

**Enhanced Comprehensive HIV Prevention Planning
For the Baltimore-Towson Metropolitan Statistical Area**

Workbook #1

SITUATIONAL ANALYSIS AND GOAL SETTING

APRIL 15, 2011

**Maryland Department of Health and Mental Hygiene
Infectious Disease and Environmental Health Administration**

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Introduction

The Maryland Department of Health and Mental Hygiene (DHMH) Infectious Disease and Environmental Health Administration (IDEHA) received notice from the Centers for Disease Control (CDC) about a new request for proposals (RFP) for the Enhanced Comprehensive HIV Prevention Plan (ECHPP) in August 2010. CDC described the purpose of the ECHPP as: 1) To develop an enhanced plan that aligns the jurisdiction's HIV prevention activities with the National HIV/AIDS Strategy; and 2) To identify and implement the optimal combination of prevention, care, and treatment activities to maximally reduce new HIV infections. The Maryland DHMH IDEHA was designated in the RFP as the potential recipient for the Baltimore-Towson Metropolitan Statistical Area (MSA). The ECHPP RFP was issued for the 12 metropolitan statistical areas most affected by HIV/AIDS and required the eligible applicants to provide information on potential implementation activities for 24 required and recommended HIV prevention and care and treatment interventions. As part of the application process, IDEHA notified all seven local health departments (LHDs) of the ECHPP grant opportunity and solicited input on potential activities and priorities to incorporate. At the same time, IDEHA notified all HIV prevention and care planning groups and other stakeholder groups of the opportunity and solicited input as well. IDEHA submitted the ECHPP proposal to CDC on the September 2nd deadline and received notification of the grant award from CDC in September 2010.

The Enhanced Comprehensive HIV Prevention Plan for the Baltimore-Towson MSA is comprised of two workbooks. Workbook one includes a situational analysis to describe the current implementation of the 24 required and recommended interventions, goals for each intervention to achieve the optimal combination of prevention, care and treatment activities, and the rationale for the selected goals. Workbook two restates the goals for each intervention and describes the specific strategies and objectives that will be implemented in the Baltimore-Towson MSA. The development of these workbooks included collaboration among HIV and STI prevention, care and surveillance stakeholders, a comprehensive assessment of current programming and mathematical modeling.

To inform the development of the ECHPP for the Baltimore-Towson MSA, IDEHA collaborated with public health and community stakeholders throughout the Baltimore-Towson MSA, including seven local health departments, the Maryland HIV Prevention Community Planning Group, the Greater Baltimore HIV Health Services Planning Council, the Baltimore City Commission on HIV/AIDS, the Anne Arundel County Commission on HIV/AIDS, and the Central Regional Advisory Committee. During September 2010, IDEHA provided the Baltimore-Towson MSA LHDs and stakeholder groups with information about the grant award amount and about the 24 required and recommended HIV prevention and care/treatment interventions. In addition to engaging external stakeholders, IDEHA convened a workgroup composed of prevention and care and treatment grant administrators to begin collaborative planning for prevention and care/treatment services in the MSA; this group began its work with a review of linkage to care services. It is important to note that the Baltimore City Commission on HIV/AIDS (BCCHA) had been engaged in a planning process for a citywide HIV prevention strategy in which IDEHA participated. IDEHA proposed that the strategy should incorporate the ECHPP required and recommended interventions in order to ensure consistency across efforts to address HIV in Baltimore City specifically.

In October 2010, IDEHA and Baltimore City Health Department leaders participated in a town hall meeting to discuss local strategies for HIV prevention. Almost 100 participants attended the town hall meeting. The workgroup of prevention and care and treatment grant administrators continued to meet to discuss collaborative efforts. IDEHA prevention and HIV surveillance groups provided information for

the Ryan White Parts A and B applications to the Health Services and Resources Administration (HRSA). IDEHA presented information on the National HIV/AIDS Strategy and the ECHPP to the statewide HIV Prevention Community Planning Group (CPG) during its annual strategic planning retreat and the CPG engaged in a discussion about the relationship between the NHAS and ECHPP as well as future directions for HIV prevention work in Maryland.

In early November 2010, IDEHA and IGS staff traveled to Atlanta for an ECHPP grantees meeting with CDC. At the CDC ECHPP grantees meeting, representatives from the federal Department of Health and Human Services (DHHS) indicate that ECHPP is considered to be an important implementation project for the National HIV/AIDS Strategy (NHAS) and discusses DHHS' intention to focus support from all of its relevant federal agencies on the ECHPP process in the funded jurisdictions. Following this meeting, IDEHA presented updates to planning groups including the Baltimore City Commission on HIV/AIDS, the Regional Advisory Committee (RAC), the Greater Baltimore HIV Health Services Planning Council (Ryan White Part A), and the statewide HIV Prevention CPG on the CDC required and recommended interventions.

Further input and planning discussions occurred throughout December and January 2010 including agreement among planning groups to support coordinated planning reports for HIV services in the region. Maryland Governor Martin O'Malley and Lt. Governor Anthony Brown convened a Health Forum on children and health, which included a workgroup session on HIV dedicated to discussion on how Maryland can meet the goals of the National HIV/AIDS Strategy. Key recommendations from the session participants were presented by Dr. Robert Redfield, University of Maryland Institute of Human Virology to the Governor and Lt. Governor during the Health Forum. A report from HIV session of the Health Forum was distributed to the session participants and relevant feedback from the discussion was incorporated into the ECHPP workbooks.

To support the development of the situational analysis, a portion of the grant award was designated for research and writing support from Intergroup Services, Inc., (IGS) a woman- and minority-owned business in Baltimore. IDEHA and IGS partnered to assess and describe the current level of information for each of the 24 required and recommended interventions, including data on program funding, activities, reach and outcomes. This assessment involved extensive collaboration among HIV prevention, HIV care, HIV surveillance, and STI prevention staff from IDEHA and the Baltimore City Health Department (the grantee for CDC STI prevention funds for Baltimore City and Ryan White Part A funds for the Baltimore EMA).

A portion of the grant award was also designated for collaboration with Dr. David Holtgrave, Chair of the Department of Health, Behavior and Society at the Johns Hopkins Bloomberg School of Public Health to conduct mathematical modeling and develop a resource optimization model for HIV prevention activities in the Baltimore-Towson MSA. Staff from IDEHA's Center for HIV Prevention and Center for HIV Surveillance and Epidemiology, partnered with Dr. Holtgrave and his staff to estimate key HIV transmission rates for the Baltimore-Towson MSA, analyze the cost effectiveness of various HIV testing approaches, develop a resource optimization model to inform the allocation of current resources, and quantify the additional resources that would be needed to reach the NHAS prevention goals.

In February 2010, Dr. Holtgrave provided the initial resource optimization model to IDEHA and presentations were made to IDEHA staff, the Maryland HIV Prevention Community Planning Group, the Greater Baltimore HIV Health Services Planning Council, the Baltimore City Commission on HIV/AIDS, the Anne Arundel County Commission on HIV/AIDS, Central Maryland Regional Advisory Committee, and the

Ryan White Part D Provider Network. IDEHA submitted the first draft of Baltimore-Towson MSA ECHPP plan to CDC on February 15th.

During March 2010, IDEHA continued to work on the ECHPP workbooks to incorporate feedback from the CDC and other federal agency representatives' review of the draft plan to meet the deadline of final submission on March 15th. IDEHA and Dr. Holtgrave presented an ECHPP update and the resource optimization modeling to the Maryland Association of County and City Health Officers during its monthly roundtable meeting and engaged in a brief discussion about proposed changes to planning for intervention implementation and resource allocation based on the modeling and ECHPP process. The final ECHPP workbooks were submitted to CDC for approval on March 15, 2010.

Immediately following the approval of the Baltimore-Towson ECHPP on March 31, 2010, IDEHA and the collaborative partners in the Baltimore-Towson MSA began implementation of the goals, strategies, and objectives. As part of our local response to the NHAS and ECHPP, IDEHA is working with local health departments to develop specific implementation plans for each jurisdiction based on the local epidemiology and provider capacity. These plans will focus available resources to achieve the goals of preventing new infections and ensuring that PLWH are aware of their serostatus and linked to HIV medical care, prevention and support services. These plans will be completed in May/June 2011.

Epidemiological Overview

The Baltimore-Towson metropolitan statistical area (MSA) consists of Baltimore City and six surrounding counties in Maryland; Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's. According to the 2009 CDC HIV Surveillance Report, the Baltimore-Towson MSA had the tenth highest rate of estimated AIDS diagnoses in the nation, with 22.8 per 100,000 population, twice the national average of 11.2. Using surveillance data reported through 12/31/2010, there were an estimated 1,327 new adult/adolescent HIV diagnoses in the Baltimore-Towson MSA during 2009 and a total of 17,048 diagnosed and reported living adult/adolescent cases of HIV on 12/31/2009. The CDC estimates that nationally 21% of persons infected with HIV are undiagnosed. In addition, due to the recent changes in Maryland's HIV/AIDS reporting laws, there may also be an additional 15% of persons diagnosed with HIV that are unreported. Therefore, there may be as many as 25,388 adults and adolescents living with HIV in the MSA, over 5,000 of who are unaware of their infection.

The HIV cases in the Baltimore-Towson MSA are concentrated in Baltimore City (76%) and disproportionately found among men (63%), non-Hispanic Blacks (80%), and persons 30-59 years of age (82%). Among living cases of HIV, the leading HIV exposure categories are injection drug use (36%), heterosexual exposure (31%), and men who have sex with other men (27%). However, the mix of exposure categories has been undergoing a substantial change over the last 15 years. Injection drug use has declined from 60% of new adult/adolescent HIV diagnoses in 1992s to only 23% in 2009. Heterosexual exposure has increased steadily, reaching 37% of new adult/adolescent HIV diagnoses by 2009. The proportion of cases that were men who have sex with men (MSM), which had been low and declining for many years, reached its lowest point at 16% of new adult/adolescent HIV diagnoses in 2001, and has since increased rapidly to 38% in 2009, becoming the leading transmission category again for the first time since 1987.

Data from the National HIV Behavioral Surveillance System showed high rates of HIV infection and substantial rates of unrecognized HIV infection among Baltimore men having sex with other men (MSM), especially among blacks and younger men. The study examined data from two periods when targeted HIV testing among adult Baltimore men in MSM-identified venues occurred: 2004-2005 and 2008. During the 2004 testing period, 58.4 percent of the MSM with a positive HIV test result reported not knowing their HIV status; during the 2008 testing period, the prevalence of unrecognized HIV infection among MSM tested was 74.4 percent. Prevalence of unrecognized HIV infection among black MSM was 63.8 percent in 2004 and almost 77 percent in 2008. Similarly, data from the National HIV Behavioral Surveillance System for samples of adult residents of the Baltimore-Towson MSA found that 51% of the HIV-positive injection drug users were aware of their serostatus (2009), and that 18% of the HIV-positive at-risk heterosexuals were aware of their serostatus (2007). However, there were only 11 HIV-positive at-risk heterosexuals in the 2007 study, so these results may not be representative of at-risk heterosexuals in the Baltimore-Towson MSA. These results suggest that the 21% national estimate of people living with HIV who are unaware of their serostatus may be an underestimate for the Baltimore-Towson MSA.

Among adult/adolescent residents of the Baltimore-Towson MSA newly diagnosed with HIV infection in 2009, 27% had a reported AIDS diagnosis in the 12 months following, using data as reported through 12/31/2010. Higher percentages of people newly diagnosed with HIV infection who had an AIDS diagnosis within 12 months were observed among race/ethnicities other than non-Hispanic whites and non-Hispanic blacks. Sixty-two percent of newly diagnosed adults/adolescents had a reported CD4 test that was performed in the 12 months following their HIV diagnosis, and 33% of those with a CD4 test

had a CD4 count lower than 200 cells/ μ l. The median CD4 count for the 2009 adult/adolescent HIV diagnoses with a CD4 test in the 12 month following their HIV diagnosis was only 312 cells/ μ l. Given that median CD4 counts for healthy persons are usually greater than 1,000 cells/ μ l, that progression to AIDS takes an average of 8-10 years, and that a level of 200 cells/ μ l indicates AIDS, this low CD4 level is an indicator that many of these newly diagnosed individuals had been living with undetected infection for years.

Among adult/adolescent residents of the Baltimore-Towson MSA newly diagnosed with HIV infection in 2009, 57% had a reported CD4 or viral load test that was performed in the 3 months following their HIV diagnosis, using data as reported through 12/31/2010. Lower percentages of adult/adolescents newly diagnosed with HIV infection who have a CD4 or viral load test were observed among residents of Baltimore City and non-Hispanic blacks. These data suggest that a high proportion of persons living with HIV in the Baltimore-Towson MSA are not being successfully linked to HIV medical care within 3 months of initial diagnosis.

Required Intervention #1: “Routine, opt-out screening for HIV in clinical settings”

A: Situational Analysis

1.1 Epidemiological Information

As described in the Epidemiological Overview, using surveillance data reported through 12/31/2010, there were an estimated 1,327 new adult/adolescent HIV diagnoses in the Baltimore-Towson MSA during 2009 and a total of 17,048 diagnosed and reported living adult/adolescent cases of HIV on 12/31/2009. Given CDC’s estimate that 21% of persons infected with HIV are undiagnosed and recent changes in Maryland’s HIV/AIDS reporting laws, possibly leading to unreported cases, there may be over 5,000 adults and adolescents living with HIV in the MSA who are unaware of their infection. Additionally, data from the National HIV Behavioral Surveillance System showed high rates of HIV infection and substantial rates of unrecognized HIV infection among Baltimore men having sex with other men (MSM) during both the 2004 MSM testing period (58.4%) and 2008 testing period (74.4%). Similarly, data from the 2009 injection drug users (IDU) testing period found that 51% of the HIV-positive IDU were aware of their serostatus. These results suggest that the 21% national estimate of people living with HIV who are unaware of their serostatus may be an underestimate for the Baltimore-Towson MSA.

Additionally, of the sixty-two percent of newly diagnosed adults/adolescents with a reported CD4 test performed in the 12 months following their HIV diagnosis, and 33% had a CD4 count lower than 200 cells/ μ l. The median CD4 count for the 2009 adult/adolescent HIV diagnoses with a CD4 test in the 12 month following their HIV diagnosis was only 312 cells/ μ l. Given that median CD4 counts for healthy persons are usually greater than 1,000 cells/ μ l, that progression to AIDS takes an average of 8-10 years, and that a level of 200 cells/ μ l indicates AIDS, this low median CD4 level is an indicator that many of these newly diagnosed individuals were late to test and had been living with undetected HIV for years.

1.2 Policies and Procedures

1.2.1 Maryland Statute and Regulations

NOTE: Maryland statute and regulations related to HIV testing consent in both clinical and non-clinical settings are described in this section and will be referenced under required intervention 2.

Maryland statute 18-336¹ requires that voluntary written informed consent be obtained from the individual to be tested before a specimen is collected for the purpose of an HIV test or before an HIV test is performed on a specimen collected for another purpose. Since July 1, 2008, Maryland law has outlined a streamlined process for the documentation of informed consent for HIV testing in healthcare facilities. In Maryland, when conducting HIV testing in health care settings (i.e. the agency offers other health related services or tests and maintains patient medical records), the client’s consent must be documented in the medical record. There is no requirement for a separate written informed consent form for HIV testing in healthcare settings. The flexibility offered by this law and the corresponding regulations² supports the provision of routine HIV in Maryland, therefore increasing the number of persons who are informed of their status and connected to HIV medical care, support and prevention

¹ Annotated Code of Maryland. General Health Article 18-336.

<http://www.michie.com/maryland/lpExt.dll?f=templates&eMail=Y&fn=main-h.htm&cp=mdcode/12793>

² COMAR 10.18.08 http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=10.18.08.*

services. In non-health care settings providers must utilize the uniform HIV informed consent form developed and provided by the Maryland Department of Health and Mental Hygiene and ensure that the uniform HIV informed consent form is distinct and separate from all other consent forms.

Maryland statute and regulations³ also outlines the consent and testing process for pregnant women, which includes the following requirements related to the provision of HIV testing: 1) Providers who provide prenatal care must notify the pregnant individual that an HIV test will be administered and document in the medical record if there is a declination of testing; 2) A test must be offered in the third trimester to women who were not tested earlier and providers in high prevalence areas should consider routinely offering a repeat HIV test in the third trimester; and, 3) In labor and delivery settings, providers must offer a rapid test to pregnant individuals with unknown or undocumented HIV status and offer antiretroviral prophylaxis prior to receiving the results of a confirmatory test if the rapid HIV test is preliminary positive.

1.2.2 Policies and Procedures for IDEHA-Supported HIV Testing Programs

All agencies supported by the Maryland DHMH Infectious Disease and Environmental Health Administration (IDEHA) for HIV testing are required to adhere to operational standards and quality assurance measures as specified by IDEHA contracts and memoranda of agreement. These standards require agencies to ensure that all HIV testing services are performed in accordance with either CDC's "Revised Guidelines for HIV Counseling, Testing, and Referral", issued in 2001, or CDC's "Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings" released in 2006. Agencies are required to align their provision of services with the appropriate set of guidance and ensure that all of their sites remain in compliance with state laws and regulations. Agencies are also required to provide HIV CTR in accordance with national Limited English Proficiency (LEP) policies and therefore accommodate the cultural and linguistic needs of targeted populations. IDEHA provides training and technical assistance on how to implement their HIV testing activities in accordance with these standards. Adherence to these requirements is monitored through Maryland's CTR Quality Improvement Program, which is extensively described in Maryland's PS10-1001 and PS10-10138 interim and annual progress reports.

1.3 Description of Current Services

1.3.1 Overview of IDEHA-Supported HIV Testing Programs

IDEHA partners with approximately 40 agencies to provide HIV counseling, testing and referral services in the Baltimore-Towson MSA. These agencies include local health departments, Baltimore Substance Abuse Services, Inc. (bSAS), the Department of Public Safety and Correctional Services, hospital clinics, emergency departments, community-based organizations, substance abuse treatment centers, community health centers, and OB/perinatal providers. Support for agencies may be classified as "Directly Funded" (i.e., direct allocation of funds through contracts) or "Indirectly Supported" (i.e., no direct allocation of funds through contracts, but supported through the provision of rapid testing supplies). All agencies, whether they are directly or indirectly supported, are provided access to comprehensive laboratory services at the State's Retrovirus Serology Laboratory at no cost to the agency. IDEHA also provides ongoing training and technical assistance to all HIV testing agencies to ensure the provision of comprehensive HIV testing services to their clients and support the monitoring

³ COMAR 10.18.09 <http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=10.18.09>. *

of testing programs through the provision of data collection tools, training on data collection and submission procedures, and access to process monitoring reports through Maryland’s HIV Testing Reporting System.

Current funding for HIV testing in the Baltimore-Towson MSA is approximately \$3.3 million. Approximately \$1.1 million supports routine HIV screening in emergency departments and correctional facilities, approximately \$1.1 million supports HIV testing in other clinical settings, and approximately \$1.1 million supports HIV testing in non-clinical settings that are located in high prevalence areas or serve high-risk clients (including mobile testing). The majority of these funds are awarded by CDC-DHAP via PS10-1001 and PS10-10138 (approximately 95%) with the remaining funds awarded by SAMHSA to the Maryland DHMH Alcohol and Drug Abuse Administration and managed by IDEHA.

As shown in the table below, IDEHA-supported HIV testing programs in the Baltimore-Towson MSA provided nearly 75,000 HIV tests during Fiscal Year 2010. These programs served 530 newly-identified, confirmed HIV-positive clients, representing an overall seropositivity of 0.7%. Among newly-identified HIV-positive clients served by these programs, 68% were informed of their confirmatory test results and 56% were linked to HIV medical care. These data are combined for clinical and non-clinical testing. More detailed analyses of client-level HIV testing data by testing strategy (i.e. routine and targeted) and setting type (i.e. clinical and non-clinical) will be conducted in April 2011 and utilized to develop jurisdictional testing plans in partnership with local health departments in the Baltimore-Towson MSA.

FY2010 HIV Testing Outcomes	Number (%)
HIV Testing Encounters	74,536
Newly Identified, Confirmed HIV-Positive Clients (self report)	530 (0.7%)
Newly Identified, Confirmed HIV-Positive Clients Post-test Counseled	362 (68.3%)
Newly Identified, Confirmed HIV-Positive Clients Referred to HIV Medical Care	354 (66.8%)
Newly Identified, Confirmed HIV-Positive Clients Linked to HIV Medical Care	299 (56.4%)
Newly Identified, Confirmed HIV-Positive Clients Referred to Partner Services	328 (61.9%)

Tables describing the demographics the 74,536 testing encounters and 530 newly-identified confirmed HIV-positive clients (new positives) are provided in Appendix A. More than half of the testing encounters (54.4%) were with individuals between 25 and 49 years of age while 28.7% of the encounters were with youth 24 years and younger. Seniors (50+ years) accounted for 15.8% of the testing encounters. The new positives were older with 64.9% between 30 and 59 years and 21.5% youth less than 24 years. Fifty-three percent of the testing encounters were with males while 68.5% of the new positives were male. Females accounted for 45.5% of all testing encounters and only 30.6% of the new positives. Few of the testing encounters were with Hispanic individuals: 4.0% of all encounters and 2.5% of the new positives. Seventy-six percent of the testing encounters were with African Americans while 87.9% of the new positives were African-American. Whites comprised 17.6% of all testing encounter and 9.4% of the new positives.

The table below describes data on reported risk behaviors collected as a part of each HIV testing encounter in FY2010. Risk behavior data were available for 65% of all testing encounters and 100% of the newly identified positives. In addition to the traditional surveillance risk categories, we have an additional category (Hetero/IDU) for clients who report both heterosexual sexual risk and injection drug use. We have also created another additional category (Other Heterosexual) to capture clients who

report heterosexual sexual behaviors but who do not report one of the risk behaviors required for the surveillance definition (High-Risk Heterosexual).

REPORTED RISK (when available)	All Encounters		New Positives	
	Number	(%)	Number	(%)
Clients/Encounters with Risk Data	48434	65.0	530	100.0
MSM	2161	4.5	139	26.2
MSM/IDU	23	0.1	4	0.8
IDU	304	0.6	4	0.8
Hetero/IDU	2739	5.7	59	11.1
High-Risk Heterosexual	8294	17.1	67	12.6
Other Heterosexual	29059	60.0	195	36.8
Transgender – Sexual & IDU Risk	0	0.0	0	0.0
Transgender – Sexual Risk Only	44	0.1	2	0.4
Other Sexual Risk	671	1.4	24	4.5
No Risk Reported	5139	10.6	36	6.8
Unknown Risk	-	-	-	-

Rates for MSM as a risk exposure category have been increasing in the Baltimore-Towson MSA for the past decade and this data shows HIV testing programs in the Baltimore-Towson MSA must improve their reach into this community as 26.2% of the new positives were MSM, however, only 4.7% of the total testing encounters (with risk behavior data) were among clients who reported MSM risk behaviors.

1.3.2 Routine HIV Testing in Clinical Settings

IDEHA supports the provision of routine HIV screening in healthcare settings to increase the number of Marylanders who know their HIV serostatus and are linked to appropriate HIV care, support and prevention services, and prevent new HIV infections. Mechanisms include direct implementation and support for routine HIV screening programs in high prevalence healthcare and correctional settings, including emergency departments, STD clinics, substance abuse treatment centers, correctional facilities, and perinatal settings.

Under CDC PS07-768 Maryland implemented routine HIV screening programs in multiple settings and healthcare facilities including emergency departments, STD clinics and other clinical settings located in high incidence/prevalence areas. These programs have continued under CDC PS10-10138. HIV screening programs in emergency departments are currently being implemented in seven hospitals in Baltimore City. These programs provide approximately 25,000 HIV tests annually with an overall new seropositivity of 0.5%.

Maryland is also currently supporting rapid HIV testing and viral hepatitis screening in conjunction with STI screening in the Baltimore City Health Department's Druid and Eastern STD Clinic and the local health department STD clinics in the counties surrounding Baltimore City.⁴ These programs provide approximately 15,000 HIV tests annually with an overall new seropositivity of 1.0%.

⁴ Testing in the Baltimore City Health Department STD clinics is supported by CDC PS10-10138. Testing in STD clinics in the surrounding counties is supported by CDC PS10-1001.

Additionally, HIV testing program in clinical settings across the Baltimore-Towson MSA are supported by Maryland's primary HIV prevention cooperative agreement (PS10-1001). Venues where routine testing is encouraged include drug treatment facilities, community health centers, and health care centers that serve the homeless. Two examples of these additional routine testing programs in the Baltimore-Towson MSA include: HIV testing during intake in several high volume Baltimore City correctional facilities implemented in partnership with the Maryland Department of Public Safety and Correctional Services; and the integration of HIV testing in substance abuse treatment settings in partnership with Baltimore Substance Abuse Systems. We estimate that these programs provide approximate 10,000 HIV tests annually. The seropositivity of these programs varies depending on jurisdiction and setting type.

1.3.3 Information Dissemination and Provider Training to Support Routine Testing

To further support the provision of routine HIV testing, IDEHA provides ongoing education for both the provider community and the general public regarding Maryland HIV consent and testing laws, the CDC recommendations for routine HIV testing in healthcare settings and opportunities to expand the provision of routine HIV testing in Maryland. Examples of these activities provider seminars on universal HIV screening of pregnant women, Grand Rounds in labor and delivery hospitals regarding the establishment of rapid testing for women who present in labor with no history of an HIV test, and —Routine HIV Testing in Healthcare Settings, a workshop offered in collaboration with the University of Maryland's Institute of Human Virology. Additionally, IDEHA has held meeting with representatives from the Maryland Insurance Administration and several Health Insurance providers, and Medical Directors from Maryland Medicaid Managed Care Organizations to discuss the CDC recommendations for routine HIV testing and explore reimbursement for HIV testing by insurance providers.

B: Goal Setting

Goals:

- Increase the number of residents in the Baltimore-Towson MSA who receive routine HIV screening as part of ongoing medical care.
- Increase the number of HIV tests provided in emergency departments located in high prevalence communities.

Rationale:

As demonstrated by the mathematical modeling conducted in partnership with Dr. David Holtgrave at the Johns Hopkins Bloomberg School of Public Health, there is significant unmet need for HIV testing in the Baltimore-Towson MSA. In order achieve the NHAS goals of increasing knowledge of serostatus and reach the over 5000 PLWH in the MSA who are unaware of their HIV status, we will need to increase partnerships with health care providers beyond publically-funded HIV testing programs. By increasing the percentage of persons who receive HIV testing as part of ongoing health care, we can continue to focus our public health resources on providing HIV testing to individuals who are not engaged in ongoing health care. The Baltimore-Towson MSA health care system is dominated by two major university systems and Federally Qualified Health Centers/Community Health Centers (CHCs) which we will be working with to develop system-wide changes in HIV testing.

Under PS07-768, Maryland successfully initiated HIV screening programs in seven hospital emergency departments in the Baltimore-Towson MSA. However, these programs currently rely on CDC funds for rapid testing kits and a portion of their staffing costs. By working with our ED grantees to establish reimbursement protocols, we can maximize the reach of these programs and transition to more

sustainable program models. While routine testing programs have lower seropositivity rates than targeted testing programs, the increased volume of testing can result in a significant number of previously undiagnosed HIV-positive persons learning their serostatus and being linked to HIV care, prevention and support services. These programs may also serve clients who would not be reached by targeted outreach programs in non-clinical settings.

Required Intervention #2: "HIV testing in non-clinical settings to identify undiagnosed HIV infection"

A: Situational Analysis

2.1 Epidemiological Information

As described in the Epidemiological Overview, using surveillance data reported through 12/31/2010, there were an estimated 1,327 new adult/adolescent HIV diagnoses in the Baltimore-Towson MSA during 2009 and a total of 17,048 diagnosed and reported living adult/adolescent cases of HIV on 12/31/2009. Given CDC's estimate that 21% of persons infected with HIV are undiagnosed and recent changes in Maryland's HIV/AIDS reporting laws, possibly leading to unreported cases, there may be over 5,000 adults and adolescents living with HIV in the MSA who are unaware of their infection. Additionally, data from the National HIV Behavioral Surveillance System showed high rates of HIV infection and substantial rates of unrecognized HIV infection among Baltimore men having sex with other men (MSM) during both the 2004 MSM testing period (58.4%) and 2008 testing period (74.4%). Similarly, data from the 2009 injection drug users (IDU) testing period found that 51% of the HIV-positive IDU were aware of their serostatus. These results suggest that the 21% national estimate of people living with HIV who are unaware of their serostatus may be an underestimate for the Baltimore-Towson MSA.

Additionally, of the sixty-two percent of newly diagnosed adults/adolescents with a reported CD4 test performed in the 12 months following their HIV diagnosis, and 33% had a CD4 count lower than 200 cells/ μ l. The median CD4 count for the 2009 adult/adolescent HIV diagnoses with a CD4 test in the 12 month following their HIV diagnosis was only 312 cells/ μ l. Given that median CD4 counts for healthy persons are usually greater than 1,000 cells/ μ l, that progression to AIDS takes an average of 8-10 years, and that a level of 200 cells/ μ l indicates AIDS, this low median CD4 level is an indicator that many of these newly diagnosed individuals were late to test and had been living with undetected HIV for years.

2.2 Policies and Procedures

As described in under required intervention 1, Maryland statute 18-336¹ requires that voluntary written informed consent be obtained from the individual to be tested before a specimen is collected for the purpose of an HIV test or before an HIV test is performed on a specimen collected for another purpose. In non-health care settings providers must utilize the uniform HIV informed consent form developed and provided by the Maryland Department of Health and Mental Hygiene and ensure that the uniform HIV informed consent form is distinct and separate from all other consent forms.

All agencies supported by IDEHA for HIV testing are required to adhere to operational standards and quality assurance measures as specified by IDEHA contracts and memoranda of agreement. These standards require agencies to perform HIV testing in non-clinical settings in accordance with CDC's "Revised Guidelines for HIV Counseling, Testing, and Referral", issued in 2001, and in compliance with state laws and regulations. Agencies are also required to provide HIV testing in accordance with national Limited English Proficiency (LEP) policies. Adherence to these requirements is monitored through Maryland's HIV Testing Quality Improvement Program. Upon the release of CDC's revised guidelines for HIV testing in non-clinical settings, IDEHA will provide training and technical assistance to assist agencies in providing HIV testing in accordance with the new guidelines.

¹ Annotated Code of Maryland. General Health Article 18-336.
<http://www.michie.com/maryland/lpExt.dll?f=templates&eMail=Y&fn=main-h.htm&cp=mdcode/12793>

2.3 Description of Current Services

2.3.1 Overview of IDEHA-Supported Testing Programs

As described under required intervention 1, IDEHA partners with over 40 agencies to provide HIV counseling, testing and referral services in the Baltimore-Towson MSA. These agencies include local health departments, Baltimore Substance Abuse Services (bSAS), the Department of Public Safety and Correctional Services, hospital clinics, emergency departments, community-based organizations, substance abuse treatment centers, community health centers, and OB/perinatal providers.

Current funding for HIV testing in the Baltimore-Towson MSA is approximately \$3.3 million. Approximately \$1.1 million supports routine HIV screening in emergency departments and correctional facilities, approximately \$1.1 million supports HIV testing in other clinical settings, and approximately \$1.1 million supports HIV testing in non-clinical settings that are located in high prevalence areas or serve high-risk clients, including mobile testing. The majority of these funds are awarded by CDC-DHAP via PS10-1001 and PS10-10138 (approximately 95%) with the remaining funds awarded by SAMHSA to the Maryland DHMH Alcohol and Drug Abuse Administration and managed by IDEHA.

As shown in the table below, IDEHA-supported HIV testing programs in the Baltimore-Towson MSA provided nearly 75,000 HIV tests during Fiscal Year 2010. These programs served 530 newly-identified, confirmed HIV-positive clients, representing an overall seropositivity of 0.7%. Among newly-identified HIV-positive clients served by these programs, 68% were informed of their confirmatory test results and 56% were linked to HIV medical care. These data are combined for clinical and non-clinical testing. More detailed analyses of client-level HIV testing data by testing strategy (i.e. routine and targeted) and setting type (i.e. clinical and non-clinical) will be conducted in April 2011 and utilized to develop jurisdictional testing plans in partnership with local health departments in the Baltimore-Towson MSA.

FY2010 HIV Testing Outcomes	Number (%)
HIV Testing Encounters	74,536
Newly Identified, Confirmed HIV-Positive Clients (self report)	530 (0.7%)
Newly Identified, Confirmed HIV-Positive Clients Post-test Counseled	362 (68.3%)
Newly Identified, Confirmed HIV-Positive Clients Referred to HIV Medical Care	354 (66.8%)
Newly Identified, Confirmed HIV-Positive Clients Linked to HIV Medical Care	299 (56.4%)
Newly Identified, Confirmed HIV-Positive Clients Referred to Partner Services	328 (61.9%)

Tables describing the demographics the 74,536 testing encounters and 530 newly-identified confirmed HIV-positive clients (new positives) are provided in Appendix A. More than half of the testing encounters (54.4%) were with individuals between 25 and 49 years of age while 28.7% of the encounters were with youth 24 years and younger. Seniors (50+ years) accounted for 15.8% of the testing encounters. The new positives were older with 64.9% between 30 and 59 years and 21.5% youth less than 24 years. Fifty-three percent of the testing encounters were with males while 68.5% of the new positives were male. Females accounted for 45.5% of all testing encounters and only 30.6% of the new positives. Few of the testing encounters were with Hispanic individuals: 4.0% of all encounters and 2.5% of the new positives. Seventy-six percent of the testing encounters were with African Americans while 87.9% of the new positives were African-American. Whites comprised 17.6% of all testing encounter and 9.4% of the new positives.

The table below describes data on reported risk behaviors collected as a part of each HIV testing encounter in FY2010. Risk behavior data were available for 65% of all testing encounters and 100% of the newly identified positives. In addition to the traditional surveillance risk categories, we have an additional category (Hetero/IDU) for clients who report both heterosexual sexual risk and injection drug use. We have also created another additional category (Other Heterosexual) to capture clients who report heterosexual sexual behaviors but who do not report one of the risk behaviors required for the surveillance definition (High-Risk Heterosexual).

REPORTED RISK (when available)	All Encounters		New Positives	
	Number	(%)	Number	(%)
Clients/Encounters with Risk Data	48434	65.0	530	100.0
MSM	2161	4.5	139	26.2
MSM/IDU	23	0.1	4	0.8
IDU	304	0.6	4	0.8
Hetero/IDU	2739	5.7	59	11.1
High-Risk Heterosexual	8294	17.1	67	12.6
Other Heterosexual	29059	60.0	195	36.8
Transgender – Sexual & IDU Risk	0	0.0	0	0.0
Transgender – Sexual Risk Only	44	0.1	2	0.4
Other Sexual Risk	671	1.4	24	4.5
No Risk Reported	5139	10.6	36	6.8
Unknown Risk	-	-	-	-

Rates for MSM as a risk exposure category have been increasing in the Baltimore-Towson MSA for the past decade and this data shows HIV testing programs in the Baltimore-Towson MSA must improve their reach into this community as 26.2% of the new positives were MSM, however, only 4.7% of the total testing encounters (with risk behavior data) were among clients who reported MSM risk behaviors.

2.3.2 Targeted HIV Testing in Non-Clinical Settings

In addition to the HIV testing in clinical settings described under required intervention 1, IDEHA supports targeted HIV counseling, testing and referral throughout the Baltimore-Towson MSA. Non-clinical testing programs are targeted to sites/venues that are located in high prevalence areas or serve high-risk populations. Many agencies further target their services to high-risk persons through mobile testing and street outreach.

