

Assessment of Need

Among People Living with HIV in the Boston EMA

Planning Council

1/1/2009



Table of Contents

Introduction

Objectives	5
Methods	5
Limitations	5
Executive Summary	6

Section I: Epidemiology of HIV in the Boston EMA	8
---	----------

Section II: Continuum of Care	17
--------------------------------------	-----------

Section III: Resource Inventory	23
--	-----------

Section IV: Unmet Need	28
-------------------------------	-----------

Section V: Co-Morbidities & Barriers	33
---	-----------

Section VI: Implications & Conclusions	43
---	-----------

Section VII: Recommendations	45
-------------------------------------	-----------

Appendix	49
-----------------	-----------

References	57
-------------------	-----------

Figures

Figure 1 – The Boston EMA Part A Eligible Metropolitan Area (EMA)

Figure 2 – Percentage of HIV/AIDS Cases in the Boston EMA by County

Figure 3 – AIDS Incidence in the Boston EMA, 1999-2007

Figure 4 – HIV/AIDS Prevalence in the Boston EMA – MA & NH

Figure 5 – Boston EMA Service Profile by Race/Ethnicity (FY 2007)

Figure 6 – Boston EMA Service Profile by Gender (as of 12/31/07)

Figure 7 – Boston EMA Service Profile by Age (as of 12/31/07)

Figure 8 – Boston EMA Service Profile by Mode of Transmission (as of 12/31/07)

Figure 9 – FY 2007 Funding Streams

Figure 10 – HIV/AIDS Client Utilization by Race

Figure 11 – HIV/AIDS Prevalence, Met and Unmet Need in the Boston EMA (2007)

Tables

Table 1 – HIV/AIDS Epidemic in the Boston EMA by County

Table 2 – Service Profile by Race/Ethnicity in Boston EMA

Table 3 – Unmet Need Framework, Boston EMA 2007

Appendices

Table 1 – AIDS Incidence, HIV/AIDS Prevalence by Demographic Exposure

Table 2 – Issues Affecting Access to Care for PLWH

Table 3 – Unmet Need Estimate

Acknowledgements

The Planning Committee and Planning Council Support would like to thank those individuals that contributed their time, energy, and expertise to help revise this document. Specifically, we would like to acknowledge the following individuals who participated in the development of the Needs Assessment:

- Darren Sack, Planning Committee, Chair
- Brian Butler, Planning Committee, Vice-Chair
- Andre Jones, Planning Committee
- George McGee, Planning Committee
- Verny Samayoa, Planning Committee
- Annie Singh, Planning Committee
- Andrea Williams, Planning Committee
- Catherine Cairns, Boston Public Health Commission
- Michael Goldrosen, Boston Public Health Commission
- Sharon Asonganyi, Planning Council Support
- Laura Kozek, Planning Council Support
- Apryl Pagliaro, Planning Council Support
- Andrew Shawhan, Planning Council Support

Acronyms

AIDS - Acquired Immune Deficiency Syndrome

ASO – AIDS Service Organization

BPHC – Boston Public Health Commission

EMA – Eligible Metropolitan Area

CDC – Centers for Disease Control & Prevention

FY – Fiscal Year

IDU – Injection Drug User

HAART - Highly Active Antiretroviral Therapy

HBV – Hepatitis B Virus

HCV – Hepatitis C Virus

HDAP/ADAP – HIV/AIDS Drug Assistance Program

HIV - Human Immunodeficiency Virus

HOPWA – Housing Opportunities for People With AIDS

HUD – Housing and Urban Development

JSI – John Snow, Inc

PLWH – People Living With HIV

MAI – Minority AIDS Initiative

NH – New Hampshire

NHDHHS – New Hampshire Department of Health & Human Services

MA - Massachusetts

MDPH – Massachusetts Department of Public Health

MSM – Men who have Sex with Men

RFP – Request for Proposals

STD/STI – Sexually Transmitted Disease/Infection

VOE – Voices of Experience - Needs Assessment

Introduction

The 2009 Needs Assessment is intended to identify the potential service needs and services available to people living with HIV; to examine the capacity of the current service system and the resources available; to assess whether resources are being expended to populations most in need and to emerging populations; and whether PLWH can effectively obtain and maintain HIV health and health related services.

Objectives

The objective of the Needs Assessment is to provide information on the HIV service system so the Planning Council may make informed decisions related to the prioritization of Ryan White Part A service categories and the Ryan White Part A funding allocations process.

Methods

This Needs Assessment was conducted in several steps. A picture of the epidemic was drawn using surveillance data from Massachusetts, New Hampshire, the Centers for Disease Control and Prevention as well as United States census data. Prevalence and incidence data was used to note trends in the local epidemic and identify emerging populations infected and affected by HIV/AIDS. Demographic factors such as race, gender, age, and mode of transmission were cross-referenced with payer-provided utilization data and examined to determine if all populations affected were accessing a full range of services. Provider capacity to serve all PLWH in the Boston EMA was estimated using both consumer- and provider-completed surveys. A literature review was conducted and included Part A funded Quality Management and Evaluation reports in addition to other documents published by the Massachusetts Department of Public Health (MDPH) and other payers in the Boston EMA. The literature review estimated barriers to accessing primary medical care services by examining consumer access to needed services, poverty and insurance, and housing and homelessness.

Limitations

Needs Assessments provide the basis for important decisions, taking into account payer, provider and consumer perspectives. Relying solely on data from some groups and not others introduces bias to this type of report. This Needs Assessment contains the most recent input available from each of these groups. Time and staffing constraints did not allow for consumer surveying to be completed in this project, which relies on information collected in FY 2002. Comparing demographic, funding, utilization, outcomes and survey information from different years decreases the validity of this Needs Assessment because there is variation in service definitions and PLWH demographics from year to year. To mitigate these limitations in the future, focus groups and additional consumer based input will be collected and effort will be made to encourage all payers and providers to create universal standards for data collection which would allow cross referencing of data.

Executive Summary

Every two years, an assessment of need among people living with HIV (PLWH) is conducted within the Boston Eligible Metropolitan Area (EMA). This document is produced by the Boston EMA HIV Health Services Planning Council, with assistance from Planning Council Support, to be an unbiased review of the needs of PLWH and how well these needs are being met. The key components of this review include the HIV/AIDS epidemiological profile of the Boston EMA, a description of the available service resources and their funding streams and a summary of the barriers to care faced by PLWH in the Boston EMA. These elements paint a picture of the health of the HIV care system and provide insight on areas of unmet need and barriers to PLWH receiving primary medical care. The conclusions and recommendations that come from this review are used by members of the Planning Council to set service priorities and make funding decisions.

Section I of this Needs Assessment describes the HIV/AIDS epidemiologic profile of the Boston EMA. Within the seven Massachusetts and three New Hampshire counties that make up the Boston EMA, there were 14,420 PLWH as of December 31, 2007 and 6,093 of them accessed the Part A system of care in FY 2007. The AIDS incidence rate has been decreasing since 1999 with the incidence rate as of December 31, 2007 at 22.3 cases per 100,000 individuals. In the two years proceeding December 31, 2007, 779 new AIDS cases and 1,269 new cases of HIV were reported. In terms of local demographics, the population of the Boston EMA as a whole is disproportionately White (83%) compared to the national population (69%), but Suffolk County (where the City of Boston is located) is more diverse (25% Black and 18% Hispanic). With that in mind, HIV/AIDS does not affect all segments of the population equally. People of color, particularly Black and Hispanic groups are disproportionately affected and infected by HIV. There are also differences by gender, where women compose an increasing proportion of PLWH (especially women of color). At 1% of the client base, transgender persons are also affected. Age plays a factor as well. While youth aged 13-24 account for only 3.05% of PLWH it is believed that many adult cases can be attributed to risk factors from their youth. The predominant mode of transmission among youths, men who have sex with men (MSM), is also the most prevalent among adults. Over 36% of HIV/AIDS cases have been attributed to MSM. Heterosexual contact and intravenous drug use (IDU) are the two other predominant modes of transmission.

Section II outlines the EMA's continuum of care which is an effective and flexible service system that spans prevention efforts, early intervention services, medical care, and health-related support services. Through the efforts of the HIV Services Planning Council and the Boston Public Health Commission (BPHC) AIDS Program (Grantee), Part A plays a leadership role in the development and maintenance of a comprehensive continuum of HIV treatment, care, and services in the region. The continuum of care is supported by a variety of funding streams including CDC, Massachusetts and New Hampshire general funds, City of Boston, Ryan White Parts A, B, C, D, Dental Reimbursement, SPNS programs, Minority AIDS Initiative funds, HOPWA housing funds, and Medicaid.

Section III of the Needs Assessment focuses on the resources available to PLWH in the Boston EMA. The Boston EMA is host to many services designed for those living with, or affected by HIV including primary medical care and ob/gyn services, drug reimbursement, substance abuse services, transportation, case management, mental health services, housing, food and nutritional support, client advocacy, peer support, day care services, complementary therapies and HIV/AIDS prevention. These services are funded by a variety of payers including:

Massachusetts and New Hampshire state Medicaid programs and substance abuse programs, private insurance plans, the national Medicare program, Massachusetts and New Hampshire State Budget AIDS line items, Housing Opportunities for People with AIDS through the US Department of Housing and Urban Development and Federal Ryan White funds through Parts A, B, C, D, and F. In FY 2007, Part A filled gaps in services to critically underserved population, accounting for 5% of available funding within the Boston EMA and served 6,093 consumers. In contrast, it is estimated that 63% of funds for HIV/AIDS services come from Medicaid programs, 14% from the MA state line item, Part B is 8% for MA, and all other payers contribute between 1% and 3%.

Section IV of the Needs Assessment combines the threads of the other sections to estimate the total unmet need of PLWH in the Boston EMA. Of the 14,420 PLWH in the Boston EMA, an estimated 4,167 are not accessing primary medical care. This number represents only part of the unmet need within the EMA; many more individuals may be only partially in care and not accessing the full range of services available to them. Particularly vulnerable populations; including Blacks, Hispanics, women, and the uninsured. One study that found that 22% of consumers were not in care over a 12 month period, but even more alarming was that 78% reported significant problems accessing care. Since higher CD4 counts, lower viral loads and improved adherence to antiretroviral regimens are reported when consumers have access to primary care services, it is important this unmet need is addressed.

Section V of the Needs Assessment describes issues that PLWH face in accessing resources in the Boston EMA in addition to co-morbidities that complicate a consumer's ability to stay in care. Part A funded-services are part of a broad continuum of care that provides services to the range of PLWH in the Boston EMA. Even so, over 30% of PLWH in the Boston EMA are not accessing services which stress the importance of understanding why consumers are not in care so barriers can be reduced or eliminated. Socio-demographic factors impact the complexity of providing care. For example, not all MSM self-identify as MSM and therefore underestimate their risk, youth lack the autonomy and resources of adults and often do not access care until later in their stage of disease, women are often more affected by federal funding and as primary caretakers may fear losing their children if they receive a mental health, substance abuse or HIV diagnosis. Transgender populations face stigma, discrimination and report a lack of culturally appropriate care and sensitivity on the part of providers. Insurance coverage is closely tied to poverty status and in turn, access to care. With over 80% of Part A clients falling below 300% of the Federal Poverty Level (FPL), income is a major factor affecting PLWH access to care in the Boston EMA. Homelessness also limits access to medical care and therefore may delay a diagnosis of HIV and other co-morbidities. Homeless PLWH are also often affected by a higher prevalence of opportunistic infections. Substance abuse and mental illness complicate diagnosis, treatment and adherence. Hepatitis as well as incarceration has been shown to complicate treatment and access to care. Individually these barriers may not prevent consumers from accessing or staying in care, but when multiple barriers or co-morbidities exist, the complexity of care and treatment increases dramatically.

In summary, this document is designed to discuss the total state of the HIV/AIDS epidemic in the Boston EMA. Starting with a discussion of the face of the local consumer, the Needs Assessment moves on to discuss available services followed by an evaluation of the available services to fulfill the needs of all PLWH in the Boston EMA. Reasons why consumers do not access health and health related services are provided in addition to a discussion of the unmet need of PLWH in the Boston EMA.

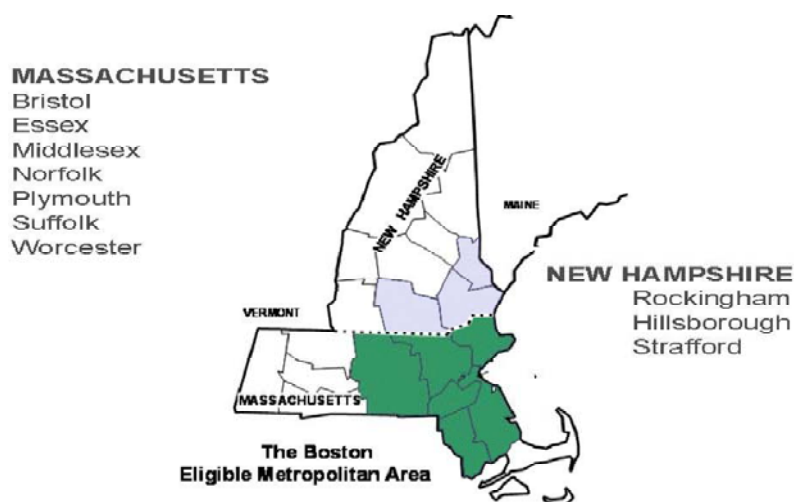
Section I: Epidemiology of HIV in the Boston EMA

This section provides information on the incidence and prevalence of HIV and AIDS within the Boston Eligible Metropolitan Area (EMA). In particular, it looks at a number of factors including location, race and ethnicity, gender, age, and mode of exposure.

Overview

We will first look at the EMA as a whole. An EMA is a geographic area that is highly impacted by HIV/AIDS and therefore eligible to receive Ryan White Part A funds. The Boston EMA makes up a ten County region in Massachusetts and New Hampshire. Figure one, below, shows the area in further detail.

Figure 1: The Boston Part A Eligible Metropolitan Area (EMA)



The race and ethnicity of the EMA varies, and this must be taken into account when determining the needs of the region. Overall, the population of the Boston EMA is disproportionately White compared to the national population: 83% White (vs. 69% nationally), 5.0% Black (vs. 12%), 6% Hispanic (vs. 13%), 3.9% Asian/Pacific Islander (vs. 3.7%), and 2.5% Native American (vs. 0.7%).¹ Further variations in race/ethnicity are highlighted when comparisons are made between regions of the Boston EMA particularly when looking at urban versus rural areas.

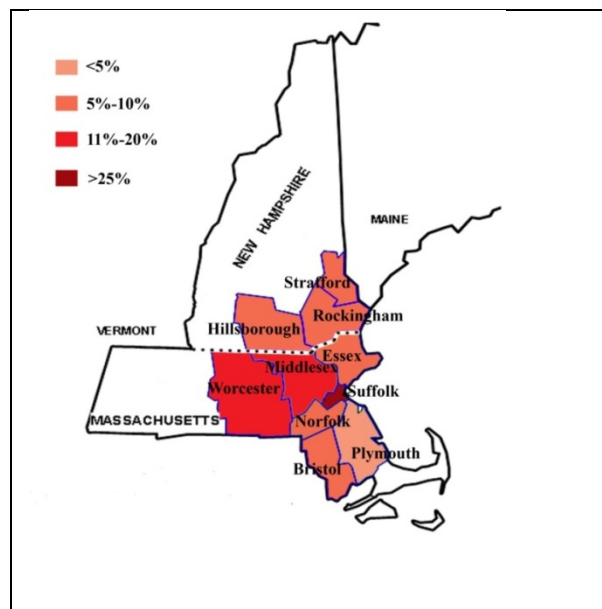
For example, 89% of Bristol County, MA is White compared to 52% of the population of Suffolk County (Boston); 1% of the population of Strafford County, NH is Black compared to 25% of Suffolk County; 3% of Norfolk County, MA is of Hispanic origin compared to 18% in Suffolk County; and 1% of the population in NH identify as Native American, Asian/Pacific Islander, or other, compared with 10.6% in Middlesex County.^{1,2}

Now that we have examined the overall population of the EMA, we will look at how HIV and AIDS have affected this population. As of December 31, 2007, there were a reported 14,420 PLWH in the Boston EMA, an increase over the 13,810 cases reported as of December 31, 2006. Table 1 (below) illustrates the proportional representation of HIV/AIDS prevalence by county within the Boston EMA.³ Twenty-five percent of PLWH are unaware of their status, and therefore it is estimated that there are an additional 2,127 prevalent HIV cases in the Boston EMA (6,381 cases reported). Further, Figure 2 shows that the majority of HIV and AIDS cases are focused around urban centers.⁴

Table 1: HIV/AIDS Epidemic in Boston EMA by County

County within the Boston EMA	Percentage of HIV/AIDS Cases in the Boston EMA as of 12/31/2007	# of HIV/AIDS Cases in Boston EMA as of 12/31/2007
Suffolk, MA	38.3%	5,515
Middlesex, MA	19.2%	2,761
Worcester, MA	10.6%	1,530
Essex, MA	9.4%	1,357
Bristol, MA	7.5%	1,078
NH counties	5.4%	776
Norfolk, MA	5.3%	751
Plymouth, MA	4.5%	652

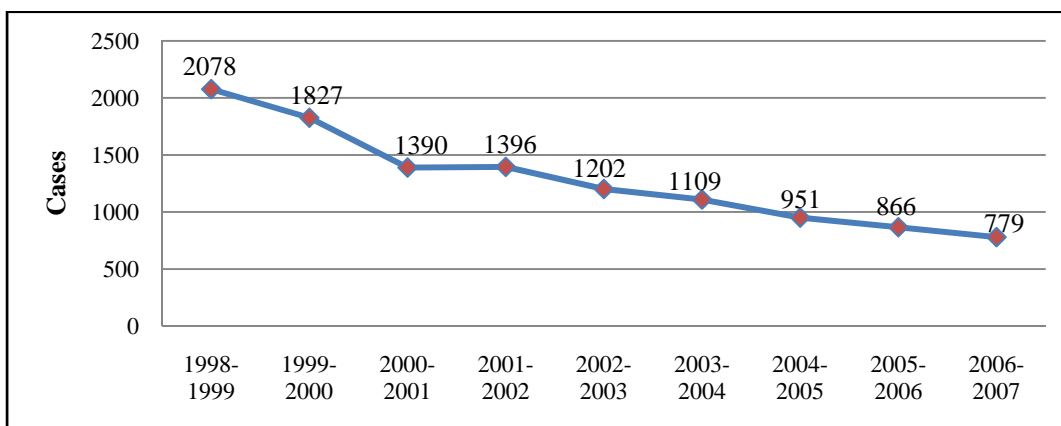
Figure 2: Percentage of HIV/AIDS Cases in the Boston EMA by County



