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SECTION I. INTRODUCTION

New York City's *2008 – 2010 HIV Prevention Plan (2008 Plan)* is the product of a collaboration between the New York City Department of Health's Bureau of HIV/AIDS Prevention and Control (BHAPC) and the New York City HIV Prevention Planning Group (NYC PPG). Its goal is to reduce HIV transmission in New York City through strategic and targeted distribution of HIV prevention resources and subsequently, to support the Centers for Disease Control and Prevention's (CDC) national HIV prevention goals.

The *2008-2010 Plan* is designed to provide an overview of the HIV epidemic, an assessment of HIV prevention services and gaps, a prioritization of populations that are at greatest risk for HIV transmission, and recommendations for evidence-based prevention activities and interventions that are necessary to reduce transmission. These topics are covered in nine sections:

Section I: Introduction

Section I provides an overview of the contents of the *2008 – 2010 NYC HIV Prevention Plan*, HIV transmission in New York City, the Centers for Disease Control and Prevention's HIV prevention goals and its community planning requirements for the health departments that it funds.

Section II: New York City Epidemiological Profile

Section II was compiled by the HIV Epidemiology & Field Services Program of the New York City Department of Health and Mental Hygiene. This section describes the impact of the HIV epidemic in New York City as reflected by the most recent epidemiological data and research. These data and trends serve as a foundation for prioritizing target populations and recommending appropriate HIV prevention interventions as outlined in sections III and VI.

Section III: Prioritization of Risk Populations

Section III was developed by the NYC PPG's Implementation, Behavioral Science, Evaluation and Implementation Committee (IBSE/I). This section describes the process that the NYC PPG has used since 1999 to identify and prioritize the populations that are most at risk for HIV transmission. In addition, it introduces a new process that the NYC PPG plans to implement by 2009 that combines New York City's methods with advances that have been developed by the San Francisco, Los Angeles, and Virginia Departments of Health.

Section IV: New York City's HIV Prevention Portfolio

Section IV was developed in collaboration with the Office of the Assistant Commissioner for HIV Prevention and Control at the New York City Department of Health and Mental Hygiene. It highlights New York City's existing prevention initiatives and planning bodies. It also includes an overview of the allocation of funding awarded to New York City through CDC *Cooperative Agreement* funds through 2009.

Section V: Recommendations for Appropriate Science-based Prevention Activities and Interventions

Section V is the product of extensive community planning activities completed by the NYC PPG in 2007 and early throughout 2008. It responds to the CDC's request for recommendations for "appropriate science-based prevention activities and interventions" that are necessary to reduce transmission in New York City's prioritized target populations *and* provides insight for local providers and consumers. The recommendations are based on their judgments about intervention effectiveness and cultural and ethnic appropriateness. This section also introduces issues that cut across subpopulations and that challenge prevention efforts as well as recommendations for future studies that would improve the planning, design, and implementation of effective interventions.

HIV Transmission in New York City

More than 100,000 New Yorkers are currently living with HIV/AIDS and as many as 20,000 do not know their status. In 2006, almost 2800 New Yorkers were diagnosed with HIV (non-AIDS) and an additional 962 first learned that they had HIV when they were diagnosed with AIDS. Through a new surveillance method that indicates whether a person diagnosed with HIV was recently infected¹, the New York City Department of Health and Mental Hygiene estimates that among those diagnosed in 2006, approximately 850 people were newly infected with HIV. These people represent the leading edge of the epidemic in the city. (This estimate is drawn from among those tested and does not include new infections among those not tested.)

New York City has the oldest and largest HIV epidemic in the Western world; over 200,000 cumulative cases of HIV and AIDS have been diagnosed since 1977. Our epidemic is also disproportionate to our population; with 3% of the United States population, we have 15% of AIDS cases, 14% of HIV infections and 16% of AIDS deaths in the nation.

While the epidemic continues, so do advances in treatment and care. Most importantly, HIV infection has been transformed by highly active antiretroviral therapy (HAART) from a disease with high annual mortality into a chronic condition that, with appropriate management, allows many of those infected to lead longer, active lives. Mortality has steadily declined since it peaked in 1995 when 8,309 New York City residents with HIV/AIDS died. After the introduction of HAART, deaths fell to 6,074 in 1996 and 3,426 in 1997. This trend has continued through 2006, when 2,076 deaths to people with HIV/AIDS were reported. Another success is that perinatal transmission is within reach of elimination as a result of routine prenatal testing, treatment during pregnancy and neonatal prophylaxis.

Declines in morbidity and mortality, however, have not been uniform. While HIV in New York City affects women, men, transgenders, people of all races, ethnicities, cultural backgrounds, and ages, it continues to disproportionately affect people of color; the proportion of HIV diagnoses among people of color has been stable at about 84% each year between 2001 and 2006. This holds true even as the transmission rates associated with risk behavior continue to shift. For example, while the proportion of cases occurring among injection drug users has declined gradually (15% in

¹ Janssen RS, Satten GA, Stramer SL, Rawal BD, O'Brien TR, Weiblen BJ, Hecht FM, Jack N, Cleghorn FR, Kahn JO, Chesney MA, Busch MP. New testing strategy to detect early HIV-1 infection for use in incidence estimates and for clinical and prevention purposes. *JAMA* 1998 280;1: 42-48.

2001 to 7% in 2006), the proportion of cases occurring in men who have sex with men (MSM) has increased (27% in 2001 to 39% in 2006).

While there is much that we know about the epidemiology of HIV in New York City, one factor which complicates our tracking of the epidemic is the high proportion of HIV diagnoses that are not attributable to a specific categorical transmission risk. Even though the rate of known risk among HIV diagnoses is increasing slightly (66% known in 2001, 59% in 2002, 60% in 2003, 67% in 2004, 66% in 2005, 68% in 2004, 2005, and 2006), this gap in vital information about risk poses continuing challenges to HIV prevention in New York City.

New York City now faces the challenge of eliminating transmission, continuing to reduce HIV-related deaths, and addressing areas where public health has failed, such as the startling increase in new diagnoses among young men of color who have sex with men and the approximately 1,000 persons per year who are diagnosed with concurrent HIV/AIDS and who, therefore, have missed out on prevention opportunities as well as vital treatment and care.

The Centers for Disease Control and Prevention's HIV Prevention Goals

For many years, the CDC has required that the health departments to which it provides HIV prevention funds (grantees) support its national goals for HIV prevention. Below is a brief history of the development of the CDC's HIV prevention goals since 2001 – *HIV Prevention Strategic Plan Through 2005*, *Advancing HIV Prevention*, *HIV Prevention Strategic Plan: Extended Through 2010*, and *Healthy People 2020* – all of which are relevant to New York City's *2008 Plan*.

The CDC's HIV Prevention Strategic Plan Through 2005²

In 2001, the CDC developed its *HIV Prevention Strategic Plan Through 2005*, which set an overarching public health goal of cutting new HIV infections in half and provided a vision of what could be accomplished with a significantly expanded investment in HIV prevention in the United States and with the full implementation of clearly defined activities. While this plan was never fully implemented and progress did not accelerate at the desired rate through 2005, the CDC remains committed to its goal of major reductions in HIV infection.

The *HIV Prevention Strategic Plan Through 2005's* overarching national goal and milestones were:

Overarching National Goal: Reduce the number of new HIV infections in the United States from an estimated 40,000 to 20,000 per year by 2005, focusing particularly on eliminating racial and ethnic disparities in new HIV infections.

Milestone 1: By 2005, decrease by at least 50% the number of persons in the United States at high risk for acquiring or transmitting HIV infection by delivering targeted, sustained and evidence-based HIV prevention interventions.

² <http://www.cdc.gov/hiv/resources/reports/PSP/pdf/prev-strat-plan.pdf>

Milestone 2: By 2005, through voluntary counseling and testing, increase from the current estimated 70% to 95% the proportion of HIV-infected people in the United States who know they are infected.

Milestone 3: By 2005, increase from the current estimated 50% to 80% the proportion of HIV-infected people in the United States who are linked to appropriate prevention, care and treatment services.

Milestone 4: By 2005, strengthen the capacity nationwide to monitor the epidemic, develop and implement effective HIV prevention interventions and evaluate prevention programs.

The CDC has begun to develop a new long-range HIV prevention strategic plan through 2020. The new plan will provide a blueprint for HIV prevention that is aligned with the CDC's Health Protection Goals³ and integrated with other infectious diseases such as viral hepatitis, sexually transmitted infections and tuberculosis. As with the development of the original goals for the *HIV Prevention Strategic Plan Through 2005*, the new plan will be based on input from many sectors, including advocates from affected and at-risk communities, public health officials, academics, health care providers, and others. The CDC plans to identify the most important outcomes in surveillance, research, program, and evaluation and will develop indicators to closely monitor progress.

The CDC's HIV Prevention Strategic Plan: Extended Through 2010 (Extended Plan)⁴

In the interim, while its long-range strategic plan through 2020 is being developed, the CDC developed the *HIV Prevention Strategic Plan: Extended Through 2010 (Extended Plan)* to define a realistic, short-term goal at a time when challenges have increased, resources for prevention are not proportionate to prevention needs, and the CDC does not anticipate a significant expansion of HIV prevention funding through 2010.

The short-term goal, milestones, and accompanying objectives are based on general and specific recommendations from the CDC and Health Resources Service Administration Advisory Committee on HIV and STD Prevention and Treatment (CHAC)⁵, formerly known as the Advisory Committee for HIV and STD Prevention.

This *Extended Plan* maintains the focus on core prevention priorities expressed in the *HIV Prevention Strategic Plan Through 2005*: reducing the number of new infections, increasing knowledge of HIV status, and promoting linkages to care, treatment, and prevention services. In addition, new objectives have been added to make urgent priorities more explicit, including:

- preventing new HIV infections among MSM and African Americans;
- addressing stigma and discrimination;
- promoting the use of rapid HIV tests;
- addressing the role of acute infection in HIV transmission; and
- increasing routine HIV testing in medical settings.

³ <http://www.cdc.gov/about/goals.htm>

⁴ <http://www.cdc.gov/hiv/resources/reports/psp/>

⁵ <http://hab.hrsa.gov/about/haac2.htm>

The *Extended Plan's* short-term goal and milestones are:

Goal: Reduce the number of new HIV infections in the United States by 5% per year, or at least by 10% through 2010, focusing particularly on eliminating racial and ethnic disparities in new HIV infections.

Milestone 1: By 2010, decrease by at least 10% the number of persons in the United States at high risk for acquiring or transmitting HIV infection by delivering targeted, sustained and evidence-based HIV prevention interventions.

Milestone 2: By 2010, through voluntary testing, increase from the current estimated 75% to 80% the proportion of HIV-infected people in the United States who know they are infected.

Milestone 3: By 2010, increase from the current estimated 50% to 65% the proportion of newly diagnosed HIV-infected people in the United States, who are linked to appropriate prevention, care and treatment services.

The CDC's Advancing HIV Prevention Initiative⁶

The CDC also requires that health department grantees support the goals of *Advancing HIV Prevention: New Strategies for a Changing Epidemic*, which it announced on April 17, 2003. This initiative is a multi-agency collaboration within the Department of Health and Human Services (DHHS)⁷.

Advancing HIV Prevention was designed to reduce barriers to early diagnosis of HIV infection and to increase access to quality medical care, treatment, and ongoing prevention services for HIV-positive persons and their partners. It also introduced four new strategies for HIV prevention:

- make HIV testing a routine part of medical care;
- implement new models for diagnosing HIV infections outside medical settings;
- prevent new infections by working with persons diagnosed with HIV and their partners; and,
- further decrease perinatal HIV transmission.

Through this initiative, the CDC increased emphasis on counseling, testing, and referral for persons who are unaware of their HIV infection; partner notification, including partner counseling and referral services; and prevention services for persons living with HIV/AIDS (PLWHA) to help prevent further transmission once they are diagnosed. In addition, since perinatal HIV transmission can be prevented, *Advancing HIV Prevention* strengthens efforts to promote routine, universal HIV screening as a part of prenatal care.

To support *Advancing HIV Prevention*, health department grantees are required to prioritize HIV-infected persons as the highest priority population for appropriate prevention services. Uninfected, high-risk populations such as sexual or needle-using partners of PLWHA, should also be prioritized based on local epidemiology and community needs.

⁶ http://www.cdc.gov/hiv/topics/prev_prog/AHP/default.htm

⁷ <http://www.hhs.gov/ohps/ohap/>

Healthy People 2020

Healthy People⁸ has been an initiative of the United States Department of Health and Human Services since 1979. Its purpose is to establish national health objectives for wellness and prevention as well as to guide the development of state and community plans. Every 10 years, the United States Department of Health and Human Services hosts a process that engages experts who highlight the scientific insights and lessons learned from the past decade and from community members and local planning groups that contribute current data, trends, and innovations to develop a new 10-year plan.

Healthy People 2010 adapted the CDC's goals outlined under *HIV Prevention Strategic Plan Through 2005*. The development of *Healthy People 2020* is presently underway and will be released in two phases. The framework (the vision, mission, goals, focus areas, and criteria for selecting and prioritizing objectives) is scheduled to be released in late 2008 or early 2009. By January 2010, the *Healthy People 2020* objectives will be released along with guidance for achieving the new 10-year targets.

The Community Planning Process

Since January 1994, the CDC has required that all state, local and United States territorial health departments that receive CDC HIV prevention funding (grantees) seek significant and meaningful involvement of their communities throughout the planning, implementation, and evaluation of local prevention efforts.

The required and suggested processes for community planning are outlined in the CDC's *2003-2008 HIV Prevention Community Planning Guidance*⁹ (the Guidance). While the CDC allows health departments some leeway in designing a community planning structure that "best fits the needs of their jurisdictions," all planning efforts are expected to follow the Guidance's principles and processes for community planning. This includes forming a community planning group, developing a *Comprehensive HIV Prevention Plan*, and following suggested planning steps throughout the development of the annual funding request to the CDC, also known as the *Cooperative Agreement*.

Community Planning Groups

The CDC Guidance requires that all health department grantees establish a community planning group through an open and inclusive process that is reflective of the local HIV epidemic and that includes representatives of state and local health departments and relevant government agencies; experts in epidemiology, behavioral and social sciences, evaluation research, and health planning; representatives of community-based organizations providing HIV prevention services; and representatives of HIV-infected and affected communities. The planning groups are required to have at least two co-chairs: one representing the health department grantee and one representing the community.

New York City's community planning group is called the New York City HIV Prevention Planning Group (NYC PPG). It is composed of about 40 community members and 10 government representatives and is co-chaired by the Director of DOHMH's Office of HIV Prevention Planning & Contract Monitoring and a community representative who is elected by the full-body of the NYC PPG. BHAPC provides staff support.

⁸ <http://www.healthypeople.gov/Default.htm>

⁹ <http://www.cdc.gov/hiv/topics/cba/resources/guidelines/hiv-cp/>

The Rules and Membership Committee of the NYC PPG has developed and implemented a recruitment process that not only fulfills the requirement to convene members that reflect New York City's epidemic, but that also engages volunteer members who commit to a rigorous and demanding planning process. NYC PPG members are required to convene annually for a three-day strategic planning retreat and seven times per year for four-hour sessions where the full body participates in community planning activities. The members also commit to joining at least one of the six workgroups or four committees, which convene between four and twelve times per year in addition to the six full body sessions. In addition, the Executive Committee, comprised of the government and community co-chairs, other officers, and the chairs of all workgroups and committees, convenes prior to each of the six full body sessions to plan the agenda and address policy issues. A profile of the membership, officers, workgroups and committees of the NYC PPG is included in the Appendices.

The Cooperative Agreement

The CDC requires that health department grantees engage their community planning group throughout the development and submission of their annual funding request or *Cooperative Agreement*. When grantees submit their *Cooperative Agreement* application to the CDC, they are required to include the most recent *Comprehensive HIV Prevention Plan* and a *Letter of Concurrence* from their community planning group. The Guidance requires that the *Letter of Concurrence* specify and explain the community planning group's "concurrence," "non-concurrence," or "concurrence with reservations" regarding the compliance of the health department's funding request with the jurisdiction's *Comprehensive HIV Prevention Plan*. The 2008 *Letter of Concurrence* is included in the appendix.

The Comprehensive HIV Prevention Plan

The CDC requires that health department grantees develop a new *Comprehensive HIV Prevention Plan* every three to five years as well as complete annual updates. The Guidance directs health department grantees to lead the planning process by developing an epidemiological profile of the present and future impact of HIV/AIDS and an analysis of available HIV prevention services, known in New York City as the *Community Services Assessment*. The community planning group then uses the epidemiological profile to identify and prioritize populations that are most impacted by the epidemic and the *Community Services Assessment* to identify unmet prevention needs for these populations. The next step in developing the *Comprehensive HIV Prevention Plan* is to identify appropriate, evidence-based interventions for the prioritized populations. According to the Guidance, prioritization of populations and interventions should be based on the following criteria:

- Documented need
- Outcome effectiveness of proposed strategies and interventions
- Cost effectiveness
- Sound scientific theory
- Values, norms, and consumer preferences in the communities targeted for services
- Availability of other resources
- Other local and state factors

NYC Department of Health & Mental Hygiene's HIV Prevention Planning Group
2008 - 2010 Comprehensive HIV Prevention Plan

The New York City 2008 – 2010 Comprehensive HIV Prevention Plan

This *2008 – 2010 Comprehensive HIV Prevention Plan (2008 Plan)* replaces New York City's previous *Comprehensive HIV Prevention Plan* that has been in effect since 2004. The new *2008 Plan* is designed to guide New York City's prevention strategy through 2010.

While the CDC allows health department grantees to develop five-year plans, the NYC PPG decided to develop a three-year plan for three primary reasons. First, the present allocation of CDC *Cooperative Agreement* funds (see Section I: HIV Prevention in New York City, CDC Cooperative Agreement Funds) will end December 31, 2009. Therefore, the BHAPC will develop a new request for proposals that will be distributed to community groups in the second half of 2009 in order to ensure that the re-allocation of *Cooperative Agreement* funds is completed by January 2010. This allocation will address gaps in services that are identified in the *Community Services Assessment*. Second, the NYC PPG is developing a new model for identifying and prioritizing high-risk populations that should be fully implemented by 2009 (see Section III: Prioritization of Risk Populations). This new model may lead to the identification and prioritization of new target populations and subpopulations, which will significantly affect the community planning process. Third, rapid changes and improvements in epidemiological data collection continue to influence and shift our understanding of the epidemic. Therefore, the NYC PPG is committed to developing a new *Comprehensive HIV Prevention Plan* to guide planning activities after 2010 that will utilize updated prioritization tools, epidemiological data, research, and community planning methodology.

The *2008 Plan* incorporates the collective knowledge, learning and experience of the BHAPC and its community planning group, the NYC PPG. These two bodies solicited, coordinated and analyzed the work of epidemiologists and researchers and the experience of consumers and community providers who are on the frontline of the epidemic.

The primary objectives of the *2008 Plan* are to provide useful information, guidance and resources to four primary stakeholders in the struggle to reduce HIV transmission in New York City. The primary stakeholders are:

The Centers for Disease Control and Prevention (CDC): As outlined above, the CDC requires that a *Comprehensive HIV Prevention Plan* be developed through a community planning process and that the health department grantee base its *Cooperative Agreement* application on its recommendations. The CDC will review this document and consider its recommendations when allocating its HIV prevention funds to New York City.

The New York City Department of Health and Mental Hygiene – Bureau of HIV/AIDS Prevention and Control (BHAPC): The BHAPC has facilitated the development of the *2008 Plan*, ensuring that the contributors share necessary information and that the final document is comprehensive and cohesive. The BHAPC will also refer to this document for guidance during the next three years as it develops, manages, and evaluates its HIV prevention efforts. In addition, this document will be an important reference when the BHAPC develops a new request for proposal that will determine the re-allocation of CDC Cooperative Agreement funds in 2010.

Health and Human Service Providers: Providers in New York City will find the epidemiological profiles, recommendations for targeted Science-based Prevention Activities and Interventions, and the Toolkit of Effective HIV Prevention Activities and Interventions as helpful references when designing, implementing, or seeking funding for HIV prevention interventions. All providers in New York City, whether or not they target persons living with HIV or offer prevention interventions, will find the *2008 Plan* a useful resource for understanding the HIV prevention landscape.

Persons Living with HIV/AIDS and their Communities: Most importantly, the *2008 Plan* is designed to be a resource for the communities most affected by HIV. It provides an overview of the best of our knowledge and strategies for reducing HIV transmission. The NYC PPG intends for this document to be a useful tool for community education and advocacy.

SECTION II. NEW YORK CITY EPIDEMIOLOGIC PROFILE

Unless otherwise noted, all HIV/AIDS data presented in this Epidemiological Profile represent new diagnoses of HIV and AIDS, persons living with HIV/AIDS and deaths to persons with HIV/AIDS in New York City, as reported through September 30, 2007, to the HIV Epidemiology and Field Services Program of the New York City Department of Health and Mental Hygiene, which is responsible for conducting HIV/AIDS surveillance in New York City.

Other sources of HIV/AIDS data in this epidemiologic profile, which are referenced when they are cited, include results of behavioral research and matches with vital and other disease registries.

HIV/AIDS surveillance methodology

AIDS surveillance has been conducted in New York City since 1981 and HIV surveillance since June 1, 2000. Named reporting of HIV and AIDS by diagnostic providers is required by the New York State Sanitary Code Section 24.1 and Article 21, Title III; and the New York City Health Code Section 11.05. The NYC DOHMH is authorized by the New York State Department of Health to conduct HIV/AIDS surveillance in NYC. The confidentiality of HIV/AIDS surveillance data is protected by law, with penalties for unauthorized disclosure, and is the central value that guides the protocols and procedures of the surveillance program.

Physicians are required to report diagnoses of HIV infection, of HIV illness (i.e., HIV illness not meeting the AIDS case definition) and of AIDS-defining conditions. As of June 1, 2005, the following laboratory tests were also electronically reportable: all positive Western Blot results; all viral load results, both detectable and undetectable; all CD4 test results; and all viral nucleotide sequence results obtained for monitoring resistance to antiretroviral drug therapy. In 2007, the NYC DOHMH received and processed over 645,000 laboratory tests, of which approximately half were viral loads and approximately half CD4 test results. All incoming reports are matched to the HIV/AIDS Registry. Matching reports are added to the existing registry record. Non-matching reports are considered to represent possible new cases and are initiated for field investigation. The majority of all cases entered into the HIV/AIDS Registry are initiated through a laboratory report and confirmed by a comprehensive medical record review.

Other sources of HIV/AIDS surveillance data include active field surveillance, matching with registries, and personal interviews conducted by the Field Services Unit of the DOHMH. Active surveillance supplements the surveillance of cases received through laboratory reporting and involves the active searching for possible missed or unreported cases at more than 80 hospitals, 500 free-standing clinics and 2,200 private physicians. This type of surveillance is performed by reviewing patient censuses and medical records, interviewing providers and patients, reviewing administrative databases, and actively seeking new cases within hospitals and clinics and through private physicians. Field surveillance staff also conducts investigations necessary to confirm, complete, or correct diagnosis and mortality data on PLWHA in New York City. Facility and date of diagnosis, clinical status, transmission risk, and demographic information including sex, race/ethnicity, date of birth, ZIP code and country of birth are among the data that are collected when cases are reported.

HIV/AIDS surveillance is population-based and legally mandated; it is therefore the most complete source of information about the HIV/AIDS epidemic in New York City. Surveillance data are as accurate as the quality of documentation in medical records and as timely and complete as are the reports submitted to the health department. Persons who are infected but remain undiagnosed and unreported because they have never been tested are not included. How many infected but undiagnosed persons are living in NYC? A household population survey in 2004 estimated that 4.8% of persons with HIV/AIDS in New York City were unreported.¹⁰ In contrast, CDC estimated in 2000 that 25% of persons with HIV/AIDS nationwide are undiagnosed,¹¹ and a 2003 estimate using direct subpopulation calculation observed an undiagnosed proportion of 26% in New York City.¹² It is estimated that case reporting in New York City is 90% complete within nine months of the date of initial diagnosis of HIV or AIDS. Therefore, the first tabulations of HIV/AIDS data for a given year are typically made available nine months after the close of the year.

Classification of demographic information

Demographic information is obtained from the initial laboratory report and verified through the medical record conducted during the case investigation. A variety of personal identifiers is collected in order to verify the accuracy of the case report and assist with subsequent matching of laboratory and other reports. These identifiers include the first and last names, nickname, married name or alias(es), and social security number when available. The demographic variables collected include sex at birth, race/ethnicity, date of birth (for calculation of age at diagnosis and age at death), and country of birth. The information is obtained directly from the medical record; thus it is as accurate and complete as is the medical record.

Classification of race/ethnicity

Race and ethnicity are two separate, socially defined constructs that may be related to or independent of physical features, culture, language spoken, country of birth and/or ancestry. Race and ethnicity data for persons with HIV are collected from patient medical records, physician reports and other reporting sources. When presenting surveillance data, race and ethnicity categories are by convention collapsed: anyone classified as being of Hispanic ethnicity is classified as Hispanic, regardless of race, and all other persons are classified by race. Non-Hispanic persons with multiple races indicated are classified in a separate category from those for Hispanic or single-race persons. More than 99% of persons in HIV/AIDS surveillance have only a single race indicated or are classified as Hispanic.

Each racial/ethnic classification represents persons with diverse cultural, physical and linguistic traits. Persons classified as black, for example, may include US-born persons of some African descent, African immigrants, Caribbean immigrants, and others classified in their medical records as being of

¹⁰ Nguyen TQ, Gwynn RC, Kellerman SE, Begier E, Garg RK, Pfeiffer MR, Konty KJ, Torian L, Frieden TR, Thorpe LE. Population prevalence of reported and unreported HIV and related behaviors among the household adult population in New York City, 2004. *AIDS* 2008;22(2):281-7.

¹¹ Glynn M, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003. National HIV Prevention Conference. Atlanta, June 2005 [abstract T1-B1101].

¹² Torian LV, Bennani Y, Frieden TR. What is the True Prevalence of HIV in New York City?: Estimating the Number of Undiagnosed and Unreported Persons Living with HIV and AIDS in 2002. 12th Conference on Retroviruses and Opportunistic Infections, Boston, MA, February 2005. Poster #970.

black race and not as Hispanic. Persons classified as Hispanic are also identified from information present in the medical record, and they may have a race identified in addition to having Hispanic ethnicity identified. Persons classified as Hispanic may be of any race; may be native speakers of Spanish, English, or another language; and may have been born in the US, a Spanish-speaking country in Latin America or any other country. For example, a Spanish-speaking person who emigrated from the Dominican Republic to NYC and whose medical record indicates black race and Hispanic ethnicity will ultimately be classified as Hispanic. Someone whose grandparents were from Puerto Rico and who was born in the US, raised speaking only English, and whose medical record indicates white race and Hispanic ethnicity will also be classified as Hispanic. If either person's medical record did not document Hispanic ethnicity, he or she would be classified according to race only.

CDC has standardized the collection and classification of race/ethnicity information by HIV surveillance programs so that data can be combined and compared across jurisdictions. It is approximately consistent with the race and ethnicity categories used in the US Census, and it facilitates the calculation of population rates of HIV/AIDS. That this system simplifies people into broad categories is both a strength and a weakness. Unfortunately, it masks the diversity within categories of people and uses terminology that may not align with people's own words to describe themselves. At the same time, it can also begin to indicate disparities between populations and suggest a course for a response.

Ascertainment and classification of HIV transmission risk

The HIV/AIDS surveillance registry does not have the HIV transmission risk for many persons newly diagnosed with HIV or AIDS, persons living with HIV/AIDS, and persons with HIV/AIDS who have died. There are two main reasons for the absence of this critical information: the narrowly defined standard CDC risk categories and the absence of documentation of specific risk in the medical record. However, even patients who are interviewed may genuinely not know or be able to describe their true risk in ways that allow the interviewer to assign them to a specific risk category. To the best of our knowledge, undocumented or missing risk does not represent a new or unknown risk category; instead, it is that it cannot be determined from the medical record or the interview which of the known methods of HIV transmission was the manner in which the infection was acquired. Efforts across the years and at many levels have been made to improve documentation and ascertainment of risk, with varying degrees of success. Nevertheless, the transmission risk remains unknown for many people with HIV/AIDS in New York City.