Based on review of the state’s epidemiologic data, HIV testing data, and the HIV prevention priority populations identified by the Maryland Community Planning Group, IDEHA-supported HIV-testing programs are targeted to: Men who have Sex with Men (MSM), High-Risk Heterosexuals, Injection Drug Users (IDU) and Special Populations, including Deaf, Latino and Transgender populations. Within these groups, HIV testing programs target individuals at the highest risk for undiagnosed HIV infection (e.g. sexual and needle-sharing partners of persons living with HIV/AIDS; persons who trade sex for money and/or drugs; homeless persons; incarcerated persons; patients of STI, addictions and TB clinics; persons with multiple sexual partners; and substance users who are currently using or in drug treatment). Special

attention is also given to reaching persons from racial/ethnic minority communities experiencing high rates of HIV infection, such as African American and Hispanic communities.

IDEHA uses both quantitative and qualitative means to further target HIV testing resources. Resources are targeted to agencies that are effective at reaching persons who are likely to be infected, but unaware of their status. Program, epidemiologic and surveillance data are used to evaluate the burden and distribution of disease. Based on review of these data, program and evaluation staff make recommendations regarding targeting of resources by studying high prevalence geographic areas, demographic groups, and reported risk factors. These data are available through IDEHA's newly expanded set of state, regional, and county-level epidemiological profiles, through our new on-line customizable HIV mapping tool, and through our new on-line query-able database that allows the development of custom tables, as well as through specialized data requests from IDEHA's HIV epidemiology unit. By using all data sources available, staff are able to assist agencies in targeting their HIV testing efforts to maximize the number of newly identified HIV-positive clients who learn their serostatus and are provided with active referrals to HIV medical care, prevention and support services.

HIV testing program in non-clinical settings across the Baltimore-Towson MSA are supported by Maryland's primary HIV prevention cooperative agreement (PS10-1001). HIV testing is offered in diverse community and social service settings, and through mobile testing and street outreach. We estimate that these programs provide approximate 25,000 HIV tests annually. The seropositivity of these programs varies depending on jurisdiction and setting type. The largest outreach program in the Baltimore-Towson MSA is conducted by the Baltimore City Health Department's Bureau of STI/HIV Prevention. This program provides approximately 14,000 HIV tests annually with a new seropositivity of 1.1%. A significant number of previously diagnosed HIV-positive clients are also reached by this program and provided with linkage-to-care services.

B: Goal Setting

Goals:

- Ensure HIV testing resources are focused on the most effective geographic areas, settings, agencies and testing strategies.
- Increase HIV testing among the populations at greatest risk for HIV infection in the Baltimore-Towson MSA.
- Increase the percentage of newly-identified HIV-positive clients who learn their serostatus and receive post-test counseling.

Rationale:

The mathematical modeling conducted in partnership with Dr. Holtgrave and his team at the Johns Hopkins Bloomberg School of Public Health underscored the importance of targeting current testing resources to the settings and populations at greatest risk for undiagnosed HIV infection. Analysis of HIV testing program data reveals that we continue to face significant challenges related to the delivery of test results and linkage to care. Given the significant impact of knowledge of serostatus and engagement in HIV care on both the health of persons living with HIV and the prevention of new infections, we need to ensure that IDEHA-supported testing programs are achieving the highest performance standards related to the delivery of results to all clients (with an emphasis on persons testing positive) and linkage to HIV medical care, prevention and support services for persons living with HIV. We have also set goals related to increasing reach to the populations in the MSA that are at greatest risk for HIV infection, particularly African American MSM.

Required Intervention #3: “Condom distribution prioritized to target HIV-positive persons and persons at highest risk of acquiring HIV infection”

A: Situational Analysis

3.1 Epidemiological Information

According to the 2009 CDC HIV Surveillance Report, the Baltimore-Towson MSA had the tenth highest rate of estimated AIDS diagnoses in the nation, with 22.8 per 100,000 population, twice the national average of 11.2. For additional information refer to the Epidemiological Overview of the Baltimore-Towson MSA, provided on page 2 of this Workbook.

3.2 Policies and Procedures

The Maryland Infectious Disease and Environmental Health Administration Condom Distribution Policy outlines the procedures for agencies to obtain free condoms for distribution and the requirements for the distribution of condoms obtained through the program. The policy requires that condoms must be distributed without charge, not sold or traded. The policy indicates that condom distribution is most effective when it occurs in the context of a prevention program that attempts to increase clients' risk reduction skills. The policy recommends that agencies distributing condoms provide educational activities that increase clients' skills to use condoms appropriately as well as to negotiate with partners about condom use. At a minimum, educational materials/pamphlets on HIV/AIDS and proper use of a condom should accompany the distribution of condoms.

3.3 Description of Current Services

IDEHA has conducted a condom distribution program for at least 15 years. IDEHA provides condoms free of charge to partnering agencies/programs via its Materials Distribution Center. Over 1000 agencies participate in the condom distribution program. Each must register and provide information about its program and methods used to distribute condoms. This information is used to determine the maximum number of condoms they can receive per month. Agencies/programs that provide HIV prevention services and those that provide HIV health care as their primary mission are eligible to receive the most condoms. Other factors considered in determining the number of condoms an agency may obtain include sources of funding, characteristics of the populations served, program size and scope of services offered, and prior performance of the program. All HIV prevention programs funded by IDEHA are eligible to participate in the condom distribution program and are expected to distribute condoms as appropriate to clients of their risk reduction interventions.

During CY 2010 IDEHA spent approximately \$500,000 from various sources to purchase and distribute condoms statewide, with approximately \$300,000 supporting condom distribution in the Baltimore-Towson MSA. IDEHA's Materials Distribution Center distributed 4,166,560 condoms (4,162,000 male condoms and 4,560 female/internal condoms) via registered condom distribution agencies statewide. Of these, approximately 2.6 million (63%) were distributed in the Baltimore-Towson MSA.

The program tracks the number of condoms distributed to agencies that serve PLWH or persons at high risk of acquiring HIV infection. Of the condoms distributed in the Baltimore-Towson MSA, approximately 63% of condoms were distributed in medical or clinical care settings, including HIV care providers, primary and gynecological care providers, community health centers, hospital clinics and local health

department STD clinics. The remainder were distributed in drug treatment, DSS and other social services agencies, CBOs, non-clinical CTR sites, university counseling centers, shelters, family planning sites, outreach programs.

Data on condom distribution and use by a sample of 242 HIV-positive individuals 18 years and older in Maryland are available from the 2007 and 2008 cycles of the Medical Monitoring Project (MMP). MMP is a national supplemental surveillance project designed by the Centers for Disease Control and Prevention (CDC) to produce population-based estimates of characteristics of persons with HIV infection and the care they receive. Three questions from the MMP interview asked about receipt and source(s) of free condoms and the use of these condoms. Almost 65% of the participants indicated that they had received free condoms, while 34.4% reported they had not. The most frequently cited agency types from which participants reported receiving free condoms were Adult HIV/AIDS specialty clinics, community health center/ public health clinic, and HIV/AIDS-focused community-based organizations. Only 2007 MMP interviewees were asked about actually using the free condoms. Of the 92 MMP participants who received free condoms, 59 or 64.1% reported using them.

B: Goal Setting

Goals:

- Increase the number of condoms distributed to HIV-positive persons and persons at the highest risk of acquiring HIV infection.

Rationale:

The availability of condoms is an important aspect of HIV prevention that has proven to be cost-effective. However, limited resources for condom distribution must be focused on the individuals at greatest risk of transmitting or acquiring HIV in order to maximize the impact. Condom distribution to HIV prevention and care providers by IDEHA's Materials Distribution Center is currently targeted to agencies that serve HIV-positive persons and persons at high risk for HIV infection. Current mechanisms for purchasing and distributing condoms to PLWH and high-risk negatives persons will be expanded with an emphasis on increasing distribution to African American MSM in the Baltimore-Towson MSA.

Required Intervention #4: “Provision of Post-Exposure Prophylaxis to populations at greatest risk”

A: Situational Analysis

4.1 Policies and Procedures

Maryland has no specific laws or state policy guidance in place for non-occupational exposures.

4.2 Description of current services

Post-Exposure Prophylaxis (PEP) involves medically supervised provision of HIV antiretroviral drugs to HIV seronegative persons who recently may have been exposed to HIV, to reduce the chance of the individual from becoming HIV seropositive as a result of the exposure event.

In cases of occupational exposure, Maryland employers provide post exposure follow-up in accordance with the requirements of the OSHA Bloodborne Pathogen Standard.

There is currently no data source available to determine if non-occupational PEP is being prescribed in hospital emergency departments or by individual physicians. At this time IDEHA is not aware of any funding available to support non-occupational post exposure prophylaxis. It is unclear if private insurers provide coverage for PEP for non-occupational exposures.

B: Goal Setting

Goals:

- Issue guidance related to the provision of non-occupational post-exposure prophylaxis to medical providers in the Baltimore-Towson MSA.

Rationale:

The provision of information and guidelines tailored to Maryland related to the provision of non-occupational post-exposure prophylaxis is an important step. Given the lack of resources, future implementation would be dependent on the ability to utilize federal funding for the provision of post-exposure prophylaxis and cost-effectiveness analyses to determine the potential impact of redirecting funds to this intervention.

Required Intervention #5: “Efforts to change existing structures, policies, and regulations that are barriers to creating an environment for optimal HIV prevention, care, and treatment”

A: Situational Analysis

5.1 Policies and Procedures

A number of efforts to change existing structures, policies, and regulations that are barriers to creating an environment for optimal HIV prevention, care, and treatment have been successfully undertaken in the past few years.

5.1.1 Recent Changes to HIV-Related Statutes and Regulations

During the 2008 legislative session, the state government of Maryland enacted statute 18-336, which addresses HIV consent and testing. This legislation, which became effective on July 1, 2008, modified the requirements for separate written consent in health care settings, eliminating the mandatory use of the State’s separate written informed consent form with the requirement that the provision of informed consent be documented in the medical record. Additionally, this legislation eliminated the statutory description of pre-test counseling and required the Maryland Department of Health and Mental Hygiene to develop the pre-test counseling description in regulations. The required method of pre-test counseling was also expanded to allow a patient to receive pretest counseling in a variety of formats based on the individual’s need and testing history. Maryland statute 18-336 also outlined a new consent and testing process for pregnant women, which include the following requirements related to the provision of HIV testing: 1) Providers who provide prenatal care must notify the pregnant individual that an HIV test will be administered and document in the medical record if there is a declination of testing; 2) A test must be offered in the third trimester to women who were not tested earlier and providers in high prevalence areas should consider routinely offering a repeat HIV test in the third trimester; and, 3) In labor and delivery settings, providers must offer a rapid test to pregnant individuals with unknown or undocumented HIV status and offer antiretroviral prophylaxis prior to receiving the results of a confirmatory test if the rapid HIV test is preliminary positive. It is hoped that the flexibility offered in the new laws will encourage medical providers to be offering HIV testing in a routine way to their clients, therefore increasing the number of persons who are informed of their status, enrolled in medical care and referred to partner services

5.1.2 Organizational Changes

Another change has been an organizational restructuring within the Maryland DHMH. In July, 2009, the Secretary of the Maryland DHMH integrated the former AIDS Administration and the Community Health Administration into a new administration, the Infectious Disease and Environmental Health Administration (IDEHA). Within IDEHA, the Office of Infectious Disease Prevention and Care Services (OIDPCS) was formed to include the Centers for HIV Prevention, STI Prevention, TB Control and Prevention, and HIV Care Services. The Center for HIV Prevention also includes the Adult Viral Hepatitis Prevention Program. This reorganization has allowed for increased integration of HIV, STI, viral hepatitis and TB prevention efforts and increased coordination with HIV care services.

5.1.3 Access to Sterile Syringes

CDC recommends that persons who inject drugs should use a new, sterile syringe for each injection to prevent transmission of HIV and other bloodborne infections.

Maryland has a drug paraphernalia law (Annotated Code of Maryland, §§5-101 and 5-619 Criminal Law Article) that criminalizes the sale and possession of syringes if it is known that they may be used to inject illegal drugs. In 1994 the legislature passed legislation enabling the Baltimore City needle exchange program. The enabling legislation provides immunity from prosecution for staff or participants of the program for distributing controlled paraphernalia. Baltimore City has developed and maintained an effective needle exchange program utilizing local and State general funds. However, the enabling legislation does not authorize needle exchange programs in other areas of the Baltimore-Towson MSA.

There is a need to increase mechanisms for injection drug users not served by the Baltimore City Needle Exchange program to access clean needles and syringes. These injection drug users include those in areas of the MSA outside Baltimore City or those in Baltimore City who may be reluctant to use the Baltimore City Needle Exchange program for any of a number of reasons (e.g. mistrust of the local health department or any government service, reluctance to be observed entering/exiting the van and being identified as a drug user in the community.)

One mechanism used in other states to increase access to sterile syringes for IDU is pharmacy-based syringe exchange. Maryland Pharmacy Board regulations limit the selling of needles and syringes by pharmacists, stating that the sale of needles and syringes or other paraphernalia shall be made by the pharmacist only in good faith to patients showing proper identification and indication of need (COMAR 10.13.08.00).

5.1.4 Comprehensive Sexual Health Education in Schools

Maryland regulation (COMAR 13A.04.18.04) requires that local school systems provide annual instruction regarding HIV/AIDS to all students at least once in grades 3 to 6, 6 to 9, and 9 to 12. Other sections of COMAR 13A.04.18 address the requirements and conditions for sexual health education in Maryland.

The regulations require that each local school system appoint a joint committee of educators and representatives of the community to examine all instructional materials proposed to be used in the schools. The committee's recommendations are submitted to the local superintendent of schools and the local board of education for final determination of curricula used in each system. As a result, there are wide variations in the provision of prevention education and a need to standardize and deliver a statewide curriculum for comprehensive sexual health education.

5.2 Current Services

5.2.1 Access to Sterile Syringes

Baltimore City has developed and maintained an effective needle exchange program utilizing local and State general funds. In CY 2010, the Baltimore City Needle Exchange program provided 1,877 individuals with access to 404,310 clean needles and harm reduction kits at 20 sites (both fixed location and mobile) across the City, distributing an average of 17 clean syringes per month per participant. Almost

400,000 syringes were exchanged, thus limiting the number of used needles and syringes in circulation. More than 65% of individuals served each quarter in 2010 were returning clients. The 2010 population served were approximately two-thirds male and two-thirds African-American with more than 50% between 40 and 59 years of age.

5.2.2 Comprehensive Sexual Health Education in School

The Baltimore City Public School system receives funding from CDC's Division of Adolescent and School Health to support the implementation of effective policies, programs and practices to reduce sexual risk behaviors among students that contribute to HIV infection, sexually transmitted diseases (STDs) and pregnancy. Focus areas of this program include increasing the delivery of HIV/STI prevention education that meets the needs of high risk minority youth; increasing professional education for health education teachers to improve their ability to provide HIV/STI prevention education, and establishing appropriate HIV-related policies. The program includes a number of planned activities to support increased provision of comprehensive sexual health education, including providing curricula and supplementary materials to support HIV prevention education, and establishing a guidance document that addresses HIV prevention education in Baltimore City public elementary, middle and high schools. A barrier to the implementation of comprehensive sexual health education is that, because principals in individual schools control what curriculum materials are implemented in each school, there is variability in the instruction received by students.

A number of activities are currently in place to augment the provision of comprehensive sexual health education for school-age youth in the Baltimore-Towson MSA. These include Project CO-ACT - COllaboration in ACTion, the HIV Prevention Service Learning Toolkit, and the Annual HIV Prevention Youth Summit.

COllaboration in ACTion (CO-ACT)

The Project CO-ACT - COllaboration in ACTion: Reducing HIV /STDs and High Risk Behaviors in Our Communities (CO-ACT) coalition was developed by the National Association of County and City Health Officials (NACCHO) and the National Coalition of STD Directors (NCSDD) in May of 2010, to focus on strengthening communication and collaboration between state and local departments of health and education to support and improve HIV and STD prevention for school-aged youth.

Maryland's CO-ACT is comprised of representatives of the Infectious Disease and Environmental Health (IDEHA), Baltimore City Health Department, Baltimore City Public School System, Maryland School Department of Education (MSDE), and The After-School Institute (TASI). The purpose of CO-ACT is to provide a platform to impart knowledge about experiences around HIV/AIDS prevention activities in Maryland, with a focus in Baltimore City and Baltimore County. In September of 2010, Maryland's CO-ACT responded to a Request for Proposal offered by NACCHO and NCSDD in September of 2010, and was awarded \$3,500 to customize an STD Mini-Pocket Guide. The STD Mini-Pocket Guide was customized to reflect resources offered in Maryland and is currently being distributed statewide, with an emphasis in Baltimore City. CO-ACT plans to distribute STD Mini-Pocket Guides at the Annual 2011 HIV Prevention Youth Summit, and to have youth complete a Mini-Pocket Guide Satisfaction Survey.

HIV Prevention Service Learning Toolkit

The HIV Prevention Service Learning Toolkit is an ongoing project of a seven-year collaborative effort of the Infectious Disease and Environmental Health Administration (IDEHA), the Maryland State Department of Education (MSDE), the Baltimore City Health Department, the Baltimore City Mayors Office and The After-School Institute.

Youth seeking a Maryland High School Diploma are expected to complete 75 hours of service-learning (during grades 6-12), that includes preparation, action, and reflection. Some schools in Baltimore City incorporate service-learning requirements and activities into existing curricula, which allows students to problem-solve real community issues across subjects and throughout the school day while at school. Some districts allow for independent and/or group projects that may take place during school time or on non-school time.

The HIV Prevention Service Learning Toolkit provides an opportunity for youth to earn service-learning hours during school or non-school hours and provides specific instructions for three types of activities: 1) Conducting Peer Leadership and HIV/AIDS Prevention Education, in which school aged youth participate in the *Becoming a Responsible Teen (BART)* intervention, then recruit other youth to participate in the BART intervention to become Peer Educators as well and earn service-learning hours; 2) Developing public service announcements (PSAs), and 3) creating and developing a Live Theater Project.

The HIV Prevention Service Learning Toolkit is currently being updated with regards to resources and a strategic planning meeting is being scheduled with collaborators to discuss next steps for printing, duplication and statewide distribution with an emphasis in Baltimore City.

5.2.3 Annual HIV Prevention Youth Summit

Since 2002, the Infectious Disease and Environmental Health Administration (IDEHA), Baltimore City Health Department, Maryland School Department of Education (MSDE), and the After-School Institute (TASI) have collaborated on an Annual HIV Prevention Youth Summit, which is held in Baltimore City. Each June, the event welcomes diverse participants including sexual minority youth, heterosexual youth, parents, health educators, and youth workers. This annual platform provides an opportunity for youth to learn and impart information on HIV/AIDS and STI prevention education, including a variety of other topics on issues that youth face daily i.e., communication and negotiation skills, domestic violence, life skills, gang involvement, and leadership skills.

In 2010, the Annual HIV Prevention Youth Summit adopted the *"Spread the Word, Not the Disease: AIDS is No Joke"* theme from a co-sponsored social marketing campaign. The secondary theme was "Get Talking! Get Tested! Get Treatment!" Each year approximately 300 Maryland youth participate in the fun-filled educational event. For the 2011 HIV Prevention Youth Summit, the topic of bullying will be added to the agenda. The Baltimore City Public School System has joined this successful collaboration, and has committed to provide incentives for youth participants completing a STD Mini-Pocket Guide Satisfaction Survey at the 2011 event.

While these activities reach hundreds of school aged youth each year in the Baltimore-Towson MSA, there are many students who do not receive comprehensive sexual health education.

B: Goal Setting

Goals:

- Reduce barriers to the availability of sterile syringes.
- Improve the provision of school-based comprehensive sexual health education, including HIV prevention education.

Rationale:

CDC recommends that persons who inject drugs should use a new, sterile syringe for each injection to prevent transmission of HIV and other bloodborne infections. While the Baltimore City Needle Exchange program provides nearly 2000 injection drug users with access to sterile syringes annually, additional venues are needed to reach injection drug users both in Baltimore City and the surrounding jurisdictions. Pharmacy-based syringe exchange may be a viable option for increase access to sterile syringes in the Baltimore-Towson MSA.

Comprehensive sexual health education is crucial to improve the health of youth as a high percentage will be sexually active prior to adulthood. In a national survey in 2009, 46.0% of high school students (grades 9-12) had had sexual intercourse, with more than a third (34.2%) reporting having had sexual intercourse with at least one person during the 3 months before the survey (i.e., currently sexually active).⁶ Youth in Maryland are contracting sexually transmitted infections at high rates. In 2009, there were 9,384 cases of Chlamydia and 1,993 cases of Gonorrhea in 15-19 year olds in Maryland. These cases represent nearly 40% of all Chlamydia cases and 31% of all Gonorrhea cases in the state that year.⁷

There is strong evidence that comprehensive sexual health education can effectively delay sex among young people even as it increases condom and overall contraception use among sexually active youth.^{8, 9, 10, 11} By partnering with the Maryland State Department of Education, the Baltimore City Health Department and the Baltimore City School system to increase the provision of comprehensive sexual health education in Baltimore City Schools, we will increase the number of youth who are providing with the necessary knowledge and skills to support safer sexual behaviors and prevent HIV and other STI.

⁶ Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2009. Surveillance Summaries, June 4, 2010. MMWR 2010; 59(No. SS-5).

⁷ Center for Sexually Transmitted Infection Prevention, IDEHA, DHMH, Baltimore City Health Department, Maryland Office of Planning.

⁸ Alford S. *Science and Success: Sex Education and Other Programs that Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections*. Washington, DC: Advocates for Youth, 2003.

⁹ Coyle KK, et al. Safer Choices: Long-term impact of a multi-component school-based HIV, STI, and pregnancy prevention program. *Public Health Reports*. 2001.

¹⁰ Jemmott JB, 3rd, Jemmott LS, Fong GT. Abstinence and safer sex HIV risk-reduction interventions for African American adolescents: a randomized controlled trial. *Jama*. May 20 1998;279(19):1529-1536.

¹¹ Kirby D. *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. Washington, DC: National Campaign to Prevent Teen Pregnancy, 2001.

Required Intervention #6: “Implement linkage to HIV care, treatment, and prevention services for those testing HIV positive and not currently in care”

A: Situational Analysis

6.1 Epidemiologic Information and Need

Sections 6.1.1 and 6.1.2 provide HIV epidemiologic information and estimated unmet need for HIV treatment in the Baltimore-Towson MSA. According to Jeanne Keruly and Richard Moore, who conducted a longitudinal study of a clinical cohort of 3,348 antiretroviral-naïve patients (mostly from the Baltimore-Towson MSA) from the largest HIV adult clinical provider in Maryland, there continues to be a tremendous need for early diagnosis and intervention in the Baltimore-Towson MSA. Their data “indicate that patients are presenting later for care than in earlier years, with lower CD4+ cell counts, a small increase in those who have AIDS, and no improvement in the time between HIV diagnosis and presentation for care for women or those with heterosexual transmission.”¹² In an era when early diagnosis and treatment have been proven to lead to a decrease in HIV transmission, better health outcomes and increased survival rate for patients, this study shows that a large number of people living with HIV in Baltimore are entering initial treatment later in the disease progression.

6.1.1 Epidemiologic Information

There were a total of 17,048 diagnosed and reported living adult/adolescent cases of HIV in Maryland on 12/31/2009. The CDC estimates that 21 percent of persons infected with HIV are undiagnosed. In addition, due to the recent changes in Maryland's HIV/AIDS reporting laws, there may also be an additional 15 percent of persons diagnosed with HIV that are unreported. Therefore, there may be as many as 25,388 adults and adolescents living with HIV in the Baltimore-Towson MSA, over 5,000 of who are unaware of their infection.¹³

There are specific communities in the Baltimore-Towson MSA that have significantly high rates of unrecognized HIV infection. For instance, according to data from the National HIV Behavioral Surveillance System, high rates of HIV infection and substantial rates of unrecognized HIV infection have been found among Baltimore men having sex with other men (MSM), especially among blacks and younger men. The study examined data from two periods when targeted HIV testing among adult Baltimore men in MSM-identified venues occurred: 2004-2005 and 2008. During the 2004 testing period, 58.4 percent of the MSM with a positive HIV test result reported not knowing their HIV status; during the 2008 testing period, the prevalence of unrecognized HIV infection among MSM tested was 74.4 percent. Prevalence of unrecognized HIV infection among black MSM was 63.8 percent in 2004 and almost 77 percent in 2008. Among Baltimore MSM, German found that “unrecognized infection was significantly associated with minority race/ethnicity, younger age and no prior year doctor visits.”¹⁴

¹² Jeanne Keruly and Richard Moore. 2007. “Immune Status at Presentation to Care Did Not Improve among Antiretroviral-Naïve Persons from 1990 to 2006.” *Clinical Infectious Diseases* 45(10), October. Internet site (<http://cid.oxfordjournals.org/content/45/10/1369.full>), downloaded Feb. 8, 2011.

¹³ Maryland DHMH, Infectious Disease and Environmental Health Administration, Center for HIV Surveillance

¹⁴ Danielle German, Frangiscos Sifakis, Cathy Maulsby, Vivian L. Towe, Colin P. Flynn, Carl A. Latkin, David D. Celentano, Heather Hauck, David R. Holtgrave. 2011. “Persistently high prevalence and unrecognized HIV infection among men who have sex with men in Baltimore: the BESURE Study.” *Journal of Acquired Immune Deficiency Syndromes*, post acceptance for future publication, February 4, 2011. Internet site (<http://journals.lww.com/jaids/pages/author.aspx?firstName=Danielle&lastName=German>) downloaded Feb. 12, 2011.

Similarly, data from the National HIV Behavioral Surveillance System for samples of adult residents of the Baltimore-Towson MSA in populations at risk for HIV infection found that 51% of the HIV-positive injection drug users were aware of their serostatus (2009), and that 18% of the HIV-positive at-risk heterosexuals were aware of their serostatus (2007). However, there were only 11 HIV-positive at-risk heterosexuals in the 2007 study, so these results may not be representative of at-risk heterosexuals in the Baltimore-Towson MSA.¹⁵ These results suggest that the 21% national estimate of people living with HIV who are unaware of their serostatus may be an underestimate for the Baltimore-Towson MSA.

Among adult/adolescent residents of the Baltimore-Towson MSA newly diagnosed with HIV infection in 2009, 57% had a reported CD4 or viral load test that was performed in the 3 months following their HIV diagnosis, using data as reported through 12/31/2010. Lower percentages of adult/adolescents newly diagnosed with HIV infection who have a CD4 or viral load test were observed among residents of Baltimore City and non-Hispanic blacks. These data suggest that a high proportion of persons living with HIV in the Baltimore-Towson MSA are not being successfully linked to HIV medical care within 3 months of initial diagnosis.

6.1.2 Estimated Number of Persons Living with HIV in Need of Treatment

The annual Ryan White Part A funding application includes an “unmet need framework,” a table showing estimates of how many persons living with HIV (PLWH) there are in Maryland and in the Baltimore-Towson MSA and how many PLWH are not receiving primary HIV medical care. These estimates are based on Maryland HIV/AIDS registry data and records of CD4 tests, viral-load tests, and antiretroviral medication prescriptions obtained from the state AIDS Drug Assistance Program (ADAP), Medicaid program and from private laboratories.¹⁶ According to the unmet need framework included in the FY 2011 Ryan White Part A application, as of December 31, 2009, the estimated number of PLWH in the Baltimore-Towson MSA was 17,015, of whom 6,965 (40.9%) were estimated to be not receiving primary HIV medical care.

6.2 Policies and Procedures

The Baltimore-Towson MSA has a comprehensive system of Ryan White funded care that includes both core medical and support services. As a whole, these services enable uninsured and underinsured PLWH to access and stay engaged in care. In keeping with recognized best practices, the Ryan White Part A and B grantees are now placing increased emphasis on outreach programs linking persons to care. In coordination with prevention programs, Part A grantee programs are targeting high-risk areas and venues such as shelters, correctional facilities, emergency rooms, soup kitchens, and substance abuse programs to identify PLWH who need referral and linkage to care. Part C programs provide early intervention services that support primary care models in community health centers. Part D programs support medical and ancillary services targeted to women, infants, children and youth.¹⁷

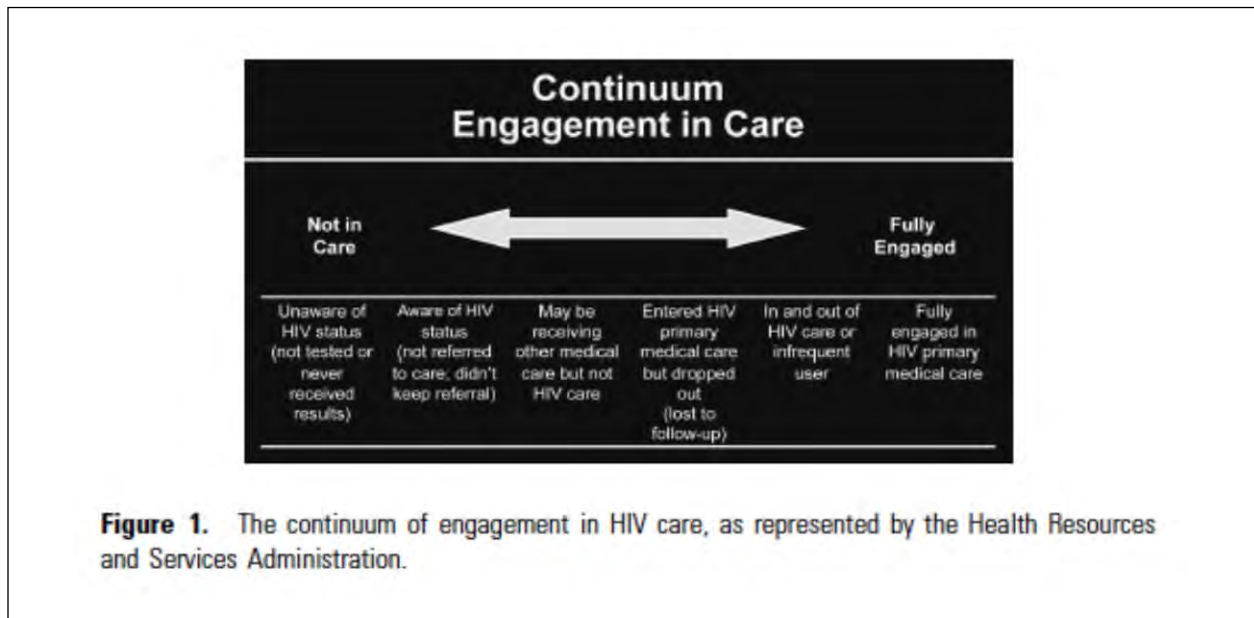
Linkage-to-care models found in the MSA are guided by principles of full engagement in HIV care as defined by the HIV/AIDS Bureau (HAB) within the Health Resources and Services Administration (HRSA). Laura Cheever, Deputy Associate Administrator at HAB, describes HRSA’s continuum of engagement in

¹⁵ Maryland DHMH, Infectious Disease and Environmental Health Administration, Center for HIV Surveillance

¹⁶ Baltimore City Health Department (BCHD), Ryan White Office. 2010. *Baltimore Eligible Metropolitan Area FY 2011 Ryan White Part A and Minority AIDS Initiative Application*. Baltimore, Md.: October, attachment 6. (*Baltimore FY 2010 Part A Application*.)

¹⁷ State of Maryland, Maryland Department of Health and Mental Hygiene (DHMH), AIDS Administration. 2009. *FY2009 Part D CSWICY Competing Continuation Application*. Baltimore Md.: DHMH, pp. 10-11. (*Maryland FY2009 Part D Application*.)

care as seven stages in the continuum ranging from “unaware of HIV status” (e.g., not tested) to “fully engaged in care.” The term “engagement in care” describes the links within the spectrum of patient services that provide the connection that maintains the client in HIV medical care. These services range from initial diagnosis, peer navigation, clinical visits and specialty care.¹⁸ Within the HRSA paradigm, HIV care programs are encouraged to examine retention rates, identify patients at-risk for loss, and add retention measures within quality improvement analyses. The following sections discuss policies and procedures related to referrals to care for persons who test positive, linkage to care procedures supported through IDEHA, and Part A and Part B standards for services linking clients to care.



Source: Laura Cheever. 2007. “Editorial Commentary — Engaging HIV-infected People in Care: Their Lives Depend On It.” *Clinical Infectious Diseases* 44, pp. 1500-1502.

6.2.1 Maryland Laws and Regulations on Referrals to HIV Medical Care for Persons who Test Positive

As discussed above, standard procedures for referrals to care are critical to insuring sustained linkages between client and the entire spectrum of Ryan White funded services. Maryland law requires providers who receive positive HIV-test results for their patients to refer those patients to “appropriate medical services, including evaluation and appropriate therapy for tuberculosis infection or disease” (COMAR 10.18.04.02.B.1). Local health officers, in turn, must ensure provision of “ongoing counseling and support services through local health department programs, including outpatient mental health and substance abuse services when indicated” (COMAR 10.18.04.02.C.3.a)¹⁹ More specifically, Maryland regulations and statutes require such providers to refer newly diagnosed PLWH “to a source of HIV-specific health care and supportive services, including evaluation and treatment for: tuberculosis, hepatitis, pregnancy, and sexually transmitted infections”; the patient must also receive “information about counseling services for HIV-infected individuals,” according to the Code of Maryland Regulations,

¹⁸ Laura Cheever. 2007. “Editorial Commentary — Engaging HIV-infected People in Care: Their Lives Depend On It.” *Clinical Infectious Diseases* 44, pp. 1500-1502.

¹⁹ State of Maryland, Division of State Documents. 2011. Code of Maryland Regulations. Internet site (<http://www.dsd.state.md.us/comar/comarhtml/10/10.18.04.02.htm>), downloaded on February 2, 2011.

section 10.18.08.10.²⁰

In addition, DHMH requires Maryland Medicaid managed-care organizations (MCOs) to offer HIV/AIDS case-management services at any time upon or after HIV/AIDS diagnosis. Individuals who refuse case-management services when they are first offered can request such services later. Case management provided by MCOs must include linkage to the full range of available benefits, including any indicated support services.

6.2.2 Linkage-to-care Procedures for HIV Testing Programs Supported by IDEHA

Before newly diagnosed PLWH can be referred and linked to care, they must be notified of their test results. All agencies conducting HIV testing as part of IDEHA supported HIV testing programs are required to have procedures for ensuring the delivery of test results to clients, especially those who test positive. IDEHA-supported HIV testing agencies must ensure that clients receive test results using one or more of the following strategies: 1) immediate or same-day provision of rapid test results; 2) scheduled follow-up appointments for conventional tests, including confirmatory testing for clients with rapid reactive results; 3) use of a telephone-results hotline for negative test results; or 4) active referral to, and follow up by, a disease-intervention specialist (DIS).

IDEHA-supported HIV testing programs are required to ensure that individuals with HIV-positive test results are connected to HIV medical care, prevention and support services. To this end, HIV testing programs must establish and maintain strong referral networks, such as through memoranda of understanding and information sharing agreements with referral agencies. Unless patients refuse the referral or are already engaged in HIV medical care, HIV testing programs are required to actively link all HIV-positive patients to care at either an on-site infectious-disease or HIV clinic, a county health department's HIV clinic, or another HIV medical provider chosen by the patient. To support the enrollment in care of their HIV-positive clients, HIV testing programs maintain partnerships with providers, connect clients to HIV-positive peer counselors, and provide integrated HIV/STI partner services and active linkage to care.