When we look at the epidemic over time, we see that AIDS incidence is on the decline. Figure 3 depicts this decline in incidence from 1999 through 2007. During this same period, 1,269 new HIV cases were reported, with about half among Blacks and Hispanics.⁴ Currently, the Boston

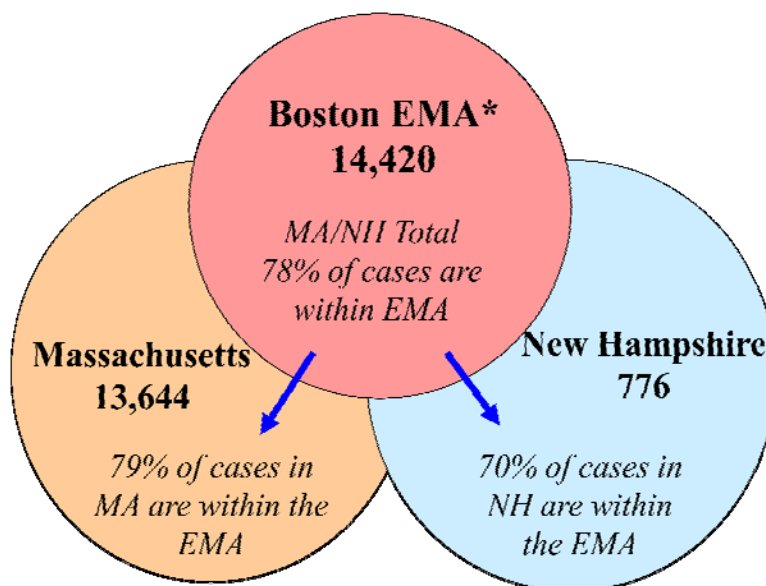
EMA has an annual incidence rate of 22.3 AIDS cases per 100,000 population, and there were 799 new AIDS cases reported in the past two-year period (1/1/06-12/31/07).³

Figure 3: AIDS Incidence in the Boston EMA, 1999-2007



Seventy-eight percent of the total reported number of living HIV/AIDS cases for both MA and NH live in the Boston EMA. The EMA's seven counties in Massachusetts represent 79% of the total reported HIV/AIDS cases for the Commonwealth of Massachusetts. The three New Hampshire counties within the EMA account for 70% of the total reported cases for that state.^{3 5} Figure 4, shows the distribution of cases across regions of the EMA.

Figure 4: HIV/AIDS Prevalence in the Boston EMA, MA & NH



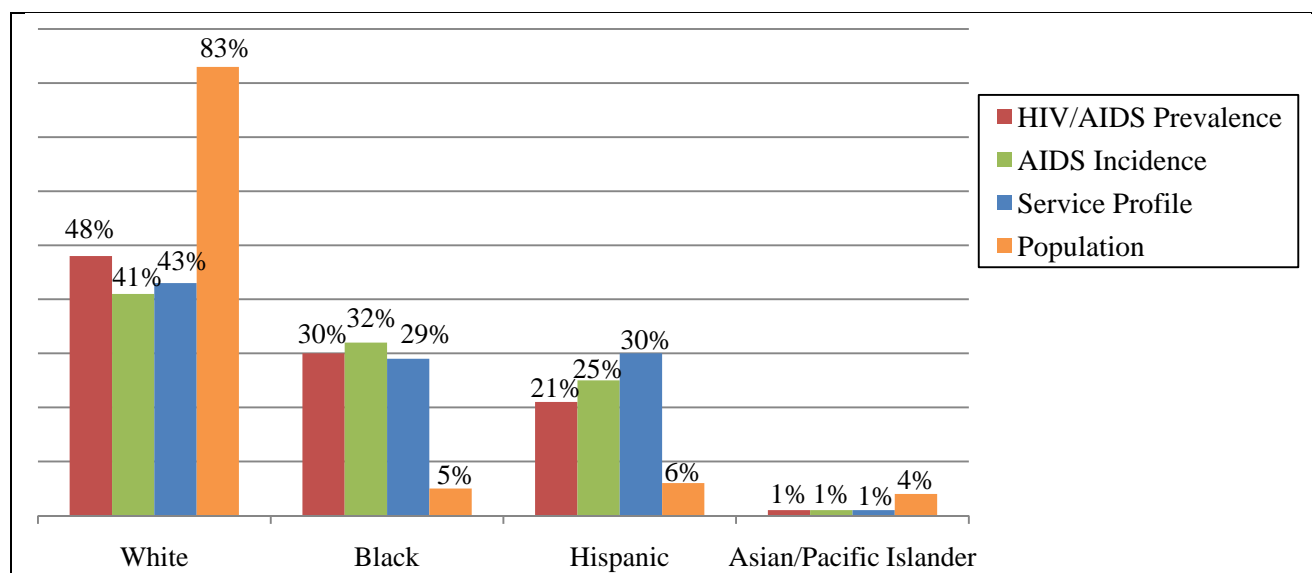
After looking at the EMA as a whole, we will now look at specific demographic factors within the EMA such as race and ethnicity, gender, age, and mode of exposure.

Demographic Groups

Race & Ethnicity

Among those with HIV/AIDS in the EMA, minorities are disproportionately represented. Blacks and Hispanics disproportionately account for a far greater number of cases than would be expected given their smaller share of the total population. In fact, Blacks account for 31% of the AIDS prevalence and 32% of the AIDS incidence yet they represent only 5% of the overall population.³ While Hispanics make up 6% of the EMA population compared to 13% nationally, they account for 21% of the prevalent HIV/AIDS cases in the Boston EMA and 17% nationally. Combined, Blacks and Hispanics comprise 11% of the EMA population in 2006 and 50% of PLWH.³ The proportion of Blacks and Hispanics among new HIV cases increased in recent years (1999 to 2005) compared to the pre-1999 period. While 83% of the Boston EMA population is White, compared to 69% nationally, the proportion of people living with HIV who are White is disproportionately low both locally (48% EMA) and nationally (35%).³

Figure 5: Boston EMA Service Profile by Race/Ethnicity (FY 2007)



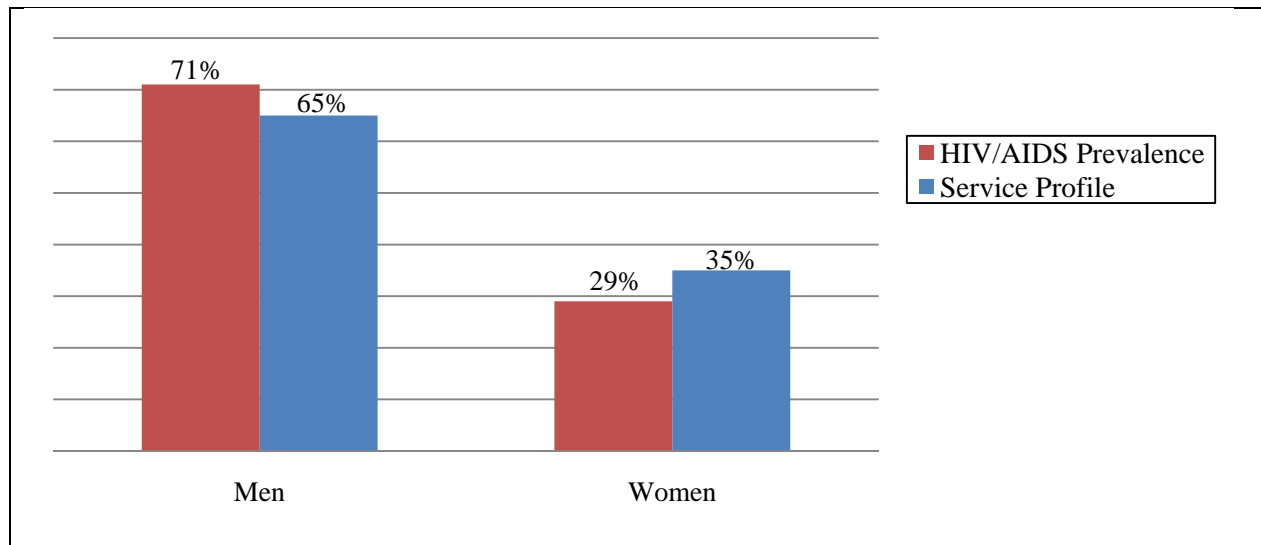
Gender

Males account for 71% of the EMA's reported HIV/AIDS prevalence compared to 73% of the national cases.⁴ Although the proportion of annually diagnosed cases of MSM in the EMA had declined over the past few years, there was an increase (compared to the last two-year period) in the number of incident HIV cases among MSM in 2005-2006.³ Hispanic and Black MSM living with AIDS in the EMA are somewhat younger than White MSM living with AIDS, with more than a quarter of Hispanic and Black MSM living with AIDS under the age of 40. The Metro Boston region of the EMA has more MSM living with HIV/AIDS than the rest of the regions combined.³ Across all regions of the EMA, the overwhelming majority of MSM living with HIV/AIDS are White. Twenty-six percent of the men diagnosed in the EMA who attribute HIV/AIDS transmission to MSM contact are from communities of color. The percentage of men who

acquired HIV/AIDS through reported heterosexual sex (including presumed) has increased over time, and of these men, about half are Black. Among injection drug users living with AIDS in the EMA, 66% are male.^{3,5}

The number of new HIV/AIDS cases among women has increased over time in the EMA. The proportion of women with HIV/AIDS is also overrepresented in the EMA (29%) when compared to the U.S. population (18%).⁴ In the Boston EMA, 30% of the new AIDS cases in the last two years are women compared to 23% of the prevalent national cases. Much of this increase has been among women of color, who made up more of the new HIV cases for females in 2005 than in 1999.² In the Boston EMA, Black women account for 45% of living HIV/AIDS cases among women, while Hispanic women make up 23%. Approximately 60% of AIDS cases among women are related to Injection Drug Use (IDU), either due to a personal history of IDU or that of a sexual partner. The mode of exposure for reported cases of HIV/AIDS among women differs by race and ethnicity. White women were almost four times as likely as Black and Hispanic women to be infected through IDU. The principle mode of transmission for Hispanic women is heterosexual sex (44%, with an additional 20% presumed heterosexual transmission). Likewise, 43% of cases among for Black women were classified as presumed heterosexual transmission (31% heterosexual transmission). The proportion of HIV-infected women of color in the Boston EMA is disproportionately high compared to their representation in the general population.¹

Figure 6: Boston EMA Service Profile by Gender (as of 12/31/07)



Transgender

Estimated HIV infection rates among specific transgender populations range from 14%- 69% nationally. The highest prevalence may be among male-to-female (MTF) transgender sex workers.⁶ The Boston EMA Part A Client Utilization data estimates that thirty transgender individuals receive Part A services, equaling .5% of the total client base.⁷

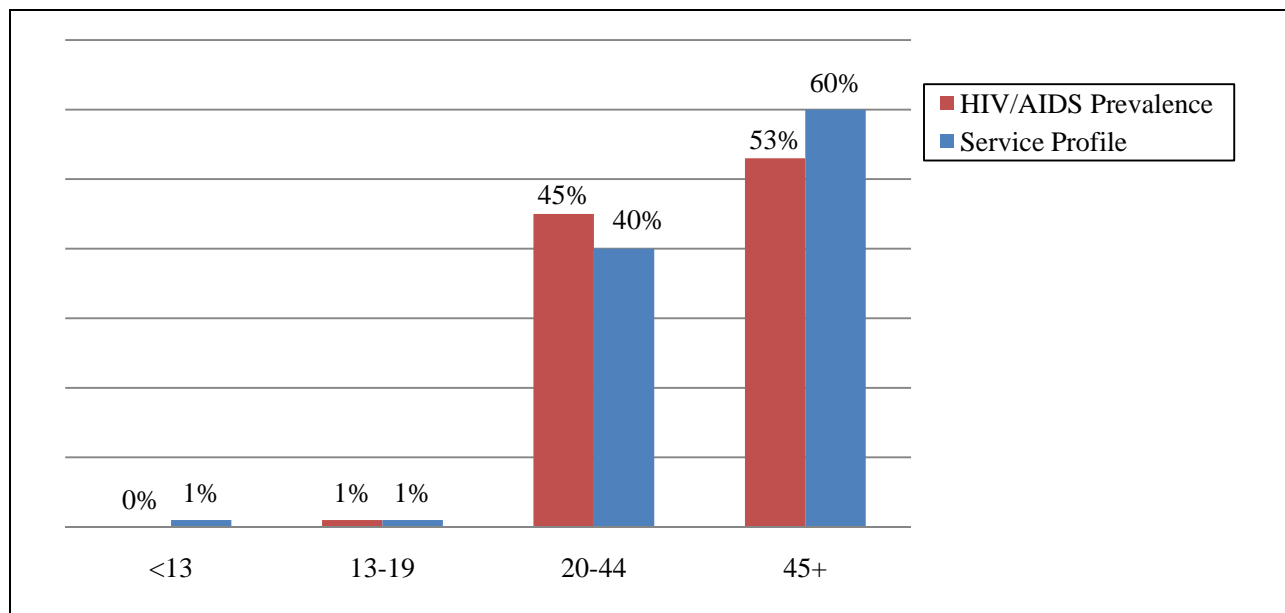
Age

Trends in HIV/AIDS prevalence show that an increasing percentage of PLWH are in the 45+ age group. In 2001, the 20-44 age group comprised the majority of HIV/AIDS prevalence in the Boston EMA. In 2007, 53% of HIV/AIDS prevalence in the Boston EMA was in the 45+ age group. This is partly due to the vast increases in survival time among PLWH after the advent of highly active antiretroviral therapies (HAART). Figure 7 shows HIV/AIDS prevalence in 2007 for different age groups in the Boston EMA.

Trends in AIDS incidence also show that the 45+ age group is an increasing percentage of the new AIDS diagnoses in the Boston EMA. Between 1999 and 2007, the number of people in the 45+ age group who were newly diagnosed with AIDS increased from 24% to 37%. In contrast, the number of people in the 20-44 age group who were newly diagnosed with AIDS decreased from 75% to 62%.

As of December 31, 2007 there was a total of 421 youth aged 13-24 living with HIV/AIDS in the Boston EMA. Surveillance trends show that a disproportionate number of youth are being diagnosed with HIV/AIDS in the Boston EMA through MSM transmission.⁴ In 2005 and 2006, there were 124 new HIV/AIDS cases diagnosed among all youth ages 13-24 throughout the Boston EMA. Of these new cases, 48% (59 cases) were among MSM 13-24 years old. An additional 39% were attributed to heterosexual (12 cases) and presumed heterosexual (36 cases) transmission. More than one quarter of all living HIV/AIDS cases among youth were newly diagnosed in 2005 and 2006. Additionally, given the incubation period from initial infection to AIDS diagnosis, many cases diagnosed among adults are the result of behaviors engaged in during adolescence.¹

Figure 7: Boston EMA Service Profile by Age (as of 12/31/07)



Mode of Exposure

Injection Drug Use (IDU)

Injection drug users accounted for 17% of the new AIDS cases reported during the last two years, a large decrease from 38% in 2003-2004. Women account for 38% of all persons living with HIV/AIDS with transmission attributed to IDU. People of color are disproportionately represented among cases associated with IDU. Blacks and Hispanics combined account for 56% of living HIV/AIDS cases attributed to IDU and make up 50% of all living HIV/AIDS cases.¹ Among IDU HIV/AIDS cases in the Boston EMA and within each racial/ethnic group, men consistently comprise a greater proportion of cases. This fact is most dramatic among Hispanics, where men make up almost three times the number of IDU HIV/AIDS cases as women.^{3,5} In most regions of the EMA, there are a higher proportion of White and Black women injection drug users with AIDS than among Hispanic injection drug users. Within the Central and Northeast regions of the EMA, Hispanic men comprise the single greatest number of injection drug use AIDS cases. White men account for the largest number of IDU AIDS cases in the Southeast and Metro West regions of the EMA. Black men account for the greatest number of IDU AIDS cases in the central Boston region.

