making riders wait extended periods to be picked up, and sometimes did not arrive for pick-up at all; that the program's advanced scheduling policy, which prohibited reserving a ride within 72-hours of a medical visit, creates a barrier for PLWH who regularly need same-day medical appointments; and, the programs practice of providing passes for public transportation, instead of a rides to-and-from their residence, adds extra barriers to accessing health care, especially riders with mobility issues who are unable to walk to transit hubs. The focus group did not share the same complaints about RWHAP Part B contracted transportation providers.

Demand for non-emergency medical transportation through LogistiCare Solutions, LLC, is expected to continue to grow following the passage of the ACA, which expanded Medicaid eligibility from all adults at or below 100% FPL to 138% FPL. Following the passage of the ACA Delaware's Medicaid has grown by 12,000 enrollees to 235,154; a 5.3% net increase of persons covered by Medicaid. Testifying at an HPC meeting, the General Manager for the Delaware operations of LogistiCare Solutions, LLC, confirmed that the company was struggling to meet increased demand for the service, but was encouraged by the Delaware General Assembly's 2015 passage of legislation (SB91) that allowed health care providers to seek Medicaid reimbursement for transportation services that they provide to their participants instead of using an established LogistiCare transportation contractor.

PLWH in Delaware who do not qualify for free non-emergency transportation services, or are looking to travel to destinations outside of non-emergency medical appointments, generally are able to qualify for reduced fare on the state's public transportation network, DART First State, through the *Reduced Fare Program*. To access the program a rider must be over the age of 65, or have a defined disability; HIV/AIDS constitutes a disability for the program. Yet, PLWH who participated in the HPC's focus groups noted that even the nominal fee required by the Reduced Fare Program can act as a barrier for a person in poverty and can hinder access to the service. Furthermore, similar to accessing transportation services through the RWHAP, routes in Kent and Sussex County, where the community is more rural than New Castle County, are sparse and irregularly timed, which can make any trip several hours long regardless of the distance.

d. Barriers to HIV Prevention and Care Services. Barriers to HIV prevention, treatment and care services are multi-faceted, varying from interpersonal and individual psychosocial factors to systemic structural level factors, like poverty and stigma. The Delaware Division of Public Health, the Delaware HIV Planning Council, and individual service providers work together to understand and mitigate these barriers as they are presented, yet the myriad of barriers make it impossible to address them all. Individuals at risk for and living with HIV/AIDS face many competing priorities that complicate and compromise their abilities to practice optimal risk reduction behaviors, access prevention services, get screened for HIV, attend medical appointments and remain adherent to treatment. For these reasons, the state ensures high quality HIV medical care and supportive services through a coordinated and comprehensive system of services through federal, state, and private funding.

The following list provides a description of barriers for PLWH and individuals at risk for HIV in accessing the state's HIV prevention, care and treatment services. These barriers were highlighted through the state's various needs assessment activities.

Social and structural barriers.

- Poverty, especially entrenched systemic poverty
- LGBTQ stigma and discrimination. Fear of stigma and discrimination based on one's sexual identity can be a powerful barrier to accessing health care. Outside of a few pockets in Delaware, there is not a strong LGBTQ community for support and empowerment.
- HIV stigma prevents individuals from accessing HIV testing and prevention services and from engaging in appropriate health care. HIV stigma presents itself in interpersonal, familial, medical and many other community-based settings.
- Mass incarceration affects community and individual-level risk for HIV on multiple levels. There are elevated levels of HIV in Delaware's incarcerated population, and those newly released from prison. Department of Correction policies prohibiting condom use and harm reduction tools increase the risk of HIV infection in prisons. Laws and policies reducing a person's opportunities for employment following release from the correction system promote continued HIV-risk behaviors following release. Limited linkage-to-care services to bridge PLWH receiving care in prison to HIV medical care in the community encourage PLWH to becoming lost to care following release.
- Lack of affordable housing in Delaware is a pervasive problem. There is a lack of federal, state, and local resources to combat the problem.
- Lack of perceived risk of HIV can be found in various subpopulations in Delaware. Lack of perceived risk often leads to lax condom use, other sexual and drug use risk behaviors, and unwillingness to get screened for HIV.
- Limited community knowledge of pre-exposure prophylaxis (PrEP) and other HIV prevention services.

Legislative and policy barriers.

- Sexual education varies across public school across the state. Decision about curriculum and amount of sexual wellness education is provided to the individual school districts.

- In 2016, the Delaware General Assembly passed legislation to allow for syringe service programs statewide, expanding it from the initial boundaries of Wilmington ZIP codes. This legislation did not come with funding mandates to properly support statewide expansion.
- Federal funding restrictions limit the state's ability to provide PrEP and clean syringes to appropriate high-risk individuals. Ryan White and CDC prevention funds cannot be used to pay for medication for PrEP, the accompanying lab tests or for clean syringes, and can only be utilized for personnel costs of such programs.

Health Department barriers.

- Reductions in public HIV prevention resources prevent the adequate funding for targeted HIV Counseling and Testing services in the community setting. According to the most recent Behavioral Risk Factor Surveillance System data, only 39% of Delawareans have ever been screened for HIV. Because of this many individuals are being diagnosed with HIV late in the disease progression when symptoms become present. Delaware ranks 42nd for Late-stage diagnosis, with 34.5% of diagnosed PLWH being classified as State 3(AIDS) within three months of their initial diagnosis.
- The state has not been able to set up cooperative data sharing agreements with all private HIV medical providers. While agreements have been established with a large majority of service providers, including the largest health systems, this challenge limits the HIV Surveillance Program's ability to ensure a fully accurate estimate of the state's continuum of care and establish funding priorities.

Program barriers.

- Lack of adequate funding to provide affordable short term and permanent housing for PLWH and those at high-risk for HIV.
- Some medical providers are uninformed about PrEP, which leads to a reluctance to prescribe PrEP to their patients. Local AETC is offering training on PrEP to providers, but limited staff resources prevent AETC from educating all of those in need.
- Many medical providers do not know how to bill for PrEP-related services and advocate for patients who want to initiate PrEP.
- There is limited understanding regarding the level of HIV testing being provided in medical settings. It is generally understood that there is a reluctance to fully implement opt-out HIV testing in health care settings. According to the most recent Behavioral Risk Factor Surveillance System data, only 39% of Delawareans have ever been screened for HIV. Because of this many individuals are being diagnosed with HIV late in the disease progression when symptoms become present. Delaware ranks 42nd for Late-stage diagnosis, with 34.5% of diagnosed PLWH being classified as AIDS-defined within three months of their initial diagnosis.
- Many newly diagnosed PLWH have a general mistrust of CBOs and have expressed a feeling that any information that they provide will not remain confidential, and will be made public. This leads to very few sexual and drug-use partners being tested for HIV.
- The Delaware Division of Public Health Disease Intervention Specialists conducting partner services activities have a limited capacity to elicit the name and contact information of partners

of newly diagnosed PLWH in Delaware. Because of this intravenous drug-use and sexual partners of newly diagnosed PLWH in Delaware may never become screened for HIV or test positive later in the disease progressions.

Service provider barriers.

- Lack of insurers and the Division of Medicaid and Medical Assistance, the state's Medicaid office, the Department of Corrections, and the Department of Education in the HIV community planning process limits the state's ability to provide a full reflection of community need.

Client barriers.

- Most of the state's PLWH and individuals at risk for HIV are living in or near poverty. Poverty affects every aspect of an individual's life and well-being, including limiting access to health care and prevention services.
- Lack of reliable transportation is a common problem for many PLWH and persons at risk for HIV infection in Delaware, particularly low income and rural populations. HIV service providers in Sussex County are dispersed throughout the county, which makes travel time through the state's transportation service providers time consuming and inconsistent. Delaware's Medicaid medical transportation provider is unreliable, which limits an individual's ability to be adherent to HIV medical regimen.
- Many PLWH and those at risk for HIV in Delaware lack access to needed behavioral health services due to lack of insurance coverage for needed treatment, workforce capacity issues, shortages of inpatient and outpatient treatment slots, and lack of integration of these services in primary care settings.
- Non-English proficiency is a barrier for various cultural and ethnic communities within Delaware. Even if language interpretation and translation technologies are available with service providers, many people are unaware of these services. Translation technologies are not available for all languages or dialects. Health literature is rarely available in multiple languages.
- Many of the individuals at greatest risk for HIV experience stigma, discrimination and violence due to their gender, race, sexual orientation, and/or socio-economic status. These experiences of trauma impact the individual's ability to trust providers, access health care, and protect themselves from HIV and other health risks.
- Many PLWH and those at risk for HIV infection are living with chronic and complex health concerns like diabetes, cardiovascular disease, mental health diagnoses, and substance abuse disorder. Co-morbidities can complicate HIV treatment. Further, Delaware's population is aging, adding additional difficulties to medical care.
- Housing instability and homelessness affect many PLWH and those at risk for HIV in Delaware. Without adequate housing it is difficult to maintain HIV treatment, and reduce risk for HIV transmission. Affordable housing is scarce in Delaware, and the availability for housing assistance is limited.
- Low health literacy affects individuals' abilities to understand and adhere to treatment and care regimens.

- Many PLWH in Delaware feel a sense of medical fatigue. PLWH have to regularly attend medical and case management appointments to treat their disease. This is promoted by limited coordination of care across primary, behavioral and HIV-specific care. Individuals have expressed a desire to not want to think about their disease, and this makes some be inconsistent with their adherence to their treatment.

E. Data: Access, Sources, and Systems

a. Data Sources and Systems. The Delaware Division of Public Health, HIV/AIDS Surveillance Program, and the Delaware HIV Planning Council relied on a wide variety of data sources and systems, both HIV-specific and non-HIV-specific, in the development of this plan. Annually, DPH develops a comprehensive epidemiological profile of the state's HIV epidemic based on service utilization reports, clinical outcomes data, census information, and more. This information is reviewed and discussed with the HPC, and is used in the implementation of its needs assessment cycle. A description of the primary data sources included in the local HIV planning needs assessment, and in this plan, is provided below.

DPH, national, and local data sources.

Center for Applied Demography & Survey Research (CADSR), University of Delaware.

Mental Health Professionals in Delaware. Estimate of mental health professionals in Delaware, including psychiatrists, psychologists, social workers, professional counselors of mental health and chemical dependency care specialists, and psychiatric advanced practice. Estimates are based on mental health professional licensures in Delaware followed up by surveys of practice details. Findings include provider demographics and educational background, and practice information including spatial distribution, hours of operation, and willingness to accept new clients.

Primary Care Physicians in Delaware. Estimate of primary care physicians practicing in Delaware, including family practice physicians, general practice physicians, internal medicine physicians, pediatricians, and obstetricians/gynecologists. Estimates are based on physician licensures in Delaware followed up by surveys of practice details. Findings include provider demographics and educational background, and practice information including spatial distribution, hours of operation, average patient wait time, use of non-physician resources (i.e. physician assistants), and willingness to accept new clients.

Center for Disease Control and Prevention (CDC).

Behavioral Risk Factor Surveillance System (BRFSS). Survey system of United States residents regarding their health-related risk behaviors, including drug and alcohol use and sexual behaviors, chronic health conditions, and use of preventive services. BRFSS is the largest continuously conducted health survey system in the world.

Enhanced HIV/AIDS Reporting System (eHARS). eHARS is a browser-based application provided by the Centers for Disease Control and Prevention (CDC). The Delaware Division of Public

Health, HIV/AIDS Surveillance Program uses eHARS to collect, manage, and report Delaware's HIV/AIDS case surveillance data to CDC.