6.2.3 Ryan White Part A and Part B Linkage-to-Care Procedures and Standards

The Greater Baltimore HIV Health Services Planning Council defines standards of care for all Ryan White Part A services categories for the Baltimore EMA. The category of outreach focuses on linkage to care by requiring providers to maintain and use referral networks to ensure that clients are engaged in primary HIV medical care. These standards are followed in all outreach efforts in the MSA. The principal purpose of Ryan White Part A outreach services is to identify "people with unknown HIV disease or those who know their status (i.e., case finding) so that they may become aware of and may be enrolled in care and treatment services". One of the category's key services is "connect[ing] persons who are HIV positive to care and treatment." Outreach workers also "identify needed services for clients"; "assess immediate or initial needs that serve as barriers to care"; and "create an action plan to link people to care and other support services." Like all Ryan White Part A providers, outreach services providers must document their policies concerning "procedures for referrals to other agencies, including follow-up procedures," and

²⁰ State of Maryland, Division of State Documents. 2011. Code of Maryland Regulations. Internet site (<http://www.dsd.state.md.us/comar/comarhtml/10/10.18.08.10.htm>), downloaded on February 2, 2011.

they must verify “that a client is currently receiving primary medical care.” For any clients who are not receiving primary medical care, providers must devise and execute a plan for referring them.²¹

Part B MAI outreach has the goal of increasing minority access to Maryland’s pharmacy assistance programs, i.e., linking minority clients to MADAP and other similar services. Additional referral and linkage to care services are provided through Ryan White Part B case management, transitional case management, and MAI outreach services. Ryan White Part B case management is defined as “a range of client-centered services that link clients with health care, psychosocial, and other services [and which] ensure timely, and coordinated access to medically appropriate levels of health and support services.” Part B transitional case management contacts HIV-infected inmates one to three months before release from prison and links them to primary HIV medical care and any indicated support services after release. Providers of Part B transitional case management services are required to contact clients two weeks after release to ensure that medical appointments have been kept; a six week follow up investigates clients’ satisfaction with linkages.²²

After HIV-positive clients have been notified of their test results, local health departments, Part A sub-recipients, CTR providers, Part B and other prevention programs independently refer clients to treatment and support services. The implementation of Part A outreach services standards of care includes the practice of escorting and tracking client participation in treatment through a minimum of two medical-care visits.

6.3 Description of Current Services

IDEHA funds the activities of, or otherwise partners with, a range of providers of HIV testing, referral, and linkage-to-care services. IDEHA partners with over 40 agencies to provide HIV counseling, testing and referral services in the Baltimore-Towson MSA. These agencies include local health departments, Baltimore Substance Abuse, Inc. (generally known as Baltimore Substance Abuse Systems or bSAS), the state Department of Public Safety and Correctional Services, hospital clinics, emergency departments, community based organizations, substance abuse treatment centers, community health centers, and obstetric/perinatal service providers.

IDEHA also partners with the seven local health departments in the Baltimore-Towson MSA to provide HIV/STI partner services to HIV-positive clients in the area. A health department disease intervention specialist (DIS) assesses engagement in HIV care when providing post test counseling and offering partner services. It is the aspiration of IDEHA that all HIV-positive clients not in care are actively linked to care in partnership with Ryan White linkage-to-care staff. Ryan White Part A referral and linkage activities are performed and supported by providers in the various service categories that community stakeholders that compose the planning council consider “engagement strategies”: outreach services, mental health services, and substance abuse treatment.

²¹ InterGroup Services, Inc. (IGS). 2010. “Outreach Category Standards of Care: Outreach Services.” Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (balpc.intergroupinfo.com/doc/doc/138/OutreachStandards2010.pdf), downloaded Feb. 10, 2011.

²² State of Maryland, Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration, Center for HIV Health Services. 2006. *CHHS Quality Assurance and Policy Manual: Commitment to Excellence*. Baltimore, Md.: DHMH. (CHHS QAP Manual.)

As described in the planning council's 2009-2011 *Comprehensive Plan for HIV Service Delivery*,²³ such service providers offer or support referral and linkage as follows. Outreach workers obtain testing services for undiagnosed individuals. After a positive test, an outreach worker attempts to execute a referral to primary medical care. If this referral is refused, the outreach worker attempts to address barriers (e.g., homelessness, substance abuse, or mental illness) by connecting the PLWH to a case manager who can help the PLWH access the needed services. The goal is that the PLWH begins and remains in primary HIV medical care while continuing to receive any needed support services. Referral and linkage activities are also provided by Ryan White Part B Minority AIDS Initiative outreach services, which are typically co-located with other Part A and Part B services. Part B outreach services refer clients to CTR, primary HIV medical care, and case management services, and have as a primary goal increasing minority access to three Maryland pharmacy assistance programs: Primary Adult Care (PAC), Medicaid, and the Maryland AIDS Drug Assistance Program (MADAP). According to the *Maryland Part B FY 2011 Application*, "the objective for the outreach and education activities of the [Part B MAI] program is to provide focused outreach activities that primarily target African American persons living with HIV/AIDS to increase their participation in MADAP."²⁴

The following table shows the funding levels, numbers of providers, and numbers of clients served for various HIV-related referral and linkage-to-care activities in the Baltimore-Towson MSA.

Referral and Linkage-to-care Activities in the Baltimore-Towson MSA

Activity	Funding	# of Sites	# of PLWH Served
IDEHA-supported HIV Testing Programs	\$2,260,000	40	1,084*
HIV Partner Services	\$684,038	8	684**
Ryan White Part A Outreach Services	\$739,514***	59	713
Ryan White Part A MAI Outreach	\$169,239	3 ²⁵	142
Ryan White Part B MAI Outreach services	\$272,567	4	260 ²⁶

* Includes all clients who tested HIV positive (new and previous positives by self-report).

** Includes all HIV-positive clients interviewed by DIS and all partners who tested HIV positive (new and previous positives). Many clients served by partner services are tested by an IDEHA-supported HIV testing program and are included in both rows.

*** Planned FY2011 Funding = \$909,165.

B: Goal Setting

Goals:

- Increase the percentage of HIV-positive clients who are successfully linked to HIV medical care and support services.

Rationale:

Current estimates of the number of persons living with HIV who are not engaged in HIV care indicate a need to significantly increase our investment in efforts to link HIV-positive persons to HIV medical care and support services, and support clients in maintaining ongoing engagement in care. Additionally, linkage-to-care data from IDEHA-supported HIV testing programs indicates that current testing

²³ IGS. 2008. *Comprehensive Plan for HIV Health Service Delivery in the Baltimore EMA: 2009-2011*. Baltimore, Md.: IGS, December.

²⁴ Maryland Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration (IDEHA). 2010. *Maryland Part B FY2011 Application*. Baltimore, Md.: DHMH. (*Maryland FY2011 Part B Application*.)

²⁵ Baltimore City Health Department, Ryan White Office. 2010. *FY2009 MAI 9-Month ESD Report released July 21, 2010*, p. 13.

²⁶ DHMH, IDEHA. 2010. *Maryland Part B FY2009 Implementation Plan Final 8-30-10*.

programs continue to face challenges when linking individuals who test HIV-positive to care. Linkage to HIV medical care and treatment play an essential role in preventing HIV infection by reducing viral load and providing PLWH with support for reducing high-risk sexual and/or needle sharing behaviors. The transmission rates for PLWH who are aware of their serostatus calculated as part of the mathematical modeling for the Baltimore-Towson MSA are based on 49% of PLWH receiving treatment. Therefore, increasing the percentage of PLWH who are linked to HIV medical care and treatment would result in a further decrease in HIV transmission rates for PLWA in the Baltimore-Towson MSA.

Required Intervention #7: “Implement interventions or strategies promoting retention in or re-engagement in care for HIV-positive persons”

A: Situational Analysis

7.1 Epidemiologic Information and Need

Sections 7.1.1 and 7.1.2 provide HIV epidemiologic information, estimated unmet need and performance indicators for retention in or reengagement in care for HIV-positive persons in the Baltimore-Towson MSA. Predictors of low retention in care include:

- Demographic characteristics (e.g., younger age, female sex, racial/ethnic minority status, lack of public health insurance, lower socio-economic status, rural residence, no usual source of care);
- Disease severity (e.g., patients presenting with less advanced HIV disease or non-HIV related co-morbid factors);
- Psychosocial considerations (e.g., active substance use, presence of Hepatitis C co-infection, low readiness to enter care, fewer social support structures);
- System and patient factors (e.g., less use of ancillary services or greater unmet need for other services).¹

A client that has reengaged is a PLWH that received some form of medical care in the past and has returned to a provider to receive services after a period of not receiving health care. Due to data system limitations, it is difficult to estimate how many PLWH in Maryland or the Baltimore-Towson MSA have been engaged in HIV primary medical care (PMC), have dropped out, and therefore need to be reengaged. Section 7.1.1 discusses these limitations and gives an estimate for the unmet need.

7.1.1 Needs Assessment

A needs assessment is paramount in determining what services are needed, the level of demand for services, and any gaps in services. In terms of the data limitations described above, estimates are only available concerning the total number of PLWH who are not in care, but current data systems do not track whether or not these PLWH were ever in care in the past. The Department of Health and Mental Hygiene’s Infectious Disease and Environmental Health Administration (IDEHA) provides both Ryan White programs (parts A and B) with a calculation of the “unmet need framework” that estimates 1) how many people living with HIV/AIDS (PLWH) there are in Maryland and in the Baltimore Part A eligible metropolitan area (EMA) and 2) how many of these PLWH are presumed not to be receiving primary HIV medical care by the proxy measures used in the calculation. The current unmet need estimates that there are 17,015 PLWH in the Baltimore-Towson MSA, of whom 6,965 (40.9%) were not receiving primary HIV medical care.² While the current data system does not track if any of these were previously in care, it is safe to assume that at least some of these PLWH were previously in care and need reengagement.

¹ Thomas P. Giordano. 2010. “Retention In HIV Care: What The Clinician Needs To Know.” Presentation given at the 13th Annual Ryan White HIV/AIDS Program Clinical Conference, IAS-USA, August 24, slides 7 and 8. Internet site (www.iasusa.org/keyslides/hrsa/2010/Giordano.ppt), downloaded February 5, 2011.

² Baltimore City Health Department (BCHD), Ryan White Office. 2011. *Baltimore Eligible Metropolitan Area FY 2011 Ryan White Part A and Minority AIDS Initiative Application*. Baltimore, Md.: October, attachment 6. (*Baltimore FY2011 Part A Application*.)

7.1.2 Performance Indicators

As described in Intervention 6 and in the preceding section, outreach, referrals and linkages are critical to ensure retention in care and improving health for PLWH. Since the intent of the federal Ryan White program is to address the needs of people with HIV by providing “primary health care and support services that enhance access to and *retention* in care”³ (emphasis added), many of the Ryan White activities in the Baltimore-Towson statistical area center around retaining HIV-positive individuals in medical care. Part A outreach services, for instance, not only identify those who are HIV positive and do *not* know their status, but also those who are positive, *do* know their status but who are not in care. In FY 2008, 74.4 percent of the HIV-positive clients identified through Part A MAI outreach had been *unknown* to the outreach provider prior to services rendered; the other quarter were therefore *already known* clients who were re-engaged in care.⁴

Because missed visits have been linked to poorer HIV-related health outcomes, adherence to medication and survival,⁵ treatment services in the region collect kept appointment data as an indicator for retention in care. Part A-funded programs track clients’ kept appointments of initial and follow-up primary care visits to measure client level outcomes in services such as Minority AIDS Initiative outreach. Client-level outcomes resulting from MAI outreach services have improved over time. The percentage of HIV-positive clients identified through MAI outreach who attended initial and follow-up PMC appointments increased from 36% in FY 2006 to 79% in FY 2008.⁶

Retention or reengagement of HIV-positive clients in care becomes more challenging when the clients present with other co-morbid conditions such as substance abuse, a mental-health diagnosis or homelessness. In its analysis of the MAI/Part-A funded outpatient ambulatory health services (OAHS), co-morbidity subcategory in FY 2009, the Baltimore City Health Department (BCHD) found that clients with multiple co-morbid conditions had an average kept-appointment rate of only 57 percent (as opposed to the 79 percent kept-appointment rate found among outreach services’ general clientele). More specifically, BCHD’s contract-monitoring system found that within the OAHS-co-morbidity category:

- The primary medical care kept-appointment rate was 65 percent.
- The mental health kept-appointment rate was 59 percent.
- The substance abuse kept-appointment rate was 55 percent.
- The case management kept-appointment rate was 58 percent.⁷

³ U.S. Health Resource and Services Administration, HIV/AIDS Bureau. 2011. *Ryan White HIV/AIDS Program Manual*. Internet site (<http://hab.hrsa.gov/tools/parta/parta/ptAsec1chap1.htm>), downloaded Feb. 6, 2011.

⁴ Baltimore City Health Department (BCHD), Ryan White Office. 2009. *Minority AIDS Initiative Ryan White Part A – FY 2008 12-Month MAI Expenditure-Service Delivery Report*. Baltimore, Md.: BCHD, November 23. Internet site (http://balpc.intergroupinfo.com/doc/doc/132/Outreach_pdfsam_FY08MAI_12mthFY_2008_Final_MAI_12_Month_ESD_Report_Nov_20_2009.pdf), downloaded Feb. 1, 2011. (*Baltimore Part A MAI FY2008 12-month ESD*.)

⁵ Michael Mugavero. 2008. “Improving Engagement in HIV Care: What Do We Do?” *Topics in HIV Medicine* 16(5), December. Internet site (<http://www.iasusa.org/pub/topics/2008/issue5/156.pdf>). Downloaded February 1, 2011. Michael Mugavero. 2008. “Improving Engagement in HIV Care: What Do We Do?” *Topics in HIV Medicine* 16(5), December. Internet site (<http://www.iasusa.org/pub/topics/2008/issue5/156.pdf>). Downloaded February 1, 2011.

⁶ Baltimore City Health Department, Ryan White Office. 2007. *Ryan White Title I – FY 2006 Twelve Month Final Expenditure Services Delivery Report Narrative as of June 30, 2007*. Baltimore, Md.: BCHD, p. 45.

⁷ Baltimore City Health Department, Ryan White Office. 2010. *Minority AIDS Initiative Ryan White Part A – FY 2009 9-Month MAI Expenditure-Service Delivery Report*. Baltimore, Md.: BCHD, July, p. 8. (*Baltimore Part A MAI FY 2009 9-month ESD*)

7.2 Policies and Procedures

The continuum of care funded by Ryan White incorporates practices and principles intended to maximize retention in care and reengagement of those who are not stabilized in care. For example, in addition to the delivery of primary HIV medical care, Ryan White also funds services that assist clients with housing, legal issues, transportation, substance abuse or mental health problems, and other potential obstacles to remaining in medical care.

Michael Mugavero reports the key factors in improving engagement in care include:

- Linkage and retention are distinct processes.
- Engagement in care is vital for HIV treatment success at the individual and population levels.
- Early missed visits can identify patients at high risk of poor health outcomes.
- Engagement in care is worse in groups bearing a disproportionate burden of the HIV epidemic in this country.
- Ancillary services have a crucial role in improving linkage to and retention in care.⁸

In addition, certain service category standards of care include specific requirements related to retention or re-engagement in care. The standards of care for the Ryan White outpatient ambulatory health services require various components related to retaining clients in care. Upon intake, providers are required to investigate any past problems with clients' treatment adherence. Providers are expected to address co-morbid conditions that can impede treatment adherence, such as mental health or substance abuse disorders, and any mental health or substance abuse treatment is required to be integrated with the client's HIV medical care. As part of addressing such problems, providers must maintain "problem lists" that include histories and activities related to mental health or substance abuse disorders. To further support retention in care,⁹ primary care providers are also required to coordinate with social work or case management services and to provide HIV education to clients and their families.¹⁰

Ryan White clients are also retained in care through medical case management (MCM),¹¹ a Ryan White core medical category,¹² and case management (non-medical),¹³ a support service category. In addition to helping facilitate linkages to psychosocial and other services that can address obstacles to retention in care, case managers also help schedule, and monitor compliance with, medical appointments; follow up on medical visits; and perform ongoing assessments of clients' and their key family members' needs and personal support systems. Case-management providers also deliver direct treatment adherence counseling, which includes development of personalized service plans, coordination of indicated services, monitoring service plan efficacy, and periodic reevaluation and adaptation of plans as needed.

⁸ Michael Mugavero. 2008. "Improving Engagement in HIV Care: What Do We Do?" *Topics in HIV Medicine* 16(5), December. Internet site (<http://www.iasusa.org/pub/topics/2008/issue5/156.pdf>). Downloaded February 1, 2011.

⁹ DHMH, IDEHA. 2007. *Commitment to Excellence: Center for HIV Health Services SFY06 Quality Assurance and Policy Manual*. Baltimore, Md.: DHMH, pp. 98-106. (*CHHS QAP Manual*)

¹⁰ InterGroup Services, Inc. (IGS). 2009. "Service Category Standards of Care: Outpatient Ambulatory Health Services - Adult." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site <http://balpc.intergroupinfo.com/doc/doc/49/OAMCstandards2010.pdf>, downloaded February 10, 2011.

¹¹ DHMH. 2007. *CHHS QAP Manual*, pp. 118-122.

¹² IGS. 2009. "Service Category Standards of Care: Medical Case Management Services (including Treatment Adherence)." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/doc/doc/156/MCMstandards2010_DPM.pdf), downloaded Feb. 9, 2011.

¹³ IGS. 2003. "Case Management." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/65/CaseManagement.pdf>), downloaded Feb. 9, 2011.

Re-engagement in care is supported by the Ryan White Part A category outreach services, one of the key components of which is to “engage or re-engage HIV-positive individuals into the continuum of care.”¹⁴

To re-engage clients in care, providers use the following methods:

- Use of patient navigators to escort clients to appointments and decrease no-show incidences.
- Decrease no-show incidence through timely follow-up with clients and referral of frequent no-show cases to outreach and case management teams.¹⁵

As with Ryan White Part A, the Part B and D programs anchor their engagement and retention services in a care-coordination model using medical case management. Parts B and D support medical case management located in a variety of clinic settings from local health department sites to community health clinics to HIV specialty care centers within hospitals. Clients referred to MCM have access to interventions that engage and maintain them in care (e.g., appointment reminders, peer navigation services, client assessment of service needs, referrals for support services such as emergency financial assistance, nutritional supplements or temporary housing). Because Part D’s programs cover women, infants, children and youth, its care coordination model also covers supportive services to caregivers responsible for maintaining HIV-positive infants, children and youth in care.¹⁶

Maryland has specific standards of care in place under Part B for transitional case management services for HIV-infected pre-release inmates who will be transitioning back into the community.¹⁷ The standards address the needs of a community that is at high risk of not reengaging in care upon being released from prison and requires providers to make contact with HIV-infected inmates anywhere from one to three months prior to release to assist these individuals to enter medical care and support services upon release.¹⁸ Services include the development of a transitional care plan, assistance in applying for the MADAP program, referral to a substance abuse program as necessary, housing arrangement, and a follow-up meeting two weeks post release.

Maryland managed care organizations (MCOs) under HealthChoice, the state’s Medicaid MCO program, are also required to provide certain services that may support retention in care. For example, MCOs must provide people living with HIV (PLWH) with the option of accessing HIV/AIDS case-management services at any time after HIV diagnosis. Enrollees have access to a full range of benefits, including support services. MCOs are required to provide navigation assistance to help adherence to and retention in care. Those who are HIV positive and are substance abusers are provided substance abuse treatment within 24 hours of request. Psychosocial assessments are required services as part of HealthChoice to help identify potential obstacles to care.¹⁹

¹⁴ IGS. 2010. “Outreach Services Standards of Care: Outreach Services.” Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/138/OutreachStandards2010.pdf>), downloaded Feb. 9, 2011.

¹⁵ BCHD. 2010. *Baltimore Part A MAI FY 2009 9-month ESD*, p. 14.

¹⁶ Department of Health and Mental Hygiene, Infectious Disease and Environmental Health Administration. 2009. *Maryland Part D FY2009 Competitive Application Narrative*. Baltimore, Md.: DHMH, p. 16.

¹⁷ DHMH. 2007. *CHHS QAP Manual*, p. 148.

¹⁸ DHMH. 2007. *CHHS QAP Manual*, p. 149.

¹⁹ Department of Health and Mental Hygiene, Health Choice Program. 2010. “What Are the MCO Standards Concerning Special Needs Populations?” Internet site (<http://www.dhmf.state.md.us/mma/healthchoice/>), downloaded February 5, 2011.

7.3 Description of Current Services

Determining where a client is on the continuum of engagement and retention is at the foundation of current care. The distinction between a PLWH being aware of his or her status and continuously engaged in care is important in determining linkages to services and providers. Section 7.3 elaborates on current strategies and services that are currently available in the MSA in terms of treatment adherence and retention. Treatment adherence services fall into several categories, all of which play an important role in retaining and re-engaging patients in primary HIV medical care. In general, the more patients are fully engaged in comprehensive care, the better their health outcomes will be. The most basic level of treatment adherence, appointment adherence, simply seeks to ensure that patients continue to receive medical evaluation and advice. Appointment adherence services support both the retention of in-care patients and re-engagement of care by attempting to ensure that initial appointments are kept. Care plan adherence supports retention in care by seeking to ensure that patients are actually following medical advice, increasing the likelihood that patients will experience the intended benefits of the care they are receiving. The latter is true of medication adherence, as well, although medication adherence plays a specific medical role in HIV care: when patients taking combination therapies do not follow prescribed dosages precisely, or when they take their medications irregularly, they can develop resistances not only to their medications but to medications they are not yet taking. Such resistances complicate their care and can lead to poor health outcomes for the patients, which in turn may cause them to become skeptical toward and disengage from care.

The mechanism for linking HIV-positive to care described under intervention 6 are also utilized for re-engaging clients who have dropped out of care. These include active linkage to HIV care and support services for previously diagnosed HIV-positive clients who are served by HIV testing programs, HIV/STI partner services or linkage-to-care outreach programs. Additionally, HIV care providers may directly request assistance from local health department Disease Intervention Specialist (DIS) or linkage-to-care outreach staff for PLWH who have fallen out of care.

Examples of retention activities found in the MSA include a peer/paraprofessional client navigation system, crisis intervention, care coordination, effective distribution of emergency financial assistance, access to transitional housing and food, as well as expedited processing to get Maryland AIDS Drug Assistance Program (MADAP) coverage and other public health insurance status. There are currently 44 providers in the MSA funded under the Ryan White program. Of the 44, seven are funded under parts B and D and state programs to provide treatment adherence services. Two of the providers support retention and adherence within a pediatric clinic setting, supporting both the pediatric client and the caregivers responsible for the child's care. One provider runs an adolescent clinic, serving both those clients who acquired HIV through perinatal transmission and those diagnosed as adolescents. In addition, there are 14 providers funded under Part A to provide medical case management, including treatment adherence services.²⁰

²⁰ Baltimore City Health Department (BCHD), Ryan White Program. 2010. "Fiscal Year 2010 Ryan White Part A Funded Providers Listing as of April 19, 2010." Internet site (<http://www.baltimorepc.org/v2/files/pdf/FY%202010%20Provider%20Listing%20By%20Category%20-%20April%2019,%202010.pdf>), downloaded Feb. 11, 2011.

FY 2011 Funding for Retention Activities in the Baltimore-Towson MSA		
<i>Funding Stream</i>	<i>Service Category</i>	<i>Amount</i>
Ryan White Part A*	Treatment Adherence	\$1,436,706
Ryan White Part B**	Medical Case Management	\$341,045
Ryan White Part B MAI**	MAI Outreach	\$272,567
MADAP Flex**	Treatment Adherence	\$691,673
State Special**	Treatment Adherence	\$303,245

*FY 2010; Source: IGS. 2011. "Medical Case Management — Treatment Adherence — EMA." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/762), downloaded Feb. 7, 2011.

** FY 2011. Source: State of Maryland, Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration. 2010. *SFY11 Baltimore City Awards Final released May 5, 2010*.

B: Goal Setting

Goals:

- Increase the percentage of HIV-positive clients who are engaged in ongoing, comprehensive HIV medical care and support services.

Rationale:

Current estimates of the number of persons living with HIV who are not engaged in HIV care indicate a need to significantly increase our investment in efforts to link HIV-positive persons to HIV medical care and support services, and support clients in maintaining ongoing engagement in care. Linkage to HIV medical care and treatment play an essential role in preventing HIV infection by reducing viral load and providing PLWH with support for reducing high-risk sexual and/or needle sharing behaviors. The transmission rates for PLWH who are aware of their serostatus calculated as part of the mathematical modeling for the Baltimore-Towson MSA are based on 49% of PLWH receiving treatment. Therefore, increasing the percentage of PLWH who are linked to HIV medical care and treatment would result in a further decrease in HIV transmission rates for PLWA in the Baltimore-Towson MSA.

Required Intervention #8: “Implement policies and procedures that will lead to the provision of antiretroviral treatment in accordance with current treatment guidelines for HIV-positive persons”

A: Situational Analysis

8.1 Epidemiological Information and Need

8.1.1 Need for Antiretroviral (ARV) Treatment

As reported through December 31, 2010, there were 17,336 PLWH in the Baltimore-Towson MSA by the end of 2009, of whom 9,622 (55.7 percent) had been diagnosed with AIDS. During 2009, the state reported 1,038 new AIDS diagnoses, as reported through December 31, 2009¹; of those, 570 or 54.9 percent are from the Baltimore-Towson MSA.² In the MSA, living AIDS cases have increased steadily from 1985 to 2008, from 92 to 9,622.³

People whose disease has progressed to AIDS are at increased risk of severe complications or death and therefore require more frequent, intensive, and expensive medical interventions. Reducing the number of new AIDS cases, then, can improve individual health outcomes and alleviate significant demands on public-health resources.

HIV-positive people can delay the onset of AIDS through active enrollment in primary medical care and adherence to antiretroviral (ARV) treatment, a drug regimen that slows the reproduction of the HIV virus in the body. The most effective mode of ARV treatment, highly active antiretroviral therapy (HAART), combines at least three ARV drugs that attack different parts of the virus or stop it from entering blood cells.⁴ Data show that access, adherence, and response to HAART affect whether or when HIV progresses to AIDS.⁵ In a study reported by the U.S. Department of Health and Human Services (HHS), “controlled trials in patients with CD4 counts 200 cells/mm³ and/or a history of an AIDS-defining condition provide strong evidence that ART improves survival and delays disease progression in these patients.”⁶ The report also notes that “long-term data from multiple observational cohort studies evaluating earlier ART (>200 cells/mm³) compared with later treatment (<200 cells/mm³) have also provided strong support for these findings.”⁷

Because of the array of health-insurance programs that cover ARV medications, it is difficult to assess the actual number of people living with HIV and/or AIDS (PLWH) who are actively enrolled in a HAART

¹ State of Maryland, DHMH, Infectious Disease and Environmental Health Administration. 2010. *Maryland Part B FY11 Application*. Baltimore, Md.: DHMH, p. 8. (*Maryland Part B FY11 Application*.)

² State of Maryland, Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration. 2010. *Maryland Baltimore-Towson Metropolitan Area HIV/AIDS Epidemiological Profile, Fourth Quarter 2009, Data Reported Through December 31, 2009*.

³ DHMH. 2010. *Epidemiological Profile, Fourth Quarter 2009*, p. 4.

⁴ Kaiser Family Foundation. 2011. “What is HAART?” Internet site: (<http://www.globalhealthreporting.org/diseaseinfo.asp?id=261>), downloaded February 5, 2011.

⁵ U.S. Centers for Disease Control and Prevention (CDC). 2011. “HIV/AIDS Statistics and Surveillance.” Internet site (<http://www.cdc.gov/hiv/topics/surveillance>), downloaded February 5, 2011.

⁶ U.S. Department of Health and Human Services (HHS), Office of AIDS Research Advisory Council, Panel on Antiretroviral Guidelines for Adults and Adolescents. 2011. *Guidelines for the Use of Antiretroviral Agents in HIV-1-infected Adults and Adolescents*. Washington, D.C.: HHS, January 10, p. 28 Internet site (<http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>), downloaded Feb. 5, 2011. (*Guidelines for Use*.)

⁷ HHS. 2011. *Guidelines for Use*, p. 28.

regimen. A review of Ryan White funded care found that approximately 67 percent of reviewed HIV-positive clients were on a HAART regimen in FY 2008.⁸

Based on current epidemiological trends, IDEHA has developed a system of estimating unmet need and distributing Ryan White funding to Maryland's counties to meet demand. In this context, "unmet need" is the estimated proportion of PLWH who are aware of their status and are not receiving primary medical care. Specifically, the unmet need estimate identifies the number of PLWH who have not received either a CD4 count or viral load test, or have not utilized antiretroviral medications during the prior year. Data used for identifying Maryland's unmet need regarding medications for HIV/AIDS are gathered through two primary sources: the Maryland AIDS Drug Assistance Program (MADAP) and the Maryland Medicaid Assistance Program. In 2009, the most recent estimate, approximately 41 percent of PLWH in Maryland in 2009 did not receive primary medical services during the prior year.⁹ Estimates specifically for the Baltimore eligible metropolitan area (EMA) — the Part A service area that corresponds to the Baltimore-Towson MSA — reveal that approximately 17,142 (59.1 percent) of PLWH in the region have been actively enrolled in primary medical care, including on antiretroviral medications, over the 2008 to 2009 reporting period.¹⁰

8.1.2 Access to Care

The Baltimore-Towson MSA contains some of the premiere HIV providers in the country. There are a number of ways in which people living with HIV have access to this HIV care and antiretroviral treatment in Maryland. In addition to Medicare and Medicaid, Maryland has had a high risk insurance pool for over a decade, providing access to insurance for people living with HIV. The Ryan White system provides access to care and treatment for those who are uninsured or underinsured. Section 14.3 provides information on the Ryan White funding for primary medical care in the MSA. The Ryan White Part B funding for ADAP in Maryland is sufficient to meet both the existing demand for services for the uninsured and underinsured and the enrollment of new clients in ARV treatment.¹¹

8.1.3 Medical Insurance Coverage

An estimated 494,196 (9.3 percent) of the state's residents were uninsured as of the 2009 reporting period.¹² Among those, 214,096 (43.3 percent of the Maryland-wide figure) live in the Baltimore-Towson MSA, with 78,272 (15.8 percent) residing in Baltimore City and 135,825 (27.5 percent) residing in Baltimore's surrounding counties.¹³

According to Maryland Department of Human Resources estimates, approximately 702,149 (13.2 percent) of Maryland residents are eligible for Medicaid.¹⁴ Of those Medicaid-eligible Marylanders, 371,502 (52.9 percent) live in the Baltimore-Towson MSA, with 198,891 (28.3 percent) living in

⁸ Baltimore City Health Department (BCHD), Ryan White Office. 2010. *Baltimore Eligible Metropolitan Area FY 2011 Ryan White Part A and Minority AIDS Initiative Application*. Baltimore, Md.: October, figure 3. (*Baltimore Part A FY 2011 Application*.)

⁹ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 9.

¹⁰ BCHD. 2010. *Baltimore RW Part A FY 2011 Application*, attachment 6.

¹¹ BCHD. 2010. *Baltimore RW Part A FY 2011 Application*, pp. 22-23.

¹² State of Maryland, Department of Health and Mental Hygiene (DHMH), Family Health Administration. 2009. "Maryland Behavioral Risk Factor Surveillance System, 2009." Internet site (www.marylandbrfss.org), downloaded February 5, 2011.

¹³ DHMH. 2009. "Maryland Behavioral Risk Factor Surveillance System, 2009."

¹⁴ State of Maryland, Department of Human Resources (DHR). 2005. "DHR Fact Pack 2005." Internet site: <http://www.dhr.state.md.us/pi/pdf/fpintr.pdf>, downloaded February 6, 2011. (Hereinafter "DHR Fact Pack 2005.")

Baltimore City and the remaining 172,611 (24.6 percent) living in Baltimore's surrounding counties.¹⁵ Maryland's Medicaid program covers hospital care, physician services, case-management services for HIV/AIDS patients, and low-cost or free prescription drugs.¹⁶ In FY 2009 the total Medicaid enrollment in the state of Maryland was approximately 760,000, including enrollees with Primary Adult Care (PAC) coverage and fee-for-service enrollees. As of June 2009, there were a total of 7,890 HIV/AIDS Medicaid enrollees in the state of Maryland, with 6,169 (78.2 percent) residing in the Baltimore-Towson MSA.¹⁷

In addition to the Maryland Medicaid program, PLWH in Maryland can access health insurance through the Maryland Health Insurance Program (MHIP), a state health insurance plan that provides coverage to Maryland residents who are unable to obtain health insurance due to a health condition. Many PLWH are eligible for prescription drugs and for insurance premium payment assistance through the Maryland AIDS Drug Assistance Program (MADAP). MADAP offers a formulary of 193 medications to qualified Maryland residents, including "all antiretroviral medications and many additional medications to treat opportunistic infections".¹⁸

8.2 Policies and Procedures

8.2.1 Guidelines and Standards of Care

The U.S. Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB) provides guidelines to Ryan White providers on funding primary health care and support services that enhance access to and retention in care, in compliance with four principles: 1) revising care systems to meet emerging needs 2) ensuring access to quality HIV/AIDS care, 3) coordinating services with other health care delivery systems, and 4) evaluating the impact of funds and making needed improvements.¹⁹ The second principle of ensuring access to quality HIV/AIDS care includes a specific focus on the provision of HIV/AIDS medical care, including ARV therapies; HAB states that programs should use quality management programs to ensure that available treatments are accessible and delivered according to established HIV-related treatment guidelines.²⁰

In order to ensure that these guiding principles are addressed, HRSA/HAB has developed further guidance through service definitions and standards of care for Ryan White funded services. The following service categories are most directly applicable to this intervention: outpatient/ ambulatory health services (specifically primary medical care), drug-reimbursement programs, treatment adherence services and case-management services.

HRSA's standards of care for Ryan White Part A primary medical care under outpatient/ ambulatory health services requires the provision of care that is consistent with the Public Health Service's Health Service guidelines. "Such care must include access to antiretroviral and other drug therapies, including

¹⁵ DHR. 2005. "DHR Fact Pack 2005."

¹⁶ Alice Middleton, Planning Administration, Medical Cares Program, Maryland Department of Health and Mental Hygiene (DHMH), State of Maryland. 2010. "Maryland Medicaid Program." Presentation given before the Greater Baltimore Planning Council Priority Setting Meeting FY2011, July 20. (Hereinafter "Maryland Medicaid Program.")

¹⁷ Middleton. 2010. "Maryland Medicaid Program."

¹⁸ DHMH. 2010. *Maryland Part B FY11 Application*, p. 44.

¹⁹ U.S. Health Resources and Services Administration (HRSA). 2011. "Guiding Principles." Internet site (<http://hab.hrsa.gov/history/principles.htm>), downloaded February 4, 2011. Hereinafter ("Guiding Principles.")

²⁰ HRSA. 2011. "Guiding Principles."

prophylaxis and treatment of opportunistic infections and combination antiretroviral therapies.”²¹ HRSA’s standard of care for drug reimbursement programs like MADAP includes ongoing services programs to pay for approved pharmaceuticals and/or medications for persons with no other payment source. Standards of care for treatment adherence and case-management services have also been developed by HRSA/HAB for the Ryan White program. According to the guidelines, treatment adherence services include “the provision of counseling or special programs to ensure readiness for and adherence to complex HIV/AIDS treatments.” Finally, case-management services include a range of client-centered services that link clients with health care and other services to ensure timely and coordinated access to medically appropriate levels of health and support services through ongoing assessment of the client's needs.²² One of the key activities involved in case management is the development of a comprehensive, individualized service plan that includes active enrollment in primary medical care and adherence to treatment.