Men who have sex with men

Within the Boston EMA, the MSM population continues to be deeply affected by the HIV/AIDS epidemic. Although the proportion of annually diagnosed HIV/AIDS cases among MSM in the EMA has declined over the past few years, in 2005-2006 there was an increase (compared to the last two-year period) in the number of incident HIV cases among MSM. Hispanic and Black MSM living with AIDS in the EMA are somewhat younger than White MSM living with AIDS, with about a quarter of Hispanic and Black MSM living with AIDS under the age of 40.^{3,5} The Metro Boston region of the EMA has more MSM living with HIV/AIDS than the rest of the regions combined. Across all regions of the EMA, the overwhelming majority of MSM living with HIV/AIDS are White. Twenty-six percent of the men diagnosed in the EMA who attribute HIV/AIDS transmission to MSM contact are from communities of color.³

According to the Massachusetts Department of Public Health, recent years have shown a rise of MSM in the HIV population. Among all males in MA diagnosed with HIV between 2004-2006, MSM constitutes over 50% of the newly reported cases. There was also found to be an inequitable rate of infection that is up to 25 times higher for MSM than for men who report only having had sex with women. Furthermore, HIV/AIDS disproportionately affects MSM in MA; as 4-9% of men (18-64 yrs) report having had sex with men in the past 12 months, yet MSM accounts for 39% of the HIV population in MA.⁴³

The White MSM community was the first and most profoundly affected by the emergence of the HIV/AIDS epidemic. Within the Boston EMA, the MSM population continues to be deeply affected. Seventy-two percent of MSM are white, reflecting the demographics of the EMA. MSM continues to be a major mode of transmission for HIV/AIDS in the Boston EMA, accounting for 37% of those living with AIDS, 45% of those living with HIV, and 40% of those living with HIV/AIDS as of 12/31/07 (including IDU/MSM).⁴

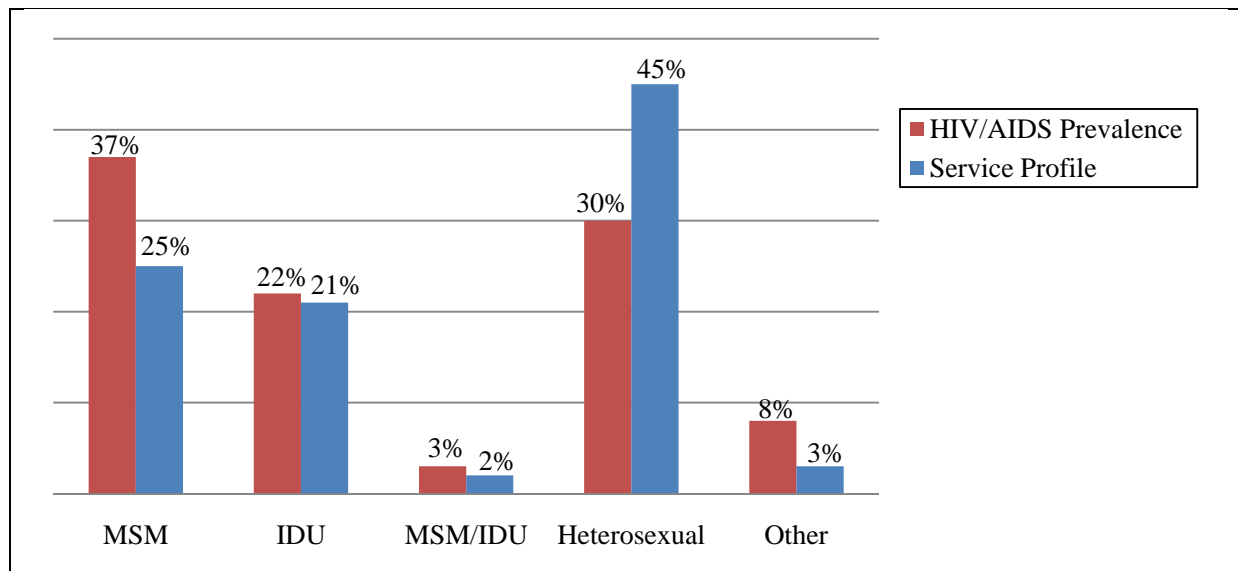
Heterosexual

Heterosexual transmission accounts for 37% of new AIDS cases within the EMA. This percentage exceeds the AIDS incidence rates of all other modes of exposure within the EMA, including, IDU (17%) and MSM (32%).¹ Nationally, heterosexual transmission is becoming increasingly prevalent among women of color; making HIV the leading cause of death among black women ages 25-44.⁸

Pediatric

There were ten new AIDS cases reported under children between January 1, 2006 and December 31, 2007; the changing epidemic in the EMA and preventative measures account for the low numbers of transmission to children.¹

Figure 8: Boston EMA Service Profile by Mode of Transmission (as of 12/31/2007)



Conclusions

In summary, the epidemiological profile of HIV/AIDS in the Part A Boston EMA demonstrates the following changes: continued increases in prevalent HIV/AIDS cases across all regions of the EMA; a drop in HIV/AIDS cases attributed to IDU; an increase in cases attributed to heterosexual sex; and the continued trend in greater representation of women among prevalent cases, reflecting increasing numbers of women who were infected with HIV through sexual contact, principally by IDU partners, and who are now progressing to AIDS. Among racial and ethnic minorities, there continues to be a disproportionate number of HIV/AIDS cases relative to their population numbers in the EMA. Of particular note, Blacks and Hispanics make up more than half of HIV/AIDS cases attributable to IDU, and both Black men and women are disproportionately represented among heterosexual cases, which are on the rise. Additionally,

AIDS prevalence data shows an aging of the population with a continued increase in the proportion of cases aged 45+.

Now that we have a picture of the epidemic within the EMA, we will shift our focus to the continuum of care available to affected populations.

Section II: Continuum of Care

This section describes the Boston EMA continuum of care. It presents the types of services which make up the continuum and the agencies that provide care.

COMPREHENSIVE SYSTEM OF CARE

The Boston EMA's continuum of care is an effective and flexible service system that spans prevention efforts, early intervention services, medical care, and health-related support services. Through the efforts of the Planning Council and the BPHC (Grantee), Part A continues to play a leadership role in the development and maintenance of a comprehensive continuum of HIV treatment, care, and services in the region. The continuum of care is supported by a variety of funding streams including the CDC, MA and NH general funds, City of Boston, Ryan White Parts A, B, C, D, F, MAI (Part A), Dental Reimbursement, SPNS programs, HOPWA housing funds, and Medicaid. The EMA's integrated system of care enables PLWH to gain and maintain access to needed medical and health-related support services and is adaptable to changing epidemiological trends and emerging needs. An ongoing challenge will be to preserve access to a full range of services of the continuum despite a lack of any increase in resources at a time when there are increasing numbers of PLWH in need of service.

GOALS

The goals of this comprehensive approach to care are to: 1) decrease the number of new infections; 2) increase the number of people who know their HIV status; 3) link newly diagnosed people, and those who know their status but are not in care, to medical care and health-related support services in order to extend and improve their health and quality of life; and 4) preserve and maintain the health of individuals currently in care. The continuum of care has been successful in lowering AIDS-related morbidity and mortality rates for those in care within the EMA over the years. Programs have focused their efforts to reach PLWH who are not engaged in primary medical care, particularly those who know their HIV status and those from disproportionately impacted communities. Prevention services follow a similar model of coordinated outreach, education, and referral services that target high risk groups, encourage people to know their status, provide counseling and testing, and link those who are identified as PLWH into care.

CORE MEDICAL SERVICES

Core medical services for PLWH in the Boston EMA include: primary care, drug reimbursement services, dental care, substance abuse treatment, mental health, and medical case management services. A range of funding streams supports these services, with Medicaid being the primary payer for medical services. Due to the availability of non-Part A resources for medical services and the lack of any waiting lists for medical care, the EMA was granted a Part A waiver to the core medical service requirement by HRSA for FY 2007 and again in FY 2008.

Under the legislative requirements of the RWTMA, the Core Medical Services requirement stipulates that a funded EMA/TGA must direct at least 75% of Part A funds towards a set of

“core medical services” and no more than 25% towards support services. Within the Boston EMA, this requirement is met and exceeded when all HIV-related funding is considered. State and other federal resources have been invested to develop and maintain a comprehensive system of core medical services. This extensive funding has reduced the need for 75% of Ryan White Part A dollars to be used for core medical services.

The availability of funding for core medical services is also supported by a comprehensive state Medicaid system (*MassHealth*), which includes an HIV waiver program. The HIV waiver allows PLWH, but not currently diagnosed with AIDS, to qualify for Medicaid coverage. These local factors, which led to the granting of a Core Medical Services waiver in prior years, have continued to expand. This is largely due to the landmark passage of the 2006 MA Healthcare Reform Law, which provides near universal health insurance coverage for area residents. As a result, the burden of primary medical care on Part A funds is expected to decrease as healthcare providers are able to bill to additional third party payers.

Part A providers have already indicated that the MA requirement to have health insurance system has expanded the number of possible payers, which reduces the burden on public programs for core medical services. However, the number of payers for support services has remained unchanged. The lack of funds that cover support services means that programs, such as Ryan White Part A, are increasingly important in providing a complete continuum of care and ensuring that all PLWH in the Boston EMA maintain their level of health. A critical focus of the Council and the EMA is providing these key health-related support services that enable PLWH to access and maintain health care. Current Planning Council allocations call for 46% of Part A funds to be spent on core medical services and 54% of Part A funds to be spent on health-related support services in FY 2009.

Part A funded *primary care* programs include a specialized pediatric primary care program, a program targeting homeless HIV infected adolescents and young adults, a clinic focused on the lesbian, gay, bisexual, and transgender (LGBT) community, and programs specifically targeting communities of color. Part A funded primary care programs ensure access for those who are not eligible for any other form of medical coverage. Part A funds seven primary care programs located in both neighborhood community health centers and larger community hospitals. As these sites also provide HIV counseling and testing services, they are able to link clients directly into care. Of those who accessed Part A primary care in FY 2007, 39% were White, 39% Black, 30% Hispanic, 12% African, 9% Haitian, and 4% Brazilian (noting that some clients declared belonging to multiple ethnic groups).

A more detailed look at the demographic profile of those accessing primary care services under Part A dollars shows an emergence of African immigrants with HIV/AIDS accessing care within the EMA. The proportion of African PLWH accessing primary care has increased 4% in comparison to the last fiscal year. This statistic is not only indicative of the growing number of African immigrants in the community, but the ability of funded case management programs through both Part A and MAI contracts to link this community into the continuum of care.

Combined funding streams allow for an open formulary of *drug therapies* to be available for PLWH in the Boston EMA. Coordinated planning by the EMA and the state governments has guaranteed the equitable availability of funds for HDAP services throughout the region. The potential for decreased resources has led both states to explore mechanisms for reducing eligibility, including the creation of waiting lists, and/or limits to the formulary; however, stable funding has allowed for the continuation of the open formulary without waiting lists.

Nonetheless, increasing costs have led to a need for higher Part A contributions to the ADAP program.

A network of *dentists and dental practitioners*, dentistry school clinics, and teaching hospitals provides dental diagnostic and therapeutic care. In addition to Part F programs, Part A funds an HIV Dental Ombudsperson program which coordinates access to dentists throughout the EMA. Dentists are reimbursed by Part A for clients without any other form of coverage. Thirty-eight percent of dental clients served in FY 2008 were from communities of color.

A range of *mental health and substance abuse* services are available to PLWH. Mental health programs provide psychological and psychiatric treatment in individual, group, and family sessions. The continuum of substance abuse treatment modalities provides clinical addiction counseling in several settings, including outpatient counseling, free standing detoxification services, and substance abuse recovery home treatment. The substance abuse programs incorporate a harm reduction and relapse prevention model. Needle exchange programs also operate in Boston and Cambridge with funding from the state of MA. In MA, legislation was passed in 2006 decriminalizing the purchase and possession of hypodermic needles without a prescription. In doing so, the state also charged the MDPH and local public health officials with providing education about safe and proper collection and disposal of used needles.

Substance abuse and mental health services play a critical role in HIV services and treatment by stabilizing patients, allowing them to become eligible for care and remain in treatment, and enabling adherence to treatment regimens. In FY 2007, 67% of mental health clients and 66% of substance abuse clients in Boston's EMA Part A were from communities of color. Again, African clients have increased significantly between FY 2006 (3%) and FY 2007 (15%).

Case management is the core service component that ensures newly infected, recently tested, and underserved individuals gain access to care, while managing the continued care of ongoing clients. Comprehensive case management services in the EMA are an extensive, multi-leveled, coordinated system of care. Services provide a continuum of information and referral, advocacy, client assessments, the development of individualized service care plans, and comprehensive care coordination and adherence support. Many programs typically provide a range of coordinated care, including linking a client to primary medical care as well as health-related support services. Specific medical case management allows the case manager to monitor the course of a client's disease progression, provide treatment adherence support, monitor the side effects of treatment, and coordinate access to specialty care. This approach and integration of care removes barriers to services and provides comprehensive HIV care to those traditionally underserved and disproportionately impacted by the epidemic. The demographic profile for case management services in FY 2007 was 41% White, 36% Hispanic, 23% Black, 7% Haitian, and 6% African (noting that some clients declared belonging to multiple ethnic groups).

The Part A case management programs are part of a coordinated network of HIV case management programs combining BPHC Part A with Part B dollars from MDPH and the state AIDS funding. The collaborative was originally designed to coordinate funding streams in three cities (Boston, Cambridge and Somerville) located within the EMA. The Case Management Collaborative has since been expanded to eliminate duplication of Ryan White funded efforts and services between MDPH Part B and BPHC Part A case management programs in the overlapping EMA and MA regions. The collaboration has standardized care across the EMA and culminated with a joint review and procurement of case management services starting in 2005. Case management services and training continue to be jointly managed by the funders.

The Case Management Collaborative has improved the quality of life for PLWH across the EMA. Funding priorities consider service providers that integrate medical and support services for comprehensive care in linguistically and culturally appropriate settings in accordance with the HIV/AIDS Case Management Standards of Care. The ultimate goal of case management is to help clients enter into and remain in primary care. In the process, programs must facilitate each client's progress towards self-sufficiency. Primary case management activities include assessment of the client's needs and personal support systems, development of a comprehensive individualized service plan, coordination of the services required to implement the plan, monitoring of the client's progress to assess the efficacy of the plan, and periodic reevaluation and revision of the plan as the needs of the client change over time. Clients are referred to case management services through a variety of health access points, including primary care, substance abuse facilities, detoxification units, homeless shelters, and emergency rooms.

The case management system is closely linked to counseling and testing providers as well as early intervention providers. For case management programs that do not offer these services on site, agreements and linkages are made within the community and at service centers that target similar populations. Some programs have case managers who work off-site and go directly to the early intervention service sites to reach the clients where they are located. Others travel to primary care sites and provide on-site services at infectious disease clinics. There are several programs that initiate contact with clients who are still incarcerated, coordinating service upon the client's release. By providing case management services in a variety of settings, such as community health centers, case managers can assist newly identified consumers, as well as ongoing clients, in accessing primary care and supportive services.

In FY 2008, the case management collaborative includes a total of 29 programs, including 17 case management contracts in the EMA that the Grantee funds. Additionally, the Grantee funds seven case management programs through MAI funding. Programs funded include, but are not limited to, those that target: Blacks/African-Americans, Haitians; Latinos/Hispanics; Portuguese speakers; substance abusers; the deaf and hard of hearing; the homeless; the formerly incarcerated, including those recently released; and MSM.

HEALTH-RELATED SUPPORT SERVICES

A spectrum of health-related support services are available assisting PLWH to access, remain in care, and to link those who know their status but are not in care to the continuum of care. These include housing, peer support, food/meals, transportation, and client advocacy services. The goal of these services is to enhance the ability of new clients, as well as those who have been in care, to remain in treatment, adhere to drug therapy, and cope with activities of daily living.

Housing services include short term rental assistance, supportive services within housing programs, and housing advocacy/search for transitional and permanent housing. Wrap-around services, including case management and clinical counseling sessions, are part of an integrated, intensive model of care for PLWH. Upon transition to permanent housing settings, clients achieve self-sufficiency to access the same services independently and more consistently due to stable housing.

Peer support plays a vital role by having peer leaders assist clients with coping mechanisms and in providing guidance to health services in the continuum, particularly for communities of

color. HIV peer support services utilize individuals living with HIV/AIDS to help clients navigate the healthcare systems, including primary medical services, prescription drug coverage, and other essential clinical services. At the same time, peer providers engage clients in practical skills building around treatment adherence and side effects management.

Food programs include culturally appropriate congregate meals, food vouchers, nutritional consultations and supplements, and food pantry services. Home-delivered meals are also provided through various food programs which are based on client need with eligibility determined by a comprehensive medical assessment.

Transportation programs provide taxi vouchers, public transportation, coordination of volunteer transportation, and agency-sponsored vans to transport clients to vital medical and social service appointments.

Client advocacy provides short-term assistance with financial and legal services, such as financial benefits, health insurance, and immigration issues. The emphasis is on targeted service coordination in a limited time span for clients who are chronically homeless or diagnosed with multiple co-morbid conditions. Once clients are stabilized, providers are then able to transition them into ongoing case management services.

The Boston EMA has a history of contracting with minority community-based providers, many of whom have a greater understanding of the social and cultural issues related to their communities. Agencies funded under the Part A *MAI program* offer a combination of services that target PLWH from communities of color who are not currently in care. The MAI programs engage clients through professional and culturally competent case management and peer support groups that assist clients in accessing the full range of medical and health-related support services. MAI programs located at community health centers in minority neighborhoods have been particularly effective in engaging consumers in care and reducing health disparities.

The continuum of care available in the EMA has continued to succeed at improving access to care and decreasing healthcare disparities across all services. One of the goals of the continuum of services is to ensure that the service utilization profile is reflective of the epidemic and is serving populations who have been disproportionately impacted by HIV and traditionally underserved. FY 2007 utilization data for Part A services demonstrates the success programs have had in providing access to these hard-to-reach populations in the EMA. The following Table I.E.1 shows that the service profile closely matches the profile of the epidemic with regard to race/ethnicity.

Table 2: Service Profile by Race/Ethnicity in Boston EMA

Demographic Group	AIDS Incidence 1/1/06 -12/31/07	HIV/AIDS Prevalence as of 12/31/07	Service Profile 3/1/07 – 2/29/08
White, Non-Hispanic	41%	48%	43%
Black, Non-Hispanic	32%	30%	29%
Hispanic	25%	20%	30%
Asian/Pacific Islander	2%	2%	2%
American-Indian/ Alaska Native	<1%	<1%	1%

When awarding contracts, the Grantee is guided by a set of funding principles developed by the Council. These principles mandate that funded programs must provide culturally competent services that are accessible to all PLWH in the EMA. In addition, programs must be linked to the continuum of care in order to assure that clients have barrier-free access to a full range of health-related supportive services. Programs are contractually required to describe their linkages with health access points and document how they follow-up on referrals to ensure clients remain in care. Documentation of linkages is monitored through site visits. These funding principles have also been incorporated into the ongoing monitoring of programs.