HIV Surveillance Report. The annual HIV Surveillance Report provides an overview on the current epidemiology of HIV disease in the United States, its states, and dependent areas. CDC funds state and territorial health departments to collect surveillance data on persons diagnosed with HIV infection. Information found in the report includes demographic information on age, race, sex, transmission category, and jurisdiction. This information is used to report trends in the epidemic, nationally and in Delaware.

STD Surveillance Report. The annual STD Surveillance Report provides statistics and trends for sexually transmitted diseases (STDs) in the United States. CDC funds state and territorial health departments to collect surveillance data on persons diagnosed with an STD. Information found in the report includes demographic information on age, race, sex , and jurisdiction. STD surveillance information is used in this report to identifying populations at increased-risk for HIV infection.

Youth Risk Behavior Surveillance System (YRBSS). A biennial survey of students' grades 9-12 attending U.S. high schools regarding the health-risk behaviors among youths and young adults. Risk behaviors considered in the survey include, among other things, sexual behaviors and use of drugs and alcohol. The system is used to describe the prevalence of health-risk behaviors among youths, assess trends in health-risk behaviors over time, and evaluate and improve health related policies and programs.

Delaware Center for Health Innovations.

State Health Care Innovation Plan. A strategic plan for the development of the state's system of health care to be more affordable, efficient, and to improve client health outcomes. Information provided in the report includes a profile of the state's health care system, payer structure, and demographic background of the state's special needs populations. The Plan, and subsequent work, was developed by a network of community stakeholders using a $35 million State Innovation Model Testing Grant from the Center for Medicaid and Medicare Innovation.

Delaware Division of Public Health.

EvaluationWeb. EvaluationWeb is an online data collection and reporting system specifically designed for HIV testing and prevention activities. DPH's funded agencies that offer HIV Counseling, Testing and Referral (CTR) services must report its activities using EvaluationWeb. Activities include HIV rapid test results, CRCS and Sexual Health services, and outreach. The CDC uses data from HIV data collection systems, like EvaluationWeb and eHARS, to report on 21 indicators that support planning, monitoring, and improvement related to three key priorities of the National HIV/AIDS Strategy. DPH funded agencies that provide CTR services include three community-based organizations, the DPH State Service Centers, several Title X programs and Delaware's high school wellness centers.

Delaware Primary Care Health Needs Assessment, 2015. Developed by the Division of Public Health, Office of Primary Care (OPC), the Delaware Primary Care Health Needs Assessment, 2015, was developed through a grant from the Health Resources and Services Administration as the foundation of work to improve access to primary care service delivery and health care workforce availability to meet the needs of underserved and vulnerable populations in Delaware. The report provided a needs assessment of the state's hospitals, a review of Delaware health care workforce capacity, and the state's population health indicators. Information on the state's population and health care system was used in the development of the Needs, Gaps, and Barriers Section of this Integrated HIV Prevention and Care Plan.

Delaware Rural Mental Health Assessment. Developed by the Delaware Division of Public Health, Office of Rural Health, the Delaware Rural Mental Health Assessment, provided a review of Delaware's rural behavioral health infrastructure, identified delivery system challenges and issues, and provided recommendations to improve behavioral health access in rural Delaware. Information on the state's behavioral health system was used in the development of the Needs, Gaps, and Barriers Section of this Integrated HIV Prevention and Care Plan.

Delaware Vital Statistics System. The Delaware Division of Public Health, Office of Vital Statistics monitors population data for all Delaware residents on six life events: births, deaths, marriages, divorces, fetal deaths, and induced terminations of pregnancy. Mortality information presented in the Integrated Plan is gathered directly from death certificates.

Medical Monitoring Project (MMP). A CDC funded surveillance system, which uses one-on-one interviews with a locally representative sample of PLWH to determine behavioral and clinical experiences of those in and out of HIV medical care. Information from the MMP is used to understand the met and unmet needs of PLWH in Delaware, barriers to accessing needed services, adherence practices to HIV medical treatment, and HIV stigma.

Partner Services Web. Centralized database for managing and reporting HIV Partner Services and required variables for CDC National HIV Prevention Program Monitoring & Evaluation.

Delaware Housing Coalition.

Annual Report on Housing Affordability in Delaware. This report provides aggregate data from the National Low Income Housing Coalition and the U.S Bureau of Labor Statistics, American Community Survey on the availability affordable housing in Delaware, the availability of affordable housing for the state's special needs populations, and the Fair Market Rent for the state as a whole, and its three counties.

Delaware Division of Substance Abuse and Mental Health (DSAMH).

Alcohol and Other Drug (AOD) Adult Admissions Summary. Admission statistics to publicly funded substance abuse treatment facilities in Delaware, including demographic information and primary drug of use at time of admission.

Health Resources and Services Administration (HRSA).

CAREWare. CAREWare is the central database for managing and monitoring HIV clinical and supportive care for PLWH in Delaware receiving services through the Ryan White HIV/AIDS Program. CAREWare is used to produce Ryan White HIV/AIDS Service Reports (RSRs) for Ryan White contracted service providers.

Ryan White HIV/AIDS Service Report (RDR). The RDR are standard program reports submitted by the recipient and sub-recipients of RWHAP funds. The report includes RWHAP services and units provided, and aggregated client level data. Client level data reported in the RSR include: demographics, socio-economic status, HIV clinical outcomes and transmission factors, and health insurance status.

Health Professional Shortage Areas (HPSA). HPSAs, designated by HRSA, are geographic areas, population groups, or medical facilities that are underserved by the jurisdictions existing health professional workforce (primary care physicians, dentists, and mental health professionals). This information was used primarily in the development of the Resource Inventory and Needs Assessments.

Homeless Planning Council of Delaware.

Point in Time (PIT) Count. The PIT Count is an annual one-night count of people experiencing homelessness in communities across Delaware. This report also provides an examination of the utilization of public emergency housing services in Delaware.

Housing Opportunities for Persons with AIDS (HOPWA).

Consolidated Annual Performance and Evaluation Report (CAPER). The CAPER, completed by all HOPWA formula grantees, is an annual performance report for all activities undertaken during the program year. Information presented in the report include program outcomes (number of households supported), client demographic information, and unmet housing needs and barriers to accessing and maintaining housing in the jurisdictions.

Substance Abuse and Mental Health Services Administration (SAMHSA).

National Survey on Drug Use and Health. Data on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use and abuse and mental disorders in the U.S. civilian, non-institutionalized population, age 12 and older.

United States Census Bureau.

American Community Survey. The American Community Survey provides Delaware-specific county-level population data. Data estimates are standardized nationwide and up to date through 2015.

United States Department of Justice, Bureau of Justice Statistics.

National Prison Statistics Program. Statistics regarding the rate of HIV/AIDS cases and AIDS-related deaths among inmates in state and federal prison systems, annually.

HPC research.

HIV Services Provider Perspective Survey, 2015. The HPC regularly assess access to HIV care and treatment services, gaps and barriers through a provider perspective survey. The survey relies on HIV-specific case managers and social workers to provide information about their client case load. Respondents are asked questions about the demographics, health status, use of and needs for HIV services and barriers to care for their caseload. In 2015, all HIV-specific case managers and social workers (n=45) were approached to fill out the survey, of which 20 submitted a survey for analysis. The next Provider perspective survey should be completed in 2017 to complement the findings of a planned consumer needs assessment survey.

HIV Prevention/At-Risk Survey, 2015. Every planning cycle the HPC performs an assessment of the state's HIV prevention services, gaps in service coverage, and barriers to accessing services through the use of an anonymous stakeholder survey. The survey targets individuals who would be considered high-risk for HIV infection, and asks respondents about their engagement in of sexual and drug use practices, and their knowledge, use, and willingness to use the state's HIV prevention services. In 2015, the HPC collected and analyzed 582 surveys.

Focus Groups. In 2016, the HPC held focus groups with PLWH in New Castle County on needs, gaps, and barriers for HIV prevention, care and treatment services in Delaware. These focus groups were used to complement the Provider Perspective Survey by providing direct insight of PLWH into the needs assessment process. Focus groups are planned to continue in the Wilmington area, and will be held across the state of Delaware throughout the next planning cycle.

b. Data Policies. The state of Delaware is benefited by its small size in the coordination of HIV-specific data for use in HIV community planning, and the needs assessment process. The Delaware Division of Public Health is the state's single health department, and its lone recipient of CDC HIV prevention and RWHAP Part B funds. In this manner, the state does not have to coordinate data collection processes across local and state jurisdictions, or across state lines, as does some RWHAP Part A recipients. The Christiana Care Health System, as sub-recipient of RWHAP Part B funds, and the state's sole recipient of RWHAP Part C and Part D funding, utilizes CAREWare data management system to track the clients it serves. The Christiana Care Health System provided HIV medical treatment to 60% of all PLWH in Delaware in 2013. This utilization of uniform electronic medical records, prevention and partner service databases allows the state to maintain a comprehensive perspective of persons living with or at risk for HIV in Delaware.

The Division of Public Health, Bureau of Communicable Diseases is made up of a small staff of 35 members. The Bureau maintains three sections – HIV Prevention, HIV Surveillance, and HIV Treatment – that make up the state's HIV program. These sections are co-located in the same office and regularly collaborate in the development of reports. Furthermore, section heads for all eight programs that make up the Bureau of Communicable Diseases meet annually to review and update the Bureau's data

sharing, security and confidentiality policies to ensure that they meet CDC guidelines and promote effective data monitoring practices to reduce the burden of communicable diseases in Delaware.

Since 2014, Delaware has maintained a Quality Management Team with a goal of using data to improve the state's RWHAP Part B funded HIV treatment and care services. The Quality Management Team is made up of Delaware's RWHAP Part B grant administrator, RWHAP Part B Eligibility Coordinator, RWHAP Part B Contractor for Quality Management Activities, DPH HIV Prevention Coordinator, Christiana Care HIV Program Performance Improvement Data Manager, and the Delaware HIV Consortium Case Management Coordinator. The group regularly reviews RWHAP Part B funded HIV medical care on 20 clinical performance indicators and creates evidence-based improvement plans for areas that do not meet group established standards. The Quality Management Team is currently in the process of establishing performance measures for RWHAP Part B funded HIV supportive services.

Importantly, there is also an inherent barrier to data coordination and analysis that is a result of the state's small size. Most national and local data sets for Delaware, HIV-specific or other, present estimates for the entire state and will not present estimates for subdivisions smaller than county-level data (such as census tract, or census block). Because of Delaware's small population size, the margin of error in estimates for subdivisions smaller than counties is generally too great to provide useful information in research. This inability to finely define disparities in health by geographic location limits the state's ability to plan effective data-informed HIV services to targeted communities or populations where the services will have the greatest impact.

One example of how this affects the HIV community planning needs assessment is in the development of the epidemiological profile of HIV in Delaware. In order to protect the privacy of PLWH in Delaware, DPH HIV Surveillance does not provide HIV infection counts or demographic indicators for census tract with less than five residents diagnosed with HIV. Because of this, all statistics presented in Delaware's epidemiologic profile are aggregated to the county or the Wilmington Metropolitan Area levels.

c. Needed data.