Risk information is collected during investigation by surveillance staff who investigate every new case by performing a comprehensive medical record review. As noted above, cases are typically investigated only at the time in which they are first reported. Since the fall of 2006, a subset of patients diagnosed at large city hospitals has been personally interviewed by staff of the DOHMH's newly established Field Services Unit. It is hypothesized that direct personal interview by an expert public health specialist will yield improved risk ascertainment, but it is still too early to assess the effect of these interviews. Other sources of risk information include New York State provider report forms; matches with registries such as those maintained by STD and TB Control; and special studies that collect supplemental risk information.

During chart review, surveillance staff search for documentation of the sex of the person's sex partner(s), of the HIV serostatus and risk of these sex partner(s), whether the index case or partners have ever injected drugs or had sex with a same-sex partner, and other risk information.

Transmission categories are assigned on the basis of the information collected from the medical record. Persons who are documented as having injected drugs are classified as IDU. Males without documentation of injection drug use and with documentation of having had sex with a male are classified as MSM.

Persons not falling into the IDU or MSM categories; who have documentation of heterosexual sex; and whose heterosexual sex partner is documented to be HIV-positive, an injection drug user or a bisexual male are classified as cases that are heterosexually transmitted. Females may be classified as heterosexual also if they have documented sex with a male and the same female has documentation of probable heterosexual transmission, multiple sex partners, an STD, prostitution or crack/cocaine use (because of its association with high-risk sex) or documentation that she has not injected drugs (to rule out IDU). Comparable expanded definitions of heterosexual transmission for females have been developed by numerous health departments nationwide to improve risk ascertainment among females who are likely to be heterosexual, even though they do not meet the more stringent criteria for the CDC definition of definitive heterosexual transmission because they do not know the risk of their male partners.

Nevertheless, neither for males nor females is documentation of heterosexual sex sufficient to assign the person to the heterosexual transmission category. This is because heterosexual transmission is less efficient than transmission between IDU or MSM, and it also stems from concern that these other risks may not have been documented. These other risks may not have been documented because of stigma associated with the specific behaviors, either on the part of the patient or the provider conducting the interview. Another reason cited by providers is time constraints. The result is failure to document risk or document it in a manner specific enough to allow surveillance to classify it.

In the early 1990s, more than 90% of cases were reported with risk factor information sufficient to assign a transmission category. At that time, only AIDS was reportable, and most AIDS cases were diagnosed in inpatient settings. With approximately 80 facilities reporting, direct professional relationships between hospital staff and DOHMH surveillance staff, patients often having multiple hospital stays, and more contact with a wide variety of health care personnel, each one contributing notes to the medical record, more risk information existed in the charts, and risk ascertainment was more complete. Today, HIV/AIDS surveillance is conducted at any New York City facility diagnosing or reporting a case of HIV/AIDS, which to date has included about 2,800 facilities of widely varying types, most of them outpatient facilities. With briefer contact between persons with HIV/AIDS and the healthcare system (since surveillance is no longer limited to persons who have already progressed to AIDS), and the increase in facilities changing the relationship between surveillance staff and facility staff, approximately one-third of cases reported today have an unknown transmission category.

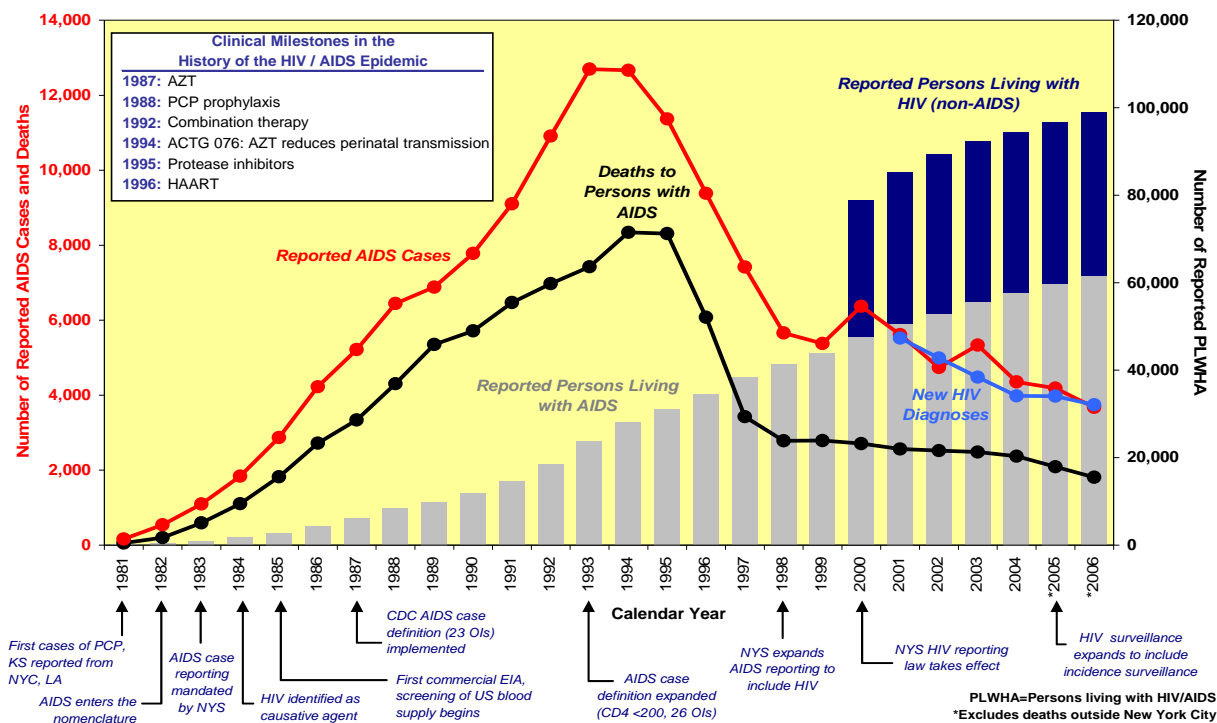
DOHMH continues to strive to improve risk ascertainment. Local efforts include training providers and DOHMH staff and to improve risk ascertainment, creating materials to help providers ask and record risk, establishing the Field Services Unit and assessing the effect of direct patient interviews, expanding transmission categories beyond the more-stringent CDC risk definitions (e.g., improving

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assignment of heterosexual risk for females), and collaborating with other health departments to advocate for more inclusive CDC risk definitions nationwide. NYC served on the committee and participated in drafting the position statement recently issued by the Council of State and Territorial Epidemiologists urging CDC to expand its definition of heterosexual risk for adult and adolescent females, and in many national surveillance conferences NYC has encouraged CDC to reformulate its risk definitions. Risk ascertainment has improved locally, however modestly: among persons newly diagnosed with HIV was at 61% for males and 33% for females in the first quarter of 2004, before many of these efforts were implemented. By the fourth quarter of 2006, risk ascertainment among newly diagnosed persons had improved to 64% among both males and females.

Historical Overview and Current State of the HIV/AIDS Epidemic in New York City

New York City has the oldest and largest HIV epidemic in the Western world. Over 200,000 cumulative HIV/AIDS cases have been diagnosed since 1977. Our epidemic is also disproportionate to our population: NYC has 3% of the United States population but has reported 15% of AIDS cases, 14% of HIV infections and 16% of AIDS deaths in the nation. More than 100,000 New Yorkers are currently living with HIV/AIDS. Many more are infected but have never been tested, and thus remain undiagnosed, unreported, and unaware of their serostatus.



More than 25 years of HIV/AIDS surveillance has allowed us to enumerate and describe this dynamically evolving epidemic. The most important recent development is that the widespread use of highly active antiretroviral therapy (HAART) has transformed HIV infection from a fatal disease into a chronic manageable condition. This means that many PLWHA are living long, active lives. Mortality has steadily declined since it peaked at 8,309 deaths in 1995. The year after the introduction of HAART, deaths declined to 6,074; deaths declined to 3,426 the following year and

have continued to decline. AIDS diagnoses peaked at 12,695 in 1993, and had declined to 9,382 in 1996. Ten years later (2006) 3,672 AIDS cases were diagnosed. Another success is that perinatal transmission is within reach of elimination as a result of proactive prenatal testing, treatment during pregnancy and neonatal prophylaxis. Perinatal HIV diagnoses peaked at 334 in 1990 and subsequently declined to 179 in 1995 and 13 in 2005.¹³ Only seven perinatally infected infants were born in 2006.

The HIV epidemic is a complex phenomenon that is in a state of constant evolution. It affects women, men and transgenders, people of all races, ethnicities, cultural backgrounds, neighborhoods, ages and risk factors. While the number of overall diagnoses has declined in recent years, there are continuing shifts in epidemic patterns. For example, the proportion of cases occurring among injection drug users (IDUs) has been declining gradually, while the proportion of cases occurring in men who have sex with men (MSM) is increasing. As survival and quality of life with HIV have improved, the population of persons living with HIV/AIDS has increased in number and has aged. These shifts pose continuing challenges to HIV prevention in New York City.

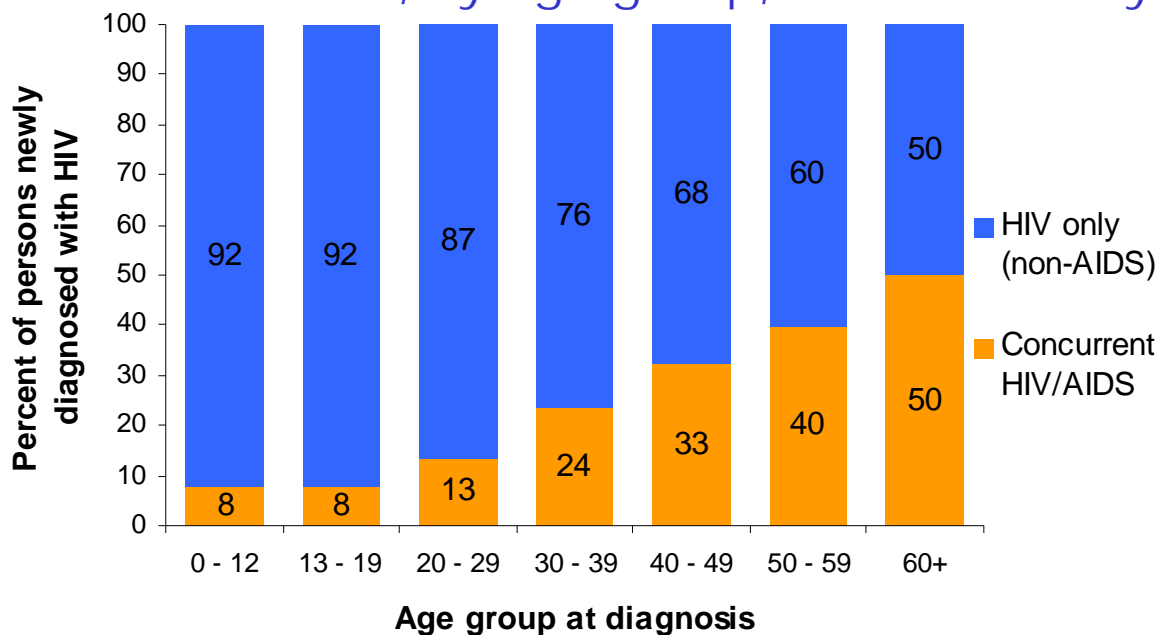
New York City now faces the challenge of eliminating transmission, continuing to reduce HIV-related deaths, and addressing areas where public health has failed, such as increased new diagnoses among young men who have sex with men and the approximately 1,000 persons per year that are diagnosed with concurrent HIV/AIDS.

New diagnoses of HIV and AIDS

In 2006, 3,745 New Yorkers were newly diagnosed with HIV. This represents an HIV diagnosis rate of 46.8 per 100,000 population. Of these 3,745 persons newly diagnosed with HIV, 2,783 (74.3%) were diagnosed with HIV only and 962 (25.7%) were diagnosed with concurrent HIV/AIDS, meaning that AIDS was diagnosed within 31 days of HIV. AIDS typically takes years to develop after HIV infection, so concurrent HIV/AIDS diagnoses are most likely to be late diagnoses, representing missed opportunities to prevent ongoing transmission and to provide medical treatment and care. The probability of being diagnosed with concurrent HIV/AIDS increased with age. Among persons diagnosed with HIV in 2006, fewer than 15% of persons under 30 were diagnosed concurrently, compared with 50% of persons 60+ years old, as shown above.

¹³ HIV Epidemiology and Field Services Program, New York City Department of Health and Mental Hygiene. Pediatric & Adolescent HIV/AIDS: Surveillance Update, New York City. December 2007.

Concurrent HIV/AIDS among persons diagnosed with HIV in 2006, by age group, New York City



If concurrent HIV/AIDS represents a late, or delayed diagnosis, how many New Yorkers are diagnosed early in the course of their HIV infection, and what are their demographic characteristics and risk factors, i.e., who is on the “leading edge” of the epidemic? New York City currently uses a CDC laboratory test, the serologic testing algorithm for recent HIV seroconversion (STARHS, or “detuned assay”) to distinguish between recent and established infection in the diagnostic Western blot specimen of persons newly diagnosed with HIV. As of July 1, 2005, all laboratories are required by New York State to submit remnant serum from western blot positive specimens for STARHS. As estimated by STARHS, based on available specimens, in 2006 21.9% (493/2255) of new diagnoses overall represented recent infections. 30.3% (205/676) of newly diagnosed persons under 30 and 18.2% (288/1579) over 30 were recently infected, as were 30.7% (282/918) of MSM, 13.6% (17/125) of IDU and 18.5% (96/519) of heterosexuals were recently infected.

In 2006, 3,672 persons were diagnosed with AIDS. This total includes the 962 persons that were diagnosed with concurrent HIV/AIDS, and it also includes 2,710 persons who had previously been reported to the registry as infected with HIV and who progressed to AIDS during 2006.

Persons living with HIV/AIDS (PLWHA)

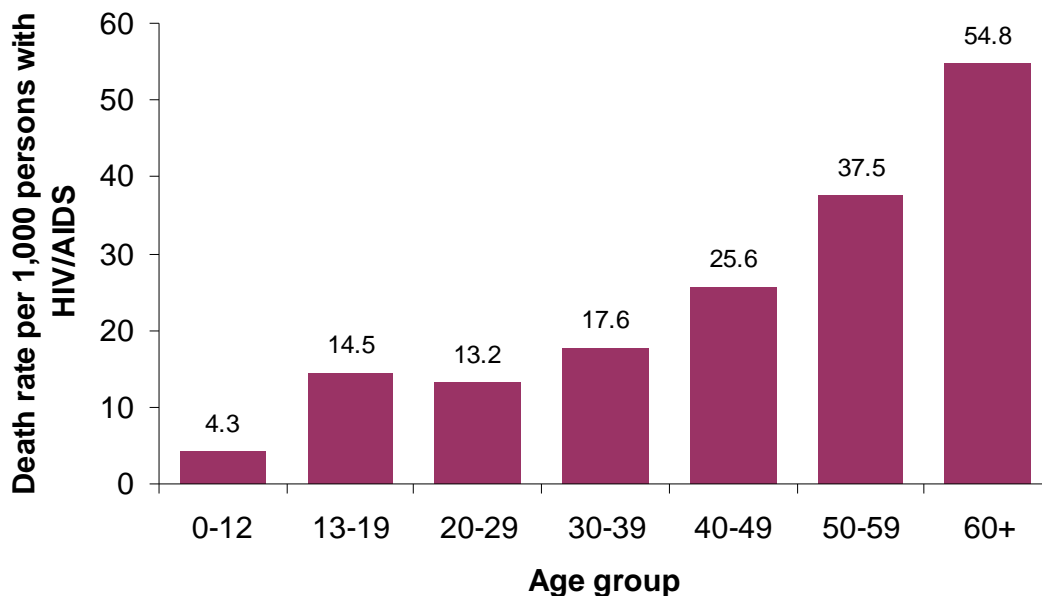
At the end of 2006, 98,861 persons were diagnosed and reported in New York City and presumed to be living with HIV/AIDS. This represents an HIV/AIDS prevalence rate of 1.2%, or approximately 1 in 81 persons, as shown below.



Deaths to persons with HIV/AIDS

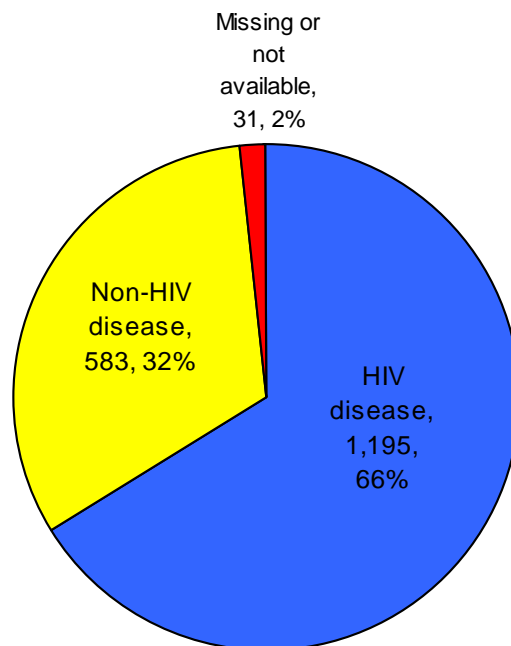
In 2006, 2,076 persons with HIV/AIDS (PWHA) died. The death rates were highest in Staten Island (29.3 per 1,000 PWHA) and the Bronx (26.1 per 1,000 PWHA). While 21.2% of persons living with HIV/AIDS at the end of 2006 were IDU, 38.5% of those who died were IDU, reflecting the increased risk of death to PWHA who are IDU compared with other transmission categories. The median age at death was 49, and the death rate increased with age. In 2006, 13.2 per 1,000 persons with HIV/AIDS in their 20s died, compared with 54.8 per 1,000 persons with HIV/AIDS in their 60s.

Death rate among persons with HIV/AIDS in New York City, by age group, 2006



Of the 2,076 persons with HIV/AIDS who died in 2006, 1,809 (87.1%) had AIDS. Two-thirds of the 1,809 died from HIV-related causes. The most common non-HIV-related causes were substance use (9.7%), cardiovascular disease (8.7%) and non-AIDS-related cancers (6.7%).

Cause of death among persons with AIDS in New York City, 2006

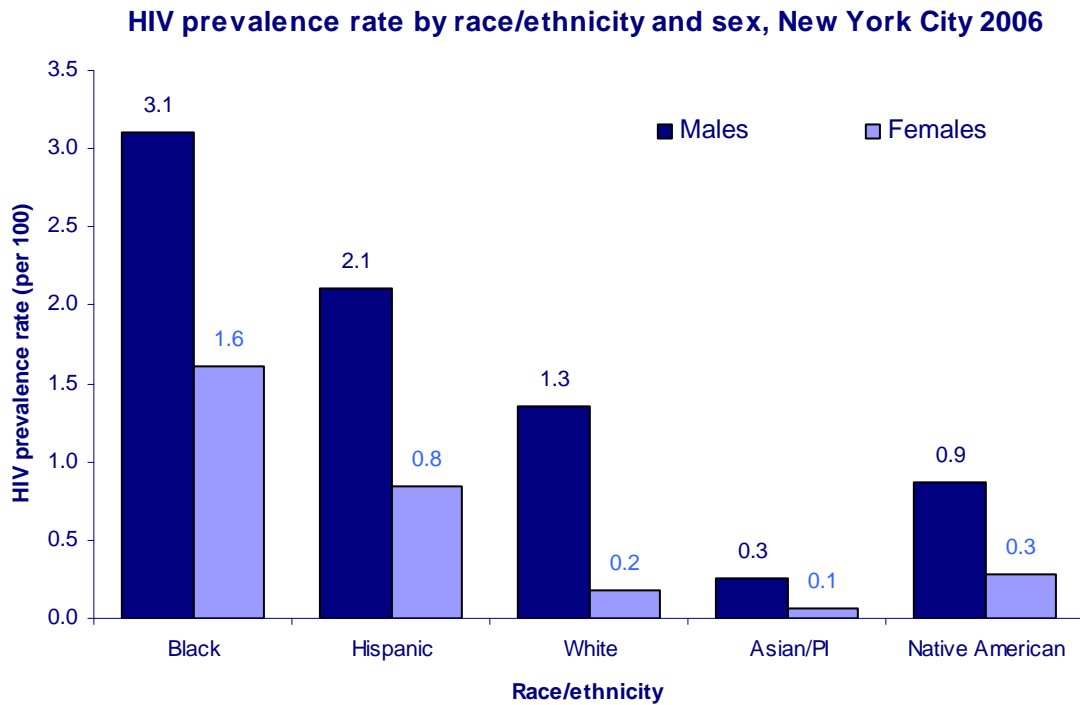


HIV/AIDS in Subpopulations in New York City

The HIV/AIDS epidemic in New York City affects women, men and transgenders, people of all races, ethnicities, cultural backgrounds, neighborhoods, ages and risk factors. Persons diagnosed with or living with HIV/AIDS, or having HIV/AIDS and dying in 2006 were more likely to be male than female, and more likely to be black or Hispanic than another race/ethnicity. The majority of persons diagnosed with or living with HIV/AIDS were in their 30s and 40s, while the majority of deaths occur to persons in their 40s and 50s.

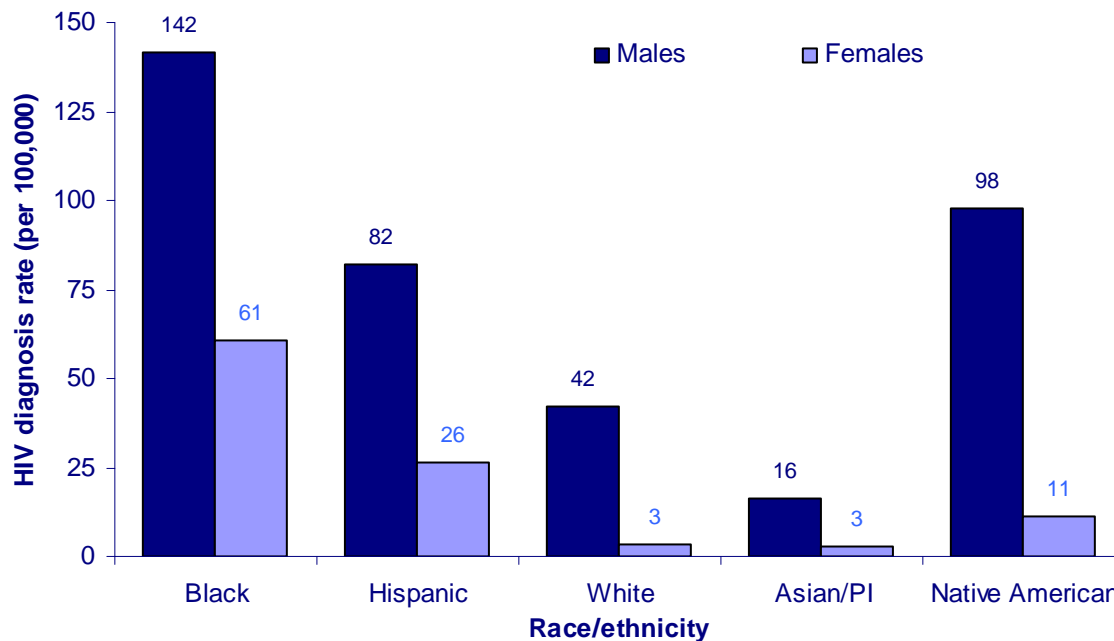
HIV/AIDS by race/ethnicity and sex

Males have a higher HIV prevalence rate than females in every racial/ethnic group. HIV prevalence varies substantially by race/ethnicity, with the highest rates in blacks. At the end of 2006, 3.1% of black males and 1.6% of black females in New York City were living with HIV/AIDS. Among Hispanics, 2.1% of males and 0.8% of females were living with HIV/AIDS.



The rate of HIV diagnosis is higher in males than females in every racial/ethnic group. HIV prevalence varies substantially by race/ethnicity, with the highest rates in blacks. In 2006, 142 of every 100,000 black males and 61 of every 100,000 black females in New York City were newly diagnosed with HIV. Among Hispanics, 81 of every 100,000 males and 26 of every 1,000 females were newly diagnosed with HIV. While fewer HIV diagnoses in 2006 were among Native Americans than other racial/ethnic groups, for both males and females, the HIV diagnosis rate among Native American males (98 per 100,000) was second only to that among black males.

HIV diagnosis rate by race/ethnicity and sex, New York City 2006

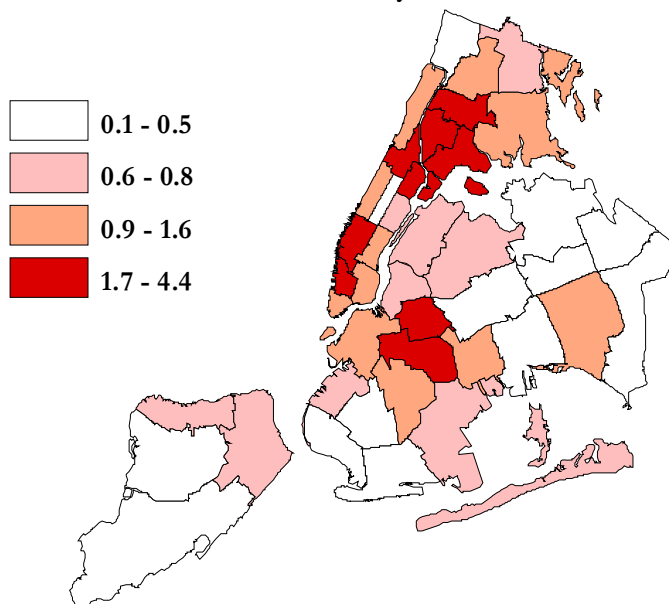


HIV/AIDS by borough and neighborhood of residence

United Hospital Fund (UHF) neighborhoods¹⁴ with the highest proportions of PLWHA are in the South Bronx, Central Brooklyn, lower Manhattan and Harlem. HIV prevalence in 2006 was highest in the neighborhood of Chelsea-Clinton, where 4.4% of the population was living with HIV/AIDS, followed by East Harlem (2.7%) and Central Harlem – Morningside Heights (2.6%).

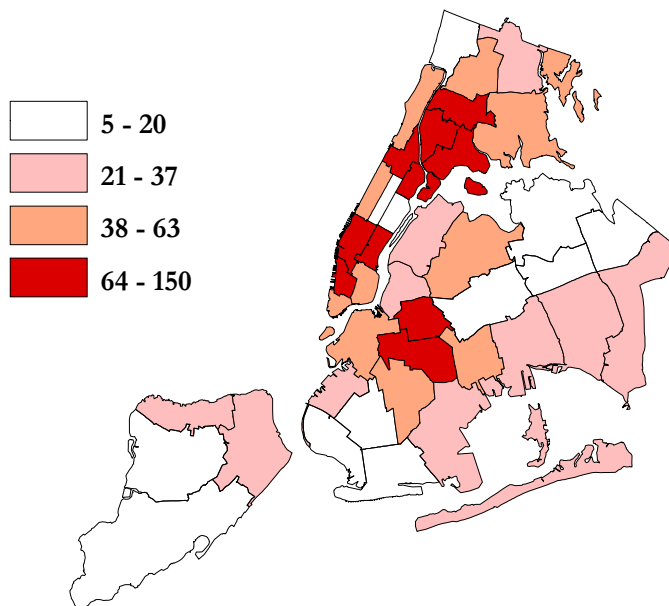
¹⁴ United Hospital Fund (UHF) neighborhoods correspond to geographic areas within New York City that aggregate between 1 and 9 ZIP codes and that are smaller than a borough. UHF neighborhoods reflect catchment areas for certain healthcare facilities.