The EMA works to ensure access for underserved populations by contracting with minority agencies as well as those that have a history of successfully targeting and reaching underserved populations. The current group of contracted Part A providers includes those who specialize in providing services to PLWH who are African-American, Latino, Haitian, Portuguese, Brazilian, Cape Verdean, homeless, women, children, adolescents, MSM, those recently released from incarceration, and those with a history of substance abuse.

The Grantee requires that all funded programs, regardless of service category, conduct a complete assessment and service care plan for their clients. At a minimum, this includes assessing the medical, financial, housing, mental health, and substance abuse service needs of the client. For those with unmet needs, programs are responsible for linking clients to appropriate internal or external services. Providers must demonstrate they have appropriate linkages to other services, including primary care and support services, and they follow-up on referrals to ensure that clients are not lost. All programs are contractually required to ensure that their clients are enrolled in primary care.

Part A funding has maximized resources within the EMA's comprehensive network of medical care and health-related supportive services. The breadth of the continuum of care ensures that the needs of all PLWH, and in particular newly affected populations, are met with high quality and culturally appropriate services.

Section III: Resource Inventory

The Resource Inventory describes the available sources of funding within the Boston Eligible Metropolitan Area (EMA). This chapter discusses general eligibility requirements and benefits packages for each payer, as well as the client utilization of these resources.

Provider Descriptions

Ryan White Treatment Modernization Act of 2006

Part A – Funds for Cities (Formerly Title I)

The method for determining eligibility for Part A (formerly called Title I) funds gives priority to urban areas with the highest number of people living with AIDS; Metropolitan areas with a cumulative of more than 2,000 cases of AIDS during the most recent five-year period and a population of 50,000. The City of Boston receives Part A funding for the Boston EMA. For FY2008, Part A received \$13,184,240 and \$814,862 in Minority AIDS Initiative (MAI) funds.⁷

Part B – Grants to States (Formerly Title II)

Part B provides formula funding to states and territories to improve the quality, availability, and organization of health care and support services for consumers. For FY2008, MA received \$20,402,533 and NH \$1,501,341 in Part B funding.⁹

Part C Funds to Communities — Early Intervention Services (formerly Title III)

Part C supports comprehensive primary health care and other services for individuals who have been recently diagnosed with HIV. Part C funding has been awarded to five agencies located within the Boston EMA. A total of \$7,810,104 was awarded to MA Part C in FY 2008. A total of \$342,419 was awarded to NH Part C in FY 2008.¹⁰

Part D - Support services for women, infants, children & youth (Formerly Title IV)

Part D provides funding for comprehensive, community-based, and family centered services to children, youth, and women living with HIV and their families. The total allocation to MA Part D in FY08 was \$2,763,025. A total of \$478,749 was awarded to NH Part D in FY 2008.¹¹

Part F- Dental Reimbursement

The dental reimbursement program assists accredited dental schools and post-doctoral dental programs with uncompensated costs incurred in providing oral health care treatment to PLWH. There are five institutions that receive dental reimbursement through the Ryan White Act in the City of Boston. For FY 2008, these institutions received a total of \$621,825 in dental reimbursement funds through the Ryan White Act Part F award.¹²

Part F- AIDS Education and Training Centers (AETC)

The AETC Program is a network of 15 regional centers and 75 associated sites, which conduct targeted, multi-disciplinary clinical education and training programs for health care providers. In FY07 the NEAETC was allocated \$1,942,594.¹³

Part F- Special Projects of National Significance (SPNS)

The SPNS program is intended to advance knowledge and skills in the delivery of health and support services to underserved PLWH. There are two SPNS projects in the Boston EMA, Part F was awarded \$950,000 in FY08.¹⁴

Commonwealth of Massachusetts AIDS Line Item

MA provides funding for HIV/AIDS services through the *Department of Public Health (DPH)* AIDS budget line item (\$36.9 million in FY 2008).¹⁵

New Hampshire State Funds

In FY 2005, NH provided state funds for HIV/AIDS services for the first time. In FY2008 \$500,000 was directed to the NH ADAP. Advocates and administrators in NH are working with the Governor and State House to increase the level of funding so that additional service categories can be funded within NH.¹⁶

Medicaid

Medicaid is the federal health insurance program administered by states; each state sets its own guidelines regarding eligibility and service provision. Medicaid is the primary payer of health services for PLWH in the Boston EMA.¹⁵ In MA, the standard Medicaid benefits package covers comprehensive primary and inpatient health services, including primary care, ob/Gyn, substance abuse, mental health, and transportation services.^{15 16} Unlike MassHealth, NH Medicaid does not provide substance abuse services.¹⁷ The NH system requires disability (AIDS diagnosis), an income limit of 75% FPL (currently \$8,123) and an assets limit of \$2,500. NH Medicaid does not account for how much spending goes to PLWH. NH state officials are working with the Federal government to create an HIV waiver program similar to that found in MA.¹⁸ Lastly, 51% of Part A consumers were Medicaid recipients in FY 2007, compared to 15% of the general population in MA and 6% of the general population in NH.^{7 15 18}

Commonwealth Care/Choice

The Health Reform Law of 2006 extends access to medical insurance to all MA residents who are US citizens and qualified aliens.¹⁹ *Commonwealth Care* is for uninsured citizens or qualified aliens aged nineteen years or older who earn less than 300% FPL (currently \$32,490).¹⁸ *Commonwealth Choice* provides nonsubsidized, 'affordable' plans available for purchase

through the Connector Board by those over 300% FPL (currently \$32,490), including uninsured people living with HIV/AIDS.¹⁷

Private Insurance

Many PLWH have private medical insurance and are able to receive health services at one of the private hospitals or at a community health center. Of 6,093 unduplicated Part A consumers in FY 2007, only 638 were enrolled in private insurance programs.⁷ This number is expected to increase as the Massachusetts Health Reform Law of 2006 is implemented and more MA consumers are enrolled in private health insurance programs.

Medicare

Medicare is the health insurance program that is administered by the Federal government. Eligibility for Medicare is limited to those who are at least 65 years old or who are disabled (AIDS diagnosis). Some people are eligible for both Medicaid and Medicare and are thus considered *dually-eligible*. People who are dually-eligible typically receive the most support from their Medicaid funded programs, as Medicaid services are usually more comprehensive in scope than Medicare services.¹⁶ As of January 1, 2006 Medicare prescription drug coverage is available to everyone with Medicare (Part D). Private insurance companies provide drug coverage for beneficiaries who enroll and pay premiums. Medicare Part D plans have set prescription benefits that vary from plan to plan and co-payments range from \$0-\$5. Medicare Part D has a complex reimbursement and benefits system involving several stages of individual contribution. ADAP/HDAP funds assist in covering medication costs throughout these complicated stages. People who are dually-eligible continue to receive their prescription drug benefits through their Medicaid program.¹⁶

Massachusetts Bureau of Substance Abuse Services (BSAS)

MA provides funding for substance abuse services through the DPH Substance Abuse Treatment line item. BSAS administers these funds, as well as federal funds received from the *Substance Abuse and Mental Health Services Administration (SAMHSA)*. While HIV-status of clients is not collected, BSAS provides a range of HIV related services to injection drug users, HIV+ consumers, and others at high risk for HIV infection who are prioritized for admission to the services provided by BSAS programs. BSAS reported in FY 2007 that \$93.3 million was available for substance abuse treatment services in the EMA.²⁰

NH Bureau of Drug and Alcohol Services

The majority of people receive substance abuse treatment services in detox, outpatient, intensive outpatient, short-term residential and low-intensity residential. Although the NH Bureau of Alcohol, Tobacco and Other Drugs does not prioritize PLWHA for substance abuse treatment services, all people entering substance abuse treatment receive a HIV risk assessment, access to counseling and testing referrals, and receive ongoing risk reduction education. The NH Bureau of Drug and Alcohol Services reported \$11.5 million was available in NH for substance abuse services.²¹

Housing Opportunities for People With AIDS (HOPWA)

The Boston EMA contains twelve HOPWA grantees. Ninety-percent of HOPWA funds are distributed to eligible metropolitan service areas through the formula award; 10% of HOPWA funds are awarded through competition for Special Projects of National Significance. In MA formula awards are allocated to Boston, Lynn, Lowell, Springfield, Worcester and MDPH. HOPWA formula awards to Rhode Island include funding which affects Bristol county in MA. In MA, HOPWA is used for emergency assistance, long-term rental assistance & services connected to housing. HOPWA was awarded \$315 million in FY09.²²

Figure 9: FY 2007 Funding Streams

To examine the entire picture, we look at Figure 9, which represents the contribution of each payer to the HIV/AIDS continuum of care in the Boston EMA.²³

Comparing the demographics of the consumers using services in the Boston EMA across multiple funding streams helps assure there is proportional population-specific service delivery and outreach to all the impacted populations. Figure 10 illustrates the proportional representation of racial populations within multiple funding streams for FY 2007.

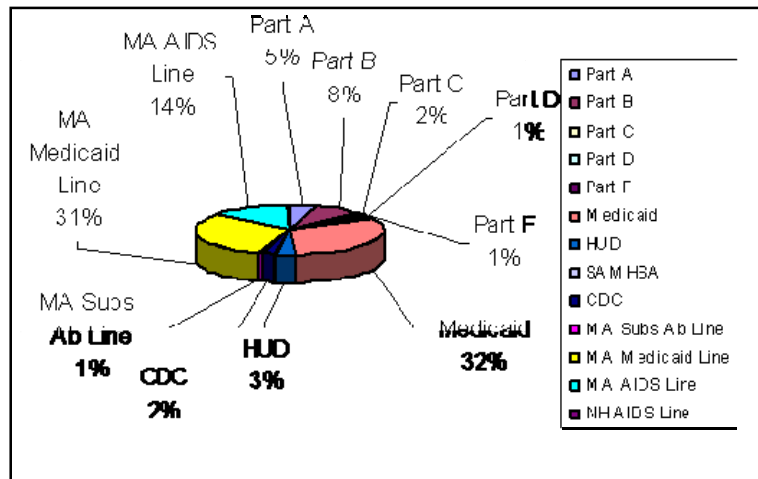
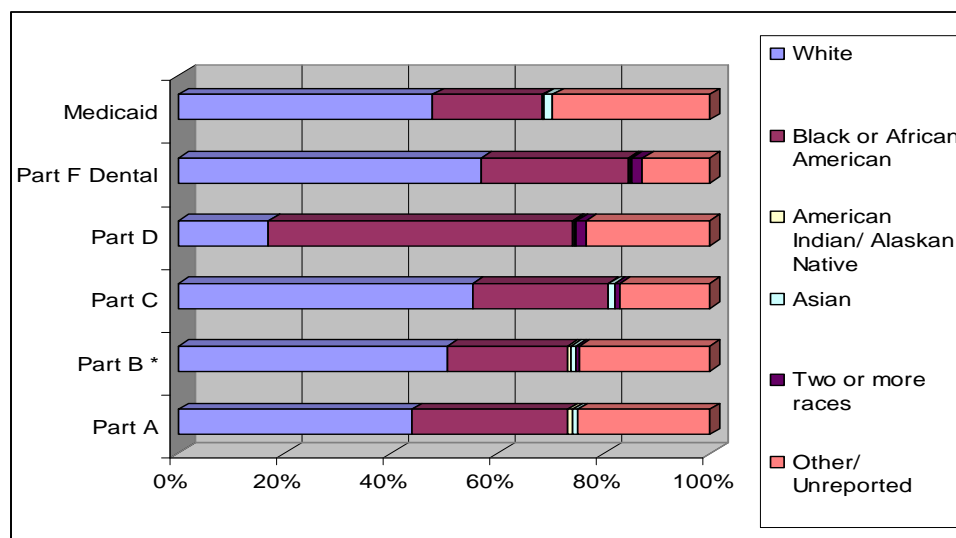


Figure 10: HIV/AIDS Client Utilization by Race



Conclusion

As diverse as the array of services provided is the variety of funding sources. Within the EMA there are over 10 payers with Medicare contributing the most dollars. Massachusetts State funds are second, and HOPWA, BSAS, NH Bureau of Alcohol, Tobacco and Other Drugs, Private Insurance, Medicaid, Commonwealth Care/Choice, NH state funds, and Ryan White dollars are all also contributing.

Section IV: Unmet Need

This section will examine the unmet need framework of the Boston EMA, and those PLWH in care vs. not in care.

The RWTMA is a significant funder of health care, medications, and support services for PLWH in the Boston EMA, most of whom are low-income, uninsured, or underinsured. As a result, the Ryan White Act has greatly expanded access to services for people who would otherwise be unable to afford these services.

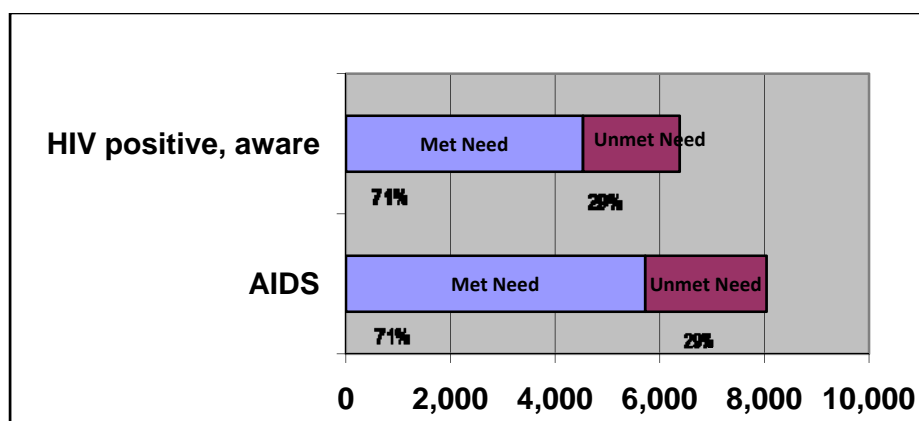
However, there still remain a number of people in the Boston EMA who are not currently in the system of care. A study conducted by the CDC estimates that approximately one third of all PLWH are likely not to be receiving medical care. Additionally, research shows that some populations, especially African Americans, Latinos, women, and the uninsured, are most likely not to be in care.²⁴ These data are especially troubling, given treatment guidelines that recommend PLWH enter care as soon as possible and recent advances in the treatment of HIV and opportunistic infections that have prolonged years of life, improved quality of life, and enhanced the health status for PLWH.

To support expanded access for PLWH not in care, the 2000 CARE Act legislation mandated that EMAs begin to identify and incorporate the needs of this group into the planning for the allocation of Title I funds. Specifically, EMAs must now develop data that better describe who is not currently in care (including factors like geographic location, race and ethnicity, gender, mode of transmission, unmet need, and service gaps) and the reasons why they are not receiving care. These data are intended to help the Planning Council better plan for and implement appropriate strategies to bring this group into care. This year the Council will continue working on a framework for assessing the unmet needs of people with HIV who are not in care.

Individuals who are HIV+ may not access available services for several reasons. Some people may not know they are infected. Others may know but choose not to access services; or they may not know the importance of accessing services while being asymptomatic. Some who know their status may have competing priorities that are more important or other issues like homelessness, mental illness, and substance abuse that complicate accessing HIV services; or they may not know about available services and/or their eligibility for these services. Still others may be uninsured or fearful of the stigma associated with being identified as someone with HIV disease. An additional group who know they are HIV+ may move in and out of care, depending on the severity of their disease or symptoms and other factors.

Over the past years, the Grantee has worked to plan and implement the Unmet Need Framework within the EMA and the overlapping Part B regions of MA and NH. These efforts have expanded upon existing efforts to collect client profile and utilization data across systems, as well as conduct special studies, including clinical chart reviews and a region wide consumer needs assessment project.

Figure 11: HIV/AIDS Prevalence, Met and Unmet Need in the Boston EMA (2007)



HRSA defined “Unmet need” as “the need for HIV-related health services by individuals with HIV who are aware of their HIV status, but are not receiving regular primary health care”. Specifically, an individual with HIV/AIDS is considered to have an *unmet need* for care when there is no evidence that s/he received any of the following three components of HIV primary medical care during a defined 12-month time frame: (1) viral load (VL) testing, (2) CD4 count, or (3) provision of anti-retroviral therapy (ART).

Illustrated in Figure 11, a combination of data sources indicate that the total number of AIDS cases in the EMA during the period 1/1/2007 to 12/31/2007 was 8,039 cases. The total number of HIV cases (aware, non-AIDS) was 6,381 cases. Out of these, 5,721 PLWA and 4,532 PLWH received HIV primary medical care during the specified period whereas 2,318 PLWA and 1,849 PLWH had an unmet need for primary care. Of the combined AIDS and HIV (aware, non-AIDS) cases in the EMA, 4,167 (29%) were not in care during this period. Massachusetts and NH estimates were added to arrive at the unmet need estimate for the entire EMA of 29%.

The population of living AIDS and living HIV (aware, non-AIDS) cases as of 12/31/07 is the number of cases reported to HIV/AIDS surveillance programs in MA (Department of Public Health) and NH (Department of Health and Human Services). Within the EMA, 7,630 of the 8,039 reported AIDS cases are in MA and 409 are in NH. Of the 6,381 people living with HIV (aware, non-AIDS) in the EMA, 6,014 are in MA and 367 are in NH.

As recommended by Mosaica, a Health Resources and Services Administration (HRSA) contractor, this year’s unmet need framework addresses methodological concerns and provides supporting evidence. For example, the unmet need estimate for the NH region is specific to the three counties within the EMA, and the estimate for MA is based on a study of that area only. Estimates of unmet need in NH are prepared through a collaborative effort at the state level. Unduplicated numbers of PLWH receiving primary care (based on having documented CD4 count and viral load testing results) during calendar year 2006 were generated through combination of NH CARE Program and HIV/AIDS Reporting System (HARS) data. The resulting estimate of met need for the EMA region of NH is 50%. NH does not generate unmet need estimates separately by AIDS and HIV diagnosis within the EMA region, nor do they break down their unmet need estimates for the EMA region by demographic and mode of exposure subpopulations. Statewide, 51% of Hispanic PLWH, 48% of Black PLWH, and 47% of White PLWH had unmet need for HIV primary medical care.

