



MASSACHUSETTS INTEGRATED HIV/AIDS PREVENTION AND CARE PLAN

HIV/AIDS SERVICES IN THE COMMONWEALTH: 2017-2021

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (MDPH);BUREAU OF
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VISION STATEMENT

Massachusetts will be a place where HIV infections are rare, and when they occur, every state resident, regardless of age, gender, race/ethnicity, sexual orientation, gender identity, or socioeconomic status will have unfettered access to high quality, life-extending care, free from stigma and discrimination.

(Adapted from The National HIV/AIDS Strategy: Updated to 2020, Office of National AIDS Policy, The White House).

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MASSACHUSETTS HIV/AIDS INTEGRATED PREVENTION AND CARE PLAN

The *Massachusetts Integrated HIV Prevention and Care Plan* (hereafter, the *State Plan*) is the framework for the Commonwealth to prevent new HIV infections, reduce health disparities, and improve health outcomes for persons living with HIV infection over the coming five years. The Plan includes epidemiologic, programmatic, and policy objectives to accomplish a shared vision—one articulated in the National HIV/AIDS Strategy and endorsed locally by HIV+ consumers, providers, stakeholders, and advisory bodies.

Since the earliest years of the HIV epidemic, Massachusetts has been a leader in efforts to ensure sustainable access to highly effective, science-based prevention and care interventions; and has remained committed over decades to protect the health and human rights of all persons living with and at risk for HIV infection in the Commonwealth.

Massachusetts brings many assets to the implementation of this Plan, including access to medical care and HIV treatment through state health care reform effective in 2006, Medicaid expansion for low income persons living with HIV infection since 2001, establishment of syringe service programs (SSP) for persons who inject drugs since 1994, and full integration of CDC prevention and HRSA Ryan White care and treatment services into the mainstream community health center, hospital, and community-based organization (CBO) infrastructure since the early 1990's. Massachusetts was the first state in the country to legalize same-sex marriage and has a long history of affirming the rights of LGBTQ state residents, a population that remains disproportionately impacted by HIV/AIDS in Massachusetts and the country.

Since the year 2000 annual HIV diagnoses in Massachusetts have decreased by 47%, from nearly 1,200 new diagnoses in the year 2000 to between 600 and 650 new diagnoses annually in recent years. Massachusetts attributes the success in reducing new infections in large part to the strengths and capacities of our prevention and care infrastructure and policy environment noted above. The Massachusetts HIV Care Continuum reinforces favorable health outcomes for persons living with HIV infection, with rates of viral suppression for HIV+ persons engaged and retained in care approaching the UNAIDS goal of 90%.

These advances in Massachusetts are challenged by substantial and persistent health disparities. Black non-Hispanic and Hispanic/Latino state residents are affected by HIV/AIDS at levels ten times and seven times that of the white (non-Hispanic) population. Gay and bisexual men and other men who have sex with men (MSM) are 28 times more likely to be diagnosed with HIV in Massachusetts than non-MSM. Women represent 26% of persons recently diagnosed with HIV infection, yet over 80% of HIV+ women in Massachusetts are racial/ethnic minorities—the vast majority are black (non-Hispanic) or Hispanic/Latina—and half are non-US born immigrants or refugees. The proportion of new infections attributed to injection drug use (IDU) is at a record low of 6%, yet rates of hepatitis C (HCV) infection have increased by 179%, with particularly pronounced increases among persons who inject drugs (PWID) who are under 30 years of age.

Massachusetts envisions an end to the HIV epidemic in the Commonwealth. We aim to accomplish this goal through programs and policies that are high-impact, science-based, and proven effective. The

strategies outlined in this State Plan apply the principles and practices of public health, alongside direct care prevention and treatment interventions, in the context of an accessible and culturally competent health care delivery system. We rely on data-driven priorities and meaningful community engagements to guide and direct our efforts, and commit to revisit our plan annually to ensure it remains relevant and responsive to the needs of persons living with and at risk for HIV infection in Massachusetts and makes meaningful progress to advance health equity.

HIV/AIDS IN THE COMMONWEALTH OF MASSACHUSETTS

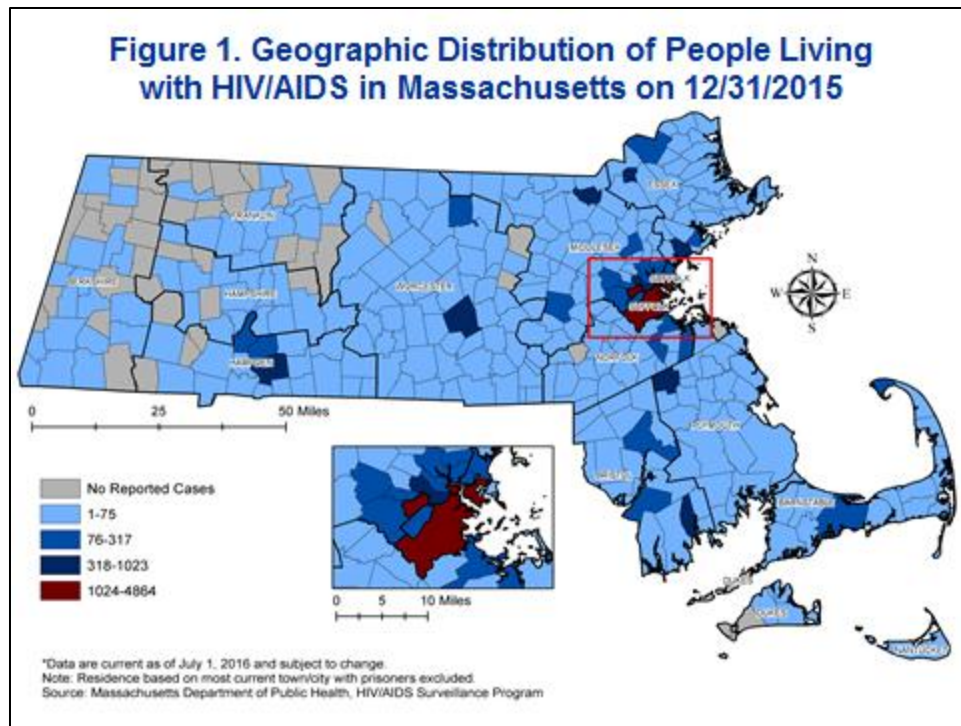
Located in the Northeast region of the United States, the Commonwealth of Massachusetts is the most populous state in New England, the third most densely populated U.S. state, and is the 15th most populous state in the U.S.¹. As of July 1, 2015, the United States Census Bureau estimates that the Commonwealth is home to 6,794,422 individuals². In terms of race and ethnicity, over three-quarters (82.1%) of Massachusetts residents are white, 8.4% of residents are Black/African American, and 11.2% of the total population identifies as Hispanic/Latino. Massachusetts is geographically the 44th largest state of the 50 states. The Commonwealth is home to 351 cities and towns, and is 190 miles long and 50 miles wide at its most distant points. Massachusetts is bordered by New Hampshire and Vermont in the north. In the south, Massachusetts is bordered by Connecticut and Rhode Island. To the east lies the Atlantic Ocean and to the west Massachusetts shares a border with New York.

As of December 31, 2015, a cumulative total of 34,001 individuals were ever diagnosed with HIV infection and reported in Massachusetts, with or without an AIDS diagnosis, of which 40% (N=13,729) have died and 60% (N=20,272) were living with HIV/AIDS. There are an additional 3,814 people living with HIV/AIDS in Massachusetts who were first diagnosed in another state. Adjusting for residents infected with HIV who do not yet know their status, have not been reported, or were first reported in another state, the MDPH estimates that the total number of residents living with HIV/AIDS in the Commonwealth is between 26,000 and 27,000. Please note that all analyses of people living with HIV/AIDS that follow describe the 20,272 individuals living with HIV/AIDS whose diagnosis was first reported in Massachusetts to MDPH.

Figure 1 below displays the distribution of people living with HIV/AIDS on December 31, 2015 within the geographic region of Massachusetts. While the city of Boston was the residence of only 10% of the Massachusetts population in general, it is the place of residence for 30% (N=5,862) of people living with HIV/AIDS at the end of 2015. There were also smaller clusters of people living with HIV/AIDS around other Massachusetts cities such as Worcester, Springfield, New Bedford, Fall River, Lowell, Lawrence, and Brockton. Despite its smaller population, there was also a concentration of people living with HIV/AIDS in Provincetown.

¹ <http://www.census.gov/popest/data/state/totals/2015/>

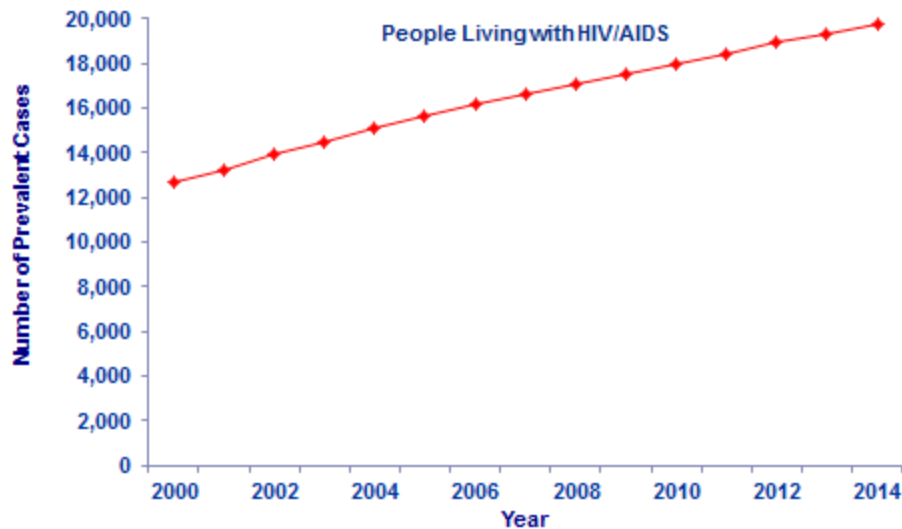
² <http://www.census.gov/quickfacts/table/PST045215/25>



Since 2000³, there are more people living with HIV/AIDS in Massachusetts, with fewer people being diagnosed with HIV infection each year, and fewer people with HIV infection who die. The improvement of health and longevity due to current HIV treatment has resulted in an increase in the number of people living with HIV/AIDS of approximately 3% per year. From 2000 to 2014, the number of people living with HIV/AIDS increased overall by 56% (Figure 2). During the same time period, the number of deaths among people reported with HIV/AIDS decreased by 31% (from 333 to 231). The number of HIV infection diagnoses decreased by 37% from 2000 (N=1,191) to 2008 (N=746), then plateaued at an average of 691 diagnoses each year from 2009 to 2014 (Figure 3).

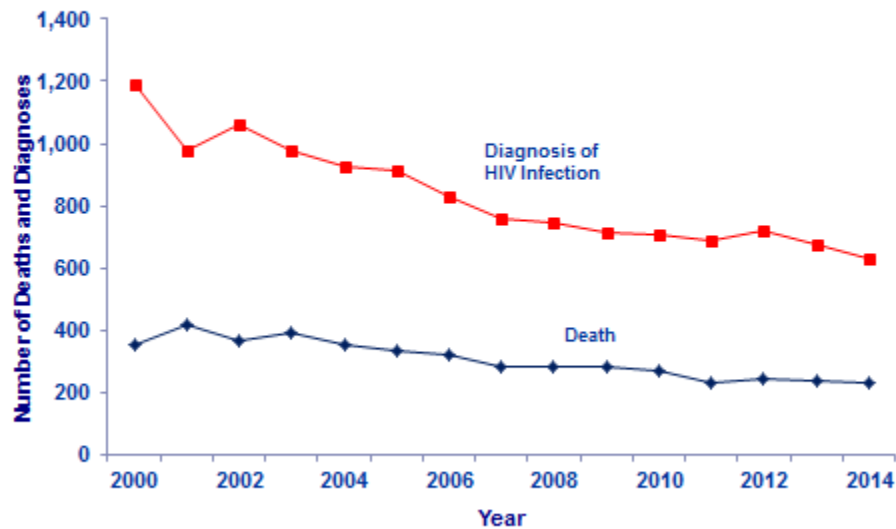
³ The year 2000 is used as a baseline to present historical trends in HIV infection diagnosis, HIV/AIDS prevalence, and deaths among those reported with HIV/AIDS to avoid reporting artifacts associated with the first year of HIV (non-AIDS) reporting (1999) in the state, the Commonwealth of Massachusetts. The most recent ten-year period for which HIV infection diagnosis data are available (2005 to 2014) is used elsewhere to describe HIV infection diagnosis trends.

Figure 2. Trends in the Number of People Living with HIV/AIDS: Massachusetts, 2000–2014



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 3/1/16

Figure 3. Trends in the Number of HIV Infection¹ Diagnoses and Deaths among People Reported with HIV/AIDS: Massachusetts, 2000–2014



¹ Reflects year of diagnosis for HIV infection among all individuals reported with HIV infection, with or without an AIDS diagnosis.
Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 3/1/16

Data-to-care approaches (i.e. using health information about persons newly diagnosed and living with HIV infection to direct service development) are central to Massachusetts’s efforts to reduce the impact of the HIV epidemic in ways that are responsive to the needs of HIV+ and at risk populations, prevent new HIV infections, and improve health outcomes along the HIV care continuum. Examining recent trends in new diagnoses informs our prevention approaches, while understanding the population of persons living

with HIV in the Commonwealth guides the design, locations, and interventions delivered by the service system. The data presented below highlight health disparities, and underscore the need for tailored responses to maximize engagement and retention in prevention, care, and treatment for different population groups.

The following is a summary description of the current epidemiology in Massachusetts, including trends and changes in the Commonwealth's HIV/AIDS cases, recent HIV infections, and a summary of population level disparities. The full range of epidemiological data for the Commonwealth is detailed in this section, pages 10-37.

EPIDEMIOLOGIC SUMMARY

- As of 12/31/2015 there are 20,951 HIV+ individuals residing in Massachusetts, including those who were first diagnosed in another state
- The number of HIV infection diagnoses decreased by 47% since the year 2000, and 31% in the last 10 years
- The number of deaths among people reported with HIV/AIDS declined 31% from 333 in 2005 to a low of 231 deaths in 2014
- The number of people with established HIV infection that progressed to AIDS declined by 69% from 358 in 2000 to a low of 111 in 2015
- Persons living with HIV infection in Massachusetts have a median age of 52 years, and 59% of HIV+ state residents are over the age of 50 years

RECENT HIV INFECTIONS

- The age-adjusted average annual rate of HIV diagnosis from 2012 to 2014 was ten times higher among the black (non-Hispanic) population and six times higher among the Hispanic/Latino population
- Male-to-male sex is the predominant exposure mode in Massachusetts, accounting for 45% of all recent (2012 to 2014) HIV diagnoses and 61% of recent diagnoses among men.
- The second largest exposure mode group consists of individuals, predominantly men of color, reported to MDPH (Massachusetts Department of Public Health) with missing exposure mode information. Black (non-Hispanic) men account for 33% and Hispanic/Latino men 25% of all HIV diagnoses reported without exposure mode information during 2012 to 2014.
- Three percent of MSM were recently diagnosed with HIV infection at age 13-19 years, 37% at 20-29 years, 22% at 30-39 years, 24% at 40-49 years, and 14% at age 50 years old or older.
- Forty percent of MSM recently diagnosed with HIV infection were under 30 years old at diagnosis, compared to 18% of non-MSM men.
- Fifty-three percent of MSM recently diagnosed with HIV infection were white (non-Hispanic), 27% were Hispanic/Latino, 14% were black (non-Hispanic), 5% were Asian/Pacific Islander, and 1% were of other or unknown race/ethnicity.
- Twenty-six percent of people diagnosed and reported with HIV infection during 2012 to 2014 and 29% of people known to be living with HIV/AIDS in Massachusetts are women

- The majority of women recently diagnosed with HIV infection were racial/ethnic minorities. Fifty-two percent were black (non-Hispanic), 26% Hispanic/Latina, 19% white (non-Hispanic), 3% Asian/Pacific Islander, and 1% were of other or undetermined race/ethnicity
- While only 16% (N=1,060,281) of the Massachusetts population was born outside the United States (US) and US dependencies, 26% (N=5,246/20,272) of people living with HIV/AIDS and 35% (N=713/2,072) of those recently diagnosed with HIV infection are non-US born
- Persons born outside the United States and diagnosed with HIV infection in Massachusetts, during 2012 to 2014, were primarily from sub-Saharan Africa (28%), Central and South America (28%), and the Caribbean Basin (27%); an additional 5% were from North America and Europe, 4% from Southeast Asia, 4% from Central and South Asia, and 4% were from other or unknown regions.
- 49% of women diagnosed with HIV infection during 2012 to 2014 were born outside the US, compared to 30% of men

DISPARITIES SUMMARY

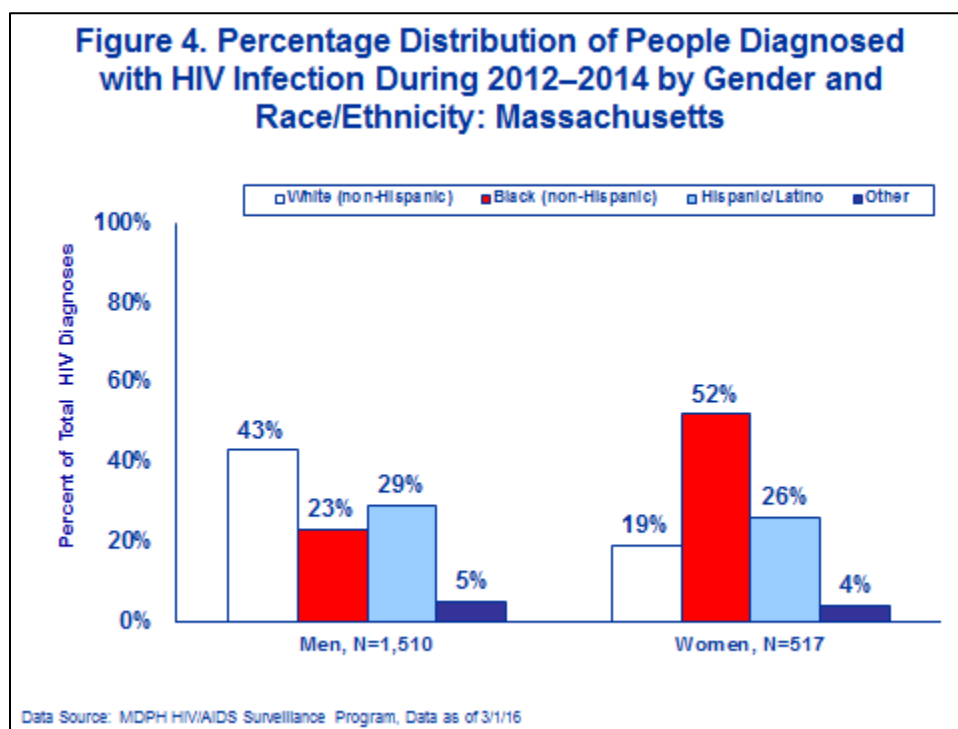
- The estimated average annual rate of HIV diagnosis from 2012 to 2014 among MSM is 28 times the rate of infection in non-MSM men
- Black (non-Hispanic) and Hispanic/Latina women are diagnosed at levels 33 and 12 times that of white (non-Hispanic) women (1.2 per 100,000).
- Non-US born individuals are diagnosed with HIV infection at a rate more than twice that of individuals born in the US or Puerto Rico

CHARACTERISTICS OF PEOPLE RECENTLY DIAGNOSED WITH HIV INFECTION IN MASSACHUSETTS

Table 1. People diagnosed with HIV infection from 2012–2014 ¹ by sex at birth, place of birth, race/ethnicity, exposure mode, and age at HIV infection diagnosis, Massachusetts		
Sex at Birth:	N	%
Men	1,510	74%
Women	517	26%
Place of Birth:		
US	1,180	58%
Puerto Rico/US dependency ²	134	7%
Non-US	713	35%
Race/Ethnicity:		
White (non-Hispanic)	745	37%
Black (non-Hispanic)	613	30%
Hispanic/Latino	580	29%
Asian/Pacific Islander	72	4%
Other/Undetermined ³	17	1%
Exposure Mode:		
Male-to-male sex (MSM)	920	45%
Injection Drug Use (IDU)	105	5%
MSM/IDU	51	3%
Heterosexual Sex	151	7%
Other	11	1%
Total Undetermined	789	39%
Presumed Heterosexual Sex ⁴	276	14%
Undetermined ⁵	513	25%
Age at Diagnosis:		
Under 13	7	<1%
13 to 19	55	3%
20 to 24	239	12%
25 to 29	291	14%
30 to 34	272	13%
35 to 39	198	10%
40 to 44	227	11%
45 to 49	295	15%
50 to 54	202	10%
55 to 59	124	6%
60+	117	6%
Total	2,027	100%
¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.		
² One hundred percent of people diagnosed with HIV infection from 2012–2014 who were born in a US dependency were born in Puerto Rico		
³ Other/Undetermined includes American Indian/Alaska Native individuals and persons of unspecified race/ethnicity		
⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to women.		
⁵ Includes male sex with female of unknown HIV status or risk; those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.		
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 3/1/16		

As shown in Table 1 above, nearly three-quarters of individuals recently diagnosed with HIV infection (during 2012 to 2014) were born male, and male-to-male sex was the leading exposure mode, accounting for 45% of diagnoses, followed by people of undetermined risk (25%). It should be noted that 13 of the 1,510 individuals recently diagnosed with HIV infection and born male are transgender women.

Thirty-seven percent of people recently diagnosed with HIV infection are white (non-Hispanic), 30% are black (non-Hispanic), 29% are Hispanic/Latino, 4% are Asian/Pacific Islander, and 1% are of other/undetermined race/ethnicity. Comparatively, black (non-Hispanic) individuals make up 6%, and Hispanic/Latino individuals 10% of the total Massachusetts population. Additionally, while 43% (N=649/1,510) of men diagnosed with HIV infection during 2012 to 2014 were white (non-Hispanic), 52% (N=269/517) of women diagnosed during this time period were black (non-Hispanic) (Figure 4).



Exposure mode among individuals recently diagnosed with HIV infection varied by race/ethnicity as well as gender, as outlined in Table 2 below. Among those diagnosed, male-to-male sex is the most frequently reported exposure, accounting for 45% of recent HIV infection diagnoses. Male-to-male sex is the most frequently reported exposure mode for men that were reported with HIV exposure information in all racial/ethnic groups. However, it should be noted that half of black (non-Hispanic) men were reported without risk information. This creates challenges in ascertaining information about exposure mode and behavioral risk in men, particularly among those who are black (non-Hispanic) and non-US born.

The most frequently reported exposure mode among women of all race/ethnicities recently diagnosed with HIV was presumed heterosexual sex, (which refers to a woman reporting sex with men, but with no HIV risk or HIV status information for male sex partners), accounting for 66% of black (non-Hispanic) women recently diagnosed with HIV infection, 47% of Hispanic/Latina women and 30% of white (non-Hispanic) women. Sex with males also accounts for 79% of HIV infections among HIV+ transgender

women. When considered alongside heterosexual exposure with a male partner who is HIV+ or documented to be at risk for HIV infection, sex with men is the leading reported exposure mode for newly diagnosed women, particularly for black (non-Hispanic) and Hispanic/Latina women. Notably, white non-Hispanic women had the highest rates of HIV infection attributed to injection drug use (IDU) at 27% of recent HIV infections in this group (compared to 10% in Hispanic/Latina women and 1% in black (non-Hispanic) women).

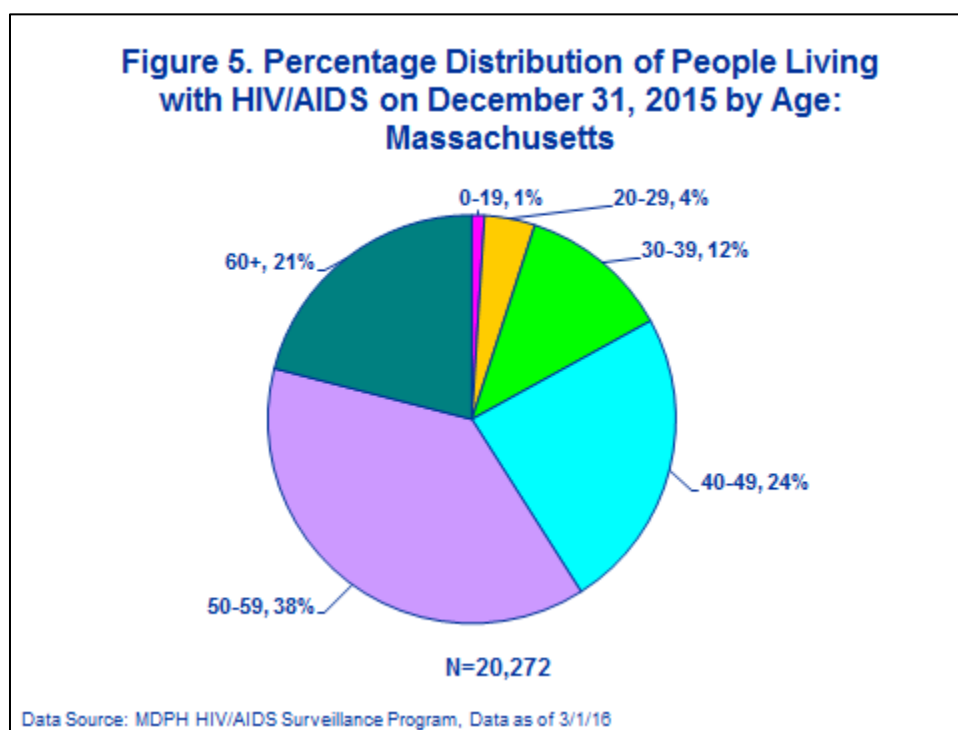
Table 2. Percentage distribution of people diagnosed with HIV infection by sex at birth, race/ethnicity ¹ and exposure mode: Massachusetts, 2012–2014				
Exposure Mode	All Men	White NH Men	Black NH Men	Hispanic/Latino Men
Male-to-male sex (MSM)	61%	76%	37%	56%
Injection drug use (IDU)	4%	3%	3%	7%
MSM/IDU	3%	6%	1%	2%
Heterosexual sex	4%	1%	8%	5%
Other	1%	0%	2%	<1%
Undetermined ²	27%	15%	50%	29%
Total Number	1,510	649	344	455
Exposure Mode	All Women	White NH Women	Black NH Women	Hispanic/Latina Women
IDU	8%	27%	1%	10%
Heterosexual Sex	18%	19%	15%	21%
Other	1%	1%	1%	0%
Presumed Heterosexual Sex ³	53%	30%	66%	47%
Undetermined	19%	23%	17%	21%
Total Number	517	96	269	135
¹ Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers. ² Includes man sex with women of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up. ³ Includes woman sex with men of unknown HIV status or risk. This category is limited to women. (NH) = (non-Hispanic), N/A=Not Applicable Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 3/1/16				

CHARACTERISTICS OF PEOPLE LIVING WITH HIV/AIDS ON 12/31/15

Table 3. People living with HIV/AIDS on December 31, 2015 by sex at birth, place of birth, race/ethnicity, exposure mode, and current age, Massachusetts		
Sex at Birth:	N	%
Men	14,439	71%
Women	5,833	29%
Place of Birth:		
US	13,043	64%
Puerto Rico/US dependency ¹	1,983	10%
Non-US	5,246	26%
Race/Ethnicity:		
White (non-Hispanic)	8,609	42%
Black (non-Hispanic)	6,083	30%
Hispanic/Latino	5,029	25%
Asian/Pacific Islander	399	2%
Other/Undetermined ²	152	1%
Exposure Mode:		
Male-to-male sex (MSM)	7,683	38%
Injection Drug Use (IDU)	3,560	18%
MSM/IDU	701	3%
Heterosexual Sex	2,819	14%
Other	413	2%
Total Undetermined	5,097	25%
Presumed Heterosexual Sex ³	1,894	9%
Undetermined ⁴	3,202	16%
Current Age:		
Under 13	24	<1%
13 to 19	76	<1%
20 to 24	298	1%
25 to 29	693	3%
30 to 34	949	5%
35 to 39	1,354	7%
40 to 44	1,764	9%
45 to 49	3,009	15%
50 to 54	4,142	20%
55 to 59	3,609	18%
60+	4,354	21%
Total	20,272	100%
¹ Ninety-eight percent of people living with HIV/AIDS in MA who were born in a US dependency were born in Puerto Rico, 2% were born in US minor outlying areas, <1% were born in the US Virgin Islands, and <1% were born in Guam. ² Other/Undetermined includes American Indian/Alaska Native individuals and persons of unspecified race/ethnicity ³ Includes female sex with male of unknown HIV status or risk. This category is limited to women. ⁴ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 3/1/16		

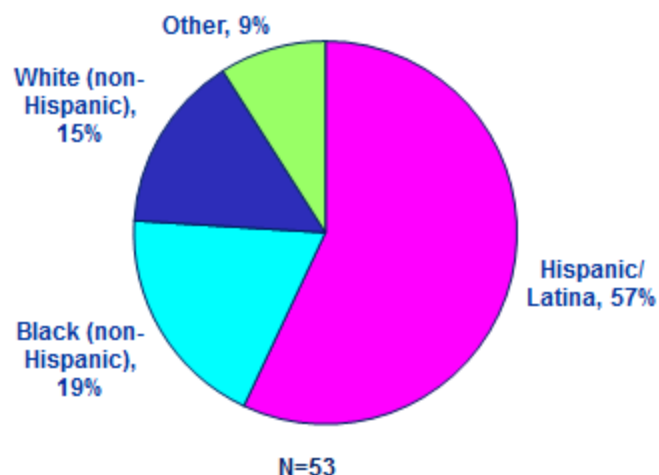
Table 2 displays the distribution of people living with HIV/AIDS by gender, race/ethnicity, place of birth, exposure mode, and age. As shown above, 42% of people living with HIV/AIDS in Massachusetts are white (non-Hispanic), 30% are black (non-Hispanic), 25% are Hispanic/Latino, 2% are Asian/Pacific Islander, and 1% are of other/undetermined race/ethnicity. Among 14,439 men living with HIV/AIDS, 50% are white (non-Hispanic), 23% are black (non-Hispanic) and 24% are Hispanic/Latino, while among 5,833 women living with HIV/AIDS, 24% are white (non-Hispanic), 46% are black (non-Hispanic) and 27% are Hispanic/Latina.