DHMH also provides guidance to Maryland Medicaid HealthChoice managed-care organization (MCO) providers.²³ According to the guidelines, MCOs must meet specific standards set forth in the regulations for treating seven special needs populations, one of which includes individuals with HIV/AIDS. For individuals who have HIV/AIDS, MCOs must offer HIV/AIDS case-management services at any time after HIV/AIDS diagnosis, even if these services are initially refused. These case-management services must link the enrollee with the full range of available benefits, as well as any needed support services. Viral load and genotypic, phenotypic or other HIV/AIDS drug resistance testing used in the treatment of AIDS will be on a fee-for-service basis and will not be the responsibility of the MCO.²⁴

8.2.2 Efforts to Support Enrollment in Primary Medical Care and Utilization of Antiretroviral Medications

In response to the Maryland HIV/AIDS epidemic, IDEHA has begun an Early Identification of Individuals with HIV/AIDS (EIIHA) initiative to increase identification of individuals who are currently unaware of their HIV/AIDS status and ensure they are enrolled in primary medical care. This initiative not only focuses on increasing the availability of testing and public awareness regarding the disease, it also focuses on strengthening the role of disease intervention specialists within both HIV-prevention and care systems to increase the number of individuals who are actively enrolled and retained in primary medical care.²⁵ EIIHA includes a focus on medical case-management and treatment adherence services for HIV/AIDS medications. EIIHA is a collaborative effort among HIV-prevention and -surveillance staff across the state of Maryland. Representatives of Ryan White Parts B and D funded services and the Baltimore City Health Department (BCHD), representing Ryan White Part A programs for the Baltimore EMA, meet on a monthly basis. MADAP leadership communicates with service providers in these meetings regarding available funding to accommodate the needs of newly identified clients from the EIIHA program, including availability of and access to HIV/AIDS medications.²⁶

²¹ State of Maryland, DHMH, Infectious Disease and Environmental Health Administration, Center for HIV Health Services. 2006. *CHHS Quality Assurance and Policy Manual: Commitment to Excellence*. Baltimore, Md.: DHMH. Internet site (<http://www.dhmh.state.md.us/AIDS/ProviderResources/Treat&Care/2006%20QA%20Manual.pdf>), downloaded Feb. 5, 2011. (Hereinafter *CHHS QAP Manual*.)

²² DHMH. 2006. *CHHS QAP Manual*.

²³ State of Maryland, Maryland Department of Health and Mental Hygiene (DHMH). 2011. “HealthChoice.” Internet site (<http://dhmh.maryland.gov/mma/healthchoice>), downloaded on Feb. 5, 2011. (Hereinafter “HealthChoice.”)

²⁴ DHMH. 2011. “HealthChoice.”

²⁵ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 11.

²⁶ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 13.

8.2.3 Quality Management

IDEHA also works to ensure the effective use of Ryan White Part B funding to address the current HIV/AIDS epidemic in Maryland through the implementation of several quality-management activities that monitor funded programs and acknowledge results. Several of IDEHA's management strategies focus specifically on MADAP and the use of Part B funding for HIV/AIDS medications. One of the key IDEHA quality management activities involves site visits to Part B-funded providers, and includes client chart reviews to ensure adherence to U.S. Public Health Service (USPHS) treatment guidelines and standards of care for primary medical care, case management and other services.²⁷ Quality management personnel also perform site visits to monitor the use of Ryan White funding and identify successes and failures. These personnel use tools such as the programmatic review tool, site visit monitoring reports, and Ryan White program checklists for service area specific reviews, which monitor service utilization by category and by provider.²⁸

The Baltimore City Health Department Ryan White Office produces several Quality Management Reports a year. The purpose is to ensure PLWH in the Baltimore EMA have access to quality care and services. These reports measure each provider's compliance with public health and local standards of care for HIV/AIDS and consistency with the Ryan White CARE Act.

In 2008, CQM reviews of primary medical care services were conducted at 13 agencies that provided outpatient ambulatory health services. Data was collected through via agency checklist, consumer surveys and client chart abstraction to assess providers' adherence to standards of care.²⁹ This process allowed DHMH to conduct performance measurement and quality improvement training at the same time. A debriefing meeting was held at each agency to identify strengths and weaknesses and strategies for improvement.³⁰

Another key quality management activity involves the administering of client-satisfaction surveys, one of which focuses specifically on MADAP. The *MADAP Client Survey* is administered every other year to assess clients' satisfaction with the MADAP program and staff. The results of this survey are reviewed by IDEHA's quality management team and shared with Regional Advisory Committee (RAC) participants to improve MADAP services.³¹

8.3 Description of Current Services

8.3.1 Programs that Promote Access to and Retention in Care

The Ryan White legislation requires that states work to identify individuals with HIV/AIDS who are unaware of their HIV status and refer those individuals to treatment and care. IDEHA's Center for HIV Prevention supports programs using state and federal funds to identify individuals who are HIV positive and refer them to care. Part A, B, C and D programs currently provide comprehensive care, treatment and support services to PLWH throughout the MSA. There are currently over 40 providers of care and

²⁷ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 24.

²⁸ DHMH. 2006. *CHHS QAP Manual*.

²⁹ Baltimore City Health Department (BCHD), Ryan White Office, Clinical Quality Management Program. 2009. "FY08 I EMA Report: OAHs Adult Primary Medical Care." Internet site (www.baltimorehealth.org/info/PMC%20report%20060309%20Final%20.pdf), downloaded March 3, 2011.

³⁰ The results of each review can be found on the BCHD Ryan White Quality Management website at <http://www.baltimorehealth.org/rwreports.html>.

³¹ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 27.

support services for PLWHA in the Baltimore-Towson MSA. An inventory of providers and locations by service type is maintained and made available to the public via the Greater Baltimore Planning Council's website at www.baltimorepc.org. In addition, there are non Ryan White funded primary sites that also provide HIV and other infectious disease specialty treatment, including Sinai Hospital, Mt. Washington Pediatric Hospital, and others. There are currently seven HealthChoice participating MCOs in the state of Maryland: AMERIGROUP Community Care, Medstar Family Choice, Inc., Jai Medical Systems, Maryland Physicians Care, Priority Partners, The Diamond Plan, and United Health Care.³²

The Maryland AIDS Drug Assistance Program (MADAP) is funded by Ryan White Part B to provide FDA-approved medications to low income individuals with HIV disease who have limited or no coverage from private insurance or Medicaid.³³ The state actively works to ensure that low income clients who do not have insurance can obtain it and that those who have insurance can keep it. Maryland encourages clients to enroll in the state's high-risk insurance pool, the Maryland Health Insurance Plan (MHIP), as well as the new federal high-risk insurance plan, and collaborates with MHIP to facilitate the enrollment of eligible clients and to ensure the direct billing to MADAP of premiums for dual MADAP/MHIP clients. The state dedicates staff to coordinating the payment of premiums and medication co-payments for eligible clients who are already enrolled in a private health insurance program or in Medicare Part D. In fact, MADAP requires that all clients receiving Medicare enroll in Medicare Part D for prescription coverage, listing MADAP as a secondary payer.³⁴ IDEHA projects that MADAP will assist 6,900 clients during FY 2011, including assistance with payments for Medicare Part D premiums.³⁵

MADAP offers access to medications for qualified Maryland residents through approximately 1,100 Maryland pharmacies. In addition to the Part B MADAP earmark, program revenue is generated through pharmaceutical rebates, which are then channeled back into the program with priority given to medication assistance.³⁶ Complementary funding sources for HIV-related medications include the Maryland Primary Adult Care (PAC) Program, which provides medication to very low income residents, MHIP (the high-risk insurance pool), and the Veterans' Administration. The two Part A programs in Maryland allocate some funds for emergency drug assistance, but do not have medications programs similar to MADAP.

The federal government provides Medicare coverage for eligible elderly or disabled residents. The Medicare program has two parts: Part A Hospital Insurance and Part B Medical Insurance coverage.³⁷ Medicare Pharmacy Insurance coverage is also available to Medicare recipients, but usually at a cost to the recipient. DHMH also provides Medicaid coverage to individuals determined to be categorically eligible or medically needy. HealthChoice is the name of Maryland's statewide mandatory managed-care program, which provides health care to most Medicaid recipients. Eligible Medicaid recipients enroll in MCOs of their choice and select a primary care provider (PCP) to oversee their medical care. The MCO enrollee selects a PCP who is part of their selected MCO's provider panel either at the time of enrollment with the enrollment broker or once enrolled in their MCO.³⁸

³² State of Maryland, DHMH, Health Choice. 2011. "MCO Member Services Contact List." Internet site (<http://dhmh.maryland.gov/mma/healthchoice/html/mcoserlist.htm>), downloaded on Feb. 2, 2011.

³³ DHMH. 2006. *CHHS QAP Manual*.

³⁴ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 45.

³⁵ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 48.

³⁶ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 44.

³⁷ U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services (CMS). 2011. "Medicare Program — General Information," Internet site: <http://www.cms.gov/MedicareGenInfo/>, downloaded February 4, 2011.

³⁸ DHMH. 2011. "HealthChoice."

Marylanders who are not Medicare beneficiaries and are not eligible for full Medicaid benefits may qualify for coverage of pharmacy benefits through the Primary Adult Care program (PAC). PAC helps low-income adults pay for the full range of pharmacy services covered under the Maryland Medicare and Medicaid programs. The PAC program also covers basic health services provided by one of the managed-care organizations selected through HealthChoice.³⁹ The Maryland Medicaid Pharmacy Program (MPP) provides HIV/AIDS drugs for Medicaid, HealthChoice, PAC, and Medicare Part D enrollees.⁴⁰ Individuals that are dually eligible for both Medicare and Medicaid receive most drugs through the Medicare Part D program. All other drugs are provided by Medicare prescription drug programs (PDPs).

The Baltimore HealthCare Access directory also provides a listing of Federally Qualified Health Centers (FQHCs) or Maryland Qualified Health Centers (MQHCs) that serve low or no-income residents. Other listed facilities participate in the PAC program, and most of them contract with several MCOs. Many of the FQHCs in the MSA, such as Chase Brexton Health Services, Family Health Centers of Baltimore, Health Care for the Homeless, Park West Hidden Medical Center, and Total Health Care, provide full-service health care for PLWH in the Baltimore-Towson MSA, including primary medical care and medication management services.⁴¹

8.3.2 Funding Streams

Maryland has no legislative policies that prevent or hamper PLWH access to primary medical care or medications. There are no waiting lists for any HIV-care services or for enrollment in MADAP.⁴² In addition to private insurance, Medicaid and Medicare funding, federal Ryan White funding promotes access to and retention in HIV care for those who are uninsured or underinsured. Outpatient Ambulatory Care in the Baltimore-Towson MSA is funded by Ryan White Part A (for the Baltimore EMA), Part B, Part C (through early intervention at four community health centers), and Part D. Many consumers receive services from federally qualified health centers funded by HRSA's Bureau of Primary Health Care. In addition, IDEHA expends state general funds to support regional HIV specialty care in rural regions of the state.

The MADAP program provides access to medications in two ways: through direct payment for medications for PLWH who are uninsured, and by assisting PLWH who are insured with payments for premiums, medication co-pays and deductibles. In CY 2010, MADAP expended \$8,905,872 to purchase HIV-related medications for 3,930 PLWH and an additional \$6,903,501 in insurance premium payments for 1,280 PLWH in the Baltimore-Towson MSA.

Other funding for primary medical care services is also available through the Minority AIDS Initiative (MAI) and through other Ryan White service categories, including medical case management's treatment adherence services, among other categories. Medical case management treatment adherence was funded primarily by Ryan White Part A funding in the Baltimore-Towson MSA in FY 2010

³⁹ State of Maryland, Department of Health and Mental Hygiene (DHMH). 2011. "Primary Adult Care (PAC) Program." Internet site (<http://dhmh.maryland.gov/mma/pac/index.htm>), downloaded on Feb. 5, 2011.

⁴⁰ State of Maryland, Department of Health and Mental Hygiene (DHMH). 2011. "Maryland Medicaid Pharmacy Program." Internet site (<http://dhmh.maryland.gov/mma/mpap>), downloaded on Feb. 5, 2011.

⁴¹ BHCA. 2010. *Guide*, pp. 14, 19.

⁴² DHMH. 2010. *Maryland RW Part B FY11 Application*, pp. 19-20.

with a \$1,436,706 allocation and is also scheduled to receive Ryan White Part B funding in FY 2011.⁴³ Additionally, in FY 2011 IDEHA has proposed to redirect over 1 million dollars towards expanded medical case management and treatment adherence services for PLWH in the Baltimore-Towson MSA.⁴⁴ Ryan White Part A and MAI funding for medical case-management services in the MSA served 2,188 and 390 clients, respectively, in FY 2009.⁴⁵ Part A funding for primary medical care served 6,724 clients in the MSA in FY 2009.⁴⁶

B: Goal Setting

Goals:

- Maintain and monitor standards of care that support the provision of treatment in accordance with Public Health Service (PHS) guidelines.

Rationale:

There are currently comprehensive mechanisms in place in the Baltimore-Towson MSA to update, communicate and monitor the provision of HIV care according to PHS guidelines. There are currently adequate public and private funding resources for HIV medication to enable provision of HIV care in accordance with the PHS guidelines for PLWH in the Baltimore-Towson MSA.

⁴³ InterGroup Services, Inc. (IGS). 2011. "Medical Case Management — Treatment Adherence." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/762), downloaded Feb. 7, 2011.

⁴⁴ DHMH. 2010. *Maryland RW Part B FY11 Application*, p. 48.

⁴⁵ IGS. 2011. "Medical Case Management — EMA." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/642), downloaded Feb. 7, 2011.; IGS. 2010. "Medical Case Management — EMA (MAI)." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/763), downloaded Feb. 7, 2011.

⁴⁶ IGS. 2011. "Scorecard, OAHS — Primary Medical Care (PMC) — (EMA)." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/643), downloaded Feb. 7, 2011.

Required Intervention #9: “Implement interventions or strategies promoting adherence to antiretroviral medications for HIV-positive persons”

A: Situational Analysis

9.1 Epidemiological Information and Need

Some 17,015 people were known to be living with HIV/AIDS on December 31, 2009 in the Baltimore Ryan White Part A eligible metropolitan area (EMA), which corresponds to the boundaries of the Baltimore-Towson MSA.¹ According to the unmet-need estimate 4,523 residents were unaware that they are living with HIV/AIDS as of December 31, 2008.² In addition, it is believed that about 6,965 people living with HIV/AIDS (PLWH) in the MSA know their HIV-positive status but, for various reasons, are not receiving treatment for HIV.³ Both these sets of individuals, those who are unaware that they are HIV positive, and those who know their status but who are not in care, need to be identified and linked into the care continuum. Once connected to a care provider, they may require additional supportive services to assist them in maintaining appointments and adhering to a care plan. It is estimated that 10,050 PLWH in the Baltimore-Towson MSA are receiving HIV care.⁴ It is essential that these individuals continue to attend regular HIV medical appointments to ensure optimal treatment for their HIV/AIDS.

The utilization of HIV medications in the Baltimore-Towson MSA continues to increase as AIDS mortality rates decrease and more clients manage their HIV/AIDS with antiretroviral medications. Allocation and expenditure of Maryland ADAP funding through Ryan White Part B increased from \$26,626,484 in FY 2005⁵ to \$32,184,000 in FY 2010, of which 47% were spent in the Baltimore-Towson MSA.⁶ In a 2009 systematic review of 606 medical case-management patient charts, the Baltimore City Health Department (BCHD) Ryan White Office’s Clinical Quality Management program discovered that 75% of clients were on antiretroviral therapy, compared to 57% in 2004.⁷ More clients receiving antiretroviral medications equates to a greater potential need for treatment adherence services.

9.1.1 Need for Treatment Adherence Services

Regular visits with a primary care provider, and taking medications as prescribed by providers, are essential to managing HIV/AIDS. Optimal treatment outcomes are achieved when patients take antiretroviral medications as prescribed and adhere to their overall care plan. Antiretroviral medication regimens, especially in combination with other medications, are complex to manage and are a lifelong commitment. According to the Federal Panel on Antiretroviral Guidelines for Adults and Adolescents,

¹ Colin Flynn, Chief, Center for HIV Surveillance and Epidemiology, IDEHA, Maryland DHMH. 2010. “HIV Epidemiological Data for Prevention Planning in Maryland.” Presentation dated Feb. 4. Internet site (<http://www.dhmm.state.md.us/AIDS/Data&Statistics/CPGEpi2010.pdf>), downloaded Feb. 5, 2011.

² Baltimore City Health Department (BCHD), Ryan White Office. 2011. *Baltimore Eligible Metropolitan Area FY 2011 Ryan White Part A and Minority AIDS Initiative Application*. Baltimore, Md.: October. (*Baltimore RW Part A FY 2011 Application*.)

³ BCHD. *Baltimore RW Part A FY 2011 Application*, p. 80.

⁴ BCHD. *Baltimore RW Part A FY 2011 Application*, p. 80.

⁵ U.S. Health Resources and Services Administration (HRSA), HIV/AIDS Bureau. 2006. *Part B FY05 Final Expenditure Report*. Internet site (<ftp://ftp.hrsa.gov/hab/Title%20II%20Expenditures%20FY2005%20web.pdf>), downloaded Feb. 5, 2011.

⁶ InterGroup Services, Inc. (IGS). 2011. “AIDS Drug Assistance Program (ADAP): Other Funding Sources.” Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/other_funding_sources/index_parsed?category_id=13), downloaded Feb. 5, 2011.

⁷ BCHD. *Baltimore RW Part A FY 2011 Application*.

adherence to HIV care — attendance at clinic visits, taking medications, and following care plans — can be impacted by many factors, including but not limited to: co-morbid conditions (e.g. active substance abuse), psychosocial issues, literacy levels, medication side-effects, stigma, age-related issues, treatment fatigue, and difficulty taking medication, says.⁸ Attendance at medical appointments can be compromised by limited access to transportation and inability to take time away from work or household responsibilities. Therefore, it is essential for HIV service providers to work with clients to identify potential barriers to treatment adherence and work to establish a care plan that includes strategies to overcome barriers.

9.2 Policies and Procedures

9.2.1 Standards of Care for Treatment Adherence Services

Treatment adherence services funded through Ryan White Parts A, B and D have specific standards of care outlining provider responsibilities for the provision of treatment adherence services. The Maryland Department of Health and Mental Hygiene's (DHMH) Infectious Disease and Environmental Health Administration (IDEHA) developed program treatment adherence standards of care in 2006 for IDEHA Ryan White and state-funded programs as part of the Center for HIV Health Services' quality assurance and policy manual.⁹ IDEHA defines treatment adherence services as the "provision of counseling or special programs to ensure readiness for and adherence to complex HIV/AIDS treatments."¹⁰ Key activities include "initial assessment of service needs, development of a comprehensive, individualized service plan, coordination of services required to implement the plan, client monitoring to assess the efficacy of the plan and periodic reevaluation and adaptation of the plan as necessary over the life of the client. It includes client-specific advocacy and review of utilization of services. This includes all types of case management including face-to-face, phone contact, and any other forms of communication."¹¹

Using a client centered approach, IDEHA's standards of care for primary medical care treatment adherence related requirements for providers including: educating clients about their medications and the importance of maintaining their care plan; documenting treatment adherence problems; screening clients for treatment adherence barriers; and referring clients to services that can help alleviate barriers to managing their care. All service category standards of care define provider competency requirements for the delivery of services.

As part of treatment adherence interventions, IDEHA programs require that clients receiving antiretroviral medications attend follow-up appointments at least once every four months. Providers referring clients to treatment adherence services must provide documentation of client missing at least

⁸ U.S. Department of Health and Human Services (HHS), Office of AIDS Research Advisory Council, Panel on Antiretroviral Guidelines for Adults and Adolescents. 2011. *Guidelines for the Use of Antiretroviral Agents in HIV-1-infected Adults and Adolescents*. Washington, D.C.: HHS, January 10. Internet site (<http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>), downloaded Feb. 5, 2011.

⁹ Maryland DHMH, IDEHA, Center for HIV Health Services. 2006. *CHHS Quality Assurance and Policy Manual: Commitment to Excellence*. Baltimore, Md.: DHMH, p. 2. (*CHHS QAP Manual*.)

¹⁰ DHMH. 2006. *CHHS QAP Manual*, p. 15.

¹¹ IGS. 2009. "Medical Case Management Services (including Treatment Adherence)." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/doc/doc/156/MCMstandards2010_DPM.pdf), downloaded Feb. 5, 2011. (Hereinafter "MCM Standard.")

three appointments or identify the client as one who attends medical appointments, but does not follow medication regimen, according to the DHMH *CHHS Quality Assurance and Policy Manual*.¹²

The Ryan White Part A programs funded by the Baltimore City Health Department further follow Part A specific standards of care for outpatient/ambulatory health services (OAHS), primary medical care services for adults and pediatrics, include directives to address treatment adherence. The standards for OAHS adult primary medical care require evaluation of clients' adherence history, assessment of potential adherence barriers, and documentation of regular discussions with client regarding medication regimens and potential side effects.¹³ Similarly, the standards of care for the provision of OAHS pediatric primary medical care require documentation of discussions with child and/or caregiver regarding history of compliance problems, medication regimens, and potential treatment side effects.¹⁴

IDEHA defines policies and procedures for the delivery of treatment adherence services in the standards of care for Ryan White Part B service category: ambulatory outpatient medical, treatment adherence. Treatment adherence is defined in this policy as, "the extent to which a client's behavior matches the prescribed health care regimen determined through a shared decision making process between the client and health care provider." The standards stress the importance of a team approach to the provision of treatment adherence services.¹⁵

Policies for the provision of Ryan White Part A funded treatment adherence activities are outlined in the standards of care for the service category, medical case management (of which treatment adherence is a component). The key services provided through Ryan White Part A medical case management/treatment adherence include activities that help clients follow medication regimens, keep medical appointments and follow through on individual care plans. The standards of care outline client eligibility for treatment adherence services as the client's having problems with one or more of these areas. Providers of these services are required to screen clients for potential treatment adherence barriers, including at minimum: psychiatric illness; drug/alcohol use; lack of education about HIV treatment; unstable housing; lack of a social support network; discomfort with disclosure of HIV status; limited access to health care; language barriers; low literacy levels; or other personal or family related crises that might impact adherence.¹⁶ The standards of care specify that Ryan White Part A funded treatment adherence services can be provided through either the sole support or the team support model. Regardless of the chosen care model, all funded providers must provide the minimum required services outlined in the standards.

The Greater Baltimore HIV Health Services Planning Council, the metropolitan area's Part A planning body, allocates Ryan White Part A OAHS primary medical care funding specifically to provide services to clients with co-morbid conditions (i.e., conditions of substance abuse, mental health or homelessness). As described in the service category standards of care, co-morbidity services are specifically intended to "address the barriers that co-morbidity creates for clients in seeking and remaining in medical

¹² DHMH. 2006. *CHHS QAP Manual*, pp. 107-110.

¹³ IGS. 2009. "Outpatient Ambulatory Health Services: Adult." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/49/OAMCstandards2010.pdf>), downloaded Feb. 5, 2011.

¹⁴ IGS. 2005. "Primary Medical Care — Pediatric Services." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/60/PMCPedFY2006.pdf>), downloaded Feb. 5, 2011.

¹⁵ DHMH. 2006. *CHHS QAP Manual*, p. 107.

¹⁶ MCM Standard

treatment....”¹⁷ Client eligibility for receiving co-morbidity services is directly related to treatment adherence. Clients must have demonstrated difficulty adhering to at least three out of the five following care-plan components: taking medications as prescribed; following a care plan; attending appointments for medical services; attending appointments for substance-abuse treatment; or attending appointments for mental-health treatment. The standards of care define the policies and procedures for providing services to the special population of clients with co-morbid conditions so that they can remain engaged in the care continuum and better adhere to their medical treatment plan.

9.3 Description of Current Services

9.3.1 Funding for Treatment Adherence Services

In the Baltimore metropolitan area, treatment adherence services are provided as a component of medical case management under Ryan White parts A, B, C and D. Additionally, state special funds are allocated to conduct special treatment adherence services. See table below for the most recent funding allocations for programs providing treatment adherence services, by funding stream.

FFY 2010 Funding for Treatment Adherence Services in the Baltimore-Towson MSA	
IDEHA, Special State Funding*	\$303,245
Ryan White Part B, medical case management*	\$341,045
MADAP-Flex*	\$691,673
Ryan White Part A, medical case management – treatment adherence**	\$1,436,706
Ryan White Part A Minority AIDS Initiative (MAI), medical case management***	\$333,173

* Funding for SFY 2011 (July 1, 2010-June 30, 2011) Source: Maryland, DHMH, IDEHA

** Funding for FFY 2010 (March 1, 2010-February 28, 2011) Source: IGS. 2011. “Medical Case Management — Treatment Adherence — EMA.” Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/762), downloaded Feb. 11, 2011.

*** Funding for MAI FY 2010 (August 1, 2010-July 31, 2010) Source: IGS. 2011. “Medical Case Management — EMA (MAI).” Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/795), downloaded Feb. 11, 2011.

Ryan White Part C providers provide treatment adherence services through case management services as part of its early intervention activities. HRSA awards Ryan White Part C funding to four health centers in the Baltimore-Towson MSA to conduct EIS, which includes risk assessment, patient education, and referrals to services such as PWP.¹⁸ In the Baltimore-Towson MSA, 4 agencies received Part C funding in the current fiscal year, some of which funds treatment adherence activities.¹⁹

¹⁷ IGS. 2005. “Primary Medical Care — Co-morbidity Services.” Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/57/PMCcoMorbidityFY2006.pdf>), downloaded Feb. 5, 2011. (Hereinafter “Co-morbidity Standard.”)

¹⁸ IDEHA, Center for HIV Care Services.

¹⁹ U.S. Health Resources and Services Administration (HRSA). 2011. “Ryan White Part C Outpatient EIS Program (H76).” Internet site (<http://granteefind.hrsa.gov/searchbyprogram.aspx?select=H76&index=192&year=>), downloaded Feb. 13, 2011.

Provider	Ryan White Part C Award for FY 2010
Chase Brexton Health Services	\$1,169,001 - Community-based early intervention
People's Community Health Center	\$341,250 - Community-based early intervention
Sinai Hospital of Baltimore	\$83,600 - Capacity development
Total Health Care	\$603,748 - Community-based early intervention \$82,415 - Capacity development

Source: U.S. Health Resources and Services Administration. 2011.

Ryan White Part D services for women, infants, children, and youth include the provision of treatment adherence activities as part of the package of services provided through this provider network. For the state fiscal year 2011 (July 1, 2010 to June 30, 2011), \$929,978 was allocated to Ryan White Part D services and \$363,155 for Part D services specifically targeting youth.²⁰

Other treatment adherence services are provided as a part of medical and non-medical case management services. Since 2002, the University of Maryland's Institute of Human Virology (IHV) has conducted treatment adherence services through its JACQUES Initiative, a national pilot program. Initial funding for the pilot project (\$400,000) was provided by the Baltimore-based Abell Foundation, with additional funding through IDEHA.²¹

As discussed in section 9.2.2, several other services are provided to HIV-infected clients experiencing homelessness, mental health problems or substance dependence, and who are experiencing problems maintaining adherence to treatment and care plans for their HIV and/or managing their co-morbidity. In FY 2010, the council funded OAHS primary medical care co-morbidity at \$202,788 in Ryan White Part A and then with an additional \$360,764 in MAI funds.²³

FFY 2010 Funding for Housing Assistance for PLWH in the Baltimore-Towson MSA	
Housing Opportunities for Persons with AIDS (HOPWA)	\$10,975,042
Ryan White Part A housing services	\$1,058,560
City of Baltimore supportive housing services	\$8,187,593

*Housing and support services not exclusive to HIV-infected people.

Source: IGS. 2011. "Housing Services — EMA." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/769), downloaded Feb. 11, 2011.

The Baltimore-Towson MSA receives funding for housing assistance and support services to stabilize homeless PLWH so that they can enter or reenter the HIV service care continuum. The table above outlines funding allocations for housing services in 2010, by funding stream.

Medical transportation is funded through the Ryan White program (Part A, Part B and MAI) for PLWH unable to afford transportation to get to and from healthcare appointments. The table below shows funding allocations for medical transportation services in 2010.

²⁰ State of Maryland, Department of Health and Mental Hygiene, (DHMH), Infectious Disease Environmental Health Administration (IDEHA). "SFY2011 Baltimore City Awards by Funding."

²¹ University of Maryland, Institute of Human Virology (IHV). 2011. "Treatment Preparation and Support: Launch of JACQUES Initiative." Internet site (<http://www.ihv.org/jacques/overview.html>), downloaded Feb. 5, 2011. ("JACQUES Initiative.")

²² IGS. 2011. "OAHS — Primary Medical Care — Co-morbidity — EMA." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/766), downloaded Feb. 11, 2011.

²³ IGS. 2011. "OAHS — Primary Medical Care — Co-morbidity — EMA (MAI)." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/808), downloaded Feb. 11, 2011.

FFY 2010 Funding for Medical Transportation for PLWH in the Baltimore-Towson MSA	
Ryan White Part A	\$172,674
Ryan White Part A MAI	\$27,828
Ryan White Part B	\$86,281

Source: IGS. 2011. "Medical Transportation — EMA." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/763), downloaded Feb. 7, 2011.

9.3.2 Treatment Adherence Service Providers

PLWH in the Baltimore-Towson MSA can access treatment adherence services from many locations, including hospitals, clinics, Federally Qualified Health Centers, local health departments and community based organizations. The majority of services are provided in Baltimore City through a variety of institutional types; in the surrounding counties, services are provided mainly in county health departments. The following table quantifies the service providers funded to deliver services related to treatment adherence by service category. Note that many providers receive funding to offer more than one of the services related to treatment adherence support.

FFY 2010 Treatment Adherence Providers in the Baltimore-Towson MSA	
Ryan White Part A medical case management/treatment adherence*	19
Ryan White Part A primary medical care co-morbidity*	2
Ryan White Part A housing services*	14
Ryan White Part A medical transportation services*	12
Ryan White Part A child care services*	1
HOPWA**	16
Special State-funded treatment adherence providers	2
Ryan White Part C providers	3
Ryan White Part B medical case management/treatment adherence	6
Ryan White Part D providers	6
Ryan White Part D-youth providers	3
MADAP-Flex treatment adherence	5

* Source: Baltimore City Health Department (BCHD), Ryan White Program. 2010. "Fiscal Year 2010 Ryan White Part A Funded Providers Listing as of April 19, 2010." Internet site (<http://www.baltimorepc.org/v2/files/pdf/FY%202010%20Provider%20Listing%20By%20Category%20-%20April%2019,%202010.pdf>), downloaded on Feb. 11, 2011.

** Source: U.S. Department of Housing and Urban Development, Homeless Resource Exchange. 2011. "Find a HOPWA Grantee." Internet site (<http://www.hudhre.info/hopwa/index.cfm?do=viewHopwaGranteeDetail&st=MD&gid=67&type=Formula>), downloaded Feb. 5, 2011.

*** Source: State of Maryland, DHMH, IDEHA. "SFY2011 Baltimore City Awards by Funding."

9.3.3 Treatment Adherence Strategies and Interventions

As discussed in 9.2.1, standards of care mandate that HIV primary medical care providers discuss care plans with clients and ensure clients understand 1) how to properly take medications and 2) what side effects can be expected. However, many PLWH experience barriers that make it difficult to adhere to treatment and maintain appointments, necessitating additional services to support adherence.

Through funding from IDEHA and the Ryan White program, medical case managers offer services to keep PLWH engaged in the HIV continuum of care. They are charged with conducting an initial assessment of service needs, collaborating with clients to develop care plans and coordinating referrals

to services clients need to be able to follow care plans. Medical case managers continue to screen clients for potential barriers to treatment adherence and make necessary referrals to services. Treatment adherence activities provided in the Baltimore-Towson MSA include directly observed therapy (DOT), peer support, pill boxes and appointment reminders.

As described in section 9.2.2, Ryan White Part A funded treatment adherence services can be provided either through the sole support or team support model. The sole support model of care includes a small team of providers, including a nurse, social worker and case worker or other professional. The team-support model includes a nurse, social worker, case manager (or other professional), primary care physician or pharmacist, and a trained peer counselor.²⁴

Ryan White Part C programs provide treatment adherence through transportation, medical case management, and patient education through early intervention services. One of the Part C grantees in the Baltimore-Towson MSA utilizes a medical support team to provide treatment adherence activities to keep PLWH engaged in care, including medical support groups that meet bi-weekly or monthly.²⁵

Ryan White Part D programs provide a comprehensive continuum of services for women, infants, children, and youth. This network delivers services that meet the special needs of this target population, including pregnant HIV-positive women, children born with HIV, and behaviorally infected youth. The combination of medical and support services offered through the Part D network are accessible to all clients in the network and services are intended to address barriers to treatment adherence and help clients stay engaged in care. All pregnant women are offered antiretroviral medications to reduce perinatal transmission and the Part D providers offer supportive services to enhance their ability to adhere to treatment. Ryan White Part D also provides supportive treatment adherence services that are specifically designed to address the unique challenges faced by adolescents with HIV/AIDS.²⁶

The JACQUES Initiative, provided through the University of Maryland's Institute of Human Virology, is a treatment adherence service combining medical and non-medical case management strategies. The treatment adherence team includes pharmacists, treatment educators, treatment coaches, and community outreach workers. Activities include DOT, monthly educational workshops, peer support, and an integration of family and friends into clients' treatment management.²⁷

As discussed in 9.2.2, under Ryan White Part A, PLWH facing substance abuse, homelessness or mental-health problems, and experiencing problems adhering to treatment, are referred to OAHS primary medical care co-morbidity services. Each client is provided an individualized care team consisting of a primary medical care provider, a provider of services for co-morbidity or co-morbidities, a care coordinator and a peer advocate. The individualized care teams work with clients to integrate care to overcome the barriers posed by managing co-morbidities. These services are provided at one location or within a system of care that removes the barriers to care coordination.²⁸

Housing services are the provision of short-term assistance to support emergency, temporary or transitional housing to enable an individual or family to gain or maintain medical care. The Housing

²⁴ IGS. 2009. "MCM Standard."

²⁵ Frannie Lerner, Ryan White Part C Program Director, Chase Brexton Health Services, Inc. 2010. "Ryan White Part C Early Intervention Services." Presentation given before the Greater Baltimore HIV Health Services Planning Council, May 18.

²⁶ Maryland DHMH, IDEHA. 2009. *FY2009 Part D CSWICY Competing Continuation Application*. Baltimore, Md.: DHMH.

²⁷ IHV. 2011. "JACQUES Initiative."

²⁸ IGS. 2005. "Co-morbidity Standard."

Opportunities for Persons with AIDS (HOPWA) program provides funding for case-management services. According to Baltimore City Housing Services' data for FY 2008, most of the 1,374 clients receiving housing services were engaged in primary medical care (87%) and/or case management (90%).²⁹ The Ryan White program funds services in the Baltimore-Towson MSA to support clients' ability to attend scheduled medical and other appointments related to their HIV care. Medical transportation services support treatment adherence by providing PLWH with transportation needs with reliable and affordable options to attend medical and support service appointments. Clients may receive vouchers or tokens for public transportation or taxis, mileage reimbursement, or transportation from service provider.³⁰ PLWH who need child care services while they attend medical appointments or Ryan White program-related meetings can receive child care services in a traditional day care facility or onsite.³¹

9.3.4 Number of Clients Receiving Treatment Adherence Services beyond Standard Clinical Care

Per section 9.3.2 above, PLWH in the Baltimore-Towson MSA are referred, as needed, to treatment adherence services to support their standard medical care. These services are provided through medical case management, OAHS primary medical care co-morbidity services, housing services, and other special interventions. The table below shows the estimated number of clients receiving treatment adherence services in 2009. Clients are not unduplicated across funding streams and service categories.