The estimate of unmet need for the MA region of the EMA is derived from a study, *People Living with HIV/AIDS Who Do Not Use Care Consistently*, prepared by Suffolk University. This study is based on interviews with consumers living in the Greater Boston and Worcester areas of MA. Unlike other studies conducted in MA, this study is not limited to clients of the Part A and B systems. Twenty-two percent of study participants had not seen a primary care provider within the past twelve months while 78% reported one or more visits. Because this study did not capture rates of CD4 count and viral load testing, and because some clients expressed inconsistent use of care, the met need estimate for MA is 72% (the lower bound of the 95% confidence interval around the point estimate for met need of 78%). Hispanics and Blacks were less likely to see a provider than Whites, and those who spoke Spanish or Haitian Creole were less likely to see a provider than English speakers. Among reasons for not seeing a provider, Hispanics gave the following the highest importance ratings: 1) transportation or distance from home, 2) not knowing where to go for services, and 3) difficulty accessing providers or providers not helpful. Among reasons for not seeing a provider, Blacks gave the following the highest importance ratings: 1) not knowing where to go for services, 2) embarrassment from family/friends, and 3) difficulty accessing providers or providers not helpful. All of these reasons received lower importance ratings from White respondents.

In addition, the EMA collects information on a number of indicators for unmet need through a subcontractor of the Grantee. JSI compiles data for a sample of clients through regular medical chart abstractions at ten Part A funded primary care sites in MA. A JSI study, completed in 2008 analyzing seven years of data (2000-2006), found that among clients eligible for ART at the clinic sites 93% were receiving ART and CD4 counts, and viral loads were regularly checked. The results of the study demonstrated that the EMA met, and often times surpassed, established nationally recognized guidelines and recommendations for quality HIV care on a number of indicators: 93% of clients had at least two medical visits that were at least three months apart each year, among those patients where PCP prophylaxis was indicated 93% were on PCP prophylaxis, and 87% of the clients' last viral load measured were ≤ 400 copies/ml. Though clinical performance in these highlighted areas has met national guidelines, there are still some gaps in different population subgroups. Of these clients, minorities were more likely to have lower viral suppression achievement rates compared to White non-Hispanics. Hispanics were also more likely to have a lapse of 8 months or greater in CD4 count monitoring. These findings are informative in utilizing Ryan White resources to target select patient groups that may benefit from additional interventions.

In an effort to assess unmet need among subpopulations within the EMA, the Grantee has sponsored several studies. In *VOE*, conducted by Suffolk University, 466 PLWH in MA and Southern NH were interviewed, of which 84% lived in the EMA. The participants were contacted through provider agencies, so the sample population is disproportionately "in care." However, 30% of respondents did not access medical services for at least a year after their positive HIV test, suggesting the newly diagnosed is a population with significant unmet need. In the open-ended response section of the Suffolk study, the most commonly identified frustrations in accessing health services by all subgroups were transportation, problems with doctors and health services, and confidentiality or disclosure concerns. Confidentiality was a particularly contentious issue among the incarcerated or those recently released.

Under the guidance of the Grantee, JSI provides site-specific performance data and technical assistance based on their findings in an effort to improve performance on primary care measures, particularly for underserved clients. A 2008 JSI retrospective study shows that among those new to care from 2001-2006, those with heterosexual behavior increased from 63% to 70%, meanwhile the proportion of patients with documented IDU risk decreased from

36% to 25%. The percentage of Black non-Hispanics new to care increased from 28% to 33%, while the percentage of Whites and Hispanics remained fairly constant based on data from 2001 to 2006. New-to-care clients were more likely to be Black or foreign-born than the clients continuing to receive primary care at the study sites. In addition, foreign-born clients were significantly more likely than US-born clients to have low CD4 counts upon entry to care (36% and 15%, respectively), suggesting delay in diagnosis and/or access to primary medical care.

JSI also further investigated characteristics of clients who were newly diagnosed with HIV and entering into care, since they may reflect the population with unmet need. These researchers found that recently diagnosed patients relative to the continuing cohort were more likely to have regular CD4 counts, and last CD4 count above 200, last viral load of ≤ 400 ; were more likely to be on PCP prophylaxis, less likely to be on HAART, and were often unaware of their status or were prompted for HIV testing due to clinical symptoms or opportunistic infections. The results of the study also highlighted that Black non-Hispanics are a growing subpopulation that may need continued assistance in gaining and maintaining access to care. Within the EMA, minority populations have been successfully brought into primary care and support services. The effective use of Ryan White dollars for medical case management and support services has allowed provider agencies to continuously connect clients with and maintain them in primary care.

The Grantee continues to seek consumer feedback both to inform assessment of needs and to measure consumer satisfaction. The planning process is underway for a large-scale consumer study with JSI that will be co-funded by the MDPH and will span two fiscal years with a target completion date in FY 2009. The Grantee will incorporate findings from this study in next year's unmet need assessment. In FY 2007, JSI conducted a satisfaction survey of Part A consumers receiving case management, food, and/or peer support services. One goal of this survey was to examine the impact of support services on maintenance of primary medical care, and thereby their role in reducing unmet need among PLWH. The survey found that 84% of case management clients, 79% of food clients, and 78% of peer support clients consider these services extremely or very important in helping them keep regular primary medical care appointments. Case management clients were also asked about the importance of this service in helping them access HIV-related medications, and 87% found it extremely or very important. Food clients were asked about the importance of food services in helping them take their HIV-related medications, including managing any side effects, and 76% found these services extremely or very important. An effort was made in this study to contact minority populations to assess their needs more thoroughly; of the 203 PLWH interviewed, 43% were Black or African-American, and 26% were Hispanic.

The NH State Needs Assessment Survey found that Hispanic and Black PLWH had more difficulty adhering to ART regimens than White respondents, although the barriers were the same. Hispanic and Black PLWH were also more likely than White PLWH to report going without HIV medical care for 12 months or more. Among all PLWH who had a 12 month or greater lapse in medical care, not having a provider who spoke their language was one of the notable barriers. Women were more likely than men to have gone 12 months or more without HIV-specific medical care (28% vs. 14%) and without HIV medications (31% vs. 22%). Among this sample, women expressed a much greater fear of status disclosure as a barrier to care.

Data from JSI clinical chart reviews and Suffolk consumer assessments indicate that racial and ethnic minorities in the EMA do encounter some barriers in accessing and maintaining primary medical care. However, during the time that the EMA has used Ryan White dollars to fund

essential medical and support services, the data demonstrates great progress in connecting ethnic and racial minorities to primary medical care.

The MA Division of Health Care Finance and Policy provided hospitalization data that assessed levels of care provided by other payers. Within the MA region of the EMA in FY 2005, there were 1,575 unduplicated hospital users (inpatient, emergency, and observation) with a primary or secondary diagnosis of HIV, 43% with Medicaid as their payer type, 30% with Medicare, 21% with private insurance and 5% uninsured. Although these numbers have not been unduplicated across Part A and Part B systems of care and represent only those who entered the hospital system, this assessment demonstrates that at least 327 PLWH were covered by private insurance. Hospitalization for opportunistic infections is another indicator of unmet need that was measured. Of 122 hospital users with a diagnosis of HIV and PCP in FY 2005, 47 received coverage by Medicaid, 33 through private insurance, 30 through Medicare, and 10 were uninsured.

Although data are not available to examine unmet need separately for people with HIV and those with AIDS in the EMA, some trends emerged based on the NH unmet need findings. Statewide in NH, 45% of those living with AIDS have an unmet need, compared to 51% among those living with HIV (aware, non-AIDS). Among those with an unknown diagnosis (HIV vs. AIDS), 69% expressed having an unmet need. New Hampshire noted in their report that this high need population is primarily a Medicaid-only population.

In the Suffolk study (MA only), 30% of participants had AIDS, 26% were HIV asymptomatic and 32% were HIV symptomatic, but care patterns were not differentiated by diagnosis. The study found that PLWH who visited a primary care doctor were more likely to have a CD4 count above 500 than those who did not, but no further differentiation was made.

The estimation of unmet need continues to evolve. To improve the reliability of the unmet need estimate, it is essential to match data across systems of care. The Grantee continues to work with MDPH on using a shared approach. The key element to this plan, a data sharing agreement with the MA Office of Medicaid, was recently finalized, and MDPH has begun to examine the matched data across systems of care. JSI has been contracted to continue data matching and analysis, which will allow the updated unmet need framework to reflect the proportion of PLWH that receive primary medical care through private sources, as well as those for whom care is provided in publicly funded settings.

The Council considers all unmet need data during their annual prioritization process. In addition, three Council Committees (Consumer, R&A, and Evaluation) further analyze the unmet need findings to fulfill the Council's responsibility to represent the larger community, and to respond to changing and unmet needs. An annual Needs Assessment is produced by Council support staff and includes a compilation of recommendations to target those with unmet need. The priority and allocation for case management is based on the role the service plays in linking those with unmet needs to the continuum of HIV medical services and health-related support services. Providers are also asked to submit plans for addressing unmet need as part of their funding proposals. The Council, Grantee, and other funders will continue to work on the refinement of the unmet need estimate for use in future planning and in reducing unmet need.

Section V: Co-morbidities & Barriers

This section will examine HIV co-morbidities and barriers to care observed within the Boston EMA.

NATIONAL LEVEL

Federal Sources of Funding

Providing healthcare for PLWH ultimately relies on two sources of funding: private insurance and government-provided insurance. The principal source of private insurance is employer-paid health insurance. The advantage of non-governmental health care is that it provides the individual with an array of services. That source of funding is not considered here in discussing barriers to care. Governmental health care funding at the macro level will be examined as it affects health care for PLWH.

Currently, the federal government is the largest provider of health care for those without private insurance. These services are provided through the entitlement programs of Medicare for the elderly and disabled; the Veterans Affairs Administration health care system for those who served in the military; and Medicaid, a federal-state partnership designed to provide medical assistance to the poor.

Medicare was established in 1965 for those 65 years of age and over, the disabled below 65 years of age, and those living with end-stage renal disease. Persons under 65 years of age and deemed to be disabled may receive benefits after 24 months from the time of the disability determination. Under Parts A and B of Medicare, inpatient and outpatient medical services are available. Some equipment and medical consumables are covered by the program. Most services have co-pay requirements on the part of the beneficiary. The schedule for payments to hospitals and healthcare providers is set annually by the federal government.²⁵ Medicare is a major payer of health care benefits to PLWH.²⁶ In federal fiscal year (FFY) 2008, \$4.5 billion was spent on HIV/AIDS. Expenditures for FFY 2009 are not finalized at this time, but the amount is projected to increase.

The continuing increase in annual spending for this program has led to congressional debate over cost containment strategies as the number of retirees increases and the tax base supporting the program decreases. The 24 month gap between a disability determination and coverage, and the intricacies of navigating the Medicare system are initial barriers for PLWH. A larger potential barrier to care for PLWH would be restructuring of the program at the national level to reduce costs by reducing benefits and/or raising premiums and co-pays.

The other federal entitlement program providing care for PLWH is Medicaid. Medicaid is a federal-state partnership program designed to provide healthcare services to the needy as defined by a national standard — the FPL—which is adjusted annually. Eligibility for program access is further defined by states. Medicaid has different names in different states; for example MA's name for Medicaid is MassHealth. When combined with state contributions, Medicaid is the largest single source of funding for healthcare services to PLWH. In FY 2008 \$4.1 billion were spent on the federal side of the federal-state partnership for HIV/AIDS. While there are a minimal number of benefits required of states in order to participate in the program, anything

beyond the basic offering is contingent on the state's policies and ability to support a larger array of benefits.

Medicaid benefits available to PLWH in the two states of the Boston EMA vary. Massachusetts has a broader offering of services provided under its MassHealth program, while NH offers fewer and more narrowly focused services. Both programs are subject to funding fluctuations because of the federal-state sharing of costs. Recognizing the importance of early, effective treatments for PLWH, in order to reduce or delay the progression to AIDS and fill the gaps in health care coverage, MA state officials developed and received federal approval for a 1115 waiver program in 2001 to expand Medicaid (MassHealth program) coverage to PLWH under 65 years of age with incomes up to 200% of the FPL. In MA FY 2007, approximately 1,006 PLWH were enrolled into MassHealth using the MA HIV waiver. Of all PLWH in the MA portion of the EMA enrolled in MassHealth, 48% are White non-Hispanic, 21% are Black non-Hispanic, and 10% are Hispanic, according to the MA Office of Medicaid, November 2007. However, state budget cuts have threatened the Medicaid safety net. In January 2003, an \$11 million cut to MassHealth resulted in 500,000 low income disabled residents, including those with HIV/AIDS, losing coverage for dentures, eyeglasses, artificial limbs, and other select services. In September of the same year, the eligibility level for the HIV waiver was reduced from 200% FPL to 133% of FPL, but it was restored to the original level in July 2004. In NH, eligibility for Medicaid is more restrictive, as it requires disability and includes both a monthly income limit (\$651 for the categorically needy and \$591 for the medically needy) and an assets limit (\$2,500).

The 1115 waiver permits states to design innovative programs and services not a part of the standard plan design. Under the MA waiver, MassHealth covers persons with an HIV diagnosis and a certain level of income. This waiver expands access to MassHealth services to people HIV infected but not having an AIDS diagnosis.

The MA Health Reform Law of 2006 poses unique challenges to PLWH accessing Medicaid in MA. Under the new law it is compulsory for all MA residents to have health insurance. A new entity, the Health Insurance Connector, was instituted to create the rules and procure health-financing services from regional managed care organizations. PLWH with incomes up to 200% FPL remain eligible for MassHealth under the new law. In addition, PLWH who are uninsured and have an income between 200% and 300% FPL will now have access to health insurance coverage through Commonwealth Care (enrollment in a Managed Care Organization with the premium subsidized by the state). PLWH who are uninsured with income over 300% will now have access to affordable products offered through the Connector.

Medicare Part D

The Medicare *Prescription Drug, Improvement and Modernization Act of 2003* was implemented on January 1, 2006. The Act provides a new prescription drug benefit for persons participating in the Medicare program. As part of the program, persons who had been receiving pharmaceuticals through Medicaid prior to January 1, 2006 are now receiving medication through Medicare.

Under Part D the drug benefit is provided through non-governmental entities. There are pharmaceutical benefit plans in place that provide participants with drug coverage at reduced cost. Many PLWH are "dually eligible" for benefits under both Medicaid and Medicare. Their participation in Medicaid is determined by their income level while their Medicare participation is

determined by their disability determination. The switch of providing medication from Medicaid to Medicare was a significant move. The plans offering pharmaceutical coverage are required to have a number of drugs per pharmaceutical category. In the case of anti-retrovirals, every plan must cover their cost. The transition, however, will further be complicated for dually-eligible PLWH whose treatment regimen requires other medications.

Medicare Part D applies to an estimated 21% of ADAP clients. MA and NH ADAPs must ensure that eligible clients that apply for this drug reimbursement service meet the payer of last resort criteria. As of June 2007, the Boston EMA consumers accounted for 79% of MA ADAP clients and 21% of NH ADAP clients. However, since Medicare does not recognize the ADAP payments as true out of pocket cost to the consumer, consumers are not eligible for Medicare's catastrophic care. State ADAPs frequently pay the remainder of medications after Part D clients reach the "doughnut hole" or coverage gap.

In preparation for the January 1, 2006 implementation of Part D, the MDPH and BPHC held technical assistance training for providers on November 10, 2005. This training was designed to provide service providers with the necessary information to help consumers navigate the new process.

Navigating the complexities of choosing a plan, determining what each plan covers and dealing with issues around co-pays has the potential of creating roadblocks to access of needed pharmaceuticals by the most vulnerable of PLWH.

LOCAL SOCIAL AND ECONOMIC LEVEL BARRIERS TO CARE

At the micro-social and economic levels there are significant barriers to care for people living with HIV/AIDS. Certain populations within the EMA continue to be disproportionately at risk of infection, and often simultaneously face community-specific barriers to care. Adolescents, IDU, white MSM, MSM of color, women of child bearing age, and individuals with criminal records all have multiple factors that affect their access to care, which are addressed below. Additionally, homelessness/housing instability, systemic weaknesses in cultural competency, and stigma create barriers to care across many populations.

Youth (13-24)

Persons 13 – 24 years of age present a series of challenges to the HIV service delivery system largely due to the unique circumstances inclusive of HIV that they face during this pivotal stage of human development. Given the sense of invulnerability characteristic of this age group, concern for health issues is usually a low priority, while risky drug use and sexual behaviors are common.

Data from the 2007 Youth Behavioral Risk survey from MA and NH showed nearly three quarters of high school students had drunk alcohol, a little less than half reported marijuana use and 3-10% reported having tried a more serious illicit drug, including cocaine and methamphetamines.²⁷

Although teen birth rates have steadily declined over the last 15 years, the rate of certain STIs in youth aged 10-24 indicates the continued presence of sexually risky behavior.

Both Chlamydia and gonorrhea rates are higher among individuals aged 15-24 than in other age groups; in MA the rate of Chlamydia among this group is eight times higher than among those 25 and older. This evidence of risky sexual behavior is corroborated by self-reported risk. In the most recent Youth Risk Behavior Survey (2007), nearly half of MA and NH high school students reported that they were sexually active, and just under 40% reported using a condom in their last episode of sexual intercourse. Meanwhile, students in the city of Boston and the state of MA were less likely to have received any in-school education about HIV or AIDS than they were four years ago (the Boston percentage falling from 85% in 2003 to 77% in 2007, and the percentage in NH remained roughly the same at 89%).¹¹

Risk taking, experimentation, substance use, and unsafe sexual activity put youth 13-24 years of age at risk for HIV infection. For those infected in this age group, the barriers to entering and maintaining care are significant. The majority of PLWH youth aged 13-17 years are dependents with minimal income and lack the autonomy, privacy, and resources that adults living with HIV/AIDS have in making decisions about their healthcare. They often encounter unique obstacles in seeking health care, including parental consent, extremely limited finances and legal issues. They may access services through parents or guardians, or public programs including Department of Social Services and Department of Youth Services. Adolescents who have left their families may attempt to obtain health services through drop-in or homeless shelters which are designed for chronically homeless adults, not adolescents. Homeless youth and youth of color, two populations experiencing rising rates of HIV infection, are likely to remain outside of the system of care until later stages in their HIV disease than the general population. In addition, many youth struggle with continuity of care, side effects from HIV medications, treatment resistance, and adherence to drug regimens. Agencies working with adolescents infected vertically or through other methods report that many youth in care have difficulty maintaining that care when they reach legal adulthood at 18 and must navigate new programs and new systems.