**Percent of the population living with HIV/AIDS,
New York City 2006**



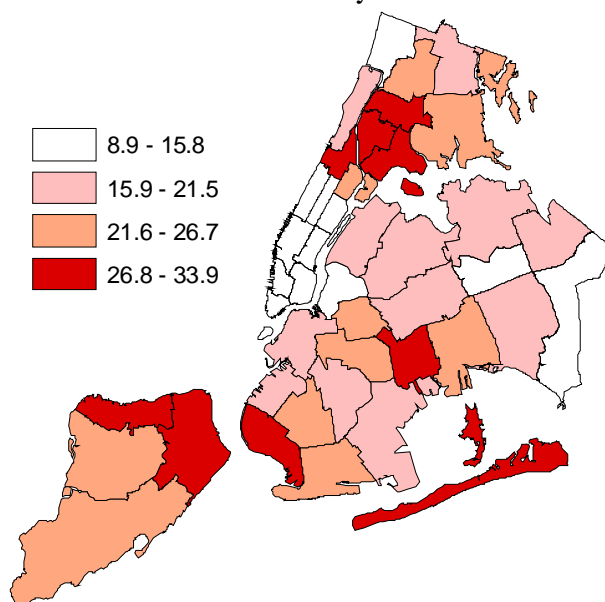
UHF neighborhoods with the highest rates of HIV diagnoses are in the South Bronx, Central Brooklyn, lower Manhattan and Harlem. The neighborhood of Chelsea-Clinton has the highest rate, 150.4 per 100,000 persons, followed by Central Harlem – Morningside Heights (124.4 per 100,000) and East Harlem (105.5 per 100,000).

HIV diagnoses per 100,000 population, New York City 2006



Most high-prevalence UHF neighborhoods have high mortality among persons with HIV/AIDS, with some exceptions: Chelsea-Clinton has the highest prevalence in the city but comparatively low mortality. Staten Island neighborhoods have low prevalence but high mortality.

**Age-adjusted death rate per 1,000 PWHA,
New York City 2006**

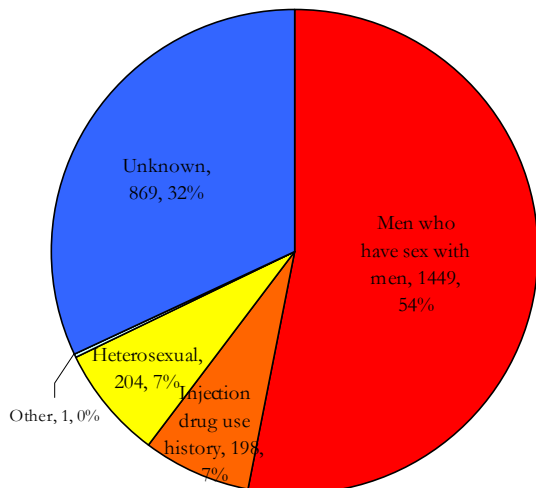


HIV/AIDS by transmission category

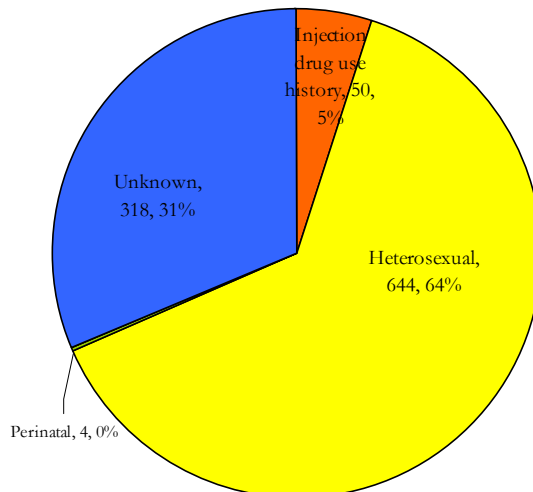
The most common transmission category among males newly diagnosed with HIV was MSM (54%). The most common transmission category among females was heterosexual (64%). These are the most common categories by sex nationally, as well.¹⁵ MSM was the most common known risk category among New Yorkers newly diagnosed with HIV, accounting for 1,449 of 3,745 newly diagnosed persons. Almost one-third of males and females newly diagnosed with HIV in New York City did not have a known transmission category.

¹⁵ Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report, 2006*. Vol. 18. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2008. <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>.

Transmission risk category of males diagnosed with HIV in 2006, New York City

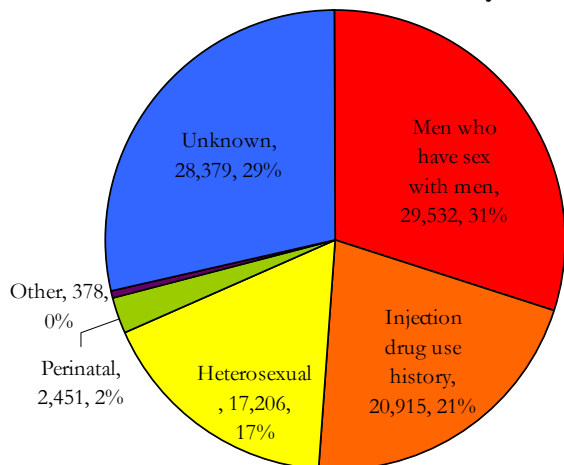


Transmission risk category of females diagnosed with HIV in 2006, New York City

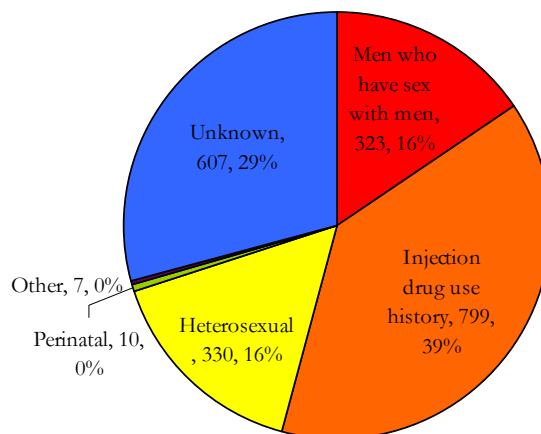


The most common transmission category among persons living with HIV/AIDS in 2006 was MSM (31%), followed by unknown (29%), IDU (21%) and heterosexual (17%). Persons with HIV/AIDS who died in 2006 were almost twice as likely as PLWHA to be IDU (39%), and IDU comprised the largest transmission category among persons who died. After IDU, heterosexual and MSM (16% each) were the most common transmission categories.

Transmission risk category of persons living with HIV/AIDS at the end of 2006, New York City



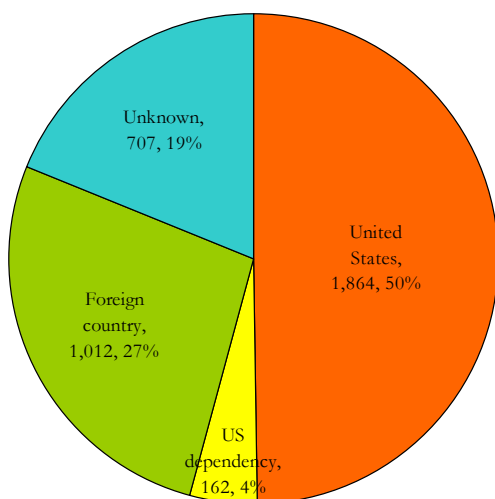
Transmission risk category of persons with HIV/AIDS who died in 2006, New York City



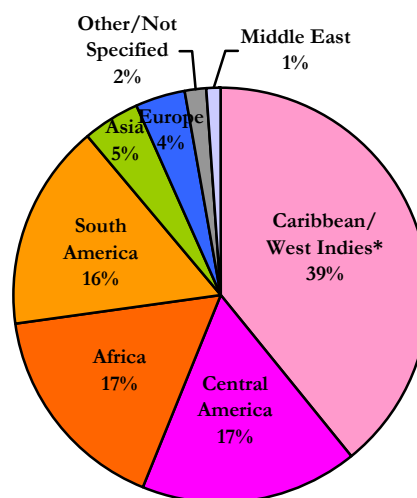
HIV/AIDS by Country of Birth

Half of persons newly diagnosed with HIV in New York City in 2006 were born in the United States. Four percent were born in a US dependency (mostly Puerto Rico). Country of birth could not be determined for 19% of persons who were newly diagnosed. Foreign-born persons accounted for 1,012 of the persons newly diagnosed with HIV, or 27%. The Caribbean/West Indies was the birthplace of more foreign-born New Yorkers diagnosed with HIV than any other region (39%). Approximately one-sixth of the foreign-born were from each of Central America, Africa and South America. Persons born in Asia accounted for 5% of the foreign-born, Europe 4% and the Middle East 1%.

HIV diagnoses in 2006 by country of birth, New York City



Foreign-born HIV diagnoses in 2006 by region of birth, New York City



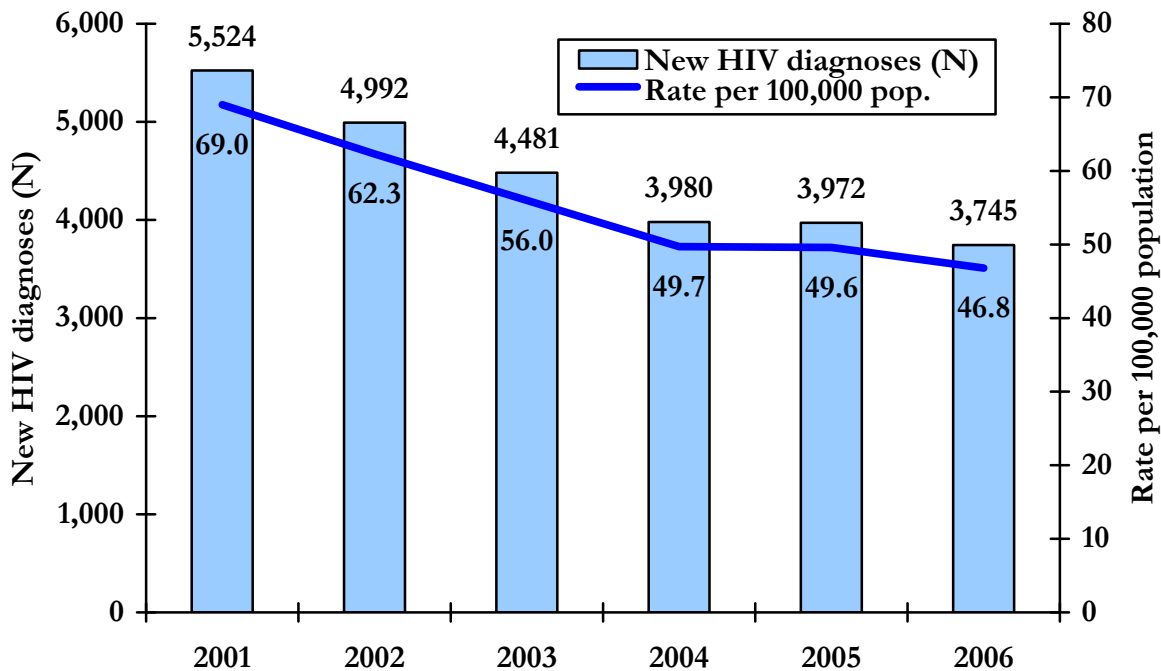
Trends in New Diagnoses of HIV/AIDS and Persons Living with HIV/AIDS

Previous paragraphs provided a brief summary of the current state of the epidemic. To interpret the 2006 data we must view them in context by observing trends over time.

New diagnoses of HIV

In 2001, 5,524 persons in New York City were diagnosed with HIV, a rate of 69.0 per 100,000 population. By 2006, that number had declined to 3,745, or 46.8 per 100,000. The number of new HIV diagnoses declined by about 500 cases annually between 2001 and 2004. A smaller decrease was observed between 2004 and 2006.

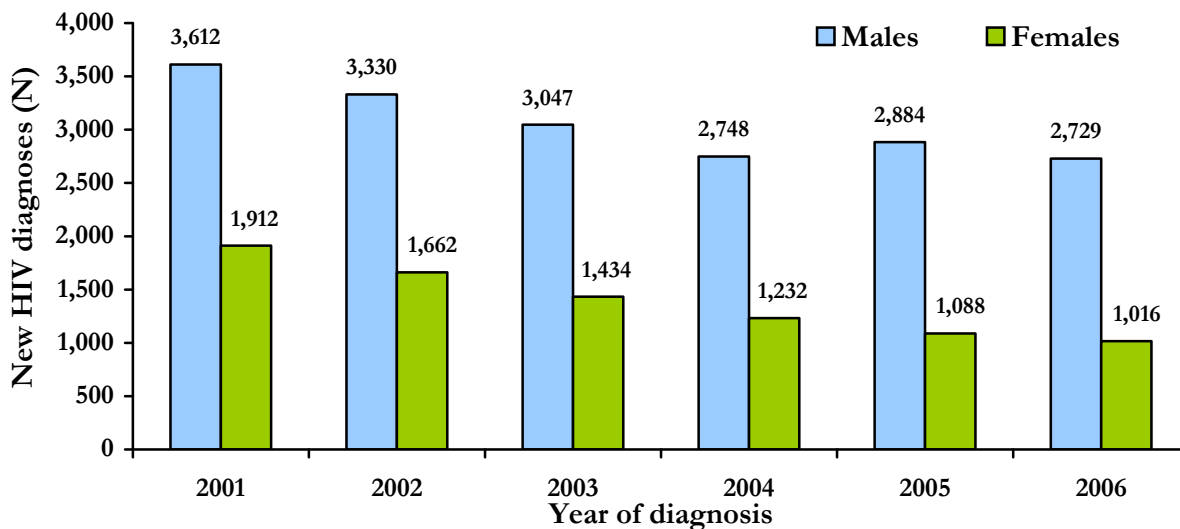
New HIV Diagnoses & Rates in NYC, 2001-2006



New diagnoses of HIV by sex

The number of new HIV diagnoses has declined annually in both males and females, except for an increase in 2005 in males. Each year, 2-3 times more males than females have been diagnosed with HIV.

New HIV Diagnoses by Sex in NYC, 2001-2006

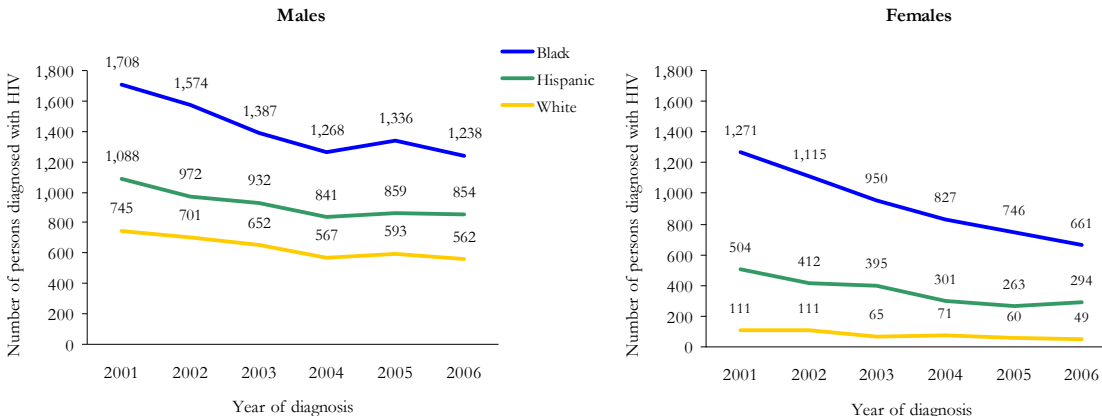


New diagnoses of HIV by race/ethnicity and sex

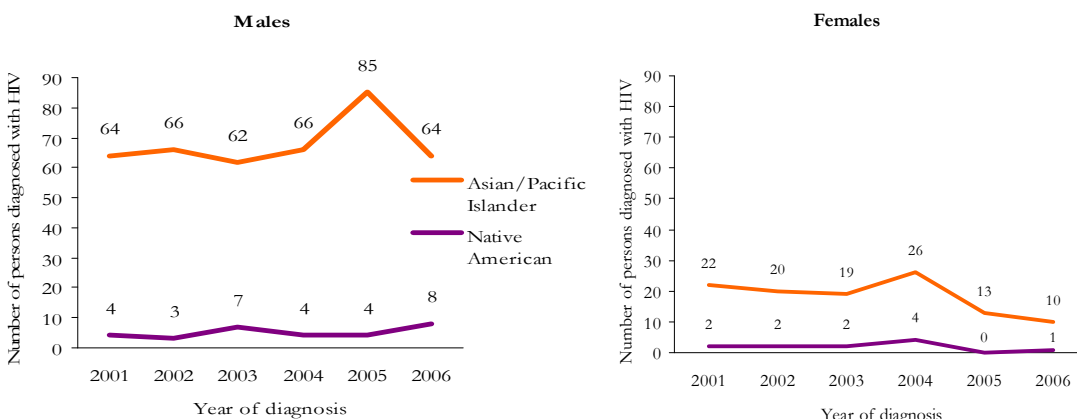
The number of HIV diagnoses declined among males in all racial/ethnic groups from 2001 through 2004. Diagnoses increased between 2004 and 2005 and then declined again slightly in 2006. The largest absolute and relative decline was among black males, who comprised the majority of males diagnosed with HIV each year. There were 470 fewer HIV diagnoses among black males in 2006 than in 2001, representing a 28% decline. Among Asian/Pacific Islander males, HIV diagnoses were approximately stable between 2001 and 2006, ranging between 62 and 66, with the exception of 2005, in which 85 males were diagnosed with HIV. Three or four Native American males were diagnosed with HIV each year between 2001 and 2006, except in 2003 when seven were diagnosed and 2006 when eight were diagnosed. The overall six-year decline in HIV diagnoses among males was 24%.

Fewer females than males were diagnosed with HIV in each year. The number of HIV diagnoses declined significantly between 2001 and 2006 in females of all racial/ethnic groups. The largest absolute decline was among black females, who comprised the majority of females diagnosed with HIV each year. There were 610 fewer HIV diagnoses among black females in 2006 than in 2001 -- a 48% decline. Among Asian/Pacific Islander females, HIV diagnoses declined each year between 2001 and 2006, from 22 to 10, with the exception of an increase to 26 cases in 2004. Between zero and four Native American females were diagnosed with HIV each year between 2001 and 2006. The overall six-year decline in HIV diagnoses among females was 47%.

New HIV diagnoses by sex and race/ethnicity in NYC, 2001-2006



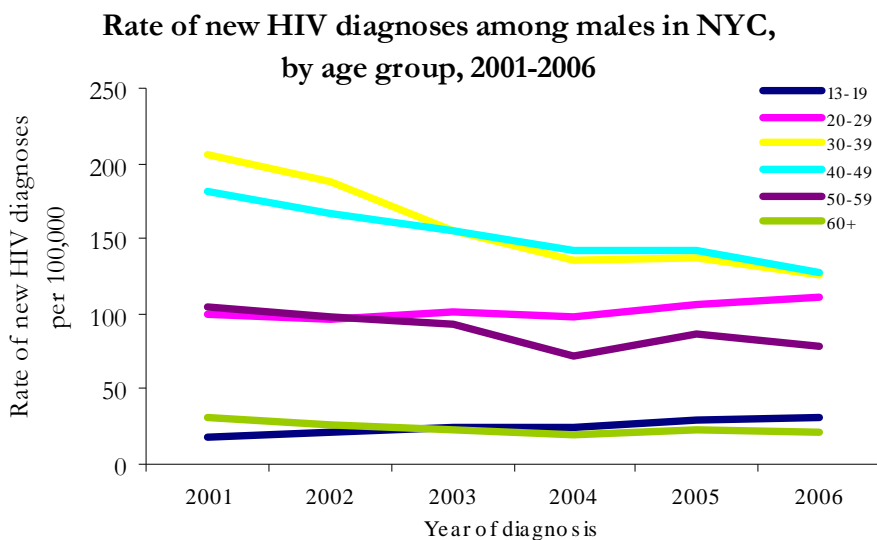
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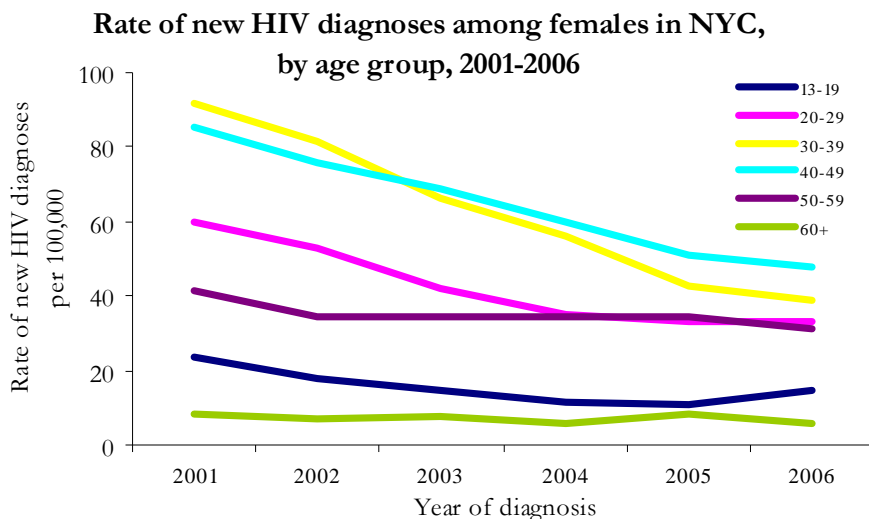


New diagnoses of HIV by age and sex

Between 2001 and 2006, HIV diagnosis rates among males were highest in those 30-39 and 40-49 years old and lowest in those 13-19 and 60+ years old. The rate of HIV diagnoses among males declined overall since 2001, from 118 per 100,000 to 89 per 100,000. However, rates increased in young men 13-19 and 20-29. These increases were among MSM, most of whom were black or Hispanic.

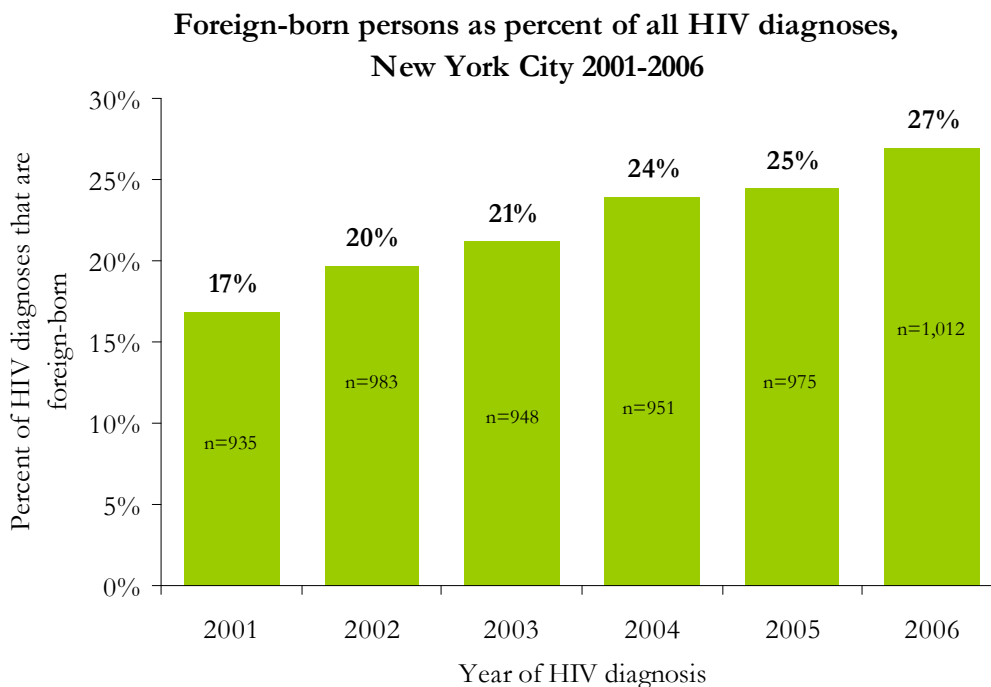
HIV diagnosis rates among females were lower than those among males. Between 2001 and 2006, HIV diagnosis rates among females were highest in those 30-39 and 40-49 years old and lowest in those 13-19 and 60+ years old. The rate of HIV diagnoses among females declined overall since 2001, from 54 per 100,000 to 29 per 100,000. However, rates increased in young women 13-19 years old. These increases were among MSM, most of whom were black or Hispanic.





New diagnoses of HIV by country of birth

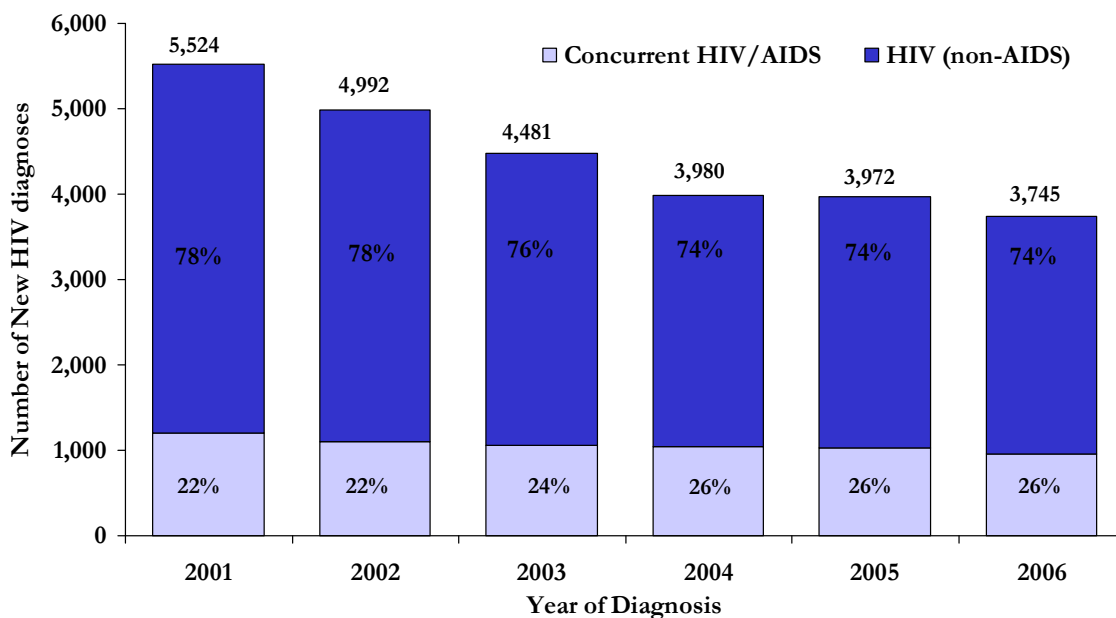
While the number of persons overall who were diagnosed with HIV declined between 2001 and 2006, the number of foreign-born persons diagnosed with HIV increased slightly, from 935 in 2001 to 1,012 in 2006. The proportion of all persons newly diagnosed with HIV who were foreign-born increased from 17% in 2001 to 27% in 2006.



New diagnoses of concurrent HIV/AIDS

A growing percentage of persons diagnosed with HIV are concurrently diagnosed with AIDS, i.e., their HIV diagnosis is followed by an AIDS diagnosis within 31 days. In 2001 and 2002, 22% of HIV diagnoses were concurrent with AIDS diagnosis. In 2004-2006, 26% of HIV diagnoses were concurrent with AIDS.