People living with HIV/AIDS are older than the general Massachusetts population with a median age of 52 years compared to 39 years for all residents of the Commonwealth. Additionally, 59% of people living with HIV/AIDS on December 31, 2015 were aged 50 years or older, compare to only 37% of general Massachusetts population. Conversely, only 5% of people living with HIV/AIDS were under 30 years old, compared to 37% of the general population (Figure 5).



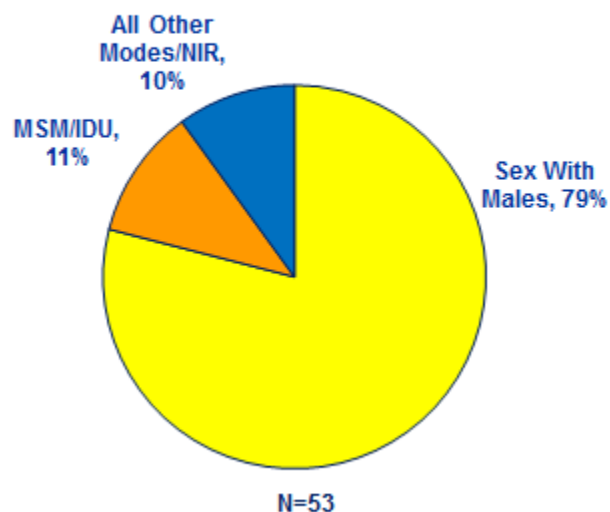
Additionally, 71% of people living with HIV/AIDS are born male and 29% are born female. Of those 14,439 individuals living with HIV/AIDS and born male, 53 are transgender women. Twenty-one percent of transgender women were under age 30 years on 12/31/15, compared to only 5% of all people living with HIV/AIDS. Over half of transgender women living with HIV/AIDS in Massachusetts are Hispanic/Latina (Figure 6). The predominant mode of exposure among transgender women is sex with males at 79%, (Figure 7).

Figure 6. Percentage Distribution of Transgender Women Living with HIV/AIDS by Race/Ethnicity: Massachusetts



Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 3/1/16

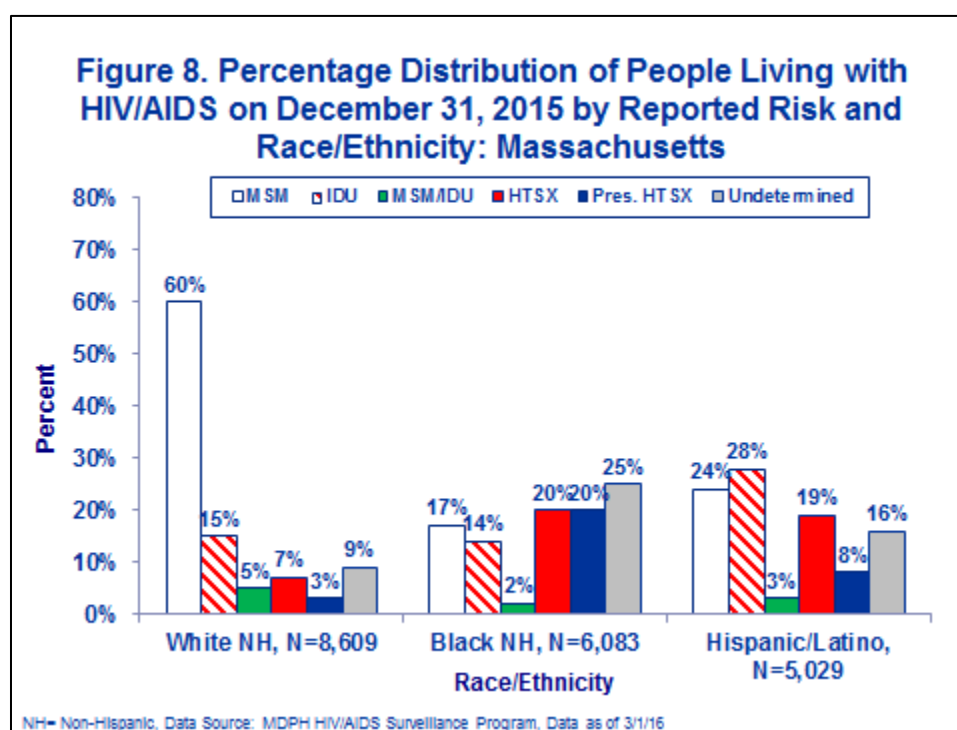
Figure 7. Percentage Distribution of Transgender Women Living with HIV/AIDS by Exposure Mode*: Massachusetts



* Exposure Mode is categorized based on sex at birth, not current gender

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 3/1/16

Male-to-male sex was the most frequently reported exposure mode for HIV infection among people living with HIV/AIDS on 12/31/15, accounting for 38% of exposures. While injection drug use accounted for only 18% of exposures among people living with HIV/AIDS overall, it remained the most frequently reported mode of exposure among Hispanic/Latino individuals living with HIV/AIDS (28%). The predominant exposure mode among white (non-Hispanic) individuals living with HIV/AIDS was male-to-male sex (60%). Among black (non-Hispanic) individuals the largest proportion was reported with undetermined risk (25%), followed by presumed heterosexual sex (20%) and heterosexual sex (20%) (Figure 8).



Sixty-four percent (N=13,043/20,272) of people living with HIV/AIDS were born in the US, 26% (N=5,246/20,272) were born outside the US, and 10% (N=1,983/20,272) were born in Puerto Rico or another US Dependency⁴. The distribution by place of birth varied by gender and race/ethnicity; for instance, 37% of women living with HIV/AIDS were born outside the US, and an additional 12% were born in Puerto Rico or another US Dependency, compared to 21% and 9%, respectively, of men. Also, among people living with HIV/AIDS who are Asian/Pacific Islander, the vast majority or 78% (N=311/399) were born outside the US, compared to 48% (N=2,895/6,083) of black (non-Hispanic), 28% (N=1,433/5,029) of Hispanic/Latino and 7% (N=577/8,609) of white (non-Hispanic) individuals. An additional 39% (N=1,956/5,029) of Hispanic/Latino individuals living with HIV/AIDS were born in Puerto Rico or another US Dependency.

⁴ US dependencies are commonwealths, territories and other entities that are supported and governed by the United States. Data Source:

U.S. Census Bureau, 2014 American Community Survey 1-year estimates, Selected Social Characteristics in the United States, 2014 American Community Survey 1-Year Estimates, DP02, accessed at <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

THE IMPACT OF HIV IN THE JURISDICTION – DIAGNOSIS TRENDS AND HEALTH DISPARITIES IN POPULATIONS AND COMMUNITIES

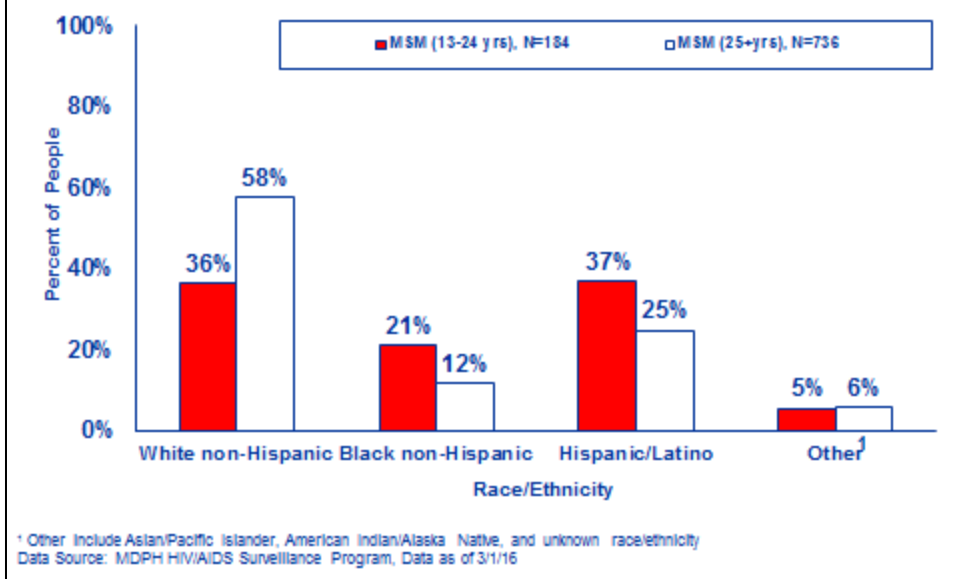
While the relative proportions of diagnosis of HIV infection by gender, race/ethnicity, and place of birth have remained fairly stable over the past ten years, there has been a shift in the distribution of HIV infection diagnoses by exposure mode. The proportion of cases with injection drug use as the exposure mode decreased from 14% in 2005 to 4% in 2014, and the actual number of cases decreased by 81% (from 125 to 24). During the same time period, the proportion of persons diagnosed with HIV infection with male-to-male sex as the reported exposure mode increased from 38% (N=350/913) to 46% (N=288/629). Among men, the proportion of HIV diagnoses with male-to-male sex as the exposure mode increased from 53% in 2005 to 61% in 2014, even though the absolute number of new infections attributed to MSM exposure has declined (from 350 in 2005 to 288 in 2014).

Differences were observed across gender and race/ethnicity in the percentage decrease in number of cases from 2005 to 2014. For example, from 2005 to 2014, the number of men diagnosed with HIV infection decreased by 28% (from 663 to 475) while the number of women diagnosed with HIV infection decreased by 38% (from 250 to 154). Additionally, from 2005 to 2014, the number of white (non-Hispanic) individuals diagnosed with HIV infection decreased by 42% (from 366 to 211); while the number of black (non-Hispanic) individuals decreased by only 32% (from 305 to 207); and the number of Hispanic/Latino individuals decreased by only 19% (from 223 to 180).

MEN WHO HAVE SEX WITH MEN

Men who have sex with men (MSM) are at high risk for HIV infection in Massachusetts, as male-to-male sex remains the predominant exposure mode for HIV infection in all Health Service Regions (HSR). Young MSM are at elevated risk for HIV infection in Massachusetts. From 2005 to 2014, there was a 49% increase in HIV infection diagnoses among MSM less than 30 years of age (from 79 to 118). During the same time period, there was a 37% decrease in HIV infection diagnoses among MSM greater than 30 years of age (from 271 to 170). Additionally, the reported rate of male-to-male sex is higher in younger men recently diagnosed with HIV infection than older men. From 2012 to 2014, male-to-male sex was the mode of exposure for 79% (N=184/232) of men diagnosed with HIV infection during adolescence and young adulthood (13–24 years) compared to 58% (N=736/1,274) of men aged 25 years or older. Additionally, a larger proportion of MSM diagnosed between the ages of 13 and 24 years was among racial/ethnic minorities, compared to MSM diagnosed at age 25 years or older. (Figure 9)

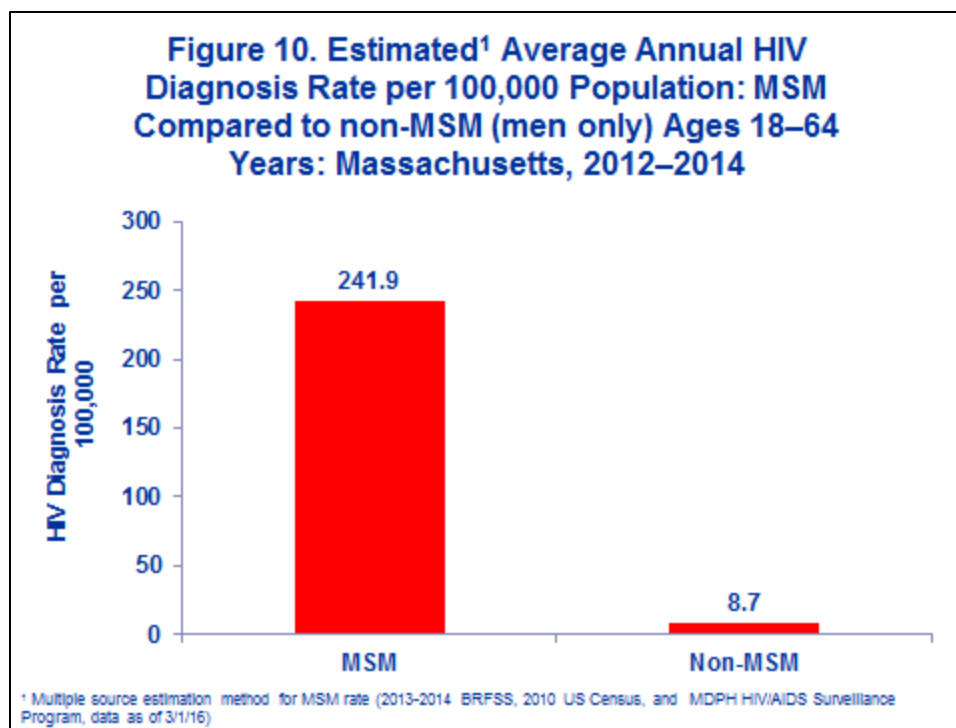
Figure 9. Percentage Distribution of MSM Diagnosed with HIV Infection During 2012–2014 by Age at Diagnosis and Race/Ethnicity: Massachusetts



The average age of HIV diagnosis was younger for black (non-Hispanic) and Hispanic/Latino MSM (33.0 and 32.8 years, respectively) compared to white (non-Hispanic) MSM (39.6 years). While the majority of white, non-Hispanic MSM were diagnosed at age 25 or older, the majority of black, non-Hispanic and Hispanic/Latino MSM were diagnosed under age 25 years. Data from other sources indicate that particularly among Hispanic/Latino(a) individuals, some of these cases are young, transgender women.

While young MSM may be at elevated risk of HIV infection, older MSM continue to be infected: 14% of new HIV infection diagnoses made during 2012 to 2014 were among men ages 50 years and above.

One of the largest comparative differences in diagnosis rates in Massachusetts is that between men exposed to HIV through male-to-male sex and those exposed through other modes. At 241.9 per 100,000 population, the estimated average annual rate of HIV diagnosis from 2012 to 2014 among MSM (ages 18-64) is 28 times the rate of infection in non-MSM men (8.7 per 100,000) (Figure 9). Please note that men with no identified risk for HIV infection were included in the non-MSM category for rate calculations.



Additionally, at 5,747.4 per 100,000 population, the estimated HIV/AIDS prevalence rate among MSM (ages 18–64) is also 28 times the rate of non-MSM.

BLACK AND HISPANIC/LATINO INDIVIDUALS AND OTHER RACIAL/ETHNIC MINORITIES

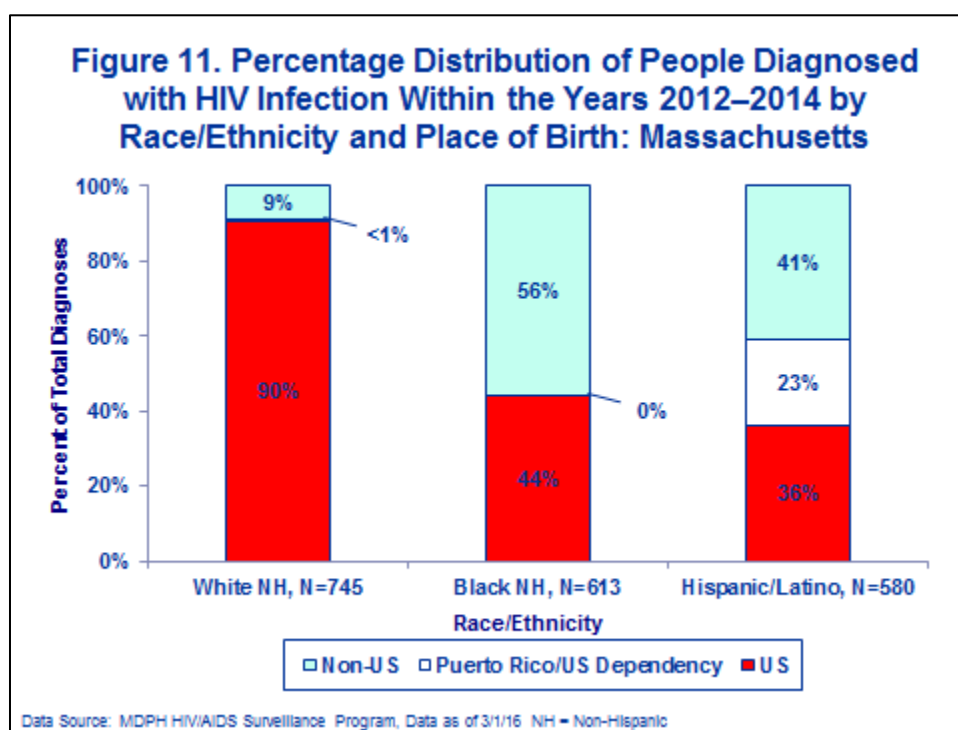
Most racial and ethnic minorities are affected by HIV/AIDS at levels disproportionate to their representation in the population at all disease stages, from detection of HIV infection to an AIDS diagnosis, as well as mortality. While only 8.4% of the Massachusetts population is black (non-Hispanic) and another 11.2% is Hispanic/Latino, 30% of the 20,272 people living with HIV/AIDS in Massachusetts are black (non-Hispanic), and 25% are Hispanic/Latino. Additionally, among 2,072 individuals diagnosed with HIV infection during 2012 to 2014, 30% were black (non-Hispanic) and 29% were Hispanic/Latino.

In Massachusetts, from 2012 to 2014, the rate of HIV diagnosis was highest among the black (non-Hispanic) and Hispanic/Latino populations. As compared to the white (non-Hispanic) population, the age-adjusted average annual rate of HIV diagnosis from 2012 to 2014 was ten times higher among the black (non-Hispanic) population and six times higher among the Hispanic/Latino population, at 48.5 and 31.3 cases per 100,000 population, respectively. The level of disparity is even greater for women. With age-adjusted average annual rates of HIV diagnosis from 2012 to 2014 of 40.9 and 15.2 cases per 100,000 population, black (non-Hispanic) and Hispanic/Latina women are diagnosed at levels 33 and 12 times that of white (non-Hispanic) women (1.2 per 100,000). With age-adjusted average annual rates of HIV diagnosis from 2012 to 2014 of 57.3 and 48.5 cases per 100,000 population, black (non-Hispanic) and Hispanic/Latino men are diagnosed at rates seven and six times that of white (non-Hispanic) men (8.6 per 100,000).

Age-adjusted rates of HIV/AIDS prevalence highlight similar patterns of disparate impact experienced by black (non-Hispanic) and Hispanic/Latino populations. The age-adjusted HIV/AIDS prevalence rate among

the black (non-Hispanic) population (1,512.2 per 100,000) is 11 times greater, and among the Hispanic/Latino population (1,059.4 per 100,000) is eight times greater than among the white (non-Hispanic) population (140.3 per 100,000). The age-adjusted prevalence rate of HIV/AIDS among black (non-Hispanic) women (1,268.7 per 100,000) is 28 times greater, and among Hispanic/Latina women (631.5 per 100,000) is 14 times greater than for white (non-Hispanic) women (46.1 per 100,000). The age-adjusted prevalence rate of HIV/AIDS among black (non-Hispanic) men (1,811.2 per 100,000) is eight times greater and among Hispanic/Latino men (1,562.5 per 100,000) is six times greater than for white (non-Hispanic) men (241.3 per 100,000).

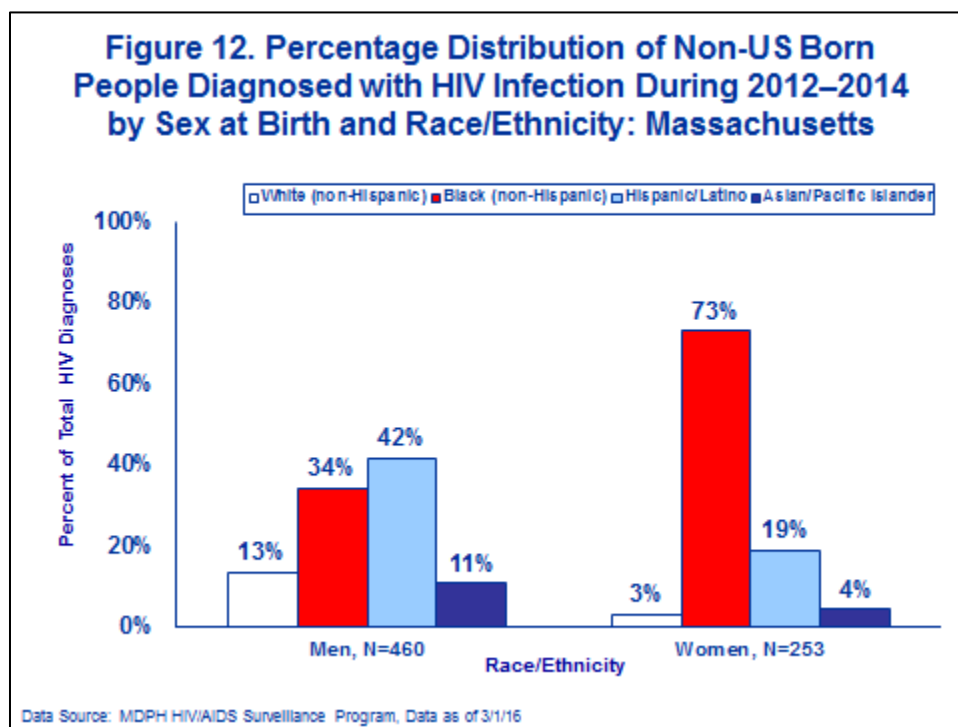
A greater proportion of racial and ethnic minorities diagnosed with HIV infection in Massachusetts are born outside the US than white (non-Hispanic) individuals. During 2012 to 2014, 56% of black (non-Hispanic) individuals diagnosed with HIV infection were born outside the US, compared to 41% of Hispanic/Latino individuals and 9% of white (non-Hispanic) individuals. An additional 23% percent of Hispanic/Latino individuals diagnosed with HIV infection during this time period were born in Puerto Rico or another US Dependency, compared to less than one percent of white (non-Hispanic) individuals and no black (non-Hispanic) individuals (Figure 11).



INDIVIDUALS BORN OUTSIDE THE UNITED STATES

While only 16% (N=1,060,281)⁵ of the Massachusetts population was born outside the United States (US) or in one of the US dependencies, 26% (N=5,246/20,272) of people living with HIV/AIDS and 35% (N=713/2,072) of those recently diagnosed with HIV infection are non-US born. Among women recently diagnosed with HIV infection, 49% (N=253/517) were born outside the US compared to 30% (N=460/1,510) of men. Among black (non-Hispanic) women diagnosed with HIV infection, the proportion born outside the US was 69% (N=185/269) compared to 36% (N=48/135) of Hispanic/Latina women and 8% (N=8/96) of white (non-Hispanic) women.

Non-US born persons diagnosed with HIV infection during 2012 to 2014 were primarily from racial and ethnic minority populations: 48% were black (non-Hispanic), 34% were Hispanic/Latino, 10% were white (non-Hispanic), and 8% were Asian/Pacific Islander. Ninety-six percent of non-US born women recently diagnosed with HIV infection were from racial/ethnic minority populations compared to 87% of non-US born men (Figure 12).



⁵ Data Source: U.S. Census Bureau, 2014 American Community Survey 1-year estimates, Selected Social Characteristics in the United States, 2014 American Community Survey 1-Year Estimates, DP02, accessed at <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

The HIV positive immigrant and refugee population of Massachusetts is a very diverse group (91 countries represented). Persons born outside the United States and diagnosed with HIV infection in Massachusetts, during 2012 to 2014, were primarily from sub-Saharan Africa (28%), Central and South America (28%), and the Caribbean Basin (27%). Combined, the following five countries represent the country of birth for 43% of non-US born individuals diagnosed with HIV infection in Massachusetts during 2012 to 2014 (N is the number of non-US born individuals diagnosed with HIV infection):

Table 4. Five most reported countries of birth for non-US born individuals newly diagnosed with HIV infection (2012-2014)		
Haiti	15%	(N=107)
Brazil	10%	(N=70)
Dominican Republic	7%	(N=53)
Uganda	5%	(N=38)
Cape Verde	5%	(N=36)

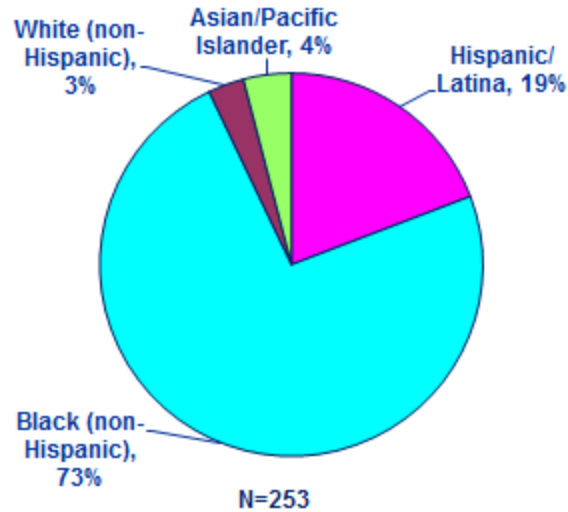
Persons born outside the United States also experience disparate impact from HIV/AIDS in Massachusetts. With age-adjusted average annual rates of HIV diagnosis from 2012 to 2014 of 19.3 per 100,000 population, non-US born individuals are diagnosed with HIV infection at a rate more than twice that of individuals born in the US or Puerto Rico (8.1 per 100,000).

WOMEN

Currently, 26% (N=517) of people diagnosed and reported with HIV infection during 2012 to 2014 and 29% (5,833) of people known to be living with HIV/AIDS in Massachusetts as of December 31, 2015 are women. These totals refer to individuals who were assigned female sex at birth; there are an additional 53 transgender women living with HIV/AIDS who were born male and 13 transgender women who were diagnosed with HIV infection during 2012 to 2014 (See Figures 6 and 7 for further detail on transgender women living with HIV/AIDS). From 2005 to 2014, the annual number of women diagnosed with HIV infection decreased by 38% (from 250 to 154), compared to a 28% decrease among men (from 663 to 475).

The majority of women recently diagnosed with HIV infection were racial/ethnic minorities. Fifty-two percent were black (non-Hispanic), 26% Hispanic/Latina, 19% white (non-Hispanic), 3% Asian/Pacific Islander, and 1% was of other or undetermined race/ethnicity. Additionally, 49% of women diagnosed with HIV infection during 2012 to 2014 were born outside the US, compared to 30% of men. See Figure 13 for the distribution of non-US born women by race/ethnicity.

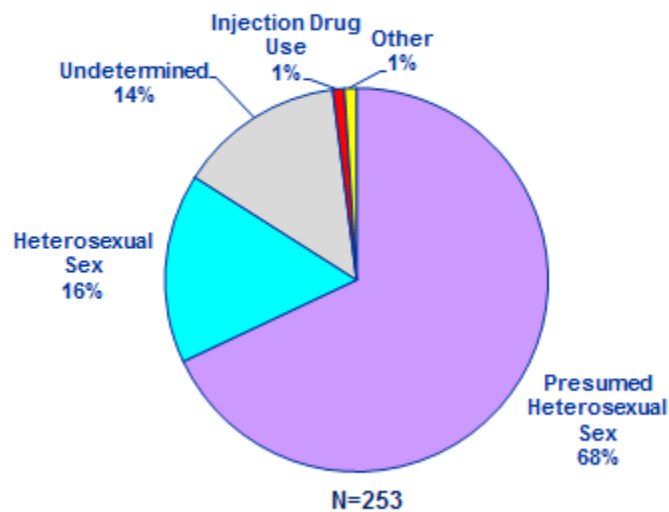
Figure 13. Percentage Distribution of Non-US born Women Diagnosed with HIV Infection During 2012–2014 by Race/Ethnicity: Massachusetts



Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 3/1/16

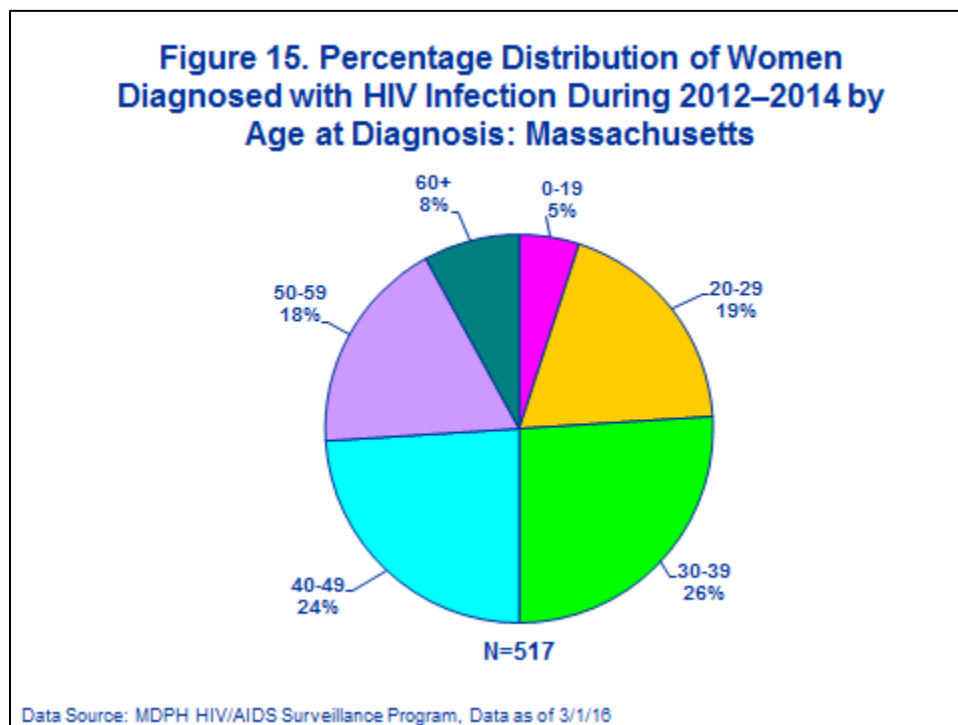
Black (non-Hispanic) women born outside the U.S. comprise 36% (N=185/517) of all Massachusetts women diagnosed with HIV infection during the three-year period 2012 to 2014. See Figure 14 for the percentage distribution of non-US born women by exposure mode. The majority (68%) reported heterosexual exposure with male on unknown risk or HIV status.