Limited demographic information. The state's current uniform HIV service databases, including eHARS, CAREWare, EvaluationWeb, and Partner Services Web, have a limited capacity to report client level data. As an example, Delaware's CAREWare module, used by Ryan White funded HIV service providers generally limits reporting client level information to socio-economic indicators, insurance status, HIV transmission risks, and received HIV medical and supportive services. Alternatively, EvaluationWeb, used by HIV Prevention funded HIV Counseling and Testing Contractors, does not report any personal client identifiers, but monitors demographic and HIV transmission risk factor data. In both instances, the variables collected by the database do affect an individual's HIV transmission risk, and health outcomes, they provide an incomplete picture of the social determinants of health that impact a person's health and behaviors. This remains a significant barrier in the development the state's HIV care continuum, where higher-level cross tabulations would allow for a more thorough needs assessment of traditionally underserved and disparate communities.

The Division of Public Health and the Delaware HIV Planning Council would have liked to have more in depth demographics (i.e. educational attainment, housing status, sexual orientation, household income, number of dependents) in the following areas when it was completing its needs assessment:

- Delaware's HIV Care Continuum;
- Persons presenting with late-stage HIV diagnosis;
- PLWH who move in and out of care or are non-adherent to HIV medical treatment;
- Persons Lost-to-Care

Opt-out HIV testing. In 2012, the Delaware General Assembly passed legislation which approved opt-out HIV testing of patients in the clinical setting provided that the patient is informed that the test is being performed, is given an opportunity to refuse consent, and is provided HIV test counseling. While Delaware State Code mandates that health care professionals report a positive STD diagnosis, including HIV, to the Divisions of Public Health within one day of the test result, no such reporting requirement exists for negative HIV screening. Furthermore, the Division of Public Health does not currently maintain any data sharing agreements with any health care providers not receiving HIV test kits from the state. Knowing the quantity of HIV screenings being performed in a health care setting, and the demographic information of those being tested would allow the state to be more efficient with its HIV prevention resources. Without such data it is impossible to judge the effectiveness of the state's HIV Counseling and Testing strategy.

Sexual wellness education in schools. In Delaware, decisions regarding the requirements for student sexual wellness education are made by local school districts and are unregulated by the Delaware Department of Education. According to the Centers for Disease Control and Prevention *School Health Profile*, an estimated 67.9% of Delaware schools required students in grades 9-12 to take a health education course that taught a full curriculum of HIV, STD, and pregnancy related topics. The Department of Education does not publicly report on the resources dedicated to HIV prevention education on a per school district basis, which limited the Delaware HIV Planning Council and the Division of Public Health ability to assess youth HIV prevention in the needs assessment.

Mental health treatment services. The state's current HIV databases have limited capacity to track a patient's behavioral health. HIV-case manager provided estimates from the HPC's *HIV Services Provider Perspective Survey, 2015*, indicate that close to half (47.8%) of PLWH in Delaware receiving RWHAP services have received a mental health diagnosis by a health care provider. The Christiana Care Health System HIV Program echoes these estimates, which projects that between 40-45% of PLWH treated through Christiana Care have previously been diagnosed with a mental health diagnosis. Yet research indicates that behavioral health diagnoses are chronically under-diagnosed. A patient's mental health treatment is currently only reflected in CAREWare if they receive mental health services through the Christiana Care Health System, the only health care provider to receive RWHAP funds for mental health treatment. This limits both a HIV case manager's ability to refer the patient to needed support services, and the state's ability to properly tailor services around the populations who need them.

Pre-Exposure Prophylaxis (PrEP). In 2015, the Delaware HIV Consortium instituted the state's first PrEP educational initiative through a private grant from Gilead Sciences. The goals of the initiative was to increase the awareness of PrEP as a HIV prevention tool for populations at high risk of HIV infection as well as health care professionals in Delaware, and to grow Delaware's network of PrEP prescribers. By the completion of the grant period, in August 2016, the state's PrEP prescribing network grew from four to 19 physicians. Yet, there is no credible data on the number of high-risk Delawareans currently on PrEP, necessary for evaluating the effectiveness of PrEP as a prevention strategy in Delaware.

Section II: Integrated HIV Prevention and Care Plan

A. Integrated HIV Prevention and Care Plan

Objective 1.1:	**Reduce the percentage of PLWH's in Delaware who are unaware of their HIV status from 10% (n=371) to 8% by 2021.**					
Strategy 1.1.1:	**Enhance Community-based HIV-testing in non-healthcare settings.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Provide technical assistance to contracted Community-based organizations that do not achieve the CDC mandated 1% positivity rate.	Contracted C&T CBOs	DPH HIV Prevention; C&T CBOs	Annually	CDC HIV Prevention TA Consultant	Positivity Rate	None
Ensure that there are adequate resources for HIV testing.	Contracted C&T CBOs; Partnering agencies	DPH HIV Prevention	Annually	CDC funding; Community funding sources	# of HIV test kits available; # of HIV tests kits used	Decreasing CDC funding for HIV testing; RWHAP restrictions for eligible services
Establish cooperative agreement with other public agencies and Community-based organizations to enhance community HIV testing in areas of high HIV incidence	Private C&T CBOs; Health Clinics; Emergency Departments	DPH HIV Prevention	January 1, 2017 - December 31, 2018	CDC HIV Prevention Test Kits; HIV C&T Personnel; DPH HIV Surveillance data	# of Cooperative Agreements secured; # of Cooperative Agreements Implemented; # of HIV tests administered	Getting data from unfunded HIV testing programs. Must identify organizations that are trusted by marginalized populations

Goal I: Reduce new HIV infections

Objective 1.1:	**Reduce the percentage of PLWH's in Delaware who are unaware of their HIV status from 10% (n=371) to 8% by 2021.**					
Strategy 1.1.2:	**Increase community awareness of HIV testing services.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Use social media messages and web communication to promote HIV testing in community-based and health care settings.	General Public	ASOs; CBOs; DPH; Title X Agencies	Annually	Organization websites; Organization social media presence	# of HIV tests; # of persons identifying social marketing as way they heard about HIV testing	Receiving accurate client feedback; Persuading partnering agencies to continue social media campaign on HIV testing; Not all online listings for HIV testing sites are accurate
Use Public Service Announcements to promote HIV testing in community-based and health care settings.	General Public	ASOs; CBOs; DPH; Title X Agencies	Annually	Funding; Professional services to make PSA.	# of HIV tests; # of persons identifying PSA Advertising as way they heard about HIV testing	Receiving accurate client feedback; funding limitations for PSA messages; Not all online listings for HIV testing sites are accurate
Initiate collaboration with additional public agencies to promote HIV testing in the community.	CBOs; Community Groups; Faith Communities	DPH HIV Prevention	January 1, 2017 – December 31, 2018	HIV Testing Marketing Materials; MidAtlantic AETC	# of Collaborations Secured	Limited outreach staff with CBOs, ASOs and partner agencies
Ensure that CBOs promote consistent and accurate messaging for HIV testing on their web platforms.	ASOs; CBOs; DPH; Title X Agencies	DPH HIV Prevention	Semi-annually	Organization websites; Organization social media presence	Review of social media for accuracy and consistency of HIV testing messages.	Receiving accurate client feedback; Persuading partnering agencies to continue social media campaign on HIV testing
Establish collaboration with healthcare providers to increase consumer awareness of HIV testing in health care settings.	Health care providers; emergency departments;	AETC; DPH HIV Prevention	January 1, 2017 – December 31, 2019	HIV testing marketing materials; AETC; HPC	# of providers who agree to incorporate HIV testing information in patient interactions.	Limitations in AETC staff resources

Goal I: Reduce new HIV infections

Objective 1.1:	**Reduce the percentage of PLWH's in Delaware who are unaware of their HIV status from 10% (n=371) to 8% by 2021.**					
Strategy 1.1.3:	**Promote Routine opt-out HIV-testing of all patients aged 13-64, and all pregnant women in all healthcare settings.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Increase awareness of opt-out testing by implementing an effective communication and education strategy for healthcare providers.	Health care providers; emergency departments; general public	DPH HIV Prevention, AETC, Medical Society of Delaware	January 1, 2017 – December 31, 2019	HIV testing marketing materials; AETC; HPC; Medical Society of Delaware	# of providers who agree to incorporate HIV testing information in patient interactions.	Limitations in AETC staff resources
Offer opt-out HIV testing in Emergency Departments.	Emergency Departments	DPH HIV Prevention	January 1, 2017-December 31, 2018	DPH HIV Prevention	# of HIV testing in Emergency Departments	Unclear methodology around offering opt-out HIV testing in health care settings; Limited provider awareness of opt-out HIV testing

Goal I: Reduce new HIV infections

Objective 1.2:	**By December 31, 2021, reduce the number of new infections diagnosed by 20% (from 116 cases [in 2015] to 93 cases) after an initial increase.**					
Strategy 1.2.1:	**Enhance Syringe Services Programs (SSPs).**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Continue support of SSPs in the Wilmington Metropolitan Region.	SSP Contracted agency(s); Injection Drug Users	DPH HIV Prevention; Division of Substance Abuse and Mental Health	Annually	State of Delaware syringe funding	# of HIV tests provided; # of persons diagnosed with HIV through SSP; # of enrollments in SSP; # of syringes distributed	Funding limitations
Expand the access to SSPs statewide.	SSP Contracted agency(s)	DPH HIV Prevention; Division of Substance Abuse and Mental Health	January 1, 2016 – December 31, 2021	Successful SSP Program in northern Delaware; Provider expertise	# of HIV tests provided; # of persons diagnosed with HIV through SSP; # of enrollments in SSP; # of syringes distributed	Currently federal restrictions for the purchase of syringes, no state funds allotted for expansion
Identify and target funding sources for the expansion of SSPs statewide.	Foundations; Grant making organizations; federal funding sources	DPH HIV Prevention and sub recipients	January 1, 2016 – December 31, 2021	DPH HIV Prevention and sub recipient staff resources; list-serves for prevention grant opportunities.	# of grant applications submitted; # of grants awarded; Amount of grant money awarded to programs.	Limited target population to allow for large enough economy of scale to warrant grant awards; Challenges in implementing multiply-funded programs

Objective 1.2:	**By December 31, 2021, reduce the number of new infections diagnosed by 20% (from 116 cases [in 2015] to 93 cases) after an initial increase.**					
Strategy 1.2.2:	**Expand Condom distribution in the state of Delaware.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Provide condoms in public school-based wellness programs.	High school students	DPH HIV Prevention	Annually	School-based wellness centers	# of condoms distributed; # of wellness programs providing condoms	Each of the 19 school districts makes its own policies about reproductive health services it offers
Provide condoms to Persons living with HIV/AIDS and high-risk HIV-negative populations through a mail order condom distribution program.	PLWH; persons at high-risk for HIV infection.	DPH HIV Prevention	Annually	Contracting agency to provide the service	# of condoms distributed; Total # of enrolled in the program; Total # of PLWH enrolled in the program.	Labeling on packages must be discreet due to stigma around HIV/AIDS and around condom use; Awareness of the program; Awareness for proper usage of condoms
Increased general access to free condoms in non-healthcare settings.	General Public	DPH HIV Prevention	Annually	CBOs; Barbershops and beauty salons; Bars; ASOs; Faith-based organizations.	# of condoms distributed; # of new non-traditional sites providing condoms.	General unwillingness of non-traditional sites to provide condoms; Reduction in HIV prevention funding