During FY07 of the Ryan White Program, 193 persons aged 13 to 24 years received Part A funded care. Based on an average cost per client, \$379,824 was expended on care for this group.

Injection Drug Users

IDUs continue to be a population at high risk for HIV infection and co-morbidities (such as mental health issues), which make obtaining and maintaining care difficult. IDU is the reported primary mode of HIV transmission for 25% of those living with HIV/AIDS in the Boston EMA, and accounted 19% of new annual AIDS cases as of 12/31/07 (including individuals who report both IDU and MSM risk factors). IDU is the principal mode of transmission among male Hispanics throughout the EMA, and in central MA it is the principal mode of transmission among all racial and ethnic groups.

IDUs are also at increased risk for HCV infection. Nationally, up to 40% of all PLWH are also living with HCV; however co-infection rates are as high as 90% for IDUs. According to the 2003 VOE Study in the Boston EMA, 46% of Part A clients are co-infected with HCV. Co-infection with HCV increases both the cost and complexity of providing health care to this group. Pharmaceutical treatment of HCV adds to the cost of care, and many co-infected clients have difficulty tolerating their HIV medications due to liver damage caused by HCV.

IDUs have an array of health and psychosocial needs stemming from unemployment, homelessness, psychiatric problems, histories of abuse, and social isolation, all of which severely limit an individual's ability to seek care and adhere to a treatment plan. Without drug treatment, mental health counseling, and a continuum of support services, most HIV-infected IDUs have difficulty adhering to HAART and remaining in primary care. In the 2003 VOE study, IDUs were less likely than non-IDUs to report undetectable viral loads, and more likely to report that they did not know their viral loads.

Reductions in state-funded drug treatment slots within the EMA have placed increased demand on Part A dollars. State-funded needle exchange programs are critical intervention sites that help bring IDUs into care and reduce HIV risk. These programs are only located in two cities within the EMA (Boston and Cambridge), leaving a large geographic area with limited access to needle exchange. Additionally, until very recently, MA was one of only three states to prohibit over the counter sales of clean needles in pharmacies without a prescription. Implementation hurdles still remain, though the 2006 Pharmacy Access Law aims to increase access to clean needles. During FY07 1,378 IDU clients received care through Part A funded agencies, about a third of the total number of IDUs living with HIV/AIDS (3,532) in the EMA. The cost of this care was approximately \$2,711,904.

Men Who Have Sex with Men, White

The white MSM community was the first and most profoundly affected by the emergence of the HIV/AIDS epidemic. Within the EMA, the MSM population continues to be deeply affected. Seventy-two percent of MSM in the EMA are white, reflecting the demographics of the EMA. MSM continues to be a major mode of transmission for HIV/AIDS in the EMA, accounting for 37% of those living with AIDS, 45% of those living with HIV, and 40% of those living with HIV/AIDS as of 12/31/07 (including IDU/MSM).

White MSM are a special population of concern due to ongoing elevated rates of STIs, which are an indicator of risky behavior. Over the last few years, Boston, the principal city of the EMA, has experienced a spike in primary/secondary syphilis case incidence. Among reported infectious syphilis cases in MA, the proportion of MSM cases increased sharply from 2000 to 2006, from 23% to about 80%. In 2007, the EMA accounted for 72% of MA's reported syphilis cases. During the same period, HIV+ MSM with reported infectious cases of syphilis increased from 12% to 43%. In the NH counties of the EMA, a regional community health center has experienced a spike in syphilis among white MSM during 2007 and has notified its patients and the community. The ongoing incidence of syphilis cases and other STIs indicates risky sexual behavior. Additionally, many suffer from message fatigue, with risk reduction messages no longer being as effective as they were during earlier phases of the epidemic.

Ongoing societal disapproval of MSM behavior, stigma, recreational drug use, and fears of public exposure of one's lifestyle all hinder access to care for this population. Recreational drug use among white MSM increases risk and complexity of care, while creating barriers to care. Club drugs such as Ecstasy (MDMA), "Special K" (ketamine), and "G" (GHB) are still part of some social gatherings, while use of crystal methamphetamine (crystal meth) has become increasingly prevalent in New England, especially among gay men.^{28 29} In addition to its role in increasing HIV transmission, crystal meth may also cause complications for PLWH users including adherence failures, interactions with protease inhibitors, and increased viral replication.

During FY07, an estimated 1,255 white MSM out of the total MSM client base of 1,607 received care funded under Ryan White Part A. The cost of that care was approximately \$2,410,800.

Men of Color Who Have Sex with Men (MSM of color)

MSM of color represent a growing share of HIV and AIDS cases in the Boston EMA, and face multiple linguistic and cultural barriers to care. Twenty-six percent (26%) of men who attribute their HIV/AIDS infection to MSM contact are from communities of color, a designation which comprises a wide range of races and ethnicities, including African Americans, Hispanics/Latinos, Portuguese speakers (i.e., Cape Verdeans, Brazilians), Asian-Pacific Islanders, and Sub-Saharan Africans. The issues facing each of these subgroups are similar: sexual identity and expression, stigma of MSM relationships in their specific communities, effects of discrimination based on both sexual orientation and race, and difficulties navigating a complex healthcare system. However, the increasingly diverse languages and cultures of MSM of color require services to be delivered in a culturally and linguistically competent manner in order to bring MSM of color into care and maintain their access to the continuum of care.

Many MSM of color perceive the established system of care to be structured by and for gay, white males. The perception is sufficient to cause MSM of color not to seek out care providers who have a deep familiarity with HIV/AIDS treatment. Class differences, underscored by economic factors, also raise barriers to both communication and care. Gaps in cultural competency exacerbate the divide between providers and clients of color. Dual minority status leads to simultaneous open and hidden life styles with different social circles for different situations. For example, a 2007 study found that African-American men who have sex with men and were living with HIV were less comfortable discussing MSM behavior with close friends and family.³⁰ Language skills, educational attainment, and economic positioning (lower skilled employment) also create hurdles for navigating the system of care, as well as high rates of depression and substance abuse among MSM.

MSM of color who are also immigrants have another layer of complication in seeking care. The Boston EMA has always had a high rate of new immigrants. Massachusetts overall foreign-born population rate of 12% is driven by the seven counties of the EMA. Their rate combined (13%) is greater than that of the seven other counties of MA (6%). This population is further concentrated in the urban centers of the EMA, where the foreign-born population reaches 17%. The three NH counties have foreign born populations ranging from 3% to 7%, compared to 4% in the state as a whole.² Uncertain immigration status among foreign-born residents can become an additional barrier to entering the care network for MSM of color.

During FY07, approximately 382 MSM of color received care under Part A for an expenditure of \$751,776.

Women of Child-Bearing Age

There are over 3.1 million women in the EMA, representing nearly 52% of the total population.² Of all HIV/AIDS cases in the EMA, 29% are among females, which is a greater proportion than the 25% of national prevalent cases who are female.³¹ There are significant racial disparities within this larger group. In the MA counties of the EMA, 24% of the 234 women diagnosed with AIDS in 2006 and 2007 were White, 50% Black or African American, 25% Latinas, and 1% Asian/Pacific Islander. The percentage of infected women of color is disproportionate to their

makeup of the general population. Modes of transmission of HIV/AIDS among women in the EMA vary, with the majority of existing cases in NH (56%) attributable to heterosexual contact, while in MA the most common mode of transmission (46% of existing cases) is IDU.

Access to and utilization of HIV-related health care continues to be a significant problem for women living with HIV/AIDS. Barriers are even greater for women who are homeless, substance abusers, single parents, or who have mental health problems. Among PLWH who are women, psychological distress poses a significant barrier to care. Many women delay accessing care because of fear, depression, and anxiety about their infection. High rates of discrimination, abuse, and domestic violence create additional challenges. Women with children frequently require day care programs in order to access care.

The Boston EMA provided Part A funded services to 1,983 women in FY07. Services to women of child bearing age cost approximately \$3,902,544.

Individuals with Criminal Records

Multiple providers in the Boston EMA have reported that PLWH who have criminal records have difficulty accessing certain services. Individuals who have been charged with a crime in a federal or MA state courts have a Criminal Offender Record Information (CORI) in their record, even if the case is dismissed or the person has been found not guilty.³² In some cases, CORIs which are very old can continue to cause problems. For example, a client at an EMA agency had proceeded through a year-long housing application process only to have the application dismissed two weeks before a scheduled move because of a CORI dating to the 1970s.³³ Closing a CORI, or sealing the record, requires a legal filing and in some cases a court appearance, even for cases that have been dismissed or in which the client has been found not guilty.

CORIs present a significant barrier to obtaining housing for PLWH. Many local housing programs screen applicants who have a history of involvement with the criminal justice system. Additionally, many employers perform CORI checks during the application and interview process, so PLWH who have findings in a CORI search also face a substantial barrier to obtaining stable work and economic self-sufficiency.

Housing Instability

A major barrier to entering and remaining in care for PLWH is stable housing. Complex drug regimens, keeping medical appointments, and having a safe, secure environment require stable housing. Stable housing in the Boston EMA is problematic and frequently is prohibitively expensive. The percentage of homeowners paying more than 30% of their incomes on housing costs jumped from 25% in 2000 to 40% in 2005. For renters, housing is also a big cost; 52% spend more than 30% of their gross income in housing, and 25% spend more than half of their gross income in housing. Although prices have fallen in the recent economic downturn, this rapid decrease, coupled with new job loss, may actually increase the number of foreclosures.³⁴ Within the City of Boston, the number of women using homeless shelters increased by 42% from 1995-2005, and the number of women living on the streets increased by 85% in just one year, from 2005-2006. NH also has a persistent shortage of affordable housing. According to the NH Emergency Shelter and Homeless Coordination Commission, in 2007 only 9% of the state's two-bedroom apartments were affordable to very-low income households (a decrease

from 12% in 2006), and the statewide rental vacancy rate was just 3%. In 2006, homeless shelters in NH turned away 9,634 individuals due to full capacity.

Homelessness and housing instability are special problems for PLWH. The MA-based AHC estimates that one third to one half of PLWH are either homeless or in imminent danger of losing their homes, and 60% of them will experience homelessness in their lifetimes. The AHC also found that 65% of PLWH cite stable housing as their second greatest need. Although the need for housing continues to grow, resources to provide that housing have not. HOPWA is the largest payer of housing services for PLWH in the EMA, accounting for 57% of the total funding available for all housing-related services in the EMA. Recent HOPWA restructuring has made providing these services somewhat more difficult. Formerly, MA had three governmental entities administering HOPWA; currently there are seven. Compounding the loss of \$100,000 in funding that came with the restructuring, the cost of establishing the new administrative centers further depleted funds available for services. The multiplication of administrative centers also created increased complexity in coordinating services throughout the restructured regions. The lack of access to stable, affordable housing is a significant barrier to entering and remaining in care, as well as a considerable threat to maintaining good health.

Once in care, homelessness presents a significant barrier to accessing critical services, including antiretroviral therapy.³⁵ Limited access to medical care among this growing population delays identification of HIV/AIDS and related diseases, increasing the likelihood of severe disease onset prior to entering care. In addition, many PLWH who are homeless also struggle with mental health issues, substance abuse, or both, simultaneously creating a need for complex, intensive care and face a matrix of barriers to entering and maintaining stable medical care.

Cost of Medications

Antiretroviral therapy has greatly extended the quality and length of life for PLWH, but it has also added considerably to the cost of care. According to a 2006 study published in *Medical Care*, the discounted lifetime cost of medical care for a person entering care with CD4 cell count <350 is \$385,200. Seventy-three percent of this cost is antiretroviral medications.³⁶ The addition of newer, more costly drugs to the formulary will continue to increase the costs of care. In addition, as people live longer and new infections continue to occur, the number of people needing ART within the Boston EMA continues to grow. The pharmaceutical needs of Medicare-eligible PLWH can be both confusing and expensive. Meanwhile, decreasing resources, reductions in Medicaid eligibility and increased need have led MA and NH to explore mechanisms for reducing eligibility, creating waiting lists, and/or restricting the ADAP formulary. Currently both states have open formularies for ADAP clients. PLWH in MA may access ADAP even if their incomes exceed 300% FPL, but those living in NH must have incomes below that level. Additionally, in order to offset rising costs, NH instituted new medical eligibility requirements for new clients enrolling in the NH ADAP program during and after FY2004, that currently requires CD4 <350 for all new clients.

Cultural Competency

A significant barrier to care for PLWH is the issue of lack of cultural competency. Cultural differences between a client and healthcare provider can arise from varying levels in

educational background, language, social and economic status, or even reading and understanding social cues. In a study conducted on PLWH not consistently receiving consistent care, Suffolk University researchers found that Hispanics and Blacks were less likely to see a provider than Whites, and those who spoke Spanish or Haitian Creole were less likely to see a provider than their English speaking counterparts. Health outcomes disparities are also closely related to cultural differences. Awareness of this barrier to effective care has been identified at the national,³⁷ state,³⁸ and local levels.³⁹ The thrust of these efforts and initiatives is to identify the causes of disparities in health outcomes for minority populations and to address the persistent elements in social structures that contribute to these disparities. The forces behind disparities are both overt and subtle. The minority person living with HIV/AIDS encounters in these overt and subtle forces as yet another hurdle to entering and remaining in care.

Stigma

Even as the HIV epidemic moves into a third decade, the problem of stigma remains. The focus and manifestation of stigma have changed over time. In the early days of the epidemic, certain populations were more afflicted by HIV/AIDS (e.g. homosexuals, hemophiliacs) and due to this association were consequently shunned by other members of society. As HIV began to spread into other populations, new assumptions developed concerning the associations of HIV/AIDS with high risk behaviors, including drug use and sexual promiscuity. Stigma, whether coming from an awareness of or from a fear of being stigmatized, can be a significant barrier to seeking care.^{40 41 42} In a 2002 study conducted by Suffolk University of men and women who did not use care consistently, Blacks ranked 'embarrassment among family and friends' as the second most important reason for not seeking care. The degree of actual stigmatization encountered or feared by an individual varies from not seeking local health care to avoiding disclosure to healthcare providers, family and social network.

ADDRESSING BARRIERS TO CARE

The barriers to care identified in this Comprehensive Plan create challenges to delivering services in the Boston EMA. Advances in treatment and services that enable PLWH to live longer, together with new infections have led to an increase in the number of PLWH at the same time that the cost of core services and medications is rising. Identifying PLWH who know their HIV status but are not in care and serving those with unmet need continues to present a challenge and additional cost to the service system. Further challenges include disparities in risk, infection rates, mortality, poverty, health insurance status, access to care among special populations and complex interactions among co-morbidities that affect the cost and complexity of care for PLWH. The rising costs of core services, in particular ADAP, and the decreasing funding for supportive services, as well as local factors such as a severe affordable housing crisis and a state fiscal situation that has resulted in unprecedented budget cuts, exacerbate service delivery challenges.

The diversity of the EMA's epidemic increases the range of services needed to bring people into care and keep them healthy. Regional variations in the demographics of the HIV epidemic in the EMA create a need for culturally and linguistically appropriate strategies and services within each area. The standards of care for the Boston EMA require providers to document cultural competency training among employees. Supporting agencies that develop innovative, targeted programs should remain a key goal, along with disseminating best practices in cultural

competency, and to foster connections between agencies and providers who offer care to similar communities or communities with similar needs.

The increase in co-morbidities, homelessness, and poverty affecting PLWH has meant that consumers enter care with a much more complicated set of interconnected issues than in earlier years of the epidemic, and with a wide array of service needs. The combination of these factors presents multiple service delivery challenges that require the maintenance of a flexible continuum of care that can meet the varied needs of PLWH.

ART has enabled PLWH to live longer and has reduced AIDS-related deaths. In addition to managing the cost, as discussed above, ART introduces a layer of complexity due to side effects and the need to support clients with adherence issues. Although treating side effects adds to the cost and complexity of care, it is an essential part of ensuring that clients remain on recommended drug regimens.

Another challenge is the need for a myriad of adherence strategies that help PLWH comply with the daily routine of taking numerous medications. Viral resistance, either from ART failure or when a person is infected with a drug resistant strain of HIV, poses another serious challenge that can complicate the cost of care and require more intensive medical planning to assess the range of available options. Recent needs assessments in the Boston EMA continue to highlight the need for tools and strategies to help PLWH maintain their medical regimens. Such strategies must be culturally and linguistically appropriate to be most effective.

In this time of economic hardship, PLWH and the agencies that provide HIV/AIDS services face considerable strain as they attempt to maintain high standards of care. Massachusetts has implemented significant reductions to the state HIV/AIDS Program, with a 28% reduction (\$14 million) from 2000 to 2008. State funding was further reduced in a \$1.9 million cut in October of 2008 in response to budget shortfalls. Although maintaining services was a priority in these cuts, they resulted in significantly reduced funding for Bureau staff, evaluation and training, which diminishes the ability of the system to anticipate and respond to a changing epidemic with the same quality of health care and support services. With an expectation of additional cuts in the future, maintaining medical care for PLWH will continue to become more challenging.

The EMA's Part A Award has also decreased by \$2.5 million since 2001. While core services for PLWH have been maintained as much as possible, this has required a reallocation of resources from supportive services. The network of supportive services, such as peer support, food services, transportation, and housing support, has played a critical role in helping PLWH gain and maintain their access to medical care, and the EMA continues to face the challenge of balancing the need for both. Reduced funding also creates an incentive to develop economies of scale by supporting larger multi-service organizations. However, the EMA must continue to support smaller community-based organizations, especially those based in communities of color, which have the cultural and linguistic capacity to reach those new to care and those who know their HIV status but are out of care. With more PLWH being identified and brought into care, the capacity of the services system will continue to be strained.