Concurrent HIV/AIDS Diagnoses as Percent of Total HIV Diagnoses, New York City, 2001-2006

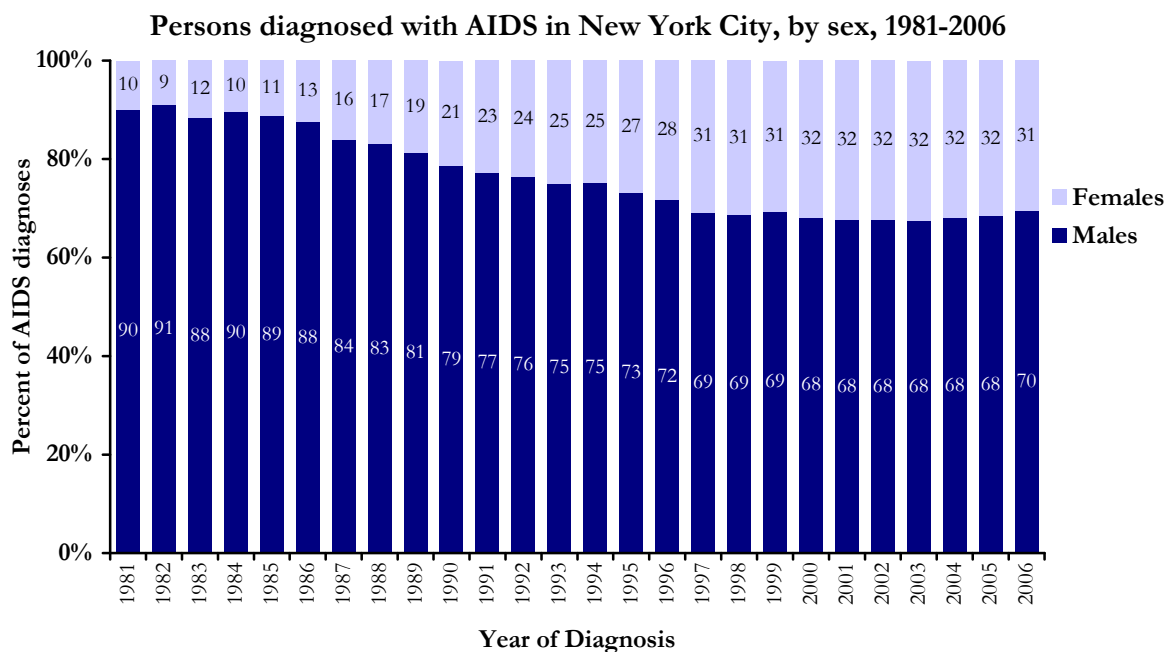


New diagnoses of AIDS

AIDS diagnoses peaked at 12,695 in 1993, and had declined to 9,382 in 1996. Ten years later (2006), 3,672 AIDS cases were diagnosed.

New diagnoses of AIDS by sex

The proportion of persons diagnosed with AIDS who were female increased from 10% in 1981 to 31% in 1997. Each year since 1997, 31-32% of AIDS diagnoses have been among females.



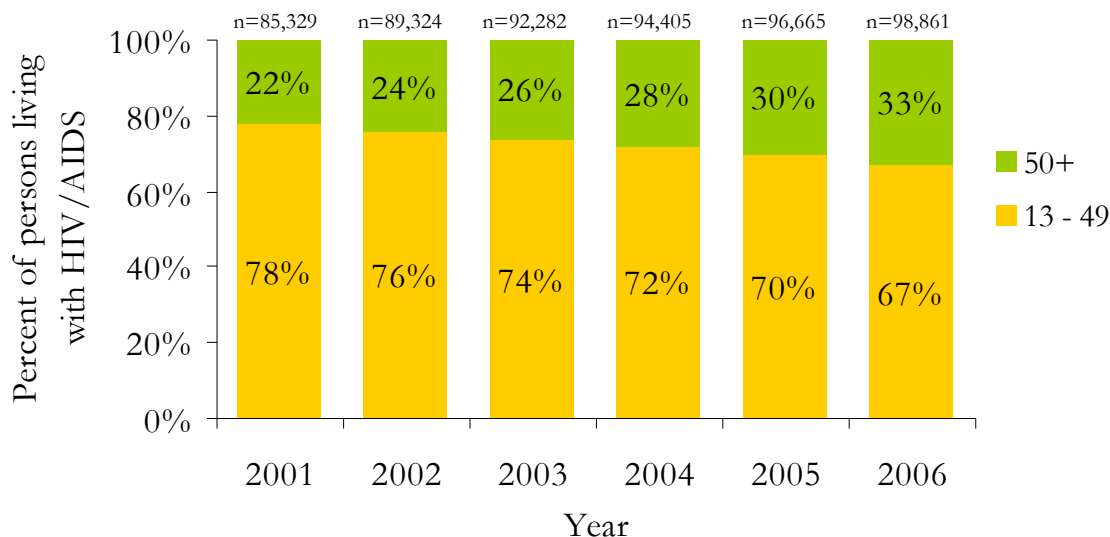
Persons living with HIV/AIDS

Between 2001 and 2006, the number of persons diagnosed and reported in New York City and living with HIV/AIDS increased 16%, from 85,329 to 98,861.

Persons living with HIV/AIDS by age group

PLWHA at least 50 years old increased from 22% to 33% of all PLWHA. This is largely because the population of persons living with HIV/AIDS has aged as survival with HIV has improved.

**Persons living with HIV/AIDS in New York City, by
age group, 2001-2006**



HIV/AIDS Prevalence and Risk in Subpopulations in New York City: Data from Behavioral Research, Registry Matches and Serosurveys

Behavioral studies, registry matches, and serosurveys provide data to supplement HIV/AIDS surveillance in samples of populations of special interest, such as high-risk, incarcerated and homeless persons.

Persons admitted to the NYC correctional system

Inmates have an elevated HIV prevalence relative to the general population, making correctional facilities unique sites for HIV diagnosis and initiation of care. In 2005, the NYC correctional system reported more HIV diagnoses in NYC than any other facility.¹⁶ In 2006, HIV prevalence and undiagnosed HIV infection were estimated using de-identified remnant serum from specimens originally drawn for routine syphilis screening at the medical intake of persons newly admitted to the NYC correctional system.

HIV prevalence was 4.7% in males, 9.7% in females and 6.1% overall in new jail admissions.¹⁷ This represented a decline from the last NYC jail serosurvey, which was conducted in 1998 and observed (or estimated) a prevalence of 7.6% in males and 18.1% in females. In 2006, 29.7% of males and

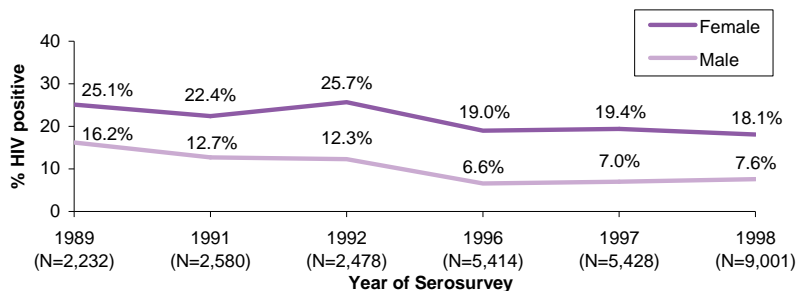
¹⁶ Bennani Y, Parvez F, Forgione L, Herrera J, Torian L, Begier E. Undiagnosed HIV Infection among New York City Jail Entrants, 2006: Results of a Blinded Serosurvey. 15th Conference on Retroviruses and Opportunistic Infections, Boston, MA, 2008. Poster #539.

¹⁷ HIV Epidemiology and Field Services Program, New York City Department of Health and Mental Hygiene. HIV Epidemiology and Field Services Semiannual Report. April 2008.

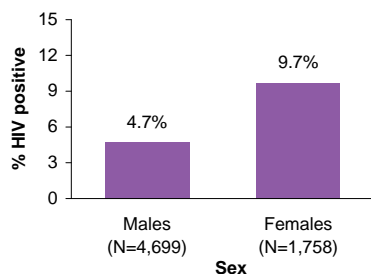
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23.4% of females testing positive appeared to have undiagnosed HIV infection, meaning that these inmates did not self-report being HIV-infected and/or were not in the HIV/AIDS surveillance registry. Most undiagnosed persons did not have documented HIV risk factors, supporting routine voluntary testing for all jail entrants as opposed to targeted testing of jail entrants with known or disclosed risk factors.

Findings from Past NYC Jail System HIV Serosurveys



2006 HIV Seroprevalence in New Jail Admissions



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Source: HIV Epidemiology and Field Services Program, New York City Department of Health and Mental Hygiene. HIV Epidemiology and Field Services Semiannual Report. April 2008.

Members of the NYC “house ball” community

A confidential survey and HIV testing were conducted in 2004 to ascertain HIV prevalence and associated risk behaviors among persons participating in New York City's house ball community.¹⁸ A “house” is a network of people, most of whom are young black or Latino gay or transgender persons.¹⁹ A “ball” is a social event for houses and unaffiliated persons to compete in performances of dance and physical appearance. The analysis was conducted for 314 persons identifying as males and 68 male-to-female transgenders with at least one male sex partner in the last 12 months and who were members of houses or socially connected to house members.

Transgenders reported significantly higher proportions of stressful life events (75% vs. 61%) and positive depression screens than males. Transgenders were significantly more likely than males to report a history of arrest (53% vs. 36%), being beaten up (40% vs. 22%), being forced to have sex (29% vs. 17%), and trying to commit suicide (24% vs. 12%) ($p < 0.05$). Transgender respondents were also more likely to report having more than 5 male sex partners (47% vs. 26%) and exchanging sex for food or money in the past 12 months (32% vs. 5%). Transgender respondents were slightly more likely than males to have been tested for HIV in the past 12 months (65% vs. 60%), less likely to have had a positive HIV test result at interview (16% vs. 20%) and more likely to be aware of their HIV infection (33% vs. 26%). Culturally appropriate prevention efforts at the community level may be helpful to reduce risk behaviors and increase HIV testing in the house ball community.

Persons using the NYC shelter system

During 2001-2003, 766 adults using the single adult shelter system of the Department of Homeless Services and 319 using the family shelter system were reported as newly diagnosed with HIV.²⁰ These diagnosis rates are 16 and 8 times higher, respectively, than among the total population of adults in NYC.

Among 88,014 New Yorkers living with HIV/AIDS in 2001-2003, 3,108 (3.5%) used the homeless shelter system for at least one night.

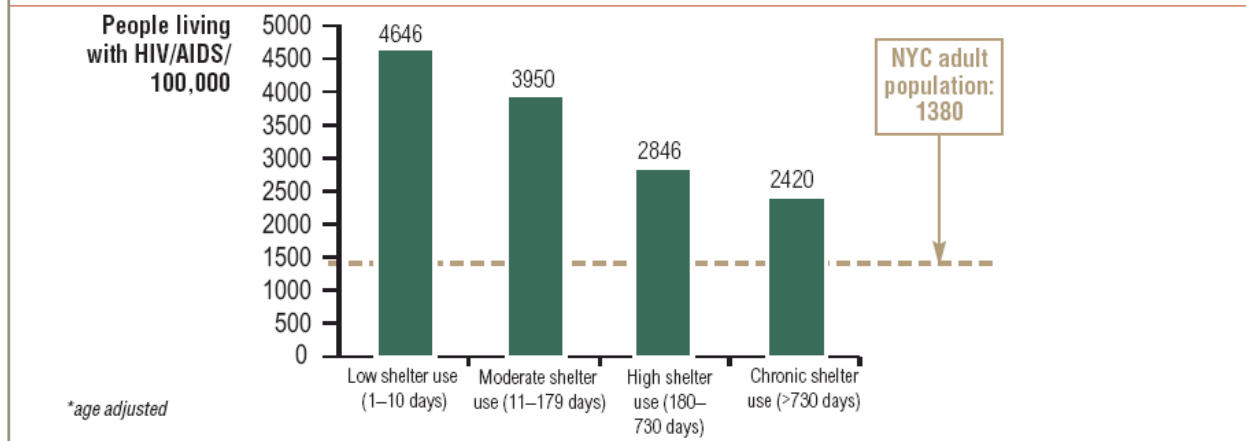
While HIV prevalence among persons using the single adult shelter system for any number of days during 2001-2003 was higher than among the NYC adult population, HIV prevalence was highest among persons using the system 1-10 days (4.6%) and lowest among those using it more than 730 days (2.4%). Housing assistance is available to persons with symptomatic HIV infection or AIDS through the HIV/AIDS Services Administration.

¹⁸ HIV Epidemiology and Field Services Program, New York City Department of Health and Mental Hygiene. HIV Epidemiology and Field Services Research Unit Report. October 2007.

¹⁹ Murrill CS, Liu KL, Guilin V, Colón ER, Dean L, Buckley LA, Sanchez T, Finlayson TJ, Torian LV. HIV prevalence and associated risk behaviors in New York City's house ball community. *Am J Public Health* 2008;98(6):1074-80.

²⁰ Kerker B, Bainbridge J, Li W, Kennedy J, Bennani Y, Agerton T, Marder D, Torian L, Tsoi B, Appel K, Gutkovich A. *The Health of Homeless Adults in New York City: A report from the New York City Departments of Health and Mental Hygiene and Homeless Services*, 2005.

Prevalence rates* of HIV/AIDS among adults who used DHS single adult shelters, 2001-2003



Source: Kerker B, Bainbridge J, Li W, Kennedy J, Bennani Y, Agerton T, Marder D, Torian L, Tsoi B, Appel K, Gutkovich A. The Health of Homeless Adults in New York City: A report from the New York City Departments of Health and Mental Hygiene and Homeless Services, 2005.

Sociodemographic & Behavioral Risk Characteristics of the General New York City Population

New York City has the largest population of any city in the United States. With 8,008,278 residents, NYC has almost as many residents as Los Angeles, Chicago and Houston (the 2nd, 3rd, and 4th largest US cities) combined.²¹ NYC is comprised of five boroughs: Manhattan, which is the economic hub; Brooklyn, which is the most populous; Queens, the most ethnically diverse county in the nation; the Bronx, which has some of the nation's poorest urban areas; and Staten Island, which is less populous than the other boroughs and is connected to them by bridge and ferry. NYC is the highest-density major city in the nation, and Manhattan the highest-density county in the nation, with 66,940 residents per square mile.

NYC has 4,214,074 females and 3,794,204 males. Females outnumber males in every borough, every age group except persons 0-19 years old, and every racial/ethnic group. Approximately half of the total population is 20-49 years old (47%). The largest racial/ethnic group is non-Hispanic whites, who comprise 35% of the population, followed by Hispanics (27%), non-Hispanic blacks (25%), Asian/Pacific Islanders (10%), American Indian/Alaska Natives (0.2%) and persons of other racial/ethnic groups (4%).

²¹ U.S. Census Bureau, 2000 Census.

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New York City population, 2000

	Total	Male	Female
Total	8,008,278	3,794,204	4,214,074
Borough of residence			
Bronx	1,332,650	620,171	712,479
Brooklyn	2,465,326	1,156,446	1,308,880
Manhattan	1,537,195	729,534	807,661
Queens	2,229,379	1,073,568	1,155,811
Staten Island	443,728	214,485	229,243
Age group			
0 to 12 years	1,429,677	729,855	699,822
13 to 19 years	723,773	368,802	354,971
20 to 29 years	1,270,490	612,055	658,435
30 to 39 years	1,348,263	657,756	690,507
40 to 49 years	1,133,497	540,069	593,428
50 to 59 years	850,372	385,776	464,596
60 years and over	1,252,206	499,891	752,315
Race/ethnicity			
Black	1,962,154	874,265	1,087,889
Hispanic	2,160,554	1,040,714	1,119,840
White	2,801,267	1,339,775	1,461,492
Asian/Pacific Islander	783,058	389,346	393,712
American Indian / Alaska Native	17,321	8,198	9,123
Other	283,924	141,906	142,018

Source: US Census 2000.

Foreign-born persons and persons from US dependencies

New York City has a large, diverse and growing population of foreign-born persons. In 2000, the NYC population of over 8 million included 2.9 million foreign-born persons.²² This constitutes an increase of more than three-quarters of a million foreign-born persons since 1990, from 28% to 36% of the city's total population. About 43% of the city's foreign-born population arrived in the U.S. during the 1990s and 29% in the 1980s. The 2006 American Community Survey estimated further increase to the foreign-born population, to 3.0 million foreign-born persons, or 37% of the total population.²³

The most common countries of birth of NYC's foreign-born population are: the Dominican Republic (N=369,186), China (N=261,551), Jamaica (N=178,922), Guyana (N=130,647), Mexico (N=122,550), Ecuador (N=114,944) and Haiti (N=95,580).

²² New York City Department of City Planning. The Newest New Yorkers 2000: Immigrant New York in the New Millennium. October 2004.

²³ U.S. Census Bureau, 2006 American Community Survey.

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Persons born in US dependencies are not considered to be foreign-born. Puerto Rico accounts for the largest number of dependency-born residents of NYC, numbering 304,168 persons in 2000.²⁴ NYC residents from other US dependencies numbered 10,045.

Poverty

More than 1.5 million NYC residents were living in poverty in 2005, of which more than half a million were children 0-17 years old.²⁵ Poverty was defined by the federal government based on income, household size, and other factors including food stamp usage. Nineteen percent of NYC residents of all ages and 28% of children were living in poverty in 2005. Poverty rates were highest in the Bronx (29% of all persons, 39% of children) and Brooklyn (22%, 31%).

Poverty in New York City by borough and age, 2005

	All ages		Children 0-17	
Total	1,509,654	19%	529,337	28%
Borough of residence				
Bronx	376,517	29%	152,744	39%
Brooklyn	543,406	22%	197,370	31%
Manhattan	272,161	18%	79,387	30%
Queens	267,880	12%	82,197	17%
Staten Island	49,690	11%	17,639	16%

Source: U.S. Census Bureau, Small Area Estimates Branch.

Homelessness

The Department of Homeless Services (DHS) provides shelter to the homeless population in NYC through two systems: one that serves single adults and one that serves families.²⁶ The term 'single adults' refers to individuals in the single adult system; 'adults in families' refers to adults in the family system. Other city agencies provide shelter services to individuals with advanced HIV infection and AIDS, teens, victims of domestic violence, and individuals facing a housing emergency such as a fire or a flood.

From 2001 through 2003, an average of 33,561 individuals resided in DHS shelters each night. DHS maintains electronic data systems to track homeless individuals in shelter, but there are currently no systems in place to track unsheltered homeless individuals. However, annual street "census" surveys suggest that shelters probably house the majority of the homeless persons in NYC.

According to the DHS 2005 Homeless Outreach Population Estimate (HOPE, an annual survey of homelessness in NYC), 86% of homeless individuals resided in shelters overseen by the NYC DHS (65% in family shelters and 21% in single adult shelters), 3% resided in alternate shelters, and 11%

²⁴ U.S. Census Bureau, 2000 Census.

²⁵ U.S. Census Bureau, Small Area Estimates Branch.

²⁶ Kerker B, Bainbridge J, Li W, Kennedy J, Bennani Y, Agerton T, Marder D, Torian L, Tsoi B, Appel K, Gutkovich A. *The Health of Homeless Adults in New York City: A report from the New York City Departments of Health and Mental Hygiene and Homeless Services, 2005.*

were unsheltered. The unsheltered population consisted of single adults only; no families with children were found on the street in this survey. In 2004, this survey was done in three boroughs, and a similar distribution was found (84% in DHS shelters, 6% in alternate shelters, and 10% unsheltered).

Drug use

The NYC Community Health Survey (CHS) is a telephone survey conducted annually by the NYC DOHMH.²⁷ The CHS samples approximately 10,000 adults aged 18 and older from all five boroughs of NYC. It is a rich source of data on knowledge, attitudes and health-related behavior of participating New Yorkers. According to the 2004 CHS, 8.5% of New Yorkers, or about 500,000 persons, have ever used cocaine, including crack or freebase, heroin, PCP, angel dust, or any other street drug, excluding marijuana.²⁸ Drug use was higher for males (11.5%) than females (5.6%) and increased with income (5.2% among persons at less than 100% poverty level vs. 14.7% among persons at more than 600% poverty level).

Incarceration

The NYC Department of Correction (DOC) operates 11 admission facilities: Rikers Island, consisting of nine facilities, and two borough facilities. During 2006, there were 93,327 male admissions (64,383 unique individuals) and 11,896 female admissions (8,073 unique individuals).²⁹ On any given day, these facilities house an average of 13,000 - 14,000 people.³⁰ The median length of stay is seven days; 25% of people admitted are released within 3 days.

DOHMH's Bureau of Correctional Health Services coordinates medical, mental health and dental services for all inmates in NYC correctional system. This includes routine, voluntary health screening at intake for all newly admitted inmates. HIV rapid testing has been offered to new admissions since March 2004. HIV testing increased from 6,500 tests in 2003 to 25,000 in 2006.

HIV testing, HIV risk behavior, and sexually transmitted infections

According to the 2006 CHS, 30.9% of New Yorkers 18-64 years old had an HIV test in the past 12 months, with blacks (44.8%) and Hispanics (39.5%) more likely than whites (19.2%) and Asians (17.2%) to have been tested.³¹ In the 2005 CHS, 59.1% of New Yorkers 18-64 reported ever having been tested for HIV, not including tests done as part of blood donation.

²⁷ New York City Department of Health and Mental Hygiene. Community Health Survey. <http://www.nyc.gov/html/doh/html/survey/survey.shtml>. Viewed June 18, 2008.

²⁸ New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System. June 18, 2008. <http://nyc.gov/health/epiquery>

²⁹ Bennani Y, Parvez F, Forgiione L, Herrera J, Torian L, Begier E. Undiagnosed HIV Infection among New York City Jail Entrants, 2006: Results of a Blinded Serosurvey. 15th Conference on Retroviruses and Opportunistic Infections, Boston, MA, 2008. Poster #539.

³⁰ New York City Department of Corrections. DOC Statistics. http://www.nyc.gov/html/doc/html/stats/doc_stats.shtml. Viewed June 18, 2008.

³¹ New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System. June 18, 2008. <http://nyc.gov/health/epiquery>.

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In the 2002 CHS, 5.1% of New Yorkers 18-64 years old reported at least one of the following in the past year, thereby potentially putting themselves at risk for HIV infection: injected drugs, been treated for a sexually transmitted infection, received money or drugs for sex, or had anal sex without a condom.³² This weighted estimate translates to 244,000 NYC residents. Among 2006 CHS respondents 18-64 years old, 11% had two or more sex partners in the last 12 months, translating to about 610,000 adults. Men were more likely than women (17% vs. 6%) and young adults more likely than older adults to report multiple partners. The last time 2006 CHS respondents 18-64 years old had sex, 62.9% (2,198,000 NYC residents) did not use a condom.

Percent of New Yorkers with multiple sex partners (two or more) in the past 12 months

	Women	Men	Overall
Age (in years)			
18-24	18	34	25
25-44	8	20	14
45+	2	11	6
Race/Ethnicity			
White	7	15	11
Black	7	24	14
Hispanic	6	19	11
Asian	4*	8	6
Relationship status			
Married or in a relationship	3	7	5
Not in a relationship	10	32	19
Sex Partners			
Opposite sex only	7	20	13
Same sex only	12*	40	33

**Due to small numbers, the estimate should be interpreted with caution.*

Source: Farley SM, Senter L, Olson EC, Kerker B. Are New Yorkers Having Safe Sex? NYC Vital Signs 2008, 7(3); 1-4.

Sexually transmitted infections (STIs) other than HIV increase the risk of acquiring and transmitting HIV. Some STIs may also quicken the progression of HIV disease. According to the 2003 CHS, 6.1% of New Yorkers 18-64 years old had even been diagnosed with genital herpes or genital warts, or had been diagnosed with Gonorrhea or Chlamydia in the last 12 months.³³

In 2006, more than 60,000 STIs were newly diagnosed among adult New Yorkers.³⁴ Between 2005 and 2007, Chlamydia was the most frequently diagnosed STI, followed by Gonorrhea. STI diagnosis rates varied by sex and neighborhood. Females were more likely than males to be diagnosed with Chlamydia. Males were more likely than females to be diagnosed with primary or secondary (P&S) syphilis, with males in the Chelsea – Clinton UHF neighborhood having the highest diagnosis rate in the city.

³² New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System. June 18, 2008. <http://nyc.gov/health/epiquery>.

³³ New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System. June 26, 2008. <http://nyc.gov/health/epiquery>.

³⁴ Farley SM, Senter L, Olson EC, Kerker B. Are New Yorkers Having Safe Sex? NYC Vital Signs 2008, 7(3); 1-4.

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**Cumulative cases and rates of STIs reported to the New York City
Department of Health and Mental Hygiene from 2005- 2007**

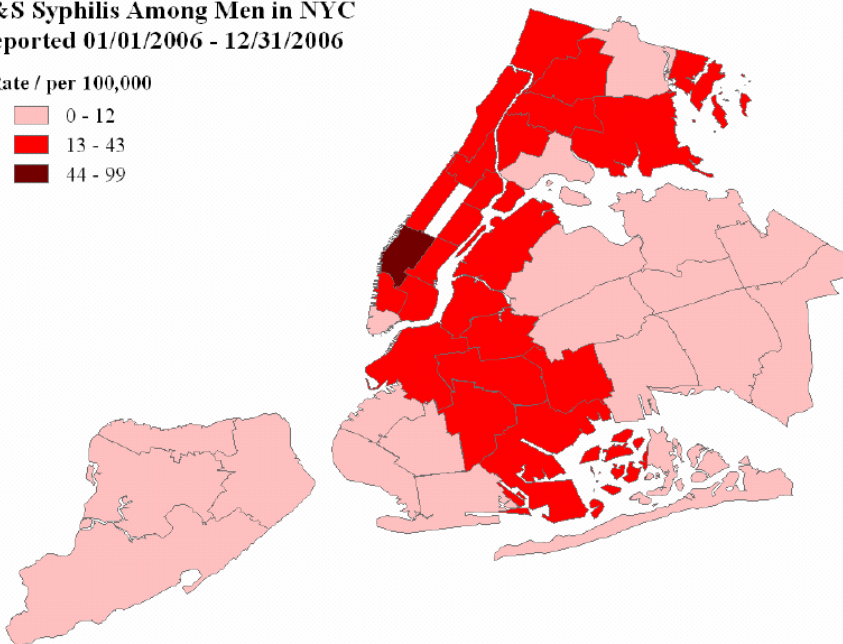
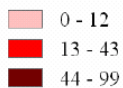
	2005		2006		2007	
	N	Rate*	N	Rate	N	Rate
Chlamydia	39,215	489.7	39,827	497.3	51,059	637.6
Males	12,242	322.7	12,632	332.9	12,945	341.2
Females	26,946	639.4	27,019	641.2	28,288	671.3
Gonorrhea	10,596	132.3	10,010	125.0	10,299	128.6
Males	5,540	146.0	5,554	146.4	5,731	151.0
Females	5,051	119.9	4,428	105.1	4,566	108.4
P&S Syphilis	616	7.7	583	7.3	578	7.2
Males	594	15.7	560	14.8	560	14.8
Females	22	0.5	21	0.5	18	0.4

* Rates are expressed as cases per 100,000 population.

Sources: The New York City Department of Health and Mental Hygiene Bureau of Sexually Transmitted Disease Control Quarterly Reports (Vols 4 and 5, No. 4, December 2006 and 2007).

**P&S Syphilis Among Men in NYC
Reported 01/01/2006 - 12/31/2006**

Rate / per 100,000



Source: The New York City Department of Health and Mental Hygiene Bureau of Sexually Transmitted Disease Control Quarterly Report Vol. 5, No. 4 December 2007.

Health care access and health status

The 2006 CHS indicated that 79.3% of NYC adults rated their health to be in general good, very good or excellent.³⁵ Some 14.3% of respondents reported that a doctor, nurse or other health professional had ever told them that they have depression. Among these 865,000 NYC adults,

³⁵ New York City Department of Health and Mental Hygiene. Epiquery: NYC Interactive Health Data System. June 18, 2008. <http://nyc.gov/health/epiquery>.

234,000 were first told this in the past 12 months. Among all NYC adults, 17.2% or about 1,018,000 persons are uninsured, and 21.4% of NYC adults do not have anybody they consider their personal doctor or health care provider.