Clients Receiving Services to Promote Treatment Adherence in FFY 2009	
Ryan White Part A medical case management/treatment adherence*	2,188
Ryan White MAI medical case management*	390
Ryan White Part A primary medical care co-morbidity*	200
Ryan White MAI primary medical care co-morbidity*	191
Ryan White Part B medical case management**	2,422
Ryan White Part A housing*	220
HOPWA***	2,973 (FY 2008)
Ryan White Part A medical transportation*	1,912
Ryan White MAI medical transportation*	281
Ryan White Part B medical transportation*	414
Ryan White Part A child care services*	17
Ryan White MAI child care services*	71
Ryan White Part C medical case management	TBD
Ryan White Part D ****	861

* Source: IGS. 2011. "Medical Case Management — EMA." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/642).

** Clients served statewide. Source: Maryland DHMH, IDEHA. 2010. "Maryland Part B FY09 Implementation Plan Final."

²⁹ Baltimore City Health Department (BCHD). 2009. "Final ESD Report for FY 2008." Internet site (http://balpc.intergroupinfo.com/doc/doc/93/Final_ESD_FY_2008_Attachment_1__Housing_.pdf), downloaded Feb. 5, 2011.

³⁰ IGS. 2011. "Medical Transportation." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/doc/doc/158/FINAL_2010_Medical_Transportation_Standards_20101117_deb.pdf), downloaded Feb 7, 2011.

³¹ IGS. 2011. "Child Care Services." Greater Baltimore HIV Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/doc/doc/6/Final_Child_Care_SOC_090519.pdf), downloaded Feb. 7, 2011.

*** D'Andra Pollard, HOPWA Program Administrator, Baltimore Homeless Services. 2009. "HOPWA Baltimore-Towson Eligible Metropolitan Area (EMA)." Presentation to Greater Baltimore HIV Health Services Planning Council, 2009
**** Total number of HIV-positive Part D clients in FFY 2009. Source: Maryland DHMH, IDEHA, Center for HIV Care Services

B: Goal Setting

Goals:

- Increase the percentage of HIV-positive clients who are adherent to their antiretroviral treatment regimen.

Rationale:

Antiretroviral treatment plays an essential role in preventing HIV infection by reducing viral load. Therefore, increasing the percentage of PLWH who are adherent to their antiretroviral treatment will contribute to decreasing the number of new HIV infections and the HIV transmission rates for PLWA in the Baltimore-Towson MSA.

Required Intervention #10: “Implement STD screening according to current guidelines for HIV-positive persons”

A: Situational Analysis

10.1 Epidemiological Information

The availability of co-morbidity data at regular intervals has been an ongoing challenge in Maryland, however, subsets of prevalent PLWH served through various prevention and treatment programs throughout the state have reported high rates of co-infection among this population. During fiscal year 2010 in the Baltimore-Towson MSA, 26.6% of PLWH who received partner services were also infected with syphilis at the time of their original interview. During calendar year 2009, statewide Ryan White providers reported the following screening and treatment statistics on a total of 11,606 clients served:

Statewide Ryan White Clients Receiving STI and Hepatitis C Screenings and Treatment in CY2009	PLWH Screened		PLWH Treated	
	Number	(%)	Number	(%)
Syphilis	8,608	74.2	590	6.9
Any treatable STI other than syphilis and HIV	5,302	46.9	1,005	19.0
Hepatitis C	5,478	47.2	169	3.1

Source: Maryland DHMH, IDEHA. 2011.

Additionally, during 2010, approximately 29.9% of PLWH diagnosed in Baltimore City Health Department STD clinics were also simultaneously diagnosed with at least one other STD. Of all co-occurring infections diagnosed among these patients, 11.6% were early syphilis, 16.5% gonorrhea, and 9.8% chlamydia.

10.2 Policies and Procedures

All STI screening at Maryland local health department STI clinics is performed according to current CDC STD Screening and Treatment Guidelines. The guidelines for STI screening for HIV-positive persons state:

Providers should be alert to the possibility of new or recurrent STDs and should treat such conditions aggressively. Diagnosis of an STD in an HIV-infected person indicates on-going or recurrent high-risk behavior and should prompt referral for counseling. Because many STDs are asymptomatic, routine screening for curable STDs (e.g., syphilis, gonorrhea, and chlamydia) should be performed at least annually for all sexually active, HIV-positive persons. Women should be screened annually for cervical cancer precursor lesions by cervical Pap tests. More frequent STD screening might be appropriate depending on individual risk behaviors, the local epidemiology of STDs, and whether incident STDs are detected by screening or by the presence of symptoms.¹

Local health department implementation of STI screening is assessed during routine Site Reviews conducted by the Center for STI Prevention as part of routine overall communicable disease site visits by the Infectious Disease and Environmental Health Administration (IDEHA).

¹ Centers for Disease Control and Prevention, 2010. *Sexually Transmitted Diseases Treatment Guidelines, 2010, HIV Infection, Detection, Counseling and Referral.* (<http://www.cdc.gov/std/treatment/2010/hiv.htm>)

The Maryland Ryan White Part B and Part D Standards of Care for Outpatient Ambulatory Medical Care require initial and annual screening for syphilis, gonorrhea and chlamydia be provided for sexual active PLWH. More frequent screening for syphilis is also recommended for high-risk clients based on behavioral risk screening.² Similarly, the Baltimore EMA Part A standards of care for Outpatient Ambulatory Medical Care outline the following requirements for initial and annual STI screening “syphilis serology and screening for gonorrhea and chlamydia for persons 35 years of age or younger and above 35 years of age based on risk factors, i.e., all MSM should be screened”.³ Compliance with these standards are monitored through clinical quality management activities conducted by IDEHA’s Center for HIV Care Services and the Baltimore City Health Department’s Ryan White Office.

10.3 Description of current services

Each of the seven jurisdictions in the Baltimore-Towson MSA provides access to free STI testing and treatment. Most local health departments provide the access via services in the health department's facilities. One county, Anne Arundel, provides access via contractual agreement with two private health care provider offices. STI testing via local health departments or local health department contract includes syphilis, chlamydia and gonorrhea, with HIV testing offered to all clients. Clinic hours per week vary locally according to demand and capacity. Additionally, DIS at each local health department, as part of routine HIV/STI partner services, assure that newly-identified PLWH are offered STI screening, and are referred to an HIV provider for routine, ongoing care. The HIV care provider should provide STI screening as part of initial entry into care if this has not previously been performed, and then annually as part of ongoing HIV care services.

Annual, routine STI screenings are provided to PLWH as part of ongoing HIV care and are performed by the patient's provider at their HIV care facility. Local health department STD Clinics are not usually the source or site for annual, routine STI screening for PLWH. STI screening/testing at local health department STD clinics is provided to PLWH when that individual accesses services at the STD clinic to seek assessment for specific symptoms or concerns about possible or known STI exposure. Results from the Baltimore City Health Department’s Ryan White Part A Clinical Quality Management program indicate significant increases in compliance with these requirements over the past five years. Specifically, annual chart reviews for Part A Outpatient Ambulatory Medical Care clients conducted between 2005 and 2010 showed that provision and documentation of annual syphilis screening increased from 64% to 84%.

B: Goal Setting

Goals:

- Increase the percentage of persons living with HIV who receive recommended initial and ongoing STI screening as part of ongoing HIV medical care.

² State of Maryland, DHMH, Infectious Disease and Environmental Health Administration, Center for HIV Health Services. 2006. *CHHS Quality Assurance and Policy Manual: Commitment to Excellence*. Baltimore, MD: DHMH. Internet site (<http://www.dhmm.state.md.us/AIDS/ProviderResources/Treat&Care/2006%20QA%20Manual.pdf>), downloaded Feb. 5, 2011.

³ InterGroup Services, Inc. (IGS). 2009. “Standards of Care: Outpatient Ambulatory Health Services: Adult.” Greater Baltimore Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/49/OAMCstandards2010.pdf>), downloaded Feb. 2, 2011.

Rationale:

The presence of an STI among PLWH indicates ongoing risk behaviors that facilitate the transmission rates in the Baltimore-Towson MSA. Therefore, the provision of STI screenings for HIV-positive persons affords an important opportunity to increase prevention education for all PLWH. Additionally, PLWH who test positive for another STI are also provided with ongoing partner services, further increasing the opportunity for additional, more targeted prevention education. Enhanced collaboration across HIV prevention, STI prevention and HIV care at the state and local levels and further dissemination of guidelines for initial and ongoing STI screening to HIV care providers in the Baltimore-Towson MSA will help ensure these prevention opportunities are leveraged to positively impact both individual and community health outcomes.

Required Intervention #11: “Implement prevention of perinatal transmission for HIV-positive persons”

A: Situational Analysis

11.1 Epidemiologic Information and Need

According to the Maryland PRAMS data for 2009, 77% of women surveyed in Maryland reported that a healthcare provider had spoken to them during their prenatal care visits about getting tested for HIV. In Maryland, 73% of women reported that they were tested for HIV during their most recent pregnancy or delivery; 17% were not tested; and 10% did not know if they were tested.¹

From 2005 through 2010, 886 investigations with HIV exposed infants and their mothers were completed in Maryland for the CDC-funded project, Enhanced Perinatal Surveillance. On average, there were 174 perinatal HIV exposures identified per year (2005 – 2008). There were 147 perinatal HIV exposures born in 2009 (Note: 2009 data are incomplete).

Of the 886 investigations completed with HIV exposed infants and their mothers from 2005 - 2010, approximately 4% of the women in this cohort did not receive any prenatal care for their pregnancy. Approximately 37% of the women had some form of substance abuse during the pregnancy. One quarter (27%) of the women were diagnosed with HIV during the pregnancy; 2% were diagnosed at time of delivery; and 1% were diagnosed after child’s birth. Eight percent of the women were not prescribed antiretroviral drugs during this pregnancy.

Of those 886 perinatally HIV exposed infants born in Maryland in 2005 – 2010, 24 perinatal HIV transmission cases were identified and investigated, a perinatal HIV transmission rate of 2.7%. In 2009, there were 3 perinatal HIV cases identified and investigated (Note: 2009 data are incomplete). The 24 HIV-positive infants were born at 12 different hospitals in Maryland; 75% were born in the Baltimore-Towson MSA. Of the 24 perinatal HIV cases in Maryland, 54% of the mothers were known to be HIV-positive before this pregnancy; 13% were found to be HIV-positive during the pregnancy; 8% at time of delivery; and 25% after the child’s birth. Of the 24 perinatal HIV cases, 17% of the mothers did not receive any prenatal care for this pregnancy. Furthermore, 33% of the mothers were not prescribed antiretroviral drugs during the pregnancy. Reasons why mothers were not prescribed antiretroviral drugs included: Mother known to be HIV negative during pregnancy; No prenatal care; HIV serostatus of mother unknown; Mother refused; Mother did not show up to appointments.

Half of the mothers of the perinatal HIV cases had substance use during pregnancy noted in the medical or social work records. Of the 24 perinatal HIV cases, 54% had a toxicology screen done on the mother either during pregnancy or at the time of delivery. Of those that had a toxicology screen completed either during pregnancy or at time of delivery, 62% of the mothers had a positive toxicology result. Of the 9 that had a positive toxicology report, 78% were positive for cocaine. In addition, 63% of the mothers were diagnosed with one or more STIs during pregnancy or at time of Labor & Delivery.

¹ Maryland Department of Health and Mental Hygiene; *Maryland PRAMS Report 2009 Births*. http://fha.maryland.gov/pdf/mch/2009_PRAMS_Report_births.pdf Accessed on March 7, 2011.

11.2 Policies and Procedures

11.2.1 Maryland Statute and Regulations

The Maryland HIV/AIDS Reporting Act of 2007, which went into effect April 24, 2007, changed laboratory reporting from codes to names, extended HIV reporting to physicians, extended HIV and AIDS reporting to health care facilities, expanded CD4 laboratory reporting to all CD4 tests, and created perinatal HIV exposure reporting. Maryland Health General Article 18-201.1 dictates that physicians shall report, by name, an infant born to an HIV-positive woman within 48 hours of the infant's birth. Infants that are determined to be HIV negative will have their names removed from the HIV registry at 18 months.

Maryland's current HIV testing statute and corresponding regulations outline both the consent and testing process for pregnant women. These laws are intended to increase the number of women who are routinely tested for HIV during their pregnancy. Maryland State law specifies that providers who provide prenatal care must notify the pregnant individual that an HIV test will be administered and document in the medical record if there is a declination of testing. An HIV test must be offered in the third trimester to women who were not tested earlier and providers in high prevalence areas should consider routinely offering a repeat HIV test in the third trimester. In labor and delivery settings, providers must offer a rapid test to pregnant individuals with an unknown or undocumented HIV status and offer antiretroviral prophylaxis prior to receiving the results of a confirmatory test if the rapid HIV test is preliminary positive. All positive pregnant individuals must be referred to HIV treatment and supportive services, including case management. Finally, all HIV-positive pregnant individuals should be counseled to notify (either on their own or with assistance from the physician or health department) all sexual and needle-sharing partners that they may have been exposed to HIV. This law allows for services to be performed in accordance with CDC's "Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings" released in 2006.

11.2.2 IDEHA-Supported HIV Testing and Partner Services Program Policies

In all IDEHA supported HIV testing sites, it is required that women are routinely queried regarding their pregnancy status during pretest counseling. If a woman reports that she is currently pregnant, she is also asked if she has been receiving regular health care during this pregnancy. If she reports that she is not currently receiving prenatal care, it is highly recommended that the site provide an active referral to prenatal care. Due to the importance and timeliness of treatment to prevent perinatal transmission, referrals to prenatal care services for women who test positive for HIV are routinely provided to all pregnant clients. If it is possible, referrals should be provided to clinics which specialize in HIV and pregnancy. All testing sites must also ensure that any pregnant HIV-positive woman who declines to be referred to prenatal care is given information about perinatal transmission prevention services so that they may access these services at a later date, if she so chooses.

All Disease Intervention Specialists (DIS) in Maryland's Partner Services Program are trained to obtain and document pregnancy status on all female patients of child bearing age. This includes original patients with HIV or syphilis as well as their named partners. The documentation also occurs to some extent for both chlamydia and gonorrhea patients. In July 2007, guidance entitled "Prioritization for Use of Disease Intervention Professionals" was jointly developed by the former Maryland AIDS Administration and the Community Health Administration. This document was released to all local health departments to provide recommendations intended to focus DIS services on the highest priorities

for STD/HIV prevention and intervention services. The guidance identifies pregnant females diagnosed with HIV or syphilis as the top priority for DIS and requires active referrals be provided for comprehensive disease case management for these high priority patients.

11.2.3 Standards of Care

All medical services provided by Ryan White funded agencies to HIV-positive pregnant women in Maryland follow standards of care from either HRSA or the USPHS Task Force. The standards of care which are specified by HRSA under Ryan White Part A for out-patient ambulatory care are that, “treatment for pregnant women should follow the guidelines for treating non-pregnant adults, as well as for prevention of perinatal transmission.” Also under Ryan White Part A, the standards of care related to the primary care of pediatric patients specify that reproductive counseling and antiretroviral options must be made available to pregnant teens. The standards of care for services provided under Ryan White Parts B and D for Ambulatory Outpatient Medical Care refer to the following sets of guidelines: “Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women” (USPHS Task Force, May 24, 2010); and, “Treating Opportunistic Infections Among HIV Infected Adults and Adolescents”, (MMWR, December 17, 2004/53(RR15);1-112). The standards of care for these parts also specify that referrals must be made for pregnant women to prenatal care.

11.3 Description of Current Services

Three Centers from the Infectious Disease and Environmental Health Administration are involved in an Internal HIV Perinatal Collaboration Workgroup that meets regularly to discuss issues germane to vertical transmission. The group includes staff from the Center for HIV Prevention, the Center for HIV Surveillance and Epidemiology and the Center for HIV Care Services, who specialize in work related to the elimination of perinatal HIV transmission. The purpose of the work group is to facilitate collaboration and consultation on proposed perinatal HIV initiatives. The relevant work from each Center is described below.

The Center for HIV Prevention supports the Perinatal HIV Consultation and Education Team (PHECT) to direct the provision of technical assistance to providers to support them in complying with Maryland law and achieving the goal of eliminating perinatal HIV transmission in Maryland. The PHECT is a collaboration among IDEHA, the Institute of Human Virology, MedChi (the state’s medical society), and the University of Maryland’s AIDS Education and Training Center. The Team is comprised of nurses, program administrators, health educators, epidemiologists, and evaluators. The PHECT conducts professional consultation and education to perinatal providers, including private practices and hospitals, regarding the HIV testing process and relevant technology for testing. Practitioners are provided with technical support to align their services with the CDC’s guidance and to ensure that all of their sites remain in compliance with state laws and regulations.

The work of the PHECT also includes practitioners outside of Labor and Delivery settings. PHECT members have sourced and/or created educational materials for practitioners to facilitate discussions with clients regarding HIV testing during pregnancy and encourage repeat testing in the third trimester. Additionally, materials have been made available to help ensure practitioners are offering testing in a manner that is consistent with an opt-out approach and appropriately documenting test declination.

Funding is provided by the Center for HIV Prevention to conduct outreach, HIV testing and other supportive services to pregnant women living in high-risk areas of Maryland. Funds are used to support

outreach workers who go into surrounding neighborhoods to locate women who have either dropped out of prenatal care or who have not previously been engaged in prenatal care. Once a clinic has established a connection with a woman, she is encouraged to enter (or re-enter) prenatal care, to be tested for HIV and other conditions, and provided with needed supportive services to remain in care (including drug treatment if needed). If a woman tests positive for HIV, or any other condition, she is supported throughout the process of accessing medical treatment to help reduce the risks to her and her baby. Wrap-around services are made available by funded organizations and all HIV-positive women are seamlessly linked to HIV medical treatment, partner services, and other relevant services. These programs provide access to HIV testing/screening not only for the pregnant woman but also her partner(s). Additionally, sites are required to maintain a return rate for negative tests of at least 75% and of at least 90% for positive tests, and linkage to services rate of 100% for individuals who test HIV-positive. Data is collected using the PEMS compliant HIV Testing Encounter Booklet that is used by Maryland to collect all data related to targeted HIV testing.

For approximately seven years, IDEHA has collaborated with the Regional Perinatal Advisory Group (RPAG), a group with statewide reach that is coordinated by the Baltimore County Health Department. Currently, staff from the Center for HIV Prevention is participating on the RPAG's Substance Abuse 2-Year Planning Committee. This Committee has begun to discuss plans for the group's next set of activities related to substance use and pregnancy. IDEHA will evaluate possible opportunities to support the proposed initiatives as these topics are inextricably linked to perinatal HIV transmission in Maryland.

Disease Intervention Specialists (DIS) who work with Maryland's Partner Services program provide critical services in the intervention, prevention, and treatment of HIV and other STIs. DIS receive special training to locate, counsel, interview, and follow-up with patients who have been identified as having syphilis, HIV, and other STIs. Services provided by DIS include post-test counseling (if it was not previously done), interviewing clients (including the provision of education and risk reduction counseling, and conducting partner elicitation), partner notification (including a client interview and notification of exposure plus counseling, testing, and referrals for all named sex and needle-sharing partners), and linking patients to care and treatment as appropriate. Relevant information gathered by local health department DIS during an HIV partner services interview and/or notification of exposure is provided to the Enhanced Perinatal Surveillance Program in the Center for HIV Surveillance and Epidemiology. Any additional information the DIS collect through their investigation related to these cases is also shared with the EPS Program as it becomes available.

The Center for HIV Surveillance and Epidemiology received funding from the Centers for Disease Control and Prevention to conduct Enhanced Perinatal Surveillance. This program collects data from the medical records of HIV-positive pregnant women and their newborns. The information collected focuses on birth cohorts from 2005 through the present and is recorded on an eight page abstraction form. Infants are identified through a variety of mechanisms including morbidity reporting, Medicaid information, retrospective matches of the birth and HIV/AIDS registries, and active case finding. Information is generally abstracted from prenatal care, maternal HIV clinic, labor and delivery, pediatric care, and/or health department records. Information from these abstractions are compiled and shared for both program planning and to provide general information.

Staff from the Center for HIV Surveillance and Epidemiology participate on the Fetal Infant Mortality Review (FIMR) Team in partnership with MedChi, the Maryland State Medical Society. Funds were awarded by City Match to pilot a study to conduct medical record abstractions and maternal interviews for HIV-positive women who had a live birth. The study specifically focused on women who had babies

who were not positive but exposed to HIV in one hospital in Baltimore City. Information was collected and presented to the FIMR Team who then provided general system level recommendation to improve health outcomes for both mothers and babies. The project has been refunded to conduct similar work in additional area institutions and is currently awaiting IRB approval to begin work.

The Center for HIV Care Services funds providers through Ryan White Part D for work with women, infants, children and youth. The Center coordinates meetings and other communications between this network of providers. The Part D Network has developed a comprehensive, coordinated system of care to address the range of complicated needs of women, infants, children, youth and their families. The six Part D Network sites are community and faith-based organizations or university-affiliated HIV clinics. Women, infants, children, youth and their families have access to a wide range of services that include STI screenings, mental health services and HIV Counseling, Testing, and Referral (CTR). Women who test HIV positive outside of a current Part D provider setting may be referred to one of the medical providers in the Network. Upon referral, a policy is in place that specifies that HIV-infected pregnant patients are educated about and offered antiretrovirals to reduce HIV transmission to their unborn child. Many HIV-infected pregnant women receive medical care at the Part D provider birthing hospital, receive prenatal care and the providers facilitate coordination with the client's primary care provider. In cases where the client receives medical care elsewhere, Part D obstetricians consult and coordinate closely with the client's doctor. Several family planning sites in high prevalence areas are supported through the Title V Maternal and Child Health Block Grant and offer HIV counseling and testing, and coordinate services with Part D providers. As a safety net, women who are pregnant are linked to services through a Part D obstetrical/gynecological provider. The Part D program strategically targets testing and outreach to find HIV-infected women and youth lost to follow-up to engage them in care. Outreach activities target high-risk youth and women in detention centers. They also target Gay, Lesbian, Bisexual and Transgender individuals in clubs and public venues, and zip codes with known high HIV seroprevalence.

Community outreach staff provide information about HIV testing at sites where the target population is more likely to be present. Outreach is supportive and non-coercive, aiming to refer HIV-infected women and youth into the comprehensive system of care offered through the Network. Projects employ health educators who relate well to at-risk youth. Most of the outreach workers are consumers and understand the needs of the target population. Additionally, perinatal outreach workers have been successful in reaching at-risk women in community settings such as homeless shelters, schools for adjudicated youth and drug treatment centers. Each program has retention strategies to identify and respond to clients who are lost to care. Services to the target populations are routinely discussed at the various Regional Advisory Committee (RAC) and Planning Council meetings. Brochures have been developed about Part D services and contact information is distributed throughout Maryland on an ongoing basis.

The Part D Network ensures that women, infants, children, youth, and their families have access to: 1) ambulatory outpatient primary and specialty care; 2) OB/GYN services, including prenatal, perinatal and post partum care; 3) social work and case management services; 4) mental health and substance abuse services; 5) outreach and linkage to care, particularly for newly-diagnosed women and youth; 6) information about and access to clinical research opportunities; 7) legal services; 8) housing assistance; 9) nutrition counseling and assistance; 10) transportation; 11) child care; and 12) translation services. These services teach women that medications can reduce the chance of HIV transmission, work with the women to ensure they have access to medications, and address issues related to treatment adherence. All HIV-infected pregnant women who are care within Maryland's Ryan White Part D Network are educated about and offered antiretrovirals to reduce HIV transmission to their unborn child.

B: Goal Setting

Goals:

- Increase the percentage of pregnant women who receive HIV testing during their first trimester.
- Increase the percentage of women at high-risk for HIV infection during pregnancy who receive repeat testing in the third trimester.
- Increase the number of women who present for labor and delivery with undocumented HIV status who receive rapid testing.
- Increase the number of women at high-risk for HIV infection during pregnancy who receive rapid testing in labor and delivery (regardless of maternal HIV testing history).

Rationale:

The goal of Maryland's perinatal programming is to eliminate perinatal HIV infection in our state. Between 2005 and 2010, Maryland's rate of perinatal HIV transmission was 2.7%, which is above the national average. Of the 24 perinatal HIV cases in Maryland during the same time frame, 54% of the mothers were known to be HIV positive before this pregnancy; 13% were found to be HIV positive during the pregnancy; 8% at the time of delivery; and 25% after the child's birth. These data demonstrate the need for multi-faceted approach that works to engage women in early prenatal care, increase HIV testing during pregnancy and reduce barriers to HIV treatment to prevention mother-to-child HIV transmission.

Maryland PRAMS data show that 27% of pregnant women are not receiving an HIV test during pregnancy, indicating a need to expand current efforts to ensure that all perinatal providers are aware of the Maryland law for HIV testing of pregnant women and clinical recommendations for providing these essential testing services. Additionally, due to the percentage of perinatal infections among women who are becoming infected with HIV during pregnancy, there is a need to develop and disseminate additional guidelines to perinatal providers and labor and delivery hospitals on the need for repeat HIV testing in the third trimester and during labor and delivery for high-risk pregnant women. As more women become aware of their serostatus, either prior to or early in pregnancy, more women will be able to access all of the recommended therapies to reduce the risk of transmission to their child.

Required Intervention #12: “Implement ongoing partner services for HIV-positive persons”

A: Situational Analysis

12.1 Epidemiological Information

Using surveillance data reported through 12/31/2010, there are an estimated 1,327 new adult/adolescent HIV diagnoses in the Baltimore-Towson MSA during 2009 and a total of 17,048 diagnosed and reported living adult/adolescent cases of HIV on 12/31/2009. The CDC estimates that nationally 21% of persons infected with HIV are undiagnosed. In addition, due to the recent changes in Maryland's HIV/AIDS reporting laws, there may also be an additional 15% of persons diagnosed with HIV that are unreported. Therefore, there may be as many as 25,388 adults and adolescents living with HIV in the MSA, with over 5000 who are unaware of their infection. In the mathematical modeling conducted in partnership with Dr. Holtgrave and his team at the Johns Hopkins Bloomberg School of Public Health, the transmission rate for PLWH who are unaware of their serostatus is over 3 times higher than PLWH who are aware their status (9.5 vs. 3.0). Among PLWH who are aware of their serostatus, PLWH who engage in high-risk behaviors that may lead to transmission have the highest transmission rate (18.7).

12.2 Policies and Procedures

12.2.1 Maryland Statute and Regulations

In Maryland, the process for ensuring the provision of Partner Services (PS) to persons reported to be HIV positive begins when the client obtains an HIV test. Maryland State law specifies that if an individual's test result is positive, the physician or physician's designee must provide post-test counseling to the individual that includes counseling the individual to inform all sexual and needle-sharing partners that they may have been exposed to HIV¹. Furthermore, the physician or physician's designee must offer to assist in notifying sexual and needle-sharing partners, or refer the individual to the appropriate local health department for assistance². Based on this law, IDEHA has instructed providers to discuss the importance of partner notification with every HIV-positive individual, and offer to assist him/her in notifying and referring partners for services, or to refer the individual to the local health department to assist with partner notification. Physicians can do this by contacting the local health department directly, or by utilizing the Maryland Confidential Morbidity Report (DHMH 1140) form to indicate that the physician requests local health department assistance with partner services. Physicians are also encouraged to inform the local health officer if an individual refuses to notify his or her partners.

12.2.2 IDEHA-Supported HIV Testing Program Policies

All staff conducting HIV testing at IDEHA-supported HIV testing sites are trained on the importance of actively referring HIV-positive individuals to partner services for identification, notification, counseling, and testing of sexual and drug injection partners. Through implementation of clear referral procedures and the provision of technical assistance, these staff are trained to counsel all HIV-positive clients on the

¹ 10.18.08.10 Content of Post-Test Counseling. <http://www.dsd.state.md.us/comar/comarhtml/10/10.18.08.10.htm>

² 10.18.04.03 Partner Counseling and Referral Services. <http://www.dsd.state.md.us/comar/comarhtml/10/10.18.04.03.htm>

importance of notifying their partners during post-test counseling and to actively refer these clients to local health department DIS for partner services.

Specifically, all directly funded or supported IDEHA testing sites are trained and required (effective July 1, 2010) to utilize the “HIV Case Report & Partner Services Referral Form” to initiate referrals to the local health department for partner services follow-up by trained DIS. This referral form specifically captures the patient’s identifying and locating information to ensure DIS are able to locate patients to provide post-test counseling (when necessary) and partner services. Additionally, HIV testing staff who conduct rapid HIV testing are trained to complete this referral form during the post-test counseling session for preliminary positive results to help ensure these clients are not lost to follow-up.

12.2.3 HIV/STI Partner Services Program Policies

All Maryland Partner Services (PS) activities are conducted in accordance with the 2008 Centers for Disease Control and Prevention (CDC) *Recommendations for Partner Services Programs for HIV Infection, Syphilis, Gonorrhea, and Chlamydial Infection*. Additional local guidance documents are also developed and implemented to supplement the CDC Recommendations, including topics such as: processing out-of-jurisdiction reactors and contacts, data management of HIV PS, and documenting referral and linkage to HIV medical care.

Contracts with all local health departments, which support the implementation of PS, require that services be performed in accordance with CDC *Recommendations*, IDEHA guidance and any local health department guidelines, policies, and procedures pertaining to PS. Local health departments are required to align their provision of services with these *Recommendations* while also ensuring they remain in compliance with Maryland law.

Staff from IDEHA’s Center for HIV Prevention and Center for STI Prevention worked with the Baltimore City Health Department’s Bureau of STD/HIV Prevention to finalize an integrated, *Maryland Internet-Based Partner Services Protocol* in December 2009. Throughout 2010, this group met to develop the *Maryland Internet-Based Partner Services Technical Guidance* which details the process for contacting named partners of persons diagnosed with HIV and/or syphilis via the Internet. In January 2011 all statewide PS staff attended a mandatory training on the Technical Guidance in preparation for the launch of Maryland’s Internet PS Program in April 2011.

All staff implementing PS must receive adequate training that has been approved by IDEHA prior to implementing these services. Disease Intervention Specialist (DIS) training in Maryland includes completion of the following: CDC DSTDP’s Employee Development Guide, CDC DSTDP’s Introduction to STD Interventions (ISTDI) 9-day training course, Maryland’s *HIV Counseling and Testing Skills Level I* training, Maryland’s Internet Partner Services Training, and a locally developed individualized training plan.

12.3 Description of Current Services

HIV/STI Partner Services grantees in the Baltimore-Towson MSA are jointly funded by IDEHA’s Center for HIV Prevention and Center for STI Prevention. The Baltimore City Health Department is also directly-funded by the CDC for syphilis elimination efforts. In FY2010 a combined total of \$2,127,608 was allocated to support the delivery of integrated HIV/STI partner services in the Baltimore-Towson MSA. During this period, the Center for HIV Prevention allocated \$684,038 (32.2% of total PS funding) toward

the support of HIV PS efforts and the Center for STI Prevention allocated \$180,655 toward STI efforts in addition to the \$932,840 directly-funded by CDC for syphilis elimination efforts in Baltimore City (67.8% of total funds). These funds collectively support the provision of integrated HIV/STI partner services by local health departments the Baltimore-Towson MSA.

Staff from these local health departments perform all aspects of PS for both HIV and syphilis investigations, which includes conducting original interviews, partner elicitation, partner notification, HIV counseling and testing, STI screening and treatment, as well as linkage to HIV medical care and prevention services as appropriate. In FY2010, approximately 21 FTEs were assigned to conduct HIV/STI Partner Services in the Baltimore-Towson MSA. These numbers represent staff who provide direct client services, and do not include Front Line Supervisors or State-level Technical Advisors. All of these staff provide both HIV and STI partner services, and are therefore supported by various funding sources (as described above). During this period an additional 4 FTEs provided front-line supervision, three of whom are federal employees assigned by CDC to provide HIV/STI Partner Services in Maryland.

These local health department staff are jointly monitored by the Partner Services Management Team (PSMT) which was created in 2008 to provide joint technical oversight and management of HIV/STI partner services implementation throughout the state of Maryland. This team is comprised of several state-level staff from both the Center for HIV Prevention and the Center for STI Prevention. The PSMT also includes two Partner Services Technical Advisors who provide on-site assistance to field staff and local supervisors through training support and continued monitoring of PSMT guidance to improve the standard implementation of PS statewide. Additionally, the staff from IDEHA's Centers for HIV and STI Prevention meet with leadership from the Baltimore City Health Department monthly to coordinate activities, share data and disease trends, and to discuss program policies and monitoring of PS efforts.

In July 2007, the *Prioritization for Use of Disease Intervention Professionals* was released to all local health departments to provide recommendations intended to focus DIS services on the highest priorities for HIV/STI prevention and intervention services. This *Prioritization* was jointly developed by staff from the former Maryland AIDS Administration, the former Community Health Administration and the Baltimore City Health Department. The *Prioritization* provided DIS and their supervisors with needed guidance as the demand for these highly trained staff increased in response to efforts to routinize private sector HIV screening and the promotion of private health care provider referrals for HIV partner services.

Given current resources, HIV/STI partner services staffing levels, and the burden of disease in Maryland, at this time we are unable to provide ongoing partner services to all individuals newly diagnosed with HIV and prevalent HIV cases. As part of the ECHPP process, we are reevaluating current investments and need to better target populations and interventions that are effective in Maryland.

Approximately 500 individuals are newly-diagnosed by IDEHA-supported HIV testing programs in the Baltimore-Towson MSA annually.³ As described above, effective July 1, 2010 all IDEHA-supported HIV testing sites are now required to refer all HIV-positive clients to the local health department for partner services. We anticipate this change in program policy will help to ensure these newly-diagnosed individuals are offered partner services by a trained DIS.

³ Newly-diagnosed is based on a combination of client self-report and programmatic record searches and may not correspond to being newly reported to HIV surveillance.

In FY2010, approximately 1,924 positive labs were initiated to DIS in the Baltimore-Towson MSA for some level of HIV/STI partner services investigation (1,147 HIV-positive labs were assigned and 777 positive syphilis labs were assigned). After review of the 1,147 initiated HIV reactors, 339 were determined to be previously diagnosed patients who required linkage to care assistance only. These patients were reassigned to Ryan White linkage to care staff in the Baltimore-Towson MSA. Of the remaining 808 HIV-positive labs investigated by DIS, approximately 65% resulted in an HIV partner services interview.

A total of 1,022 clients were interviewed by DIS during this time period (531 HIV-positive clients and 491 individuals with a positive syphilis serology, 206 of which were diagnosed with primary or secondary syphilis infection). A total of 1,027 potentially exposed partners were named during these original HIV/STI partner services client interviews (509 partners were named by HIV-positive clients, and 518 were named by syphilis patients).

In FY2010, 347 individuals were notified of a potential exposure to HIV and offered integrated HIV/STI screening. As a result of notification, 221 individuals agreed to HIV/STI testing and 14 notified partners were newly diagnosed with HIV, representing a 6.3% seropositivity rate among tested partners. An additional 139 previous positives were also reached through these HIV/STI partner services activities, many of whom were reenrolled in primary HIV medical care and/or referred to other prevention services as appropriate.