Goal I: Reduce new HIV infections

Objective 1.2:	**By December 31, 2021, reduce the number of new infections diagnosed by 20% (from 116 cases [in 2015] to 93 cases) after an initial increase.**					
Strategy 1.2.3:	**Promote School-based sexual health education**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Perform an assessment of current sexual health education (i.e. curriculum, staff support, etc.) in state educational systems.	Delaware school districts	Department of Education	January 1, 2017 – December 31, 2018	Department of Education staff resources	Assessment completion	Each of the 19 school districts makes its own policies about reproductive health services it offers
Develop a collaboration between DPH, HPC, and individual school districts to identify and implement an effective sexual health/drug prevention education program in three of Delaware's public school districts.	Delaware school districts; student population	DPH HIV Prevention; HPC; Department of Education	January 1, 2019 – December 31, 2021	School board; School-based wellness programs; DPH HIV Prevention, DOE and DHC staff resources; DPH Community Engagement Team; AETC	# of school districts agreements established; # of school districts implementing or enhancing a sexual wellness education program.	Each of the 19 school districts makes its own policies about reproductive health services it offers

Goal I: Reduce new HIV infections

Objective 1.2:	**By December 31, 2021, reduce the number of new infections diagnosed by 20% (from 116 cases [in 2015] to 93 cases) after an initial increase.**					
Strategy 1.2.4:	**Expand Pre-Exposure Prophylaxis (PrEP) available to Delaware residents.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Continue PrEP education in the healthcare setting to increase the number of healthcare prescribers accepting referrals for PrEP in Delaware.	Medical providers	AETC	January 1, 2017 – December 31, 2021	DHC; AETC; PrEP Marketing Materials	# of Medical Providers listed on Delaware PrEP educational website.	Resistance of physicians being labeled as PrEP providers
Collaborate with CBOs to promote PrEP as an HIV prevention strategy.	CBOs	HPC	Annually	AETC; DPH C&T training staff; HPC; PrEP Marketing Materials	# of CBOs reporting sharing PrEP education	General stigma surrounding PrEP as an HIV prevention tool
Hold a second PrEP conference in Delaware.	Medical providers; CBOs	DHC	January 1, 2017 – December 31, 2021	DHC Staff resources; Medical Society of Delaware; Delaware Public Health Association	Completion of conference; # of participants of conference; # of new participants to conference	Providing educational sessions that meets the needs of medical and non-medical practitioners; Funding limitations for conference activities
Explore the use of a peer-to-peer model for PrEP promotion to persons at increased-risk for HIV infection and implement if feasible.	Persons prescribed PrEP	HPC	January 1, 2017 – December 31, 2018	HPC	# of models identified; # of models implemented	Potential lack of best-practices nationally

Goal I: Reduce new HIV infections

Objective 1.3:	**Decrease the percent of newly diagnosed concurrently diagnosed with HIV and stage 3 [AIDS] diagnosis from 38% (in 2015) to 30% by 2021.**					
Strategy 1.3.1:	**Increase the number of partners identified and contacted through partner notification services.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Provide additional HIV-specific training for newly employed and existing partner services workers on partner elicitation information, and motivational interviewing.	Partner Services Workers	DPH HIV Prevention	Annually	DPH Trainers, TA consultants as needed	# of training modules provided: % of Partner Services Workers demonstrating knowledge and skills about partner elicitation	Stigmas about talking with DIS Workers; client fears that names are being collected "on a list by the government"; undocumented persons fear contact with government representatives
Increase the collaboration between DPH and CBO's on eliciting partner contact information at the time of testing.	C&T Providers at community-based sites	DPH HIV Prevention	January 1, 2016 – December 31, 2017	DPH HIV Prevention Staff	# of C&T contracts that include partner elicitation components; # of partners' names gathered at time of testing; # of partners' successfully contacted	Coordinating efforts between Partner Services Workers and community-based C&T providers to prevent duplication of effort

Goal I: Reduce new HIV infections

Objective 1.3:	**Decrease the percent of newly diagnosed concurrently diagnosed with HIV and stage 3 [AIDS] diagnosis from 38% (in 2015) to 30% by 2021.**					
Strategy 1.3.2:	**Increase routine HIV testing in healthcare settings.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Develop a plan to determine the amount of routine opt-out HIV tests performed annually in healthcare settings.	Health care providers; Emergency Departments	DPH HIV Prevention, HPC	January 1, 2016 – December 31, 2016	AETC, Medical Society of Delaware; DHC; DPH HIV Prevention; providers of lab services in Delaware	Completion of Plan; # of HIV tests included as part of routine bloodwork; # of patients having routine bloodwork done as part of treatment	Difficulty in obtaining data itself – it may be necessary to use proxy measures or self-reports from physicians and Emergency Departments
Maintain the collaboration between DPH and AETC to educate diverse clinicians and other staff regarding routine opt-out HIV testing.	Health care providers and their support staff	AETC, DPH HIV Prevention	Annually	AETC	# of educational encounters provided	Difficulty in reaching clinicians in smaller practices; May need to incorporate Opt-Out education into other educational programs with greater perceived value to clinicians
Develop and implement an educational campaign to promote consumer advocacy in requesting HIV testing.	Health care providers; General public	DPH HIV Prevention; HPC	January 1, 2018 – December 31, 2021	CDC and HRSA educational materials; HPC members; marketing consultants	Completion of a campaign that meets project goals; # of patients requesting HIV tests as reported by physician staff members	Funding limitations; Resistance from physicians and other clinicians

Goal I: Reduce new HIV infections

Objective 1.3:	**Decrease the percent of newly diagnosed concurrently diagnosed with HIV and stage 3 [AIDS] diagnosis from 38% (in 2015) to 30% by 2021.**					
Strategy 1.3.3:	**Increase targeted HIV testing in populations and locations with high rates of late diagnoses.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Annually perform an analysis to determine the demographics of newly diagnosed PLWH in Delaware who receive a concurrent AIDS diagnosis.	Newly diagnosed PLWH in Delaware	DPH HIV Prevention; DPH HIV Surveillance	Annually	Data from HIV C&T sites, state laboratories and HIV Medical Providers	Date of infection (if known); Date of HIV diagnosis; Date of AIDS Diagnosis	Relatively low numbers of new cases each year means that small changes in the numbers may have large impacts on trend data
Prioritize HIV prevention funds based on this analysis.	Newly diagnosed PLWH in Delaware	DPH HIV Prevention	Annually	DPH HIV Prevention Staff and Contract Managers	Amount of funding allocated for special initiatives based on this prioritization	Relatively low numbers of new cases each year means that small changes in the numbers may have large impacts on trend data
Incorporate HIV prevention funding priorities into testing contract decisions and in the development of collaborative projects with CBOs doing privately funded HIV testing.	HIV C&T Providers	DPH HIV Prevention	Annually	HIV C&T Providers, other CBOs	# of funding priorities incorporated in testing contracts through DPH; # of collaborations with CBOs developed	Time lags between data collection and implementation of special initiatives

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.1:	**Increase the percentage of newly diagnosed PLWH in Delaware linked to care within 30 days after diagnosis from 65% to 85% by 2021.**					
Strategy 2.1.1:	**Improve linkage to care outcomes through Early Intervention Services activities.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Annually identify and analyze the demographic information on newly diagnosed PLWH in Delaware not linked to care within 30 days.	Newly diagnosed PLWH	DPH HIV Surveillance	Annually	DPH HIV Surveillance Staff; eHARS	Completion of task	None
Utilize partner services interviews to understand barriers that prevent newly diagnosed PLWH in Delaware from being linked to care in 30 days.	Newly diagnosed PLWH not linked to care in 30 days	Partner Services; C & T contract providers; EIS Providers;	On going	Staff resources; DPH HIV Surveillance MMP Interviewers	# of interviews completed	There is currently no uniform questionnaire for CBOs to use to analyze barriers to linkage to care
Develop and implement interventions around barriers highlighted through DIS interviews to support linkage to HIV care within 30 days of initial diagnosis.	Newly diagnosed PLWH not linked to care in 30 days	DPH HIV Prevention; HPC; ASOs	January 1, 2017 – December 31, 2019	Staff resources	# of interventions implemented	Difficulty in reaching and engaging persons in unstable housing situations or who are homeless; Difficulty reaching and persuading newly diagnosed PLWH to link to care

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.1:	**Increase the percentage of newly diagnosed PLWH in Delaware linked to care within 30 days after diagnosis from 65% to 85% by 2021.**					
Strategy 2.1.2:	**Develop an integrated counseling and testing, and Early Intervention Service model for Delaware.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Establish a collaborative relationship between the RWHAP-Part B Program and HIV Prevention Program.	RWHAP Part B; DPH HIV Prevention	RWHAP Part B; DPH HIV Prevention	January 1, 2017 – December 31, 2017	Program staff and funding resources	Established collaboration	None
Implement integrated funded contracts for HIV Counseling and Testing (C & T) and Early Intervention Services (EIS) programs.	EIS and C&T CBOs	RWHAP Part B; DPH HIV Prevention	January 1, 2017 – December 31, 2017	Program staff and funding resources	# of joint contracts	Will require amending or renew all existing C&T and EIS contracts to reflect joint funding
Increase the capacity for service provision statewide if funding allows.	EIS and C&T CBOs	RWHAP Part B; HPC	January 1, 2017 – December 31, 2021	RWHAP and CDC funding; Grant making foundations; Other federal funding sources	# of new service providers; # of HIV tests performed in community settings	Limited staff resources to increase HIV testing capacity; Limited and unpredictable existing funding resources for HIV testing

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.1:	**Increase the percentage of newly diagnosed PLWH in Delaware linked to care within 30 days after diagnosis from 65% to 85% by 2021.**					
Strategy 2.1.3:	**Increase the availability of transportation services for newly diagnosed PLWH in Delaware.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Initiate dialogue with Medicaid and other transportation service providers to determine the existing capacity for medical transportation services for newly diagnosed PLWH in Delaware and barriers to the service.	Medicaid and other state transportation service providers	DPH HIV Prevention; RWHAP Part B	January 1, 2017 – December 31, 2017	DPH HIV Prevention & RWHAP Part B staff resources	Dialogue initiated	Limited existing relationship between the HPC, HIV prevention and treatment providers and transportation service providers
Explore the capacity to provide transportation assistance to newly diagnosed PLWH regardless of insurance status and insurance providers.	State transportation service providers	DOT; RWHAP; DPH HIV Prevention	January 1, 2018 – December 31, 2018	DPH HIV Prevention & RWHAP Part B Staff Resources	Meeting minutes; # of formal agreements established.	Limited existing relationship between the HPC, HIV prevention and treatment providers and transportation service providers
Provide education and training to C & T and EIS contractors regarding transportation availability for newly diagnosed PLWH in Delaware to initial medical visit.	C&T and EIS Contractors	RWHAP; DPH HIV Prevention	Annually	DPH HIV Prevention & RWHAP Part B staff resources	Documentation for # of trainings provided	None