Figure 14. Percentage Distribution of Non-US Born Women Diagnosed with HIV Infection from 2012–2014 by Exposure Mode: Massachusetts

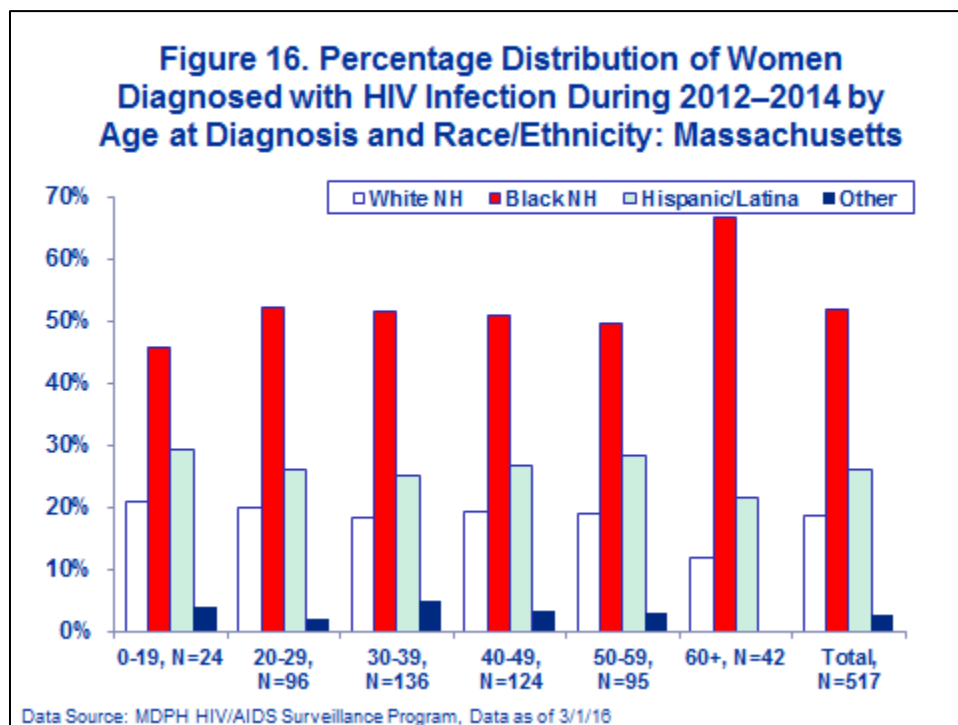


Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 3/1/16

Women experience risk for HIV infection throughout the lifespan. The majority (50%) of women diagnosed with HIV infection during 2012 to 2014 were between the ages of 30 and 49 (Figure 15).

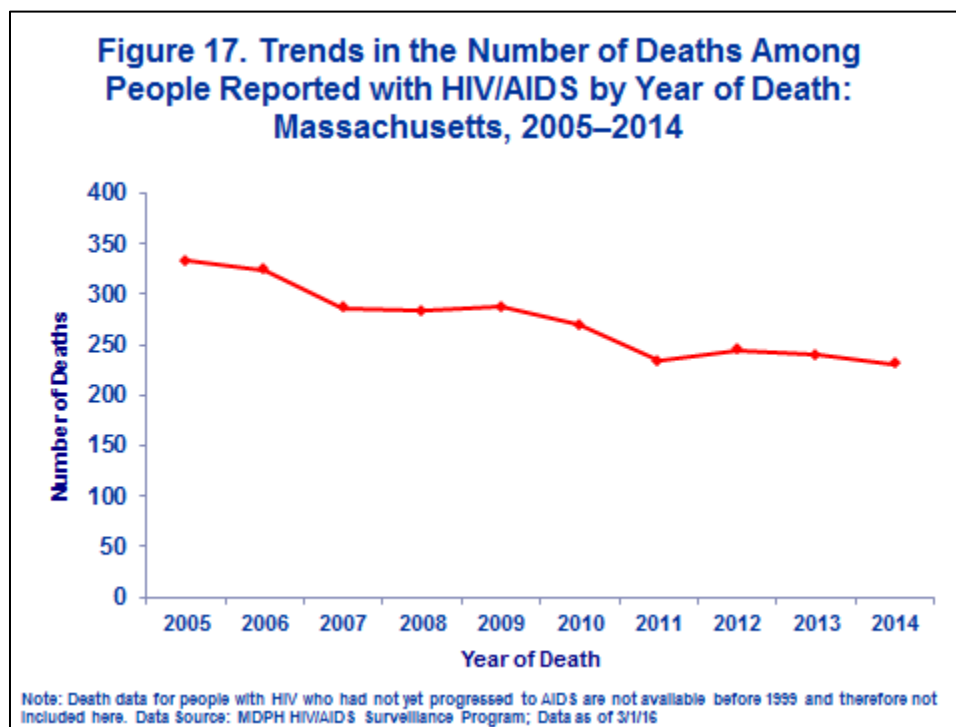


Black non-Hispanic women represent the greatest proportion of women diagnosed with HIV in all age groups. Sixty-seven percent of women recently diagnosed with HIV infection at age 60 years or older are black (non-Hispanic), compared to 52% of all women recently diagnosed (Figure 16).



MORTALITY AMONG INDIVIDUALS REPORTED WITH HIV/AIDS

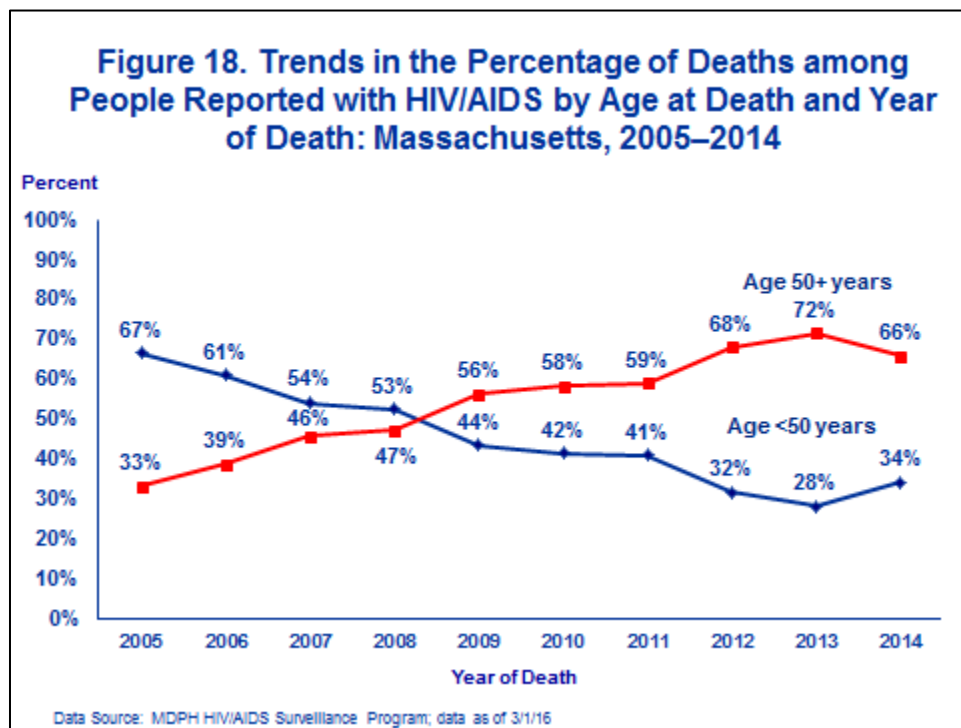
The number of deaths among individuals reported with HIV/AIDS declined 31% from 333 in 2005 to a low of 231 deaths in 2014 (Figure 17). In 2013, only 36% of deaths among people reported with HIV/AIDS were directly HIV-related (N=86/240), compared to 60% ten years prior (2004, N=211/353).



From 2005 to 2014, the greatest proportion of deaths among people with HIV was in persons reported with an exposure mode of injection drug use, which remained fairly stable at over 40% of deaths annually. In 2014, while IDU was the exposure mode for only 4% of people diagnosed with HIV infection, it was the mode of exposure for 44% of those reported with HIV/AIDS who died. In the past ten years (2005 to 2014), the proportion of deaths among people with HIV reported with male-to-male sex exposure mode increased from 17% to 26%.

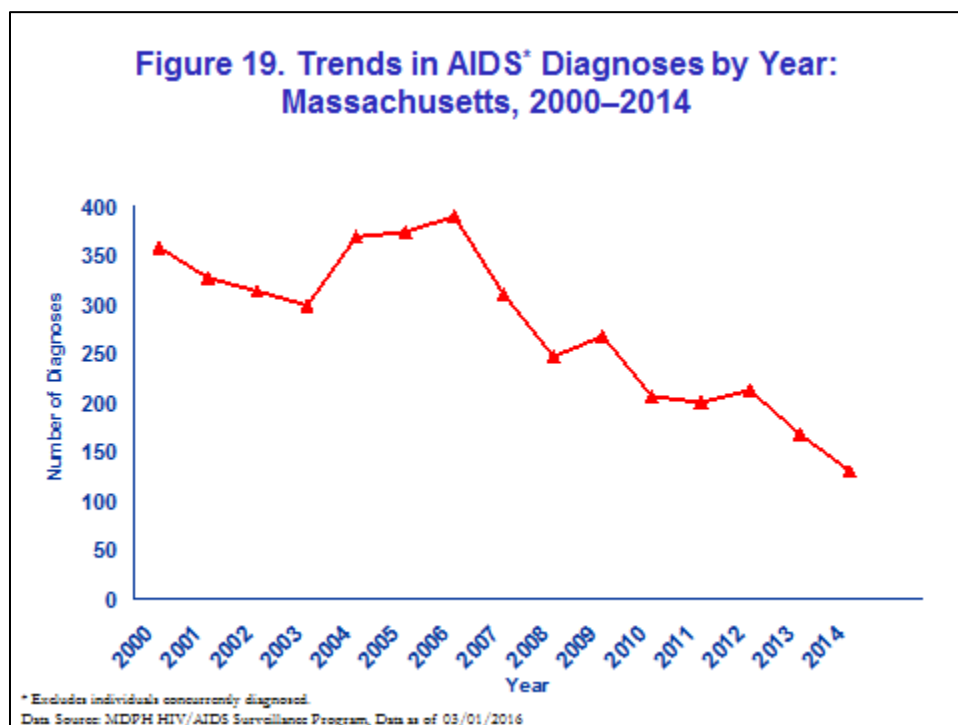
Members of black (non-Hispanic) and Hispanic/Latino populations are living and diagnosed with HIV infection at higher rates than those of the white (non-Hispanic) population, so they also experience higher mortality rates. But, black (non-Hispanic) and Hispanic/Latino individuals do not experience differential survival compared to white (non-Hispanic) individuals once diagnosed. Deaths among people reported with HIV/AIDS from 2005 to 2014 declined for all race/ethnicities.

The proportion of deaths among people with HIV/AIDS who were less than 50 years of age decreased from 67% (N=222/333) in 2005 to 34% (N=79/231) in 2014. During the same time period, the proportion of deaths among people with HIV/AIDS who were age 50 years old and older increased from 33% (111/333) to 66% (N=152/231) (Figure 19). Within the 50+ age group, the largest proportional increases in deaths from 2005 to 2014 were among 55 to 59 year olds and 60 to 64 year olds reported with HIV/AIDS (Table 4).



PROGRESSION TO AIDS

The number of people with established HIV infection that progressed to AIDS declined by 69% from 358 in 2000 to a low of 130 in 2014 (Figure 18). The decline in new AIDS diagnosis reflects the high quality of care and treatment available to HIV+ state residents, including high rates of viral suppression and improved health outcomes. A central objective of the State Plan is to eliminate progression to AIDS in persons living with HIV infection (see Objective #2.3).



INDICATORS OF RISK FOR HIV INFECTION IN MASSACHUSETTS: BEHAVIORAL RISK FOR HIV INFECTION

In order to implement highly effective HIV prevention approaches, an understanding of sexual and drug injection behaviors and other behavioral risks is of central importance. A range of behavioral surveillance surveys, program enrollment, and infectious disease surveillance data sources in Massachusetts provide insight into these patterns for particular population groups as well as for the general population.

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, (BRFSS)

The Massachusetts Department of Public Health's Office of Data Management and Outcomes Assessment is responsible for the operations of the Behavioral Risk Factor Surveillance System (BRFSS) in Massachusetts. The BRFSS is an annual telephone survey that collects data on emerging public health issues, health conditions, risk factors, and behaviors. This survey collects information on topics that are vital statewide and nationally, such as: racial discrepancies in health and health care, trends in chronic diseases, and health risk factors. Results are used for health care policy planning, as a guide for developing preventive health interventions, and as an assessment of health status in Massachusetts.

NUMBER OF SEXUAL PARTNERS

Sex with multiple partners has historically been correlated with other predictors of HIV transmission. Reducing the number of sexual partners is an effective HIV/STI prevention intervention strategy, as is increasing condom use. . Among 3,543 male and female respondents to the 2013 and 2014 BRFSS surveys, 18–64 years of age, 9% reported two or more sexual partners in the previous year, 69% reported one partner, and 22% reported no sexual partners. A larger proportion of men reported two or more partners in the previous year (14% of men compared to 4% of women), as well as 18 to 24 year olds (30% of 18 to 24 year olds reported two or more partners compared to 12% of 25 to 34 year olds, 5% of 35 to 44 year olds, and 2% of 45 to 64 year olds).

CONDOM USE

Of 2,512 18–64 year old sexually active respondents to the 2013 and 2014 BRFSS, 25% reported using a condom at last sexual encounter (27% of male respondents and 24% of female respondents). Thirty-one percent of 140 black (non-Hispanic) respondents reported condom use at last sexual encounter, compared to 28% of 190 Hispanic/Latino individuals and 24% of 2,056 white (non-Hispanic) individuals. Thirty-seven percent of the 79 respondents reporting three or more sexual partners in the previous year also reported condom use at last sexual encounter, compared to 65% of the 75 respondents reporting two partners and 22% of the 2,348 respondents reporting one partner.

Among 605 sexually active female respondents (age 18–64) to the 2014 Massachusetts Behavioral Risk Factor Surveillance Survey (BRFSS), 76 % reported that they did not use a condom at their last sexual encounter. Of these, the most common reason reported for not using a condom was being in a monogamous relationship (58%), followed by using another form of birth control (23%).

MASSACHUSETTS YOUTH RISK BEHAVIOR SURVEY

The Massachusetts Department of Elementary and Secondary Education - in collaboration with the Centers for Disease Control and Prevention (CDC) and the Massachusetts Department of Public Health - conducts the Youth Risk Behavior Survey (YRBS) in randomly selected public high schools in every odd-numbered year. The YRBS focuses on the major risk behaviors that threaten the health and safety of young people. This anonymous survey includes questions about tobacco use, alcohol and other drug use, sexual behaviors that might lead to unintended pregnancy or sexually transmitted disease, dietary behaviors, physical activity, and behaviors associated with intentional or unintentional injuries. Data from the YRBS provides accurate estimates of the prevalence of risk behaviors among public high school students in the Commonwealth, and are important for planning health education and risk prevention programs.

According to the Massachusetts Youth Risk Behavior Survey (MYRBS), adolescents in Massachusetts are engaging in behaviors that may place them at risk for HIV infection, although there has been little change in the rates of reported behaviors between 2003 and 2013. Fifty-eight percent of respondents reported condom use at last intercourse (compared to 57% in 2003). Thirty-eight percent reported ever having had sexual intercourse (compared to 41% in 2003). Three percent of students reported sexual intercourse before age 13 (compared to 5% in 2003). Nine percent reported four or more lifetime sexual partners (compared to 10% in 2003.) Twenty-eight percent reported sexual intercourse in the past three months (compared to 30% in 2003). Twenty-four percent reported alcohol or drug use at last intercourse (compared to 25% in 2003). Three percent reported ever having been or gotten someone pregnant (compared to 4% in 2003). Lastly, 9% reported ever having had sexual contact against their will (compared to 10% in 2003).

In addition to infection risks associated with sharing injection equipment, both injection and non-injection substance use has been documented to increase sexual risk for HIV infection and hepatitis C (HCV). Among 2,718 high school-aged respondents to the 2013 Massachusetts Youth Risk Behavior Survey (MYRBS), 4% reported ever using cocaine, 1% reported ever using heroin and 1% reported ever using a needle to inject drugs. As in prior years, in 2013, injection drug use was more common among high-school age males (1.2%) than among females (0.6%), but did not vary substantially by grade level.

HIV/AIDS SERVICE SYSTEM PROGRAM DATA

The Massachusetts Department of Public Health (MDPH) Office of HIV/AIDS (OHA) provides funding to community based medical and non-medical programs to support the provision of HIV prevention, integrated HIV, HCV, and STI screening, medical case management for people living with HIV, and HIV-related supported services. These providers submit data to OHA including client demographics, exposure mode category, and service utilization data (e.g. testing, medical case management). These data are utilized to inform the delivery of HIV prevention and care services in the Commonwealth. The sample of data outline below does not represent the full array of program data collected by the Office of HIV/AIDS.

HIV COUNSELING, TESTING, AND REFERRAL DATA

In calendar year 2015 (CY2015), publicly funded (OHA) HIV Counseling, Testing, and Referral (CTR) sites testing programs conducted 61,816 tests. Testing identified 260 new diagnoses, this represents approximately 44% of new diagnoses in 2015 based on preliminary data. In 2015, more HIV tests were performed on men (55.4%, N=34,231) than women (44.1%, N=27,263) at publicly (MDPH-Office of HIV/AIDS) funded sites; 236 tests (0.4%) were performed on transgender identified individuals. Racial and ethnic minorities comprised the majority of individuals tested for HIV at publicly funded sites; 35.8% (N=22,100) of tests were conducted with black (non-Hispanic) individuals, 21.1% (N=13,028) of tests were conducted with Hispanic/Latino individuals. Individuals identified as white (non-Hispanic) comprised 33.6% (N=20,774) of HIV tests conducted at publicly funded sites in CY2015. Of the 260 new diagnoses identified at publicly funded sites, 65.7% were male (N=171). 33.5% were female (N=87), and 0.8% (N=2) were transgender identified individuals. Among exposure mode categories, 33.8% (N=88) were MSM, 11.2% were IDU (N=29), and 12% (N=31) were assigned to the presumed heterosexual sex category.

SYRINGE SERVICE PROGRAMS (SSP)

There are currently six state-funded SSPs operating in Massachusetts—located in Boston, Brockton, Cambridge, Northampton, Provincetown, and Worcester. Four additional cities have approved SSP with establishment of direct service programs pending—in Gloucester, Greenfield, Lawrence, and North Adams. Two programs, located in Holyoke and Barnstable, operate without state funding. In CY2015, agencies providing state-funded SSPs distributed over 650,000 syringes and collected over 640,000 syringes. In 2015, state-funded SSPs conducted 1347 HIV tests, identifying 12 new and known HIV+ cases, representing a 0.9% seroprevalence among these sites. Additionally, these sites conducted 988 HCV antibody (HCV AB) tests, yielding 280 HCV AB+ tests (28.4% seroprevalence).

SEXUALLY TRANSMITTED INFECTIONS SURVEILLANCE DATA

Sexually transmitted infections in the general Massachusetts population are an indicator of unprotected sex and elevated risk for HIV infection. Individuals with an STI are more likely than uninfected individuals to also become infected with HIV if they are exposed to the virus through sexual contact. Additionally, persons with HIV/STI co-infection are more likely to transmit HIV through sexual contact than individuals infected with HIV alone.⁶

GONORRHEA

In 2015, there were 3,921 reported cases of gonorrhea, of which 71% (N = 2,798/3,921) were among men, and 28% (N= 1,102/3,921) were among women, and 1% were among transgender individuals or those with unknown gender. Nine percent (N=364/2,798) of gonorrhea cases among men and <1% of cases among women were co-infected with HIV. Nineteen percent (N=732/2,798) of gonorrhea cases among men also reported same sex contact (MSM). Of those identified as MSM, 20% (N=146/732) were co-infected with HIV, compared to 12% (N=214) of men with unknown risk. The greater number of men

⁶ CDC. CDC Fact Sheet The Role of STD Prevention and Treatment in HIV Prevention, <http://www.cdc.gov/std/hiv/stds-and-hiv-fact-sheet-press.pdf>

reported with unknown risk is due to reliance on passive reporting of sexual risk (case report forms) and limited follow-up.

Half (50%) of gonorrhea cases among men in 2015 were between 20 and 29 years of age, of which 9% (N= 120) were co-infected with HIV. The majority of co-infected cases were among older men: 16% of 30 to 39 year old men reported with gonorrhea in 2015 were co-infected with HIV, as were 23% of 40 to 49 year old men. While over half of gonorrhea cases reported among women in 2015 were aged 20 to 29 years (n = 617), 50% of women co-infected with gonorrhea and HIV were 50 years or older.

Rates of HIV and gonorrhea co-infection were similar across race/ethnicity: 11% among white (non-Hispanic), 10% among black (non-Hispanic), and 10% among Hispanic/Latino. Race/ethnicity was unknown or unreported in 39% of gonorrhea cases, for which 8% were co-infected with HIV.

INFECTIOUS SYPHILIS

In 2015, there were 778 reported cases of infectious syphilis, 93% (N=721/778) of which were among men, 6% (N=50/778) women, and 1% transgender individuals or those with unknown gender. Thirty-six percent (N=282/721) of infectious syphilis cases among men were also infected with HIV compared to <1% among women.

Eighty-two percent (N= 591/721) of infectious syphilis cases among men reported same sex contact (MSM). Of those identified as MSM 43% (N= 251) were co-infected with HIV.

A larger percentage of older men were co-diagnosed with infectious syphilis and HIV compared to younger age groups. Twenty-four percent (N=56) of men aged 20 to 29 with infectious syphilis were co-infected with HIV compared to 44% of 30 to 39 year olds and 53% of 40 to 49 year olds.

The majority of women (86%) with infectious syphilis were of reproductive age (age 15 to 44), with over half of HIV co-infections being among the 30 to 39 year olds.

Among both men and women, the majority of infectious syphilis cases in 2015 were among white (non-Hispanic) individuals. Rates of HIV co-infection were similar across race/ethnicity: 36% among white (non-Hispanic), 40% among black (non-Hispanic), and 35% among Hispanic/Latino. Race/ethnicity was unknown or unreported in 19% of infectious syphilis cases, of which 37% were co-infected with HIV.

Recent outbreaks of syphilis among MSM in Massachusetts are an indicator of unprotected sex and elevated risk for HIV infection. The number of annually reported cases of infectious syphilis in self-identified MSM more than doubled during the ten-year period from 2005 (N=167) to 2014 (N=397). Additionally, the proportion of self-identified MSM among reported infectious syphilis cases from 2005 to 2014 ranged from 66% (2014) to 83% (2008 and 2010). In 2014, 40% (N=158/397) of infectious syphilis cases among self-identified MSM were also diagnosed with HIV infection. Due to the increased risk of onward HIV transmission in HIV+ men co-infected with syphilis, increased access to STD testing, and prompt treatment and partner services, are central components of the HIV prevention response—particularly for men who have sex with men.

HEPATITIS C

Hepatitis C (HCV) is one of the highest volume reportable infectious diseases in Massachusetts, with 8,000 to 10,000 confirmed and probable HCV infection cases being newly reported annually, most of whom are chronically infected. Persons who inject drugs remain particularly vulnerable to acquisition and transmission of HCV, in large part due to the sharing of syringes and other drug injection equipment. During the period 2007-2014, the number of confirmed acute HCV infections increased 177% from 2007 (N=93) to 2014 (N=258). Data on risk history are frequently not reported, but among those for whom risk history is known, the majority indicates a history of injection drug use.

Acute HCV infection is frequently not reported given that only 20% of those that are acutely infected are symptomatic and even among those with symptoms, they may have reduced access to care. A recent study by MDPH with community partners found that of 183 clinically acute HCV cases, only one was classified as a confirmed acute case for surveillance purposes. In order to better understand transmission trends, it is therefore helpful to examine HCV data among younger people who may not be acutely infected but were likely more recently exposed than their older counterparts.

HCV among youth and young adults aged 15-29 remains a priority concern for the Commonwealth. During the period 2007-2014, probable and confirmed cases of HCV infection rose 37% among this demographic, with 2,606 cases of HCV being reported in this age group in 2014 alone. Most of these cases are likely due to injection drug use, as seen in recent enhanced surveillance conducted in Massachusetts. Youth and young adults also continue to represent a significant proportion of clients accessing state-funded SSPs. Among all participants accessing syringe services programming in state fiscal year 2014, 26% of these clients were between the ages 18-29. In the same reporting period, 42% of all participants enrolled in SSP's reported being under age 20 at first injection.

SUBSTANCE ABUSE TREATMENT SERVICES

From state fiscal years 2006 to 2015, the percentage of clients admitted to state-licensed substance abuse treatment programs reporting the use of a needle to inject drugs within a year of admission rose from 30% to 50%. The number of enrolled substance abuse treatment program clients reporting needle use within one year increased 58% from 30,950 in fiscal year 2006 to 48,842 in fiscal year 2015. From state fiscal years 2006 to 2015, the percentage of admissions to state-licensed substance abuse treatment programs for heroin addiction increased from 37% to 53% of total admissions. Additionally, 89% of people admitted to state-funded substance abuse treatment programs in fiscal year 2015, who reported needle use within the past year were unemployed, compared to only 60% of those admitted who did not report needle use and 25% were homeless compared to only 12% of those who did not report needle use. The impacts of the opiate crisis in Massachusetts are profound, and include increases in drug injection behaviors, and corresponding increased risk for HIV and hepatitis C (HCV) infection among persons who inject drugs (PWID). Expanded efforts to reach and engage PWID in prevention and care services is a priority of the State Plan, including objectives to improve health outcomes and eliminate new HIV infections in PWID.

MASSACHUSETTS HIV CARE CONTINUUM

The HIV Care Continuum is an important tool to measure and track the effectiveness of efforts to combat the HIV epidemic in the country and the Commonwealth. Timely linkage to care after an HIV diagnosis and consistent engagement and retention in medical care are both critical to assure access to treatment and promote health for persons living with HIV infection. High rates of viral suppression are associated with improved health outcomes and substantially lower risk of HIV transmission.

METHODS

The HIV Care Continuum is a model that is used by federal, state and local agencies to identify issues and opportunities related to improving the delivery of services to people living with HIV across the entire continuum of care. The HIV care continuum is a way to show, in visual form, the proportion of individuals living with HIV/AIDS who are engaged at each stage of HIV care including linkage to care, retention and viral suppression. In Massachusetts, the HIV Care Continuum is developed by the Massachusetts HIV/AIDS Surveillance Program (MHASP) through analysis of HIV case surveillance and laboratory data submitted by local health centers, hospitals, and reference laboratories. The MHASP utilizes CDC recommendations published in *Continuum of HIV Care: Guidance for Local Analyses* to determine the measures of the HIV Care Continuum. The methodology is as follows:

- Any Evidence of Care – at least 1 CD4 or viral load (VL) lab drawn in the measurement year.
- Retention in Continuous Care – 2 or more CD4 or VL test results at least 3 months apart during a 12 month period (measure currently used by HIV Incidence and Case Surveillance Branch (HICSB) and National HIV/AIDS Strategy (NHAS))
- Viral Suppression – VL \leq 200 copies/mL at most recent lab draw (based on Department of Health and Human Services recommended definition of virologic failure)

STAGES OF HIV CARE: PEOPLE LIVING WITH HIV/AIDS

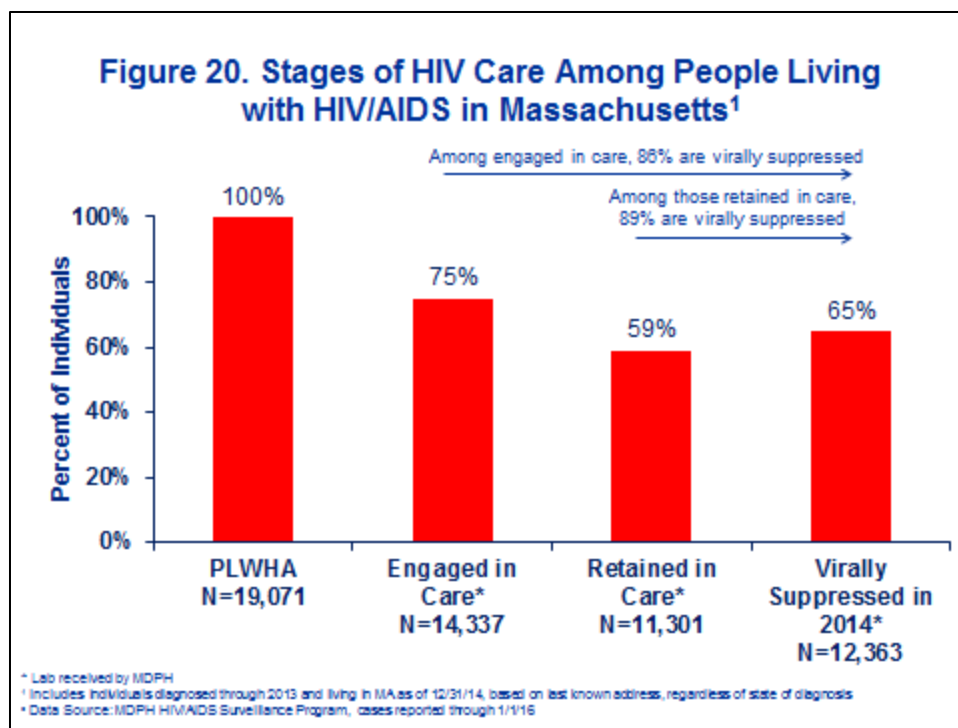
The Massachusetts HIV Care Continuum for persons living with HIV/AIDS (PLWHA) is generated based on all persons who have been diagnosed with HIV infection in the state, and who have not been reported to have died. Among 19,071 persons living with HIV/AIDS in Massachusetts as of 1/1/15,⁷ 75% were engaged⁸ in HIV care and 59% were retained⁹ in care in 2014. Engagement and retention in care was linked with high rates of viral suppression. Eighty-six percent of those engaged in care and 89% of those retained in care in Massachusetts were virally suppressed.¹⁰ Among all PLWHA ever reported to MDPH since 1981 in Massachusetts, 65% were virally suppressed³, 28% did not have a viral load test reported to MHASP in 2014, and only 8% had a viral load higher than 200 copies/mL.