B. GOAL SETTING

Goals:

- Increase the number of newly-diagnosed HIV-positive persons who are provided with HIV/STI partner services.
- Increase the quality and effectiveness of HIV/STI partner services.

Rationale:

Partner services ensures that the persons at highest risk for HIV infection (i.e. the sexual and needle-sharing partners of persons living with HIV) are notified of their potential exposure, provided provide access to HIV/STD testing, and linked to prevention, care and support services. Currently, HIV/STI partner services are primarily devoted towards reaching newly-diagnosed persons who are diagnosed by IDEHA-supported testing programs. Existing funding amounts are not sufficient to provide partner services for persons previously diagnosed with HIV. Efforts to reach more prevalent PLWH will require additional resources, implementation of Maryland's Internet-Based Partner Services Program and continued efforts to more fully interface with private testing providers.

Required Intervention #13: “Behavioral risk screening followed by risk reduction interventions for HIV-positive persons (including those for HIV-discordant couples) at risk of transmitting HIV”

A: Situational Analysis

13.1 Epidemiological Information

Using surveillance data reported through 12/31/2010, there are an estimated 1,327 new adult/adolescent HIV diagnoses in the Baltimore-Towson MSA during 2009 and a total of 17,048 diagnosed and reported living adult/adolescent cases of HIV on 12/31/2009. The CDC estimates that nationally 21% of persons infected with HIV are undiagnosed. In addition, due to the recent changes in Maryland's HIV/AIDS reporting laws, there may also be an additional 15% of persons diagnosed with HIV that are unreported. Therefore, there may be as many as 25,388 adults and adolescents living with HIV in the MSA, with over 5000 who are unaware of their infection. In the mathematical modeling conducted in partnership with Dr. Holtgrave and his team at the Johns Hopkins Bloomberg School of Public Health, the transmission rate for PLWH who are unaware of their serostatus is over 3 times higher than PLWH who are aware their status (9.5 vs. 3.0). Among PLWH who are aware of their serostatus, PLWH who engage in high-risk behaviors that may lead to transmission have the highest transmission rate (18.7).

13.2 Policies and Procedures

The following are policies and procedures found within the Baltimore-Towson MSA related to risk screening and/or risk reduction for persons living with HIV.

13.2.1 Ryan White Standards of Care

Ryan White Part A Programs: As defined by the standards of care of the Greater Baltimore HIV Health Services Planning Council (the metropolitan Baltimore Part A planning body), outpatient ambulatory health services (OAHS) pertain to “the provision of professional diagnostic and therapeutic services rendered by a physician, physician’s assistant, clinical nurse specialist or nurse practitioner in an outpatient setting.” Included in these therapeutic and diagnostic activities are requirements to conduct risk-reduction interventions, including but not limited to diagnostic testing; early intervention and risk assessment; documented discussions of safer sex practices and discussions regarding reducing high-risk behavior for HIV transmission. According to these standards of care, providers must discuss reduction of high-risk behavior for HIV transmission at each visit and safer sex practices at least quarterly.⁴

Medical case management is another Ryan White Part A-funded service with standards of care requiring behavior-risk screening and risk-reduction activities. Medical case-management services (including treatment adherence) are a range of client-centered services that link clients with health care, psychosocial and other services. The category includes client-specific advocacy and/or review of

⁴ InterGroup Services, Inc. (IGS). 2009. “Standards of Care: Outpatient Ambulatory Health Services: Adult.” Greater Baltimore Health Services Planning Council Information Portal. Internet site (<http://balpc.intergroupinfo.com/doc/doc/49/OAMCstandards2010.pdf>), downloaded Feb. 2, 2011.

utilization of services to aid in risk reduction. As part of the intake process, case managers must complete a comprehensive written psychosocial assessment of clients' needs.⁵

Ryan White Part B Programs: The standards of care for the Ryan White Part B program, funded through the Maryland Department of Health and Mental Hygiene's (DHMH) Infectious Disease Environmental Health Administration (IDEHA) mandate that all HIV-positive clients in medical care and/or case management receive HIV risk screening to identify clients necessitating in-depth risk-reduction interventions. Standards of care for prevention with positives (PWP) define minimum criteria for risk screening, interventions, counseling, and provider skills and experience.⁶

Behavior-risk screening is identified as one of the key services within ambulatory outpatient medical care funded through the Ryan White Part B program. The standards require an initial medical evaluation and assessment to occur within four weeks of initial presentation to care provider. This assessment must include screening for high-risk behaviors and referrals to partner counseling. The educational component of the client care plan should include prevention counseling, discussion on safer sex and/or harm reduction with needles, and referrals to PWP services, as needed. The Part B standards also require follow-up visits at least every four months to include screening for high-risk behaviors, positive reinforcement of safer behaviors and referral to services, as needed.⁷

Ryan White Part C Program: Four health centers in the Baltimore-Towson MSA receive Ryan White Part C funding from HRSA. Part C service providers are legislatively mandated by the Ryan White Treatment and Modernization Act of 2009 to provide specific risk-assessment counseling through early intervention services (EIS). As defined by HRSA, EIS activities are intended to identify HIV-positive individuals and expeditiously bring them into care. Under Part C, these activities include outreach, counseling, testing, education and referral services, and comprehensive primary medical care.⁸ EIS must comprise at least 50 percent of the Part C budget, including funding for services that include patient education provided with medical care, but should not duplicate services available locally through Ryan White Part A and Part B.⁹

Ryan White Part D Program: The Ryan White Part D program — which provides a coordinated system of care for women, infants, children, youth and their families — follows the standards of care developed for the Part B program, including standards for primary medical care, case management and PWP services.¹⁰

⁵ IGS. 2009. "Service Category Standards of Care: Medical Case Management Services (including Treatment Adherence)." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/doc/doc/156/MCMstandards2010_DPM.pdf), downloaded Feb. 2, 2011. (Hereinafter "Medical Case Management Standard.")

⁶ State of Maryland, Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration (formerly the AIDS Administration), Center for HIV Health Services. 2006. *CHHS Quality Assurance and Policy Manual: Commitment to Excellence*. Baltimore, Md.: DHMH. Internet site (<http://www.dhmh.state.md.us/AIDS/ProviderResources/Treat&Care/2006%20QA%20Manual.pdf>), downloaded Feb. 5, 2011. (Hereinafter *QAP Manual*.)

⁷ DHMH. 2008. *QAP Manual*, p. 98.

⁸ U.S. Health Resources and Services Administration (HRSA). 2011. "Glossary of Terms." Internet site (<http://hab.hrsa.gov/history/webterms.htm>), downloaded Feb. 1, 2011.

⁹ HRSA. 2011. "Part C — Early Intervention Services." Internet site (<http://hab.hrsa.gov/treatmentmodernization/partceis.htm>), downloaded Feb. 1, 2011. (Hereinafter "Part C — EIS.")

¹⁰ DHMH. 2008. *QAP Manual*.

13.2.2 Department of Health and Mental Hygiene, HealthChoice (Medicaid)

According to DHMH rules, Maryland Medicaid managed-care organizations (MCOs) must offer HIV/AIDS case-management services at any time upon or after HIV/AIDS diagnosis. Even individuals who refuse case-management services when they are first offered can request them later. Case-management services provided by MCOs must include linkage with the full range of available benefits, including any indicated support services. COMAR¹¹ guidance for MCOs include:

- 1) *§ 10.18.04.02 — Provisions to limit spread of [HIV] infection:* These Maryland regulations provide guidance to professionals regarding the education and distribution of informational materials on HIV, modes of transmission and prevention.¹²
- 2) *§ 10.09.65.04 — MCOs' provision of health-care services to special-needs populations, including individuals with HIV/AIDS:* This section of the regulations covers the expectation by the state that MCOs must “make documented outreach efforts to contact and educate enrollees who fail to appear for appointments or who have been noncompliant with a regimen of care.”¹³

13.2.3 Policy and Procedure Training

All Ryan White providers are required to receive training in the standards of care and other policies for delivering and monitoring Ryan White-funded services. These procedures differ by funding stream and grantee.

Ryan White Part A Program: The Baltimore City Health Department (BCHD) is the Part A grantee charged with contracting and contract monitoring. The Clinical Quality Management Program (CQM) in the Ryan White Office at BCHD ensures that Part A clients receive high-quality medical and support services. This monitoring is conducted through site visits, quarterly provider trainings, on-site technical assistance and quality-management reviews.¹⁴ Adherence specifically to standards of care for risk assessment and referral for risk-reduction interventions is assessed when CQM conducts chart reviews for OAHS and medical case management. Findings from these quality-management reviews drive the development of quality-improvement technical assistance and trainings.¹⁵

Ryan White Part B: IDEHA is the Part B grantee charged with contract monitoring and quality-management services. These activities are carried out through the Health Services Division of IDEHA's Center for HIV Care Services. The center's health services administrators (HSAs) conduct routine site visits for technical assistance, budget oversight, and performance monitoring throughout the year. The HSAs are also charged with carrying out the Maryland Part B Quality Management Plan, which ensures

¹¹ I.e., the Code of Maryland Regulations.

¹² State of Maryland, Division of State Documents. 2011. Code of Maryland Regulations. Internet site (<http://www.dsd.state.md.us/comar/comarhtml/10/10.18.04.02.htm>), downloaded Feb. 2, 2011.

¹³ State of Maryland, Division of State Documents. 2011. Code of Maryland Regulations. Internet site (<http://www.dsd.state.md.us/comar/comarhtml/10/10.09.65.04.htm>), downloaded Feb. 2, 2011.

¹⁴ Baltimore City Health Department (BCHD), Ryan White Office. 2010. *Baltimore Eligible Metropolitan Area FY 2011 Ryan White Part A and Minority AIDS Initiative Application*. Baltimore, Md.: October, attachment 6. (Hereinafter *FY 2010 Application*.)

¹⁵ Baltimore City Health Department, Ryan White Office, Clinical Quality Management Program (BCHD-CQM). 2009. *Service Category: OAHS Adult Primary Medical Care*. Baltimore, Md.: BCHD, June. Internet site (www.baltimorehealth.org/info/PMC%20report%20060309%20Final%20.pdf), downloaded Feb. 2, 2011. (Hereinafter *Adult Primary Medical Care*.)

that Part B services, including risk assessment and risk reduction counseling, are delivered according to the standards of care.

Every three years, each Part B contractor receives a comprehensive site visit conducted by the HSAs, a fiscal staff member and a medical chart auditor. The comprehensive site visit is summarized in a site-specific report, which includes recommendations for improvement, best practices highlighted, and areas in need of corrective action identified. Semi-annual statewide Part B meetings are also held to provide technical assistance and training to all grantees.

Ryan White Part C Program: The four Part C providers in the Baltimore-Towson MSA receive Ryan White Part C funding directly from the U.S. Health Resources and Services Administration (HRSA). Like other Ryan White programs, Part C grantees are required to allocate funding for establishing a clinical quality-management program to conduct quality-improvement activities and coordination, facilitate consumer involvement, collect quality-management data, and conduct staff training and technical assistance.¹⁶

Ryan White Part D Program: IDEHA is the Part D grantee and oversees the monitoring of contracts included as part of the Part D network through its Center for HIV Care Services. Contract monitoring and quality management for Part D providers are similar to that of Part B activities, with training and technical assistance delivered through site visits and provider meetings.¹⁷

Ryan White Client Satisfaction Survey: Another method for assessing the provision of quality care and identifying training needs is the Ryan White Client Satisfaction Survey, which surveys clients of Ryan White Part A, Part B, and Part D providers. Findings from surveys are summarized by region and by provider (for providers with 10 or more respondents). In addition to the summary reports, providers receive report cards rating services according to provider location results. Providers must develop corrective action plans if findings highlight a need for improvement.¹⁸

13.3 Description of Current Services

The following programs provide risk screening and risk-reduction activities (or referral to risk-reduction interventions) in the Baltimore-Towson MSA.

13.3.1 Ryan White Program Activities

Ryan White Part A Activities: In FY 2009, BCHD and the HIV planning council invested \$5,744,363 in OAHS and served 6,724 clients.¹⁹ The total funding for medical case management under Part A in FY 2009 was \$1,227,358, and 1,288 clients were served.²⁰ There are currently 18 OAHS providers and 18 MCM providers under the Part A program, says the BCHD *FY 2010 Provider Listing by Category* (April 19, 2010).²¹

¹⁶ HRSA. 2011. "Part C — EIS."

¹⁷ State of Maryland, Maryland Department of Health and Mental Hygiene (DHMH), AIDS Administration. 2009. *FY2009 Part D CSWICY Competing Continuation Application*. Baltimore Md.: DHMH. (Hereinafter *FY2009 Part D Application*.)

¹⁸ State of Maryland, Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration. 2010. *Maryland Part B FY11 Application*. Baltimore, Md.: DHMH. (Hereinafter *FY11 Application*.)

¹⁹ BCHD-CQM. 2009. *Adult Primary Medical Care*.

²⁰ IGS. 2009. Medical Case Management Standard."

²¹ Baltimore City Health Department (BCHD), Ryan White Program. 2010. "Fiscal Year 2010 Ryan White Part A Funded Providers Listing as of April 19, 2010." Internet site (<http://www.baltimorepc.org/v2/files/pdf/FY%202010%20Provider%20Listing%20By%20Category%20-%20April%2019,%202010.pdf>), downloaded Feb. 11, 2011.

As noted in 13.1.1, providers of Part A medical and case-management services are required to conduct risk assessments and provide referrals to risk-reduction interventions, including PWP services. The 2008 CQM review of OAHS primary medical care (adults and pediatric) found 39 percent (421) of the 1,071 clients whose charts were reviewed had documentation of receiving PWP services.²² Risk-reduction counseling is also provided through Ryan White Part A Minority AIDS Initiative (MAI) and findings from the FY 2008 Expenditure Services Delivery Report found that all 493 clients identified as HIV positive through MAI outreach services received risk-reduction counseling.²³

Ryan White Part B Activities: As part of early intervention activities, the IDEHA Center for HIV Care Services supports services under ambulatory outpatient medical care that promote risk screening during clinic visits. There were, in 2010, eight ambulatory outpatient medical care providers funded under Part B, with funding of \$1,413,044.²⁴ Part B served 1,682 clients in 2009.²⁵ As noted in section 13.1, current standards of care for ambulatory outpatient medical care require risk screening within a routine clinical visit setting.

Ryan White Part C Activities: HRSA awards Ryan White Part C funding to four health centers in the Baltimore-Towson MSA to conduct EIS, which includes risk assessment, patient education, and referrals to services such as PWP.²⁶

Provider	Part C Award for FY 2010
Chase Brexton Health Services	\$1,169,001 - Community-based early intervention
People's Community Health Center	\$341,250 - Community-based early intervention
Sinai Hospital of Baltimore	\$83,600 - Capacity development
Total Health Care	\$603,748 - Community-based early intervention \$82,415 - Capacity development

Source: U.S. Health Resources and Services Administration. 2011. "Ryan White Part C Outpatient EIS Program (H76)" and "Ryan White Title III HIV Capacity Development and Planning Grants (P06)." Internet sites(<http://granteefind.hrsa.gov/searchbyprogram.aspx?select=H76&index=192&year=> and <http://granteefind.hrsa.gov/searchbyprogram.aspx?select=P06&index=194&year=>), downloaded Feb. 10, 2011.

Ryan White Part D Activities: IDEHA's Center for HIV Services also funds and coordinates the services of six Part D network sites/programs (five of which are part of the Baltimore-Towson MSA). A total of 861 HIV-positive clients were served in the 2009 budget period,²⁷ with expenditure totaling \$1,063,360 according to the FY 2009 Part D Expenditures Report.²⁸ According to the standards of care, risk assessment and referrals are conducted as part of routine medical and case-management visits; additionally Part D providers are able to reach vulnerable populations (e.g., youth) who may not receive adequate risk screening and referrals elsewhere.²⁹

²² Baltimore City Health Department (BCHD), Ryan White Office, Clinical Quality Management Program (BCHD-CQM). 2008. *Review of Service Categories Adult and Adolescent Primary Medical Care, Pediatric Primary Medical Care*. Internet site (http://balpc.intergroupinfo.com/doc/doc/39/07_EMA_PMC_FINAL061008.pdf), downloaded February 2, 2011.

²³ BCHD-CQM. 2009. *Adult Primary Medical Care*.

²⁴ State of Maryland, Department of Health and Mental Hygiene (DHMH), Infectious Disease and Environmental Health Administration. 2010. *SFY11 Baltimore City Awards Final released May 5, 2010*.

²⁵ DHMH, Infectious Disease and Environmental Health Administration. 2010. *Maryland Part B FY09 Implementation Plan Final 8-30-10*, tab "Core Medical Services."

²⁶ IDEHA, Center for HIV Care Services.

²⁷ IDEHA, Center for HIV Care Services.

²⁸ DHMH. 2009. *FY2009 Part D Application*.

²⁹ DHMH. 2009. *FY2009 Part D Application*.

PLWA Feedback from BCHD's CQM Program: It is worthy of note that, during the BCHD Continuous Quality Management team's convenience sampling of 139 clients from 13 primary care sites in the MSA in 2008, the clients were asked whether their clinicians implemented risk-reduction interventions. Of the 139 clients surveyed, 134 (96.4 percent) indicated that they received risk-reduction services as part of their primary care visit. Only five indicated that they had not spoken to their medical provider over the previous year about ways to prevent passing HIV to others. The 134 affirmative respondents stated that this discussion occurred with either their physician or a nurse at their primary medical care site. Details may be found in the June 2009 report, *Baltimore City Health Department Ryan White Office Clinical Quality Management (CQM) — Service Category: OAHs Adult Primary Medical Care*.³⁰

PLWA Feedback from the Ryan White Client Satisfaction Survey: In 2009, 3,378 surveys were delivered to Ryan White Part A, Part B and Part D providers and 3,025 surveys were distributed to clients (1,865 clients returned the survey). Survey results related to risk screening found most clients reporting discussions with providers regarding risk prevention education. Among respondents statewide, 80 percent of respondents reported that someone at their care site explained how to prevent spreading HIV to others. When asked if in the past year, someone at the site had discussed the importance of disclosing HIV status with sexual or needle-sharing partners, 75.8 percent reported always. Additionally, 78.9 percent reported that someone always explained how to protect themselves from re-infection and infection of other sexually transmitted diseases.³¹

13.3.2. Department of Health and Mental Hygiene, Infectious Disease and Environmental Health Administration Activities

Training: IDEHA collaborates with health-care providers to provide training on the delivery of prevention services to HIV-positive persons. During 2010, IDEHA continues to partner with the Region III STD/HIV Prevention Training Center to offer *Ask, Screen, Intervene: Prevention with Positives*, which focuses on clinical and behavioral strategies for reducing transmission of HIV among clients living with HIV and is specifically designed to give health-care providers tools to conduct prevention counseling with confidence. Maryland also offers *Sex Talk: Skills for Comfortable and Effective Communication*, twice annually. *Sex Talk* builds providers' skills by deepening their understanding of their own responses to sexual issues, examining the process of psychosexual development and its impact on sexual risk taking, and practicing approaches to interactions. *Sex Talk* helps providers facilitate more honest communication about behavior, toward the goal of assisting clients in assessing and reducing risk.

Behavioral Interventions: Approximately \$290,000 of CDC funds are currently utilized to support intensive Health Education and Risk Reduction interventions that provide services for PLWH. During 2010, IDEHA funded five agencies to implement individual and/or group-level evidence-based interventions for PLWH in the Baltimore-Towson MSA. These agencies include 2 local health departments, 2 community-based organizations, and 1 university, implementing a total of 5 prevention with positives (PWP) projects in the MSA. The table below describes the evidence-based interventions implemented by IDEHA-funded PWP projects in FY2010.

³⁰ BCHD-CQM. 2009. *Adult Primary Medical Care*.

³¹ DHMH and BCHD. [n.d., probably 2009]. *Joint Client Satisfaction Survey 2009 Report*. Baltimore, Md.: DHMH/BCHD.

Intervention/program models/ Public health strategies funded	Target population	Number of agencies funded
Healthy Relationships, Project SELF	PLWH African American MSM	1
Healthy Relationships and POWER	PLWH Youth	1
Healthy Relationships and POWER	PLWH	1
POWER	PLWH	2

Source: IDEHA, Center for HIV Prevention.

These interventions were delivered in an array of settings to a range of at-risk populations, including youth, men who have sex with men (MSM), women, and injection-drug users. All group interventions utilized the “Healthy Relationships” curriculum and one intervention in Baltimore City implemented an adaptation of this curriculum that was specifically designed for African-American MSM called Project SELF. Individual-level interventions utilized the Positive Wellness and Renewal (POWER) curriculum, an individual motivational counseling intervention.

The table below summarizes the evidence base for HERR interventions currently implemented by IDEHA-Supported PWP projects in the Baltimore-Towson MSA.

HERR Curriculum	Evidence Base
Healthy Relationships	<i>CDC 2009 Compendium of Evidence-Based HIV Prevention Interventions</i> ³²
Healthy Relationships, Project SELF	Locally developed adaptation to Health Relationships, targeting African American MSM. <i>CDC 2009 Compendium of Evidence-Based HIV Prevention Interventions</i> ³⁷
Positive Wellness and Renewal (POWER)	Developed and evaluated by AIDS Project Los Angeles.

Source: IDEHA, Center for HIV Prevention.

Maryland’s Prevention with Positives Program provided a total of 589 intervention hours to a total of 163 unique clients during FY2010 (69 clients participated in group-level interventions and 135 clients participated in individual-level interventions). Approximately 70% of these clients were served by agencies located within Baltimore City and the remaining 30% of clients were served by agencies in the surrounding counties within the Baltimore-Towson MSA.

All clients enrolled in Maryland’s prevention interventions are asked to complete an intake form and provide basic information on a participant sign-in sheet during each intervention. Based on the data collected on these forms we are able to describe our program reach. Of the 163 clients who participated in PWP interventions in FY2010, 65% of clients reported the current gender as male, 32% female and 2% transgender. Only 1.2% of clients served reported their ethnicity as Hispanic during this period. Approximately 80% of clients reported their race as African American or Black and 15% White. Of those served, approximately 32% were under age 24 and 26% of clients were between 40-49 years old at the time of the intervention.

³² http://www.cdc.gov/hiv/resources/reports/hiv_compendium/index.htm

Additionally, of those clients who completed the Intake Form (n=63), the following risk behaviors were reported by clients enrolled in these interventions during FY2010:

Reported Risk (when available)	Number of Clients	Percent
MSM	20	31.7
MSM/IDU	2	3.2
IDU	0	0
Heterosexual/IDU	4	6.3
High-Risk Heterosexual	13	20.6
Other Heterosexual	6	9.5
Transgender – Sexual & IDU	0	0
Transgender – Sexual Risk Only	1	1.6
No Reported Risk ³³	8	12.7
Other Risk ³⁴	9	14.3

Source: IDEHA, Center for HIV Prevention program data.

An additional 115 clients with self-reported HIV-positive serostatus were also reached through other Health Education Risk Reduction projects that were not specifically targeted by serostatus. These intensive behavioral interventions assist clients at high-risk for HIV infection or transmission in their reduction of sexual and injection risk behaviors.

B: Goal Setting

Goals:

- Increase the percentage of PLWH who receive ongoing risk assessment and risk reduction counseling (when applicable) as part of HIV medical care and support services.
- Increase the percentage of high-risk PLWH who receive intensive behavioral interventions to support them in reducing their high-risk sexual and needle sharing behaviors.

Rationale:

In the mathematical modeling conducted in partnership with Dr. Holtgrave and his team at the Johns Hopkins Bloomberg School of Public Health, persons living with HIV who are aware of their serostatus and engage in high-risk behaviors have the highest transmission rate (18.7). While these individuals represent a small percentage of PLWH, interventions to support high-risk persons living with HIV in reducing their unsafe sexual and needle-sharing behaviors can significantly decrease new infections and improve health outcomes for PLWH.

Analysis of prevention budgets and client-level HERR data reveal that only 20% of current HERR programming is targeted to persons living with HIV, indicating a need to transition HERR programs to serving high-risk PLWH. In addition to reviewing the current HIV prevention portfolio and reallocating existing HERR resources for PLWH programming, IDEHA will be working with the robust and collaborative care service delivery system in the Baltimore-Towson MSA to expand the provision of risk assessment and risk reduction interventions for PLWH in partnership with HIV care providers.

³³ Risk data was collected but the client did not report any of the sexual or injection risk factors described by above categories.

³⁴ Risk data was collected but the client reported risky behavior in a way that could not be classified into the above categories.

As a first step, IDEHA will be partnering with an academic entity to review national best practices for the integration of prevention interventions into HIV medical care and support services, and assess current provider practices in the Baltimore-Towson MSA. Based on the findings of the review and assessment, we will develop plans to increase the integration of prevention in HIV care settings through training and technical assistance to HIV care and support staff. IDEHA and the Baltimore City Health Department (the recipient of Ryan White Part A funds for the Baltimore EMA) will also be working with the HRSA HIV/AIDS Bureau, the HRSA Bureau of Primary Health Care, and the AETCs to increase the integration of prevention in all HIV care settings, regardless of funding source.

Required Intervention #14: “Implement linkage to other medical and social services for HIV-positive persons”

A: Situational Analysis

14.1 Needs Assessment and Co-Morbidity Data

14.1.1 Needs Assessment

The *Greater Baltimore HIV Health Services Planning Council Consumer Survey: Baltimore EMA, 2007*, assessed the need for medical and social services among PLWH in the MSA. Conducted on behalf of the Baltimore planning council, the Ryan White Part A planning body for metropolitan Baltimore, the survey determined the service gaps experienced by persons in care but potentially not receiving some needed HIV/AIDS-related services. Of the 730 PLWHs surveyed, primary medical care, case management and local/consortium drug reimbursement were the services identified as having the highest demand .¹

HRSA uses two related terms to discuss such needs and shortfalls in meeting them:

“Unmet” need describes the circumstance of an HIV-positive person, aware of his or her HIV status, who is not receiving primary medical care (often referred to as “not in care”). “Service gaps” refer to a person who is “in care” (i.e., receiving primary medical care) but not receiving some other needed HIV-related service (e.g., medical transportation, case management, etc.).²

Out of 24 Part A service categories, there were only three where the 2007 survey found indications of considerable service gaps: legal services, emergency financial assistance and oral health. The survey found that the most commonly cited barriers to care included consumer lack of awareness about available services and not knowing how to access services needed.

The chart provided on the following page lists the consumer need and unmet demand for each service category.³

¹ InterGroup Services, Inc. (IGS). 2007. *Greater Baltimore HIV Health Services Planning Council Consumer Survey: Baltimore EMA, 2007*. Baltimore, Md.: IGS, December. Internet site (<http://www.intergroupservices.com/pdf/ConSurveyReptFY2007.pdf>), downloaded Feb. 10, 2011. (Hereinafter *Survey 2007*.)

² IGS. 2007. *Survey 2007*, p. 1.

³ IGS. 2007. *Survey 2007*, p. 1.

Consumer Need and Unmet Demand: Chart from 2007 Baltimore EMA Consumer Survey		
Category (Service)	% of respondents who reported needing this service	Of those respondents who reported needing this service, % of those who report their service needs were unmet
Primary Medical Care	100.00%	2.50%
Oral Care	83.40%	44.20%
Mental Health	59.00%	23.30%
Substance Abuse Treatment	38.90%	21.80%
Case Management	91.20%	11.70%
Treatment Adherence (Appointment Reminder)	31.60%	13.40%
Treatment Adherence (Medication Reminder)	15.60%	23.70%
Client Advocacy	60.50%	37.40%
Home Health Services	9.20%	64.20%
Medical Nutrition Therapy	59.70%	41.10%
Hospice Care	5.30%	69.20%
Local/Consortium Drug Reimbursement	84.10%	13.50%
Rehabilitation Services	23.70%	59.00%
Outreach Services	53.80%	42.20%
Temporary Housing Assistance	41.50%	53.10%
Emergency Financial Assistance	61.20%	57.90%
Medical Transportation	70.60%	17.60%
Child Care Services (6 and under)	5.20%	52.60%
Child Care Services (Over 6)	5.70%	59.50%
Psychosocial Service	57.50%	27.40%
Food Bank & Home Delivered Meals	11.00%	48.80%
Legal Services	49.60%	69.30%
Day/Respite Care	1.40%	60.00%
Translation Services	1.90%	57.10%

Source: InterGroup Services, Inc. (IGS). 2007. *Greater Baltimore HIV Health Services Planning Council Consumer Survey: Baltimore EMA, 2007*. Baltimore, Md.: IGS, December, pp. 26, 29.

14.1.2 Complexity of Care Resulting from Co-Morbidities

The complexity of HIV/AIDS care in the MSA results in service-delivery costs that are higher than the national average. In the MSA, transmission resultant from intravenous drug usage constitutes 42 percent of the reported AIDS cases in 2008, highlighting the need for the provision of substance-abuse treatment and hepatitis C treatment in conjunction with HIV primary care. Moreover, those with a

history of IDU are more likely to have co-morbid medical conditions, such as tuberculosis, mental illness and sexually transmitted diseases than the general population. These factors create a greater medical burden for the MSA in comparison to the state at large.

The following data on issues impacting co-morbidity demonstrate the need for linkage to other medical and social services, particularly co-morbidity services, and training and support for HIV/AIDS service providers to assess, refer and treat clients.

- It is estimated that in 2009 in Maryland 11,698 people were homeless at some point in the year, up from 9,219 the previous year (an increase of 26.9 percent).⁴ The Baltimore City Health Department estimates that as many as 20 percent of homeless persons in the Baltimore-Towson MSA are HIV positive. The homelessness rate in Baltimore City is 400.4 per 100,000 people compared with 181.7 in the entire state of Maryland. The rate of homelessness in the counties ranges from 59 per 100,000 in Anne Arundel County to 115.3 in Carroll County.⁵
- The rate of substance abuse in the general Maryland population is 5,947.3 per 100,000.⁶ The rate is nearly double in Baltimore City at 10,867.6 per 100,000. The rate of substance abuse in the counties is lower, with an average of 6,436.9 per 100,000. Moreover, Baltimore City is home to a higher number of heroin addicts than almost any other city in the nation.⁷
- Sexually transmitted infections, particularly gonorrhea and syphilis infection rates, in Baltimore City continue to be among the highest in the nation. The statewide gonorrhea rate is 118.3 per 100,000, while the Baltimore City rate is four times as high at 501.8 per 100,000. Likewise, the general syphilis rate is 6.7 per 100,000 statewide, compared to 31.1 per 100,000 in Baltimore City.⁸
- Mental illness is a co-morbid condition for many HIV-positive clients in the MSA. In the 2007 HIV planning council consumer survey, 59 percent of respondents reported needing mental-health services.⁹ In FFY 2009, 8 mental health providers funded under Part A served 590 HIV-positive clients.¹⁰ In FFY 2009, Part B-funded mental health programs served 587 clients state-wide.¹¹
- Poverty is another factor that influences both HIV/AIDS prevalence and also access to medical and other social services. Of Maryland's population, 20.6 percent are below the *300 percent* poverty federal poverty line (FPL) level, but nearly half of Baltimore City's population is below *100 percent* of

⁴ M. William Sermons and Peter Witte. 2011. *State of Homelessness in America: A Research Report on Homelessness*. Washington, D.C.: National Alliance of End Homelessness, p. 12. Internet site (http://www.endhomelessness.org/files/3668_file_SOH_report_FINAL_LOW_RES_NOT_embargoed.pdf), downloaded Feb. 10, 2011.

⁵ BCHD. 2010. *FY 2011 Application*, p. 74.

⁶ State of Maryland, DHMH, AIDS Administration. 2006. *Ryan White Part B Statewide Coordinated Statement of Need*. Baltimore, MD: DHMH, January 5, p. 20. Internet site (<http://www.dhmh.state.md.us/AIDS/ProviderResources/Treat&Care/Maryland200SCSN1509.pdf>), downloaded Feb. 10, 2011.

⁷ White House, U.S. Office of National Drug Control Policy (ONDCP). 2006. *Baltimore, Maryland: Profile of Drug Indicators*. Washington, D.C.: ONDCP, December, p. 3. Internet site (<http://www.whitehousedrugpolicy.gov/statelocal/md/mbaltimore.pdf>), downloaded Feb. 10, 2011.

⁸ BCHD. 2010. *FY 2011 Application*, p. 74.

⁹ IGS. 2007. *Survey 2007*, p. 26.

¹⁰ Baltimore City Health Department, Ryan White Office, 2010. *Part A FY 2009 12-month Expenditure Service Delivery Report released July 9, 2010*, p. 10.

¹¹ State of Maryland, Department of Health and Mental Hygiene, Infectious Disease and Environmental Health Administration. 2010. *Maryland Part B Implementation Plan – Final released August 30, 2010*, tab "Part B Plan – Core Services."

FPL.¹² According to the planning council's consumer survey of 2007, 68.1 percent of respondents EMA-wide (and 70.8 percent in the city) had annual household incomes under \$9,800, at that time the basic FPL for a family of one.¹³

14.2 Policies and Procedures

14.2.1 Code of Maryland Regulations

The Code of Maryland Regulations (COMAR) provides guidance on linking HIV-positive individuals to medical and social services. Case management is defined a set of "services which will assist participants in gaining access to the full range of Medical Assistance services, as well as to any additional needed medical, social, housing, financial, counseling, and other support services," (COMAR 10.09.32.01).¹⁴ Additionally case management includes advising the client about available services and service providers including the full range of Medical Assistance (Medicaid) services and other support services such as medical, social, housing, financial, and counseling. This is done through referrals and arrangements with providers for which the client is eligible and is then chosen by the client (COMAR 10.09.32.04).¹⁵

14.2.2 Standards of Care

In addition to COMAR regulations, Ryan White-funded programs have established standards of care in accordance with HRSA definitions. HRSA states that, "medical case-management services must be provided by trained professionals, including both medically credentialed and other health-care staff who provide a range of client-centered services that result in a coordinated care plan which links clients to medical care, psychosocial, and other services."¹⁶ The provision of treatment adherence counseling to ensure readiness for and adherence to complex HIV/AIDS treatments is included as a component of medical case management. Key activities include: initial assessment of service needs; development of a comprehensive, individualized service plan; coordination of services required to implement the plan; client monitoring to assess the efficacy of the plan; and periodic reevaluation and adaptation of the plan as necessary over the life of the client. It includes client-specific advocacy and/or review of utilization of services. This includes all types of case management, including face-to-face and phone contacts, and any other forms of communication, according to the HIV planning council's most recent (October 2009) standard of care for medical case management.¹⁷ Most Ryan White standards of care require that the agency adopt a formal policy regarding the establishment of linkages with other agencies, maintains copies of all linkage agreements, and maintains a list of agencies with which it has linkage agreements.

¹² BCHD. 2010. *FY 2011 Application*.

¹³ IGS. 2007. *Survey 2007*, p. 19.

¹⁴ State of Maryland, Division of State Documents. 2011. Code of Maryland Regulations. Internet site (<http://www.dsd.state.md.us/comar/comarhtml/10/10.09.32.01.htm>), downloaded on February 2, 2011.

¹⁵ State of Maryland, Division of State Documents. 2011. Code of Maryland Regulations. Internet site (<http://www.dsd.state.md.us/comar/comarhtml/10/10.09.32.04.htm>), downloaded on February 2, 2011.

¹⁶ U.S. Department of Health and Human Services, Health Resources and Service Administration (HRSA). 2010. "Policy No. 97-01 and 97-02; Federal Policy on Allowable Uses of Funds" (as reissued). Internet site (<http://hab.hrsa.gov/law/1002.htm>), downloaded February 1, 2011.