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.2	**Increase the proportion of PLWH in Delaware engaged and retained in care from 81% to 85% by 2021**					
Strategy 2.2.1:	**Develop ongoing strategies that reduce the number of individuals who cycle in and out of HIV care.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Determine the demographic characteristics of PLWH who are susceptible for non-compliance or who fall in and out of care.	PLWH who cycle in and out of care	DPH HIV Surveillance; RWHAP Part B	Annually	eHARS; DPH HIV Surveillance staff resources; CAREWare	Completion of analysis	Difficulty in identifying client behaviors that impact participation in HIV treatment that go beyond simple demographics (such as mental health issues, domestic violence, etc.); A process to determine demographic characteristics cycling "in-and-out" of care currently does not exist through DPH HIV Surveillance eHARS data system and will need to be developed, potentially through CAREWare
Develop interventions aimed at retention of vulnerable populations.	CCHS; ASOs; CBOs	RWHAP Part B	January 1, 2019 – December 31, 2021	HPC; RWHAP Part B staff and funding resources	# of intervention implemented; # of PLWH retained in care	Limited and unpredictable funding through RWHAP and other sources; Workforce capacity to implement an intervention
Review and refine approaches.	CCHS; ASOs; CBOs	RWHAP Part B	Annually beginning January 1, 2020	RWHAP Part B staff resources; RWHAP Part B Quality Assurance Contractor	Completion of review	None

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.2	**Increase the proportion of PLWH in Delaware engaged and retained in care from 81% to 85% by 2021**					
Strategy 2.2.2:	**Enhance the use of Early Intervention Services and Counseling and Testing Services to re-engage PLWH's who have been lost to care.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Establish a collaborative relationship between the RWHAP-Part B Program and HIV Prevention Program.	RWHAP Part B; DPH HIV Prevention	RWHAP Part B; DPH HIV Prevention	January 1, 2017 – December 31, 2017	Program staff and funding resources	Established collaboration	None
Implement integrated funded contracts for HIV Counseling and Testing (C & T) and Early Intervention Services (EIS) programs.	EIS and C&T CBOs	RWHAP Part B; DPH HIV Prevention	January 1, 2017 – December 31, 2017	Program staff and funding resources	# of joint contracts	Will require amending or renew all existing C&T and EIS contracts to reflect joint funding
Increase the capacity for service provision statewide if funding allows.	EIS and C&T CBOs	RWHAP Part B; HPC	January 1, 2017 – December 31, 2021	RWHAP and CDC funding; Grant making foundations; Other federal funding sources	# of new service providers; # of HIV tests performed in community settings	Limited staff resources to increase HIV testing capacity; Limited and unpredictable existing funding resources for HIV testing

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.2	**Increase the proportion of PLWH in Delaware engaged and retained in care from 81% to 85% by 2021.**					
Strategy 2.2.3:	**Enhance the use of HIV/AIDS Case Management and Social Work Services.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Evaluate the capacity of existing case management programs to meet current and future needs.	Case Management Service Providers	RWHAP Part B	January 1, 2017 – December 31, 2017	HPC; RWHAP Part B staff resources; RWHAP Part B Quality Assurance Contractor; RWHAP Technical Assistance Consultant	Evaluation completion	Availability of objective third party evaluator to conduct evaluation
Explore funding opportunities to enhance and expand case management services if needed.	Case management service providers	RWHAP Part B; Case Management Service Providers	January 1, 2018 – December 31, 2021	HPC; Funding listservs; private grant making foundations	# of grants applied for; $ funds received for expanded case management capacity.	Limited funds available; Staff capacity for grant writing
Implement comprehensive educational programming to certify HIV Case Managers and Social Workers.	HIV Case Managers and Social Workers	RWHAP Part B; RWHAP Part B Quality Assurance Consultant	Annually beginning January 1, 2018	AETC; HPC; RWHAP Technical Assistance Consultant; RWHAP Part B and Quality Assurance Consultant staff resources	Development of certification program; # of trainings provided; # of certifications; # of continuing education hours provided	Currently training for HIV case managers and social workers is fragmented and provided by each individual employer

Goal II: Increase access to care, and improve health outcomes for PLWH.

Increase the role of HIV Case Managers and Social Workers in monitoring and supporting PLWH who repeatedly move in and out of care.	HIV Case Managers and Social Workers	RWHAP Part B; RWHAP Part B Quality Assurance Consultant	On-going	AETC; HPC; RWHAP Technical Assistance Consultant; RWHAP Part B and Quality Assurance Consultant staff resources	# of PLWH retained in care	Case Management System is currently designed to terminate services to clients who are non-compliant (and therefore most in need of service)
Provide training to HIV Case Managers and Social Workers to promote client screenings for behavioral health care.	HIV Specific Case Managers and Social Workers	RWHAP Part B	On-going	DSAMH; RWHAP Part B Quality Assurance Consultant; Mental Health Association of Delaware	# of educational sessional offered; # of HIV case managers and social workers trained	Limited staff resources

Objective 2.3	**Increase the percentage of PLWH in care in Delaware who are virally suppressed from 74% to 80% by 2021**					
Strategy 2.3.1:	**Improve access to viral load lab data on all RWHAP clients regardless of source of medical care.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Correlate client level data between eHARS and CAREWare to ensure most recent data is reported.	DPH HIV Surveillance	RWHAP Part B	January 1, 2017 – December 31, 2017	Staff resources, eHARS, EMRs, CAREWare	Completion of task	None

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.3	**Increase the percentage of PLWH in care in Delaware who are virally suppressed from 74% to 80% by 2021**					
Strategy 2.3.2:	**Maintain access to and adherence of HIV medical regimens, including: antiretroviral therapy, HIV medical appointments and necessary lab testing, etc.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Enroll all eligible clients into the AIDS Drug Assistance Program based on need and insurance status.	RWHAP Providers	RWHAP Part B	On-going	ADAP Funding; Provider staff resources; RWHAP Part B Quality Assurance Contractor.	# of ADAP Enrollees	Client level documentation of eligibility
Promote the use of the Health Insurance Program to secure health insurance coverage to those underinsured.	RWHAP Providers; PCPs	RWHAP Part B	On-going	RWHAP Part B Funding; Health Insurance Marketplace Navigators;	# of HIP Enrollees	Client level documentation of eligibility
Encourage all Delaware Drug Formulary Committees to adhere to all HHS guidelines for HIV treatment when approving covered HIV medications on formulary.	ADAP Formulary Committee; Delaware Medicaid Pharmaceutical and Therapeutics Committee	HPC	On-going	RWHAP Part B, DHC Staff Resources; HPC	# of ART medications approved by DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents, approved by Delaware Formulary Committees	No existing relationship between DPH, HPC, or DHC with Medicaid Pharmaceutical and Therapeutics Committee
Encourage the use of telehealth to increase access to medical care in Delaware's rural areas.	Medical Providers	RWHAP Part B	On-going	AETC; HPC	# of health care providers actively using telehealth technology	Limited existing relationships with health care community; Fractured health care system in Delaware to encourage care coordination through telehealth outside of large health networks

Goal II: Increase access to care, and improve health outcomes for PLWH.

Objective 2.3	**Increase the percentage of PLWH in care in Delaware who are virally suppressed from 74% to 80% by 2021**					
Strategy 2.3.3:	**Ensure eligible clients have access to needed supportive services**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Implement a comprehensive educational program about HIV supportive services for HIV Case Managers and Social Workers	HIV Case Managers and Social Workers	RWHAP Part B Quality Assurance Consultant	Annually beginning January 1, 2018	AETC; RWHAP Part B Quality Assurance Consultant	# of trainings provided; # of training hours; # of HIV Case Managers and Social Workers trained	None
Explore and promote housing options that are not HIV-specific but can meet the needs of PLWH in Delaware in need of housing services (i.e. elderly housing, HUD housing, etc.).	Subsidized Housing Providers	RWHAP Part B	On-going following exploration period of January 1, 2017 – December 31, 2018	Delaware Housing Coalition; DHC; HPC	# of non-HIV specific housing options identified; # of PLWH placed	Limited funding for subsidized housing in Delaware
Evaluate the need for peer support programs in Delaware.	PLWH	HPC	January 1, 2017 – December 31, 2018	HRSA Technical Assistance; AETC; RWHAP Part B staff resources; HPC	MMP Unmet Need; # of PLWH Focus Groups	None
Analyze examples of best practices for peer support programs nationwide.	National Peer Support CBOs	HPC	January 1, 2017 – December 31, 2018	HRSA Technical Assistance; AETC; RWHAP Part B staff	# of best practice examples of peer support models	Limited RWHAP Part B funding if need is uncovered
Initiate dialogue with Medicaid and other transportation service providers to determine the existing capacity for medical transportation services for newly diagnosed PLWH in Delaware and barriers to the service.	Medicaid and other state transportation service providers	DPH HIV Prevention; RWHAP Part B	January 1, 2017 – December 31, 2017	DPH HIV Prevention & RWHAP Part B staff resources	Dialogue initiated	Limited existing relationship between the HPC, HIV prevention and treatment providers and transportation service providers

Goal III: Reduce HIV related disparities and health inequities

Objective 3.1:	**Identify sub-populations who experience HIV-related health disparities in Delaware by December 31, 2018.**					
Strategy 3.1.1:	**Outline, define, and analyze the Delaware Statewide HIV Care Continuum.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Identify the number of Delawareans living with HIV/AIDS.	PLWH in Delaware	DPH HIV Surveillance	January 1, 2017 – June 30, 2017	eHARS; DPH HIV Surveillance Staff	# of PLWH identified	None
Utilize the CDC mathematical modeling to estimate Delawareans living with HIV/AIDS who are unaware of their status.	PLWH in Delaware	DPH HIV Surveillance	January 1, 2017 – June 30, 2017	eHARS; DPH HIV Surveillance Staff	# of PLWH unaware of their HIV status	None
Identify the number of Delawareans living with HIV/AIDS engaged in care, retained in care, prescribed ART, and virally suppressed.	PLWH in Delaware	DPH HIV Surveillance	January 1, 2017 – June 30, 2017	eHARS; DPH HIV Surveillance Staff	# of PLWH engaged in care; # of PLWH retained in care; # of prescribed ART; # of PLWH virally suppressed.	Limited clinical data for PLWH accessing HIV medical care from private health care providers

Goal III: Reduce HIV related disparities and health inequities

Objective 3.1:	**Identify sub-populations who experience HIV-related health disparities in Delaware by December 31, 2018.**					
Strategy 3.1.2:	**Analyze the HIV care continuum by population sub-group to include cross tabulations by characteristics.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Identify the number of Delawareans living with HIV/AIDS by subpopulation.	PLWH in Delaware	DPH HIV Surveillance	July 1, 2017 – June 30, 2018	eHARS; DPH HIV Surveillance Staff	# of PLWH identified by subpopulation	Current client level demographic data may not be specific enough to break down by subpopulation (i.e. education level, women taking care of children or grandchildren)
Utilize the CDC mathematical modeling to estimate Delawareans living with HIV/AIDS who are unaware of their status by subpopulation.	PLWH in Delaware	DPH HIV Surveillance	July 1, 2017 – June 30, 2018	eHARS; DPH HIV Surveillance Staff	# of PLWH unaware of their HIV status by subpopulation	Current client level demographic data may not be specific enough to break down by subpopulation (i.e. education level, women taking care of children or grandchildren)
Identify the number of Delawareans living with HIV/AIDS engaged in care, retained in care, prescribed ART, and virally suppressed by subpopulation.	PLWH in Delaware	DPH HIV Surveillance	July 1, 2017 – June 30, 2018	eHARS; DPH HIV Surveillance Staff	# of PLWH engaged in care by subpopulation; # of PLWH retained in care by subpopulation; # of prescribed ART by subpopulation; # of PLWH virally suppressed by subpopulation.	Current client level demographic data may not be specific enough to break down by subpopulation (i.e. education level, women taking care of children or grandchildren); Difficulty in getting information about clients receiving HIV treatment in the correction system