⁷ An earlier date for people living with HIV/AIDS is used than elsewhere in the report (1/1/15 vs 1/1/16) to allow a one-year period of observation for assessment of engagement, retention and suppression.

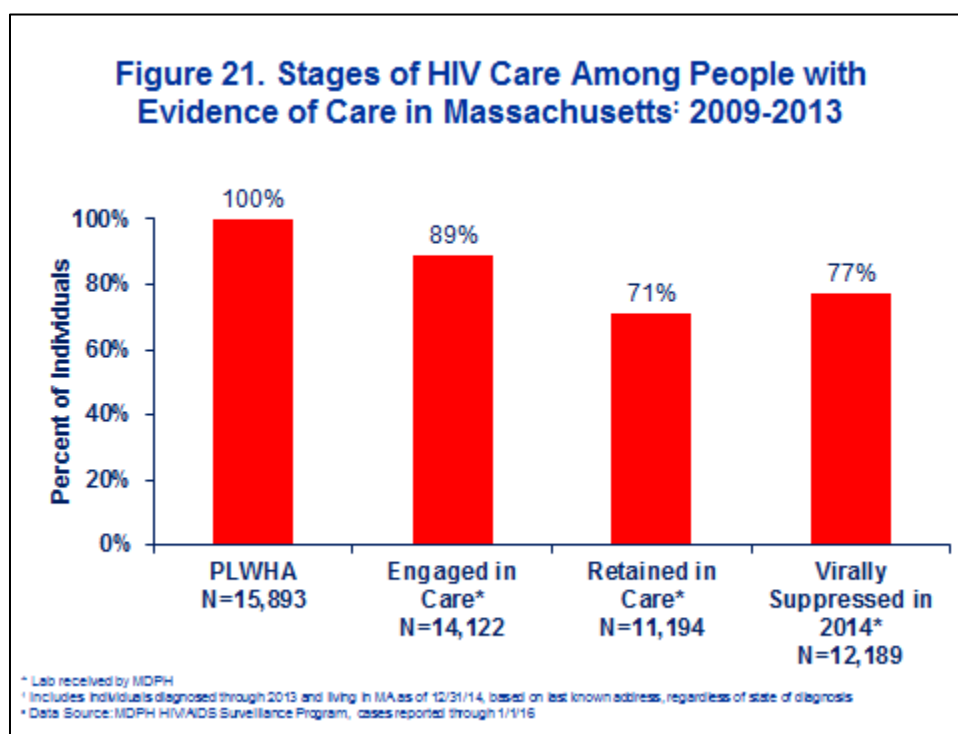
⁸ “Engaged in care” is defined by the Centers for Disease Control and Prevention (CDC) as having one laboratory test result (CD4 or viral load test) during a one year period.

⁹ “Retained in care” is defined by CDC as having two or more laboratory tests, obtained at least three months apart, during a one year period.

¹⁰ “Viral suppression” is defined as a viral load less than or equal to 200copies/mL.



It is possible that there are a number of individuals who have not been reported with an HIV laboratory in the past 12 months that may no longer reside in Massachusetts. Analysis of viral suppression based only on those individuals with evidence of care in Massachusetts in the last five years resulted in higher levels of engagement in care (89%) and viral suppression (77%).



Women had slightly higher rates of engagement and retention in care compared to men, and slightly lower rates of viral suppression. A higher percentage (77%) of women were engaged in care compared to 75% of men; 61% were retained in care compared to 59% of men, and 63% were virally suppressed compared to 66% of men.

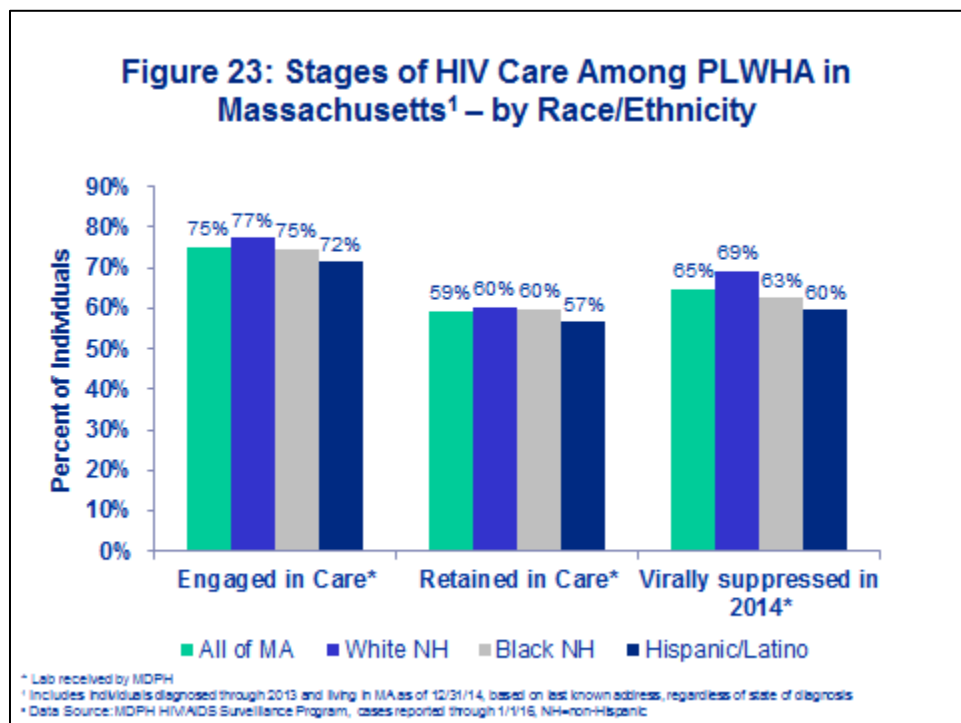
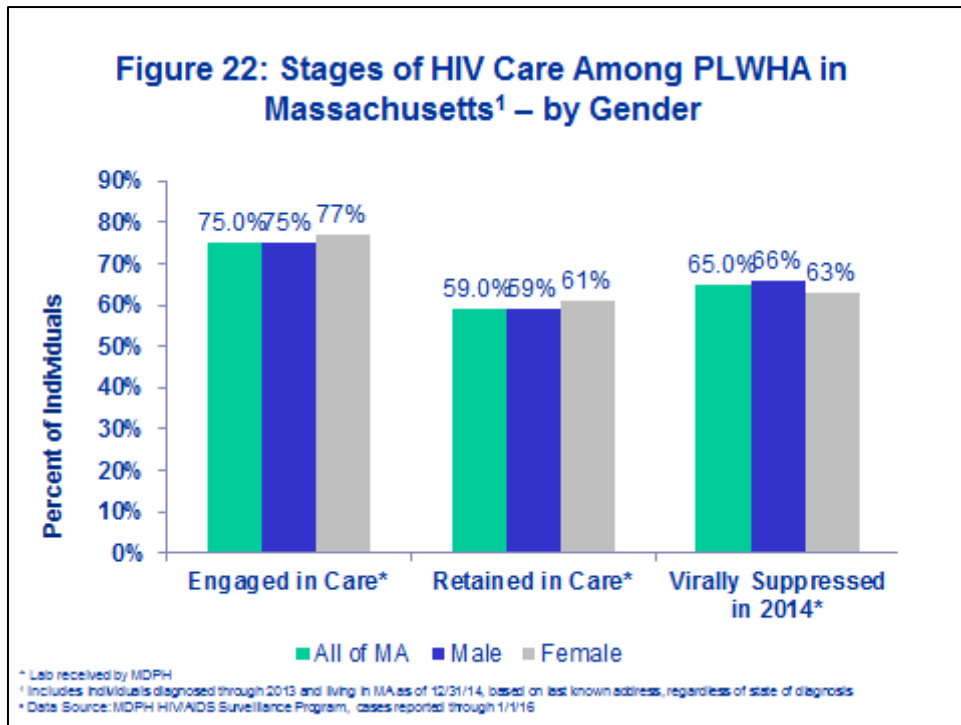
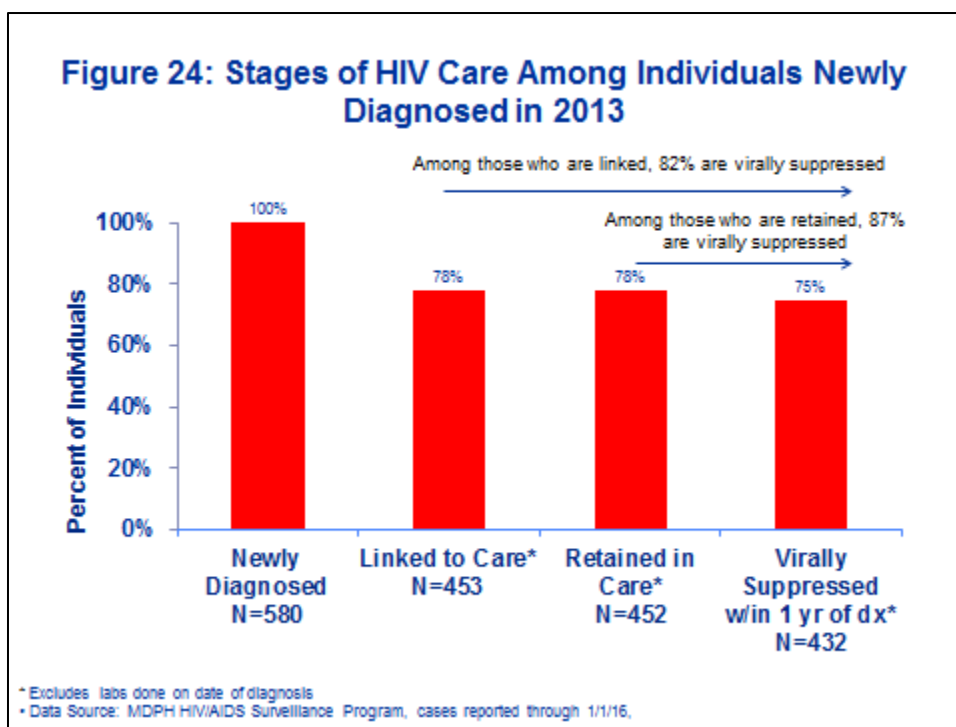


Figure 23 above highlights that levels of engagement in care and viral suppression were higher among white (non-Hispanic) PLWHA compared to black (non-Hispanic) and Hispanic/Latino PLWHA. Sixty-nine percent of white (non-Hispanic) were virally suppressed compared to 63% for black (non-Hispanic) and 60% for Hispanic/Latino individuals.

Engagement and retention in care were similar among exposure modes. However, rates of viral suppression were higher among men who have sex with men (MSM) compared to other exposure modes. Seventy percent of MSM were virally suppressed compared to other exposure modes which ranged from 60% to 66%.

STAGES OF HIV CARE: INDIVIDUALS NEWLY DIAGNOSED

Prompt entry into medical care after HIV diagnosis ensures timely access to treatment, and other health and social services. Linkage to care within three months of HIV diagnosis improves health outcomes for newly diagnosed individuals and supports HIV prevention. High rates of linkage to care are associated with retention in care and viral suppression.



As of January 1, 2016, there were 580 individuals newly diagnosed with HIV in 2013 who were living in and receiving care in Massachusetts. Among the 580 newly diagnosed individuals, 78% were linked to care within three months of diagnosis. Seventy-eight percent were retained in care and 75% were virally suppressed within one year of diagnosis (viral load less than or equal to 200 copies/mL).

Rates of linkage to care, retention in care and viral suppression are similar for newly diagnosed women and men. Eighty-one percent of women and 77% of men were linked to care within three months of HIV diagnosis. Eighty-one percent of women and 77% of men were retained in care. Sixty-nine percent of newly diagnosed women and 76% of newly diagnosed men were virally suppressed.

The rate of linkage to care among persons newly diagnosed with HIV infection is similar for all race/ethnicities. However, retention and viral suppression rates within 12 months of diagnosis were lower among Hispanic/Latino individuals than other race/ethnicities. Seventy percent of Hispanic/Latino individuals were retained in care compared to 77% of white (non-Hispanic) individuals and 86% of Black (non-Hispanic) individuals; and 63% were virally suppressed compared to 81% of white (non-Hispanic) individuals and 77% of black (non-Hispanic) individuals. No meaningful differences in linkage, retention, or viral suppression rates were identified based on exposure mode.

HIV/AIDS SERVICES INFRASTRUCTURE

Massachusetts is a national leader in the delivery of high quality and accessible healthcare. Massachusetts was the first state to accomplish state healthcare reform, enacting landmark legislation in 2006 that made affordable health insurance products available to all residents of the Commonwealth. Today, Massachusetts boasts the highest percentage of insured residents of any state in U.S. at 96%¹¹. Residents can access healthcare at leading medical facilities, private medical practices, academic teaching hospitals, or through a system of community health centers (CHC) located in communities disproportionately impacted by HIV throughout the Commonwealth.

In Massachusetts, the HIV/AIDS prevention and care infrastructure is woven into the fabric of this extensive healthcare system; prevention and care services are provided both in these medical care sites, as well as through a network of non-medical, community based organizations (CBO). Ending the HIV epidemic in Massachusetts relies on a combination of meaningful community engagement and advisory, highly effective HIV prevention and care programs, and core public health activities and interventions. Massachusetts is committed to utilize the full range of tools available to reduce new HIV infections, support engagement and retention in care, and improve rates of viral suppression.

PUBLIC HEALTH INVESTMENTS

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

The mission of the Massachusetts Department of Public Health (MDPH) is to prevent illness, injury, and premature death; ensure access to high quality public health and health care services, and to promote wellness and health equity for all people in the Commonwealth. Health Department programming explicitly addresses health disparities through purposeful stakeholder and community engagements, improved collection and use of data, and rigorous monitoring to ensure equal access to health care services. Community based HIV/AIDS services in the Commonwealth are administered by a number of bureaus, offices, and programs within MDPH and local public health departments.

BUREAU OF INFECTIOUS DISEASES AND LABORATORY SCIENCES

A merger between the Bureau of Laboratory Sciences and Bureau of Infectious Diseases, completed in February 2016, created a new Bureau known as the Bureau of Infectious Disease and Laboratory Sciences (BIDLS). This new structure supports the shared work and priorities of the Office of HIV/AIDS (OHA) and the Massachusetts State Public Health Laboratory (MSPHL) and further enhances opportunities to improve communications and collaborations between these two important entities.

¹¹ <http://kff.org/other/state-indicator/total-population/>

OFFICE OF HIV/AIDS

The Office of HIV/AIDS (OHA) is the division within the Bureau of Infectious Diseases and Laboratory Sciences responsible to administer state and federal resources for HIV prevention, care, and treatment services. OHA works with medical and non-medical organizations, community-based programs, people living with HIV/AIDS, and other stakeholders to advance HIV prevention and care services. This includes needs assessment, community engagement and HIV service planning, awarding contracts for services, capacity building assistance, and service monitoring and evaluation.

OHA funds a range of services in medical, non-medical, and community-based settings across the state for persons living with or at risk for HIV infection. These services include prevention and risk reduction services, integrated testing for HIV, hepatitis C, and sexually transmitted infections, and linkage to care and treatment; as well as opioid overdose education and naloxone distribution (OEND) activities, syringe services programs (SSP), non-occupational post-exposure prophylaxis (nPEP) and pre-exposure prophylaxis (PrEP). OHA funds a range of direct care health promotion services for people living with HIV/AIDS, with the aim of supporting engagement and retention in care and improving health outcomes. Medical case management programs assist in the coordination of medical care and support services, and either directly provide or coordinate access to, HIV treatment, adherence counseling, health systems navigation, peer support, nutrition, housing search and advocacy, rental/utility assistance, legal services, and benefits counseling services.

OHA staff work closely with programs throughout the Commonwealth serving a range of population groups, including gay and bisexual men and other men who have sex with men (MSM), persons who inject drugs (PWID), LGBTQ youth and young adults, racial/ethnic minorities, non-US born immigrants and refugees, individuals who are homeless or unstably housed, persons who are incarcerated or transitioning from a correctional facility, and other vulnerable population groups. OHA also collaborates with other MDPH programs that serve these individuals.

HEALTH PROMOTION & DISEASE PREVENTION SERVICES

Seamless integration of prevention and care services for PLWH and persons at risk for HIV, STIs, and viral hepatitis remains a top priority. Within the OHA, the Health Promotion and Disease Prevention (HPDP) services unit is responsible for managing prevention, medical case management, and health-related supportive services contracts to promote high quality service provision and to ensure compliance with federal, state, MDPH, and OHA requirements. Integration of prevention and care enables responsive community outreach and engagement services; access to risk reduction interventions relative to both sexual and drug injection behaviors; broad availability of integrated HIV, hepatitis C, and STI testing; rapid linkage to care and treatment for persons newly-diagnosed with HIV infection, including HIV+ individuals reengaged in care through the prevention and screening system; linkage to treatment for individuals diagnosed with hepatitis C, Chlamydia, gonorrhea, and syphilis; and access to services that help individuals maintain treatment and ongoing access to healthcare.

BEHAVIORAL HEALTH AND INFECTIOUS DISEASE PREVENTION

The OHA Behavioral Health and Infectious Disease Prevention Unit integrates behavioral health and infectious disease frameworks, and population health data to inform service models to better meet the needs of individuals disproportionately impacted by HIV and viral hepatitis. Public health interventions are

planned and coordinated with stakeholders to effectively address complex health conditions to maximize outcomes in OHA-contracted prevention and care service system. Coordination of community engagement and advisory activities are an integral component of this work.

HIV DRUG ASSISTANCE PROGRAM

The Massachusetts HIV Drug Assistance Program (HDAP) ensures access to medication for the treatment of HIV and HIV-related conditions through three program components: full-pay medication coverage for individuals who are uninsured, under-insured, or serving sentences in a county correctional facility, assistance with premiums associated with health insurance coverage, and drug co-pay assistance for insured clients. State resources in the HDAP also enable coverage of non-occupational post-exposure prophylaxis (nPEP) and pre-exposure prophylaxis (PrEP) for individuals who experience HIV exposure or are at high risk for seroconversion. Finally, HDAP includes the Benefits Resources Infectious Disease Guidance & Engagement (BRIDGE) Team which provides education about HDAP and health insurance coverage opportunities available to individuals living with HIV/AIDS, and direct health insurance enrollment support.

MASSACHUSETTS STATE PUBLIC HEALTH LABORATORY

The mission of the Massachusetts State Public Health Laboratory (MSPHL) is to protect the health of the people of Massachusetts through excellence in public health laboratory science. The MSPHL is a critical resource for the publicly-funded HIV/AIDS prevention and care system. The MSPHL currently tests biologic samples for HIV and hepatitis C (though a co-testing platform), as well as gonorrhea, chlamydia, and syphilis. The MSPHL conducts over 30,000 HIV and HCV tests annually, processing all specimens using an automated testing platform, the Abbott ARCHITECT®. The MSPHL utilizes a 4th generation HIV testing algorithm, with the capacity to detect HIV infection during the acute phase.

DIVISION OF STD PREVENTION

The Division of STD Prevention (DSTDP) works to reduce the burden of chlamydia, gonorrhea, and syphilis in Massachusetts, reduce the risk of HIV acquisition and transmission, and reduce health disparities, through a number of strategies. These strategies include accessible STD testing and treatment in accordance with Centers for Disease Control and Prevention (CDC) guidelines, delivery of partner services through deployment of Field Epidemiologists, training and technical assistance to STD care and treatment providers, and prompt linkage to care, treatment, and prevention services for persons newly diagnosed with an STD. The Division of STD Prevention oversees HIV and STD surveillance, and monitors the quality and timeliness of the public health response to these infections.

MASSACHUSETTS HIV/AIDS SURVEILLANCE PROGRAM

The goal of the Massachusetts HIV/AIDS Surveillance Program (MHASP) is to provide a comprehensive picture of the HIV/AIDS epidemic through data collection, quality assurance, and analysis, in order to support prevention and health service activities delivered by the Department of Public Health and a statewide system of health care and social service organizations. Epidemiologists are responsible for the collection, analysis, and interpretation of adult and pediatric HIV/AIDS case data. HIV/AIDS Surveillance data are disseminated widely throughout the Commonwealth; to governmental agencies, public and

private providers, advocacy groups and consumers. The program distributes specialized and routine data reports. The program also works collaboratively with planning and policy groups, health care providers and other Bureaus within the Department of Public Health, providing surveillance information and assisting with assessment of resource distribution and ongoing planning to ensure that the needs of people living with or at risk for infection are met.

VIRAL HEPATITIS PROGRAM

Hepatitis C (HCV) activities are integrated throughout the Bureau of Infectious Disease and Laboratory Sciences, including within the Office of HIV/AIDS. Massachusetts conducts reflex testing of all HIV samples submitted to the MSPHL for HCV antibodies, and promotes HCV prevention alongside HIV prevention in publicly-funded programs that serve people who use drugs and other individuals at risk for HCV acquisition. HCV is reportable as an acute and chronic infection in Massachusetts, and OHA works with staff in the Division of Epidemiology and Immunization to ensure that the BIDLS programmatic response is driven by and evaluated with up-to-date surveillance data and understanding of HCV epidemiology. The Bureau holds an *ad hoc* Viral Hepatitis Advisory Committee that includes staff from multiple areas within the BIDLS, other areas within MDPH (including the Bureau of Substance Abuse Services), and community partners. This group guides BIDLS on issues ranging from interpretation of the HCV care cascade to perinatal HCV infection and other policy related issues.

MASSACHUSETTS COMMUNITY AIDS RESOURCE ENHANCEMENT

MassCARE (Massachusetts Community AIDS Resource Enhancement) is a statewide program which provides access to coordinated, comprehensive, family-centered, culturally and linguistically competent medical care, social service support and peer services for women, infants, children and youth living with HIV and their affected family members. MassCARE promotes early identification and enhances available care in a community-based setting with an HIV medical home approach. It is funded under Part D of the Federal Ryan White Program and is located at Federally-qualified community health centers in three sites.

BUREAU OF SUBSTANCE ABUSE SERVICES

Since the MPDH's early response to the HIV/AIDS epidemic in Massachusetts, The Bureau of Infectious Disease and Laboratory Sciences, and Bureau of Substance Abuse Services (BSAS) have had an ongoing, strategic and successful partnership. This partnership addresses the continuum of prevention, care, and treatment for persons living with and at risk for HIV and viral hepatitis due to substance use disorders and specifically, the sharing of injection equipment. This collaboration is essential to the implementation of the *State Plan*, ensuring the needs of PWID are represented and reflected throughout our goals, objectives and strategies.

OFFICE OF LOCAL AND REGIONAL HEALTH

The MDPH Office of Local and Regional Health (OLRH) provides a focus for state-local public health systems coordination. The OLRH supports improvements in local public health performance and quality,

promotes a skilled public health workforce, connects our local public health partners with MDPH programs, services and resources, and advances public health planning at the local level.

Working with the Massachusetts Coalition for Local Public Health (CLPH) and other stakeholders, the OLRH collaboratively addresses the needs of local boards of health and establishes priorities from among identified challenges and needs. CLPH is comprised of the five statewide public health professional associations: Massachusetts Health Officers Association, Massachusetts Association of Health Boards, Massachusetts Association of Public Health Nurses, Massachusetts Environmental Health Association, and Massachusetts Public Health Association

BOSTON PUBLIC HEALTH COMMISSION

The Boston Public Health Commission (BPHC), the local health department for the City of Boston, administers Ryan White Part A HIV funding to the Boston Eligible Metropolitan Area (EMA). The Boston EMA is home to 85% of persons living with HIV in Massachusetts, and the work of BPHC supports delivery of responsive, highly effective services to PLWH in eastern Massachusetts. Awards from BPHC support the following services: medical case management, psychosocial support, medical transportation, housing search and advocacy, and nutritional programs. BPHC staff provides programmatic support to Ryan White-funded agencies in the Boston EMA. Support includes contract management, monitoring client demographics and service utilization data, working with agencies to maximize distributed funds, and providing technical assistance on grant management and reporting requirements. BPHC also awards City funding to support evidence based interventions for HIV-negative individuals at high risk for HIV, HCV, and STI acquisition. OHA and BPHC annually collaborate on the annual Clinical Chart Review to assess the quality of medical care in Ryan White funded agencies, relative to established treatment and quality measures.

HIV DENTAL OMBUDSPERSON PROGRAM

The HIV Dental Ombudsperson Program (HIV DOP) is a comprehensive dental access program for persons living with HIV/AIDS in Massachusetts, funded under Ryan White Part A and supported by funds from the Massachusetts Department of Public Health. The HIV DOP is designed to remove or reduce barriers to oral health services for persons living with HIV/AIDS. The program provides access to oral healthcare for eligible and enrolled clients via referrals to nearly 200 public and private dental providers. Oral health services in Massachusetts are also supported through resources directly awarded by HRSA to eligible dental care providers.

NEW ENGLAND AIDS EDUCATION AND TRAINING CENTER

Supported by Ryan White Part F funding, the New England AIDS Education and Training Center (NEAETC) provides training on HIV-related clinical issues to physicians, nurse practitioners, physician assistants, nurses, mental health professionals, dentists, and other health care providers throughout the six-state New England region. Recent efforts by the NEAETC include increased training to primary care providers to respond to acute HIV infection, managing HIV and hepatitis C co-infection, and maximizing HIV treatment options to improve viral suppression. The activities of the NEAETC directly support the objectives of the

State Plan, and the organization is a participating member of the Massachusetts Integrated HIV Planning Group, the MIPCC.

STAKEHOLDER ENGAGEMENT SYSTEM

Engagements with community members, persons living with HIV/AIDS, and other key stakeholders are an essential component of the Commonwealth's response to the HIV epidemic. Massachusetts has a long-standing and highly effective state HIV/AIDS planning system. This network has historically contributed to prevention and care planning across state-, CDC- and HRSA-supported investments, and serves in an advisory capacity to the Office of HIV/AIDS regarding the identification of regional and service area priorities, program development, and policy initiatives. The ability to meet our HIV prevention and care goals relies on strategic program investments, as described throughout the *State Plan*, but by also continuing to benefit from the knowledge, expertise, and experience of stakeholders, advisory bodies, and other partners within and outside of Massachusetts.

Community and stakeholder engagement activities in Massachusetts embody the goals of the *Integrated HIV Prevention and Care Plan* and the *National HIV/AIDS Strategy* by making the OHA's public health policy and programmatic responses informed by, transparent, accountable, and responsible to the needs of vulnerable populations and those engaged in treatments for HIV and HCV. Routine engagement with members of OHA-supported advisory groups, provider-led forums, and consumer-focused dialogues are all utilized to assess service needs, identify gaps and barriers, and implement responsive prevention and care initiatives. Engagements with the leadership and members of these groups ensure the prioritization of key initiatives, and facilitate a sense of shared responsibility for achieving jurisdictional priorities.

MASSACHUSETTS INTEGRATED PREVENTION AND CARE COMMITTEE

As the integrated HIV planning group for the Commonwealth of Massachusetts the Massachusetts Integrated Prevention and Care Committee (MIPCC) fulfills expectations framed in by the National HIV/AIDS Strategy, CDC, and HRSA to accomplish integrated planning across HIV prevention and care. Forty-two individuals serve as members or technical advisors; this panel is comprised of medical and non-medical providers, HIV+ consumers, policy experts, advocates, and local and state health department staff directly connected to HIV/AIDS prevention and care services in Massachusetts. The MIPCC membership reflects the profile of the HIV epidemic in Massachusetts in terms of race/ethnicity, gender and gender identity, sexual orientation, exposure mode, and geographic region. MIPCC provides feedback and proactive guidance on HIV prevention and care program and policy initiatives, aimed at reducing the impacts of HIV in the Commonwealth. The MIPCC meets at least five times each state fiscal year (July 1 to June 30).