The Grantee and Council will continue to work with all funders of HIV services to monitor and evaluate the impact of the myriad of challenges to maintaining a full continuum of core medical services, case management services, and the other supportive services that enable PLWH to gain and maintain their access to care, and to extend and improve their lives.

Section VI: Implications and Conclusions

This section discusses how barriers to care and instances of unmet need create unique challenges to delivering services in the Boston EMA.

Advances in treatment and services that enable PLWH to live longer, together with new infections have led to an increase in the number of PLWH while the cost of services and medications is rising. Identifying PLWH who know their HIV status but are not in care and serving those with unmet need continues to present a challenge and additional cost to the service system. Further challenges include disparities in risk, infection rates, mortality, poverty, health insurance status, access to care among special populations and complex interactions among co-morbidities that affect the cost and complexity of care for PLWH. The rising costs of services, in particular ADAP, and the decreasing funding for supportive services, local factors such as a severe affordable housing crisis, as well as, federal factors such as revisions of the Ryan White legislation, create service delivery challenges.

Improvements in the medical care of HIV infection and the availability of a continuum of care, including early intervention services for PLWH, have resulted in a more than 60% decline in AIDS deaths since 1996. AIDS deaths, however, continue to be substantially higher for Blacks and Hispanics than for Whites. The number of new AIDS cases has also continued to decline in the Boston EMA, but there have been significant increases in the number and proportion of women, and people of color who make up the total number of AIDS cases as compared to national averages. The diversity of the EMA's epidemic increases the severity of need for services among PLWH, and impacts the type and range of services needed to bring people into care and keep them healthy. Regional variations in the demographics of the HIV epidemic in the EMA add additional challenges due to the need for culturally and linguistically appropriate strategies and types of services within each area.

The increase in co-morbidities, homelessness, and poverty affecting PLWH has meant that consumers entering care do so with a more complicated set of interconnected issues than in earlier years of the epidemic, and with a wide array of service needs. All of these factors combine to present multiple service delivery challenges that require the maintenance of a flexible continuum of care that can meet the varied needs of PLWH.

Since FY 2001, Massachusetts has implemented significant reductions to state-funded public health programs, including a \$19 million reduction for HIV/AIDS services (a 38% reduction since FY 2001) and an \$11 million reduction for substance abuse treatment. The FY 2005 reduction to the EMA's Part A award (\$1.2 million reduction) has also impacted the continuum of care. While core services for PLWH have been maintained as much as possible, HIV services like home care, day care, respite care, adoption/foster care, complementary therapies, STD services, positive prevention programs, counseling and testing, integrated HIV/STD/Hepatitis C services, services that link patients to health care and maintain residents in community-based housing, and substance abuse treatment for opiate-dependent PLWH have been reduced or eliminated. State funding for evaluation, technical assistance, and training for HIV/AIDS programs have mostly been eliminated and will impact the quality of services offered by health care and support service providers. With these ongoing reductions to critical health related support serves maintaining people in medical care will continue to become more challenging.

Reductions in funding have destabilized the comprehensive, high quality continuum of HIV-related services that has been built in the Boston EMA. There is always a need for more money; core services need additional resources to maintain a growing system. However, the network of supportive services, such as peer support, food services, transportation and housing support, have played critical roles in helping PLWH gain and maintain their access to medical care. Therefore the challenge will be how to balance the need for both. Reduced funding also creates an incentive to develop economies of scale by supporting larger multi service organizations. The challenge is how to continue to support smaller community based organizations that are based in communities of color and have the cultural and linguistic capacity to reach those new to care and those who know their HIV status but are out of care. With more PLWH being identified and brought into care, the capacity of the services system will continue to be strained.

Section VII: Recommendations

The mandate of the Planning Council is to improve the quality of the lives of all people living with HIV/AIDS throughout the EMA by responding to their existing and emerging needs. The recommendations listed below are ways the Council, the Grantee, and the Boston EMA can continue responding to the Council's mission, both directly and indirectly.

Maintain a stable, high quality continuum of primary care and support services for people living with HIV/AIDS in the Boston EMA.

- Develop methods for bringing into care those who are HIV-positive but not in treatment.
- Maintain a continuum of care that reflects the needs of all people living with HIV/AIDS.
- Continue to review and revise existing standards of care for each service category, as needed and as services come up for bid, to ensure high quality services and develop new standards for new services, as needed.
- Continue to assess the need and appropriately allocate funds for core health services as well as health related support services that facilitate, enhance, support or sustain the delivery, continuity, or benefits of health services for individuals and families with HIV.

Improve the capacity of programs and agencies in the Boston EMA to meet the needs of their clients and to deliver high quality services.

- Ensure that local programs have knowledge of and access to recent grants awarded to the region for technical assistance and capacity building programs.

Facilitate collaboration among agencies in the planning and delivery of services to ensure comprehensive care for consumers.

- Guide agencies into closer collaborations through the Request for Proposals process in order to maximize efficiency and reduce program duplication.

Ensure coordination and collaboration with substance abuse service providers, including the Massachusetts Bureau of Substance Abuse Services, the EMA's largest funder of substance abuse services.

- Ensure continued representation from substance abuse service providers on the Planning Council.
- Continue to work with the Bureau of Substance Abuse Services to collect information annually on the range of services provided and clients served, in order to coordinate services, identify gaps in the continuum, and ensure that Part A funds are the payer of last resort.

Ensure coordination with the Massachusetts and New Hampshire Medicaid programs, the largest funders of services for people living with HIV in the EMA.

- Ensure representation from Medicaid on the Planning Council.
- Continue to work with the MA Office of Medicaid to collect information annually on the range of services provided, clients served, and eligibility requirements.

Reduce the complexity of the service system and the burdens to providers and consumers.

- Explore establishing centers of excellence in HIV care to provide “one stop shopping” for services by consolidation of services where practical and efficient.
- Explore the feasibility of moving other services into collaborative arrangements.
- Explore the feasibility and impact of different contract cycles or structures (e.g., longer cycles, all services in single RFP, maintain existing structure, etc).

Develop methods for bringing into care those who are HIV-positive but not in treatment, with particular attention to eliminating the disparities in access and services among affected populations and historically underserved communities.

- Use guidance from HRSA and other EMAs to develop and implement strategies for bringing people into care who know their serostatus.
- Use support services contracts and existing bi-annual needs assessment activities to gather data on this population.
- Work collaboratively with the Massachusetts Part B program to gather this information on the needs of people with HIV/AIDS not in care to reduce burden and prevent duplication of effort.
- Maintain and strengthen links between counseling and testing sites and Part A funded programs to ensure a seamless continuum of care and to facilitate points of access to services after a person tests HIV positive.

Monitor and respond to programmatic changes in the Massachusetts Health Reform, the Medicaid waiver in Massachusetts and in expanding Medicaid eligibility to those who are HIV-positive.

- Monitor annual expenditure data from Medicaid, and utilization data from Part A and Part B/state programs to detect potential impacts of the expanded coverage.
- Adjust funding allocations appropriately to respond to the increased availability of some services to a greater proportion of people living with HIV/AIDS in the Boston EMA, and to the increased need for services not covered by Medicaid.

Develop greater collaboration with HIV prevention programs within the EMA.

- Ensure representation from the Massachusetts HIV/AIDS Bureau's Prevention Programs and the New Hampshire Department of Health and Human Services Prevention Programs on the Council.
- Begin to collect funding and service program data on prevention programs in the EMA to be incorporated during the annual planning and resource allocation processes.

Ensure that the administrative mechanism is efficient, open, and rapidly allocates funds to the areas of greatest need.

- Continue providing a forum at Council meetings for the Grantee to report on its progress in allocating Part A funds.
- Certify annually, by vote of the Council, that the Grantee has rapidly allocated funds in accordance with the Council priorities.

Develop skills among people living with HIV to assume leadership roles on the Council and in the community.

- Continue to develop and refine the Council orientation process to ensure that Council members get adequate information about the Council's work and about working with community members on the Council.
- Continue offering the Laptop Program for consumers and provide further training to empower their participation on the Council.
- Ensure that Council members are receiving training and technical assistance.

Ensure that the Council continues to be reflective of the epidemic in the EMA.

- Monitor HIV and AIDS surveillance data for emerging trends in the epidemic.
- Continue to develop and implement strategies annually for recruiting potential Council members from all affected populations throughout the EMA.
- Ensure that recruitment of applicants and final appointments meet membership requirements.
- Sponsor annual presentations throughout the EMA to provide information about the Council and its work and to solicit interest and potential applicants.

Ensure that the Consumer membership of the Council continues to exceed the minimum requirements.

- Continue to develop and implement strategies annually for recruiting potential consumer members of the Council from all affected populations throughout the EMA.
- Sponsor annual presentations throughout the EMA to provide information about the Council and its work and to solicit interest and potential applicants, with particular focus on Consumer Advisory Boards and other consumer focused programs and spaces.

Ensure that support services are not only available, but enable access to and maintenance of existing funded support services.

- Continue to apply for a core medical service waiver, to assure that non-core services are funded.

Remain in constant communication with key stakeholders.

- Continue having organization updates from the Grantee, MDPH, and NH DHHS at every Council meeting.

Ensure agencies are following the standards of care.

- The Grantee will continue to conduct site visits and collect quarterly and yearly reports.
- Monitor health and quality of life outcomes of PLWH in the Boston EMA.

Identify the current service needs of PLWH in the Boston EMA through surveys and research studies.

- The Grantee will continue to contract out with evaluation agencies for assessment purposes.
- Evaluate data to identify changes in service patterns.

Appendices

Table 1: AIDS Incidence, AIDS Prevalence and HIV Prevalence by Demographic Group and Exposure Category

	AIDS INCIDENCE 1/1/06 - 12/31/07		AIDS PREVALENCE as of 12/31/07		HIV PREVALENCE as of 12/31/07		HIV/AIDS PREVALENCE as of 12/31/07	
	The number of <u>new</u> AIDS cases as reported to the CDC		The number of people living with AIDS		The number of people living with HIV (non-AIDS)		The number of people living with HIV (non-AIDS) and AIDS	
Race/Ethnicity	#	%	#	%	#	%	#	%
White, not Hispanic	319	41.0%	3728	46.4%	3145	49.3%	6873	47.7%
Black, not Hispanic	248	31.8%	2466	30.7%	1811	28.4%	4277	29.7%
Hispanic	196	25.2%	1704	21.2%	1268	19.9%	2972	20.6%
Asian/Pacific Islander	15	1.9%	120	1.5%	90	1.4%	210	1.5%
American Indian/Alaska Native	1	0.1%	14	0.2%	11	0.2%	25	0.2%
Not Specified ¹	0	0.0%	7	0.1%	56	0.9%	63	0.4%
Total	779	100.0%	8039	100.0%	6381	100.0%	14420	100.0%
Gender								
Male	545	70.0%	5774	71.8%	4441	69.6%	10215	70.8%
Female	234	30.0%	2265	28.2%	1940	30.4%	4205	29.2%
Total	779	100.00%	8039	100.0%	6381	100.0%	14420	100.0%
Age at Diagnosis (years)²								
<13 years	1	0.1%	16	0.2%	53	0.8%	69	0.5%
13-19 years	11	1.4%	62	0.8%	112	1.8%	174	1.2%
20-44 years	481	61.8%	3182	39.6%	3346	52.4%	6528	45.3%
45 + years	286	36.7%	4779	59.5%	2870	45.0%	7649	53.0%
Total	779	100.0%	8039	100.0%	6381	100.0%	14420	100.0%
Mode of Exposure, Adult								
Men who have sex with men (MSM)	244	31.7%	2636	33.3%	2599	41.8%	5235	37.0%
Injection drug users (IDU)	131	17.0%	1961	24.8%	1115	17.9%	3076	21.8%
MSM / IDU	18	2.3%	275	3.5%	181	2.9%	456	3.2%
Heterosexual Sex ³	287	37.3%	2476	31.3%	1819	29.3%	4295	30.4%
Other ⁴	2	0.3%	85	1.1%	22	0.4%	107	0.8%
Risk not reported/identified	87	11.3%	491	6.2%	478	7.7%	969	6.9%
Total	769	100.0%	7924	100.0%	6214	100.0%	14138	100.0%
Mode of Exposure, Child								
Hemophilia	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Mother with/at risk HIV+	10	100.0%	115	100.0%	167	100.0%	282	100.0%
Receipt of blood transfusion	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Risk not reported/identified	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	10	100.0%	115	100.0%	167	100.0%	282	100.0%

¹Includes multi-race (NH)

²Prevalent cases in the Massachusetts counties of the EMA are reported by current age

³Includes presumed heterosexual, unknown risk of partner and primary risk categories have been denied

⁴Includes hemophilia and all other cases with identified modes of transmission not listed here

Table 2: Issues Affecting Access to Care for PLWH

ESTIMATED ANNUAL HIV CARE COSTS		
For PLWH without advanced disease	For PLWH with advanced disease	Data Source
<ul style="list-style-type: none"> • \$14,000 (includes \$1,700 for hospitalization) • \$249 monthly (does not include any medications) 	<ul style="list-style-type: none"> • \$34,000 (includes \$7,800 for hospitalization) • \$1,653 monthly (does not include any medications) 	<ul style="list-style-type: none"> • University of Alabama at Birmingham (UAB), 2002 cost analysis study. • Lifetime Cost of Current HIV Care in US (Medical Care), 2006 study
POVERTY STATUS		
Estimated percentage of people in MA/NH below 100% of FPL, 2006-2007	Estimated percentage of PLWH in EMA below 100% of FPL	Data Source
<ul style="list-style-type: none"> • 15% of MA population; 1,008,986 people • 8% of NH population; 111,051 people 	<ul style="list-style-type: none"> • 66% of Part A clients • 66% of PLWH surveyed for <i>VOE</i> 	<ul style="list-style-type: none"> • Kaiser Family Foundation, State Health Facts Online, 2006-2007. • BPHC, Part A client utilization data FY07. • Suffolk University, <i>Voices of Experience (VOE)</i>.
Estimated percentage of people in MA/NH below 200% of FPL, 2006-2007	Estimated percentage of PLWH in EMA below 200% of FPL	Data Source
<ul style="list-style-type: none"> • 31% of the MA population; 1,974,524 people • 23% of the NH population; 290,554 people 	<ul style="list-style-type: none"> • 82% of Part A clients 	<ul style="list-style-type: none"> • Kaiser Family Foundation State Health Facts Online, 2006-2007. • BPHC, Part A client utilization data FY07.
Estimated percentage of people in MA/NH below 300% of FPL	Estimated percentage of PLWH in EMA below 300% of FPL	Data Source
<ul style="list-style-type: none"> • Not available. 	<ul style="list-style-type: none"> • 87% of Part A clients 	<ul style="list-style-type: none"> • BPHC, Part A client utilization data FY07.
INSURANCE STATUS		
Estimated percentage and number of people in MA/NH without insurance coverage, including without Medicaid, 2006-2007	Estimated percentage of PLWH in the EMA without insurance coverage, including without Medicaid	Data Source
<ul style="list-style-type: none"> • 8% of MA population • 498,451 people • 11% of NH population • 143,754 people 	<ul style="list-style-type: none"> • 10% of Part A clients 	<ul style="list-style-type: none"> • Kaiser Family Foundation State Health Facts Online, 2006-2007. • BPHC, Part A client utilization data FY07.