Goal III: Reduce HIV related disparities and health inequities

Objective 3.1:	**Identify sub-populations who experience HIV-related health disparities in Delaware by December 31, 2018.**					
Strategy 3.1.3:	**Review Strategy 3.1.1 and 3.1.2 data to identify populations who experience disparities in HIV prevention and care in Delaware.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Define threshold for disparities relative to the appropriate population.	Subpopulations identified in Strategy 3.1.2	DPH HIV Surveillance	July 1, 2017 – June 30, 2018	eHARS; HPC; DPH HIV Surveillance Staff Resources; CDC HIV Surveillance Technical Assistance	Completion of task	Limited resources to perform activity
Compile list of sub-populations experiencing health disparities, with supporting information, for presentation to the HIV Planning Council	Subpopulations identified in Strategy 3.1.2	DPH HIV Surveillance	July 1, 2017 – June 30, 2018	eHARS; HPC; DPH HIV Surveillance Staff Resources; CDC HIV Surveillance Technical Assistance	Completion of task	Limited resources to perform activity

Goal III: Reduce HIV related disparities and health inequities

Objective 3.2:	**Implement two new prevention interventions targeting sub-populations identified as disparate populations in terms of unmet need and linkage to care by December 31, 2021.**					
Strategy 3.2.1:	**Prioritize populations to be targeted.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Present data collected in Strategy 3.1.3 to obtain community input in prioritization process.	HPC	DPH HIV Surveillance; HPC Executive Committee	July 1, 2018 – March 31, 2019	DPH HIV Surveillance staff resources; HPC Executive Committee	Completion of task	Organizing the data in a meaningful and easily understood way
Facilitate community planning process to prioritize population subgroups to be addressed.	HPC	HPC Executive Committee; DHC Staff	July 1, 2018 – March 31, 2019	DPH HIV Surveillance staff resources; HPC Executive Committee	Completion of task	The HPC has limited experience prioritizing HIV prevention services
Present recommendations to community stakeholders.	Community Stakeholders	HPC Executive Committee; DHC Staff; HPC	July 1, 2018 – March 31, 2019	DPH HIV Surveillance staff resources; HPC Executive Committee; AETC	Completion of task	Organizing the data in a meaningful and easily understood way

Goal III: Reduce HIV related disparities and health inequities

Objective 3.2:	**Implement two new prevention interventions targeting sub-populations identified as disparate populations in terms of unmet need and linkage to care by December 31, 2021.**					
Strategy 3.2.2:	**Develop interventions to reduce HIV-related disparities in Delaware.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Solicit proposals for interventions from a diverse group of stakeholders.	CBOs involved in disease prevention	DPH HIV Prevention	April 1, 2019 – December 31, 2019	HPC distribution list; State of Delaware Bid Solicitation Directory	# of proposals received; # of unique CBOs who submit proposals	Limited funding to implement interventions
Implement a selection process based on recipient requirements including available support and monitoring.	Organizations who have submitted a proposal	DPH HIV Prevention	April 1, 2019 – December 31, 2019	DPH RFP Review Panel	Completion of task	Limited funding to implement interventions

Objective 3.2:	**Implement two new prevention interventions targeting sub-populations identified as disparate populations in terms of unmet need and linkage to care by December 31, 2021.**					
Strategy 3.2.3:	**Implement, test, evaluate, and refine interventions.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Develop appropriate metrics for monitoring each intervention.	Funded Organizations from Strategy 3.2.2	DPH HIV Prevention	April 1, 2019 – December 31, 2019	CDC HIV Prevention Technical Assistance; DPH HIV Prevention staff resources	# of metrics developed for each intervention	None
Monitor interventions.	Funded Organizations from Strategy 3.2.2	DPH HIV Prevention	On-going beginning January 1, 2020	DPH HIV Prevention staff resources	# of monthly reports produced by funded organizations from Strategy 3.2.2	None
Provide continuous improvement based on routine evaluations.	Funded Organizations from Strategy 3.2.2	DPH HIV Prevention	On-going beginning January 1, 2020	DPH HIV Prevention staff resources	# of times the intervention is evaluated	Limited staff resources

Objective 3.3:	**Increase the percentage of viral suppression among two selected sub-populations by 5 percentage points by increasing the number of persons in these identified sub-groups retained in care and prescribed ART.**					
Strategy 3.3.1:	**Prioritize populations to be targeted.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Present data collected in Strategy 3.1.3 to obtain community input in prioritization process.	HPC	DPH HIV Surveillance; HPC Executive Committee	July 1, 2018 – March 31, 2019	DPH HIV Surveillance staff resources; HPC Executive Committee	Completion of task	Organizing the data in a meaningful and easily understood way
Facilitate community planning process to prioritize population subgroups to be addressed.	HPC	HPC Executive Committee; DHC Staff	July 1, 2018 – March 31, 2019	DPH HIV Surveillance staff resources; HPC Executive Committee	Completion of task	The HPC has limited experience prioritizing HIV prevention services
Present recommendations to community stakeholders.	Community Stakeholders	HPC Executive Committee; DHC Staff; HPC	July 1, 2018 – March 31, 2019	DPH HIV Surveillance staff resources; HPC Executive Committee; AETC	Completion of task	Organizing the data in a meaningful and easily understood way

Objective 3.3:	**Increase the percentage of viral suppression among two selected sub-populations by 5 percentage points by increasing the number of persons in these identified sub-groups retained in care and prescribed ART.**					
Strategy 3.3.2:	**Develop interventions to reduce HIV-related disparities in Delaware.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Solicit proposals for interventions from a diverse group of stakeholders.	CBOs involved in disease prevention	RWHAP Part B	April 1, 2019 – December 31, 2019	HPC distribution list; State of Delaware Bid Solicitation Directory	# of proposals received; # of unique CBOs who submit proposals	Limited funding to implement interventions
Implement a selection process based on recipient requirements including available support and monitoring.	Organizations who have submitted a proposal	RWHAP Part B	April 1, 2019 – December 31, 2019	DPH RFP Review Panel	Completion of task	Limited funding to implement interventions

Objective 3.3:	**Increase the percentage of viral suppression among two selected sub-populations by 5 percentage points by increasing the number of persons in these identified sub-groups retained in care and prescribed ART.**					
Strategy 3.3.3:	**Implement, test, evaluate, and refine interventions.**					
Activity/ Intervention	**Targeted Population(s)**	**Responsible Parties**	**Time-frame**	**Resources**	**Data Indicators**	**Anticipated Challenges & Barriers**
Develop appropriate metrics for monitoring each intervention.	Funded Organizations from Strategy 3.3.2	RWHAP Part B	April 1, 2019 – December 31, 2019	HRSA Technical Assistance; RWHAP Part B staff resources	# of metrics developed for each intervention	None
Monitor interventions.	Funded Organizations from Strategy 3.3.2	RWHAP Part B	On-going beginning January 1, 2020	RWHAP Part B staff resources	# of monthly reports produced by funded organizations from Strategy 3.3.2	None
Provide continuous improvement based on routine evaluations.	Funded Organizations from Strategy 3.3.2	RWHAP Part B	On-going beginning January 1, 2020	RWHAP Part B staff resources	# of times the intervention is evaluated	Limited staff resources

B. Collaboration, Partnerships, and Stakeholder Involvement

a. Stakeholder contribution. The Delaware HIV Planning Council (HPC), the state's joint HIV prevention and care community planning body, is comprised of consumers and providers of services utilized by the state's HIV community. The members of the state's planning body reflect the community that they serve. This is done to ensure that the decisions made by the group are in the best interest of those receiving and providing the HIV prevention and care services affected by such decisions. The planning activities of the HPC are benefited by regular participation from the Division of Public Health, Bureau of Communicable Disease, MidAtlantic AIDS Education and Training Center (AETC), staff of the State of Delaware, and the business community.

The Delaware HIV Planning Council maintains three working groups with direct responsibility for the implementation of needs assessment activities and for informing the development of this plan. The Testing & Linkage to Care Working Group and the Retention & Viral Suppression Working Group provide forums for the membership of the Delaware HIV Planning Council to critically analyze the state's HIV prevention, treatment and care services. These working groups reviewed epidemiological and Medical Monitoring Project data, and performed needs assessments of persons at-risk for HIV and persons living with HIV/AIDS that served as the basis for the Statewide Coordinated Statement of Need. The Systems of Care Working Group reviews national and local data, HIV-specific and other, to assess how external changes in Delaware affect the system of care at all points along the HIV Prevention and Care Continuum. The objectives, strategies and activities noted in this plan are the result of the work of these committees, in conjunction with direct input from the HPC, and other community stakeholders.

The Delaware HIV Consortium (DHC) provides administrative and technical support for the Delaware HIV Planning Council. DHC responsibilities for the HPC include: maximizing stakeholder engagement in the community planning process through education and outreach, assessing community need through quantitative and qualitative research, preparing comprehensive prevention and care plans, and providing logistical and administrative support for the planning body, including the taking of meeting minutes.

The Delaware Division of Public Health, HIV Surveillance Program is responsible for data management and the development of the state's annual HIV epidemiologic profile, which serves as the basis for all community planning activities. In the completion of this task DPH maintains the state's HIV databases, including eHARS, CAREWare, EvaluationWeb, and Partner Services Web, and produces the state's monthly HIV surveillance report. DPH HIV Surveillance holds representation on the HPC, and annually presents the HIV epidemiologic update to the HPC for discussion.

b. Gaps in stakeholder participation. Annually, the HPC's Membership & Community Engagement (MCE) Working Group performs an assessment of the Council's members to ensure that its membership reflects the state's epidemic and maintains representation from all of Delaware's HIV stakeholder groups. The Working Group presents its results, with recommendations for growth, to the

HPC. In December 2015, the last time a membership assessment was completed, the MCE Working Group made the following recommendations:

- Representatives from the Delaware Division of Medicaid and Medical Assistance, and private insurance community;
- Representative from the Delaware Department of Corrections;
- Representative from the Delaware Division of Substance Abuse and Mental Health;
- Representative from higher education, and social research;
- Representatives from the LGBTQ community;
- Representatives of PLWH youth and aging communities.

The Delaware HIV Planning Council strives to be inclusive of all stakeholder groups affecting Delaware's HIV Prevention and Care Continuum, and all population groups affected by the HIV epidemic in Delaware. The MCE Working Group participates in on-going recruitment of targeted individuals who best represent areas where the HPC is deficient. The HPC encourages stakeholders that are not directly involved with HIV services, but largely impact PLWH in Delaware to present in HPC meetings, and participate in HPC working groups as needed.

c. Letter of Concurrence
Between the Delaware HIV Planning Council, and the Delaware Division of Public Health

September 12, 2016

Kenya L. Young, MPH
Public Health Analyst
U.S. Department of Health and Human Services
Health Resources and Services Administration
HIV/AIDS Bureau
Division of State HIV/AIDS Program (DSHAP)
Northeastern/Central Services Branch
5600 Fishers Lane
Mail Stop 09SWH03 | Work Station 09W61C
Rockville, MD 20857

Christian C. Spears MSW, MPH
National Center for HIV/AIDS, Viral Hepatitis,
STD and TB Prevention
Division of HIV/AIDS Prevention
Prevention Program Branch
1600 Clifton Rd. NE,
Mail Stop E58
Atlanta, GA 30333

Dear Mrs. Young & Mr. Spears:

The Delaware HIV Planning Council, the state's joint HIV prevention and care planning body, concurs with the following submission by the Delaware Division of Public Health in response to the guidance set forth for health departments and HIV planning groups funded by the CDC's Division of HV/AIDS Prevention (DHAP) and HRSA's HIV/AIDS Bureau (HAB) for the development of an *Integrated HIV Prevention and Care Plan*.