STATEWIDE CONSUMER ADVISORY BOARD

Informed advisory from people living with HIV is paramount to assuring that care and treatment services in the jurisdiction are maximally accessible and highly responsive to the needs of HIV+ individuals in the Commonwealth. To that end, Massachusetts remains steadfast in its commitment to meaningful and responsive engagements with PLWH. The primary vehicle for engagements with PLWH is the Statewide Consumer Advisory Board (SWCAB). Convened by MDPH, the SWCAB is a group of 21 PLWH that provides

feedback regarding the service system, and advisory on HIV-related program and policy efforts. SWCAB membership reflects the profile of the HIV epidemic in Massachusetts in terms of race/ethnicity, gender, sexual orientation, exposure mode, and geographic region. The SWCAB meets at least quarterly throughout the state fiscal year. Two members of the SWCAB also serve as liaisons to the MIPCC.

RYAN WHITE PART A PLANNING COUNCIL

The Boston Part A EMA HIV/AIDS Services Planning Council (hereafter, the Planning Council) is a federally-required planning body that works to organize, evaluate, prioritize, and allocate Ryan White Part A HIV funding in the Boston EMA. The Planning Council is appointed by the Mayor of Boston and works with staff of the Boston Public Health Commission (BPHC) Division of HIV/AIDS Services to administer the Part A grant. The Planning Council is comprised of 43 members, representing HIV care providers, HIV+ consumers, advocates, policy experts, and representatives from MDPH, Medicaid, and BPHC. The entire Planning Council meets monthly; a variety of sub-committee meetings are also convened throughout the year.

TRANSGENDER HEALTH ADVISORY GROUP

The Transgender Health Advisory Group, formed in May 2016, meets quarterly to advise the OHA regarding prevention, care, and other health service needs of transgender individuals living with or at risk for HIV infection. The group has confirmed four priorities: to promote transgender cultural competency among health department staff and OHA-funded providers, assess the availability of continuum of care services for transgender and gender-variant individuals; expand peer health navigation services for at risk and HIV+ transgender individuals in all regions of the state; and to develop and implement sexual orientation and gender identity (SO/GI) data collection standards across publicly funded health and social service programs.

SCIENTIFIC ADVISORY BOARD

The Massachusetts HDAP Scientific Advisory Board (SAB) is comprised of 20 members including people living with HIV/AIDS, epidemiologists, medical providers, educators, a representative from the state Medicaid program, and OHA staff. The SAB advises the OHA on issues related to the administration of the State's HIV Drug Assistance Program (HDAP), including inclusion/exclusion of particular medications on the HDAP formulary, HDAP enrollment criteria, and general procedures and policies related to program operations. The SAB meets at least once per year, and more often when there are pressing concerns, such as inclusion of newly available HCV treatments for HIV/HCV co-infected individuals, and state-supported coverage of PrEP through the HDAP.

PREP CLINICAL ADVISORY GROUP AND COMMUNITY OF PRACTICE

PrEP activities are designed in consultation with the state's PrEP Clinical Advisory and Community of Practice Group (PrEP CoP). This advisory group was established in February 2012 when the Bureau of Infectious Disease and Laboratory Sciences (BIDLS) actively sought guidance from community stakeholders about early experiences with PrEP, and ways that the health department could support utilization of this new promising intervention. Initial recommendations included publication by the health

department of a PrEP Clinical Advisory, which was subsequently released in July 2012 and updated in July 2013 and September 2016. Recent efforts have focused on a PrEP Demonstration Project in Massachusetts. The advisory group provides policy and program recommendations to increase PrEP utilization and improve PrEP services for individuals that experience risk for HIV exposure and infection, particularly gay and bisexual men and other men who have sex with men (MSM) and transgender women. This advisory group meets quarterly and has grown to include 64 members, representing 24 organizations throughout the state, including medical agencies, community-based organizations, capacity building and training programs, and youth-serving organizations.

GETTING TO ZERO COALITION (GTZ)

The Massachusetts Getting to Zero Coalition (GtZ) is a diverse and representative group of providers, consumers, advocates, and other stakeholders from all health service regions in Massachusetts. Coalition organizers are working to create a coordinated plan and set of strategies for how Massachusetts can reduce HIV-related stigma, deaths, and new infections. GtZ engagement, programmatic priorities and public health responses outlined in the Massachusetts Integrated Prevention and Care Plan are closely coordinated. These complimentary plans provide policy and programmatic frameworks to accomplish mutual goals.

ONE LOVE HIV+ YOUTH ADVISORY GROUP

One Love is a program of Next Step Inc., an agency that empowers, educates and encourages young people living with HIV and other chronic illness to accomplish health, education, and career goals. Through youth development and social support, they encourage members to develop important life-skills, make healthy choices, and let their voices be heard. Members of One Love provide guidance regarding the needs of youth and young adults who have been living with HIV since birth, or were behaviorally exposed as adolescents or young adults. One Love also serves as a youth advisory body to the Office of HIV/AIDS.

PARTNERSHIP FOR ADDRESSING HIV AMONG AFRICAN IMMIGRANTS

Newly convened by the Multicultural AIDS Coalition (MAC), the Partnership for Addressing HIV and viral hepatitis among African Immigrants will support an ongoing partnership to engage diverse stakeholders to define areas of need and priorities for addressing HIV among African Immigrants. This group includes medical, non-medical and behavioral health providers, and African Immigrants living with HIV. It will meet quarterly and will first work to identify effective public health and population specific strategies available to patients that work best and in what circumstances. The goal is to support replication of robust patient engagement in prevention and care services, inclusive of existing core public health responses. This effort builds upon considerable formative public health planning initiatives supported by the Bureau of Infectious Disease and Laboratory Sciences addressing the needs, gaps, and barriers for African immigrants at risk and living with HIV and viral hepatitis.

RESOURCE ALLOCATION AND OVERSIGHT

Massachusetts is fortunate to have a strong and stable resource base to provide highly effective services that reduce the impact of HIV, HCV, and STI infections and improve health outcomes.

Detailed information regarding funding sources in Massachusetts, including funding amounts and services provided, are outlined in Table 5: Jurisdictional HIV Resources Inventory. We rely on a combination of state and federal funds to accomplish a system that can ensure uninterrupted access to prevention, care, and treatment services; as well as partnerships with community-based organizations, and guidance from our advisory bodies, including the Massachusetts Integrated Prevention and Care Committee (MIPCC) and the Statewide Consumer Advisory Board (SWCAB).

Table 5: Jurisdictional HIV Resources Inventory

Federal Grants and Contracts- Federal Fiscal Year 2016				
Funding Source	Funding Amount	Funded Service Providers	Funded Services	HIV Care Continuum Step(s) Impacted
Ryan White HIV/AIDS Program Part B	\$18,946,173	Resources support health department personnel and direct service contracts with 27 community-based medical and non-medical agencies.	<ul style="list-style-type: none"> • HIV Drug Assistance Program • Medical case management • Medical transportation • Nutrition programs • Client advocacy • Peer services • MAI funded peer services • Clinical quality management 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care • Retained in care • Achieving viral suppression
Ryan White HIV/AIDS Program Part A	\$14,570,656	Resources are administered by the Boston Public Health Commission. Resources support service contracts at community-based medical and non-medical agencies in the Boston EMA.	<ul style="list-style-type: none"> • Medical case management • Medical transportation • Nutrition programs • Client advocacy (legal services) • Peer services • Dental ombudsman 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care • Retained in care • Achieving viral suppression

Ryan White HIV/AIDS Program Part C	\$7,591,945	Resources support personnel and costs associated with the delivery of services at 16 community health centers and hospital programs	<ul style="list-style-type: none"> • Early Intervention Services • Core medical services • Support services • Clinical quality management (CQM) 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care • Retained in care • Achieving viral suppression
CDC High-Impact HIV Prevention Programs for Health Depts. (PS12-1201)	\$5,011,056	Resources support health department personnel and direct service contracts with 17 community-based medical and non-medical agencies.	<ul style="list-style-type: none"> • Integrated HIV, HCV, and STI testing (targeted and routine) • Comprehensive prevention with HIV positives • Condom distribution • Policy initiatives • Field epidemiology services, including partner services • Jurisdictional planning 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care
Ryan White HIV/AIDS Program Part F	\$680,495 (Dental) \$2,201,809.00 (NEAETC)	Resources support personnel and costs associated with administering direct awards to oral health service providers and the New England AIDS Education and Training Center (NEAETC).	<ul style="list-style-type: none"> • Dental reimbursement program • Community based dental partnership program • AIDS Education and Training Center programs 	<ul style="list-style-type: none"> • Engaged in care • Retained in care • Achieving viral suppression

CDC Directly Funded Programs (PS15-1501)	\$1,810,294	<p>Resources support personnel and costs associated with the delivery of services at the following MA agencies:</p> <ul style="list-style-type: none"> • Fenway Health • Massachusetts Alliance of Portuguese Speakers • Whittier Street Health Center 	<ul style="list-style-type: none"> • Client outreach and engagement • Integrated HIV, HCV, and STI testing • Comprehensive prevention with HIV positives • Condom distribution • Evidence based interventions 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care
Ryan White HIV/AIDS Program Part D	\$1,790,334	<p>Resources support health department personnel and direct service contracts to provide services to women, infants, children and youth supported through the MassCARE program. HRSA also directly awards funds for this population to three community-based medical agencies in Massachusetts.</p>	<ul style="list-style-type: none"> • Medical case management • Peer support • Clinical quality management (CQM) 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care • Retained in care • Achieving viral suppression
HRSA Bureau of Primary Health Care and CDC (Partnerships for Care)	\$644,049	<p>Resources support health department personnel and costs associated with administering services funded under this cooperative agreement.</p>	<ul style="list-style-type: none"> • Field epidemiology services, including partner services • MA HIV/AIDS Surveillance Program 	<ul style="list-style-type: none"> • Engaged in care • Retained in care • Achieving viral suppression

CDC (CoRECT)	\$500,000	Resources support health department personnel, awards to collaborating health centers, and costs associated with administering services funded under this cooperative agreement.	<ul style="list-style-type: none"> Field epidemiology services, including partner services MA HIV/AIDS Surveillance Program 	<ul style="list-style-type: none"> Engaged in care Retained in care Achieving viral suppression
Housing Opportunities for Persons with HIV/AIDS (HOPWA)	\$308,246	Resources support personnel and costs associated with delivery of services at four community-based agencies.	<ul style="list-style-type: none"> Housing search and advocacy Medical case management Adherence support Benefits coordination 	<ul style="list-style-type: none"> Engaged in care Retained in care Achieving viral suppression
State Programs and Resources				
Funding Source	Funding Amount	Funded Service Providers	Funded Services	HIV Care Continuum Step(s) Impacted
MassHealth (MA Medicaid)	\$381,295,909 (State FY2016)	MassHealth resources are managed by the Commonwealth of Massachusetts.	<ul style="list-style-type: none"> Medical care and treatment services Expanded access to Medicaid for non-disabled PLWH under 200% FPL under an 1115 Medicaid waiver 	<ul style="list-style-type: none"> Diagnosed with HIV Engaged in care Retained in care Achieving viral suppression

State Budget Appropriations	\$33,370,000 (State FY2017)	<p>Resources support direct service contracts with community-based medical and non-medical agencies:</p> <ul style="list-style-type: none"> • 39 services contracts to provide HIV prevention and screening services • 40 service contracts to provide Medical Case Management and health related support services • One service contract to administer the HIV Drug Assistance Program 	<ul style="list-style-type: none"> • Client outreach and engagement • Integrated HIV, HCV, and STI testing and linkage to care and treatment • Comprehensive prevention with HIV positives • Condom distribution • Field epidemiology services, including partner services • Medical case management • Health related support services for PLWHA, including nutrition, housing, legal, peer services and acupuncture • HIV/AIDS Surveillance 	<ul style="list-style-type: none"> • Diagnosed with HIV • Engaged in care • Retained in care • Achieving viral suppression
Retained Revenue Account	\$7,500,000 in manufacturer rebates	Resources support the HIV Drug Assistance Program (HDAP)	<ul style="list-style-type: none"> • Coverage for the full cost of drugs for uninsured HIV+ individuals • Health insurance premium assistance • HIV medication copayment assistance 	<ul style="list-style-type: none"> • Engaged in care • Retained in care • Viral suppression

FEDERAL AGENCIES—CDC, HRSA, AND HUD

Massachusetts receives significant financial support from the federal government, namely through the awarding of funds from cooperative agreements and competitive grants that support HIV/AIDS surveillance, prevention, and care and treatment services. Funding for these federal grants come from the Centers for Disease Control and Prevention (CDC), the Health Resources Services Administration (HRSA), and the Department of Housing and Urban Development (HUD). The CDC provides funding to support HIV prevention and screening programs in Massachusetts, including integrated testing services for HIV, STDs, and hepatitis C. CDC also directly funds three community based organizations and their subcontractors to deliver community-based HIV prevention programs. Additional CDC resources awarded to Massachusetts include funding for three competitive grants: the National HIV Behavioral Surveillance Program (NHBS), the Cooperative Re-Engagement Controlled Trial (CoRECT), and the Partnerships for Care (P4C) initiative.

To support PLWH, Massachusetts receives financial support through the Health Resources and Services Administration (HRSA), Ryan White HIV/AIDS Program (RWHAP). Massachusetts is the recipient of funds from RWHAP Parts A, B, C, D and F. Part A and a portion of Part F funds are administered through the Boston Public Health Commission (BPHC), and support medical case management, health-related support services, and the dental program (Part F only). Ryan White Part B and D funding is awarded directly to Massachusetts to support medical case management and health-related support services for PLWH (Part B), as well as to administer the HIV Drug Assistance Program (HDAP). Massachusetts also utilizes Part B funds to support the Dental Ombudsperson Program for persons living with HIV infection, who reside outside of the Boston EMA. Part D services support clinical and community based services for women, children, and youth at three publicly-funded agencies in Massachusetts. Part D funds are also directly awarded by HRSA to three community health centers and hospitals to ensure broad access to HIV services for women, children and youth. Part C funds are awarded to 16 community health centers and hospitals to support medical care for HIV+ individuals. Part F funding is also awarded to Massachusetts to support the New England AIDS Education and Training Center (NEATC). HUD provides direct funding to Massachusetts to support housing access through the Housing Opportunities for People with AIDS (HOPWA) program.

STATE BUDGET

A key source of support for HIV prevention and care efforts are resources from the HIV/AIDS State Budget Line 4512-0103. In State Fiscal Year 2017, which began July 1, 2016, HIV/AIDS services received budget funding in the amount of \$33,370,000.00. These resources support contracts for HIV prevention, care, and treatment services; HIV medical case management and health-related support services; laboratory testing; epidemiologic follow-up by Field Epidemiologists; and other services associated with prevention and control of HIV, viral hepatitis, Tuberculosis (TB), and sexually transmitted infections (STI). These services include client outreach and engagement, health education and risk reduction, integrated HIV, HCV, and STD testing, linkage to care and treatment, and medical case management and health related support services for persons living with HIV. Recognizing the importance of HIV in the context of other communicable infections, state appropriations now allow for expenditures associated with the prevention and control of viral hepatitis, STIs and Tuberculosis. In addition, State Budget resources include a retained revenue account in the amount of \$7.5 million, which is re-invested into the Massachusetts HIV Drug Assistance Program (HDAP) consistent with authorizing language of the State budget.

MEDICAID (MASSHEALTH)

The most important payer source for HIV care in Massachusetts is the jointly federal- and state-funded Massachusetts Medicaid program (MassHealth). More than half of all HIV+ state residents have coverage under the Medicaid program. This level of coverage has been supported since 2001 by an 1115 Medicaid waiver that expanded Medicaid access to non-disabled, single, childless HIV+ state residents with incomes under 200% of the Federal Poverty Level (FPL). MassHealth expenditures represent the single largest investment in HIV care and treatment in the Commonwealth totaling more than \$381 million in State Fiscal Year 2016.

Massachusetts anticipates that we will continue to experience changes in the coverage scope and policies of the State's Medicaid program, MassHealth. We are anticipating changes to payment structures, including greater emphasis on Medicaid Managed Care Organizations (MCO's) and implementation of Global Payments for patients with chronic or complex health conditions. Persons living with and at risk for HIV infection are likely to be impacted by these changes in ways that are challenging to fully anticipate. The OHA—in partnership with our advisory bodies, health department partners, and colleagues at MassHealth—are committed to monitor these policy changes and assess the particular ways that HIV+ state residents may experience different levels of need for health supports from HIV care and prevention programs. We also recognize that changes in Medicaid payment policies will impact persons at risk for HIV and hepatitis C infection, who also receive health support services through existing prevention and care programs funded by CDC and HRSA.

MEDICARE

Medicare coverage and prescription drug coverage under Medicare Part D, starting in 2006, is an important component of the HIV care coverage landscape for PLWH, both those who are over 65 and eligible based on age, and those who are long term disabled according to the SSDI definition. In Massachusetts, One Care (a CMS demonstration project) serves dually eligible adults with disabilities who are between the ages of 21 and 64 at the time of enrollment. It is estimated that there are upward of 500-700 PLWHAs enrolled in the program. One Care provides all medical, behavioral health, pharmacy, dental, and long-term support services covered by Medicare and Medicaid. The model integrates the full spectrum of services by utilizing an Interdisciplinary Care Team (ICT), which includes the enrollee, a care coordinator or a clinical care manager, and an Independent Living and Long-Term Services and Supports coordinator.

PRIVATE HEALTH INSURANCE

As a state with high rates of insurance coverage, Massachusetts aims to maximize utilization of private health insurance to meet the prevention, care, and treatment needs of persons living with and at risk for HIV infection, while simultaneously prioritizing the utilization of state and federal resources to ensure uninterrupted access to care and treatment for persons impacted by communicable infections of public health importance. State health care reforms (implemented in 2006) eliminated pre-existing conditions exclusions as a barrier to private health insurance for persons living with HIV and other chronic health conditions. State and federal health care reforms also require treatment and care coverage policies that are non-discriminatory, and provide access to subsidies for low income Massachusetts residents that make private health insurance coverage more accessible and affordable. The variability in coverage across

private plans, including provider and pharmacy networks, preauthorization requirements, and cost-sharing obligations, requires some level of system-level flexibility to meet the needs of HIV+ and at-risk Massachusetts residents to protect both individual and public health. This includes financial support for income eligible HIV+ state residents to receive premium and medication co-payment assistance through the Massachusetts HIV Drug Assistance Program.

WORKFORCE CAPACITY

In Massachusetts, HIV prevention and care services are delivered in community based medical and non-medical agencies by a highly skilled and experienced workforce. The comprehensive healthcare system in Massachusetts provides people living with HIV, and those at elevated risk, with a wide range of access to medical providers, including internal medicine and specialty and sub-specialty providers; located in community health centers, hospitals, academic medical centers, family planning agencies, substance abuse treatment programs, and other community-based health and social service programs. A comprehensive workforce capacity assessment for Massachusetts has also been developed by the New England AIDS Education and Training Center (NEAETC), and is available as Attachment 1.

These programs include a range of clinical and non-clinical staff, including HIV testing counselors, phlebotomists, medical case managers, behavioral health providers, and HIV+ peers. These individuals often work directly, or in collaboration with, registered nurses, nurse practitioners, infectious disease physicians, and primary care providers. All MDPH-funded HIV service providers in the Commonwealth are required to articulate how services in their facilities comply with MDPH expectations to provide culturally and linguistically appropriate services (CLAS); agencies meet this important expectation by hiring staff that reflect the socio-demographic profile of an agency's client populations and language needs. In aiming to meet Massachusetts's goal of *'improving service system quality and sustainability'* Massachusetts intends to utilize the HIV/AIDS Integrated Prevention and Care Plan to strengthen and diversify the HIV workforce and improve access to services for HIV+ state residents.

GEOGRAPHY

Massachusetts has a concentration of HIV medical care facilities and programs, including HIV health care services in and around urban centers and metropolitan areas, therefore some areas of the state have a greater number of medical facilities and HIV care access points than others. The distribution of the HIV healthcare and social service workforce may require individuals in some areas of state—notably the Western region, Cape Cod and the Islands, and parts of Northeastern Massachusetts—to travel substantial distances to access high quality HIV health care services.

COMMUNITY HEALTH CENTERS

Massachusetts launched the community health center movement, with the opening of the first community health center (CHC) in the nation in the city of Boston in 1965. Today, Massachusetts is home to 50 community health centers in over 300 sites, serving nearly 1 million (14%) of the state's residents. Patients at CHC's receive primary, preventative, and dental care, as well as behavioral health services, including substance abuse and other community-based services to anyone in need regardless of

insurance status or ability to pay. Just under half of these CHCs receive state or federal resources for HIV prevention and/or care service.

Community health centers employ board-certified physicians along with physician assistants, nurse practitioners, registered nurses, social workers, dentists, optometrists, certified nurse midwives, community health workers, nutritionists, counselors and other health professionals to help improve health outcomes for their patients. The continuum of care at community health centers ensures that a range of programs and services promote overall health and wellness.

HOSPITALS AND MEDICAL CENTERS

There are 95 hospitals in Massachusetts, 68 acute care facilities and 27 non-acute facilities. Major academic medical centers across the state provide HIV prevention and care services, including ten hospital facilities, which receive HIV/AIDS prevention and/or care funding.

FAMILY PLANNING AGENCIES

Family planning agencies play an important role in Massachusetts to provide low threshold access to sexual and reproductive health services, including HIV and STD testing. Family Planning sites are located in a variety of settings such as community health centers, hospitals, and community based service organizations. Twelve agencies have over 80 sites located throughout the state. These agencies also provide education and outreach to communities within their region and can respond to specific requests from members of the community for HIV-related workshops, materials or training. A number of family planning agencies also receive HIV prevention funding from the OHA.

SUBSTANCE ABUSE TREATMENT FACILITIES

Massachusetts has an extensive network of substance abuse prevention and treatment programs throughout the Commonwealth, including detoxification services, residential and outpatient facilities, short-term, long-term, transitional, post-treatment recovery, recovery high schools, and aftercare programs. As of July 1, 2016, a total of 322 treatment programs are licensed in the Commonwealth, and required to adhere to strict requirements for the delivery of treatment services. A quality assurance team ensures compliance with implementation of quality treatment practices. Capacity building and technical assistance partnerships train providers and members of community coalitions on evidenced-based practices to ensure optimal treatment and recovery outcomes.

HEALTH CARE PROFESSIONALS

Table 6 outlines the number of health care professionals currently (as of April 2016) providing services in Massachusetts. Prior needs assessment activities have identified shortfalls in the current HIV health care workforce, including limited access to mental health and substance use treatment providers, particularly in rural areas. The health care needs of persons living with HIV infection have changed significantly over the past decade. More people living with HIV are accomplishing successful viral suppression, mortality is declining, and the population of individuals living with HIV is aging. At the same time, the median age of PLWH in Massachusetts continues to rise, resulting in the need for more services that are responsive

health challenges associated with aging. There is an increasing need for geriatricians, dentists, psychiatrists, and other specialists who can address the unique needs of older PLWH, as well as for responsive health care facilities, such as nursing homes.

Table 6: Health Care Professionals, Massachusetts (April 2016)

Occupation	Total
Physicians (all)	32,130
Primary Care Physicians	14,239
Physician Assistants	2,243
Registered Nurses	92,905
Nurse Practitioners	6,620
Dentists	6,301
Psychiatrists	2,639

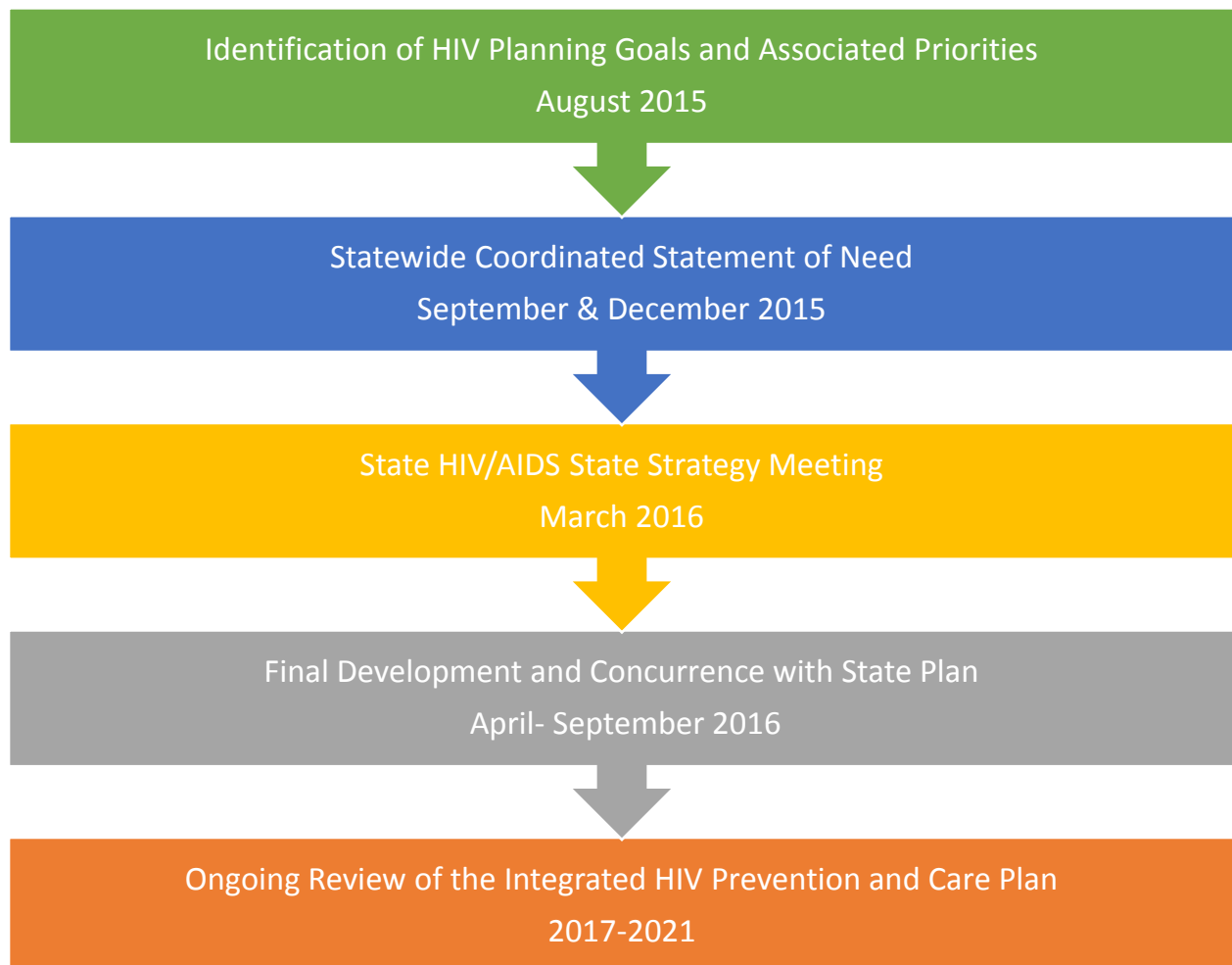
COMMUNITY HEALTH WORKERS

Since the early years of Massachusetts’s response to the HIV epidemic, community health workers (CHWs) such as medical case managers, outreach workers, health educators, and HIV+ peer counselors have played an important role in the HIV prevention and care service system. Today, there are new opportunities to further advance the role of CHWs through the formalization of training and certification processes, and opportunities to seek reimbursement for CHW services from public and private insurers. Certification for CHWs is supported by state legislation, Chapter 322, Acts of 2010, “An Act Establishing a Board of Certification of Community Health Workers.” The law, which took effect in 2012, calls for voluntary certification, rather than mandatory licensure. The intent of the law is to create a competency-based process that recognizes and strengthens the work of CHWs while simultaneously avoiding the creation of barriers for effective CHWs to get certified.

DEVELOPMENT OF THE PLAN

To develop the *State Plan*, including the Integrated Statewide Coordinated Statement of Need (Integrated SCSN), Massachusetts conducted a series of ongoing and one-time engagements with a number of existing and ad-hoc advisory groups; more than 250 people in more than 15 meetings, presentations, and community engagements in all regions of the Commonwealth were involved in the development of the *State Plan*. Figure 25 (below) outlines the process developed by Massachusetts both to satisfy the stakeholder engagement requirements in the *Integrated HIV Prevention and Care Plan Guidance*, and to assure our efforts are consistent with the needs, priorities, and recommendations of community members.