UNEMPLOYMENT RATES		
ESTIMATED PERCENTAGE OF PEOPLE IN MA/NH WHO WERE UNEMPLOYED IN DECEMBER 2008	ESTIMATED PERCENTAGE OF PLWH IN EMA WHO WERE UNEMPLOYED IN DECEMBER 2008	DATA SOURCE
<ul style="list-style-type: none"> • 6.9% IN MA (UP FROM 4.3% IN DECEMBER 2007) • 4.6% IN NH (UP FROM 3.4% IN DECEMBER 2007) 	<ul style="list-style-type: none"> • NOT AVAILABLE. 	<ul style="list-style-type: none"> • UNITED STATES DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS. DECEMBER 2008.
MEDICAID COVERAGE		
Estimated percentage and number of people in MA/NH with Medicaid coverage, 2006-2007	Estimated percentage and number of PLWH in EMA with Medicaid coverage	Data Source
<ul style="list-style-type: none"> • 15% in MA • 979,539 people • 6% in NH • 82,576 people 	<ul style="list-style-type: none"> • 51% of Part A clients • 82% of PLWH surveyed for <i>VOE</i> • 13,141 enrolled in MA • 274 enrolled in NH 	<ul style="list-style-type: none"> • Kaiser Family Foundation State Health Facts Online, 2006-2007. • BPHC, Part A client utilization data FY07 • Suffolk University. <i>Voices of Experience</i>. • MA Office of Medicaid, 11/13/08. • NH DHHS Office of Medicaid, 11/13/08.
	Estimated percentage of total funds for care for PLWH in the EMA from Medicaid	Data Source
	<ul style="list-style-type: none"> • 86% of Primary Care Funds • 74% of Medication Funds • 62% of Mental Health Funds • 24% of Substance Abuse Funds • 48% Caucasian • 21% Black • 10% Hispanic 	<ul style="list-style-type: none"> • PCS, <i>Funding for HIV/AIDS Care and Services in the Boston EMA, April 2008</i> • MA Office of Medicaid 11/8/07. • MDPH, Bureau of Substance Abuse Services 4/26/07. • NH Department of Health and Human Services 4/26/07. • RW Act Part A, B, C, D providers 3/07.
HOUSING AND HOMELESSNESS		
AMONG ALL PEOPLE IN MA/NH	AMONG PLWH IN THE EMA	DATA SOURCE
<ul style="list-style-type: none"> • 35,000 families and unaccompanied individuals homeless in 2000 • Number of individuals on the streets and in shelters in Boston, MA in 12/2007: 6,901 • Number served by emergency shelters in MA in 2003: 28,800 people • 5,609 people received temporary housing (emergency or transitional) New Hampshire during SFY20067 	<ul style="list-style-type: none"> • Among Part A clients: <ul style="list-style-type: none"> - 68% permanently housed - 23% non-permanently housed, institutionalized or other - 9% housing status unreported 	<ul style="list-style-type: none"> • UMASS Boston, McCormack Institute: Center for Social Policy, <i>Meeting the Housing Needs of Lower-Income Massachusetts Residents, Report 2001</i>. • Homeless in the City of Boston, Annual Census Report 2007. • The Center for Social Policy, John M. McCormack Graduate School of Policy Studies at UMass Boston,

	<ul style="list-style-type: none"> • 58% of PLWH surveyed in <i>VOE</i> living in subsidized housing • 365 PLWH assisted by HOPWA programs in New Hampshire in SFY2007 • 10 PLWH sheltered in New Hampshire in SFY2007 • 254 PLWH (as of 12/31/07) in the Massachusetts EMA counties were homeless at time of diagnosis • 60% PLWH experience homelessness in lifetime • HIV/AIDS prevalence up to 9 times higher for homeless pops 	<p><i>Hard Numbers, Hard Times: Homeless Individuals in Massachusetts Emergency Shelters, 1999-2003.</i></p> <ul style="list-style-type: none"> • NH DHHS, Division of Behavioral Health, Emergency Shelter and Homeless Coordination Commission Annual Report, 2007. • BPHC, Part A client utilization data FY07. • Suffolk University, <i>Voices of Experience (VOE)</i>. • AIDS Housing Corporation 2/12/09
SUBSTANCE ABUSE		
Prevalence within the general population within MA/NH	Prevalence among PLWH in the EMA	Data Source
<ul style="list-style-type: none"> • Total substance abuse admissions to treatment programs in MA in 2008: approx. 106,689 • Total substance abuse admissions to treatment programs in NH in 2008: 6,523 • Rank of most abused substance reported in treatment admissions in MA and NH in 2007: <ul style="list-style-type: none"> 1. Alcohol 1. Alcohol 2. Heroin 2. Marijuana 3. Cocaine 3. Cocaine/Crack 4. Marijuana 4. Heroin/Morphine <p>Past year heroin use reported by substance abuse treatment admissions in MA: 39.7% in FY2007 (up from 20% in FY1992)</p>	<ul style="list-style-type: none"> • 29% of PLWH surveyed in <i>VOE</i> reported current substance abuse problems • 27% of female PLWH and 19% of male PLWH in the Massachusetts EMA counties with mode of exposure attributed to IDU 	<ul style="list-style-type: none"> • MDPH, Bureau of Substance Abuse Services presentation to the Planning Council, 12/11/08. • NH DHHS, Bureau of Drug and Alcohol Services, 12/11/08. • Suffolk University, (<i>VOE</i>). • MDPH Surveillance Program, data as of July 2008.

MENTAL ILLNESS		
Prevalence within the general population within MA/NH	Prevalence among PLWH in the EMA	Data Source
<ul style="list-style-type: none"> • Estimated percentage and number of adults with serious psychological distress (mental illness) in 2005-2006: • 11% of adult population in MA • 12% of adult population in NH 	<ul style="list-style-type: none"> • Percent of HIV-infected clients with active psychiatric diagnosis: 49% • Percentage of PLWH reporting a diagnosed mental illness in VOE: 37% • Percentage of PLWH reporting a need for mental health treatment in VOE: 46% 	<ul style="list-style-type: none"> • SAMHSA's Office of Applied Statistics, 2006. • John Snow Institute, Title I Clinical CQI Chart Review, 2006. • Suffolk University, <i>Voices of Experience (VOE)</i>.
SEXUALLY TRANSMITTED DISEASES		
Prevalence within the general population within MA/NH	Prevalence among PLWH in the EMA	Data Source
<p>Rates in MA portion EMA, 2007:</p> <ul style="list-style-type: none"> • Increase in Primary and Secondary Syphilis: 15% (2.4 cases per 100,000) with 134 cases in 2007 • Increase in Chlamydia: 12% (251 per 100,000) with 13,240 cases in 2007 • Increase in Gonorrhea: 16% (to 41.9 cases per 100,000) with 2,163 cases in 2007 • Percentage increase in fluoroquinolone-resistant gonorrhea cases in MA from 2001 to 2004: 2467% (from 3 cases to 74); 79 ciprofloxacin-resistant cases reported in 2005 <p>Rates in NH portion EMA 2007:</p> <ul style="list-style-type: none"> • Primary and Secondary Syphilis: 2.4 per 100,000 • Chlamydia: 169.9 per 100,000, an increase by 15% over 2005 • Gonorrhea: 12 per 100,000 	<ul style="list-style-type: none"> • Percent of cumulative AIDS cases in MA through 4/2001 estimated to have a concurrent STD: 9.2% • Approx. percent of MSM among early syphilis cases in 2007 in MA EMA counties: 72%, with 43% of these self-reporting as HIV+ • Percent of MSM among early syphilis cases in 2006 in NH EMA counties: 90%, and 49% of the early syphilis cases were HIV+ 	<ul style="list-style-type: none"> • Centers for Disease Control and Prevention, 2003 <i>STD Surveillance Report</i>, 2007. • Center for Disease Control and Prevention, <i>Gonococcal Isolate Surveillance Project Annual Report – 2003</i>, and the 2005 Report • NH DHHS, Bureau of Communicable Disease Surveillance, July 2007. • MDPH, Surveillance Program, data as of July 2007.

HEPATITIS B		
Prevalence within the general population within MA/NH	Prevalence among PLWH in the EMA	Data Source
<ul style="list-style-type: none"> • Up to 300,000 in MA at one point or currently infected • MA EMA counties: 44 acute and 375 chronic confirmed cases reported in 2007 • NH EMA counties: 4 acute cases reported in 2007 (chronic case counts not available) 	<ul style="list-style-type: none"> • 18% of PLWH surveyed for <i>VOE</i> 	<ul style="list-style-type: none"> • MDPH, <i>Facts About Hepatitis B Disease and Hepatitis B Vaccine</i>. • Suffolk University, <i>Voices of Experience (VOE)</i>. • MDPH, Surveillance Program, data as of July 2008. • NHDHHS, Bureau of Communicable Disease Surveillance, July 2008.
HEPATITIS C		
Prevalence within the general population within MA/NH	Prevalence among PLWH in the EMA	Data Source
<ul style="list-style-type: none"> • Over 110,000 in MA • MA EMA counties: 9 acute and 2,334 chronic confirmed cases reported in 2007 	<ul style="list-style-type: none"> • 46% of PLWH surveyed for <i>VOE</i> • 2,334 chronic cases in MA 	<ul style="list-style-type: none"> • MDPH, Surveillance Program, data as of July 2008. • Suffolk University, <i>Voices of Experience (VOE)</i>.
FORMERLY INCARCERATED POPULATIONS		
Impact on service delivery by former prisoners who were released in the preceding 3 years and had HIV/AIDS diagnosis on the date of their release		Data Source
<ul style="list-style-type: none"> • HIV/AIDS prevalence 1.7% greater among the incarcerated • NE inmates have the highest rate of HIV infection (3.6%) • Nationwide, minorities disproportionately represented in institutions • In MA prisons, 285 Black and 381 Hispanic incarcerated individuals (30.2% and 40.4% of the prison HIV caseload respectively), which means that over 70% of HIV+ incarcerated individuals are members of a minority population. • 944 PLWH in MA were diagnosed while incarcerated (as of 6/1/08) • 92 PLWH in NH were diagnosed while incarcerated (as of 12/31/07) 		<ul style="list-style-type: none"> • HIV in Prisons, 2004 (US Department of Justice)- revised 3/1/2007 • MDPH HIV/AIDS Summary Report, 9/2007

Table 3: Unmet Needs Estimate

Population		Value		Data Source(s)
A.	Number of persons living with AIDS (PLWA), as of 12/31/07	8,039		Living AIDS cases reported in the Boston EMA, from the Massachusetts Department of Public Health and the New Hampshire Department of Health and Human Services
B.	Number of persons living with HIV/non-AIDS/aware, as of 12/31/07	6,381		Living HIV (non-AIDS) cases reported in the Boston EMA, from the Massachusetts Department of Public Health and the New Hampshire Department of Health and Human Services
C.	TOTAL number of HIV+/aware as of 12/31/07	14,420		
Care Patterns		Value		Data Source(s)
D.	Number of PLWA who received the specified HIV primary medical care during the 12-month period [1/1/07 – 12/31/07]	5,721		For NH region of EMA: proportion of cases with met need generated by the New Hampshire Department of Health and Human Services (HARS; NH CARE Program) For MA region of EMA: Suffolk University study
E.	Number of PLWH/non-AIDS/aware who received the specified HIV primary medical care during the 12-month period [1/1/07 – 12/31/07]	4,532		For NH region of EMA: proportion of cases with met need generated by the New Hampshire Department of Health and Human Services (HARS; NH CARE Program) For MA region of EMA: Suffolk University study
F.	TOTAL number of HIV+/aware who received the specified HIV primary medical care during the 12-month period [1/1/07 – 12/31/07]	10,253		
Calculated Results		Value	Percent	Calculation
G.	Number of PLWA who did not receive the specified HIV primary medical care	2,318	29%	Value: Value A – Value D. Percent: Value G / Value A
H.	Number of PLWH/non-AIDS/aware who did not receive the specified HIV primary medical care	1,849	29%	Value: Value B – Value E. Percent: Value H / Value B

References

1. United States 2000 Census. Data requested by Part A Grantee; August 2007.
2. United States Census Bureau. Quickfacts; Available Online: <http://quickfacts.census.gov/qfd/index.html>.
3. Massachusetts Department of Public Health. HIV/AIDS Bureau Surveillance Data; Data as of July 2008.
4. CDC. HIV/AIDS Surveillance Data; December 2006. <https://www.cdc.gov>.
5. New Hampshire Department of Health and Human Services. Surveillance Data; Data as of July 2008.
6. CDC. HIV and Transgender Fact Sheet; January 2008. Available Online: <http://www.cdc.gov/lgbthealth/pdf/FS-Transgender-06192007.pdf>
7. Boston Public Health Commission. AIDS Program, Year 17 Client Services Handbook. March 2007.
8. CDC. Fact Sheet: HIV/AIDS – Women in the US; August 2008. Available Online: <http://www.cdc.gov/hiv/topics/women/resources/factsheets/women.htm>
9. HRSA. Part B Grants to States. *Ryan White Treatment Modernization Act of 2006*. Available Online: <http://hab.hrsa.gov/treatmentmodernization/partb.htm>.
10. HRSA. Part C Early Intervention Services. *Ryan White Treatment Modernization Act of 2006*. Available Online: <http://hab.hrsa.gov/treatmentmodernization/partc.htm>.
11. HRSA. Part D Women, Children, Infants and Youth. *Ryan White Treatment Modernization Act of 2006*. Available Online: <http://hab.hrsa.gov/treatmentmodernization/partd.htm>.
12. HRSA. Dental Programs. *Ryan White Treatment Modernization Act of 2006*. Available Online: <http://hab.hrsa.gov/treatmentmodernization/dental.htm>.
13. HRSA. AIDS Education and Training Centers. *Ryan White Treatment Modernization Act of 2006*. Available Online: <http://hab.hrsa.gov/treatmentmodernization/educating.htm>.
14. HRSA. Special Projects of National Significance. *Ryan White Treatment Modernization Act of 2006*. Available Online: <http://hab.hrsa.gov/treatmentmodernization/spns.htm>.
15. Boston Public Health Commission. Ryan White Act Part B and Massachusetts State Funding Streams. *Part A Boston EMA HIV Health Services Planning Council Presentation*; February 12, 2009. Available Online: http://bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/MA_Part_A_Planning_Council_Funding_Streams.021209.pdf.

16. Massachusetts Office of Medicaid. *Part A Boston EMA HIV Health Services Planning Council Presentation*; November 2008. Available Online: [http://bostonplanningcouncil.org/pdfs/2008-2009/PC/MA Medicaid Presentation.pdf](http://bostonplanningcouncil.org/pdfs/2008-2009/PC/MA%20Medicaid%20Presentation.pdf)
17. NHDHHS. New Hampshire Medicaid. *Part A Boston EMA HIV Health Services Planning Council Presentation*; November 2008. Available Online: [http://bostonplanningcouncil.org/pdfs/2008-2009/PC/NH Medicaid Presentation-11-08.pdf](http://bostonplanningcouncil.org/pdfs/2008-2009/PC/NH%20Medicaid%20Presentation-11-08.pdf).
18. NHDHHS. New Hampshire Ryan White Program Funding Streams. *Part A Boston EMA HIV Health Services Planning Council Presentation*; February 2009. Available Online: [http://bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/NH Funding Streams 2.12.09.pdf](http://bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/NH%20Funding%20Streams%202.12.09.pdf)
19. Boston Public Health Commission. 2006-2007 Policy Committee Year End Report. *Boston Part A EMA HIV Services Planning Council*. May 2007.
20. Bureau of Substance Abuse Services. *Part A Boston EMA HIV Health Services Planning Council Presentation*; December 2008. Available Online: [http://www.bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/MA Substance Abuse Services 12.11.08 MB FINALI.pdf](http://www.bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/MA%20Substance%20Abuse%20Services%2012.11.08%20MB%20FINALI.pdf)
21. New Hampshire Bureau of Drug and Alcohol Services. *Part A Boston EMA HIV Health Services Planning Council Presentation*; December 2008. Available Online: [http://www.bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/NH Substance Abuse Services 12.11.08 BW.pdf](http://www.bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/NH%20Substance%20Abuse%20Services%2012.11.08%20BW.pdf)
22. HOPWA. *Part A Boston EMA HIV Health Services Planning Council Presentation*; February 2009. Available Online: [http://www.bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/HOPWA-Title 1 Presentation 2009.pdf](http://www.bostonplanningcouncil.org/pdfs/2008-2009/PC/Presentation/HOPWA-Title%201%20Presentation%202009.pdf)
23. Boston Public Health Commission. Funding Streams Overview: Funding to HIV/AIDS Services in the Boston EMA. *Planning Council Support*. 2008.
24. HRSA. Department of Health and Human Services, HIV/AIDS Bureau, *Unmet Need Consultation Report*, November 2000.
25. www.medicare.gov
26. Kaiser Family Foundation. "HIV/AIDS Policy Fact Sheet" U.S. Federal Funding for HIV/AIDS: The FY 2009 Budget Request. April 2008.
27. National Center for Chronic Disease Control. Youth Risk Behavior Surveillance System 2007. Youth Online Database. Available Online: <http://apps.nccd.cdc.gov/yrbss>
28. Garafolo R, et al. Methamphetamine and Young Men who Have Sex with Men. *Archives of Pediatric and Adolescent Medicine*. June 2007; 161(6):591-6.
29. Mansergh G, et al. Methamphetamine and Sildenafil (Viagra) use are linked to unprotected receptive and insertive anal sex, respectively. *Sexually Transmitted Infections*. 2006; 82:131-34.

30. O'Leary A, et al. Correlates of Risk Patterns and Race/Ethnicity among HIV-positive Men who have Sex with Men. *AIDS Behavior*. 2007; 11:706-15.
31. Centers for Disease Control. New Estimates of U.S. HIV Prevalence; 2006. Available Online: <http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/pdf/prevalence.pdf>
32. Criminal Offender Record Information. MassLegalHelp. Available Online: <http://www.masslegalhelp.org/cori>
33. Agency communication. November 6, 2008.
34. Bluestone B, Billigham C, Davis T. The Greater Boston Housing Report Card 2008. The Center for Urban and Regional Policy (CURP), Northeastern University & Citizens' Housing and Planning Association (CHAPA). October 2008. Available Online: http://www.chapa.org/files/f_1225210216HousingReportCard2008.pdf
35. New York City EMA. Comprehensive Plan 2005.
36. Schackman BR, et al. The Lifetime Cost of Current Human Immunodeficiency Virus Care in the United States. *Medical Care*. 44(11):990-97; November 2006.
37. National Institutes of Health. *Strategic Research Plan and Budget to Reduce and Ultimately Eliminate Health Disparities, Vol. I, Fiscal Years 2002-2006*; U. S. Department of Health and Human Services; cf. "Policy Challenges and Opportunities in Closing the Racial/Ethnic Divide in Health Care," Race, Ethnicity & Health Care, Issue Brief, The Henry J. Kaiser Family Foundation, March 2005.
38. HCFAMA. "The Special Commission to Eliminate Health Disparities," Available Online: www.hcfama.org/index.cfm?fuseaction=Page.viewPage&pageId=408 (October 4, 2005).
39. Boston Public Health Commission. *Disparities Project*, June 2005.
40. Herek, G.M., et al., "Sigma, Social Risk, and Health Policy: Public Attitudes Toward HIV Surveillance Policies and the Social Construction of Illness," *Health Psychology*, pp. 533-540, vol. 22, no. 5 (September 2003).
41. Herek, G.M. et al., "AIDS and Stigma: A Conceptual Framework and Research Agenda – Final Report from a Research Workshop" National Institute of Mental Health. Available Online: www.psyweb2.ucdavis.edu/rainbow/html/aids.html
42. Brimlow, D.L. et al., "Stigma and HIV/AIDS—A Review of the Literature," U.S. Department of Health and Human Services, HRSA, Rockville, MD: May 2003. Available Online: <http://hab.hrsa.gov/publications/stigma/front.htm> (accessed October 5, 2005).
43. Massachusetts Department of Public Health HIV/AIDS Bureau. *Inequitable Impact: The HIV/AIDS Epidemic Among Gay and Bisexual Men and Other Men Who Have Sex with Men in Massachusetts*. December 2008.



1010 Massachusetts Avenue, 2nd floor

Boston, MA 02118

Tel: 617-534-4559

Fax: 617-534-5756

pcs@bostonplanningcouncil.org

www.bostonplanningcouncil.org