HIV Testing and Health Care for Persons Living with HIV/AIDS in NYC

NYC offers many settings for HIV diagnosis and expert care as well as an extensive institutional support system for persons with HIV.³⁶ The city's 32 Designated AIDS Centers are distributed throughout the five boroughs and accessible 24 hours a day by what may be the best public transportation system in the US. Medical and prescription drug benefits are designed to assure that no person goes without care or HAART because of lack of resources. Case management, housing and nutritional benefits are available. DACs and large medical facilities have the administrative capacity to reduce many traditional barriers to care by arranging entitlements and ensuring access to support services. Most private physicians treating patients with HIV/AIDS have institutional relationships with hospitals offering these services.

The DOHMH is committed to ensuring that all persons are routinely offered voluntary HIV testing and that all persons newly diagnosed with HIV receive post-test counseling, assistance with partner notification, and linkage to medical care. The department is equally committed to assisting diagnostic providers, ranging from individual physicians to large medical institutions to community-based organizations, to provide these services to patients, their contacts, and others at risk.

Summary

New York City has a large population of persons living with HIV/AIDS and an even larger population of as-yet uninfected persons at risk for acquiring HIV. There are continuing shifts within the epidemic, the most recent developments being a declining number of HIV diagnoses overall, an increasing proportion of diagnoses among MSM and foreign-born persons, and increased survival of persons with HIV/AIDS. Multiple factors at different levels contribute to HIV transmission in a city as large and diverse as NYC. Prevention of HIV transmission is therefore a substantial and complicated undertaking. Fortunately, NYC is one of the best-equipped cities to address the HIV/AIDS epidemic. It has large networks of committed professionals, networks of infected and affected persons, an established community planning process, and the world's premier infrastructure for HIV-related medical treatment and care. Continuous expansion of opportunities for voluntary HIV testing, coupled with continuous expansion and refinement of targeted, culturally sensitive HIV prevention interventions are key elements in the overall strategy that is intended to empower New Yorkers to know their HIV serostatus, prevent secondary transmission and obtain the care and services they need to maintain their health and quality of life.

AUTHOR'S NOTE: Ellen Wiewel of the HIV Epidemiology & Field Services Program of the New York City Department of Health and Mental Hygiene is developing a second draft of this section.

³⁶ Torian LV, Wiewel EW, Liu KL, Sackoff JE, Frieden TR. Risk factors for delayed initiation of medical care after diagnosis of human immunodeficiency virus. *Arch Intern Med.* 2008;168(11):1181-7.

Section III. HIV Prevention Planning Group and NYC Prioritization of Risk Populations

Background and Rationale

The primary task of the NYC PPG is to develop a comprehensive HIV prevention plan that includes a prioritized ranking of populations. Among the various types of data that are used to help determine the prioritized rankings are epidemiological data and data that identify structural and biopsychosocial cofactors that facilitate HIV transmission and place individuals at risk for HIV infection.

Most recently, the NYC PPG used a model referred to as the Risk Targeting Model (RTM) as the basis for prioritizing populations. The RTM was driven by epidemiological data, and it prioritized populations based on HIV/AIDS seroprevalence data and the number of new HIV diagnoses. While the model successfully served as a basis for the PPG's prioritization efforts for several years, the epidemic has continued to evolve, revealing the need for a clearer understanding of which populations are at highest risk and the need to re-think and reconfigure the PPG's prioritization strategies. A key limitation of the model was its one-dimensional nature, which did not allow the PPG to include populations for which there was limited, if any, epidemiological data.

The PPG's decision to move forward with exploring and researching new ways of prioritizing populations was also influenced by other factors impacting the PPG's ability to maximize its population prioritization efforts. For example, in New York City, more than one-quarter of HIV cases have no identified HIV transmission risk. In addition, using a hierarchical system for classifying risk behavior, CDC categorizes multiple risk behaviors under one risk factor. An example of this is the classification of men who have sex with both men and women as MSM. Such rigid classifications make it somewhat difficult for the PPG to better understand the complex interaction of risk behaviors.

Conceptual Framework

Beginning in 2007, and under the leadership of its Interventions, Behavioral Science, Evaluation/Implementation (IBSE/I) Committee, the PPG initiated a series of discussions to begin formulating new ways of identifying high-risk populations not accounted for in previous prioritization efforts and to incorporate quantitative and qualitative research data in its determinations about the ultimate priority rankings. The current model, referred to as the Dynamic Prioritization Model or DPM, integrates population and epidemiological data as well as data related to structural and biopsychosocial cofactors that are associated with risk for HIV. Additionally, while the RTM defined populations by transmission risk (sexual behavior and injection drug use), sex and race/ethnicity, the DPM opens the HIV prevention planning process to a wider range of social, structural and cultural determinants of health disparities that exert an additive and synergistic impact on HIV incidence and transmission, particularly on disadvantaged and marginalized populations.

The fundamental elements of the DPM were defined early on:

- Inclusion of relevant factors from multiple sources, such as population size from the Census and HIV/AIDS diagnosis rate from NYCDOHMH surveillance, rather than a single factor from surveillance data alone.

- Inclusion of structural and biopsychosocial cofactors, such as homelessness and sexually transmitted infection (STI) rates, which are associated with disproportionate HIV risk for particular populations.
- Regular monitoring of surveillance data by the NYC DOHMH HIV Epidemiology & Field Services Program to note shifts in the epidemic and support proactive planning.

The overarching goal of the DPM is to generate an objective, more egalitarian and reality-driven set of prioritized populations that will ultimately assist the DOHMH with decisions about program activities and resource allocations to high-risk populations. The model's uniqueness is that it incorporates quantitative data – and hopefully in the future, qualitative data – on population and epidemiologic factors and structural and biopsychosocial conditions (cofactors) that synergistically impact individual decision-making behaviors and that place individuals at high risk for HIV infection.

Population and epidemiologic data on target populations were supplemented by data on the following measurable cofactors: rates of poverty, sexually transmitted infections, homelessness and mental distress. Other cofactors may be present in the named target populations, although they are not directly measured in the NYC model because they are more difficult to quantify. Organizations should identify common cofactors that have an additive impact on their target populations and their risk for HIV. The IBSE committee is recommending that additional co-factors (e.g., sex work, incarceration, substance use; see below for comprehensive list) that are associated with the epidemic according to the literature be addressed in future RFPs so that providers can receive support for interventions that address the complexity and social aspects of the disease.

A focused literature review was conducted for this purpose by a specialized IBSE ad hoc group including PPG members, community members, advocates, and academics to generate a preliminary bibliography confirming the significance of particular social determinants or cofactors. This review guided and validated the inclusion of particular local cofactors in the model. Selection criteria for the bibliography included publications in peer-reviewed scientific journals in the last five to ten years, the subject matter of research (including cofactors and interdependence of risk factors) and research based on or including NYC and the quality of research, data, institution, and researchers.

Methodology

Step 1: Identify and Define Target Populations

Populations were categorized in a way that would include all New Yorkers. This decision was inspired by Los Angeles County's progressive Plan (2009-2013): "Adopting broad population categories allows everyone at risk for HIV to identify with one or more of the categories. This inclusive approach minimizes the chance that people who are at risk for HIV will 'fall through the cracks' of the model. One hundred percent of the population will fall into one or more of these categories..." The model includes 12 target populations: Black males, Black females, Hispanic males, Hispanic females, White males, White females, Asian/Pacific Islander males, Asian/Pacific Islander females, Native American males, Native American females, HIV-positive persons, and transgender persons. Categories are not mutually exclusive and allow for inclusion of New Yorkers regardless of how they identify themselves.

Step 2: Determine Factors and Cofactors

The LA Prevention Plan defined a cofactor as “a condition that can increase risk for HIV, increase susceptibility to infection, or decrease the ability to act upon HIV prevention messages.” From this perspective, the NYC DPM incorporates four cofactors (see Table 1) that are relevant to the epidemic in NYC and may be readily quantified and scored. These cofactors resulted from the literature review described earlier and are known as the **Structural and biopsychosocial** cofactors. These cofactors may increase people’s risk for acquiring or transmitting HIV or decrease people’s access to HIV testing or prevention. An additional four factors are called **HIV and Population** factors and include data on population size and number of diagnoses.

Table 1: Factors in the Dynamic Prioritization Model

Factors	Data source
HIV and population factors	
Population size (N)	American Community Survey NYC DOHMH HIV surveillance & American Community Survey
HIV (non-AIDS) diagnoses (rate per 1,000) Change in 2004-2006 HIV (non-AIDS) diagnoses (%)	NYC DOHMH HIV surveillance NYC DOHMH HIV surveillance & American Community Survey
HIV/AIDS prevalence (%)	NYC DOHMH HIV surveillance & American Community Survey
Structural and biopsychosocial cofactors	
Poverty (%) in 2000	2000 US Census PUMS
Homelessness (%)	NYC Department of Homeless Services
Sexually transmitted infections (rate per 100,000)	NYC DOHMH STD surveillance
Frequent mental distress (%)	NYC DOHMH Community Health Survey

Other cofactors as discussed above may be present in any of the target populations named. They are not directly measured in the DPM because they are more difficult to quantify, but they should still be considered in the design and funding of prevention interventions. Organizations applying for support for prevention work should identify common cofactors in their constituencies that may affect HIV-related risk. IBSE/I and the ad hoc literature review committee identified the following cofactors that should also be considered when evaluating applications to support HIV prevention work:

- Stigma
- Sex work
- Undocumented residency/Immigration status
- Gender self-identification
- Limited English proficiency
- Substance use
- Health illiteracy
- Incarceration and Trauma

Step 3: Weight Factors & Cofactors

Each factor was assigned a weight, commensurate with its importance in the epidemic. Weights reflect an assessment of the relative importance of each factor to a population's HIV prevention needs. For example, the factors for population size and HIV (non-AIDS) diagnosis rate in 2006 were given the most weight, four points. This reflects the understanding that these are the two single most important factors determining a population's need for HIV prevention. Structural and biopsychosocial cofactors, also critical drivers of HIV prevention needs, were given two points each. (See Table 2).

Table 2: Factor and Cofactor Weights

Factors	Weight
HIV and population factors	
Population size	4
HIV (non-AIDS) diagnosis rate per 1,000	4
% change in 2004-2006 HIV (non-AIDS) diagnoses	1
HIV/AIDS prevalence (%)	1
Structural and biopsychosocial cofactors	
Poverty (%)	2
Homelessness (%)	2
Sexually transmitted infections (rate per 100,000)	2
Frequent mental distress (%)	2
Total weight	18

The total weight is 18, with 56% of the weight (10 points) on HIV and population factors and 44% (8 points) on structural and biopsychosocial cofactors. IBSE/I assigned weights to the cofactors to be sufficient to substantially influence the prioritization process.

Step 4: Create Scales by Applying Factors and Cofactors to Target Populations

Values for each factor within each target population were calculated from the data sources mentioned previously. Table 3a shows, as an example, values for the population prevalence of HIV/AIDS for each target population.

Table 3a: HIV/AIDS Prevalence within each Target Population

Target population	Prevalence
Black males	4.11%
Black females	1.97%
Hispanic males	2.82%
Hispanic females	1.08%
White males	1.57%
White females	0.20%
Asian/Pacific Islander males	0.31%
Asian/Pacific Islander females	0.07%
Native American males	1.29%
Native American females	0.35%
Transgender persons	Unknown
HIV-positive persons	N/A

To create a rating scale, the values for each factor were scaled and divided into four intervals of equal ranges. The four intervals were then assigned scores from 1 (for the lowest values) to 4 (for the highest values). In the case of HIV/AIDS prevalence, the values ranged from 0.07% to 4.11%. The width of each interval was 1.01, which was one-quarter of the difference between the lowest value and the highest value. Table 3b shows the resulting scale for HIV/AIDS prevalence:

Table 3b: Rating Scale for HIV Prevalence

Prevalence	Score
0.07% - 1.08%	1
1.09% - 2.09%	2
2.10% - 3.10%	3
3.11% - 4.11%	4

Step 5: Score Target Populations on Each Factor and Cofactor

For each target population, the score for each factor was multiplied by the factor's weight. Weighted scores from all factors were added together to obtain the total weighted score for each target population. Table 4 illustrates this for Hispanic males:

Table 4: Factor and Cofactor Scores for Hispanic males

Factor	Weight	Value	Score	Weighted Score
HIV and population factors				
Population size	4	789,700	3	12
HIV (non-AIDS) diagnosis rate per 1,000	4	0.81	3	12
% change in 2004-2006 HIV (non-AIDS) diagnoses	1	0%	2	2
HIV/AIDS prevalence (%)	1	2.82%	3	3
Structural and biopsychosocial cofactors				
Poverty (%)	2	27.7%	3	6
Homelessness (%)	2	1.70%	2	4
Sexually transmitted infections (rate per 100,000)	2	[calculated]	2	4
Frequent mental distress (%)	2	42.3%	2	4
Total	18			47

Step 6: Rank Target Populations

Target populations were ranked from 1-11 and critical target subpopulations were identified within them. Transgender persons were unranked because of lack of population-level data, but they also need prevention services. Consistent with CDC guidelines, HIV-positive persons were given the top ranking. Black males were ranked 2nd, followed by Black females, Hispanic males, Hispanic females, White males, White females, Native American males, Asian/Pacific Islander females and Native American females (tied), and Asian/Pacific Islander males (Table 5). Every New Yorker falls into at least one of the target populations, implying that all New Yorkers should have access to HIV prevention services.

Table 5: Target population rankings

Ranking	Population
Unranked**	Transgender persons
1	HIV-positive persons
2	Black males
3	Black females
4	Hispanic males
5	Hispanic females
6	White males
7	White females
8	Native American males
9	Asian/Pacific Islander females & Native American females (tie)
11	Asian/Pacific Islander males

**We lack data to rank transgender persons, but they also need prevention services.

Step 7: Identify Critical Target Subpopulations

Although we could have stopped at step 6, we identified critical target populations so that prevention efforts may be targeted within each target population by transmission category, age group and borough of residence. Each target population’s total weighted score was distributed by transmission category, age and borough, consistent with their distribution among new HIV diagnoses within the target population. Critical target subpopulations thus tended to be those comprising a substantial proportion of new HIV diagnoses within a target population.

Twenty-five critical target subpopulations were identified, with eight ranked places for each division (Table 6). Top critical target populations were heterosexual Black females (by risk), Manhattan White males (by borough) and 20-29-year-old Black males (by age). Critical target subpopulation rankings do not supplant the ranking of target populations by race/ethnicity and sex, in which every New Yorker is meant to be included. Rather, they complement that information with more specific guidance on where prevention funding and activities might be allocated. When a high-ranked target population does not have high-ranked critical target subpopulations, it might be because persons with HIV in that target population are diverse and the epidemic is not concentrated in one particular subpopulation, in which case one could easily justify interventions for the target population in general and/or a variety of subpopulations.

Table 6: Critical target subpopulations

By transmission risk category

- 1 Heterosexual Black females
- 2 MSM Black males
- 3 Heterosexual Hispanic females
- 4 MSM Hispanic males
- 5 White men who have sex with men
- 6 Heterosexual White females
- 7 Heterosexual Asian/Pacific Islander females
- 8 MSM Asian/Pacific Islander males

By borough of residence

- 1 Manhattan White males
- 2 Queens Asian/Pacific Islander females
- 3 Bronx Hispanic females
- 4 Brooklyn Black males
- 5 Brooklyn Black females
- 6 Queens Native American males
- 7 Manhattan Hispanic males, Bronx Black females, & Manhattan Black males (tie)

By age group

- 1 20-29-year-old Black males
 - 2 20-29-year-old Hispanic males
 - 3 30-39-year-old Black females, Black males & Hispanic males (tie)
 - 6 30-39-year-old White females & males, 40-49-year-old Black females & males (tie)
-

IBSE Recommendations

- continued examination of new data/realities and their integration into the DPM to assure responsive and articulate prioritization
- incorporation of qualitative data and community needs assessments to maintain the meaningfulness and integrity of the model
- Using recently acquired peer-reviewed, longitudinal transgender research to generate metrics for inclusion in the DPM over the next 3 years.
- Ensuring the centrality of community workgroups which have been pivotal to keeping us abreast of the local conditions that fuel the epidemic.
- Building PPG/IBSE participation into the DOHMH resource allocation process to monitor the utilization and effectiveness of the DPM in the decision making process.

SECTION IV. NEW YORK CITY'S HIV PREVENTION PORTFOLIO

The New York City Department of Health and Mental Hygiene (DOHMH) is responsible to its jurisdiction for ensuring that state of the art practices in HIV prevention and HIV/AIDS care and treatment are implemented for the benefit of all New Yorkers. This section provides a brief overview of the planning bodies and bureaus that contribute to the prevention side of DOHMH's mandate. It highlights New York City's existing prevention initiatives, both within and separate from the Bureau of HIV Prevention and Control (BHAPC) and includes an overview of the allocation of funding awarded to New York City through the Centers for Disease Control and Prevention (CDC) *Cooperative Agreement*.

HIV/AIDS Planning Bodies

In New York City, there are three planning bodies that contribute to DOHMH's planning and implementation of HIV and AIDS services: The New York City HIV Prevention Planning Group, the HIV Health and Human Services Planning Council of New York, and the New York City Commission on HIV/AIDS.

New York City HIV Prevention Planning Group

As outlined in Section 1: Introduction, the New York City HIV Prevention Planning Group (NYC PPG) primary purpose is defined by the CDC's *HIV Prevention Community Planning Guidance*, which requires that all health department grantees establish a community planning group through an open and inclusive process that is reflective of the local HIV epidemic and that includes representatives of state and local health departments and relevant government agencies; experts in epidemiology, behavioral and social sciences, evaluation research, and health planning; representatives of community-based organizations providing HIV prevention services; and representatives of HIV-infected and affected communities.

The NYC PPG is comprised of a maximum of 40 community members and 10 government representatives. It is co-chaired by the Director of DOHMH's Community HIV Prevention Planning Group and a community representative who is elected by the full-body of the NYC PPG. BHAPC provides staff support. NYC PPG members convene annually for a three-day strategic planning retreat and seven times per year for four-hour sessions where the full body participates in community planning activities. Through the community planning process, the NYC PPG participates in the development and submission of BHAPC's annual funding request or *Cooperative Agreement*, which includes the NYC PPG's most recent *Comprehensive HIV Prevention Plan*. The submission also includes a letter from the NYC PPG explaining whether the community planning group voted to concur with the *Cooperative Agreement*, concur with reservations or not to concur at all.

HIV Health and Human Services Planning Council of New York

In 1991 the Mayor of New York City established the HIV Health and Human Services Planning Council of New York (the Planning Council). The Planning Council is charged with developing spending and allocation priorities for Ryan White CARE Act Title I funds (including secondary prevention activities with persons living with HIV/AIDS) based on the needs of New York City's HIV/AIDS epidemic. The 50-member Planning Council is a group of persons living with HIV/AIDS, care givers, governmental representatives, and community members. The vision of the Planning Council is that people living with HIV disease in the New York City Eligible Metropolitan

Area (EMA) will have access to appropriate, quality services across the continuum of care, resulting in the best possible health and quality of life.

The New York City Commission on HIV/AIDS

In 2003, Mayor Michael R. Bloomberg created the New York City Commission on HIV/AIDS (the Commission) to advise the Mayor, the DOHMH, the Human Resources Administration, the Health and Hospitals Corporation, and other New York City agencies on priorities, strategies, and best practices to improve the prevention of HIV infection, the treatment of HIV disease, and the control of the HIV/AIDS epidemic.

Dennis M. Walcott, the Deputy Mayor for Policy, and Thomas R. Frieden, the Commissioner of the DOHMH, co-chaired the Commission, which was composed of 20 individuals with vast HIV/AIDS experience, including medical, program, and policy experience.

The Commission was charged with examining emerging trends and needs in HIV/AIDS prevention, treatment, support, and funding as well as assessing their impact on New York City government policy, services, and programs. On October 31, 2005, the Commission released a report detailing its evidence-based HIV/AIDS policy recommendations for the Mayor to help reduce HIV infection rates, increase HIV testing utilization, and improve access to quality medical care, substance abuse treatment, mental health services, and housing for all persons with HIV/AIDS in New York City. The recommendations were grouped into three primary categories: increase evidence-based prevention, promote HIV testing, and improve treatment outcomes (see Appendix 4: *New York City Commission on AIDS Prevention Recommendations*).

New York City Department of Health and Mental Hygiene HIV Prevention Activities

The New York City DOHMH coordinates HIV prevention activities through a combination of activities coordinated by the Bureau of HIV/AIDS Prevention and Control (BHAPC) and interdepartmental collaborations. In addition, the NYCDOHMH conducts HIV testing, provides partner services and allocates funding to other organizations to provide HIV testing.

Bureau of HIV/AIDS Prevention and Control

The goal of the BHAPC is to control the HIV epidemic and minimize its impact on New Yorkers by preventing new HIV infections. BHAPC promotes HIV testing; distributes condoms; educates New Yorkers about HIV/AIDS through social marketing campaigns, public presentations, an HIV Training Institute, a citywide call-line, and a variety of other means; monitors trends in the HIV epidemic through surveillance for HIV/AIDS and allocates prevention resources within the DOHMH and the community to those populations in greatest need. BHAPC also collaborates with the following units and bureaus within NYCDOHMH:

Correctional Health Unit

Through the Correctional Health Unit, DOHMH provides HIV testing and counseling, partner counseling and referral services, as well as referral for services to inmates upon discharge from the city's jail system. The unit provides male condoms during incarceration and female condoms upon release to all persons incarcerated in the city jail. In addition, BHAPC's HIV testing unit trains the clinicians who provide testing to incarcerated people.

Bureau of Tuberculosis (TB) Control

The BHAPC collaborates with the Bureau of TB Control on HIV testing, education and referrals for HIV treatment and care, as well as behavioral change interventions. In 2008, BHAPC has begun to collaborate with the Bureau of TB Control on the provision of routine HIV testing services in the city's ten chest clinics and to offer confidential HIV testing to immediate contacts of individuals with active TB. The Field Services Unit provides Prevention Counseling Referral Services (see *Partner Counseling Referral Services (Field Services Unit)* below) to TB patients who test HIV-positive.

District Public Health Offices

BHAPC has placed three HIV specialists in the City's District Public Health Offices (DPHO) in Brooklyn, the Bronx, and Harlem. These HIV prevention specialists extend the BHAPC program into the field by speaking to local agencies and community groups on relevant issues, attending local community events, serving as a liaison between the BHAPC and local agencies, and assisting with condom distribution through a network of more than 100 non-traditional partners such as beauty salons, barber shops, laundromats, and check cashing establishments.

Bureau of Sexually Transmitted Disease (STD) Control

BHAPC collaborates with the Bureau of STD Control on the provision of HIV counseling and testing, as well as serving on several advisory groups composed of DOHMH personnel and community partners: the Syphilis Advisory Group, Commercial Sex Venues Working Group, and the Internet Interventions Advisory Group. Currently, BHAPC is working with the Bureau of STD Control to create an epidemiological map of specific STDs, in collaboration with DOHMH's Director of Epidemiology. The BHAPC maintains a joint system with the Bureau of STD Control for allocating citywide partner notification and referral programs between the two bureaus. Finally, the BHAPC assists the DOHMH's 10 STD clinics with on-site HIV testing, including rapid HIV testing services.

Hepatitis C Program

DOHMH's Hepatitis C Program currently offers hepatitis C virus (HCV) testing of blood specimens through New York City agencies that offer the test to their clients free of charge. The Hepatitis C Program has a pre-established protocol for partnering with agencies and programs to provide HCV-antibody screenings to high-risk populations, primarily injection drug users. Currently the Hepatitis C Program works with 22 partner sites at 26 different locations, including mobile vans, syringe exchange programs, methadone maintenance treatment facilities, transitional or correctional health agencies, HIV prevention programs, HIV/AIDS care facilities, community health centers, and Bureau of STD Control clinics. Beginning in 2008, BHAPC began collaborating with the Hepatitis C Program to offer integrated Hepatitis C and HIV testing at some of these locations.

HIV Testing

DOHMH Public Health Laboratory conducts more than 120,000 HIV tests each year, approximately half of all non-blood bank-related HIV tests in the city. Eleven STD clinics run by DOHMH offer free confidential and anonymous HIV and STD testing, as do all ten DOHMH chest clinics. DOHMH also funds many hospitals, clinics and community-based organizations throughout New York City to conduct rapid HIV testing. These programs are described below.

Partner Counseling and Referral Services: The Field Services Unit (FSU) and the Contact Notification Assistance Program (CNAP)

In the summer of 2006, DOHMH formed the Field Services Unit within the BHAPC to improve partner elicitation and notification of partners. The Field Services Unit is staffed with experienced Public Health Advisors based in eight large medical facilities in the Bronx, Harlem, and Brooklyn where HIV-related mortality rates are high. The Public Health Advisors also receive reports for case investigation and partner services from four satellite clinics associated with hospitals and all ten Bureau of TB Control chest centers. By working with patients to get their partners notified and tested, the Field Services Unit's work allows more New Yorkers to know their HIV status.

Each Field Services Unit Public Health Advisor works with medical care providers to identify persons diagnosed with HIV infection. The Public Health Advisors conduct face-to-face interviews with HIV-positive individuals to collect surveillance data, provide education regarding reducing HIV transmission risk, elicit their sexual and needle-sharing partners, develop a partner notification plan and facilitate partner testing and evaluation. They assist patients with linkage and referral to HIV medical care and other services if needed and with patients' consent. Providers at non-Field Services Unit-associated facilities make partner notification referrals to the Contact Notification Assistance Program (CNAP).

When providers at non-Field Services Unit-associated facilities make partner notification referrals to CNAP, Bureau of STD Control staff conduct notifications and index case interviews. In the past, these index patients had been interviewed primarily by telephone by Bureau of STD Control because of inadequate staff to initiate face-to-face interviews. At present, however, all individuals that are referred to CNAP are contacted and directly interviewed by staff of the Bureau of STD Control.

HIV Testing, Counseling and Referral (TCR)

DOHMH directly funds 49 organizations to conduct HIV testing. DOHMH-funded programs are located in all five boroughs, with the majority in DPHO neighborhoods. Sites include community clinics, correctional facilities, community outreach programs, homeless shelters, hospitals (clinics, emergency departments, inpatient units), methadone maintenance treatment programs, STD clinics, and TB clinics. In addition, DOHMH is working with the Health and Hospitals Corporation (HHC) to fund HIV testing in bath houses and with the Department of Homeless Services (DHS) to expand voluntary HIV testing services and improve linkage to care for those who test HIV positive in the adult shelter system.

The Bureau of STD Control operates 10 clinics within the five boroughs of New York City. These clinics are designed to minimize barriers to HIV testing and other STD care and prevention. All services are free, and available to persons 12 years and older. There is no parental notification for HIV Testing, STD screening and treatment of STDs, or requirements for proof of citizenship or insurance. All patients are offered HIV testing (anonymous or confidential) and counseling during clinic hours, irrespective of the chief complaint or reason for visit.

Condom Distribution

In the late 1980s, DOHMH increased condom distribution to include HIV/AIDS service organizations and agencies providing services to injecting drug users. In 2005, DOHMH launched a condom distribution expansion campaign and established a user-friendly website ordering system for health service organizations to receive male condoms free-of-charge. Attached to, but separate from the main website, this 'passive' distribution mechanism increased the monthly distribution average from 250,000 to 1.5 million condoms per month.

In 2006, DOHMH conducted a venue-based survey within New York City gay male bars, homeless shelters, methadone clinics, DOHMH-funded sites, and syringe exchange programs to assess how well the condom distribution system was reaching sexually active, high-risk New Yorkers. Major findings highlighted that the DOHMH could have been doing more to increase the efficacy of its distribution efforts, as well to improve tracking of distribution. Prompted by these survey findings, the DOHMH made significant changes in 2007 to its condom distribution program and launched its new 'exclusively Gotham' condom packages on Valentine's Day 2007 and through the newly refurbished www.nycondom.org website. The website is designed to encourage wider public access by simplifying ordering criteria so that condoms can be made available where a variety of New Yorkers congregate. It features direct ordering access for organizations and smaller community initiatives, as well as postings of over 280 locations throughout the five boroughs where New Yorkers can go for individual supplies of condoms.