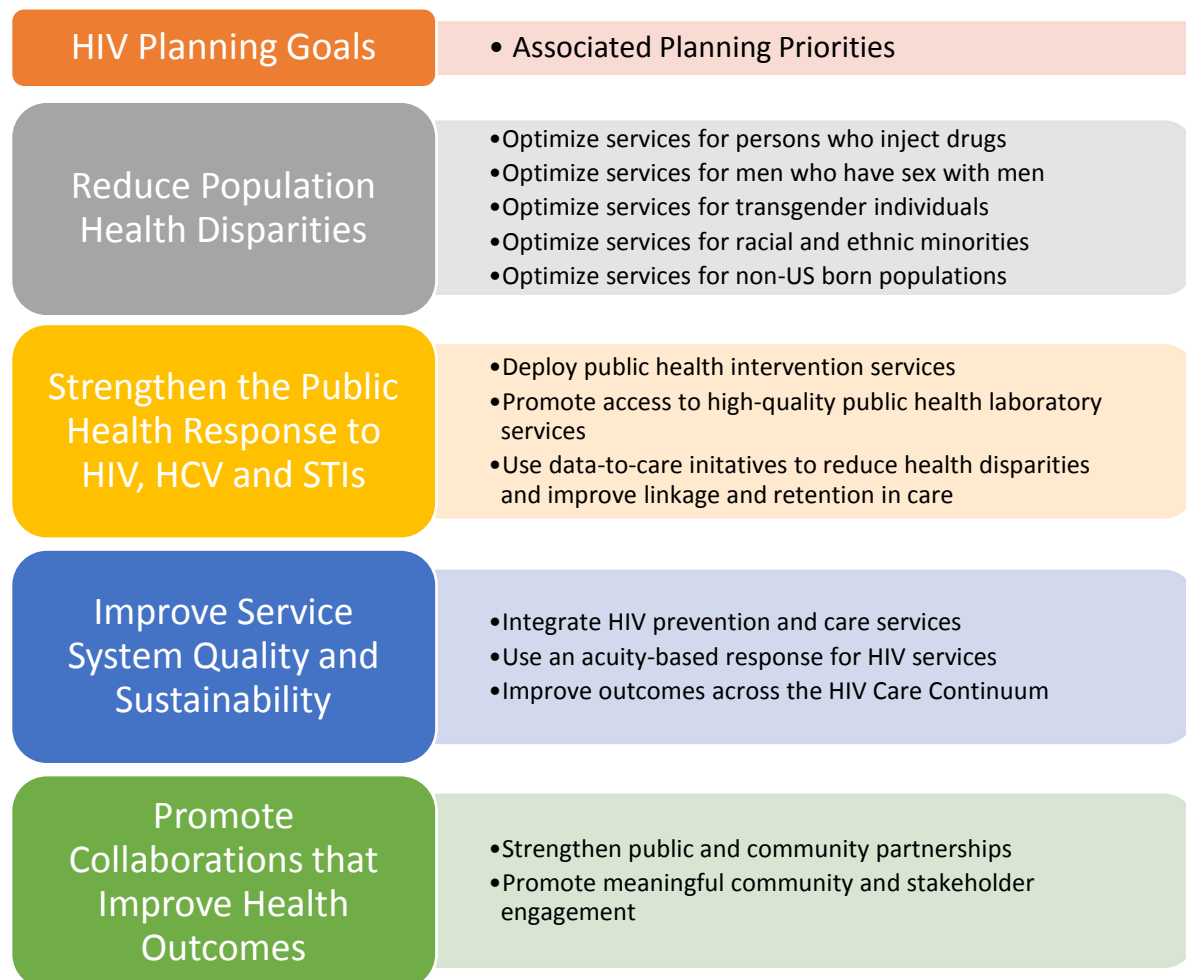
FIGURE 25: State Plan Development



IDENTIFICATION OF HIV PLANNING GOALS AND ASSOCIATED PRIORITIES

Planning for the development of the *State Plan* began in August 2015, shortly after the release of CDC and HRSA's *Integrated Prevention and Care Plan Guidance*. Initial planning work largely focused on accomplishing the two major components of the *State Plan*: (1) design of needs assessment activities to identify needs, gaps, and barriers for inclusion in the Integrated SCSN; and (2) maximize stakeholder contributions to the goals and objectives of the *State Plan*. In consultation with existing advisory groups, OHA identified four major HIV planning goals and a set of associated planning priorities.

Figure 26: HIV Planning Goals and Associated Planning Priorities



These goals and planning priorities were utilized to ground the needs assessment process and focus planning efforts towards generating system-level transformations, and program strategies that advance the HIV prevention and care response in the Commonwealth. The needs identified and strategies generated through the Integrated SCSN and stakeholder engagement processes were fundamental to the development of the goals and objectives of the Massachusetts State Plan.

DEVELOPMENT OF THE STATEWIDE COORDINATED STATEMENT OF NEED

The ongoing assessment of service needs remains a core component in OHA's approach to providing critical services to the most vulnerable populations. To develop the Integrated SCSN, OHA conducted a series of engagements with members of existing advisory groups. Primary participants in the process included members of the MIPCC and SWCAB, in addition to invited PLWH, advocates, representatives from RWHAP Parts A, C, D, and F, as well as representatives from CDC directly-funded agencies. Between September 2015 and February 2016, OHA convened three separate meetings to identify planning priorities, outline service needs, and identify gaps and barriers. In June 2016, the final results of the Integrated SCSN/Needs Assessment were reviewed and confirmed with the members of the MIPCC and SWCAB.

MASSACHUSETTS HIV/AIDS STATE STRATEGY MEETING

On March 29, 2016, the MDPH Office of HIV/AIDS convened 172 advisory group members, consumers, senior-level program staff, and executive leaders from medical and non-medical agencies across the Commonwealth for a meeting titled the *Massachusetts HIV/AIDS State Strategy Meeting: Improving Our Prevention, Care, and Public Health Response*. The meeting included HIV+ state residents, medical and non-medical providers, collaborators from all Ryan White Parts funded in the Commonwealth, key MDPH collaborators (e.g. staff from the Bureau of Substance Abuse Services and Sexual and Reproductive Health programs), as well as representatives from CDC and HRSA directly-funded agencies. The meeting summarized progress made on the *2013 Massachusetts State HIV/HCV Plan* goals and objectives, and reviewed the results of the Integrated SCSN. Participants were assigned to working groups and tasked with identifying specific strategies and activities to advance the goals of the *State Plan*.

FINAL DEVELOPMENT AND CONCURRENCE WITH THE PLAN

Massachusetts conducted extensive internal and external review of *the State Plan* prior to submission to CDC and HRSA. Between August and September 2016, drafts of the *State Plan* were shared with the Boston Public Health Commission (BPHC) and the Boston EMA Health Services Planning Council (Planning Council). On September 8, 2016, the Planning Council received a presentation outlining coordinated efforts between the Massachusetts Department of Public Health and the Boston Public Health Commission, and reviewed the goals and objectives of their respective plans. The Part A Planning Council proceeded to vote in support of the *State Plan*. A letter of support is included as Attachment 2.

The final draft of the plan was presented to members of the MIPCC and SWCAB for their review. At the September 15, 2016 meeting of the MIPCC, members confirmed agreement with the goals and objectives, and provided a letter of concurrence in support of the document (see Attachment 3).

ASSESSING NEEDS, GAPS, AND BARRIERS

Massachusetts is in a position to end the local HIV epidemic by continuing to reduce new HIV infections and further improving rates of engagement in care and viral suppression. We recognize that continued progress to meet these goals is only possible through the implementation of innovative, high-impact approaches that are also tailored to meet the particular needs of disproportionately impacted populations.

Assessment of the Commonwealth's HIV prevention and care service gaps, current needs, and barriers was a foundational component in the development of the *State Plan's* goals and objectives. The Needs Assessment was essential in the development of strategic approaches to enhance the quality of HIV prevention and care services for persons living with and at risk for HIV infection in Massachusetts. Assessment processes identified resource, structural, and programmatic gaps described below.

GAPS IN THE CURRENT SERVICE SYSTEM

Throughout the assessment of gaps and service needs, stakeholders highlighted the importance of promoting a population-level response to HIV, in addition to improving the quality and capacity of the publicly funded HIV prevention and care service system. There are more people living with HIV infection in Massachusetts today than at any other point in the epidemic. The needs of HIV+ state residents remain complex—related to the aging of the HIV+ population, vulnerabilities associated with poverty and other social determinants of health, and co-occurring health challenges such as hepatitis C. At the same time, we have behavioral, public health action, and biomedical prevention tools at our disposal to end the epidemic in Massachusetts, and establish sustainable program models that will reduce new infections and improve health outcomes

POPULATION HEALTH GAPS

The gap analysis conducted by Integrated SCSN participants identified areas where current capacity is insufficient to meet the needs of populations disproportionately impacted by HIV. While Massachusetts has accomplished a decline in the annual number of HIV infections, across all racial/ethnic and exposure mode groups in the state, over the past five years disparities have actually widened. The relative rates of disparity in new HIV infection diagnoses in both black non-Hispanic and Hispanic/Latino populations have increased, and are particularly pronounced for young MSM and transgender women who are racial/ethnic minorities.

The following population groups have been prioritized through an analysis of local data and recommendations from OHA's advisory groups and Integrated SCSN participants: gay/bisexual men and other men who have sex with men (MSM), racial and ethnic minorities, non U.S. born immigrants and refugees, persons who inject drugs (PWID) and transgender men and transgender women.

MEN WHO HAVE SEX WITH MEN

Among recently diagnosed individuals and those living with HIV infection, men who have sex with men (MSM) is the most commonly reported exposure mode in Massachusetts. While there have been successes in reducing new infections among MSM more must be done to reduce the disproportionate impact of HIV on this population. Participants identified the following gaps and service needs among MSM:

- Limited points of access to biomedical interventions, including PrEP and nPEP
- Insufficient culturally competent medical providers that prescribe PrEP to impacted populations, notably MSM, young MSM and MSM of color
- Systemic barriers to access for routine testing for HIV, HCV, and STIs among MSM, including limited provider education and availability of culturally competent programming
- Inconsistent availability of extra-genital screening for STIs, including self-collected rectal specimens
- Absence of diversity of prevention messaging, including use of current technology (such as social media) to engage at-risk MSM
- Limited access to prevention programs that engage young MSM at risk for HIV and STI acquisition and transmission
- Limited access to behavioral health services that address the unmet mental health care needs of at-risk individuals and PLWH

RACIAL AND ETHNIC MINORITIES

Racial and ethnic minorities continue to experience persistent health disparities relative to the HIV/AIDS epidemic in the Commonwealth. These persistent disparities are often associated with the social determinants of health, such as poverty, unemployment, low educational attainment, access to health care, and living in communities with a high prevalence of HIV and other STIs. In Massachusetts, black (non-Hispanic) men and women and Hispanic/Latino men and women are impacted by HIV/AIDS at levels disproportionate to their representation in the population.

BLACK (NON-HISPANIC) INDIVIDUALS

Black (non-Hispanic) individuals represent only 8.4% of the Massachusetts population, yet account for 30% of PLWH in the Commonwealth. Throughout the needs assessment process, participants identified a number of gaps and institutional barriers faced by black individuals that are grounded in long-standing, institutionalized racism. These include stigma, historic mistrust of the healthcare system, inadequate healthcare coverage, lack of public transportation in communities where racial/ethnic minorities often reside, economic barriers, and racism in healthcare and other settings. Participants also noted a number of HIV service system gaps among this population, including:

- Limited numbers of black medical care providers, including primary care physicians and behavioral health providers.
- Limited representation of black men and women in the HIV workforce, on interdisciplinary care teams, in medical and non-medical settings, and in health communications and patient educational materials

- Inconsistent access to community-based medical and non-medical programs that provide access to biomedical interventions, notably PrEP and nPEP
- Insufficient investment in neighborhoods and communities that experience high incidence of new infections among black (non-Hispanic) men and women
- Limited access to behavioral health services that address the unmet mental health care needs of at-risk individuals and PLWH who are black, particularly those who are non-US born
- Recent closures of agencies providing tailored services to non-US born racial/ethnic minorities, notably insufficient services for recent immigrants and refugees who are Hispanic/Latino

HISPANIC/LATINO INDIVIDUALS

In Massachusetts, only 11.2% of the total population identifies as Hispanic/Latino, yet one-quarter (25%) of PLWH in the Commonwealth are Hispanic/Latino. Of the 2072 individuals diagnosed with HIV during the period 2012-2014, 29% were Hispanic/Latino. Throughout the needs assessment process, participants identified a number of factors that contribute to persistent disparities in among individuals that identify as Hispanic/Latino. These include cultural factors such as homophobia, heterosexism, and stigma regarding sexuality and HIV. Challenges in accessing high-quality HIV prevention and care services are further compounded by a number of socioeconomic factors including access to health care, language barriers, poverty, and immigration status. Additional gaps in promoting the HIV prevention and care needs of this population include:

- Poor access to culturally and linguistically appropriate services at medical and non-medical HIV prevention and care programs
- Limited representation of Hispanic/Latino individuals in the HIV workforce, on interdisciplinary care teams, in medical and non-medical settings, and in health communications and patient educational materials
- Inconsistent access to community-based medical and non-medical programs that provide access to biomedical interventions, notably PrEP and nPEP
- Recent closures of agencies providing tailored services to non-US born racial/ethnic minorities, notably insufficient services for recent immigrants and refugees who are Hispanic/Latino

NON-US BORN IMMIGRANTS AND REFUGEES

Non-US born individuals in Massachusetts are disproportionately impacted by HIV infection. Non-US born individuals account for 26% of persons living with HIV infection and 35% of persons recently diagnosed. Non-US born individuals, particularly those who are newly-arrived immigrants or refugees to Massachusetts face unique barriers to access HIV prevention and care. Gaps in the service system for this highly diverse group of individuals range from insufficient cultural and linguistic competencies, to limited sources of financial support and housing, and lack of mental health and psychosocial supports capable of addressing issues such as experiences of violence and trauma. Service needs and gaps identified for this population include:

- Lack of collaboration between community-based agencies that serve immigrant and refugee populations, and HIV prevention and care programs that aim to reach non-US born individuals
- Inconsistent integration of HIV testing alongside TB testing and treatment services

- Lack of qualified interpreter services for at-risk individuals and PLWH engaged in care with limited English proficiency
- Limited examination of the unique needs of non-US born women and men in the current delivery of HIV prevention and care services
- Insufficient mental health services for immigrants and refugees relocating from countries experiencing war and other types of pervasive violence
- Recent closures of specialized service agencies addressing the particular needs of non-US born PLWH

PERSONS WHO INJECT DRUGS

Persons who inject drugs (PWID) and others managing substance use disorders remain particularly vulnerable to acquisition and transmission of HIV and HCV due to sharing used syringes and associated injection equipment, and high risk sexual behaviors that often accompany substance use. The needs assessment highlighted the importance of additional services to improve health outcomes in this population, and particular barriers to HIV prevention and health promotion for PWID. These include:

- Insufficient syringe service programs (SSP) in all impacted regions of Massachusetts
- Lack of available beds in private and publicly-funded substance use treatment programs
- Limited access to behavioral health services that address the unmet mental health care needs of at-risk individuals and PLWH who are PWID
- Too few access points to link PWID to biomedical interventions, including both PrEP and nPEP
- Lack of educated and culturally competent healthcare providers that deliver services utilizing a harm reduction framework
- Limited attention to the sexual and reproductive health care needs of PWID, and the need to integrate sexual health and drug user health interventions
- Shortfalls in the availability of healthcare providers that administer HCV treatment to active substance users, and the need to increase uptake of HCV treatment in PWID, particularly PWID under 30 years of age
- Stigma associated with substance use, particularly opiate injection, restricts access to urgent and ongoing medical care and other health services for PWID

TRANSGENDER INDIVIDUALS—TRANSGENDER WOMEN AND TRANSGENDER MEN

To guarantee that transgender individuals Massachusetts have access to high quality and culturally competent prevention and care services, in March of 2016 the OHA convened the Transgender Health Advisory Group. Members of this group identified a set of care and prevention needs of transgender persons both living with and at risk for HIV infection.

- Insufficient data collection by HIV Surveillance, HIV prevention and screening programs, and HIV medical case management providers, to sufficiently and accurately characterize the health inequities facing transgender individuals living with and at risk for HIV infection
- Lack of capacity at OHA-funded programs to provide HIV prevention and care services to transgender individuals, particularly outside of Boston

- Systemic barriers to link transgender individuals to biomedical interventions, including both PrEP and nPEP
- Lack of healthcare providers with the skills and cultural competence to provide comprehensive services, including biomedical interventions, to transgender individuals
- Highly limited access to HIV treatment and HIV medical case management programs that are co-located in medical agencies that deliver affirmative counseling and support, hormone treatments and other types of transgender health care
- Absence of peer support service programs for at-risk and HIV+ transgender individuals, including health systems navigation services

PUBLIC HEALTH SYSTEM GAPS

LIMITED ACCESS TO PUBLIC HEALTH INTERVENTION SERVICES

Field epidemiologists (formerly termed Disease Intervention Specialists) play an important role in the coordination of care and treatment for HIV and STIs, as well as delivery of partner elicitation and notification services. The insufficient capacity for field epidemiologists to provide partner services and linkage to care for all newly diagnosed HIV+ individuals, including prompt linkage to care, treatment, and partner services for individuals diagnosed with acute HIV infection, was noted as a significant gap in the current service system. Additional gaps identified include:

- Lack of current capacity for field epidemiologists to promote access to biomedical interventions such as PrEP and nPEP, and provide expedited linkage to PrEP services for partners of HIV individuals and persons recently diagnosed with an STD
- Limited collaborations with local public health departments and local health officials to coordinate HIV prevention and care responses, particularly outside of Boston

INCONSISTENT ACCESS TO HIGH-QUALITY PUBLIC HEALTH LABORATORY SERVICES

Publicly funded medical and non-medical providers rely on the Massachusetts State Public Health Laboratory (MSPHL) to provide testing for sexually transmitted infections, hepatitis C, and HIV. Participants identified a number of gaps in the current public health laboratory system, including:

- Lack of access to testing of self-collected specimens from multiple anatomic sites, including rectal, oral/pharyngeal, and vaginal swabs.
- Inability for the SPHL confirm perform HCV RNA testing and confirm chronic HCV infection, which would support linkage to care and treatment
- Limited laboratory capacity to perform HIV RNA testing to measure viral load and to confirm acute HIV infections

HIV SERVICE SYSTEM NEEDS

Partnerships between health department staff and community-based medical and non-medical agencies present important opportunities to effectively identify, engage, and link HIV+ and at-risk individuals to

care and treatment services. Recent experiences with applied use of HIV surveillance and electronic laboratory reporting (ELR) data have demonstrated effectiveness to improve engagement and retention in HIV care and treatment. A key component of the *State Plan* is to strengthen connections between public health staff and community-based prevention and care programs, and to strategically deploy public health interventions in partnership with medical and non-medical providers. Participants identified three major service needs and proposed a number of strategies to achieve a more effective public health response.

EXPAND UTILIZATION OF DATA-TO-CARE INITIATIVES

The strategic use of data to inform service delivery was consistently identified as an ongoing need and current gap in the service system. As a component of grant-funded projects, Massachusetts implemented the use of HIV surveillance generated line-lists to identify HIV+ patients who may be out of care, based on a gap in the receipt of a recent HIV viral load or CD4+ T-cell count laboratories in the last six months or more. These line-lists are confidentially shared with a subset of medical providers to support efforts to reengage HIV+ individuals in care and treatment. Stakeholders highlighted these types of data-sharing efforts as best practices, and underscored the importance of expanding these approaches to all medical providers serving HIV+ patients. Additional strategies to improve utilization of data-to-care initiatives include:

- Expand dissemination of out-of-care line lists to all HIV medical care providers to identify individuals truly out of care who could benefit from linkage to care interventions
- Expand capacity to provide out-of-care line lists to community-based non-medical providers for the purpose of promoting engagement and retention in medical care
- Improve capacity for dissemination of local (city, neighborhood) disease surveillance data to inform local-level disease response, in collaboration with local public health agencies
- Develop capacity for HIV providers to coordinate with the Massachusetts HIV/AIDS Surveillance Program to verify engagement in care
- Expand implementation of Electronic Health Record Support for Public Health (ESPnet) to directly query electronic medical records to monitor HIV, STD, and viral hepatitis diagnosis, and improve the quality and timeliness of care and treatment services
- Improve provider capacity to use HIV surveillance and Electronic Medical Record (EMR) data to improve the delivery of HIV prevention and care services.

INTEGRATION OF PREVENTION AND CARE SERVICES

The integration of prevention and care services has long been identified as top priority for HIV service programs. Overwhelmingly, participants highlighted the need for additional flexibility across prevention and care funding streams to meet the needs of both HIV+ and at-risk populations. Suggested strategies include:

- Streamline funding for prevention and care services into a single contract procurement
- Support contractual scopes of service that are responsive to social determinants of health for individuals both living with and at risk for HIV infection

- Expand allowable service scopes to include housing search, advocacy, and transitional or permanent placement services for persons at high risk for HIV infection, who are homeless or unstably housed
- Provide flexibility for medical and non-medical providers to leverage federal and state funds across prevention and care funding streams
- Cross-train prevention and medical case management staff to provide continuous levels of care, regardless of funding source(s) or HIV status of clients served
- Develop an integrated set of prevention and care quality monitoring standards
- Include support for certified Community Health Workers (CHWs) as members of integrated HIV prevention and care teams as a component of service contracts

IMPROVE OUTCOMES ACROSS THE HIV CARE CONTINUUM

The Massachusetts HIV care continuum is an important tool to assess the impact of publicly funded HIV/AIDS prevention and care services. Data from the Massachusetts HIV care continuum indicates higher levels of engagement in care, retention in care, and viral suppression when compared to nationwide data; yet disparities persist by race/ethnicity, age, gender, and exposure mode. Closing the remaining gaps along the continuum of care, especially for populations experiencing lower rates of viral suppression and retention in care, was highlighted as a priority. Additional service needs to improve health outcomes were identified, including:

- Continue to implement a rapid public health response to all new diagnoses of acute HIV infection, including deployment of Field Epidemiologists to deliver Partner Services and ensure prompt linkage to care
- Expand the role of HIV+ peers and Community Health Workers to assist in efforts that support the identification and reengagement of individuals identified as out-of-care
- Outpost HIV Drug Assistance Program (HDAP) staff at medical and non-medical sites to support increased enrollment in health insurance, access to medication assistance, and enrollment in the state-funded PrEP drug assistance program (PrEP DAP)
- Invest in specialized staff and/or programming to support adherence to antiretroviral therapies for PLWH, including treatment for hepatitis C
- Assist medical and non-medical providers in developing agency-specific care continua to identify population and/or systems-level gaps
- Expand the capacity for HIV Surveillance staff to generate timely, regional, agency-level, and population-specific care continua to promptly identify gaps and need for intervention

HIV SERVICE SYSTEM BARRIERS

A number of organizational, policy, and infrastructure barriers impacting delivery of HIV/AIDS prevention and care services were identified throughout all of Needs Assessment activities.

THE IMPACTS OF STIGMA IN HIV, STD AND HCV PREVENTION AND CARE

Stigma and discrimination undermine equal access to high quality prevention and care services for populations impacted by HIV, STD, and HCV infections. Stigma has been demonstrated to have a negative influence on an individual's mental health, ability to modify risk behaviors, motivation to access care and prevention services, and on providers' willingness and ability to offer compassionate care and prevention services. Persons living with HIV and/or HCV experience social marginalization because of the stigma associated with transmission behaviors, both sexual- and injection-related. Stakeholder engagements repeatedly cited the continued impact of stigma and discrimination on health promotion behaviors for those at risk and living with HIV and HCV. Advisory groups have called for more intentional and visible anti-stigma campaigns, and emphasized that these efforts should be located in communities most disproportionately impacted by HIV and HCV. OHA program implementation and monitoring plans will continue to include strategies to reduce stigma by contracted providers. Other ongoing or planned activities include increased provider training, materials development, on-line and in-person educational programs and community forums, and media campaigns.

HOMELESSNESS AND HOUSING INSTABILITY

A major barrier to entering and remaining in care, and staying adherent to antiretroviral treatments is stable housing. The majority of individuals living with HIV infection in Massachusetts are lower income. The lack of access to stable, affordable housing is associated with increased risks for communicable infections, chronic illness, injury, and food insecurity; and is associated with disease progression and lower likelihood of viral suppression in homeless persons who are HIV+. The high costs of housing in Massachusetts, particularly in and around Boston, which is home to 30% of PLWH, and limited affordable housing options, places housing insecurity as one of the most substantial barriers to health facing individuals living with and at risk for HIV infection in the Commonwealth. Support for healthcare organizations that serve homeless populations, as well as housing search and advocacy services for persons living with and at risk for HIV infection are a priority.

CHALLENGES ASSOCIATED WITH AGING

Due to advances in highly active antiretroviral treatments, PLWH are living longer and healthier lives. In Massachusetts, 59% of PLWH are aged 50 years and older, 21% are over 60 years of age. The Massachusetts HIV care continuum also demonstrates that older persons living with HIV infection are more likely to accomplish viral suppression than their younger counterparts; in fact rates of viral suppression for both women and men and across racial/ethnic groups, increases with age. Despite some relative health advantages, the HIV service system is not currently designed to sufficiently meet the changing needs of older clients. Direct care staff, including prevention providers, medical case managers, and peers are more likely to be comparatively younger than many of their aging clients. Older PLWH have greater needs for support in home and community-based settings, including residential and nursing home

care. The challenges of navigating the Social Security and Medicare system, particularly for HIV+ persons approaching retirement age after years out of the workforce or on disability, may increase the need for specialized benefits advocacy. Older persons with HIV infection, who are immigrants or refugees, may face even more acute support needs, particularly for culturally and linguistically appropriate services.

MENTAL HEALTH CHALLENGES AND SUBSTANCE USE DISORDERS

Untreated mental illness and substance use disorders may pose significant barriers for those individuals to access prevention and care services and adhere to prescribed treatments. PLWH impacted by mental illness and/or addiction face competing priorities that may delay or complicate access to care. One recommended solution is to better integrate the availability of HIV prevention and care services alongside behavioral health care, and to co-locate to the extent possible substance abuse treatment and mental health counseling in venues where risk reduction counseling, HIV and HCV testing, and HIV medical case management services are also available. Additional recommendations include expanding the use of peers and community health workers, who have the flexibility to be deployed to home and community-based settings, to work directly with vulnerable clients in ways that are low threshold and individually-tailored to their particular support needs.

FUNDING STREAMS SILOES

Because programs in Massachusetts are funded in several different ways, the requirement that certain contract resources may only be utilized for a proscribed set of activities impedes the provision of a seamless continuum of care. This is notably the case when prevention and health-related support services are conditional on HIV status. When providers are restricted in the ways in which they deliver comprehensive care to clients, HIV+ and at risk individuals seeking to access services may be unfairly affected. Massachusetts aims to increase flexibility in the use of public health resources (within allowable parameters) to both expand access to and maximize the impacts of prevention and care programs for persons living with and at risk for HIV, STDs, viral hepatitis, and TB. Recent expansion of authorizing language in the State HIV/AIDS budget line allows for investment across these four communicable disease areas.

PROVIDER STAFF CAPACITY

In order to attract and retain skilled and qualified workforce, HIV service agencies need sufficient resources to offer staff salaries and professional development opportunities commensurate with their expertise. Serving vulnerable populations in medical and community-based settings requires providers with skills and experience in outreach and assessment, and linkage to care strategies such as Motivational Interviewing. The needs of persons with HIV infection are increasingly complex, which also demands a differently skilled workforce. Individuals living with HIV infection are aging, and present with more complex health care needs, including for long-term care and supportive housing. There is increased demand for persons with high levels of skills and expertise in benefits advocacy, as well as navigating new systems and requirements under state and national health care reforms, such as health insurance plan selection and prior authorization. Massachusetts will continue to deploy health department expertise and external consultants to deliver specialized training and capacity building, and is investing in an

Electronic Learning Management System (ELMS), which will allow for on-line training and consultation opportunities.

REPORTING REQUIREMENTS INCLUDING CLIENT-LEVEL DATA COLLECTION

Data collection and reporting often prove burdensome for providers who must meet the requirements of multiple funders with limited funding to allocate for administration. Providers estimate that requirements associated with documentation and client-level data entry reduces available time to serve clients by up to 20%. Complicating matters for providers is the lack of consistent fiscal years across funding streams, which means that they are faced with reporting periods that do not necessarily correlate with other data collection periods. There is a strong and unified desire for a single, client-level data system across funded prevention and care programs, which would both support service coordination for HIV+ and prevention clients, as well as facilitate reporting to state and federal funders. Massachusetts will implement the CAREWare client-level data system for both state-funded Ryan White Part B and D funded programs in 2016, as one solution that will begin to address some of these challenges and concerns. CAREWare will also be utilized to collect and monitor client-level HIV Drug Assistance Program (HDAP) data, and align medical case management service utilization with access to treatment and HIV care continuum outcomes. Opportunities to expand utilization of CAREWare to include HIV prevention and screening services, as well as to link service information to HIV surveillance data will also be explored.

LEGISLATIVE AND POLICY ENVIRONMENT

The Massachusetts State Legislature has provided extraordinary leadership over decades to advance sound public health policies with respect to HIV prevention and care. Implementation of state health care reforms in 2006, were foundationally important to improve access to HIV prevention, care, and treatment services. State laws and regulations accomplished expanded access to Medicaid for non-disabled persons with HIV infection who are low income, authorization of verbal consent to HIV testing to improve access to routine HIV testing, operation of locally-approved syringe service programs (SSPs), and legalization of over-the-counter purchase of sterile syringes. In the 2016 state budget process MDPH was authorized to expand funding to additional SSPs (beyond a prior ten-program cap) with approval by local Boards of Health. In July of 2016 the Massachusetts House and Senate passed and Governor Baker signed in to law legislation that requires public and private insurers to cover prescribed HIV-related lipodystrophy treatments. The law is the first of its kind in the country.

Some current policy challenges relate to the interplay between public and private health insurance coverage, and assurance of access to particular levels of coverage for HIV and HCV testing, care, and treatment. These challenges underscore the important role of public health resources to meet HIV prevention and care needs that are not sufficiently met by health insurance coverage. Responsive public health policies reduce onward transmission of communicable infections and improve health outcomes.

CONDUCTING A DATA-DRIVEN NEEDS ASSESSMENT PROCESS

To prepare the Integrated SCSN, OHA utilized a variety of data sources to ground participants in the current epidemiological profile and highlight successes and challenges relative to the current response. Key data sources were utilized to identify gaps in the existing prevention and care system and to prioritize service needs. Needs assessment participants also reviewed OHA service utilization data, including updated HIV, HCV, and STI counseling, testing, and referral data, as well as demographic and service utilization data from OHA-supported medical case management and health related support service programs. Additionally, participants were presented HIV Care Continuum data for particular state regions and population groups, updates on HIV incidence and prevalence, and an overview of any emerging, epidemiologic trends. Presentations included analyses that were stratified by age, gender/gender identity, race/ethnicity, health service region, and exposure mode category. Epidemiological data sources utilized to develop the Integrated SCSN include the following:

COMMUNICABLE DISEASE SURVEILLANCE DATA

Surveillance data including case reports and laboratory results on all reportable infectious diseases, including HIV, STDs and HCV, are reported to MDPH and are managed through the Massachusetts Virtual Epidemiologic Network (MAVEN). MAVEN is a web-based disease surveillance and case management system that enables state and local health departments to collect and share public health, laboratory, clinical, and case management data securely over the Internet. Data generated from these sources include updated HIV epidemiologic and laboratory data.