¹⁷ IGS. 2009. "Medical Case Management Services (including Treatment Adherence)." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/doc/doc/156/MCMstandards2010_DPM.pdf), downloaded Feb. 2, 2011.

14.3 Description of Current Services

14.3.1 Service Providers in the Baltimore-Towson MSA

According to the U.S. Health Resources and Services Administration (HRSA), medical case-management services, including treatment adherence, can be defined as a “range of client-centered services that link clients with health care, psychosocial, and other services.” There are currently 39 medical case-management sites that provide services in the MSA.

HRSA defines mental-health services to be psychological and psychiatric treatment and counseling services for individuals with a diagnosed mental illness. These services, provided by a mental-health professional licensed or authorized within Maryland, can be administered in a variety of group and/or individual settings. There are currently 48 sites that provide of mental-health services in the MSA.

Substance-abuse services are the provision of treatment to address the abuse of alcohol and/or legal and illegal drugs. To augment efforts and funding sources, the planning council has established partnerships with various agencies, such as Baltimore Substance Abuse Systems (bSAS), which oversees Baltimore’s substance-abuse treatment programs for the uninsured. BSAS coordinates residential and outpatient treatment and served 22,130 persons in FY 2008 according to the Baltimore FY 2011 Ryan White Part A application.¹⁸

Housing services, including referral, assessment, search, placement, advocacy, and the associated fees, provide short-term assistance to individuals and families to obtain emergency, temporary, or transitional housing according to HRSA. Stable housing is critical to gaining or maintaining medical care. HRSA classifies eligible housing to “include both housing that does not provide direct medical or supportive services and housing that provides some type of medical or supportive services such as residential mental health services, foster care, or assisted-living residential services.” There are currently 69 Ryan White sites that provide of housing assistance in metropolitan Baltimore, not including HOPWA-funded agencies.

Psychosocial support services are the “provision of support and counseling activities, child abuse and neglect counseling, HIV support groups, pastoral care, caregiver support, and bereavement counseling” as defined by HRSA. Nutrition counseling provided by a non-registered dietitian is included, but nutritional supplements are not. There are 53 sites that provide of psychosocial support services in central Maryland.

Tables providing information on the funding streams within the Baltimore-Towson MSA that support linkages to other services are included in Appendix B.

14.3.2 Screening, Brief Intervention, Referral and Treatment (SBIRT) framework

In 2005, IDEHA began a partnership with Dr. Carlo DiClemente in the Center of Community Collaboration (CCC), part of the psychology department at the University of Maryland, Baltimore County. The main goal of this academic/community partnership is to improve the treatment adherence and health outcomes of PLWA who also have mental health and/or substance abuse diagnoses by enhancing the capacity, skills and services of providers serving this population.

¹⁸ BCHD. 2010. *FY 2011 Application*.

Specific examples of capacity building services funded through this partnership are:

- Developing training modules based on the results of a comprehensive needs assessment;
- Conducting clinical trainings and direct clinical service activities to build provider capacity;
- Developing and facilitating a conference on the topic of Integrative Dual Diagnoses Treatment;
- Facilitating treatment adherence groups and providing staff development trainings; and
- Coaching on the subject of motivational interviewing and strategies related to increasing client adherence in several treatment and support environments.

As part of this project, IDEHA and CCC recognized the need to have clients with substance abuse and mental health issues to be identified as early in the treatment process as possible to enable appropriate diagnosis and treatment of these issues to optimize HIV treatment adherence. To that end, IDEHA and CCC have partnered to promote the use of the Screening, Brief Intervention, Referral and Treatment (SBIRT) framework to assist agencies in identifying clients with substance abuse and mental health issues and connect those clients to treatment support services. The CCC provides consultations with agencies to address issues related to screening instruments and practices, creating effective identification and referral processes, promoting the most efficient client transitioning/flow, improving documentation and communication of treatment activities, and connecting QA and CQI processes. CCC has worked extensively with pilot agencies and is working with IDEHA to develop strategies to allow further rollout of SBIRT within the next funding year.

B: Goal Setting

Goals:

- Ensure that PLWH are linked to appropriate medical and social services.

Rationale:

The Baltimore-Towson MSA contains a comprehensive system of medical and social services for PLWH funded by Ryan White Parts A, B, C and D, CDC HIV Prevention, CDC STD Prevention, CDC DASH, SAMSHA and HOPWA funding. The goals and activities related to intervention 14 will enhance the existing coordination and collaboration mechanisms that ensure linkage to these services.

Recommended Intervention #15: “Condom distribution for the general population”

A: Situational Analysis

15.1 Policies and Procedures

The Maryland Infectious Disease and Environmental Health Administration Condom Distribution Policy outlines the procedures for agencies to obtain free condoms for distribution and the requirements for the distribution of condoms obtained through the program. The policy requires that condoms must be distributed without charge, not sold or traded. The policy indicates that condom distribution is most effective when it occurs in the context of a prevention program that attempts to increase clients' risk reduction skills. The policy recommends that agencies distributing condoms provide educational activities that increase clients' skills to use condoms appropriately as well as to negotiate with partners about condom use. At a minimum, educational materials/pamphlets on HIV/AIDS and proper use of a condom should accompany the distribution of condoms.

15.2 Description of current services

IDEHA has conducted a condom distribution program for at least 15 years. IDEHA provides condoms free of charge to partnering agencies/programs via its Materials Distribution Center. Over 1000 agencies participate in the condom distribution program. Each must register and provide information about its program and methods it uses to distribute condoms. This information is used to determine the maximum number of condoms they can receive per month. Agencies/programs that provide HIV prevention services and those that provide HIV health care as their primary mission are eligible to receive the most condoms. Other factors considered in determining the number of condoms an agency may obtain include sources of funding, characteristics of the populations served, program size and scope of services offered, and prior performance of the program. All HIV prevention programs funded by IDEHA are eligible to participate in the condom distribution program and are expected to distribute condoms as appropriate to clients of their risk reduction interventions.

During CY 2010 IDEHA spent approximately \$500,000 from various sources to purchase and distribute condoms statewide, with approximately \$300,000 supporting condom distribution in the Baltimore-Towson MSA. IDEHA's Materials Distribution Center distributed 4,166,560 condoms (4,162,000 male condoms and 4,560 female/internal condoms) via registered condom distribution agencies statewide. Of these, approximately 2.6 million (63%) were distributed in the Baltimore-Towson MSA.

B: Goal Setting

As described under Intervention 3, condom distribution to HIV prevention and care providers by IDEHA's Materials Distribution Center is targeted to agencies that serve HIV-positive persons and persons at high risk for HIV infection. At this time, condom distribution specifically targeted to the general population is not planned as part of the Baltimore-Towson MSA ECHPP.

Recommended Intervention #16: “HIV and sexual health communication or social marketing campaigns targeted to relevant audiences”

A: Situational Analysis

16.1 Context

Social marketing and health communication are important tools to influence behavior. A variety of health communication strategies to disseminate information and promote health behaviors can be utilized. Examples include: mass media, interpersonal communication through a health-care provider, computer and Internet resources, social networking sites, marketing publications (e.g., brochures), message placement (e.g., billboards) and community level outreach.¹ Social marketing and health communication media have been found “to penetrate the population regardless of education, race/ethnicity, or health care access” among Internet users, according to a study done at the University of Colorado at Denver and Health Sciences Center. Furthermore, the results showed that social networking sites are being utilized by African-Americans at a higher rate than by non-Hispanic whites². Social-media websites, such as YouTube, Facebook, MySpace, Twitter and Second Life are popular, not only as means of social interaction, but for health information especially for youth and adolescents. Usage of social networking sites has more than quadrupled between 2005 and 2009, suggesting a “potential systematic shift in the communication pattern that transcends the traditional digital divide.”³ This is particularly helpful when trying to communicate to blacks and younger individuals, who are less likely to have a regular health-care provider.⁴ Further, social marketing is typically inexpensive, interactive and capable of being quickly circulated to a large community. There is tremendous potential to reach traditionally underserved members of the population through this medium.

16.2 National HIV/AIDS Strategy Guidance

The *National HIV/AIDS Strategy* (NHAS) released on July 10, 2010 offers the following guidance on social marketing and education:

Outreach and engagement through traditional media (radio, television, and print) and networked media (such as on-line health sites, search providers, social media, and mobile applications) must be increased to educate and engage the public about how HIV is transmitted and to reduce misperceptions about HIV transmission. Efforts will be made to utilize and build upon World AIDS Day (December 1st) and National HIV Testing Day (June 27th), as well as other key dates and ongoing activities throughout the year.⁵

¹ W. Douglas Evans. 2006. “How Social Marketing Works in Health Care.” *British Medical Journal* 332(7551), May 20. Internet cite (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1463924>), downloaded Feb. 10, 2011.

² K. Vance, W. Howe and R.P. Dellavalle. 2009. “Social Internet Sites as a Source of Public Health Information.” *Dermatologic Clinics* 27(2), April. Abstracted at Internet site (<http://www.ncbi.nlm.nih.gov/pubmed/19254656>), downloaded Feb. 10, 2011

³ Wen-ying Sylvia Chou *et al.* 2009. “Social Media Use in the United States: Implications for Health Communication.” *Journal of Medical Internet Research* 11(4), Oct.-Dec. Internet site (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC>), downloaded Feb. 10, 2011.

⁴ K. Vance, W. Howe and R.P. Dellavalle. 2009. *Op. cit.*

⁵ White House, Office of National AIDS Policy (ONAP). 2010. *National HIV/AIDS Strategy for the United States, July 2010*. Washington D.C.: ONAP, July. Internet site (<http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>), downloaded on September 10, 2010.

16.3 Current Programs

16.3.1 ACT! Campaign

Launched in 2007, U.S. Centers for Disease Control and Prevention's (CDC) ACT! Campaign is a \$10 million, five-year collaboration with the goal of raising the visibility of the HIV/AIDS epidemic with messages from leaders in African American communities.⁶ The theme of Baltimore's ACT! Campaign is "Stopping AIDS is Everyone's Business" and in 2009, the Office of the Mayor of Baltimore launched a social marketing campaign, featuring leaders of local HIV-prevention and health-care organizations. In 2010, the Baltimore City Health Department sponsored the *iHeart Baltimore* Creative Arts Competition in which participants were asked to submit poetry, short essays, photos or other creative arts to embody the theme of "Stopping AIDS is Everyone's Business".⁷ The winning entries are featured online at: <http://www.baltimorehealth.org/iheart-stoppingaids.html>.

The ninth annual Baltimore African American Heritage Festival was held on June 18-20, 2010 at M&T Bank Stadium. The three-day family event every year celebrates the history, culture, heritage and arts of African-Americans, attracting over 10,000 people from Maryland, Virginia and Washington, D.C.⁸ The festival features booths and vendors promoting education, financial literacy, health, home ownership, and career information. IDEHA staff participated in ACT!'s Wellness Village at the festival and distributed HIV prevention and STOP AIDS literature.⁹

16.3.3 Spread the Word, Not the Disease Campaign

In 2007, Baltimore City Health Department, The After-School Institute (TASI), Baltimore City Mayors Office, and the Infectious Disease and Environmental Health Administration launched the "*Spread the Word, Not the Disease: AIDS is No Joke*" social marketing campaign. The campaign's focus was to encourage youth, youth workers and parents to identify with key messages and strategies for effective communication in an effort to prevent the spread of HIV infection in youth.

The campaign slogan "*Spread the Word, Not the Disease: AIDS is No Joke*" and other media messages were developed as result of input from focus groups and youth ages 13 to 23 that resided in neighborhoods affected by high rates of HIV/AIDS, as well as after-school providers and parents. The campaign was launched for statewide implementation and was eventually adopted and supported by the Centers for Disease and Control (CDC) for national implementation.

The campaign elements included posters and newspaper print ads; two television public service announcements airing on public TV stations; a radio ad airing on the radio station with largest youth audience in the area; a billboard focused on abstinence and testing for HIV; a website; two community theatre performances; and special events, such as Baltimore City Summer Pool Opening Parties and a press conference with the Mayor and Health Commissioner of Baltimore City.

⁶ U.S. Centers for Disease Control & Prevention (CDC). 2011. "Act Against AIDS." Internet site (<http://www.cdc.gov/hiv/aaa>), downloaded Feb. 10, 2001.

⁷ Baltimore City Health Department Press Release. June 10, 2010. "Baltimore City Public Health Students Win Inaugural Creative Arts Contest" Internet site (http://baltimorehealth.org/press/2010_06_10_iHeARTwinner_pr.pdf), downloaded Mar. 2011.

⁸ Baltimore.org. 2010. "African American Heritage Festival." Internet site (<http://baltimore.org/events/id/2252>), downloaded Feb. 2011.

⁹ DHMH. 2009. *2009 Annual Progress Report*, p. 32.

16.3.4 Baltimore City Stomping on HIV – Social Marketing Campaign

IDEHA is collaborating with Baltimore City Health Department and The After-School Institute to develop and launch an HIV/AIDS prevention “*Stomping on HIV*” social marketing campaign on Morgan and Coppin State Universities campuses through competitive stomping and/or step- show events by organizations such as sororities, fraternities and other on-campus groups. The “*Stomping on HIV*” social marketing campaign on local college campuses will provide a platform for students to learn information and skills about HIV/AIDS and other STIs to protect themselves, and also to share information learned with their family and friends. “*Stomping on HIV*” activities will be promoted via text messaging, websites, flyers and other advertising media, and through on-campus organization meetings. Materials will include resources for HIV information, testing and treatment.

16.3.5 Project ACCESS

Project ACCESS is a multi-media social marketing campaign to encourage HIV counseling and testing among high- risk youth sponsored by the University of Maryland Medical Center located in downtown Baltimore.¹⁰ The goals of the social marketing campaign are to “raise consciousness among sexually active minority youth about the need for HIV counseling and testing; and to provide youth with easy access to HIV counseling and testing, which incorporates efficient and graceful transition into adolescent-focused comprehensive care.”

The Project ACCESS promotion consisted of producing a “Get Tested Week” campaign launch, and utilized social media and marketing messages along with community saturation by peers. The phone line for testing was promoted, a public service announcement for television and local movie theatres was developed, and advertisements and literature were featured in public venues, public transportation, and other places where youths gather.

The National Institutes of Health (NIH) have expressed interest and have provided funding for this campaign because of the important biomedical and clinical research opportunities from HIV-infected adolescents. “The program could help establish clinical infrastructure and patient volume so that research participation opportunities might be offered to an important understudied population.”¹¹

B: Goal Setting

Goals:

- Increase knowledge of HIV transmission and prevention strategies, and awareness of the availability of HIV prevention, care and treatment services.

Rationale:

While there are numerous social marketing and health communication activities being implemented in the Baltimore-Towson MSA, current efforts are targeted to the general population and may not be effective for African American MSM. Given the high rates of HIV infection among African American MSM in the MSA (and statewide), there is a need to develop and implement social marketing campaigns to

¹⁰ University of Maryland Medical Center. 2011. “Division of Adolescent and Young Adult Medicine.” Internet site (<http://www.umm.edu/pediatrics/ped-adolescence.htm>), downloaded Feb. 10, 2011.

¹¹ The White House web site. [n.d.] “Clinton Administration Initiative to Address HIV/AIDS among Racial and Ethnic Minorities: National Institutes of Health.” Internet site (http://clinton4.nara.gov/textonly/ONAP/cbc/cbc_nih.html), downloaded Feb. 10, 2011.

increase knowledge of HIV transmission and prevention strategies, and awareness of the availability of HIV prevention, care and treatment services among this population. In 2011, IDEAH will begin these efforts by developing and implementing “HIV Stops with Me” with a focus on African American MSM and transgender persons.

Recommended Intervention #17: “Clinic-wide or provider-delivered evidence-based HIV prevention interventions for HIV-positive patients and patients at highest risk of acquiring HIV”

A: Situational Analysis

See Intervention #13. At this time we are not aware of any clinic-wide or provider-delivered evidence based HIV prevention interventions for HIV-positive patients and patients at highest risk of acquiring HIV being implemented in the Baltimore-Towson MSA.

B: Goal Setting

Goals:

- Increase the percentage of PLWH who receive prevention interventions as part of HIV medical care.

Rationale:

As demonstrated by the mathematical modeling conducted in partnership with Dr. David Holtgrave and team at Johns Hopkins University Bloomberg School of Public Health, persons living with HIV who are aware of their serostatus and engage in high-risk behaviors have the highest transmission rate (18.7). While these individuals represent a small percentage of PLWH, interventions to reduce risk behaviors can significantly decrease the transmission of HIV. As described under intervention 13, IDEHA will be partnering with an academic entity to review national best practices for the integration of prevention interventions into HIV medical care and support services, and assess current provider practices in the Baltimore-Towson MSA. These activities will also explore provider-delivered and clinic-wide prevention interventions. Based on the findings of the review and assessment, we will develop plans to increase the integration of prevention in HIV care setting by piloting a provider-delivered or clinic-wide intervention with a high-volume HIV care provider in the Baltimore-Towson MSA.

Recommended Intervention #18: “Community interventions that reduce HIV risk”

A: Situational Analysis

18.1 Description of current services

Due to the high rates of undiagnosed HIV infection among African American MSM in the Baltimore-Towson MSA, IDEHA has begun implementation of two community-level interventions in the Baltimore-Towson MSA aimed at reducing HIV risk among African American MSM.

IDEHA has awarded \$64,550 to the Baltimore City Health Department to subcontract with Empowering New Concepts/the Portal to implement d-Up! (Defend Yourself) in Baltimore. d-Up! is a community-level intervention for Black MSM. d-Up! is a cultural adaptation of the Popular Opinion Leader (POL) intervention and is designed to change social norms and perceptions of Black MSM regarding condom use. d-Up! finds and enlists opinion leaders whose advice is respected and trusted by their peers. These opinion leaders are trained to change risky sexual norms in their own social networks. This project will involve a minimum of 15 trained Opinion Leaders (OL) and will target a specific social network of African American MSM of at least 100 individuals. The community assessment for this project is underway and the recruitment and training of the OL will begin by mid-April, 2011.

IDEHA has awarded \$48,000 to the Baltimore County Health Department to implement the Real AIDS Prevention Project with African American MSM in Baltimore County. RAPP is a community-level intervention originally designed for African American women which IDEHA has adapted for use with African American MSM. RAPP identifies, recruits, trains, and deploys members of the target population as HIV peer educators. RAPP also collects, abbreviates, and disseminates role model stories celebrating risk reduction behaviors. The community observation and input components of this project have begun. The recruitment and training of Peer Leaders is planned so that outreach activities and dissemination of role model stories can begin by the end of May 2011.

In addition to the activities described above, the policy initiatives, social marketing campaigns, and community partnerships described under interventions 5, 16 and 24 impact HIV risk at the community level by creating environments to support risk reduction, increasing awareness of HIV prevention services and strategies, decreasing stigma, and mobilizing communities.

B: Goal Setting

No new activities are proposed as part of the Baltimore-Towson MSA ECHPP. Although there is a need to expand these efforts among African American MSM communities, community-level interventions are expensive and challenging to implement with diffuse communities. The feasibility of further expansion will be assessed based on evaluation of the two new initiatives that are launching in 2011.

Recommended Intervention #19: “Behavioral risk screening followed by individual and group-level evidence-based interventions for HIV-negative persons at highest risk of acquiring HIV; particularly those in an HIV-serodiscordant relationship”

A: Situational Analysis

19.1 Epidemiological Information

Using surveillance data reported through 12/31/2010, there were an estimated 1,327 new adult/adolescent HIV diagnoses in the Baltimore-Towson MSA during 2009. The HIV cases in the Baltimore-Towson MSA are concentrated in Baltimore City (76%) and disproportionately found among men (63%), non-Hispanic Blacks (80%), and persons 30-59 years of age (82%). Among living cases of HIV, the leading HIV exposure categories are injection drug use (36%), heterosexual exposure (31%), and men who have sex with other men (27%). However, the mix of exposure categories has been undergoing a substantial change over the last 15 years. Injection drug use has declined from 60% of new adult/adolescent HIV diagnoses in 1992s to only 23% in 2009. Heterosexual exposure has increased steadily, reaching 37% of new adult/adolescent HIV diagnoses by 2009. The proportion of cases that were men who have sex with men (MSM), which had been low and declining for many years, reached its lowest point at 16% of new adult/adolescent HIV diagnoses in 2001, and has since increased rapidly to 38% in 2009, becoming the leading transmission category again for the first time since 1987.

19.2 Current Services

IDEHA is currently supporting 15 agencies in the Baltimore-Towson MSA to implement individual and/or group-level evidence-based interventions for HIV-negative persons at highest risk of acquiring HIV. These agencies include 4 local health departments, 4 community-based organizations, 1 community health center, 4 substance abuse treatment centers and 2 universities to implement HERR projects in the MSA. Four projects are directly implemented by IDEHA staff (three in correctional facilities and one in community settings). In addition to the projects described above, IDEHA partners with Baltimore Substance Abuse Services, Inc. (bSAS) and substance abuse treatment centers to integrate HERR interventions into substance abuse treatment services in Baltimore City. Approximately \$1,160,000 in CDC funds are currently utilized to support HERR interventions with high-risk negatives.

All IDEHA-supported HERR projects are targeted to the priority populations identified by Maryland’s Community Planning Group. The geographical areas and risk populations served by each project are determined by the epidemiological data in each region/jurisdiction to ensure that HERR interventions are provided to individuals at the greatest risk of HIV transmission or infection. All HERR projects utilize evidence-based interventions that are culturally appropriate for the individuals and communities they serve. The table below summarizes the number of HERR projects in 2010 by intervention/program model and target population. Several agencies implement more than one intervention, resulting in a total number of interventions that is greater than the number of HERR agencies described above.

Intervention/program models/ Public health strategies funded	Target population	Number of agencies funded to implement intervention
American Red Cross Hispanic Curriculum	Latino Adults	1
Becoming a Responsible Teen (BART)	Youth	1
d-up! Defend Yourself	MSM	1
Pharaoh	Men (Heterosexual, IDU)	8
POWER – Transgender	Transgender Individuals	1
Project SMART	Substance Users	3
Real AIDS Prevention Project (RAPP)	MSM	1
Rewriting Inner Scripts	MSM	2
SISTA	Women (Heterosexual, IDU)	7

Source: IDEHA, HIV Prevention Program data.

The table below summarizes the evidence base for HERR interventions currently implemented by IDEHA-Supported HERR projects in the Baltimore-Towson MSA.

HERR Curriculum	Evidence Base
American Red Cross Hispanic HIV/AIDS Curriculum	Developed by the American Red Cross.
Becoming A Responsible Teen (BART)	CDC 2009 Compendium of Evidence-Based HIV Prevention Interventions ¹ ; CDC Diffusion of Effective Behavioral Interventions (DEBI) Program ²
d up! defend yourself	CDC 2009 Compendium of Evidence-Based HIV Prevention Interventions ³ ; CDC Diffusion of Effective Behavioral Interventions (DEBI) Program ⁴
Pharaoh	Locally developed intervention based on behavior change theory and local needs assessment activities.
Positive Wellness and Renewal (POWER)	Developed and evaluated by AIDS Project Los Angeles.
Real AIDS Prevention Project (RAPP)	CDC 2009 Compendium of Evidence-Based HIV Prevention Interventions ³
Rewriting Inner Scripts (RISE)	Locally developed intervention based on behavior change theory and local needs assessment activities.
Sisters Informing Sisters about Topics on AIDS (SISTA)	CDC 2001 Compendium of HIV Prevention Interventions with Evidence of Effectiveness ³ ; CDC Diffusion of Effective Behavioral Interventions (DEBI) Program ⁴
Project SMART	CDC 2001 Compendium of HIV Prevention Interventions with Evidence of Effectiveness ⁶

¹ <http://www.cdc.gov/hiv/topics/research/prs/evidence-based-interventions.htm>

² <http://www.effectiveinterventions.org>

³ http://www.cdc.gov/hiv/resources/reports/hiv_compendium/index.htm

During FY 2010, IDEHA's HERR programs provided the above listed interventions to 2038 HIV negative individuals in the Baltimore-Towson MSA. 1963 clients were served in Group-Level Interventions; 129 were served in Individual-Level Interventions. Approximately 50% of the GLI participants completed at least 75% of the sessions offered for the multi-session interventions with a total of 1779 hours of GLI for FY 2010. The 129 Individual-Level Intervention participants received a total of 282 hours of interventions for an average of 3 hours per participant with a range of 1 to 48.

The demographics and risk of clients by HERR programs for high-risk negative clients served during FY2010 are provided in Appendix C. Participants were somewhat evenly distributed across the age span with 25% of the clients being youth and young adults (< 13 to 24 years) while approximately one-third were between 25 and 39 years and another third between 40 and 49 years. Fifty-five percent of the HERR participants were female, 41.2% male, and 1.3% transgender. Participants reporting Hispanic ethnicity represented 7.3% of HERR clients. Sixty-two percent of clients served were African-American and 25.7% were white.

HERR participants who reported negative HIV serostatus were categorized into risk groups based on their reported gender and risk behaviors. In addition to the traditional surveillance risk categories, we created an additional category (other heterosexual) to capture clients who report heterosexual sexual behaviors but who do not report one of the risk behaviors required for the surveillance definition (high-risk heterosexual). Approximately 42% clients were classified as IDU, high-risk heterosexual, or other heterosexual. Although MSM were the CPG's second priority population, only 0.9% of the HERR participants reported MSM risk behaviors.

Analysis of client-level HERR data describing clients served by current programs indicates a significant need to more effectively target HERR interventions to the highest risk persons. To accomplish this, IDEHA will increase the utilization of core surveillance data for program targeting. These data are available through newly expanded set of state, regional, and county-level epidemiological profiles, through a new on-line customizable HIV mapping tool, and through a new on-line query-able database that allows the development of custom tables, as well as through specialized data requests from IDEHA's HIV epidemiology unit. Additionally, the National HIV Behavioral Surveillance (NHBS) System provides us with data on the rates of behaviors that put people in high-risk populations (MSM, IDU, heterosexuals) at increased risk of acquiring HIV infection. NHBS also provides insight into effective ways of reaching high-risk populations.

B: Goal Setting

Goals:

- Ensure that resources for behavioral interventions with HIV-negative clients are targeted to the geographic areas and populations at highest risk for HIV infection.
- Maximize the reach of HIV prevention interventions for HIV-negative persons at highest risk for HIV infection.

Rationale:

Mathematical modeling conducted in partnership with Dr. David Holtgrave and team at Johns Hopkins Bloomberg School of Public Health indicates that there are insufficient resources available for HIV prevention in the Baltimore-Towson MSA. Current resources must be focused on the interventions that can have the greatest impact on reducing new infections by increasing the number of PLWH who are

aware of their serostatus and are engaged in HIV medical care, and decreasing high-risk behaviors among PLWH. In order to increase HIV testing, HIV/STI partner services and behavioral interventions for high-risk PLWH, resources for behavioral interventions for HIV-negative persons will need to be decreased and redirected. However, due to the high rates of infection among communities in Baltimore City and the capacity of local health departments and community based organization to deliver evidence-based risk reduction interventions, IDEHA will continue to invest some resources for HERR intervention with high-risk negative clients. The amount of CDC funding utilized for HERR interventions with HIV-negative persons will be determined in partnership with the local health departments in April 2011. These interventions will be implemented in the highest prevalence areas of the Baltimore-Towson MSA with communities with the highest rates of HIV infection (e.g. African American MSM, active substance users, heterosexual men and women at greatest risk of HIV infection).

Recommended Intervention #20: “Integrated hepatitis, TB, and STD testing, partner services, vaccination, and treatment for HIV infected persons, HIV-negative persons at highest risk of acquiring HIV, and injection drug users according to existing guidelines”

A: Situational Analysis

20.1 Epidemiological Information

The availability of co-morbidity data at regular intervals has been an ongoing challenge in Maryland, however, subsets of prevalent PLWH served through various prevention and treatment programs throughout the state have reported high rates of co-infection among this population. During fiscal year 2010 in the Baltimore-Towson MSA, 26.6% of PLWH who received partner services were also infected with syphilis at the time of their original interview. During calendar year 2009, statewide Ryan White providers reported the following screening and treatment statistics on a total of 11,606 clients served:

Statewide Ryan White Clients Receiving STI and Hepatitis C Screenings and Treatment in CY2009	PLWH Screened		PLWH Treated	
	Number	(%)	Number	(%)
Syphilis	8,608	74.2	590	6.9
Any treatable STI other than syphilis and HIV	5,302	46.9	1,005	19.0
Hepatitis C	5,478	47.2	169	3.1

Source: Maryland DHMH, IDEHA. 2011.

Additionally, during 2010, approximately 29.9% of PLWH diagnosed in Baltimore City Health Department STD clinics were also simultaneously diagnosed with at least one other STD. Of all co-occurring infections diagnosed among these patients, 11.6% were early syphilis, 16.5% gonorrhea, and 9.8% chlamydia.

19.2 Current Services

Maryland supports integrated HIV/STI/viral hepatitis screening in the Baltimore City Health Department STD Clinics through CDC PS10-10138. Clinic staff provide integrated conventional or rapid HIV screening, allowing Maryland to increase the number of MSM, IDU and other high-risk individuals who are tested for viral hepatitis and linked to vaccination and treatment in this setting. Funds from the Expanded Testing Grant are utilized to cover laboratory costs for expanded viral hepatitis screening efforts and integrated STI screening is provided to all clients in conjunction with HIV testing utilizing funds from other sources. These efforts have increased the overall availability of cross-trained staff to provide integrated testing.

Each of the seven jurisdictions in the Baltimore-Towson MSA provides access to free STI testing and treatment. Most local health departments provide the access via services in the health department's facilities. One county, Anne Arundel, provides access via contractual agreement with two private health care provider offices. STI testing via local health departments or local health department contract includes syphilis, chlamydia and gonorrhea, with HIV testing offered to all clients. Clinic hours per week vary locally according to demand and capacity. Additionally, DIS at each local health department, as part of routine HIV/STI partner services, assure that newly-identified PLWH are offered STI screening, and are referred to an HIV provider for routine, ongoing care. The HIV care provider

should provide STI screening as part of initial entry into care if this has not previously been performed, and then annually as part of ongoing HIV care services.

Annual, routine STI screenings are provided to PLWH as part of ongoing HIV care and are performed by the patient's provider at their HIV care facility. Local health department STD Clinics are not usually the source or site for annual, routine STI screening for PLWH. STI screening/testing at local health department STD clinics is provided to PLWH when that individual accesses services at the STD clinic to seek assessment for specific symptoms or concerns about possible or known STI exposure. Results from the Baltimore City Health Department's Ryan White Part A Clinical Quality Management program indicate significant increases in compliance with these requirements over the past five years. Specifically, annual chart reviews for Part A Outpatient Ambulatory Medical Care clients conducted between 2005 and 2010 showed that provision and documentation of annual syphilis screening increased from 64% to 84%.

B: Goal Setting

Goals:

- Increase the integration of HIV, STI, viral hepatitis, and TB screening and treatment.

Rationale:

The provision of integrated hepatitis, TB, and STD testing, partner services, vaccination, and treatment for HIV infected persons, HIV-negative persons at highest risk of acquiring HIV, and injection drug users according to existing guidelines will help ensure these prevention opportunities are leveraged to positively impact both individual and community health outcomes. Many local health departments within the Baltimore-Towson MSA already implement some integrated services. Review of client-level HIV and STI testing data to assess the current level of service integration and review of these assessment results with providers will help assist in planning efforts to improve integration of services. Enhanced collaboration across HIV prevention, STI prevention and HIV care at the state and local levels will further assist in the implementation of plans to increase the integration of these services.

Recommended Intervention #21: “Targeted use of HIV and STD surveillance data to prioritize risk reduction counseling and partner services for persons with previously diagnosed HIV infection with a new STD diagnosis and persons with a previous STD diagnosis who receive a new STD diagnosis”

A: Situational Analysis

As previously described in Interventions 2 and 12, both HIV and STI program, epidemiologic and surveillance data are used to prioritize risk reduction counseling and partner services for individuals with previously diagnosed HIV infection reported to have a new STI diagnosis and for persons with repeat STI diagnoses. Partner Services staff are trained to conduct a thorough record search on all patients. By using all data sources available (e.g. STD*MIS history, local clinic records, eHARS data when available), DIS are able to properly prioritize these high-risk patients to provide enhanced counseling as appropriate, ensuring patients received comprehensive services.

Timely record searches of HIV surveillance data have been an ongoing challenge due to lack of existing policies and procedures and staff shortages. As partner services staffing levels are increased, IDEHA’s Centers for HIV Prevention and STI Prevention will collaboratively develop these policies and procedures in partnership with local health departments to ensure this data is utilized effectively.

Currently, Maryland initiates partner services follow-up for all HIV-positive clients who are diagnosed with syphilis through a laboratory reporting system. When a syphilis case is reported by a laboratory, an eHARS record search should be conducted prior to field initiation to ensure proper treatment, linkage to care, and notification of partners. Any syphilis case identified to be co-infected with HIV through this record search process can then be promptly initiated for treatment and partner services by entry and assignment of a reactor field record in STD*MIS. While laboratory results for gonorrhea and chlamydia are also reported to the health department, at this time the volume of gonorrhea and chlamydia lab reports prohibits this level of record searching to identify HIV co-infection.

B: Goal Setting

Goals:

- Increase the utilization of HIV and STI surveillance data to target HIV testing, partner services and other prevention interventions.

Rationale:

Partner services ensures that the persons at highest risk for HIV infection (i.e. the sexual and needle-sharing partners of persons living with HIV) are notified of their potential exposure, provided provide access to HIV/STD testing, and linked to prevention, care and support services. Currently, HIV/STI partner services are primarily devoted towards reaching newly-diagnosed persons who are diagnosed by IDEHA-supported testing programs. Existing staffing levels have limited our ability to implement policies and procedures for timely record searches needed to identify PLWH reported with a new STI. Efforts to identify and provide partner services to persons living with HIV with a new STI diagnosis will be improved as staffing levels are increased and PRISM is implemented in Maryland.

Recommended Intervention #22: “For HIV-negative persons at highest risk of acquiring HIV, broadened linkages to and provision of services for social factors impacting HIV incidence such as mental health, substance abuse, housing, safety/domestic violence, corrections, legal protections, income generation, and others”

A: Situational Analysis

22.1 Description of current services

While there is not a consistent process for such linkages across the HIV prevention portfolio, IDEHA is implementing a number of specific intervention models and projects which do endeavor to link clients to these services as a standard element of their delivery. Examples include the RISE (Rewriting Inner Scripts) intervention for MSM delivered at two locations in Baltimore City; the POWER (Positive Wellness and Renewal) intervention being delivered to transgender adults in Baltimore City; and the substance abuse treatment facilities in Baltimore City who are participating in the BSAS (Baltimore Substance Abuse Systems) Integration Initiative.

RISE is a locally-developed behavioral intervention for MSM. It is comprised of two sessions of group-level intervention exploring: internalized racism, heterosexism, and homophobia; the consequences of oppression on the development of MSM self-concept and perceptions of peers; relationship patterns and norms; and sexual risk reduction strategies. At the end of the second group session, follow-up interview are scheduled with RISE participants. During the motivational interview, the RISE Facilitator works with each client to identify the next step they are going to take on behalf of their own health, such as: learning their serostatus via HIV counseling, testing, and referral; acquiring mental health services to continue the work begun in RISE; enrolling in substance abuse treatment if appropriate; linking to HIV medical care if they are living with HIV but out of care; etc. RISE explicitly aims to connect MSM to other relevant health services that will lower their HIV risks.