Surveillance

The DOHMH monitors trends in the HIV epidemic through surveillance for HIV/AIDS. Surveillance for HIV/AIDS cases is conducted in 62 hospitals, 600 free standing clinics and 1,500 private medical doctors offices. Surveillance data are used to secure federal and state HIV prevention and federal HIV/AIDS Ryan White treatment funding. Special surveillance studies are conducted to better understand and control the epidemic in high-risk populations.

Activities Funded Through of CDC Cooperative Agreement Funds

In 2006, the BHAPC issued an open request for proposals (RFP) for qualified organizations to compete for CDC *Cooperative Agreement* funds to conduct interventions to reduce HIV transmission and acquisition in New York City. The RFP stated that it would distribute funds to four service categories:

- 1.Evidence- or theory-based interventions (*50% of total funding*)
- 2.Co-factors of HIV transmission (*25% of total funding*)

3. Anti-stigma interventions (15% of total funding)

4. Non-occupational post exposure prophylaxis (NPEP) Administration and Awareness (10% of total funding)

The allocation process also utilized an epidemiologically driven 'Tier' structure for prioritizing allocations to communities that are the most heavily affected by the epidemic. The basis of the Tier designation is the grouping of zip codes by HIV rates.

In April 2007, BHAPC awarded contracts totaling \$11,554,778 to community-based organizations in the five boroughs of New York City. The contracts are for a one-year term, renewable in one year increments for up to three years, contingent on continued need, contract performance and availability of funding. Contracts awarded under this portfolio follow the calendar year, January 1 through December 31, after the first contract year that runs from May 1, 2007 through December 31, 2007.

Evidence- or Theory-Based Interventions

BHAPC allocated \$6,007,057 to community-based organizations to fund 27 behavioral intervention contracts that target priority populations. The funded interventions include the CDC Diffusion of Evidence-Based Interventions (DEBIs) SISTA, Mpowerment, Safety Counts, Holistic Health Recovery Program, Community PROMISE, Healthy Relationships, Popular Opinion Leader, Street Smart, Together Learning Choices, Many Men Many Voices as well as three new evidence-based interventions that were developed and tested by local community-based organizations.

Half of the funds allocated to behavioral interventions support programs that target MSM, 39% of the funding targets women and 11% targets men who are not in the MSM risk category. The sub-category receiving the greatest proportion of the total behavioral funding is Black³⁷ MSM (\$1,361,662 or 23% of the total). Other target populations include Hispanic/Latino³⁸ MSM (\$700,000 or 12%); youth (\$711,000 or 12%); persons connected to the criminal justice system (\$673,911 or 11%); IDUs (\$583,497 or 10%); and Black Women, Women, MSM, and High-Risk Heterosexuals are 9% each.

Co-factors of HIV Transmission

Twelve programs were funded for a total of \$2,796,380 to screen for well-documented co-factors that increase the likelihood of HIV transmission or acquisition. The co-factors targeted by this funding include sexually-transmitted infections (STIs) that increase the risk of both transmitting and acquiring HIV infection³⁹; mental health issues such as depression^{40,41}; and substance use, including alcohol.⁴²

³⁷ In New York City, those covered under the racial category "Black" are predominantly African-American. However, the category may also include people of Caribbean and African descent, who may differ from African-Americans in ways that influence prevention.

³⁸ In this document, Hispanic/Latino includes people from Puerto Rico, the Caribbean, Mexico, as well as South and Central America as well as those born in the United States who trace their ancestry to these areas.

³⁹ Wasserheit JN, Aral SO. The dynamic topology of sexually transmitted disease epidemics: Implications for prevention strategies. *Journal of Nervous Mental Disorders* 1996;174(Suppl 2):S201-S213.

The primary objectives of this service category are: (1) to help existing outreach programs to screen people who are at increased risk for acquiring or transmitting HIV infection for the co-factors and (2) to link the affected individuals to appropriate care services. To the extent possible, these brief, cost-effective intervention strategies have been funded to be integrated into pre-existing health and social service activities. This service category is neighborhood/borough focused and the funds were distributed primarily in:

Neighborhood	# of Sites
South Bronx	7 sites
Harlem	14 sites
Chelsea and lower Manhattan	4 sites
Downtown and Central Brooklyn	21 sites
Queens	9 sites
Rikers Island	2 Site

Most of the funded programs are utilizing standardized screening instruments that have been found to be valid and reliable and that may be administered by peers and other non-professionals to identify the target co-factors. Some of the funded screening programs are utilizing peer educators and outreach workers who were trained under previous prevention grants to provide Health Education and Risk Reduction education. Funded programs are also screening for STIs through urine screening (i.e., gonorrhea and chlamydia) and blood screening (Syphilis, Herpes Simplex II, Hepatitis A, B and C).

Anti-Stigma Interventions

BHAPC allocated \$1,610,000 to six community-based organizations to provide anti-stigma interventions. The primary objectives for the funded interventions are: (1) to utilize culturally appropriate and linguistically competent social marketing strategies with messages that directly confront HIV/AIDS-related stigma and (2) to implement community-level interventions to change social norms around stigma.

This service category was created to address the growing evidence that stigma is a significant barrier to successful HIV prevention interventions. Stigma can potentially cause individuals living with HIV and those most vulnerable to becoming infected to avoid contact with the health and human service systems that are equipped to address their needs.⁴³ Stigma and discrimination operate in relation to structural inequality and, therefore, are social rather than individual processes.^{44,45} Moreover, stigma

⁴⁰ Williams CT, Latkin CA. The role of depressive symptoms in predicting sex with multiple and high-risk partners. *Journal of Acquired Immune Deficiency Syndrome*, 2005 Jan 1;38(1):69-73.

⁴¹ Koblin BA, Husnik MJ, Colfax G, Huang Y, Madison M, Mayer K, Barresi PJ, Coates TJ, Chesney MA, Buchbinder S. Risk factors for HIV infection among men who have sex with men. *AIDS*. 2006 Mar 21;20(5):731-9

⁴² Miller M. A model to explain the relationship between sexual abuse and HIV risk among women. *AIDS Care* 1999;11(1):3-20.

⁴³ Parker R and Aggleton P. HIV and AIDS-related stigma and discrimination: a conceptual framework and implications for action. *Social Science Medicine* 2003;57:13-24.

⁴⁴ Goffman E. *Stigma : Notes on the Management of Spoiled Identity*. New York, NY: Simon & Schuster, Inc; 1963.

⁴⁵ Link BG and Phelan JC. Stigma and its public health implications, *Lancet*. 2006 Feb 11;367(9509):528-9.

as it relates to HIV has tended to focus exclusively on the disease and contributes to our inability to address this vague concept. There is a need to broaden the definition (and subsequently our approaches) to include the many types of stigma that are also associated with HIV. These include stigma around sexual orientation and non-mainstream sexual choices; mental health problems and mental illness; substance use, including alcohol; stereotypes around race and ethnicity; and the reality that HIV/AIDS increasingly affects those who live in poverty.⁴⁶

The funded anti-stigma contracts were based on best practices in the field and target the reduction of stigma among six target groups:

- Stigma among medical providers towards IDUs
- HIV stigma in African immigrant communities
- HIV stigma among staff of the jail system and incarcerated men and women
- HIV stigma within the African American community
- HIV stigma in the Hispanic/Latino community
- Anti-homophobia campaign and testing within the African American community

The impact of these anti-stigma campaigns will be evaluated by DOHMH using surveys of targeted populations and/or communities. Attitudes and behaviors addressed by the core messaging components of each campaign will be assessed.

Non-occupational Post Exposure Prophylaxis (NPep) Interventions

Two programs in Manhattan are funded to provide NPep citywide to persons without Medicaid or other medical coverage. NPep is the administration of antiretroviral drugs as soon as possible after a confirmed or suspected non-occupational exposure to HIV – either from consensual sexual intercourse, sexual assault, injection drug use or accidents (e.g., unintentional needle sticks) – to prevent infection from taking hold in the body. These medications are more effective the sooner they are initiated. The New York State guidelines on NPep, issued in 2005, recommend that antiretroviral drugs should be started as soon as possible after exposure, and no later than 36 hours after exposure. These medicines are then continued for 28 days.⁴⁷

The objectives of the funded programs are: (1) to provide NPep for a non-occupational, high-risk exposure to HIV in a timely fashion, (2) to ensure that participating individuals complete a 28-day course of therapy, and (3) to increase awareness regarding the availability of NPep to communities and individuals at high risk of acquiring HIV infection.

Harm Reduction

Working in conjunction with DOHMH, BHAPC expanded harm reduction initiatives for improved prevention initiatives targeting substance users in 2007, funding 13 syringe exchange programs and four expanded syringe access programs throughout New York City. Other harm reduction activities

⁴⁶ Treichler PS. *How to Have Theory in an Epidemic: Cultural Chronicles of AIDS*. Durham, NC: Duke University Press; 1999

⁴⁷ http://www.hivguidelines.org/public_html/npep/npep.htm

include overdose prevention education and assistance. An expanded harm reduction unit is planned for 2008-2009, with target populations including sexually vulnerable and exploited groups, including victims of sexual assault, commercial sex workers, and the homeless, as well as those with a recent history of incarceration. The unit also will promote ongoing integration of HIV prevention with chemical dependency and hepatitis C (HCV) programs that are taking place both within the department and, more broadly, throughout New York City.

Social Marketing/Media

Flat funding for HIV prevention has limited DOHMH's ability to conduct effective, sustained HIV prevention messaging campaigns. In order to be successful, campaigns must post prevention messages before target audiences at regular intervals. However, the ability to do this requires steady, committed funding. Without publicly funded and administered prevention campaigns targeting the highest-risk populations, the only messages that are of influence are those of the pharmaceutical industry. For the most part, pharmaceutical advertising campaigns show people with HIV whose lives appear to be untouched by living with the disease. HIV prevention social marketing campaigns targeting the highest-risk groups are particularly important activities for local jurisdictions to undertake, especially given the CDC's emphasis on a "heightened national response to the HIV/AIDS crisis among African Americans." With increased funding, the DOHMH would be able to mount an ongoing HIV prevention campaign similar to its highly-effective campaign to halt tobacco use.

The DOHMH began development of a new campaign targeting young gay men/MSM of color in New York City in response to epidemiological surveillance reports indicating that new HIV diagnoses among this group have increased rapidly. The campaign, to be released in late spring 2009, will feature filmed testimonials from HIV-positive and at-risk gay men/MSM. They will promote safer sex and HIV testing to their peers. The campaign will include a second video spot highlighting the serious medical conditions associated with HIV/AIDS as well as side effects of antiretroviral treatment, to suggest that one would rather prevent HIV than have to live with it. All campaign materials will be placed on Internet websites frequented by the target populations and in print media. Formative research to develop the campaign included conducting focus groups of African American and Hispanic/Latino gay men/MSM in the fall of 2007. Based upon initial focus group findings, the DOHMH and an advertising agency under contract developed six preliminary video spots. These spots were shown to additional focus group participants, whose feedback has informed further development of the campaign.

On February 14, 2007 (National Condom Day and Valentine's Day), the DOHMH launched a new social marketing campaign in which packaging of the Lifestyles standard size, lubricated condom was "branded" with a unique and attractive design evocative of the New York City subway system. The branding campaign had several goals: to increase public awareness of the City's free distribution program; to reinvigorate the public's interest in condoms; to increase New Yorkers' access to free condoms; to promote condom usage; and to enable better tracking of DOHMH's condom distribution. This highly successful, city-wide media campaign included bilingual print ads (English/Spanish) that appeared in subways and telephone kiosks for three months after launch day, as well as radio advertisements and public events, bar and other social venue-based launch parties on

and around February 14. Street teams distributed the NYC Condom on launch day at high pedestrian traffic spots throughout the city. Bi-weekly street distribution was additionally done at check-cashing sites in the outlying boroughs by a private media company for six months following the launch. In the summer of 2007, DOHMH began surveying New Yorkers to measure awareness of and experience with the NYC Condom in communities of color and gay populations.

HIV Prevention Research and Evaluation Unit

The HIV Prevention Research and Evaluation Unit (R&E Unit) has two overarching goals: 1) to conduct and facilitate research designed to directly inform HIV prevention planning; and 2) to monitor and evaluate the effectiveness of all funded prevention programs. In implementing these goals, staff of the R&E Unit work closely with the HIV Testing Unit, the Condom and Materials Distribution Unit and the NYC PPG.

Since its development in late 2007, the R&E Unit has initiated several research projects, including a multi-phase study of young MSM. This study will both enhance our understanding of factors associated with the recent increase in HIV diagnoses in young MSM, and provide direct information about effective HIV prevention strategies. This project is being conducted in collaboration with faculty at New York University. In addition, the Unit is collaborating on a study of linkage to care practices in New York City hospitals funded to provide routine rapid HIV testing. Future projects, to be conducted in collaboration with the HIV Testing Unit, include a pilot pooled Nucleic acid amplification testing (NAAT) study and an HIV serosurvey among the homeless population of New York City. Small research projects specifically related to each DPHO neighborhood will also be conducted by DPHO HIV Specialists in conjunction with the R&E Unit.

The program evaluation functions of the R&E Unit are: (1) regular program monitoring to ensure that funded programs are meeting goals and service targets and (2) outcome evaluation. The primary program monitoring role of the R&E Unit is to oversee the collection of program process data, and to review and report on this data on a regular basis. In doing so, the R&E Unit works closely with staff from Public Health Solutions, the master contractor for DOHMH prevention contracts, and the Project Officer Unit. Activities in coming months will be geared toward standardizing and streamlining the data collection, review and reporting process. This will enable the Project Officers, other BHAPC staff, and funded agencies to track the progress of their funded programs.

Also, the R&E Unit in collaboration with contracted agencies has begun implementing a range of activities to evaluate the effectiveness of funded prevention programs. This effort will continue to be incorporated into each agency's ongoing data collection and reporting processes. Outcome evaluation activities include conducting community-level, street-based surveying, and utilizing an agency's existing intake and follow-up surveys of individual clients. In order to facilitate analysis, outcome evaluation will be standardized, as much as possible, across funded agencies. However, given the considerable extent to which funded programs differ in their goals, style and target population, most outcome evaluation activities will be tailored to specific programs. In all cases, the purpose of these activities is to measure the extent to which each funded program has successfully met its outcome objectives.

SECTION V: RECOMMENDATIONS FOR APPROPRIATE EVIDENCE-BASED PREVENTION ACTIVITIES AND INTERVENTIONS

Priority Population Workgroups and Advisory Committees

A major step in New York City's HIV prevention community planning process has involved identifying the populations in need of interventions. In collaboration with the New York State Department of Health's AIDS Institute (the organization responsible for coordinating the New York State HIV Prevention Planning Group), seven population groupings were initially identified as representative of individuals most in need of HIV prevention services and those at highest risk for HIV/AIDS in New York City. In 1994, the groups identified for both the New York City and New York State HIV Prevention Planning Groups were (in alphabetical order):

- Adolescents
- Criminal Justice Populations
- Immigrants
- Men Who Have Sex With Men
- Racial and Ethnic Communities
- Substance Users
- Women and Children

Priority Population Workgroups (Workgroups) were established to address the HIV prevention needs of these seven populations and to advise the NYC PPG on appropriate interventions for these populations. Over time, the NYC PPG disbanded the Racial and Ethnic Communities workgroup due to the fact that issues of race and ethnicity were interwoven throughout all of the workgroups. While HIV in New York City affects women, men and transgenders, and people of all races, ethnicities, cultural backgrounds and ages, it continues to disproportionately affect communities of color: the proportion of HIV diagnoses among people of color has been stable at about 84% each year between 2001 and 2006.

In addition, the NYC PPG created two Advisory Committees that provide input and guidance from members of these respective communities to the HIV prevention planning process:

- People Living with HIV/AIDS Advisory Committee
- Transgender Advisory Committee

In the spring of 2007, the NYC PPG Workgroups began the task of recommending targeted, evidence-based HIV prevention activities and interventions as well as identifying cross-cutting issues that impact these populations for the *2008 Plan*. This process involved prioritizing the Workgroups' subpopulations and identifying evidence-based interventions for them; reviewing existing data sets to identify service gaps and unmet needs; defining and explaining issues that impact each of the priority populations; and offering suggestions about future foci and special studies needed to advance our understanding of HIV transmission and related interventions in New York City.

Workgroup Approach

In order to develop recommendations for the *2008 Plan*, each priority population workgroup engaged in a variety of activities to ensure that their recommendations were made based on the most relevant information. The workgroups reviewed available epidemiological data and information relevant to their population and subpopulations and conducted additional research as needed, which included but was not limited to: hosting community forums to engage community members in discussions about issues and needs both directly and indirectly related to HIV; requesting presentations from service providers and other experts at both the full PPG meetings and workgroup meetings, as well as service providers' experiences; and reviewing research and reports relevant to the conditions and needs of the priority population. Through consensus, each workgroup incorporated these data as they developed recommendations for the *2008-2010 Plan*.

The Workgroups, which are composed of both PPG members as well as others from the community (e.g. consumers, service providers, academics, etc.), usually met once a month, although some Workgroups met more frequently. In addition to the community members, there is a BHAPC staff liaison assigned to support the work of each Workgroup and to attend each meeting. When Workgroups engaged experts to meet with or present to them, this was often arranged through either the BHAPC staff liaison or through the Workgroup chairperson. Workgroups are chaired by community members of the PPG through appointment by the Coordinating Committee.

Strengths of the Approach

The community planning approach of the NYC PPG is intended to promote community-government collaboration in planning, implementing and evaluating HIV prevention efforts in New York City. As such, the Workgroups and Advisory Committees foster ongoing dialogue between the community stakeholders and governmental representatives about the challenge of preventing HIV transmission in the communities at greatest risk in New York City. This approach has three strengths that enhance New York City's HIV prevention planning:

- **Improved Awareness of Emerging Issues:** The NYC PPG, and consequently the New York City DOHMH, is able to quickly identify emerging issues. Workgroups are open to all who are interested in preventing HIV within the communities that are most affected.
- **Facilitated Access to Comprehensive Data:** The breadth and depth of the resources of the DOHMH allow the NYC PPG to consider a wide range of data. The Workgroups are empowered to request original data sets from the HIV Epidemiology & Field Services Program of the DOHMH, as needed. In addition, BHAPC provides staff support and resources to community forums, experts' reports, and HIV prevention and AIDS services program reports and presentations.
- **Government-Community Collaboration:** As part of a body in New York City that engages community members and government representatives in a consensus process, the Workgroup process is highly effective at articulating the challenges in HIV prevention from both perspectives. This process enhances both DOHMH's and the participating community members' capacity to develop positions on policy and planning.

Challenges of the Approach

Along with its strengths, the workgroup approach also confronts several challenges: the limits of the available epidemiological data; the complexity and multiplicity of available data, including anecdotal reports from consumers and providers; the limits of the Risk Targeting Model that was in place when the *2008 Plan* was developed; the absence of an updated Community Service Assessment when the Workgroups developed their recommendations; and the constraints of the Workgroup structure.

- Epidemiological Data: Even though the Workgroups had access to the most recent data, limits to the collection and reporting of epidemiological data (see ***Challenges Regarding Collection of Epidemiology*** below) often created gaps and delays in the representation of the epidemic.
- Complex Data: In addition to the epidemiological data, the Workgroups access to much additional complex and multilayered data. While BHAPC staff provide support, the Workgroups were ultimately responsible for reviewing and incorporating multiple sources of complex quantitative and qualitative data, expert advice, as well as personal and professional experience into their recommendations. This process is more conducive to focusing and defining questions about effectiveness of interventions than it is at generating definitive conclusions.
- Risk Targeting Model: As discussed in Section III: Prioritization, the Risk Targeting Model that was used to inform the prioritization process for the *2008 Plan* generated general categories. It does not provide a structured way for prioritizing subpopulations or weighing cross-cutting issues, service gaps, or other factors. Therefore, the Workgroups were tasked with analyzing and prioritizing the using multiple sources of complex data.
- Community Services Assessment: The *Community Services Assessment* (CSA) is a document that describes the prevention needs of populations at risk for HIV infection in New York City, the prevention activities and interventions implemented to address these needs, and service gaps. While BHAPC is working closely with a contractor to develop a new *Community Services Assessment*, it was not available to the Workgroups as they focused on the appropriate evidence-based activities and interventions, service gaps and unmet needs.
- Cross-Cutting Issues: Workgroups focus on particular subpopulations which sometimes makes it difficult to address cross-cutting issues. In 2008, Workgroups rose to the challenge of identifying and addressing issues that cut across subpopulations which also enhanced the development by IBSE/I of the new Risk Targeting Model.

Priority Populations

In order to understand the rationale behind the NYC PPG's recommendations about evidence-based prevention activities and interventions, it is important to review the current impact of HIV and AIDS on the populations that the NYC PPG has prioritized for HIV prevention interventions. The summaries below include a profile of the epidemic and service gaps and needs for PLWHA, adolescents, immigrants, people with histories of criminal justice involvement, MSM, substance users, transgenders, and women and children in New York City. For the sake of expediency, the summaries are organized by population group; however, these groups are not mutually exclusive. For example, many of those with histories of incarceration also use or abuse substances. So, just as populations overlap, so may the strategies to prevent the epidemic.

People Living With HIV/AIDS (PLWHA)

More than 100,000 New Yorkers are currently living with HIV/AIDS. As many as 20,000 more New Yorkers are living with HIV, but do not know their status. Moreover, an increasing body of evidence suggests that the New York City HIV epidemic is now predominantly one fueled by unprotected sex between HIV positive and HIV negative individuals. Estimations of annual HIV transmission rates suggest that over 95% of PLWHA do not transmit HIV in any given year⁴⁸. Other research concluded that those with acute HIV infection account for about half of transmissions⁴⁹. This suggests that a relatively small group of PLWHA may contribute to a substantial number of new HIV infections in New York City. However, individual members of this group may be difficult to identify and may not even recognize that they are contributing to the spread of HIV due to the fact that they may not know their serostatus.

In general, there are some behaviors that may facilitate the transmission of HIV from those who are infected to those who are uninfected. The study of transmission among those with acute HIV infection cited earlier found that over 1/5 of newly diagnosed men who have sex with men engaged in high risk sexual behavior with multiple partners⁵⁰. Sharing needles and other injecting drug use equipment also facilitates transmission. Certainly, among PLWHA are those who engage in high-risk activities including sex work, exchanging sex for drugs, money or other commodities, participating in sex parties, abusing drugs or alcohol and having sex while high. However, growing evidence also suggests that the "risky people" model of understanding HIV infection is incomplete. Rather, there are structural factors, like lack of affordable housing, that influence the ability to avoid exposure to HIV or, for those with HIV, to avoid exposing others to infection⁵¹.

There are several service gaps and/or unmet needs that create barriers for successful HIV prevention among PLWHA in New York City. While New York City has made great strides in increasing the number of New Yorkers who know their HIV status, more needs to be done, especially to identify those with acute HIV infection. Not only may PLWHA benefit from early

⁴⁸ Holtgrave DR. Estimation of Annual HIV Transmission Rates in the United States, 1978–2000. *Journal of Acquired Immune Deficiency Syndrome*. 2004; 35:89-92.

⁴⁹ Brenner BG, Roger M, Routy J-P, Moisi D, Ntemgwana M, Matte C, Baril J-G, Thomas R, Rouleau D, Bruneau J, Leblanc R, Legault M, Tremblay C, Charest H, Wainberg MA, et al. High Rates of Forward Transmission Events after Acute/Early HIV-1 Infection. *Journal of Infectious Diseases*. 2007, 195: 951-9.

⁵⁰ Ibid.

⁵¹ The National AIDS Housing Coalition. *Housing is the Foundation of HIV Prevention and Treatment: Results of the National Housing and HIV/AIDS Research Summit*. 2005.

entry into treatment but, early treatment may prevent additional transmissions. For those who know that they are HIV+, there is a dearth of HIV culturally-competent prevention interventions for use with HIV positive people that can be used with the various subpopulations of PLWHA in New York City (e.g. MSM, perinatally-infected adolescents, heterosexuals, people over 50, IDUs, transgender, those who are foreign-born, etc.). A review of the New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded drug treatment programs revealed that not only is there no standardized HIV prevention education in these programs, but also that there is no such programming for non-IDU drug users who use alcohol and/or other drugs (AOD). In addition, while there are multiple reasons for the high proportion of PLWHA for whom there is no identified risk in the surveillance data, the absence of such data prohibits a full understanding of the epidemic in New York City. The NYC PPG suggests that DOHMH develop methods to more adequately collect such data and that there be more provider training on how to elicit information from diverse populations in a culturally appropriate and sensitive manner.

Adolescents

Cumulatively, among adolescents diagnosed through December 31, 2006, HIV infection was reported in 2,893 youth diagnosed at 13-19 years of age, of whom 60% were male, and in 10,600 young adults diagnosed at 20-24 years of age, of whom 65% were male⁵². The most common CDC-defined risk factor for males in both age groups is sex with other men (59%), and for females, heterosexual sex (43%)⁵³. AIDS was diagnosed in 67% of males and 66% of females⁵⁴. However, since many adolescents have not been tested for HIV, the actual number of adolescents living with HIV infection is estimated to be much higher than the reported number. In addition, due to the long incubation period and all-too-frequent delayed testing, it is likely that a significant number of those people diagnosed with HIV/AIDS between the ages of 25-29 were infected as youth and, in 2006, new diagnoses among MSM ages 13 to 19 doubled. Young men of color who have sex with men are most affected. Among MSM under age 30, new HIV diagnoses have increased by 33%, from 374 in 2001 to almost 500 in 2006. Over ¾ of those newly diagnosed MSM under 30 were black or Latino. Those under 30 now account for 44% of all new diagnoses among MSM in New York City, up from 31% in 2001.

Specific behavioral, social, and economic risk factors and co-factors can be identified that significantly contribute to the toll HIV/AIDS is taking on the adolescents of New York City. These include, but are not limited to: substance use, risky sexual behaviors, intimate partner violence, sexual abuse, low perception of personal risk, lack of knowledge about HIV and sexual health, mental illness, high rates of STIs, homelessness, incarceration, and poor access to healthcare.

There are three primary barriers to successful HIV prevention among adolescents in New York City. Immediate and long-term housing for homeless youth is in short supply in New York City. Homelessness increases vulnerability to HIV. Many homeless youth are gay, lesbian, bisexual, transgender or questioning. For these youth, safety and stability are even more difficult to achieve. There is also a need for the development of comprehensive evaluation tools for more thorough and accurate intervention evaluations that community-based organizations (CBOs)/AIDS service organizations (ASOs) can administer themselves. The creation of such tools would enable HIV

⁵² Pediatric/Adolescent HIV/AIDS Surveillance in New York City: Semiannual Report, December 2007. New York City Department of Health and Mental Hygiene, HIV Epidemiology Program.

⁵³ Ibid.

⁵⁴ Ibid.

prevention organizations and AIDS service organizations in New York City to undertake more systematic evaluations of their HIV prevention interventions and strategies. Finally, there is a need for more awareness about existing HIV prevention, care and program services for youth in New York City. This, in turn, can lead to increased access for adolescents and better coordination among providers in New York City.