OFFICE OF HIV/AIDS (OHA) SERVICE DATA

All OHA-supported providers of prevention, screening, medical case management, and HIV-related support services submit data to OHA including client demographics, exposure mode category, and service utilization (e.g. testing, medical case management) received. Data are maintained in multiple databases. Presently prevention and integrated testing services data are submitted by providers via paper forms; data collected from these forms are uploaded into a secure database for ongoing analysis and submission to federal funders. HIV Medical Case Management (MCM) and Health-Related Support Services are currently maintained in a system called GenuWin2. In 2016, Massachusetts will transition data collection to CAREWare for HIV+ clients receiving care services funded by the state health department, including by Ryan White Parts B and D.

BOSTON PUBLIC HEALTH COMMISSION: SERVICES AND FUNDING STREAMS OVERVIEW

Members of the Ryan White Part A Planning Council, as well as staff at the Boston Public Health Commission, contributed valuable information to the needs assessment process relative to HIV/AIDS services funded through RWHAP Part A funds and the City of Boston. This information included an annual review of funding streams and the availability of HIV/AIDS services within the Boston Eligible Metropolitan Area (EMA). This review describes the types and amounts of federal, state and local funds available for HIV-related services in the Boston EMA. Data for this assessment is collected using a survey completed by various HIV/AIDS payers and providers in the Boston EMA.

INTEGRATED HIV PREVENTION AND CARE PLAN

GOALS AND OBJECTIVES: 2017-2021

The *Massachusetts HIV/AIDS Integrated Prevention and Care Plan* is intended to inform and guide prevention, care, and treatment activities of the Massachusetts Department of Public Health. Because the success of Massachusetts's efforts depends significantly upon the strength and effectiveness of a broad range of partnerships, the *State Plan* also serves as a guide to inform the activities of health and social service providers, advisory bodies, policy makers, local public health, researchers, community leaders, and other stakeholders.

The *State Plan* is built upon the core components of the 2013 Massachusetts *State HIV/AIDS Plan* (the 2013 State Plan). The 2013 State Plan articulated a series of recommendations that were designed to enhance Massachusetts's response to HIV/AIDS, emphasizing policy, structural, and operational adjustments that optimize resources and leverage existing and historic investments in a responsive HIV/AIDS prevention and care system. The 2013 State Plan also articulated a number of policy and programmatic initiatives to strengthen Massachusetts's response to hepatitis C, including a set of strategies to enhance programmatic efforts for the prevention, care, and treatment of HCV infection.

In implementing the 2016 Massachusetts *HIV/AIDS Integrated Prevention and Care Plan*, MDPH seeks to (1) build on the goals and objectives of the 2013 State Plan; (2) accelerate progress to reduce new HIV infections and improve health outcomes for PLWH; (3) link the intended outcomes and objectives of this State Plan directly to the goals and objectives outlined in the *National HIV/AIDS Strategy*, and (4) advance health equity. Moreover, the programmatic investments detailed in the State Plan align with the four major areas of focus outlined in the *National HIV/AIDS Strategy: Updated to 2020*:

- Widespread testing and linkage to care, enabling people living with HIV to access treatment early and achieve viral suppression
- Broad support for people living with HIV to remain engaged in comprehensive care, including support for treatment adherence
- Universal viral suppression among people living with HIV
- Full access to comprehensive PrEP services for those whom it is appropriate and desired, with support for medication adherence for those using PrEP

Promotion and achievement of health equity is an overarching objective of the *State Plan*. OHA is committed to health equity through investments in programming and policies that decrease health disparities and address the social and environmental determinants of health. Strategies to achieve health equity and decrease disparities among prioritized populations—including racial and ethnic minority populations, gay and bisexual men and other men who have sex with men, persons who inject drugs, and transgender individuals—are included in the *Goals and Objectives 2017-2021* section of the *State Plan*.

These goals will be monitored as outlined in the Monitoring and Evaluation Plan (page 86) along with providing progress updates to stakeholders.

Massachusetts has identified three broad goals for inclusion in the *2016 State Plan*:

- Reduce the impacts of HIV
- Improve health outcomes for persons living with HIV (PLWH)
- Reduce HIV-related health disparities

Each goal has an associated set of strategic, measurable, attainable, realistic, and time-framed (SMART) objectives, as well as corresponding strategies, activities, and data sources. Objectives span prevention and care arenas, and address individual- and population-level health outcomes. To achieve these goals and objectives, the *State Plan* employs a core set of four strategic approaches and associated activities:

Optimize the population-level response to HIV, HCV, and STIs. Activities include focused population health programs, such as targeted HIV testing, access to PrEP, syringe service programs, and population recruitment and engagement efforts.

Improve the public health response to HIV, HCV, and STIs. Activities include interventions directly administered by the health department and data-to-care initiatives.

Improve service system quality and sustainability. Activities include integrated prevention and care services, investments in training and capacity building, promotion of an acuity based service provision, integration of HIV, HCV, and STI services, and service monitoring and quality improvement efforts.

Promote meaningful collaborations and stakeholder engagement activities. Activities include novel service system collaborations and partnerships, and active engagements with community members, advisory bodies, PLWH, and other key stakeholders.

These approaches align directly with the HIV Planning Goals identified by key stakeholders during initial development of the *State Plan* (see *Figure 26, page 56*). These strategic approaches reflect the Commonwealth's commitment to investing in novel and high-impact prevention and care programming, leveraging the core public health infrastructure, and routinely collaborating with stakeholders and advisory bodies.

MASSACHUSETTS GOAL 1: REDUCE THE IMPACT OF HIV

CORRESPONDING NATIONAL HIV/AIDS STRATEGY GOAL: REDUCE NEW HIV INFECTIONS

Massachusetts envisions an end to the HIV epidemic in the Commonwealth. Currently, Massachusetts has a number of opportunities to make significant reductions to new diagnoses in particular population groups, through delivery of primary prevention interventions, risk reduction services, and treatment as prevention (TasP) approaches. Massachusetts has already made substantial progress in the last fifteen years to reduce new HIV infections, and we recognize that accelerating these reductions will require vigilance, creativity, and innovation. Massachusetts has focused our objectives to improve population health and reduce the number of new HIV infections in the jurisdiction, including two HIV elimination targets.

SMART OBJECTIVES, STRATEGIES, AND SELECTED ACTIVITIES

Objective 1.1: By 2021, reduce newly diagnosed HIV infections among MSM by 30%.

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Expand access to and utilization of biomedical interventions, including PrEP and nPEP, through expansion of PrEP services to agencies with demonstrated capacity to serve MSM
- Improve population targeting efforts at community based medical and non-medical HIV prevention and care programs, to better reach at-risk MSM, particularly black and Latino and other racial/ethnic minority MSM and MSM under 30 years of age
- Increase rates of HIV, HCV, and STI testing among MSM in publicly-funded community based medical and non-medical HIV prevention and care programs
- Implement rectal and pharyngeal screening for STIs to identify MSM engaging in high risk sexual activity, and provide prompt access to treatment and effective prevention tools
- Implement behavioral health assessment at all programs serving MSM, including substance use assessment and referral/linkage to treatment.
- Develop a series of population-specific educational materials for medical providers and potential PrEP utilizers to increase knowledge about, capacity to prescribe, and utilization of PrEP by MSM

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Deploy Field Epidemiologists to provide rapid linkage to medical care and HIV Partner Services for MSM diagnosed with acute HIV infection
- Deploy Field Epidemiologists to link MSM recently diagnosed with a sexually transmitted infection directly to PrEP services, and prioritize linkage to PrEP for MSM who have experienced repeated syphilis or rectal gonorrhea or chlamydia infections in the past 12 months
- Utilize HIV, STD, and behavioral surveillance data to improve the quality and responsiveness of HIV prevention services for MSM

- Implement universal STI testing and treatment in all OHA-funded sites that provide health promotion and disease prevention services

Strategy: Improve service system quality and sustainability

Selected Activities:

- Continue to evolve the service model to focus on comprehensive health promotion services for MSM, inclusive of HIV, HCV, and STI testing, linkage to medical care, linkage to behavioral health services, linkage to biomedical interventions, and coordination of housing and other supportive services
- Provide capacity building activities to agencies with experience providing PrEP and/or agencies identified to implement PrEP
- Support capacity building/technical assistance (CB/TA) activities, including the use of Electronic Learning Management System, to bolster system capacity to provide services to MSM
- Implement quality assurance protocols to improve the completeness of data collected on integrated testing data forms to ensure reporting of sexual risk indicators
- Enhance analysis of counseling, testing, and referral data from publicly-funded HIV, HCV, and STI testing programs to measure effectiveness in reaching MSM.
- Sustain investments in capacity building activities focused on ‘Talking with Clients About Sex’ with publicly-funded HIV, HCV, STI testing programs to increase levels of sexual risk assessment and risk reduction planning services- including access to agency staff coaching and use of supervisory tools
- Develop acuity-based system of case management for high-risk negative MSM, focusing on coordination of preventive and supportive services including behavioral health and housing

Strategy: Promote meaningful collaborations and stakeholder engagement activities

Selected Activities:

- Engage PrEP Clinical Advisory Group and Community of Practice to evaluate outcomes of PrEP demonstration project and refine processes for referral and engagement in PrEP
- Collaborate with New England AIDS Education and Training Center (NEAETC) to develop provider training series to increase the number of providers that will prescribe PrEP to MSM
- Initiate stakeholder engagements with YMSM, racial and ethnic MSM, and HIV+ MSM over 50 years to age to discuss barriers to accessing HIV prevention and care services
- Collaborate with the Bureau of Substance Abuse Services (BSAS) to implement substance use treatment in selected sites serving LGBTQ youth

Objective 1.2: By 2021, eliminate newly diagnosed HIV infections among PWID.¹²

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Expand the number of SSPs in the state, with an emphasis on meeting the prevention needs of PWID in regions disproportionately impacted by HIV, hepatitis C, and opiate overdose

¹² For this objective, elimination is defined as fewer than 10 new diagnoses annually.

- Expand support for community-based outreach and linkage services in settings that serve PWID, and in venues where PWID congregate or reside
- Expand access to Overdose Education and Naloxone Distribution (OEND) services in the context of comprehensive health promotion services for PWID
- Implement behavioral health assessment at all programs serving PWID, including substance use assessment and referral/linkage to treatment.
- Support comprehensive health promotion and disease prevention services in correctional facilities, including provision of HIV, HCV, and STI testing, prevention counseling, and activities to support engagement and retention in care
- Support a diverse workforce including peers, community health workers, and other direct care providers with demonstrated effectiveness to competently engage PWID

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Deploy Field Epidemiologists to provide rapid linkage to medical care and HIV Partner Services for PWID diagnosed with acute HIV infection
- Assess the feasibility of Field Epidemiologist deployment for young people reported with HIV/HCV co-infection
- Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible PWID with HIV infection
- Sustain access to HIV and HCV co-testing for all individuals receiving integrated screening in publicly-funded programs; support referral and linkage to medical care providers for individuals diagnosed with HCV infection
- Implement universal STI testing and treatment in all OHA-funded sites that provide health promotion and disease prevention services

Strategy: Improve service system quality and sustainability

Selected Activities:

- Continue to evolve the SSP model to focus on comprehensive health promotion services for PWID, inclusive of HIV, HCV, and STI testing, linkage to medical care, linkage to substance use treatment services, and coordination of housing and other supportive services
- Support CB/TA activities, including the development and deployment of ‘Talking with Clients About Drugs’ to all direct care health promotion and disease prevention service providers, as well as the use of an Electronic Learning Management System, to bolster system capacity to provide services to PWID through online learning modules.
- Ensure the provision of acuity-based medical case management and peer support services at programs funded to provide services to PWID
- Increase access to substance use treatment and behavioral health services, including Medication Assisted Treatment (MAT), in programs that are co-located with HIV prevention and care programs

Strategy: Promote meaningful collaborations and stakeholder engagement activities

Selected Activities:

- Partner with the Bureau of Substance Abuse Services (BSAS) to expand collaborative efforts to support assessment and linkage to Overdose Education and Naloxone Distribution (OEND) services as well as facilitating barrier-free access to substance use treatment
- Collaborate with the Drug User Health Advisory Group to develop a set of best practices relative to the use of harm-reduction based services in all publicly-funded HIV programs

Objective 1.3: By 2021, eliminate perinatal HIV transmission

Strategy: Improve service system quality and sustainability

Selected Activities:

- Utilize Clinical Chart Review to ensure levels of ART prescription to HIV+ pregnant women meets the 100% performance expectation, and provide public health follow up with any medical agencies failing to meet this standard to implement a quality improvement response
- Collaborate with the Part D MassCARE program to implement Fetal Infant Mortality Review (FIMR) case investigation for any HIV+ infant both in the Commonwealth

Strategy: Promote meaningful collaborations and stakeholder engagement activities

Selected Activities:

- Partner with the Massachusetts League of Community Health Centers to increase offer of routine HIV testing by obstetrician/gynecologists (OB/GYN) medical practices, including in the 3rd trimester and during labor and delivery
- Collaborate with PrEP Clinical Advisory Group and Community of Practice to develop best practices for working with sero-discordant heterosexual couples looking to conceive

Objective 1.4: By 2021, achieve a reduction in the proportion of cases reported to Massachusetts HIV Surveillance Program with No Identified Risk (NIR), from 25% to 15% of all reported cases.

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Deploy HIV surveillance epidemiologists to follow up with all providers submitting CRFs with incomplete exposure mode data

Strategy: Improve service system quality and sustainability

Selected Activities:

- Provide education and technical assistance to medical providers who complete HIV Case Report Forms (CRFs) regarding the importance of complete and accurate reporting of exposure mode
- Develop Corrective Action Plans with any publicly funded agency that submits CRFs with incomplete exposure mode data to require updated data submission within a specified time period

Objective 1.5: By 2021, establish a baseline understanding of new infections among transgender-identified individuals, and set health outcomes benchmarks to improve the quality and effectiveness of prevention and care services

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Standardize all HIV, STD, and HCV surveillance and service data collection forms to include documentation of both 'sex at birth' and 'current gender identity'
- Monitor completion of 'sex and birth' and 'gender identity' data fields and deploy epidemiologic follow up with any agency failing to report complete data, or reporting conflicting or inconsistent information

Strategy: Improve service system quality and sustainability

Selected Activities:

- Provide education and technical assistance to medical providers who complete CRFs regarding the importance of accurately reporting both 'sex at birth' and 'current gender identity' on CRFs
- Provide capacity building to publicly-funded HIV prevention and care programs to develop and implement transgender sensitivity and competency training plans

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Perform frequent data analysis (minimum biannually) to monitor trends in HIV infection in transgender populations and share information with Transgender Health Advisory Group and other key stakeholders
- Collaborate with the Transgender Health Advisory Group to outline health outcomes benchmarks and outline best practices for serving the transgender community

MASSACHUSETTS GOAL 2: IMPROVE HEALTH OUTCOMES FOR PERSONS LIVING WITH HIV

CORRESPONDING NATIONAL HIV/AIDS STRATEGY GOAL: INCREASING ACCESS TO CARE AND IMPROVING HEALTH OUTCOMES

Massachusetts aims to ensure that all persons living with HIV infection have access to high quality care and treatment, and the structural and direct care supports they need to accomplish viral suppression and improve health outcomes. We recognize that the needs of HIV+ individuals to navigate the medical care system, remain engaged and retained in care, and adhere to antiretroviral therapies are widely variable; and that these capacities are influenced by a range of socioeconomic, environmental, and psychosocial factors. Efforts to improve health outcomes for all persons living with HIV infection must address both individual and systems-level assets and barriers.

SMART OBJECTIVES, STRATEGIES, AND SELECTED ACTIVITIES

Objective 2.1: By 2021, 90% of newly diagnosed HIV+ individuals will be successfully linked to care within 45 days of the date of diagnosis

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Expand linkage to care activities in primary care practices, obstetrics and labor and delivery, community health centers, and hospitals with access to populations disproportionately impacted population groups
- Utilize HIV surveillance data to identify population groups, geographic regions, and provider agencies with suboptimal linkage to care, and deploy tailored interventions

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Deploy Field Epidemiologists to intervene with all persons diagnosed with acute HIV infection within 24 hours of diagnosis, and link them to care within 72 hours of diagnosis
- Deploy field epidemiologists to follow up with all individuals newly diagnosed with HIV infection, and provide direct linkage to an HIV medical provider
- Expand the services of the Benefits Resource Infectious Disease Guidance and Engagement (BRIDGE) team to ensure HDAP services are maximally accessible to individuals newly diagnosed with HIV infection

Strategy: Improve service system quality and sustainability

Selected Activities:

- Expand utilization of interdisciplinary care teams (including peers, nurses, and social workers) to outreach to newly diagnosed individuals in community-based settings and provide intensive linkage to care supports

- Support provision of same-day (date results returned) engagement into HIV medical care and treatment for individuals newly diagnosed with HIV by coordinating with other RWHAP and state-funded medical care and case management programs
- Design and implement education and training activities that aim to reduce HIV-associated stigma

Objective 2.2: By 2021, improve Massachusetts HIV Care Continuum outcomes to 90/90/90 (90% diagnosed; 90% retained in care; and 90% of PLWH virally suppressed)

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Expand targeted testing initiatives to reach disproportionately impacted population groups and at-risk populations with low rates of HIV testing in community-based medical and non-medical agencies

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Deploy Field Epidemiologists to intervene with all persons diagnosed with acute HIV infection within 24 hours of diagnosis, and link them to care within 72 hours of diagnosis
- Deploy field epidemiologists to follow up with all individuals newly diagnosed with HIV infection, and provide direct linkage to an HIV medical provider
- Expand the services of the HDAP's BRIDGE team to promote barrier-free access to HDAP services and support in accessing the Commonwealth's health insurance marketplace

Strategy: Improve service system quality and sustainability

Selected Activities:

- Expand routine HIV testing in primary care practices, obstetrics and labor and delivery, community health centers, and hospitals with capacity to provide immediate linkage and engagement in HIV medical care
- Integrate direct service procurements for prevention and care into a single contract, to enable a seamless continuum of services for persons living with and at risk for HIV infection
- Establish a mechanism to provide expedited access to HIV Drug Assistance Program (HDAP) coverage for all individuals diagnosed with HIV infection during the acute phase

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Participate, in partnership with colleagues at MassHealth- in the Centers for Medicare and Medicaid Services (CMS) HIV Affinity Group. Participation will enable Massachusetts to perform analyses of health outcomes for HIV+ state residents who are covered by MassHealth, to monitor impacts of Medicaid policy changes on HIV+ Massachusetts residents, and to pilot new health promotion interventions for HIV+ persons covered by the Medicaid program

- Explore collaborative opportunities with the MDPH Office of Local and Regional Health, as well as local health departments in jurisdictions with high HIV incidence and prevalence, to support public-health led efforts to promote linkage and retention in care

Objective 2.3: By 2021, eliminate progression to AIDS among PLWH.¹³

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Utilize HIV electronic laboratory reporting (ELR) surveillance data to identify PLWH who are out of care or not virally suppressed, and deploy Field Epidemiologists in coordination with members of medical care teams, to promptly reengage patients into care and treatment
- Continue to administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection
- Expand the services of the Benefits Resource Infectious Disease Guidance and Engagement (BRIDGE) team to ensure HDAP services are maximally accessible

Strategy: Improve service system quality and sustainability

Selected Activities:

- Implement acuity-based medical case management (MCM) services in all regions of the state to ensure access to health systems navigation, clinic- and community-based interventions to promote engagement and retention in care, and adherence support to maximize rates of viral suppression
- Expand efforts to reduce HIV-associated stigma by supporting a diverse HIV workforce in the Commonwealth, including the use of HIV+ peers, community health workers, and other direct care providers with demonstrated effectiveness to competently engage PLWH

Objective 2.4: By 2021, reduce HIV related mortality among PLWH by 10%

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection

Strategy: Improve service system quality and sustainability

Selected Activities:

- Implement acuity-based medical case management (MCM) services in all regions of the state to ensure access to health systems navigation, clinic- and community-based interventions to promote engagement and retention in care, and adherence support to maximize rates of viral suppression

¹³ Excludes individuals concurrently diagnosed with HIV and AIDS.

- Offer enhanced engagement and retention in care interventions to HIV+ PWID and persons co-infected with HIV and HCV that have higher rates of mortality compared to other HIV+ populations

Objective 2.5: By 2021, 90% of individuals co-infected with HIV and HCV will be linked to HCV treatment

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Build capacity at syringe service programs to provide comprehensive health promotion services for PWID, including routine testing for HIV/HCV and seamless linkage to medical care and treatment
- Design and distribute educational materials to medical providers about the availability of medication co-payment assistance through HDAP for HIV/HCV co-infected individuals, including co-infected persons who are incarcerated
- Integrate behavioral health and substance abuse treatment services into prevention and care programs that serve PWID and other persons managing substance use disorders
- Release an educational campaign directed to persons who inject drugs (PWID), with a focus on young PWID about the availability and benefits of HCV care and treatments

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Utilize HIV Drug Assistance Program (HDAP) data to identify co-infected program enrollees who have not received HCV treatment, and deploy follow up by HDAP medical staff to deliver education and clinical guidance to the treating physician

Strategy: Improve service system quality and sustainability

Selected Activities:

- Provide capacity building assistance to all health promotion and disease prevention service providers about the effectiveness of HCV treatment, clinical recommendations that HIV/HCV co-infected persons receive HCV treatment, and long term, health-promoting impacts of HCV cure for persons co-infected with HIV and HCV

Objective 2.6: By 2021, 100% of clients diagnosed with acute HIV infection will be linked to care within 72 hours

Strategy: Improve service system quality and sustainability

Selected Activities:

- Train and provide continuing education to Field Epidemiologists to intervene with all acute HIV infection diagnoses and ensure linkage to medical care
- Amend scopes of services with contracted medical providers to ensure expedited access to medical evaluation and treatment for all individuals diagnosed with acute HIV infection as a condition of award, including cases of acute HIV infection referred directly by Field Epidemiologists

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Collaborate with the New England AIDS Education and Training Center (NEAETC), Massachusetts League of Community Health Centers, and others to provide training to medical providers about acute HIV infection; the importance of immediate access to evaluation and treatment, and prompt referral to partner services

Objective 2.7: By 2021, 75% of sexually active PLWH will receive STD testing during medical visits

Strategy: Improve service system quality and sustainability

Selected Activities:

- Utilize the Clinical Chart Review to identify medical agencies with suboptimal levels of STD testing in HIV+ patients, and require implementation of a clinical quality improvement response to improve performance
- Expand upon existing capacity building activities focused on 'Talking with Clients About Sex' with medical case managers to increase levels of sexual risk assessment and supportive referrals to STD testing for HIV+ clients

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Collaborate with the New England AIDS Education and Training Center (NEAETC), Massachusetts League of Community Health Centers, and others to provide training to medical providers about the importance of regular STI testing among sexually active PLWH

MASSACHUSETTS GOAL 3: REDUCE PERSISTENT HIV-RELATED HEALTH DISPARITIES

CORRESPONDING NATIONAL HIV/AIDS STRATEGY GOAL: REDUCE HIV RELATED DISPARITIES AND HEALTH INEQUITIES

Reducing and/or eliminating persistent HIV-related health disparities are a critical component of the Commonwealth's plan to end the epidemic in Massachusetts. MDPH has identified five objectives that propose overall reductions in new diagnoses and rates of disparities among racial and ethnic minorities. Selected strategies and corresponding activities address the many social determinants that contribute to health inequity: socioeconomic status, geographic location of residence, and access to medical care and health-related supportive services. Mental health, substance use disorders, HCV co-infection, and other co-morbidities are also addressed in the strategies and activities associated with this goal.

SMART OBJECTIVES AND SELECTED STRATEGIES:

Objective 3.1: By 2021, reduce the disparity in relative rates of new HIV infection diagnoses between black (non-Hispanic) and white (non-Hispanic) residents by 20%.

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Expand HIV prevention, testing, and medical case management services in agencies serving black (non-Hispanic) populations or with documented capacity to serve them.
- Expand access to biomedical interventions, including PrEP and nPEP, to agencies located in neighborhoods where black (non-Hispanic) individuals receive services

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Generate HIV care continuum analyses for black (non-Hispanic) individuals to monitor disparities in health outcomes and implement interventions to address gaps in engagement and retention in care and viral suppression.
- Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Collaborate with the Partnership for Addressing HIV and viral hepatitis among African Immigrants to identify strategies and best practices for serving African-born immigrants living with and at risk for HIV.

Objective 3.2: By 2021, reduce the disparity in relative rates of new HIV infection diagnoses between Hispanic/Latino and white (non-Hispanic) residents by 25%.

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Expand HIV prevention, testing, and medical case management services in agencies serving Hispanic/Latino populations or with documented capacity to serve them.
- Expand access to biomedical interventions, including PrEP and nPEP, to agencies located in neighborhoods where Hispanic/Latino individuals receive services

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Generate HIV care continuum analyses for Hispanic/Latino individuals to monitor disparities in health outcomes and implement interventions to address gaps in engagement and retention in care and viral suppression.
- Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Work with the Transgender Health Advisory Group to identify strategies to deliver HIV prevention and care services to Latina transgender women

Objective 3.3: By 2021, improve rates of viral suppression for racial/ethnic minorities to be equivalent to rates in white (non-Hispanic) populations

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Generate HIV care continuum analyses for black (non-Hispanic) and Hispanic/Latino populations to monitor disparities in health outcomes and implement interventions to address gaps in engagement and retention in care and viral suppression.
- Perform analyses of participation in HDAP by racial/ethnic minority populations, and deploy staff from the HDAP Benefits Resource Infectious Disease Guidance & Engagement (BRIDGE) team to perform targeted outreach and enrollment in HDAP of racial/ethnic minority clients

Strategy: Improve service system quality and sustainability

Selected Activities:

- Expand adherence support services at agencies that serve black (non-Hispanic) and Hispanic/Latino populations or with documented capacity to serve them

Objective 3.4: By 2021, reduce rates of new HIV diagnoses among young MSM (under age 30) by 50%

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Increase access to HIV testing for young MSM in publicly funded program
- Expand access to biomedical interventions, including PrEP and nPEP, to agencies with demonstrated capacity to serve YMSM

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Utilize HIV surveillance data to identify young MSM who are documented to be out-of-care based on gaps in HIV laboratories, and deploy Field Epidemiologists and specialized linkage and retention teams to reengage these individuals in care and treatment.
- Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection

Strategy: Promote meaningful collaborations and stakeholder engagement

Selected Activities:

- Collaborate with the Bureau of Substance Abuse Services (BSAS) to implement substance use treatment in selected sites serving LGBTQ youth

Objective 3.5: By 2021, eliminate new HIV diagnoses among young PWID (under age 30)

Strategy: Optimize the population-level response to HIV, HCV, and STIs

Selected Activities:

- Increase participation in HIV and hepatitis C testing and prevention services by PWID, particularly young persons who inject drugs (YPWID)
- Increase participation in SSP by young PWID through specialized outreach and engagement activities to reach this population
- Develop and release educational media campaign focused on engaging YPWID in HIV and HCV prevention, testing, care, and treatment services
- Design specialized outreach programs to engage young PWID in HIV and HCV prevention and testing, and provide linkage to overdose prevention and substance abuse treatment programs
- Expand access to biomedical interventions, including PrEP and nPEP, to agencies with demonstrated capacity to serve YPWID

Strategy: Improve the public health response to HIV, HCV, and STIs

Selected Activities:

- Utilize HIV surveillance data to identify young PWID who are documented to be out-of-care based on gaps in HIV laboratories, and deploy Field Epidemiologists and specialized linkage and retention teams to reengage these individuals in care and treatment.

- Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection
- Assess the feasibility of Field Epidemiologist deployment for young people reported with HIV/HCV co-infection

MONITORING AND EVALUATION

The *State Plan* includes a range of objectives, strategies, and associated activities. We are committed to frequent assessment of our progress in implementing planned strategies, and the extent to which these activities bring us closer to established benchmarks. Specific measurable outcomes associated with identified strategies and activities have been identified. In this way, implementation of the monitoring and evaluation plan (M&E Plan) will promote and facilitate provision of high-quality, evidence-based prevention, care, and treatment services for HIV/AIDS. Ongoing assessment of progress will enable adjustments to program plans, including ramping up strategies that are proven effective and reducing or re-directing investments from those that do not meet expectations.

The *State Plan's* monitoring and evaluation plan has two key objectives:

- (1) Provide the Bureau of Infectious Disease and Laboratory Sciences, Office of HIV/AIDS with a roadmap for monitoring and evaluating the Commonwealth's response to HIV/AIDS, specifically the strategies and associated activities outlined in the *State Plan*;
- (2) Articulate the data collection, management, and analytic resources, tools and processes needed to implement the M&E plan, including identification of gaps and opportunities for improvement.

OHA is committed to transparency and accountability, and to report regularly on its progress towards achieving the objectives presented in this plan. OHA will report to key stakeholders and advisory bodies on progress toward implementing this plan, achievement of benchmarks, challenges encountered, and changes to the plan.

At the same time, OHA will seek input from these stakeholder groups regarding the local-level issues and challenges implicated our progress as well as strategies to refine and improve efforts to respond to HIV/AIDS and HCV in the Commonwealth.

KEY DATA SOURCES

Multiple data sources, both quantitative and qualitative will be used by OHA in implementing the goals and objectives of the *State Plan*.

ADMINISTRATIVE

OHA maintains a variety of administrative and fiscal data sources that will be used in monitoring and evaluation including annual work plans which quantify services and include performance objectives. Quality improvement activities will further be informed by program-specific protocols and procedures, intervention curricula (where applicable), staffing plans, budgets and expenditure reports, and narrative progress reports which describe the challenges and facilitators associated with program implementation.