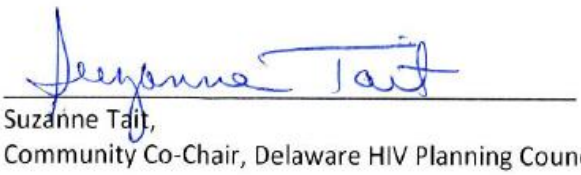
The Delaware HIV Planning Council has reviewed the *Integrated HIV Prevention and Care Plan* submission to the CDC and HRSA to verify that it describes how programmatic activities and resources are being allocated to the most disproportionately affected populations and geographical areas that bear the greatest burden of HIV disease. The planning council 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 Delaware HIV Planning Council acted as an integral partner in the development and review of this *Integrated HIV Prevention and Care Plan*. The planning council has examined the epidemiology of HIV/AIDS in Delaware annually and has directed a needs assessment of both, persons living with HIV, and those at risk for HIV infection, in Delaware. Furthermore, the planning council was responsible for the development and commenting on a resource inventory of HIV services in Delaware. Finally, in partnership with Delaware Division of Public Health, the Delaware HIV Planning Council used the findings of the HIV needs assessment to develop the goals, objectives, strategies, and activities that make up the Integrated HIV Prevention and Care Plan presented in Section II of the *Integrated Plan*. The plan was approved through a vote of the full planning council.

The signatures below confirm the concurrence of the planning body with the Integrated HIV Prevention and Care Plan.

Sincerely,

Stanley Waite,
State Co-Chair, Delaware HIV Planning Council



Suzanne Tait,
Community Co-Chair, Delaware HIV Planning Council

C. People Living with HIV and Community Engagement

a. Community participation in HIV community planning. Membership of the Delaware HIV Planning Council and its working groups strive to be reflective of the demographics and distribution of the state's HIV epidemic. According to the *Delaware Monthly HIV/AIDS Report,* as of December 31, 2016 there were 3,434 Delawareans living with HIV/stage 3(AIDS). Delaware's HIV epidemic disproportionately affects men, with 68.8% of PLWH being male; the remaining 31.2% were females. HIV in Delaware follows the state's population with 65.6% of PLWH living in New Castle County; 13.5% reside in Kent County; the remaining 20.4% live in Sussex County. In terms of the epidemic's racial/ethnic composition, 60.2% of PLWH in Delaware are Black/African-American, 30.6% are white, and 7.0% are Hispanic (an aggregate of all races). As reported in Delaware's epidemiologic overview, the primary mode of HIV exposure have changed over time, but of the current PLWH in Delaware 36.3% are classified as men who have sex with men (MSM), 28.0% are heterosexual contact, and 19.4% are injection drug use (IDU).

The HPC's MCE Working Group annually assesses the Council's membership, and recruits for stakeholders in communities where it is deficient, particularly those that are traditionally underserved by Delaware's health care system, and marginalized by the public. In December 2015, the last time the Membership & Community Engagement Working Group performed a diversity analysis, the HPC membership was distributed as follows:

Gender.

- Male – 50%
- Female – 50%
- Transgender – 0%

Race/Ethnicity.

- Black/African-American – 29%
- White – 63%
- Multiple racial categories – 4%
- Hispanic/Latino – 8%

Employment/Residency.

- Kent County – 29%
- New Castle County – 54%
- Sussex County – 17%

Personal experience with.

- People living with HIV/AIDS – 24%
- Men who have sex with men – 32%
- Injection drug use – 4%
- People living with mental illness – 16%
- Homelessness – 8%

b. PLWH involvement in plan development. Community input is integrated consistently across Delaware's HIV planning process. The Delaware HIV Planning Council meets bi-monthly to review data on the epidemiology of the state's HIV epidemic, RWHAP and CDC prevention service utilization, and the Medical Monitoring Project, and to act as a forum to discuss emerging trends affecting PLWH in Delaware. Discussions in HPC meetings illuminate service needs and barriers to be reviewed in greater

depth by the HPC's working groups through the needs assessment cycle. PLWH sit on the HPC's three data processing working groups, Testing & Linkage to Care Working Group, Retention & Viral Suppression Working Group, and Systems of Care Working Group, which are responsible for directing the state's needs assessment process. These working groups developed and implemented the *HIV Services Resource Inventory Survey, 2015*, the *HIV Services Provider Perspective Survey, 2015*, and the *2015 HIV Prevention/At-Risk Needs Assessment Survey*, which together formed the foundation of the Statewide Coordinated Statement of Need. The objectives, strategies, and activities noted in this plan are the result of the work of these three working groups.

In Spring 2016, the HPC held two focus groups with PLWH in the Wilmington area to discuss needs, gaps and barriers with HIV medical and supportive services. The information collected through these focus groups augmented the quantitative data already collected through the needs assessment, and informed the development of the Integrated Plan. Members of these focus groups also formed the foundation of the HPC's Positive Action Committee, which will act as a forum to discuss the needs of consumers, and formal channel of communication to other consumers and service providers about the barriers that consumers are encountering that get in the way of accessing services.

There were several instances throughout the development of this plan where community insight provided invaluable anecdotal evidence of an unmet need for HIV prevention, care and treatment services, which allowed the HPC to dedicate resources to collecting quantitative and qualitative research for inclusion in this plan. In the fall of 2015, PLWH voiced a concern over the service provided by LogistiCare Solutions, Inc., for non-emergency medical transportation provided to Medicaid recipients. Following these discussions, the HPC brought in the General Manager for the Delaware Operations of LogistiCare Solutions, LLC, to discuss the group's concerns, and follow-up conversations were held in a focus group of PLWH to further explore the issue. Similar instances occurred around the topics of HIV stigma, Sexual Wellness education in public schools, barriers to care for PLWH dealing with substance abuse issues, access to condoms for inmates in the Department of Corrections, and community early intervention services.

c. PLWH engagement. All Delaware HIV Planning Council and working group meetings are open to the public, and efforts are taken to encourage community participation and diverse viewpoints. Transportation is arranged to and from HPC meetings for community members in the Wilmington area 60 miles to the meeting site in Dover, Delaware, and a lunch is provided. The insight of persons at-risk for HIV was sought for the *2015 HIV Prevention/At-Risk Needs Assessment Survey*, and a PLWH consumer survey is planned as a part of the next needs assessment cycle. Findings from HPC meetings and needs assessment activities are reinforced by community input provided at stakeholder meetings outside of the regular HPC events, including HIV support groups and the Christiana Care Patient Advisory Group. In August 2016, the HPC held its inaugural meeting of the Positive Action Committee, a working group for and led by community members. This working group will provide community members direct input into the needs assessment and decision making process, will empower PLWH in Delaware to be advocates for themselves in HIV community planning through education and trainings.

d. Community insight and solutions. Community engagement is a continuous process in the work of the Delaware HIV Planning Council that does not occur solely in the development of Comprehensive Plans. PLWH serve as integral section of the HPC's voting membership, and as non-voting stakeholders in meetings and in HPC working groups. The Positive Action Committee will now provide the community a direct voice in the development of the state's HIV needs assessment process, and engagement in the committee will serve to reduce barriers that hinder community members' abilities of becoming active voting members of the HPC. The HPC has begun a process of holding focus groups for community stakeholders who do not regularly attend HPC meetings. The HPC's working groups plan on expanding focus groups outside of their initial Wilmington location, to include meetings in all three Delaware counties to better understand the diverse needs of underserved PLWH. Finally, accurate data serves as the basis for all decisions made by the Delaware Division of Public Health, and the HPC. PLWH and persons at-risk for HIV infection serve on HPC working groups that develop consumer and provider surveys and analyze the data that is collected through the survey process.

Section III: Monitoring and Improvement

Delaware's Integrated HIV Prevention and Care Plan was created through a collaborative process that included a wide variety of persons, including government officials, representatives from HIV Service Providers, members of the Delaware HIV Planning Council, community stakeholders and persons living with HIV. That process was very intentional. First, it drew upon the knowledge of those persons to ensure that the Integrated Plan was realistic and achievable. Second, it fostered the buy-in of those individuals (and the organizations they represented) in the Plan itself. Lastly, it laid the groundwork to have those same individuals involved in the process to monitor Delaware's success in achieving the goals as articulated within the Plan.

The responsibility for monitoring and improving Delaware's Integrated Plan will be shared between the Delaware HIV Planning Council and the Quality Management Team (QMT) of Delaware's Ryan White Part B Program. By having each group report to the other, Delaware incorporates a system of "checks and balances" that will ensure that the activities in the Plan are implemented by the responsible parties assigned to those activities, and that adjustments to the Plan are made in a timely manner to ensure the success of those activities.

At its August 19, 2016 meeting, the Quality Management Team agreed to add a committee to its structure in this regard. The core members of the Plan Review Committee will be the Ryan White Program Part B Administrator (Delaware Division of Public Health, or DPH), the HIV Prevention Administrator (DPH) and the Quality Management Consultant currently contracting with Delaware's Part B Program. Additional members may be added to the committee once it begins its monitoring efforts, on a permanent or an ad hoc basis. The Plan Review Committee will meet quarterly to update each other on activities included in the Plan, to identify any challenges being encountered in the implementation of the Plan, and to engage in problem-solving strategies for those challenges. Members of the Plan Review Committee may find it necessary to remind community partners of their roles in implementing the Plan, to offer technical assistance to community partners as needed, or to modify the Plan as necessary. The primary focus of the Plan Review Committee will be monitoring the Plan on the Activities / Interventions Level.

The Plan Review Committee will present its findings to the entire Quality Management Team semi-annually, at its May and November meetings. Once the findings have been reviewed by the Quality Management Team, the committee will then provide an update to the members of the Delaware HIV Planning Council at the next regularly-scheduled Council meeting. The update will report on progress made towards each objective in the plan, as well as a discussion of challenges encountered. Planning Council members will be given the opportunity to make suggestions for changes to the Plan or any of the activities included in the Plan. Suggestions will be referred to the Plan Review Committee for possible implementation, with the approval of the Ryan White Part B Program Administrator.

As part of their work, the Quality Management Team monitors twenty clinical Performance Indicators as defined by the Health Resources and Services Administration (HRSA). The QMT will use those measures,

along with Treatment Cascades generated by Delaware's HIV Surveillance Program and Service Utilization Reports from Delaware's Ryan White Programs, to assess health outcomes for Delawareans living with HIV disease. The primary focus of the Quality Management Team will be monitoring the Plan on the Objectives and Strategies Levels.

The key to monitoring and improving Delaware's Integrated HIV Prevention and Care Plan is communication. By fostering the open sharing of information between the Quality Management Team and the Delaware HIV Planning Council on a regular basis, Delaware will keep the implementation of the Plan as a high priority for Service Providers and community stakeholders. The Plan casts a vision for long-range planning for entities throughout the continuum of HIV services. It also serves as a catalyst for Delaware to make greater advances in its efforts to impact the HIV epidemic within its jurisdiction.