Currently and Formerly Incarcerated

Those who are incarcerated experience rates of infectious disease that are higher than those in the general population⁵⁵. So, incarceration has a direct influence upon public health. Nationwide, HIV infection rates among prisoners are 5X that of the general population⁵⁶. About a fifth of all state prisoners with HIV in the United States were incarcerated in New York State. Nationwide, nearly 2% of state and federal inmates were HIV+ in 2002. In New York State, the estimated rate of HIV infection was more than 3X that (7.5%)⁵⁷. Rates of HIV among women in state and federal custody in New York State were more than double those for men in 2005 (14.1% vs. 6.7%)⁵⁸. HIV among inmates in New York State is relevant to prevention planning in New York City because many of the inmates in New York State prisons come from New York City and return there upon release. According to the New York State Department of Correctional Services (NYS DOCS), 26,394 people (approximately 93% of them male) were released from NYS DOCS facilities in 2006; over half (53%) had been committed from the five boroughs of New York City, and most would return there.⁵⁹ In addition, the majority of the inmate population at the New York City Department of Correction's (NYC DOC) Rikers Island jail complex originates in and returns to the five boroughs. The prevalence of HIV among those in NYC DOC facilities is several times greater than the 1.3-1.8% estimated prevalence in New York City, overall⁶⁰. The 2006 NYC DOC HIV serosurvey showed a prevalence of 4.7% among males and 9.7% among females. At the end of 2005, the prevalence among males in New York City overall was 1.8% and among females, 0.7%⁶¹.

The criminal justice system in the United States embarked on a period of enormous expansion in the 1970's resulting in the mass incarceration of many in communities of color. When large numbers of people in a neighborhood are displaced by imprisonment, social networks are disrupted and communities are destabilized, creating conditions in which HIV thrives⁶². The great majority of those who are incarcerated will be released to these same communities. The hours and days that immediately follow release are a period when many former detainees engage in behavior that places

⁵⁵ INSERT CITATION FROM LATEST BJS REPORT ON THIS.

⁵⁶ Ross, Houkje. "HIV in Prisons is 5 Times the Rate of General Population." HIV Impact (US Department of Health and Human Services, Office of Minority Health) (December 2001): 1-2.

⁵⁷ Maruschak, L.M. (2007). HIV in Prisons and Jails, 2005. Bureau of Justice Statistics, U.S. Department of Justice. Accessed on 4/9/08 at: www.ojp.usdoj.gov/bjs/pub/pdf/hivpj05.pdf.

⁵⁸ Maruschak, L.M. (2007). HIV in Prisons and Jails, 2005. Bureau of Justice Statistics, U.S. Department of Justice. Accessed on 4/9/08 at: www.ojp.usdoj.gov/bjs/pub/pdf/hivpj05.pdf.

⁵⁹ NYS Department of Correctional Services. 2007. Statistical Overview: Year 2006 Discharges.

⁶⁰ HIV Prevalence in New York City, 2002. HIV Epidemiology Program, Special Supplemental Report. New York: New York City Department of Health and Mental Hygiene, 2004.

⁶¹ Bennani Y, Parvez F, Forgione L, Herrera J, Torian L, Begier E. Undiagnosed HIV Infection Among New York City Jail Entrants, 2006: Results of a Blinded Serosurvey. Poster Presentation at the 15th Conference on Retroviruses and Opportunistic Infections, February 3-6, 2008, Boston, Massachusetts.

⁶² Fullilove MT, Fullilove R and Wallace R. Where is Home?: Mass Incarceration in the Context of Incessant Displacement. <http://www.crimeandjustice.org/councilinfo.cfm?PID=61>.

them and others at increased risk for infection⁶³ thus perpetuating a cycle where rates of HIV and STI remain high.

There is an array of service gaps and needs that create barriers to HIV prevention services among those involved in the criminal justice system. The results of research estimating the rate of HIV transmission within correctional facilities vary widely. Most incarcerated persons with HIV probably acquired the infection while in the community. However, Hammett et al. estimated that, in a given year, about a quarter of those in the United States with HIV will pass through a correctional facility⁶⁴. This suggests that correctional facilities must be settings for HIV prevention interventions⁶⁵ including education about the risks associated with needle sharing (for tattooing as well as for injecting drugs) and the distribution of condoms. Drug use and sexual activity are forbidden in correctional facilities. However, those who are incarcerated must still be given the tools to protect their health. The New York City Department of Corrections recognizes this and provides condoms to those who are detained upon request. Prisons in New York State, however, have yet to adopt this approach.

In a state where over one-third of poor adults are without health insurance⁶⁶, detention presents the best opportunity for many of those in the criminal justice system to receive health care. Given this, incarceration may be used not only as an opportunity to diagnose and treat illness but to connect people to health care after their release. Prisoners are routinely offered testing for HIV and STI's in city jails. Those who test positive may also seek treatment and connection to care in the community.

Also, despite the fact that a number of inmates enter the criminal justice system with mental health problems, substance abuse problems and mental illness, there continues to be a lack of mental health care and substance abuse services for this population both while incarcerated and after release. Incarceration presents an opportunity to screen for mental health conditions associated with increased vulnerability to HIV, like substance abuse, post-traumatic stress disorder and depression. Treatment for and attention to discharge planning for those with previously undiagnosed substance abuse and mental illness may reduce risk behavior as well as recidivism.

Immigrants

While an estimated 44% (2.7 million) of the adult population in New York City in 2000 was foreign-born, only 27% of persons newly diagnosed with HIV in 2006 were foreign-born.⁶⁷ Among the 1,012 foreign-born persons diagnosed with HIV during 2006, 70.2% were men and 47.4% were 35 years of age or younger. Overall, 88.6% were either Black or Hispanic/Latino. Eight of the top 10 countries of origin of all foreign-born New Yorkers are in the Caribbean or Central and South America. Persons from the Caribbean (excluding Puerto Rico and the United States Virgin Islands, both unincorporated territories of the United States) accounted for more HIV diagnoses (39.2%) in

⁶³ <http://www.cdc.gov/hiv/topics/research/projectSTART/description.htm#section8>

⁶⁴ Hammett TM, Harmon MP, Rhodes W. The burden of infectious disease among inmates of and releaseses from US correctional facilities, 1997. *Am J Public Health.* 2002;92:189–194.

⁶⁵ Hammett TM. HIV/AIDS and Other Infectious Diseases Among Correctional Inmates: Transmission, Burden and an Appropriate Response. *Am J Public Health.* 2006;96:974–978.

⁶⁶ Kaiser State Health Facts. <http://www.statehealthfacts.org/profileind.jsp?ind=131&cat=3&rgn=34>

⁶⁷ New York City HIV/AIDS Surveillance Slide Sets. New York: New York City Department of Health and Mental Hygiene, 2007. November 2007. Accessed 4/9/08 at http://www.nyc.gov/html/doh/html/dires/epi_surveillance.shtml.

2006 among foreign-born persons than any other region, followed by Central America (16.9%), Africa (16.7%) and South America (16.0%). Asia accounted for 6% of the foreign-born men and 1% of the foreign-born women diagnosed with HIV in 2006.

Identifying and implementing successful HIV prevention interventions for immigrant populations is complicated by the unique problems in collecting comprehensive surveillance data for this extremely diverse population group. Increased public and private funding is desperately needed to build and strengthen the capacity of community-based immigrant provider organizations to conduct HIV prevention activities. HIV prevention information also needs to be more readily available and accessible to immigrants via culturally and linguistically appropriate print and non-print materials. It is also crucial that efforts be made to integrate indigenous health models and practices into Western-based health models and overcome Western suspicion about 'alternative' ways of healing. Another persistent barrier is the fact that data on the foreign born are incomplete because no data exist to report on incidence and prevalence of HIV/AIDS in Arabic and Middle Eastern groups, due to serious problems with how to identify this population group and how individuals from this group identify themselves.

Men Who Have Sex with Men (MSM)

Among persons with known risk, MSM continue to comprise the largest proportion of new HIV diagnoses in New York City.⁶⁸ MSM account for 77.9% of new HIV diagnoses in males with reported risk. Within this group, there is great diversity. During 2006, 1,449 MSM were diagnosed with HIV infection, among whom 23% were foreign-born⁶⁹. Thirty-three point five percent (33.5%) were between the ages of 30 and 39, with almost as many aged 20 to 29 (33.3%). Among MSM who were newly diagnosed with HIV in 2006, Blacks, Whites, and Hispanic/Latinos were represented in about equal proportions (36%, 30% and 31% respectively). About 3% were Asian/Pacific Islanders and less than 1% were Native Americans. Even as the number of new diagnoses among MSM aged 30 and older has declined, the number of new HIV diagnoses among MSM younger than 30 is increasing. Numbers of HIV (non-AIDS) diagnoses among young MSM ages 13-29 have steadily risen: from 2001 to 2006, new diagnoses among MSM under age 30 increased by 33%. As absolute numbers have increased, the proportion of diagnoses in MSM attributable to those ages 13-29 has increased as well so that those under 30 now account for 44% of all new diagnoses among MSM, up from 31% in 2001. Over ¾ of those newly diagnosed MSM under 30 were Black or Latino. Cumulatively, 40.9% of MSM diagnosed with AIDS from 2001-2006 were between the ages of 20-39, suggesting an early age at HIV infection.

A powerful combination of barriers continues to impact the implementation of effective HIV prevention interventions and strategies for MSM in New York City. A lack of epidemiological data and research about the various subpopulations (e.g. MSM of color who use crystal meth, MSM of color who frequent sex parties, and transient populations of MSM of color and their social networks) impedes organizations' ability to successfully reach all of aspects of the MSM community in New York City. Proper research and evaluation tools for those who serve MSM would help to improve the understanding of the various subpopulations. It would also contribute to the development of culturally competent prevention messages and materials for MSM which would address not only

⁶⁸ Ibid.

⁶⁹ New York City HIV/AIDS Surveillance Slide Sets. HIV/AIDS in New York City, 2006: Men who have sex with men. New York: New York City Department of Health and Mental Hygiene, 2007. Updated November 2007. Accessed 4/9/08 at http://www.nyc.gov/html/doh/html/dires/epi_surveillance.shtml

ethnic cultures but also sexual cultures and identity cultures among MSM. In addition, most of the community-based organizations in New York City that currently target MSM formed in the late 1980s as grassroots responses to the emerging HIV epidemic. While they have achieved stability and sustainability, they may still require additional resources to improve their capacity to work with Black and Latino MSM. At the same time, grassroots organizations currently at work in communities of color may need technical assistance not only to improve their work with Black and Latino MSM but also to achieve the stability enjoyed by more established HIV/AIDS service organizations.

In addition, there are personal, community-level, and systemic barriers that continue to be faced by MSM of color in particular when attempting to access HIV/STI prevention and treatment services. A recent survey of MSM in New York City showed that 39% did not disclose their sexual orientation to their doctors. The results among Black and Latino MSM were even more striking: 60% of Black MSM and 48% of Latino MSM did not disclose their sexual orientation to their physicians while 19% of white men did not disclose. Those who disclosed their sexual orientation to their doctors were twice as likely as those who did not to be tested for HIV⁷⁰. This suggests that stigma and discrimination as well as related barriers like family and/or community loss, a lack of affirming services, and untreated mental health concerns, have a real impact on HIV prevention efforts.

Additive psychosocial health problems exist among urban MSM and the interconnection of these problems function to magnify the effects of the HIV/AIDS epidemic in this population⁷¹. The MSM population battles a number of issues including consistent cultural silence about sex, homosexuality, and HIV that are significant barriers to addressing mental health issues including but not limited to depression, low self esteem, and trauma. Other important elements include self-hatred, internalized homophobia variegated by place of origin or culture, climates of ostracism, physical abuse, and racial and generational discrimination in the MSM community as well as in the general population.

At a summit organized by the Women and Childrens', the Men Who Have Sex with Men and Substance Use Workgroups and the Transgender and the PLWHA Advisory Groups, participants made a strong recommendation to educate service providers about the dynamics of sexual compulsivity, which may have the same effects on individual decision-making as alcohol and other drug misuse. Clear understanding of sexual compulsivity will make it easier to assess for it, talk about it, and educate others about it. At the same time, summit participants emphasized the importance of "sex positive" environments that support open and honest communication about sex among men. Such environments would validate healthy relationships, acknowledge the diversity of sexual behavior and recognize that what some may consider "kinky" does not mean unsafe.

Substance Users

While HIV and Hepatitis C (HCV) seroprevalence among IDUs have decreased between 1990 and 2001, it is estimated that 13% of all IDUs have HIV, 63% of all IDUs are HCV-positive, and 59% of all HIV negative IDUs have HCV⁷². Among the 248 IDUs newly HIV diagnosed with HIV in 2006, 31.0% had concurrent HIV/AIDS, 20.2% were women, 48.0% were Black, 38.7%

⁷⁰ INSERT ARCHIVES OF INTERNAL MEDICINE REFERENCE HERE.

⁷¹ NEED BETTER FOOTNOTE THAN: Am J Public Health, 2003.

⁷² Update on Sterile Syringe Access in New York City. New York: New York City Department of Health and Mental Hygiene, 2007.

Hispanic/Latino, and 11.7% were White⁷³. In 2006, the largest proportions of IDUs diagnosed with HIV were 40-49 (31.9%) and 50-59 years of age (31.5%). There were smaller proportions in the 30-39 (21.0%) and 20-29 (11.3%) age groups. From 2001-2006, 28.7% of IDUs diagnosed with HIV were women, mirroring the sex ratio found in the heterosexual transmission category. Of the 20,915 IDUs known to be living with HIV infection at the end of 2006, 79.5% had AIDS. Among male IDU PLWHA, 42.2% were Black, 43.6% were Hispanic/Latino, 13.7% were White, 0.3% were Asian/Pacific Islander, and 0.1% were Native American, while among female IDU PLWHA, a larger proportion (49.7%) were Black⁷⁴. In New York City, HIV/AIDS among IDUs is most prevalent in Central Brooklyn, the South Bronx, and Harlem⁷⁵ – neighborhoods with high levels of poverty and large populations of people of color. In 2006, the death rate among IDUs infected with HIV (32.8 per 1000) was almost 60% higher than the overall death rate (20.6 per 1000) in New York City⁷⁶.

HIV prevention efforts have historically focused on IDU's. In New York City, HIV seroprevalence among this group has declined dramatically, thanks in large part to syringe exchange programs. However, substance users who do not inject drugs are at substantial risk for contracting and spreading HIV. In a recent study of injecting and non-injecting drug users in New York City, HIV prevalence was nearly identical among current injectors (i.e., injected in the last 6 months) and heroin and cocaine users who had never injected: 13% among current injectors and 12% among never-injectors in a drug treatment program study, and 15% among current injectors and 17% among never injectors in a respondent-driven sampling storefront study⁷⁷. Another study among drug users found that injection did not significantly correlate with HIV seroprevalence but that sexual behaviors and socioeconomic factors did⁷⁸.

The barriers that substance users experience to accessing HIV prevention interventions and strategies include insufficient allocation of resources for research, training, implementation and evaluation of effective HIV prevention interventions for substance users. Especially lacking is an understanding of the sexual risks faced by those who use drugs that are not injected like alcohol, crack, cocaine and methamphetamines. In addition, the lack of a continuum of substance use and abuse services that include harm reduction and HIV prevention as well as treatment services impedes effective service provision to this community. Finally, substance use and mental health are intricately linked with both substance abuse and mental illness independently related to increased

⁷³ New York City HIV/AIDS Surveillance Slide Sets. HIV/AIDS in New York City, 2006: Injection Drug Users. New York: New York City Department of Health and Mental Hygiene, 2007. Updated November 2007. Accessed 4/9/08 at http://www.nyc.gov/html/doh/html/dires/epi_surveillance.shtml.

⁷⁴ New York City HIV/AIDS Annual Surveillance Statistics. New York: New York City Department of Health and Mental Hygiene, 2007. Updated November 27, 2007. Accessed on 4/9/08 at <http://www.nyc.gov/html/doh/html/ah/hivtables.html>

⁷⁵ New York City HIV/AIDS Surveillance Slide Sets. Substance Use and HIV/AIDS: A Look at Central Brooklyn. New York: New York City Department of Health and Mental Hygiene, 2007.

⁷⁶ New York City HIV/AIDS Surveillance Slide Sets. HIV/AIDS in New York City, 2006: Injection Drug Users. New York: New York City Department of Health and Mental Hygiene, 2007. Updated November 2007. Accessed 4/9/08 at http://www.nyc.gov/html/doh/html/dires/epi_surveillance.shtml.

⁷⁷ Des Jarlais, D.C., Arasteh, K., Perlis, T., Hagan, H., Abdul-Quader, A., Heckathorn, D.D., McKnight, C., Bramson, H., Nemeth, C., Torian, L.V. and Friedman, S.R.. Convergence of HIV seroprevalence among injecting and non-injecting drug users in New York City. *AIDS* 2007, 21:231–235

⁷⁸ Ompad DC, Fuller CM, Galea S, Wu Y, Nash D, Benjamin E, Vlahov D. Sexual risk is associated with HIV among injection and non-injection drug users: Implications for intervention strategies. *Int Conf AIDS*. 2004 Jul 11-16; 15: abstract no. WePeC6026. Bangkok, Thailand.

risk of HIV infection. Effectively addressing one often means addressing the other and requires trained staff who are able to deliver the services needed or, at least, able to refer to services, like psychiatric treatment, when needed.

Transgenderers

Although no national or local surveillance data are currently available on the incidence or prevalence of HIV/AIDS within transgender communities, data collected by local jurisdictions around the United States suggest disproportionately high rates of HIV infection among transgender persons⁷⁹. Data from 29 studies of mostly transgender men (female-to-male) and transgender women (male-to-female) of color indicate that HIV prevalence for transgender men ranged from 0% to 3% and from 11.8% to 27.7% for transgender women⁸⁰. Black transgender women had higher rates of HIV infection (56.3%) than their White (16.7%) or Hispanic/Latino (16.1%) peers⁸¹. In 10 of the studies, 21.1% of the transgender women reported having a prior STI with higher rates of self-reported STIs among White transgender women⁸². In studies of transgender men that asked about a history of STIs, lower rates of STIs were reported (6-7%)⁸³. While members of this community may have lower HIV infection and STI rates than transgender women, many still engage in HIV risk behaviors, including unprotected anal and vaginal sex, sex work and drug use⁸⁴. Many transgender research participants reported engaging in risky sexual and drug using behavior such as unprotected receptive anal and vaginal intercourse, sex work, and injection of hormones or silicone to affirm their gender identity and/or alter their gender presentation.⁸⁵

There are several barriers to the implementation of successful HIV prevention interventions and strategies for this community. Most existing HIV prevention education in New York City is not inclusive of transgender people and often makes assumptions about sex and gender that are not applicable to their anatomical situation⁸⁶. A number of evidence-based interventions that were originally created for MSM and non-transgender heterosexual female populations (e.g. *Many Men*, *Many Voices* and *Community PROMISE*) have been modified to 'fit' transgender women. However, the adaptation of these interventions is faulty from the onset, as they do not address the unique needs of transgender women and men which often override HIV-related concerns including: gender identity, social and cultural community norms, stigma and discrimination, inadequate housing and homelessness, violence, substance use and abuse, dating, and unaddressed mental health needs..

In addition, there are no behavioral models that address how social, psychological, and cultural conditions influence behavior for transgenders. A few reasons for this are the invisibility of transgender men and women and the lack of political advocacy on behalf of and among transgender people in New York City (compared to the advocacy and politicization in other cities like San Francisco, Minneapolis, and Philadelphia). All of these contribute to the lack of understanding of the HIV risk factors for transgender people,

⁷⁹ Herbst, JH, Jacobs, ED; Finlayson, TJ; McKleroy, VS; Neumann, MS; Crepaz, N. Estimating HIV Prevalence and Risk Behaviors of Transgender Persons in the United States: A Systematic Review. *AIDS Behavior* 2008; 12(1):1-17.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid.

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Xavier, J. HIV/AIDS Risk Factors Among Transgender People in the United States. Accessed on 4/10/08 at www.yescenter.org/HIVAIDS_Risk_Factors_Among.pdf.

At a summit organized by the Women and Childrens' Workgroup, the Men Who Have Sex with Men and Substance Use Workgroups and the Transgender and the PLWHA Advisory Groups, participants observed that transgendered people have frequently experienced trauma but have very few outlets to therapeutically address their experiences. Within the medical system and even within traditional gay and HIV/AIDS service organizations, transgender people experience discrimination, a lack of trans-sensitivity, and lack of respect. About 60% of transgender individuals know someone who has been attacked because they were transgendered; this makes them particularly vulnerable to "re-traumatization"⁸⁷. The lack of research about the transgender community and the connection between mental health disparities and HIV/AIDS has left it poorly armed to battle the epidemic.

Many New York City HIV prevention service providers lack knowledge about and sensitivity towards the transgender community, and there continues to be a lack of adequate training available on transgender issues for providers. Available training needs to include more than introductory "Transgender 101" workshops and address topics relevant to the transgender experience. Such training topics can include but are not limited to: cultural and gender diversity; gender identity; hormone therapy and its impact on behavior; hormone therapy and its interaction with HAART; sexual health; socioeconomic norms and behavior; legal issues; substance use, misuse, and abuse; and discrimination and advocacy.

Women and Children

Women in New York City are increasingly affected by HIV/AIDS, and women are more biologically vulnerable to HIV infection than men. Early in the epidemic, about 1 in 10 New Yorkers with AIDS were women, with most infected as a result of IDU. As the epidemic progressed, women began accounting for an increasing proportion of diagnoses, and the transmission risk pattern among females has changed. For the last five years, the proportion of HIV diagnoses occurring in women has remained around 30%; in 2006, 27% of new HIV diagnoses occurred among women. Heterosexual sex accounted for 92.3% of newly diagnosed infections in 2006 among women with a reported risk factor[□].

In 2006, 1,016 women were newly diagnosed with HIV and 23.5% of these women were concurrently diagnosed with AIDS[□]. Of the 1,016 women, 65.1% were Black, 28.9% were Hispanic/Latino, 4.8% were White and 1.0% were Asian/Pacific Islanders. Approximately equal proportions were aged above and below 40 years of age at HIV diagnosis.

Among female PLWHA at the end of 2006, 58.4% were Black, 31.4% Hispanic/Latino, 8.5% were White, 0.8 were Asian/Pacific Islander, and 0.1% were Native American. 39.5% were age 40-49, 21.6% were between the ages of 50-59, and 21.2% were between 30-39 years of age.

⁸⁷ NEED REFERENCE.

[□] New York City HIV/AIDS Surveillance Slide Sets. HIV/AIDS in New York City, 2006: Females. New York: New York City Department of Health and Mental Hygiene, 2007. Updated November 2007. Accessed 4/9/08 at http://www.nyc.gov/html/doh/html/dires/epi_surveillance.shtml

[□] Ibid.

The number of HIV-infected infants born each year has decreased dramatically from a peak of over 300 in 1990 to only 13 in 2006[□]. Of all HIV infections diagnosed in New York City children since 1977, 96.7% resulted from perinatal exposure. Children of color account for 95% of all children living with HIV/AIDS as of December 31st, 2006. Prior to 1993, IDU use was the most common known risk among mothers of HIV-infected children; since then, most mothers of HIV-infected children were infected through heterosexual transmission, mirroring the changes in the HIV epidemic among all women in New York City.

Women and children experience three main barriers to accessing HIV prevention interventions. Recognition of and responses to the various types of trauma experienced by women--sexual abuse, physical abuse, domestic violence, gender-based violence--are often not addressed by HIV prevention interventions or agency-wide programming. At a summit organized by the Women and Childrens' Workgroup (in collaboration with the Men Who Have Sex with Men and Substance Use Workgroups and the Transgender and the PLWHA Advisory Groups) Gail Wyatt, PhD, from the UCLA Sexual Health Program and the Center for Culture, Trauma and Mental Health Disparities, observed that most HIV prevention interventions focus on consensual sex and drug related practices. However, they do not take into account a number of dynamics including psychological distress and trauma. It is important to acknowledge that women with higher levels of emotional distress may be more likely to engage in the types of behaviors that put them at risk for HIV and other sexually transmitted diseases⁹¹.

Another barrier is the absence of information about the diverse needs of the various groups of women of color, i.e., Asian/Pacific Islander, Native American/American Indian/Native Alaskan, mixed race women who identify as women of color, Arabic/Middle Eastern, Black, and Hispanic/Latino women. The DOHMH needs to improve its efforts to ensure that the HIV prevention needs of all women from various ethnic groups are addressed. The third barrier, poverty and other factors that often accompany it--unemployment, low literacy levels, limited language proficiency, little knowledge of HIV transmission, poor health literacy and doctor-patient communication, lack of physical safety, and exposure to violence in the community – uniquely and negatively impact women, as women are often the primary caregivers in their families (of origin or choice). HIV prevention activities and interventions that fail to address these various barriers will not adequately address women's HIV prevention needs.

Prioritization of Evidence-Based Interventions

Each NYC PPG Workgroup and Advisory Committee was tasked with prioritizing evidence-based interventions ('EBIs') for its priority population and subpopulations. This section highlights the top three to five evidence-based HIV prevention activities and interventions that were prioritized for each population. Prioritizing a limited number of activities and interventions enables the Workgroups to strategically identify the most effective activities and interventions for their populations. The Workgroups selected interventions and activities based on the following criteria:

□ New York City HIV/AIDS Surveillance Slide Sets. HIV/AIDS in New York City, 2006: Pediatric HIV/AIDS. New York: New York City Department of Health and Mental Hygiene, 2007. Updated November 2007. Accessed 4/9/08 at http://www.nyc.gov/html/doh/html/dires/cpi_surveillance.shtml

⁹¹ Morrill, A.C., Kasten, L., Urato, M., Larson, M.J.(2001). Abuse, addiction, and depression as pathways to sexual risk in women and men with a history of substance use. *Journal of Substance Abuse* 13 (1-2): 169- 184

- Documented effectiveness with either a New York City priority population or one similar to New York City's priority populations;
- Documented ability to work with clients in the context of their lives; and,
- Documented ability to address the prevention needs of PLWHAs.

The development and distribution of the CDC Diffusion of Effective Behavioral Interventions (DEBIs)⁹², all of which target specific populations in specific settings, has increased awareness about the importance of targeting the needs of diverse populations. The NYC PPG, the DOHMH, and community providers in New York City agree that, while a targeted approach is necessary, there are several challenges that must be examined to ensure that the investments in these short-term, population- and setting-focused interventions support our overarching goal to ensure reduction in transmission for all high-risk populations.

First, the range of available CDC DEBIs is not adequate to meet the diverse needs of high-risk populations in New York City. HIV is concentrated in the poorest communities in New York City where the need for food, shelter and medical care take precedence over building skills to prevent HIV. Organizations serving these communities prioritize these requests over the development of HIV prevention outreach.

Second, there is concern about the overall reach of DEBI's. DEBI's have demonstrated effectiveness but are costly, especially given the maximum number of people they can reach. They require intensive training and recruitment and their ultimate success depends upon retaining participants throughout the intervention period.

The third challenge is accessing on-going support and training to ensure successful implementation of the DEBIs in New York City. Several community-based organizations in New York City are adapting DEBIs to fit the specific needs of local communities with some success. The proven interventions were rigorously designed and require trained staff. In addition to training staff to ensure that the initial implementation is accurate and effective, on-going technical assistance and training is often needed to ensure fidelity to the core elements of the proven behavioral intervention. Organizations implementing DEBI's need training that is available frequently and locally to accommodate staff turnover and limited travel budgets.

The fourth challenge to the effectiveness of DEBIs is their limited ability to address the root causes of risk. Co-factors (e.g. trauma, depression, homelessness, etc.) and basic survival needs (e.g. housing, detoxification, medical care, etc.) continue to be barriers to consistent adoption of behaviors even when promoted by the effective implementation of proven behavioral interventions.

With the aforementioned challenges noted, what follows is a listing of evidence-based interventions, activities and approaches that are also culturally-appropriate and population-specific. This list is not intended to be exhaustive. Rather, it represents the best judgments of the workgroups based on available research and the experiences of workgroup participants. It includes both behavioral and structural approaches. It is also important to note that several community-based organizations in New York City are addressing the limited range of DEBIs by developing 'home-grown' evidence-

⁹² <http://www.effectiveinterventions.org/>

based interventions (NYC EBIs). Some of these are recommended by Workgroups below. While being mindful that due to its sheer size, diversity, and position as a national and international destination for migration, New York City has a large number of distinct subpopulations with unique behavioral, cultural, and/or linguistic prevention needs, the following recommended interventions share a purposeful attention to the impact of gender and both individual and community culture, history, and trauma, and utilize a harm reduction approach in which client self-determination is an integral part of the intervention. The NYC PPG's short list of recommended evidence-based activities and interventions share two core elements:

1. They incorporate the co-factors that either increase one's decision to engage in risky sexual and/or drug-using behaviors or increase the likelihood that one will become infected with HIV or develop AIDS; and,
2. They can be modified to address these issues.