POWER is an individual-level, client-centered counseling intervention based on the stages of change. It begins with an assessment of client needs. The POWER Facilitator then customizes the modules in the POWER curriculum to match the needs of each client. POWER sessions involve helping the client to move through the stages of change with regard to their risk behaviors. In the Baltimore City project serving transgender adults, the POWER curriculum is enhanced by an ongoing support group which clients may also choose to attend. The support group sometimes features external speakers who provide information about linking to other relevant services such as those described by this Required Intervention. Recent examples include: the current status of civil rights protections for transgender persons, and how and where to address perceived violations; sources for safe and legal hormones; and injection safety/universal precautions. The Outreach Worker who recruits clients to the project also provides ongoing support to POWER clients, such as by accompanying clients to their first medical appointments, by referring clients into General Educational Development /high school equivalency preparatory classes, and to Vocational Rehabilitation for job training.

The vision of the BSAS HIV Prevention Integration Initiative is a publicly-provided substance abuse treatment infrastructure in Baltimore City in which HIV prevention interventions are fully-integrated, standard elements of service delivery. Toward the realization of this vision, IDEHA staff train Baltimore Substance Abuse Systems substance abuse treatment grantees to provide HIV counseling, testing, and referral, and/or HERR curricula *Pharaoh* and *Extra Steps*. Substance abuse treatment facilities in Baltimore City are a target for HIV prevention integration because their clients are at high risk for HIV

acquisition and have demonstrated openness to behavior change via their enrollment in drug treatment. Drug treatment grantees receive a small award in their first year of participation to offset costs associated with staff persons being out of the office for HIV prevention training. In subsequent years facilities who conduct HIV testing continue to receive support in the form of rapid test kits and controls from IDEHA.

In addition, IDEHA is pursuing two additional integration initiatives related to substance abuse, Sexual Health in Drug and Alcohol Treatment, and SBIRT. In partnership with Maryland's Alcohol and Drug Abuse Administration (ADAA), IDEHA is sponsoring the development of a local team of trainers in Doug Braun-Harvey's Sexual Health in Drug and Alcohol Treatment intervention. This 12-session, group-level intervention for clients of substance abuse treatment facilities addresses the challenge that many clients enter drug treatment with high sex/drug-linked behaviors. Drug treatment typically addresses only half of the equation: clients' substance using behavior. Because drug taking and sexual behaviors are closely linked, not addressing clients' sexual behavior can lead them to fail drug treatment: desire itself is a relapse trigger. *Sexual Health in Drug and Alcohol Treatment* reframes sexuality as an ally in recovery, rather than an adversary. The intervention builds substance abuse treatment facilitators' capacity to comfortably discuss clients' sexual behaviors, and supports substance abuse clients in building skills to consider their own sexual past, plan for their own healthy sexual future, and successfully navigate the challenge of sexuality in sobriety. The intervention has been shown to increase client retention in treatment, decrease relapse, and reduce sex/drug-linked shame among participants.

Lastly, Center for HIV Prevention staff are exploring the potential for use of SAMHSA's SBIRT (Screening, Brief Intervention, and Referral to Treatment) tool in multi-session Health Education/Risk Reduction settings as a way of identifying and linking high-risk HIV-negative persons to substance abuse treatment services when appropriate. Additional information on the SBIRT tool is provided in intervention 14.

B: Goal Setting

HIV prevention interventions include linkages to mental health services, substance abuse treatment and other social services as needed and feasible. IDEHA will continue the partnerships described above in order to leverage the services provided by other health and social services systems.

Recommended Intervention #23: “Brief alcohol screening and interventions for HIV-positive persons and HIV-negative persons at highest risk of acquiring HIV”

A: Situational Analysis

14.1 Screening, Brief Intervention, Referral and Treatment (SBIRT) framework

In 2005, IDEHA began a partnership with Dr. Carlo DiClemente in the Center of Community Collaboration (CCC), part of the psychology department at the University of Maryland, Baltimore County. The main goal of this academic/community partnership is to improve the treatment adherence and health outcomes of PLWA who also have mental health and/or substance abuse diagnoses by enhancing the capacity, skills and services of providers serving this population.

Specific examples of capacity building services funded through this partnership are:

- Developing training modules based on the results of a comprehensive needs assessment;
- Conducting clinical trainings and direct clinical service activities to build provider capacity;
- Developing and facilitating a conference on the topic of Integrative Dual Diagnoses Treatment;
- Facilitating treatment adherence groups and providing staff development trainings; and
- Coaching on the subject of motivational interviewing and strategies related to increasing client adherence in several treatment and support environments.

As part of this project, IDEHA and CCC recognized the need to have clients with substance abuse and mental health issues to be identified as early in the treatment process as possible to enable appropriate diagnosis and treatment of these issues to optimize HIV treatment adherence. To that end, IDEHA and CCC have partnered to promote the use of the Screening, Brief Intervention, Referral and Treatment (SBIRT) framework to assist agencies in identifying clients with substance abuse and mental health issues and connect those clients to treatment support services. The CCC provides consultations with agencies to address issues related to screening instruments and practices, creating effective identification and referral processes, promoting the most efficient client transitioning/flow, improving documentation and communication of treatment activities, and connecting QA and CQI processes. CCC has worked extensively with pilot agencies and is working with IDEHA to develop strategies to allow further rollout of SBIRT within the next funding year.

B: Goal Setting

HIV prevention and care services include screening for alcohol and other substance use and referral for treatment as needed. As described above and in interventions 22, IDEHA is partnering with the University of Maryland, Baltimore County to pilot the SBIRT framework with agencies that serve PLWH and explore the use of this tool in Health Education/Risk Reduction interventions for high-risk HIV-negative clients.

Recommended Intervention #24: “Community mobilization to create environments that support HIV prevention by actively involving community members in efforts to raise HIV awareness, building support for and involvement in HIV prevention efforts, motivating individuals to work to end HIV stigma, and encouraging HIV risk reduction among their family, friends, and neighbors”

A: Situational Analysis

24.1 Planning Councils

HRSA mandates that each Ryan White Part A eligible metropolitan areas (EMAs) assemble a local HIV planning council to set priorities and allocate Ryan White Part A funds. The membership of each planning council is specific to the epidemic of the community. Demographically, members must reflect the community and at least one-third of the members must be PLWH/A that consume Ryan White services.¹

Planning councils are tasked with several duties. The Greater Baltimore HIV Health Services Planning Council’s main responsibilities are:

- “Conducting consumer needs assessments and identifying service needs of people living with HIV and AIDS (PLWH/As) in the Baltimore EMA.
- Setting priorities for the allocation of federal HIV/AIDS service dollars under the Ryan White Program, Part A (formerly Title I).
- Evaluating the efficiency of the administrative mechanism designated by the mayor to distribute Ryan White Program funds and follow planning council priorities.
- Developing a comprehensive plan for delivering HIV services to PLWH/As.
- Working with other Ryan White Program representatives to develop the Statewide Coordinated Statement of Need (SCSN).
- Assuring community participation.
- Developing methods to address conflicts of interest and grievances.”²

The planning council achieves these directives through delegating tasks to series of six standing committees. Each committee has representation from the infected/affected community. One committee, the People Living with HIV/AIDS (PLWH/A) Committee welcomes all community members that are HIV positive. This committee is critical to providing guidance to the planning council on service delivery, core medical, and support services as well as the real-life needs of PLWH/A in the EMA. At the level of the full council, half the membership is from the infected/affected community, well above the one-third proportion required by HRSA.

All planning council meetings and committee meetings are open to the public, and meeting times and locations are posted on the planning council web site. In addition, meeting minutes as well as documents that the planning council creates are available for viewing on the web site at <http://www.baltimorepc.org> and the council’s second site, <http://balpc.intergroupinfo.com>.

¹ U.S. Health Resources and Services Administration (HRSA). 2011. “The HIV/AIDS Program: Ryan White Parts A-F. Part A- Grants to Emerging Metropolitan & Transitional Grant Areas.” Internet site (<http://hab.hrsa.gov/treatmentmodernization/parta.htm>), downloaded on February 9, 2011.

² InterGroup Services, Inc. for the Greater Baltimore HIV Health Services Planning Council. 2011. “Welcome to the Greater Baltimore HIV Health Services Planning Council.” Internet Site (<http://www.baltimorepc.org>), downloaded on February 9, 2011.

24.2 ACT! Campaign

Launched in 2007, U.S. Centers for Disease Control and Prevention's (CDC) ACT! Campaign is a \$10 million, five-year collaboration with the goal of raising the visibility of the HIV/AIDS epidemic with messages from leaders in African American communities.³ As part of the ACT! Campaign, the City of Baltimore is one of six cities to receive funding for The Business Responds to AIDS/Labor Responds to AIDS (BRTA/LRTA) program, a partnership with health departments, businesses, and leaders to increase awareness of HIV. Local merchants are requested to actively support the HIV/AIDS awareness and prevention activities with their employees and customers. Based on the March 20, 2009 final report from Baltimore City, 137 eligible merchants were successfully recruited into the BRTA/LRTA partnership. Decals, posters, t-shirts, bags, cards, and bus-side ads were produced and distributed throughout the targeted ZIP codes of 21205, 21213, and 21223. There were additional distributions of materials to community organizations within the area as well. Further training about HIV transmission, prevention, and stigma reduction was scheduled for the merchants in April and May 2009.

24.3 World AIDS Day

World AIDS Day is an annual remembrance of the 47 million people worldwide, the 1.7 million in the United States and the thousands in the greater Baltimore area, who have AIDS or who have died from AIDS. The World AIDS Day commemoration is the culmination of a year long sequence of community events that observe HIV/AIDS Awareness among a variety of populations in Maryland including National Black HIV/AIDS Awareness in February, National HIV Testing Day in June and National HIV/AIDS Gay Awareness Day in September. For all major national HIV/AIDS observance days IDEHA routinely works with the community to solicit and development a community event calendar highlighting events in locations throughout the state. For World AIDS Day 2011, we received notification of 30 events occurring throughout the state and also included 4 events for the Washington, DC area.

Baltimore City honored World AIDS Day on December 1, 2010 with many activities. The 2010 observance of Baltimore World AIDS Day was held at Mt. Vernon Place United Methodist Church. A health fair with the theme, "Act Aware, Respect, and Protect," featuring free food, giveaways, health screenings and speakers was held at the Men and Family Health Center. At the Walters Art Museum, an exhibition of a mosaic mural created by members of the greater Baltimore community who are living with HIV or AIDS was displayed at a reception.⁴ Social media were a major factor in spreading the word about Baltimore World AIDS Day. Information was posted on the Baltimore City Health Department's webpage: www.baltimorehealth.org/worldaidsday. A Facebook page was also created; 197 Facebook users "liked" the page, meaning the page was displayed on their personal sites for their friends to see (as of February 4, 2011). The Facebook page featured dozens of posts and pictures from the event.⁵ A Twitter page was established that had 123 followers and 137 tweets that anyone with Internet access could view to get more information on the event (as of February 4, 2011).⁶

³ U.S. Centers for Disease Control & Prevention (CDC). 2011. "Act Against AIDS." Internet site (<http://www.cdc.gov/hiv/aaa>), downloaded Feb. 10, 2001.

⁴ State of Maryland, Maryland Department of Health and Mental Hygiene (DHMH), Infectious Disease & Environmental Health Administration (IDEHA). 2010. Working Together: World AIDS Day 2010 Community Calendar of Events. Baltimore, Md.: DHMH, December.

⁵ See <http://www.facebook.com/BaltimoreWorldAIDSday?v=wall>.

⁶ See <http://twitter.com/BmoreWorldAIDS>.

IDEHA observed the 22nd annual World AIDS Day with the theme, “Working Together,” where the program featured a range of faith and community leaders and local performers supporting the core message of Testing, Treatment and Care. The commemorative event was held on December 1, 2010 at the Central Branch of the Enoch Pratt Library in Baltimore. About 150 attendees were greeted by the Secretary of DHMH, John Colmers; Baltimore City Mayor, Stephanie Rawlings-Blake; DHMH Deputy Secretary for Public Health Services, Frances B. Phillips; DHMH Deputy Secretary for Behavioral Health and Disabilities, Renata J. Henry, and IDEHA Director, Heather L. Hauck. These leadership staff addressed new federal funding, the incidence of the disease in Maryland, current public health prevention and treatment programs, the impact of Health Care Reform, and the National HIV/AIDS Strategy. Activities included spoken word, music and dance performances as well as several video clips about HIV. Several new panels for Maryland’s living AIDS quilt were added and on display throughout the event. Participants had the opportunity to pick up information on STI, Hepatitis, TB and HIV. HIV testing was also available on a mobile unit outside the venue, provided by one of IDEHA’s community partners, Sisters Together and Reaching. IDEHA leadership and staff also lent their presence and support to the city-wide partnership event led by Moveable Feast and Chase Brexton Health Services which started with a candlelight program at the Mt. Vernon monument and concluded with an arts-focused event at the Walters Art Gallery.

24.4 Statewide Faith Based Community Initiative

IDEHA implements a Statewide Faith Based Community Initiative (FBCI) to collaborate with leaders and members of all faiths in the state to raise awareness about HIV/AIDS, develop responsible and effective communication about HIV/AIDS prevention in communities of faith, and facilitate healthy dialogue about HIV/AIDS in order to increase access to HIV/AIDS prevention, treatment, care and support services. This initiative was launched in 2005 and is a component of IDEHA’s overall effort to reach African American communities, which are disproportionately impacted by HIV/AIDS.

24.5 LifeLinc

LifeLinc is a local advocacy group for HIV/AIDS awareness and is developed and run by volunteers, many of them past or present members of the planning council’s PLWH/A Committee. The LifeLinc framework is the product of a collaborative process among federal, state and local agencies, public stakeholders, and consumer advisory boards and committees. Their mission is “to ensure that the needs of people living with HIV/AIDS are being heard and addressed.”⁷ For more information, visit their website at www.lifelincofbaltimore.com.

B: Goal Setting

The community mobilization efforts described above will continue to be supported through partnerships with the Planning Council and other entities. Unfortunately, there have been position reductions among the staff currently responsible for community events and public information programs and therefore, it is not anticipated that IDEHA will be able to sustain the current level of effort. We will be reassessing priorities for community events and public information programs during 2011.

⁷ LifeLinc of Baltimore. 2011. Internet site (<http://www.lifelincofbaltimore.com>.), downloaded on February 9, 2011.

**Testing Data for IDEHA-Supported HIV Testing Programs in the Baltimore-Towson MSA
State Fiscal Year 2010 (July 1, 2009 to June 30, 2010)**

Client Demographics and Risk

Age in Years	All Encounters		New Positives Only	
	Number	(%)	Number	(%)
< 13	46	0.1	0	0.0
13 – 19	6907	9.3	13	2.5
20 – 24	14355	19.3	101	19.0
25 – 29	11012	14.8	50	9.4
30 - 39	13578	18.2	85	16.0
40 – 49	15982	21.4	153	28.9
50 – 59	9587	12.9	106	20.0
60 +	2215	2.9	11	2.1
Not indicated/missing	854	1.1	11	2.1

Current Gender Identity	All Encounters		New Positives Only	
	Number	(%)	Number	(%)
Male	39743	53.3	363	68.5
Female	33877	45.5	162	30.6
Transgender	55	0.1	2	0.4
Not indicated/missing	861	1.2	3	0.6

Ethnicity	All Encounters		New Positives Only	
	Number	(%)	Number	(%)
Hispanic	2981	4.0	13	2.5
Not Hispanic	69147	92.8	506	95.5
Not indicated/missing	2408	3.2	11	2.1

Race	All Encounters		New Positives Only	
	Number	(%)	Number	(%)
African American/Black	56852	76.3	466	87.9
American Indian/Native Alaskan	267	0.4	1	0.2
Asian	490	0.7	1	0.2
Native Hawaiian/Other Pac Islander	78	0.1	0	0.0
White	13147	17.6	50	9.4
Other	-	-	-	-
Multi-Racial	352	0.5	0	0.0
Don't know	318	0.4	2	0.4
Not indicated/missing	3032	4.1	10	1.9

REPORTED RISK (when available)	All Encounters		New Positives Only	
	Number	(%)	Number	(%)
Clients/Encounters with Risk Data	48434	65.0	530	100.0
MSM	2161	4.5	139	26.2
MSM/IDU	23	0.1	4	0.8
IDU	304	0.6	4	0.8
Hetero/IDU	2739	5.7	59	11.1
High-Risk Heterosexual	8294	17.1	67	12.6
Other Heterosexual	29059	60.0	195	36.8
Transgender – Sexual & IDU Risk	0	0.0	0	0.0
Transgender – Sexual Risk Only	44	0.1	2	0.4
Other Sexual Risk	671	1.4	24	4.5
No Risk Reported	5139	10.6	36	6.8
Unknown Risk	-	-	-	-

Funding to Support Linkages to other Services for PLWH in the Baltimore-Towson MSA

Medical Case Management FY 2009	
RW Part A EMA	\$1,227,358
Part A MAI (EMA and Counties)	\$340,396
Baltimore County RW Part B	\$443,915
Baltimore City RW Part B	\$341,045
Anne Arundel County RW Part B	\$126,364
Harford County RW Part B	\$119,835
Carroll County RW Part B	\$29,770

Source: IGS. 2011. "Medical Case Management — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/642), downloaded Feb. 2, 2011.

Case Management (Non-medical) FY 2009	
RW Part A EMA	\$330,215
Baltimore City RW Part B	\$238,000
Baltimore County RW Part B	\$114,150
Anne Arundel County RW Part B	\$81,329
Howard County RW Part B	\$23,064
Queen Anne's County RW Part B	\$9,365

IGS. 2011. "Case Management (Non-Medical) — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/655), downloaded Feb. 2, 2011.

Food Bank/Home-Delivered Meals FY 2009	
RW Part A EMA	\$233,816
MAI (EMA and Counties)	\$101,616
MAI, Baltimore EMA	\$58,047

IGS. 2011. "Food Bank/Home-delivered Meals — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/663), downloaded Feb. 2, 2011.

Food Bank/Home-delivered Meals — Emergency Financial Assistance FY 2009	
RW Part A EMA	\$190,288

IGS. 2011. "Food Bank/Home-delivered Meals — EFA — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/664), downloaded Feb. 2, 2011.

Housing Services FY 2009	
RW Part A EMA	\$827,895
City of Baltimore, Supportive Housing	\$8,187,593
HOPWA — Baltimore City	\$7,726,103
HOPWA — Baltimore County	\$1,243,947
HOPWA — Anne Arundel County	\$553,945
HOPWA — Howard County	\$223,522
HOPWA — Harford County	\$204,085
HOPWA — Carroll County	\$68,028
HOPWA — Queen Anne's County	\$23,412

IGS. 2011. "Housing Services — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/657), downloaded Feb. 2, 2011.

Housing Services — Emergency Financial Assistance FY 2009	
RW Part A EMA	\$383,734

IGS. 2011. "Housing Services — EMA — EFA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/657), downloaded Feb. 2, 2011.

Psychosocial Support FY 2009	
RW Part A EMA	\$408,072
MAI (EMA and Counties)	\$86,319
Baltimore City RW Part B	\$117,451
MAI, Baltimore County EMA	\$43,389
Baltimore County RW Part B	\$40,623
Howard County RW Part B	\$23,063
Carroll County RW Part B	\$1,708
Queen Anne's County RW Part B	\$150

IGS. 2011. "Psychosocial Support — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/656), downloaded Feb. 2, 2011.

Outreach Services Funding Streams FY 2009	
RW Part A EMA	\$739,514
Part A MAI (EMA and Counties)	\$182,571
Part A MAI, Baltimore EMA	\$1,432,773
Baltimore City Ryan White Part B MAI	\$272,567

IGS. 2011. "Outreach Services — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/660), downloaded Feb. 2, 2011.

Legal Services Funding Streams FY 2009	
RW Part A EMA	\$262,031

IGS. 2011. "Legal Services Scorecard — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/662), downloaded Feb. 2, 2011.

Medical Transportation Funding Streams FY 2009	
RW Part A EMA	\$170,000
MAI (EMA and Counties)	\$81,422
Anne Arundel County RW Part B	\$84,581
Services to Surrounding Counties, MAI continuation	\$38,635
MAI, Baltimore EMA	\$27,828
Howard County RW Part B	\$1,500
Queen Anne's County RW Part B	\$200

IGS. 2011. "Medical Transportation Scorecard — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/654), downloaded Feb. 2, 2011.

Substance-abuse Treatment — Residential Funding Streams FY 2009	
RW Part A EMA	\$258,429
Baltimore Substance Abuse Systems RW Part A	\$330,706

IGS. 2011. "Substance-abuse Treatment — Residential — EMA." Greater Baltimore Health Services Planning Council Information Portal. Internet site (http://balpc.intergroupinfo.com/esd_reports/659), downloaded Feb. 2, 2011.

**Data for IDEHA-Supported HERR Programs with HIV Negative Clients in the Baltimore-Towson MSA
State Fiscal Year 2010 (July 1, 2009 to June 30, 2010)**

Client Demographics (n = 2038)		
Age in Years	Number of Clients	Percent
< 13 – 24	511	25.1
25-29	228	11.2
30-39	412	20.2
40-49	572	28.1
50 +	308	15.1
Not Indicated/ Missing	7	0.3
Gender	Number of Clients	Percent
Male	839	41.2
Female	1120	55.0
Transgender	27	1.3
Not Indicated/ Missing	52	2.6
Ethnicity	Number of Clients	Percent
Hispanic	148	7.3
Non-Hispanic	1821	89.4
Not Indicated/ Missing	69	3.4
Race	Number of Clients	Percent
African American/Black	1267	62.2
American Indian/Native Alaskan	19	0.9
Asian	7	0.3
Native Hawaiian/Other Pacific Islander	3	0.1
White	523	25.7
Other	2	0.1
Multi-Racial	27	1.3
Don't Know/ Not Indicated/ Missing	190	9.3
Risk Behaviors (n = 1434)		
Reported Risk (when available)	Number of Clients	Percent
MSM	11	0.8
MSM/IDU	2	0.1
IDU	79	5.5
Hetero/IDU	202	14.1
High-Risk Heterosexual	223	15.6
Other Heterosexual	302	21.1
Transgender – Sexual & IDU Risk	2	0.1
Transgender – Sexual Risk Only	3	0.2
Other Risk*	330	23.0
No Reported Risk**	280	19.5

*Other Risk: Clients who reported risky sexual behavior in a way that it could not be categorized into any of the other categories usually due to missing gender and/or risk behaviors.

**No Reported Risk: Risk data present but client did not report any sexual or IDU risk behaviors described in other categories.

Report on Mathematical Modeling for Baltimore-Towson MSA: ECHPP Project

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Background

Johns Hopkins Bloomberg School of Public Health investigators were provided a contract in November 2010 to conduct a rapid-turnaround project using mathematical modeling techniques to identify optimal strategies for preventing further HIV infection in the Baltimore-Towson MSA. The contract was funded by the State of Maryland DHMH as part of the CDC's Enhanced Comprehensive HIV Prevention Planning (ECHPP) project. The model was completed on January 15, 2011.

The model utilized and expanded upon a mathematical approach previously utilized in the preparation of 2008 Congressional testimony on HIV prevention (Holtgrave, 2008), the conduct of an analysis on optimal HIV prevention spending for the State of Michigan (Holtgrave, 2009), estimation of future courses of HIV in the United States (Hall et al, 2010), and estimation of the costs and consequences of the National HIV/AIDS Strategy (Holtgrave, 2010). Further, the model adapted a previously published approach to analyzing the efficiency of a variety of HIV counseling and testing policies (Holtgrave, 2007).

All analyses are contained in the attached spreadsheets, as are the sources of all input parameter values. The eight spreadsheets build the overall analysis from beginning to end. First, estimates are made of a variety of key HIV transmission rates for the Baltimore-Towson MSA. Second, two spreadsheets provide analyses of a variety of HIV counseling and testing approaches for the MSA. Third, an analysis is given that attempts to determine a highly efficient approach to using existing HIV prevention resources in the MSA to maximize the number of HIV infections that could be prevented. This strategy is also compared to the "percentage" goals of the National HIV/AIDS Strategy (NHAS) to determine if current resources can meet the NHAS goals. Fourth, since we find that current resources are insufficient, we offer several estimates of what resources would be necessary to meet the goals of the NHAS.

Below, we identify and describe each spreadsheet in further detail.

Spreadsheet 1: Baltimore-Towson MSA Transmission Rate Calculator

This spreadsheet calculates the HIV transmission rates needed for the Baltimore-Towson MSA ECHPP analysis. It is based on the equations used in Dr. Marks' paper focused on percentage of new HIV infections from persons aware versus unaware of HIV seropositivity (Marks et al, 2006). Wherever possible, the input parameters were based on Baltimore-Towson MSA specific information provided by State of Maryland DHMH.

Summary	Transmission Rate
HIV Transmission Rate for Baltimore MSA	4.359
HIV TR for Persons Unaware of Seropositivity	9.519
HIV TR for Persons Aware of Seropositivity	2.988
HIV TR for Persons Aware and Engaging in No Risk Behavior	0.000 (by definition)
HIV TR for Persons Aware and Engaging in Risk Behavior	18.674
(Defined as number of HIV transmission per 100 PLWH fitting the particular category definition)	

It is clear that awareness of seropositivity matters a great deal in lowering the HIV transmission rate. Further, while the vast majority of persons living with HIV do not engage in any risk behavior that could result in HIV transmission, for a small percentage who do continue to engage in risk behavior the transmission rate also appears to be high (indicating that prevention programs for this particular group of persons living with HIV could be important).

It is worth noting that the Baltimore MSA overall transmission rate is a bit below the national transmission rate of approximately 5.0 (due, at least in part, to methodologic differences). Mr. Colin Flynn with the State of Maryland has calculated the TR for a number of geographic areas in the MSA and some rival the City of Baltimore in magnitude (however, the background prevalence is lower in these areas so the resultant incidence is still lower).

Spreadsheet 2: Baltimore-Towson MSA CT Analysis

This spreadsheet mimics the Holtgrave PLoS Medicine (2007) analysis comparing the effectiveness and cost-effectiveness of a variety of HIV counseling and testing policies (opt-out testing with and without the possibility of behavioral offset due to lack of counseling; routine testing with pre-test counseling for all and post-test counseling only for persons living with HIV and HIV- persons at heightened risk of infection; and targeted counseling and testing designed to provide services to populations with heightened seroprevalence). The Summary Table of this analysis is given here:

	Testing w Behavioral Offset	Testing w/ No Behavioral Offset	Routine CT w/ Counseling for HR HIV-s	Targeted CT
No. Tested	434,356	434,356	434,356	183,200
No. Undiagnosed HIV+ Reached	1,021	1,021	1,021	1,154
No. High Risk Negatives Reached	51,346	51,346	51,346	89,777
Total Testing Cost	\$6,637,935	\$6,637,93	\$10,788,669	\$6,637,935
Transmissions Averted	66	66	66	75
Infections Averted	(14)	-	41	68
Transmissions + Infections Averted	52	66	108	143
Gross Cost Per Trans+Inf Averted	\$126,637	\$100,059	\$100,180	\$46,260
Public Support for Med Care Needed Y1	\$17,442,463	\$ 17,442,463	\$17,442,463	\$19,724,712

The central finding of this analysis is that a more targeted counseling and testing strategy (where targeting is very broadly defined to mean geographic-, venue-, or client-specific risk) "dominates" opt-out and routine strategies in terms of number of persons living with HIV newly reached, transmissions averted, and cost-per-infection averted. It should be noted that these analyses are based on an assumption of the use of state of the art rapid testing which yields more clients learning of their seropositivity in a timely fashion.

Spreadsheet 3: Baltimore-Towson MSA CT Analysis – NEW TYPES

This spreadsheet is similar to the previous spreadsheet but instead focuses on the performance of three types of testing defined by the State of Maryland DHMH: Routine testing similar to that done in Emergency Departments (defined by DHMH as having an HIV seropositivity rate of 0.8%; an HIV new diagnosis rate of 0.5%; and post-test counseling for persons living with HIV and HIV- persons at heightened risk of infection); Targeted counseling and testing focused by venue type (HIV seropositivity rate 1.2%; HIV new diagnosis rate 1.0%; and post test counseling for all); and Targeted counseling and testing defined by outreach efforts (HIV seropositivity rate 4.0%; HIV new diagnosis rate 1.2%; and post test counseling for all with 10% of total costs devoted to targeting strategy such as outreach).

The Summary Table of this analysis is given here:

Summary Table	Routine "ED"	Target by Setting	Target by Outreach
No. Tested	45,260	34,472	28,916
No. Undiagnosed HIV+ Reached	226	345	347
No. High Risk Negatives Reached	5,343	16,859	13,741
Total Testing Cost	\$1,130,000	\$1,130,000	\$1,130,000
Transmissions Averted	15	22	23
Infections Averted	4	13	11
Transmissions + Infections Averted	19	36	34
Gross Cost Per Trans+Inf Averted	\$59,435	\$31,507	\$33,707
Public Support for Med Care Needed Y1	\$3,867,450	\$5,891,225	\$5,930,184

The central finding of this analysis is that targeting improves performance over routine testing, and the two different targeting strategies yield remarkably similar results. This would suggest that the funding should be exhausted for targeting testing before turning to routine testing (however, the routine testing strategy as defined here by DHMH still performs reasonably well and may serve a client population not reached otherwise reached).

Spreadsheet 4: Baltimore-Towson MSA Optimization Analysis

This spreadsheet contains the basic optimization analysis that attempts to maximize infections averted given the \$6M level of funding currently available in the Baltimore-Towson MSA.

The Summary Table of this analysis is given here:

	Year 0	Year 1	Years 2	Year 3	Year 4	Year 4 / Year 0	NHAS Goal
Incidence	1,201	1,103	995	967	936	77.91%	75%
Prevalence	27,550	28,194	28,722	29,213	29,667	107.68%	
Transmission Rate	4.3593	3.9108	3.4628	3.3086	3.1539	72.35%	70%
Seropos. Unawareness	21.00%	17.69%	15.45%	13.22%	10.98%	NA	10%

Total Costs	\$6,002,859	\$ 6,002,84	\$ 5,724,757	\$6,007,416	\$6,276,419	\$24,011,436
Targeted Testing	\$3,260,500	\$3,807,730	\$2,293,361	\$2,411,791	\$2,521,157	\$11,034,039
Prevention for aware PLWH w/ risk beh	\$290,663	\$608,014	\$2,475,500	\$2,590,367	\$2,704,418	\$8,378,299
Prevention for HIV- persons	\$1,162,653	\$ -	\$ -	\$ -	\$ -	\$ -
Partner services and additional linkage to care	\$789,043	\$1,587,100	\$955,896	\$1,005,259	\$1,050,844	\$4,599,098
ECHPP Line in Yr 0	\$500,000	\$ -	\$ -	\$ -	\$ -	

(Year 0 is simply how the resources are now spent.)

By comparison, we can compare the performance of this modeled strategy to models that assume a flat transmission rate or flat incidence:

Infections Averted	Year 0	Year 1	Year 2	Year 3	Year 4	Total	Gross Cost Per Infection Averted (Not Assuming Medical Costs Saved or Induced)
Vs Flat TR Model	-	131	272	334	400	1,136	\$ 21,129
Vs Flat Incidence Model	-	98	206	234	265	805	\$ 29,843

The central finding of this analysis is that there are not enough resources in the system to even achieve the NHAS goal of 90% awareness of HIV seropositivity; similarly the NHAS goals for incidence and TR

reduction cannot be achieved. However, if only this amount of money is available, there are important improvements to be made by highly focusing the available resource on targeted counseling and testing, providing key prevention services to persons living with HIV and continuing to engage in risk behavior (a small minority of persons living with HIV), and linkage to care / partner services (note: the partner service level is determined directly by Maryland DHMH). Unfortunately, HIV seronegative persons at high risk of infection would get only post-test counseling and partner services via their HIV+ partners; no other services would be possible due to limited budgets. This is unfortunate as evidence based interventions do exist that could provide important services to HIV- persons at risk of infection.

It should be noted that DHMH has chosen to leave the syringe exchange funding out of this pool of resources for the modeling exercise and we assume that syringe exchange would continue to be provided at (at least) current levels. DHMH also chose to leave out of the pool of funds analyzed here the resources for public information campaigns, condom distribution, structural interventions, overall program management and evaluation; and capacity building.

Spreadsheets 5-8: Unmet Need Analyses

The next four spreadsheets contain analyses that examine how much resource would need to enter into the system in order to meet NHAS goals. Spreadsheets 5 and 6 examine what would be needed simply to meet the NHAS goal of 90% awareness of seropositivity; with spreadsheet 6 examining the impact of "front loading" the resources so as to reduce lack of awareness of HIV seropositivity as quickly as possible. Spreadsheets 7 and 8 examine what would be needed to provide even some minimal level of services for HIV seronegative persons, and whether such an addition would allow meeting all of the prevention goals of the NHAS. Spreadsheet 8, as compared to spreadsheet 7, examines the impact of "front loading" resources.

Tab	Year 1 to 4 Needed Resources	Total Incidence Reduction	Total TR Reduction	Final Seropos. Awareness Level	Infections Averted (vs Flat TR)	Infections Averted (vs Flat Incidence)	Gross Cost Per Additional HIV Infection Averted (Flat TR Comparator)	
Unmet Needs 1	\$25,769,082	23.26%	28.69%	90.00%	1157	825	\$84,419 (vs Base Case)	
Unmet Needs 2 (Unmet Needs 1 Front Loaded)	\$25,984,400	24.04%	29.24%	90.00%	1235	903	\$2,773 (vs Line Above)	
Unmet Needs 3	\$32,281,882	24.94%	30.12%	90.00%	1214	882	\$115,587(vs Unmet Needs 1)	
Unmet Needs 4 (Unmet Needs 3 Front Loaded)	\$32,538,589	25.73%	30.68%	90.00%	1292	960	\$3,291 (vs Line Above)	
NHAS Target		25.00%	30.00%	90.00%				

These analyses suggest that to meet the NHAS goals, a substantial amount of new resource needs to be introduced into the system, and the additional cost per additional HIV infection averted would appear to indicate a worthy investment of funding. Further, the analyses show the substantial benefit of front loading any increases in funding to help turn the tide of HIV infection as quickly as possible (which then in turns yields further downstream benefits). Finding ways to infuse the system with further investment -- and quickly -- appears to be an urgent public health priority. Also, when we consider the lifetime costs of HIV treatment (estimated by CDC at over \$350,000), it seems that investing in prevention would save the public sector money; in fact, failing to scale up the investment in HIV prevention is actually the more costly policy option. Two important evaluation questions are apparent from these analyses: first, quickly determining the exact impact of partner services is an area worthy of urgent study, as is the precise

effect on TRs of providing evidence-based interventions to HIV seronegative partners of persons living with HIV or of unknown serostatus. We have been conservative in estimating these impacts here...perhaps overly conservative. Also, it would be useful to empirically confirm during scale up that the modeled seropositivity and new diagnosis rates hold as estimated; this is also true for the modeled effect size of interventions with persons living with HIV.

Summary of Key Findings

We have found that HIV transmission rates differ greatly by population and these differences suggest certain strategies for intervention. We also find that there is not enough money in the current system to meet NHAS goals, but that with appropriate additional investment the goals could be achieved. Still, even with current resources, it appears that some strategic redirections of efforts could result in considerable improvements in terms of possible infections averted and lowered transmission rates. Within the boundaries of current constrained resources, using resources efficiently is critical. This includes a focus on highly targeted counseling and testing strategies, and prevention services with persons living with HIV. This does NOT mean that prevention services for HIV- persons are undesirable or unwanted; rather it means that within the limits of available resources, only the most efficient services can be afforded.

References (Note: sources for all input parameters are given in the accompanying spreadsheet)

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