ALL PAYER'S CLAIMS DATA BASE (APCD)

The APCD is comprised of medical, pharmacy, and dental claims, as well as information about member eligibility, benefit design, and providers for all payers (Medicaid, Medicare, and private insurers) covering Massachusetts residents. The APCD is maintained by the Massachusetts Center for Health Information and Analysis. The APCD is an important mechanism to measure receipt of HIV prevention and care services by insured state residents, including routine HIV testing in healthcare settings.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

BRFSS is a national-level survey, supported by the CDC, that collects data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. BRFSS collects data in all 50 states as well as the District of Columbia and three U.S. territories. BRFSS completes more than 400,000 adult interviews each year.

COMMUNICABLE DISEASE SURVEILLANCE DATA

Surveillance data including case reports and laboratory results on all reportable infectious diseases, including HIV, STDs and HCV, are reported to MDPH and are managed through the Massachusetts Virtual Epidemiologic Network (MAVEN). MAVEN is a web-based disease surveillance and case management system that enables state and local health departments to collect and share public health, laboratory, clinical, and case management data securely over the Internet. Data generated from these sources include updated HIV epidemiologic and laboratory data.

CLINICAL CHART REVIEW

Conducted since 1998 for all HIV clinics receiving funding under Ryan White Parts A and B, the clinical chart review assesses the quality of care provided, relative to national treatment guidelines and federal quality measures. The chart review is conducted in collaboration with the Boston Public Health Commission. Beginning in 2010-11, review of clients with HCV mono-infection was included in the chart review.

HDAP DATABASE

The HIV Drug Assistance Program (HDAP) maintains a database containing client level information (demographics, mode of transmission, program eligibility, lab values, HCV status, insurance type, etc.) on all program enrollees. The database also contains data on payments made on behalf of enrollees such as premium payments to insurers and prescription cost reimbursement to pharmacies. The database is maintained by the subcontracted program administrator, Community Research Initiative of New England (CRI).

OFFICE OF HIV/AIDS (OHA) SERVICE DATA

All OHA-supported providers of prevention, screening, medical case management, and HIV-related support services submit data to OHA including client demographics, exposure mode category, and service

utilization (e.g. testing, medical case management) received. Data are maintained in multiple databases. Presently prevention and integrated testing services data are submitted by providers via paper forms; data collected from these forms are uploaded into a secure database for ongoing analysis and submission to federal funders. HIV Medical case management and health-related support services are currently maintained in a system called GenuWin2. In 2016, Massachusetts will transition data collection to CAREWare for HIV+ clients receiving care services funded by the state health department, including by Ryan White Parts B and D.

UNIFORM DATA SYSTEM (UDS)

The Uniform Data System (UDS) manages a variety of data including patient demographics, services provided, staffing, clinical indicators, utilization rates, costs, and revenues for community health centers (CHCs) receiving funding from the federal Health Resources and Services Administration (HRSA) for primary care under Section 330 of the Public Health Service Act. Data are reported annually to HRSA. The Massachusetts League of Community Health Centers acts as a clearinghouse for these data for member CHCs.

YOUTH RISK BEHAVIOR SURVEY (YRBS)

The YRBS is conducted in randomly selected public high schools in every odd-numbered year. This anonymous survey includes questions about tobacco use, alcohol and other drug use, sexual behaviors that might lead to unintended pregnancy or sexually transmitted disease, dietary behaviors, physical activity, and behaviors associated with intentional or unintentional injuries. YRBS is conducted by the Massachusetts Department of Elementary and Secondary Education and the Massachusetts Department of Public Health.

MONITORING THE PLAN'S GOALS AND OBJECTIVES

The strategies and activities outlined in the *State Plan* are each associated with timeframes, parties responsible for implementation, and progress indicators towards meeting our objectives. The monitoring and evaluation plan (detailed below) will be the primary mechanism to monitor our coordinated efforts across multiple actors and initiatives, and to remain accountable to stakeholders for priority commitments to reduce the impacts of HIV infection in the Commonwealth.

GOAL 1: REDUCE THE IMPACT OF HIV

Objective 1.1: By 2021, Reduce newly diagnosed HIV infections among MSM by 30%				
Timeframe	Evaluative Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Expand access to and utilization of biomedical interventions through expansion of PrEP services to agencies with demonstrated capacity to serve MSM	MSM, YMSM, racial/ethnic minority MSM	Office of HIV/AIDS (OHA) OHA-funded health promotion and disease prevention (HPDP) programs	Number of clients enrolled in PrEP Number of clients that access nPEP
Ongoing	Improve population targeting efforts at community based medical and non-medical HIV prevention and care programs	MSM, YMSM, racial/ethnic minority MSM	OHA OHA-funded HPDP programs	Number of clients reached through population targeting efforts
Through 2021	Increase rates of HIV, HCV, and STI testing among MSM in publicly-funded	MSM, YMSM, racial/ethnic minority MSM	OHA OHA-funded HDPD programs	Proportion of tests conducted within priority population
Through 2021	Implement rectal and pharyngeal screening for STIs to identify MSM engaging in high risk sexual activity	MSM, YMSM, racial/ethnic minority MSM	BIDLS Division of STD Prevention MA State Public Health Laboratory (MSPHL) OHA funded health promotion and disease prevention programs	Number of STI screenings conducted Number of STI positive MSM linked to STI treatment

Ongoing	Deploy Field Epidemiologists to provide rapid linkage to medical care and HIV Partner Services for MSM diagnosed with acute HIV infection	MSM diagnosed with acute HIV infection	BIDLS Division of STD Prevention MA State Public Health Laboratory OHA funded HPDP programs	Number of MSM diagnosed with acute HIV infection linked to medical care
Through 2021	Expand upon existing training focused on 'Talking with Clients About Sex' with publicly-funded HIV, HCV, STI testing programs to increase levels of sexual risk assessment and risk reduction planning services	MSM, YMSM, racial/ethnic minority MSM	Office of HIV/AIDS OHA funded health promotion and disease prevention programs	Number of training series delivered Number of field-based staff trained
Through 2021	Implement universal STI testing and treatment in all OHA funded-programs that provide health promotion and disease prevention services	MSM, YMSM, racial/ethnic minority MSM	Office of HIV/AIDS OHA funded health promotion and disease prevention programs	Number of STI+ individuals identified Percent of STI+ provided treatment

Objective 1.2: By 2021, eliminate newly diagnosed HIV infections among PWID

Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Through 2021	Expand the number of SSPs in the Commonwealth	PWID	Local boards of health (for SSP approval) OHA OHA-funded HPDP programs	Number of SSP's Number of syringes collected Number of syringes distributed
Through 2021	Expand support for community-based outreach and linkage services in settings that serve PWID, and in venues where PWID congregate or reside	PWID	OHA OHA-funded HPDP programs	Number of clients reached through population targeting efforts
Through 2021	Expand access to Overdose Education and Naloxone Distribution services in the context of comprehensive health promotion services for PWID	PWID	OHA OHA-funded HPDP programs Bureau of Substance Abuse Services (BSAS)	Number of programs providing OEND services Number of enrollments in OEND services

				Number of refills Number of reported overdose reversals
Ongoing	Deploy Field Epidemiologists to provide rapid linkage to medical care and HIV Partner Services for PWID diagnosed with acute HIV infection	PWID diagnosed with acute HIV infection	BIDLS Division of STD Prevention MSPHL OHA funded HPDP programs	Percent of PWID diagnosed with acute HIV infection linked to medical care
Ongoing	Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance Program to all income-eligible PWID with HIV infection	Income eligible PWID living with HIV	OHA MA HIV Drug Assistance Program	Percent of income-eligible HIV+ PWID enrolled in HDAP
Ongoing	Sustain access to HIV and HCV co-testing in OHA-funded sites and support referral and linkage to medical care providers for individuals diagnosed with HCV infection	PWID	OHA MSPHL OHA funded HPDP programs	Proportion of HIV/HCV tests conducted among PWID Percent of individuals linked to HCV medical care and treatment
Through 2021	Implement universal STI testing and treatment in all OHA funded-sites that provide health promotion and disease prevention services	PWID	OHA OHA funded HPDP programs	Number of STI+ individuals identified Percent of STI+ provided treatment
Objective 1.3: By 2021, eliminate perinatal HIV transmission				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Utilize clinical chart review to ensure levels of ART prescription to HIV+ pregnant women meets 100% performance expectation	HIV+ pregnant women	OHA John Snow Inc. (subcontractor that conducts clinical chart review)	Percent of HIV+ pregnant women that are prescribed ART

Ongoing	Collaborate with the Part D MassCARE program to implement Fetal Infant Mortality Review for any HIV+ infant born in Massachusetts	HIV+ pregnant women	OHA Part D MassCARE Program	Number of Fetal Infant Mortality Reviews conducted
Objective 1.4: By 2021, achieve a reduction in the proportion of cases reported to Massachusetts HIV Surveillance Program with No Identified Risk (NIR) from 25% to 15% of all reported cases				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Through 2021	Deploy HIV surveillance epidemiologists to follow up with all providers submitting CRF's with incomplete exposure mode data	Medical providers submitting HIV case report forms	OHA BIDLS Division of STD Prevention	Number of providers engaged by Field Epidemiologists Percent of CRFs with missing data
Through 2021	Provide education and technical assistance to medical providers who complete HIV Case Report forms regarding the importance of complete and accurate reporting of exposure mode	Medical providers submitting HIV case report forms	OHA	Number of technical assistance sessions provided Percent of CRFs with missing data
Through 2021	Develop Corrective Action Plans with any publicly funded agency that submits CRF's with incomplete exposure mode data	Medical providers submitting HIV case report forms	OHA	Number of corrective action plans developed and completed
Objective 1.5: By 2021, establish a baseline understanding of new infections among transgender-identified individuals, and set health outcomes benchmarks to improve the quality and effectiveness of prevention and care services				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Through 2021	Standardize all HIV, STD, and HCV surveillance and data collection forms to include documentation of both 'sex at birth' and 'current gender identity'	Transgender-identified individuals	OHA MA HIV Surveillance Program	Completion of updated forms
Through 2021	Provide education and technical assistance to medical providers who complete HIV Case Report forms regarding the importance of complete and accurate reporting of exposure mode	Transgender-identified individuals	OHA MA HIV Surveillance Program (MAHSP)	Number of technical assistance sessions provided

Through 2021	Monitor completion of 'sex and birth' and 'gender identity' data fields and deploy epidemiologic follow up with any agency failing to report complete data, or reporting conflicting or inconsistent information	Transgender-identified individuals	OHA	Number of corrective action plans developed and completed
By 2021	Provide capacity building to publicly-funded HIV prevention and care programs to develop and implement transgender sensitivity and competency training plans	Transgender-identified individuals	OHA OHA funded HPDP programs	Number of capacity building sessions provided
By 2021	Perform frequent data analysis (minimum biannually) to monitor trends in HIV infection among population and share with Transgender Health Advisory Group	Transgender-identified individuals	OHA MAHSP Transgender Health Advisory Group	Completion of data analysis Number of engagements with advisory group

GOAL 2: IMPROVE HEALTH OUTCOMES FOR PERSONS LIVING WITH HIV

Objective 2.1: By 2021, 90% of newly diagnosed HIV+ individuals will be successfully linked to care within 45 days of the date of diagnosis				
Timeframe	Evaluative Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Utilize HIV surveillance data to identify population groups, geographic regions, and provider agencies with suboptimal linkage to care, and deploy tailored interventions	Newly diagnosed HIV+ individuals	Office of HIV/AIDS (OHA) MA HIV Surveillance Program OHA-funded HPDP programs	Proportion of clients linked to care within 45 days
Ongoing	Deploy Field Epidemiologists to intervene with all persons diagnosed with acute HIV infection within 24 hours of diagnosis, and link them to care within 72 hours of diagnosis	Individuals diagnosed with acute HIV infection	OHA BIDLS Division of STD Prevention	Percent of individuals with acute HIV infection linked to care within 72 hours of diagnosis
Through 2021	Deploy Field Epidemiologists to follow up with all individuals newly diagnosed with HIV infection, and provide direct linkage to an HIV medical provider	Newly diagnosed HIV+ individuals	OHA BIDLS Division of STD Prevention	Number of newly diagnosed individuals connected to a Field Epidemiologist

				Percent of newly diagnosed individuals linked to medical care via Field Epi.
Ongoing	Expand the services of the Benefits Resource Infectious Disease Guidance and Engagement (BRIDGE) team to ensure HDAP services are maximally accessible to individuals newly diagnosed with HIV infection	Newly diagnosed HIV+ individuals	OHA HIV Drug Assistance Program (HDAP) HDAP BRIDGE Team	Number of income eligible newly diagnosed individuals enrolled in HDAP
Through 2021	Expand utilization of interdisciplinary teams to outreach to newly diagnosed individuals in community-based settings and provide intensive linkage to care supports	Newly diagnosed HIV+ individuals	OHA funded HPDP programs	Assessment of workforce capacity to meet needs of newly diagnosed HIV+ individuals
Through 2021	Design and implement education and training activities that aim to reduce HIV-associated stigma	Newly diagnosed HIV+ individuals	Office of HIV/AIDS	Description of activities and number of training activities conducted
Objective 2.2: By 2021, improve Massachusetts HIV Care Continuum outcomes to 90/90/90 (90% diagnosed; 90% retained in care; and 90% of PLWH virally suppressed)				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Expand targeted testing initiatives to reach disproportionately impacted population groups and at-risk populations with low rates of HIV testing in community-based medical and non-medical agencies	Individuals at risk for HIV acquisition	OHA OHA-funded HPDP programs	Proportion of HIV tests conducted among impacted population groups
Ongoing	Deploy Field Epidemiologists to intervene with all persons diagnosed with acute HIV infection within 24 hours of diagnosis, and link them to care within 72 hours of diagnosis	Individuals diagnosed with acute HIV infection	OHA BIDLS Division of STD Prevention	Proportion of individuals with acute HIV infection linked to care within 72 hours of diagnosis
Through 2021	Deploy Field Epidemiologists to follow up with all individuals newly diagnosed with HIV infection, and provide direct linkage to an HIV	Newly diagnosed HIV+ individuals	OHA BIDLS Division of STD Prevention	Proportion of newly diagnosed individuals

	medical provider			connected to Field Epidemiologist Number of newly diagnosed individuals linked to medical care via Field Epi.
Ongoing	Expand the services of the Benefits Resource Infectious Disease Guidance and Engagement (BRIDGE) team to ensure HDAP services are maximally accessible to individuals newly diagnosed with HIV infection	Newly diagnosed HIV+ individuals	OHA HIV Drug Assistance Program (HDAP) HDAP BRIDGE Team	Number of income eligible newly diagnosed individuals enrolled in HDAP
Through 2021	Expand routine HIV testing in primary care practices, obstetrics and labor and delivery, community health centers, and hospitals with capacity to provide immediate linkage and engagement in HIV medical care	Individuals at risk for HIV acquisition	OHA OHA-funded HPDP programs Non-OHA funded medical programs	Percentage of pregnant women who report receiving an HIV test in PRAMS dataset
By 2021	Integrate direct service procurements for prevention and care into a single contract, to enable a seamless continuum of services for persons living with and at risk for HIV infection	Individuals at-risk for HIV acquisition PLWH	OHA OHA funded HPDP programs	Establishment of integrated service procurement
By 2021	Establish a mechanism to provide expedited access to HIV Drug Assistance Program (HDAP) coverage for all individuals diagnosed with HIV infection during the acute phase	Individuals diagnosed with acute HIV infection	OHA OHA funded HPDP programs MA HDAP	Percent of eligible individuals diagnosed with acute HIV infection enrolled in HDAP
Objective 2.3: By 2021, eliminate progression to AIDS among PLWH				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Utilize HIV electronic laboratory reporting (ELR) surveillance data to identify PLWH who are out of care or not virally suppressed, and deploy Field Epidemiologists in coordination with medical care	PLWH	Office of HIV/AIDS (OHA) MA HIV Surveillance Program	Number of out of care PLWH reengaged into medical care Number of non-

	teams to promptly reengage patients into care and treatment		BIDLS Division of STD Prevention	virally suppressed PLWH reengaged into medical care
Ongoing	Continue to administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance Program to all income-eligible persons with HIV infection	Income eligible PLWH	OHA MA HIV Drug Assistance Program	Number of income-eligible PLWH enrolled in HDAP
Ongoing	Implement acuity-based medical case management (MCM) services in all regions of the state to ensure access to health systems navigation, clinic- and community-based interventions to promote engagement and retention in care, and adherence support to maximize rates of viral suppression	PLWH	OHA OHA-funded HPDP providers	Number of clients enrolled in state and HRSA funded MCM services Rates of linkage and engagement in care among PLWH accessing MCM services Rates of viral suppression among PLWH accessing MCM services
Through 2021	Expand efforts to reduce HIV-associated stigma by supporting a diverse HIV workforce in the Commonwealth, including the use of HIV+ peers, community health workers, and other direct care providers with demonstrated effectiveness to competently engage PLWH	PLWH	OHA OHA-funded providers	Assessment of workforce capacity to meet needs of PLWH Self-reported experience of HIV-related stigma by consumers in surveys
Objective 2.4: By 2021, reduce HIV related mortality among PLWH by 10%				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Continue to administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance Program to all income-eligible persons with HIV infection	Income eligible PLWH	OHA MA HIV Drug Assistance Program	Percent of income-eligible PLWH enrolled in HDAP

Ongoing	Implement acuity-based medical case management (MCM) services in all regions of the state to ensure access to health systems navigation, clinic- and community-based interventions to promote engagement and retention in care, and adherence support to maximize rates of viral suppression	PLWH	OHA OHA-funded HPDP providers	Number of clients enrolled in state and HRSA funded MCM services Rates of linkage and engagement in care among PLWH accessing MCM services Rates of viral suppression among PLWH accessing MCM services
Through 2021	Offer enhanced engagement and retention in care interventions to HIV+ PWID and persons co-infected with HIV and HCV that have higher rates of mortality compared to other HIV+ populations	Medical providers submitting HIV case report forms	OHA	Number of corrective action plans developed and completed

Objective 2.5: By 2021, 90% of individuals co-infected with HIV and HCV will be linked to treatment

Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Build capacity at syringe service programs to provide comprehensive health promotion services for PWID, including routine testing for HIV/HCV and seamless linkage to medical care and treatment	Individuals co-infected with HIV and HCV	OHA OHA-funded syringe service programs	Percentage of SSP participants that are provided HIV/HCV testing Percent of new and known HIV and HCV positive individuals linked to care
Through 2021	Design and distribute educational materials to medical providers about the availability of medication co-payment assistance through HDAP for HIV/HCV co-infected individuals, including co-infected persons who are incarcerated	Individuals co-infected with HIV and HCV	OHA MA HDAP	Number of educational materials provided
Through 2021	Integrate behavioral health and substance abuse treatment services into prevention and care programs that serve PWID and	Individuals co-infected with HIV and HCV	OHA OHA-funded HPDP programs	Number of referrals made to behavioral health programs

	other persons managing substance use disorders			and substance use treatment
Through 2021	Release an educational campaign directed to persons who inject drugs (PWID), with a focus on young PWID about the availability and benefits of HCV care and treatments	Individuals co-infected with HIV and HCV	OHA OHA funded HPDP programs	Number of individuals reached via campaign
Through 2021	Utilize HIV Drug Assistance Program (HDAP) data to identify co-infected program enrollees who have not received HCV treatment, and deploy follow up by HDAP medical staff to deliver education and clinical guidance to the treating physician	Individuals co-infected with HIV and HCV	OHA MA HDAP	Number and percentage of co-infected HDAP enrollees linked to HCV treatment
Through 2021	Provide capacity building assistance to all health promotion and disease prevention service providers about the effectiveness of HCV treatment, clinical recommendations that HIV/HCV co-infected persons receive HCV treatment, and long term, health-promoting impacts of HCV cure for persons co-infected with HIV and HCV	Individuals co-infected with HIV and HCV	OHA OHA-funded HPDP programs	Number of capacity building activities conducted Number of providers reached
Objective 2.6: By 2021, 100% of clients diagnosed with acute HIV infection will be linked to care within 72 hours				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Through 2021	Train and provide continuing education to Field Epidemiologists to intervene with acute HIV infection diagnoses and ensure linkage to medical care	Individuals diagnosed with acute HIV infection	BIDLS Division of STD Prevention	Number of Field Epidemiologists trained
Through 2021	Amend scopes of services with contracted medical providers to ensure expedited access to medical evaluation and treatment for all individuals diagnosed with acute HIV infection as a condition of award, including cases of acute HIV infection referred directly by Field Epidemiologists	Individuals diagnosed with acute HIV infection	OHA BIDLS Division of STD Prevention OHA-funded HPDP programs	Completion of contract amendments
Through 2021	Collaborate with the NEAETC, Massachusetts League of Community Health Centers, and others to provide training to medical providers about acute HIV	Individuals diagnosed with acute HIV infection	OHA NEAETC Massachusetts	Number of providers reached

	infection; the importance of immediate access to evaluation and treatment; and prompt referral to partner services		League of Community Health Centers BIDLS Division of STD Prevention	
Objective 2.7: By 2021, 75% of sexually active PLWH will receive STD testing during medical visits				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Utilize the Clinical Chart Review to identify medical agencies with suboptimal levels of STD testing in HIV+ patients, and require implementation of a clinical quality improvement response to improve performance	PLWH	OHA John Snow Inc. (subcontractor that conducts clinical chart review)	Number of Field Epidemiologists trained
Through 2021	Expand upon existing capacity building activities focused on 'Talking with Clients About Sex' with medical case managers to increase levels of sexual risk assessment and supportive referrals to STD testing for HIV+ clients	PLWH	OHA OHA-funded HPDP programs	Completion of contract amendments
Through 2021	Collaborate with the New England AIDS Education and Training Center (NEAETC), Massachusetts League of Community Health Centers, and others to provide training to medical providers about the importance of regular STI testing among sexually active PLWH	PLWH	OHA NEAETC Massachusetts League of Community Health Centers	Number of providers reached

GOAL 3: REDUCE PERSISTENT HIV-RELATED HEALTH DISPARITIES

Objective 3.1: By 2021, reduce the disparity in relative rates of new HIV infection diagnoses between black (non-Hispanic) and white (non-Hispanic) residents by 20%				
Timeframe	Evaluative Activity	Target Population	Responsible Parties	Data Indicators
Through 2021	Expand HIV prevention, testing, and medical case management services in agencies serving black (non-Hispanic) populations or with documented capacity to serve them	Black (non-Hispanic) men, women, and black (non-Hispanic) transgender women	Office of HIV/AIDS (OHA) OHA-funded health promotion and disease prevention (HPDP) programs	Number of agencies serving black (non-Hispanic) clients

Through 2021	Expand access to biomedical interventions, including PrEP and nPEP, to agencies located in neighborhoods where black (non-Hispanic) individuals receive services	Black (non-Hispanic) men, women, and black (non-Hispanic) transgender women	OHA OHA-funded HPDP programs	Number of black (non-Hispanic) men, women, and transgender women that are enrolled in PrEP and nPEP.
Through 2021	Generate HIV care continuum analyses for black (non-Hispanic) individuals to monitor disparities in health outcomes and implement interventions to address gaps in engagement and retention in care and viral suppression.	Black (non-Hispanic) men, women, and black (non-Hispanic) transgender women	OHA OHA-funded HPDP programs	Rates of engagement in care among population Rates of retention in care among population Rates of viral suppression among population
Ongoing	Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection	Income eligible Black (non-Hispanic) men, women, and black (non-Hispanic) transgender women	OHA MA HIV Drug Assistance Program	Number of income-eligible PLWH enrolled in HDAP
Through 2021	Collaborate with the Partnership for Addressing HIV Among African Immigrants to identify strategies and best practices for serving African born immigrants living with and at risk for HIV	African born immigrants	OHA Partnership for Addressing HIV Among African Immigrants	Number of engagements with advisory group Number of programs implemented
Objective 3.2: By 2021, reduce the disparity in relative rates of new HIV infection diagnoses between Hispanic/Latino and white (non-Hispanic) residents by 25%				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Through 2021	Expand HIV prevention, testing, and medical case management services in agencies serving Hispanic/Latino populations or with documented capacity to serve them	Hispanic/Latino men, women, and transgender women	Office of HIV/AIDS (OHA) OHA-funded HPDP programs	Number of agencies serving Hispanic/Latino population
Through 2021	Expand access to biomedical interventions, including PrEP and nPEP, to agencies located in neighborhoods where	Hispanic/Latino men, women, and transgender women	OHA OHA-funded HPDP programs	Number of Hispanic/Latino men, women, and

	Hispanic/Latino individuals receive services			transgender women that are enrolled in PrEP and nPEP.
Through 2021	Generate HIV care continuum analyses for Hispanic/Latino individuals to monitor disparities in health outcomes and implement interventions to address gaps in engagement and retention in care and viral suppression.	Hispanic/Latino men, women, and transgender women	OHA OHA-funded HDPD programs	Rates of engagement in care among population Rates of retention in care among population Rates of viral suppression among population
Ongoing	Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection	Hispanic/Latino men, women, and transgender women	OHA MA HIV Drug Assistance Program	Number of income-eligible Hispanic/Latino individuals enrolled in HDAP
Through 2021	Work with the Transgender Health Advisory Group to identify strategies to deliver HIV prevention and care services to Latina transgender women	Latina transgender women	OHA Transgender Health Advisory Group	Number of engagements with advisory group Number of programs implemented
Objective 3.3: By 2021, improve rates of viral suppression for racial/ethnic minorities to be equivalent to rates in white (non-Hispanic) populations				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Generate HIV care continuum analyses for black (non-Hispanic) and Hispanic/Latino populations to monitor disparities in health outcomes and implement interventions to address gaps in engagement and retention in care and viral suppression	Racial and ethnic minorities living with HIV	OHA MA HIV Surveillance Program	Rates of engagement in care among population Rates of retention in care among population Rates of viral suppression among population

Ongoing	Perform analyses of participation in HDAP by racial/ethnic minority populations, and deploy staff from the HDAP Benefits Resource Infectious Disease Guidance & Engagement (BRIDGE) team to perform targeted outreach and enrollment in HDAP of racial/ethnic minority clients.	Racial and ethnic minorities living with HIV	OHA MA HDAP BRIDGE Team	Number of income-eligible racial and ethnic minorities enrolled in the HIV Drug Assistance Program
Through 2021	Expand adherence support services at agencies that serve black (non-Hispanic) and Hispanic/Latino populations or with documented capacity to serve them	Racial and ethnic minorities living with HIV	OHA OHA-funded HPDP programs	Confirmed expansion of adherence support programs
Objective 3.4: By 2021, reduce rates of new HIV diagnoses among young MSM (under age 30) by 50%				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Increase access to HIV testing for young MSM in publicly funded programs	YMSM	OHA OHA-funded HPDP programs	Proportion of HIV tests conducted among YMSM
Through 2021	Expand access to biomedical interventions, including PrEP and nPEP, to agencies with demonstrated capacity to serve YMSM	YMSM	OHA OHA-funded HPDP programs	Number of YMSM enrolled in PrEP and nPEP
Through 2021	Utilize HIV surveillance data to identify young MSM who are documented to be out-of-care based on gaps in HIV laboratories, and deploy Field Epidemiologists and specialized linkage and retention teams to reengage these individuals in care and treatment.	YMSM	OHA BIDLS Division of STD Prevention	Percent of out of care YMSM reengaged in care and treatment services
Ongoing	Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection	YMSM	OHA MA HIV Drug Assistance Program	Percent of income-eligible HIV+ YMSM enrolled in HDAP
Through 2021	Collaborate with the Bureau of Substance Abuse Services (BSAS) to implement substance use treatment services in selected sites serving LGBTQ youth	LGBTQ youth	OHA BSAS OHA-funded HPDP programs	Number of programs offering treatment services Number of

				LGBTQ youth enrolled in treatment services
Objective 3.5: Eliminate new HIV diagnoses among young PWID (under age 30)				
Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
Ongoing	Increase participation in HIV and hepatitis C testing and prevention services by PWID, particularly young persons who inject drugs (YPWID)	YPWID	OHA OHA funded HPDP programs	Proportion of PWID tested for HIV/HCV under the age of 30
Ongoing	Increase participation in SSP by young PWID through specialized outreach and engagement activities to reach this population	YPWID	OHA OHA funded HPDP program	Number of YPWID reached through population targeting efforts
Through 2021	Develop and release educational media campaign focused on engaging YPWID in HIV and HCV prevention, testing, care, and treatment services	YPWID	OHA	Number of individuals reached by campaign
By 2021	Design specialized outreach programs to engage young PWID in HIV and HCV prevention and testing, and provide linkage to overdose prevention and substance abuse treatment programs	YPWID	OHA OHA funded HPDP programs	Number of YPWID successfully referred to substance use treatment and OEND services
Through 2021	Expand access to biomedical interventions, including PrEP and nPEP, to agencies with demonstrated capacity to serve YPWID	YPWID	OHA OHA-funded HPDP programs	Number of YPWID enrolled in PrEP and nPEP
Through 2021	Utilize HIV surveillance data to identify young PWID who are documented to be out-of-care based on gaps in HIV laboratories, and deploy Field Epidemiologists and specialized linkage and retention teams to reengage these individuals in care and treatment.	YPWID	OHA MA HIV Surveillance Program BIDLS Division of STD Prevention	Percent of out of care YPWID reengaged in care and treatment services
Ongoing	Administer access to health insurance premium and medication co-payment assistance through the HIV Drug Assistance (HDAP) Program to all income-eligible persons with HIV infection	YPWID	OHA MA HIV Drug Assistance Program	Number of income-eligible HIV+ YPWID enrolled in HDAP

CONTRIBUTORS

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