Appendix: Delaware HIV Workforce

Table A1 provides an overview of the Delaware HIV workforce's capacity for providing HIV services within the state's jurisdiction. The data for this table was collected from the Bureau of Labor Statistics, Occupational Employment Statistics (OES), May 2014, a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in the United States. The OES utilizes the categories established by the North American Industry Classification System (NAICS) to make its estimates. OES occupational titles were included as a part of the HIV workforce in Table 1 if they fit one or more of the following criteria:

1. The occupation provides direct health care (HIV-specific, or non HIV-specific) or supportive services (HIV-specific) to a person living with HIV in Delaware;
2. The occupation provides HIV/STD prevention services to persons living with HIV/AIDS in Delaware, population groups at increased risk for HIV infection, or the general public,;
3. The occupation provides direct aid or assistance to a professional from either of the first two categories in the completion of their work;
4. The occupation provides professional education or training to individuals seeking a certification, licensure, or secondary or post-secondary degree in a field covered under the first three categories.

Table 1 uses a Bureau of Labor Statistic index, known as "Location Quotient," to highlight workforce categories that could be insufficient to service the area's needs. Location Quotient is an index that shows the occupation in question's share of the state's total workforce as it compares to the national average for that occupational category. Therefore, a location quotient of 2.0 would indicate that Delaware's density of professionals in that occupation category is twice the share of employment in the state than it is nationally. Alternatively, a location quotient of 0.5 would state that the area's share of employment is half that of the national average. Occupation titles bolded in Table 1 indicate categories with a Location Quotient of 1.0, or below.

Table 23 Delaware HIV Workforce

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Child, Family, and School Social Workers	1,120	1.25	Provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. May assist parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. May also advise teachers.

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Chiropractors	**90**	**0.93**	**Assess, treat, and care for patients by manipulation of spine and musculoskeletal system. May provide spinal adjustment or address sacral or pelvic misalignment.**
Clinical, Counseling, and School Psychologists	**280**	**0.84**	**Diagnose and treat mental disorders; learning disabilities; and cognitive, behavioral, and emotional problems, using individual, child, family, and group therapies. May design and implement behavior modification programs.**
Community and Social Service Specialists, All Others	510	1.72	All community and social service specialists not listed separately.
Community Health Workers	190	1.27	Assist individuals and communities to adopt healthy behaviors. Conduct outreach for medical personnel or health organizations to implement programs in the community that promote, maintain, and improve individual and community health. May provide information on available resources, provide social support and informal counseling, advocate for individuals and community health needs, and provide services such as first aid and blood pressure screening. May collect data to help identify community health needs. Excludes "Health Educators."
Counselors. All Others	**40**	**0.40**	**All counselors not listed separately.**
Dental Assistants	**750**	**0.76**	**Assist dentist, set up equipment, prepare patient for treatment, and keep records.**
Dental Hygienists	710	1.15	Clean teeth and examine oral areas, head, and neck for signs of oral disease. May educate patients on oral hygiene, take and develop x rays, or apply fluoride or sealants.
Dentists, General	**290**	**0.94**	**Examine, diagnose, and treat diseases, injuries, and malformations of teeth and gums. May treat diseases of nerve, pulp, and other dental tissues affecting oral hygiene and retention of teeth. May fit dental appliances or provide preventive care. Excludes "Prosthodontists," "Orthodontists," "Oral and Maxillofacial Surgeons" and "Dentists, All Other Specialists.".**
Dietetic Technicians	130	1.42	Assist in the provision of food service and nutritional programs, under the supervision of a dietitian. May plan and produce meals based on established guidelines, teach principles of food and nutrition, or counsel individuals.

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Dietitians and Nutritionists	**150**	**0.79**	**Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease. May supervise activities of a department providing quantity food services, counsel individuals, or conduct nutritional research.**
Emergency Medical Technicians and Paramedics	1,310	1.77	Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.
Family and General Practitioners	550	1.40	Physicians who diagnose, treat, and help prevent diseases and injuries that commonly occur in the general population. May refer patients to specialists when needed for further diagnosis or treatment.
Health Educators	**150**	**0.81**	**Provide and manage health education programs that help individuals, families, and their communities maximize and maintain healthy lifestyles. Collect and analyze data to identify community needs prior to planning, implementing, monitoring, and evaluating programs designed to encourage healthy lifestyles, policies, and environments. May serve as resource to assist individuals, other health professionals, or the community, and may administer fiscal resources for health education programs. Excludes "Community Health Workers."**
Health Specialties Teachers, Postsecondary	**220**	**0.42**	**Teach courses in health specialties, in fields such as dentistry, laboratory technology, medicine, pharmacy, public health, therapy, and veterinary medicine. Excludes "Nursing Instructors and Teachers, Postsecondary" and "Biological Science Teachers, Postsecondary" who teach medical science.**
Health care Social Workers	500	1.09	Provide individuals, families, and groups with the psychosocial support needed to cope with chronic, acute, or terminal illnesses. Services include advising family care givers, providing patient education and counseling, and making referrals for other services. May also provide care and case management or interventions designed to promote health, prevent disease, and address barriers to access to health care.
Home Health Aides	2,720	1.08	Provide routine individualized health care such as changing bandages and dressing wounds, and applying topical medications to the elderly, convalescents, or persons with disabilities at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patient.

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Internists, General	**90**	**0.60**	**Physicians who diagnose and provide non-surgical treatment of diseases and injuries of internal organ systems. Provide care mainly for adults who have a wide range of problems associated with the internal organs. Subspecialists, such as cardiologists and gastroenterologists, are included in "Physicians and Surgeons, All Other."**
Lawyers	2,880	1.52	Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, or manage or advise clients on legal transactions. May specialize in a single area or may practice broadly in many areas of law.
Legal Support Workers, All Others	330	2.30	All legal support workers not listed separately.
Marriage and Family Therapists	250	2.63	Diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Apply psychotherapeutic and family systems theories and techniques in the delivery of services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders. Excludes "Social Workers" and "Psychologists" of all types.
Massage Therapists	140	2.66	Perform therapeutic massages of soft tissues and joints. May assist in the assessment of range of motion and muscle strength, or propose client therapy plans.
Medical and Clinical Laboratory Technicians	**180**	**0.36**	**Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.**
Medical and Clinical Laboratory Technologists	**420**	**0.82**	**Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.**
Medical and Health Services Manager	**710**	**0.73**	**Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.**
Medical Assistants	1,900	1.03	Perform administrative and certain clinical duties under the direction of a physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician. Excludes "Physician Assistants."

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Mental Health and Substance Abuse Social Workers	360	1.04	Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs. Activities may include individual and group therapy, crisis intervention, case management, client advocacy, prevention, and education.
Mental Health Counselors	550	1.47	Counsel with emphasis on prevention. Work with individuals and groups to promote optimum mental and emotional health. May help individuals deal with issues associated with addictions and substance abuse; family, parenting, and marital problems; stress management; self-esteem; and aging. Excludes "Social Workers," "Psychiatrists," and "Psychologists."
Nurse Practitioners	510	1.33	Diagnose and treat acute, episodic, or chronic illness, independently or as part of a health care team. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x rays. May prescribe medication. Must be registered nurses who have specialized graduate education.
Nursing Instructors and Teachers, Postsecondary	280	1.59	Demonstrate and teach patient care in classroom and clinical units to nursing students. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
Nursing Assistants	5,520	1.23	Provide basic patient care under direction of nursing staff. Perform duties such as feed, bathe, dress, groom, or move patients, or change linens. May transfer or transport patients. Includes nursing care attendants, nursing aides, and nursing attendants. Excludes "Home Health Aides," "Orderlies," "Personal Care Aides," and "Psychiatric Aides."
Obstetricians and Gynecologists	120	1.78	Physicians who provide medical care related to pregnancy or childbirth and those who diagnose, treat, and help prevent diseases of women, particularly those affecting the reproductive system. May also provide general medical care to women.
Optometrists	130	1.24	Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment. May prescribe therapeutic drugs to treat specific eye conditions. Ophthalmologists are included in "Physicians and Surgeons, All Other."

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Personal Care Aides	**1,140**	**0.29**	**Assist the elderly, convalescents, or persons with disabilities with daily living activities at the person's home or in a care facility. Duties performed at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. May provide assistance at non-residential care facilities. May advise families, the elderly, convalescents, and persons with disabilities regarding such things as nutrition, cleanliness, and household activities.**
Pharmacists	**790**	**0.87**	**Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.**
Pharmacy Technicians	**1,020**	**0.88**	**Prepare medications under the direction of a pharmacist. May measure, mix, count out, label, and record amounts and dosages of medications according to prescription orders.**
Phlebotomists	470	1.33	Draw blood for tests, transfusions, donations, or research. May explain the procedure to patients and assist in the recovery of patients with adverse reactions.
Physical Therapist Aides	410	2.66	Under close supervision of a physical therapist or physical therapy assistant, perform only delegated, selected, or routine tasks in specific situations. These duties include preparing the patient and the treatment area.
Physical Therapists	630	1.00	Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and improve or correct disabling conditions resulting from disease or injury.
Physicians and Surgeons, All Others	1,340	1.38	All physicians and surgeons not listed separately.
Physicians Assistants	410	1.43	Provide health care services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited educational program for physician assistants. Excludes "Emergency Medical Technicians and Paramedics," "Medical Assistants," "Registered Nurses," "Nurse Anesthetists," "Nurse Midwives," and "Nurse Practitioners."

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Psychiatric Aides	**130**	**0.58**	**Assist mentally impaired or emotionally disturbed patients, working under direction of nursing and medical staff. May assist with daily living activities, lead patients in educational and recreational activities, or accompany patients to and from examinations and treatments. May restrain violent patients. Includes psychiatric orderlies.**
Psychiatrists	110	1.37	Physicians who diagnose, treat, and help prevent disorders of the mind.
Registered Nurses	10,090	1.20	Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required. Includes Clinical Nurse Specialists. Excludes "Nurse Anesthetists," "Nurse Midwives," and "Nurse Practitioners."
Social and Community Service Manager	760	2.08	Plan, direct, or coordinate the activities of a social service program or community outreach organization. Oversee the program or organization's budget and policies regarding participant involvement, program requirements, and benefits. Work may involve directing social workers, counselors, or probation officers.
Social and Human Service Assistants	**480**	**0.43**	**Assist in providing client services in a wide variety of fields, such as psychology, rehabilitation, or social work, including support for families. May assist clients in identifying and obtaining available benefits and social and community services. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or dependent care. Excludes "Rehabilitation Counselors," "Psychiatric Technicians," "Personal Care Aides," and "Eligibility Interviewers, Government Programs."**
Social Work Teachers, Postsecondary	110	3.06	Teach courses in social work. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
Social Workers, All Others	**90**	**0.45**	**All social workers not listed separately.**

Occupation Title	Estimated Number of Positions	Location Quotient	Occupation Description
Substance Abuse and Behavioral Disorder Counselors	**180**	**0.68**	**Counsel and advise individuals with alcohol, tobacco, drug, or other problems, such as gambling and eating disorders. May counsel individuals, families, or groups or engage in prevention programs. Excludes "Social Workers," "Psychologists," and "Mental Health Counselors" providing these services.**
Surgeons	190	1.45	Physicians who treat diseases, injuries, and deformities by invasive, minimally-invasive, or non-invasive surgical methods, such as using instruments, appliances, or by manual manipulation. Excludes "Oral and Maxillofacial Surgeons."
Surgical Technologists	330	1.05	Assist in operations, under the supervision of surgeons, registered nurses, or other surgical personnel. May help set up operating room, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeon's assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.
Total Workforce Capacity	42,760		