People Living With HIV/AIDS

Mindful that many behavioral interventions can only reach a limited number of people, the People Living with HIV/AIDS Advisory Committee suggests identifying PLWHA who engage in risk behavior. To work with this "core group", the committee recommends implementing the following HIV prevention interventions and activities:

1. **Healthy Relationships**—This DEBI is a five-session, small-group intervention for men and women living with HIV/AIDS. It is based on Social Cognitive Theory and focuses on developing skills and building self-efficacy and positive expectations about new behaviors through modeling behaviors and practicing new skills.
2. **Holistic Health Recovery Program (HHRP)**—This DEBI is a 12-session, manual-guided, group-level intervention for HIV-positive and HIV-negative IDUs. The primary goals of HHRP are health promotion and improved quality of life. More specific goals are abstinence from illicit drug use or from sexual risk behaviors; reduced drug use; reduced risk for HIV transmission; and improved medical, psychological, and social functioning. HHRP is based on the Information-Motivation-Behavioral Skills (IMB) model of HIV prevention behavioral change. According to this model, there are three steps to changing behavior: providing HIV prevention information, motivation to engage in HIV prevention and opportunities to practice behavior skills for HIV prevention.
3. **Street Smart**—This DEBI is a small-group intervention which targets runaway and homeless youth, ages 11 to 18. It is a multi-session, skills-building intervention to help runaway and homeless youth practice safer sexual behaviors and reduce substance use. Sessions address improving youths' social skills, assertiveness, and coping through exercises on problems solving, identifying triggers, and reducing harmful behaviors. Agency staff also provides individual counseling and trips to community health providers.
4. **Herizen Peer Program**—This NYC EBI is a small-group intervention that targets women living with or at high-risk for HIV infection. It is an eight-week training followed by a 24-week internship. This peer education training program is grounded in a holistic HIV prevention formula: the combination of structured classroom education (knowledge-

building), hands-on service delivery (skills-building), and supportive services for the peers themselves (access). Topics include: HIV/AIDS Treatment, Hepatitis ABC, Harm Reduction Theory and Practice, Safer Sex Negotiation, Safer Drug Use, Reproductive Health, and Direct Outreach Strategies.

5. Empowerment for Women—This NYC EBI is a small-group intervention targeting women aged 45 and over who are living with HIV and/or AIDS. The purpose of the intervention is to provide support and education to these women who are often diagnosed after their male partners or husbands die or develop AIDS. Topics include but are not limited to: health, sex, family, and aging.

Adolescents

Due to the fact that many adolescents at risk for acquiring and transmitting HIV do not test, the adolescent workgroup recommends the following approaches to working with youth and one DEBI that has been successfully implemented with New York City youth:

1. Follow the Principles of Youth Development—Youth development approaches that incorporate HIV prevention and behavior change meet the needs that young people themselves identify by building on their capabilities, assisting them to cultivate their own talents and to increase their feelings of self-worth, and easing their transition to adulthood⁹³. Interventions for youth and the staff who work with them should be nonjudgmental, enthusiastic, flexible, supportive, motivational, and responsive. They should support the ability of young people to take control of their own lives.

2. Follow Best Practices for HIV Counseling and Testing with Adolescents—In 2006, the adolescent workgroup presented a set of recommended best practices for HIV counseling and testing with youth. These recommendations are consistent with the youth development approaches outlined above. They emphasize building relationships with youth during pre-test counseling, individualizing approaches for HIV testing, assuring confidentiality, choosing approaches that are age and developmentally appropriate, providing counseling and testing within the context of sexual health education, and encouraging the participation of supportive persons.

3. Incorporate Structural Interventions—Structural intervention involve coalition building, community mobilization, and/or collaboration to change resource availability, the physical environment, organizational systems, and law and policies that support HIV prevention and behavior change. An example is Connect to Protect (C2P), which targets New York City young MSM of color and young women of color. C2P is a community coalition that brokers relationships between community organizations, government entities, and individuals to address HIV prevention through the identification of root causes such as homophobia, employment, and violence within the target populations.

4. Promote Linkages to Care—For secondary prevention with HIV-positive adolescents, make concerted efforts to provide these adolescents with linkages to care (e.g. intensive

⁹³ Advocates for Youth. Youth development: Strengthening prevention strategies. Accessed on 4/17/08 at www.advocatesforyouth.org.

phone outreach for HIV positive youth in need of HAART). Examine innovative approaches to retaining HIV+ young people in care as they become adolescents and young adults.

5. Promote Behavior Change Through Comprehensive Sex Education that Includes HIV/AIDS Education—Comprehensive sex education is HIV prevention. Many youth lack the information they need to make healthy choices. Acquisition of knowledge about HIV transmission and prevention can increase youths' perception of risk and help them to develop the skills that are necessary to protect themselves and make healthy choices. This strategy can be promoted through collaboration with the New York City Department of Education (DOE) on the implementation of the HIV curriculum, promotion of peer education programs that provide HIV education to youth in both schools and other settings, support of the DOE implementation and expansion of its Condom Availability Program in high schools and through the building of partnerships between DPHOs, the DOE, and community-based organizations to facilitate the dissemination of HIV education.

6. Street Smart—This DEBI is an intervention which targets runaway and homeless youth, ages 11 to 18. It is a multi-session, skills-building intervention to help runaway and homeless youth practice safer sexual behaviors and reduce substance use. Sessions address improving youths' social skills, assertiveness, and coping through exercises on problem solving, identifying triggers, and reducing harmful behaviors. Agency staff also provide individual counseling and trips to community health providers.

Criminal Justice

Preventing HIV infection among those currently and formerly incarcerated must address a combination of factors. Approaches that focus exclusively on individual behavior change ignore how behavior is influenced not only by the characteristics of those involved in the criminal justice system, but also by the systems (e.g. corrections, probation, health care, etc.) with which they interact. The Criminal Justice Workgroup recommends the development of multiple strategies to intervene at different points during the process of incarceration. Such strategies may operate at different levels, influencing not only individual behavior but systems. The following interventions and activities are among the more effective models in use in New York City at this time:

1. Safety Counts—This DEBI is an intervention for out-of-treatment, active and non-active IDUs. Its aim is to reduce both high-risk drug use and sexual behaviors. It is a behaviorally focused, seven-session intervention, which includes both structured and unstructured psycho-educational activities in group and individual settings. This intervention has been used successfully with both those on probation and on parole.

2. Holistic Health Recovery Program (HHRP)—This DEBI is a 12-session, manual-guided, group-level intervention for HIV-positive and HIV-negative IDUs. The primary goals of HHRP are health promotion and improved quality of life. More specific goals are abstinence from illicit drug use or from sexual risk behaviors; reduced drug use; reduced risk for HIV transmission; and improved medical, psychological, and social functioning. This intervention has also been used successfully with those on probation and on parole.

3. Anti-stigma and Discrimination Intervention—This NYC EBI is based on the “Understanding and Challenging HIV Stigma: Toolkit for Action” curriculum developed by the Academy for Educational Development. The toolkit was created based on research that examined the experience of stigma among "stigmatizers" as well as those who were "stigmatized" in three African countries. The research found that people are frequently unaware of their stigmatizing actions and that knowledge and fear interact with cultural attitudes about sex and morality to fuel discrimination, isolation and despair, which can be as devastating as HIV/AIDS itself. The toolkit can be tailored to sensitize specific audiences to stigma's harmful effects and empower them to challenge stigma in their communities⁹⁴. This intervention has been used successfully with HIV positive and HIV negative inmates and correctional staff.

4. Sexual Health and Relationship Empowerment (SHARE)—This NYC EBI is an intervention that targets gender-specific HIV risks faced by criminal justice-involved women. The Women's Prison Association is collaborating with the HIV Center of Columbia University and Nonprofit Consulting Services to achieve DEBI status for this intervention.

5. Addressing Co-Factors of HIV Transmission—Those who are currently or formerly incarcerated suffer from high rates of mental illness and substance abuse. Providing mental health and substance abuse screenings and referrals to parolees and jail inmates at state parole offices, at a local jail, and the offices of a local community-based organization is an effort to stem HIV transmission and acquisition in this population.

Immigrants

The Immigrant Workgroup has had limited success in identifying DEBIs being implemented by New York City HIV prevention providers serving immigrant populations. Among those providers contacted, the DEBIs, even if adapted and tailored, have been criticized as not meeting the needs of New York City's immigrant populations. Based on interviews with HIV prevention service providers working with immigrant populations, anecdotal reports of experiences of Immigrant Workgroup members in delivering prevention services, and an examination of research materials, peer advocate-based and peer-mediated models appear to be the most effective way to diffuse information about HIV prevention in immigrant communities in New York City and to initiate the behavior change process in those communities. Some of these approaches include:

1. The Client Navigation model—This NYC EBI moves clients seamlessly through the maze of HIV prevention and other needed services with the aid of a peer counselor who provides linguistic and cultural support. This model involves the use of “navigators [that] work with patients and families to empower them to overcome barriers in the health care system, and enjoy better health and health care”⁹⁵. The application of this model has been shown to improve risk factors for chronic health issues, improve survival rates for those with chronic health problems, and increase frequency of screening and treatment of chronic

⁹⁴ Understanding and Challenging HIV Stigma: Toolkit for Action. Academy for Educational Development, September 2003. Accessed on 4/15/08 at www.changeproject.org/technical/hivaids/stigma/StigmaToolkit.pdf.

⁹⁵ Fischer, S.M., Sauaia, A., & Kutner, J.S. (2007). Patient navigation: A culturally competent strategy to address disparities in palliative care. *Journal of Palliative Medicine*, 10: 1023-1028.

health issues⁹⁶. This model has been successfully used with Asian and Pacific Islander populations receiving HIV prevention services.

2. Peer-led support groups for immigrant Lesbian, Gay Bisexual, and Transgenders—This EBI helps immigrant Lesbian, Gay Bisexual, and Transgenders (LGBTs) build trust, encourage open and honest conversation, help people to normalize their experience, and learn from others how to cope with stressors and navigate various social service systems in New York City. This has been used successfully by a local LGBT-focused organization to work with immigrants.

3. The “Promovision” Program—This EBI utilizes lay community health care workers (“*promotores*”) who help to improve the provision of HIV prevention services to recent immigrants and Latinos who are less acculturated. The *Promotores* serve as liaisons between the clients and providers, and can potentially “make the delivery of prevention services efficient, effective, and readily adaptable to the cultural variations among immigrant groups”⁹⁷.

Men Who Have Sex with Men (MSM)

In NYC, MSM continue to comprise the largest proportion of new HIV and AIDS diagnoses, and MSM of color in particular face a double burden of stigma⁹⁸. As a result, the MSM Workgroup recommends the following strategy, a local EBI, and three DEBIs:

1. Motivational Interviewing—This strategy is a client-centered, evidence-based approach to overcoming the ambivalence that keeps many people from making changes in their lives and that strategically directs clients to examine, explore, and resolve ambivalence to change high-risk behaviors⁹⁹.

2. Entre Hombres—This NYC EBI is a six-session group-level intervention that focuses on modifying risky sexual behaviors of Latino men and covers sex with male and female casual and steady partners.

3. Community PROMISE—This DEBI is a community-level HIV/STI prevention intervention that relies on role model stories and peer advocates from the community. The intervention is based on behavioral theories including Stages of Change. Community PROMISE can serve any population, since it is created anew each time it is implemented in collaboration with the community. The intervention has been tested with African American, White, and Latino communities, including IDUs and their sex partners, non-gay identified MSM, and high-risk youth.

⁹⁶ Fischer et al.

⁹⁷ Ramos, R.L., Hernandez, A., Ferreira-Pinto, J.B., Ortiz, M., and Gallegos Somerville, G. Promovisión: Designing a Capacity-Building Program to Strengthen and Expand the Role of Promotores in HIV Prevention. *Health Promotion Practice* 2006; 7; 444. Accessed on 4/10/08 at <http://hpp.sagepub.com/cgi/content/abstract/7/4/444>.

⁹⁸ The New York City Commission on HIV/AIDS. October 2005. Accessed on 4/10/08 at www.nyc.gov/html/doh/downloads/pdf/ah/ah-nychiveport.pdf

⁹⁹ Miller, W. and Rollnick, S. (2002) *Motivational Interviewing: Preparing People for Change*. Guilford Press: NY.

4. **Many Men, Many Voices (3MV)**—This DEBI is a 7-session, group-level intervention program to prevent HIV and STIs among Black MSM who may or may not identify themselves as gay. The intervention addresses factors that influence the behavior of Black MSM: cultural, social, and religious norms; interactions between HIV and other sexually transmitted diseases; sexual relationship dynamics; and the social influences that racism and homophobia have on HIV risk behaviors.

5. **Popular Opinion Leader (POL)**—This DEBI is a community-level intervention and involves identifying, enlisting, and training key opinion leaders to encourage safer sexual norms and behaviors within their social networks through risk-reduction conversations.

Substance Users

Syringe exchange programs have led to dramatic declines in HIV among injection drug users. However, who use drugs that are not injected, including alcohol, are at risk for HIV infection. The Substance Use Workgroup recommends harm reduction approaches and two DEBIs:

1. **Harm Reduction**—A wide array of harm reduction strategies has been effective. The Workgroup recommends approaching client involvement with substances as a continuum that can include abstinence instead of the traditional dichotomist approach of ‘users’ and ‘non-users’. This approach has been used successfully in New York City by many community based organizations as well as DOHMH initiatives. Harm reduction must reach beyond safe injection and include strategies for substance users to prevent sexual transmission of HIV

2. **Street Smart**—This DEBI is a multi-session, skills-building program to help runaway and homeless youth practice safer sexual behaviors and reduce substance use. Sessions address improving youths' social skills, assertiveness and coping through exercises on problem solving, identifying triggers, and reducing harmful behaviors.

3. **Safety Counts**—This DEBI is an HIV prevention intervention for out-of-treatment, active and non-active IDUs aimed at reducing both high-risk drug use and sexual behaviors. It is a behaviorally focused, seven-session intervention, which includes both structured and unstructured psycho-educational activities in group and individual settings.

Transgenders

The Transgender Advisory Committee recommends two EBIs that are on track to become DEBIs and a strategy for use with transgender clients:

1. **Provision of ‘Wraparound’ Services**—This strategy is an approach to implementing individualized, comprehensive services for people with complicated, multi-dimensional problems¹⁰⁰. Wraparound is based on a community-based model of service that develops comprehensive plans focusing on the strengths and needs of individuals. Through wraparound, clients develop an effective support network, increase their sense of

¹⁰⁰ Miles, P. and Franz, J. (2001). Foundations of wraparound: Values, practice patterns, and essential ingredients. Accessed on June 3, 2008 at www.utexas.edu/courses/streeter/fall2005sw393t19/paperboat/foundations3.doc.

competence, acquire new skills for managing their lives, and have access to the supportive resources they need to build brighter futures for themselves. Wraparound services include but are not limited to: employment counseling, support groups, case management, mental health services, comprehensive medical care, housing assistance, financial counseling, legal counseling, and HIV/AIDS/STI prevention education. Wraparound services impact the four levels of human service operations: practice with individual clients, program operations in each agency, system connections among agencies, and in the broader relationships throughout the community. For wraparound services to be relevant and useful for the transgender community, services must be affirming of transgender people. To be affirming, such services must be keenly aware of trans-phobia and respect gender identification and gender expression, allow clients to define their “families”, understand that persons may engage in risk behaviors for many reasons (including survival or a desire to feel loved), and help clients develop harm reduction and risk reduction skills.

2. Living in Good Health Together (LIGHT)—This EBI is a group-level intervention for ethnically diverse men and women, aged 18 or older, aimed at decreasing unprotected sexual intercourse and increasing condom use. Grounded in behavioral theory, the program targets three primary factors that mediate sexual risk acts 1) outcome expectancies, 2) skills, and 3) self-efficacy. The small group format allows group members to gain knowledge and to enhance and practice risk reduction skills, and the group dynamic encourages the promotion of new social norms within a safe, supportive environment.

3. Women Involved in Life Learning from Other Women (WiLLOW)—This EBI is a group-level skill-training intervention for women living with HIV. Through interactive discussions within groups of eight to ten women, the intervention emphasizes gender pride and informs women how to identify and maintain supportive people in their social networks. The intervention enhances awareness of HIV transmission risk behaviors, discredits myths regarding HIV prevention for people living with HIV, teaches communication skills for negotiating safer sex, and reinforces the benefits of consistent condom use. **WiLLOW** also teaches women how to distinguish between healthy and unhealthy relationships, discusses the impact of abusive partners on safer sex, and informs women of local shelters for women in abusive relationships.

Women and Children

It is because of the devastating impact HIV has had on women in New York City, the increasing evidence that trauma impacts their high-risk sexual behavior, and the role gender has on sexual and drug-using decision-making, that the Women and Children Workgroup recommends three EBI's for implementation with New York City populations.

1. Healing Our Women (HOW)—This EBI is an 11-session, small group intervention for HIV-positive Black women and Latinas ages 18 to 65 with a history of exposure to trauma or violence, including childhood sexual abuse, who report ever having sexual activity. The HOW intervention adds to existing programs for HIV positive Black women and Latinas by focusing on mental health factors that place women of color at risk for HIV transmission. The intervention is based on the Stages of Change, Pennebaker's trauma research, and the Sexual Health Model. **HOW** focuses on reducing risky sexual practices, depression, anxiety,

Post-Traumatic Stress Disorder, and sexual trauma symptoms, and improving medication adherence.

2. **Herizen Peer Program**—This NYC EBI is an intervention that targets women living with or at high risk for HIV infection. It is an eight-week training followed by a 24-week internship. This peer education training program is grounded in a holistic HIV prevention formula: the combination of structured classroom education (knowledge-building), hands-on service delivery (skills-building), and supportive services for the peers themselves (access). Topics include: HIV/AIDS Treatment, Hepatitis ABC, Harm Reduction Theory and Practice, Safer Sex Negotiation, Safer Drug Use, Reproductive Health, and Direct Outreach Strategies.

3. **Bronx ATTITUDE**—This NYC EBI is a group- and community-level HIV testing and prevention initiative that targets women of color living in the Bronx. The goal of this initiative is to reduce barriers to HIV testing among women of color in the Bronx by familiarizing them with the HIV Pre/Post-test counseling process, providing education about the benefits of testing, and easing access to testing. The **Bronx ATTITUDE** program consists of 3 phases, which include educational workshops for groups, the use of peers to disseminate HIV testing information through their social networks and at community-level events.

Prioritizing Interventions: A Framework for the Future

The NYC PPG supports the increased use of evidence-based HIV prevention interventions and strategies, expanded voluntary HIV testing in order to increase the proportion of HIV-positive New Yorkers who know their status, and strengthened linkage to and improved coordination of HIV/AIDS treatment and care. In addition, the NYC PPG strongly advises that HIV prevention services take into account the multiple factors that impact clients' sexual and/or drug-using decision making processes and utilize a harm reduction approach in which client self-determination is an integral part of the process.

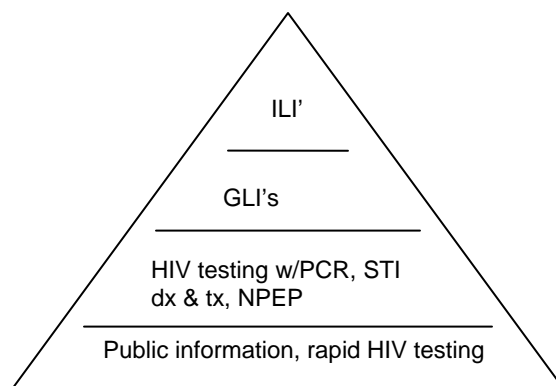
As mentioned previously, one of the limitations of many of the behavioral interventions is that they reach relatively few people. While the advisory committees and workgroups recommended several for use, the NYC PPG acknowledge that behavioral interventions are not sufficient to arrest the spread of HIV. In fact, for some subpopulations, emphasis upon individual behavior may be misguided. For example, recent research shows that behavioral risk factors do not explain high rates of HIV among black MSM. Compared to white MSM, black MSM report fewer sex partners and less substance use and there was no difference between black MSM and white MSM in unprotected anal intercourse, commercial sex work or intercourse with a known HIV+ partner. However, more black MSM than white MSM reported infection with a sexually transmitted infection and, among those with HIV, black MSM were less likely to be taking highly active antiretroviral therapy than white MSM¹⁰¹.

¹⁰¹ Millet GA, Flores SA, Peterson JL, Bakeman R. Explaining disparities in HIV infection among black and white men who have sex with men; a meta-analysis of HIV risk behaviors. AIDS 2007; 15:2083-2091.

Along with behavioral interventions, the PPG supports the use of biomedical interventions to prevent HIV in New York City. Following the recommendations of the PPG, New York City's current portfolio includes interventions that expand the availability of non-occupational post-exposure prophylaxis (nPEP) for HIV. While we were very glad to include nPEP among the interventions in the city's portfolio, we are eager to learn about their implementation because many more New Yorkers may benefit from nPEP if they were aware of its availability and efficacy. Lessons learned from the implementation of expanded nPEP may suggest different approaches to offering it so that it is cost-effective and reaches those most in need, including offering nPEP in community-based settings. In addition, research is emerging about the safety, efficacy and cost-effectiveness of pre-exposure prophylaxis (PrEP). Assuming that PrEP demonstrates success, New York City may consider conducting needs assessments and other formative research to support its implementation once it becomes available.

The New York City HIV PPG believes in a framework for HIV prevention that organizes services so that broad, low-threshold approaches may be applied to the general population while targeted, intensive services are applied to those most at risk. Figure 1 illustrates this approach with some examples of interventions that may be appropriate at each level.

Figure 1:



At the base of the pyramid are low-threshold interventions that reach a broad swath of the general population including, for example:

- Public information campaigns to promote safer sex, encourage testing and reduce stigma towards HIV.
- Male and female condom distribution.
- Routinely offering rapid HIV testing to all between 13 and 64 years of age.

In the middle of the pyramid are interventions for those who are at greater risk. These interventions are intended to reach as many of these persons as possible and may include:

- Regular HIV testing supplemented by pooled HIV polymerase chain reaction to identify those with acute HIV infection who screen HIV-.
- Screening and treatment for sexually transmitted infections.
- Non-occupational post-exposure prophylaxis for HIV.

Finally, at the top are those higher threshold interventions that reach those at even greater risk. These are for those who are most in need and who most desire this level of intervention.

Lastly, the NYC HIV PPG believes that stopping the epidemic also depends upon addressing cofactors that cut across several subpopulations and upon improving the gaps in our knowledge about the epidemic. These are described in the following pages.

Recommendations for Addressing Challenges to Effective HIV Prevention

The Workgroups and Advisory Committees created a summary of challenges to HIV prevention in New York City. The NYC PPG recommends that both government funders and local service providers take steps to address the co-factors that facilitate HIV transmission and infection, make needed improvements in the collection of epidemiological data, and conduct research to better understand and replicate effective interventions.

Co-Factors that Facilitate HIV Transmission and Infection

In New York City, there are several individual level and structural co-factors that are common to communities at highest risk of HIV infection and are related to increased risk of acquiring or transmitting HIV. To better inform New York City's prevention efforts, the DOHMH and HIV/AIDS service providers must make concerted efforts to address these co-factors in the priority populations and develop ways to address clients' sexual and drug-using risk within the broader social context of their lives.

In communities where HIV prevalence is high, other factors that facilitate transmission also exist at high levels. STIs have long been known to increase both the risk of transmitting and of acquiring HIV infection¹⁰² and communities in New York City with high rates of HIV also have high rates of STI's. Mental health problems, most notably trauma and depression, are frequently found among those at increased risk of HIV infection¹⁰³, and are associated with high-risk behaviors^{104, 105}. Related to this, illicit drug use is often endemic in communities where HIV is also prevalent. Injecting drug use, as well as other drug and alcohol use, has consistently been associated with high levels of HIV infection¹⁰⁶.

As noted in Section IV, the DOHMH prevention portfolio includes screening for three co-factors: STIs that increase the risk of both transmitting and acquiring HIV infection¹⁰⁷; mental health issues

¹⁰² Wasserheit JN, Aral SO. The dynamic topology of sexually transmitted disease epidemics: Implications for prevention strategies. *Journal of Nervous Mental Disorders* 1996; 174(Suppl 2):S201-S213.

¹⁰³ Miller M. A model to explain the relationship between sexual abuse and HIV risk among women. *AIDS Care* 1999; 11(1):3-20.

¹⁰⁴ Williams CT, Latkin CA. The role of depressive symptoms in predicting sex with multiple and high-risk partners. *Journal of Acquired Immune Deficiency Syndrome*, 2005 Jan 1; 38(1):69-73.

¹⁰⁵ Koblin BA, Husnik MJ, Colfax G, Huang Y, Madison M, Mayer K, Barresi PJ, Coates TJ, Chesney MA, Buchbinder S. Risk factors for HIV infection among men who have sex with men. (2006) *AIDS*. Mar 21; 20 (5):731-9.

¹⁰⁶ Miller M. The dynamics of substance use and sex networks in HIV transmission. *Journal of Urban Health* 2003; 80 (Suppl. 3):iii88-iii96.

¹⁰⁷ Wasserheit JN, Aral SO. The dynamic topology of sexually transmitted disease epidemics: Implications for prevention strategies. *Journal of Nervous Mental Disorders* 1996; 174(Suppl 2):S201-S213.

such as depression^{108,109}; and, substance use, including alcohol¹¹⁰. The portfolio also includes interventions that reduce stigma. Specifically, the bases for these interventions include:

Sexually Transmitted Infections (STIs): Improved control of STIs is vitally important to reducing the risk of HIV transmission in New York City. STIs increase vulnerability to HIV and may also increase infectiousness among those who are HIV+. Social marketing may increase awareness of the relationship between STIs and HIV. Effective screening, diagnosis and treatment of STIs can reduce the sexual transmission of HIV. Prevention efforts should integrate HIV testing and screening, diagnosis and treatment of STIs to ensure that all individuals with STIs are offered counseling and testing for HIV.

Mental Health Problems: A study of HIV-infected adolescents revealed that most (53%) had been diagnosed with mental illness prior to their treatment at an urban adolescent primary care clinic, had a documented history of sexual abuse (50%), and had a history of substance use (82%).¹¹¹ More than half of HIV-positive adolescents in this sample also suffered from depression. Psychiatric disorders in adolescents and adults, especially affective disorders, may be a risk factor for high-risk sexual behavior and substance use, which increase the risk of HIV infection.

In addition, the under-treated mental health needs of high-risk populations are a significant barrier to successful prevention efforts. The divide between mental health expertise and HIV expertise in programs and agencies limits the success of prevention efforts. In a theme echoed throughout the summit on trauma organized by the Women and Children's Workgroup, the Men Who Have Sex with Men and Substance Use Workgroups and the Transgender and the PLWHA Advisory Groups, participants felt that front-line HIV prevention workers are largely without mental health training and skills, budgets do not allow for credentialed staff, and mental health services rarely integrate HIV prevention in their treatment protocol. This leads to concerns that even those who are successfully screened for mental health needs and connected to care will eventually fall out of care and return to high-risk settings. The cycle will then continue as HIV prevention workers do not have the necessary training to adequately engage persons with mental illness in interventions.

Substance Use: Drug treatment, harm-reduction strategies, and recovery readiness programs can prevent the spread of HIV. Alcohol and drug use, along with a number of other mental and psychosocial issues, increase the risk of becoming infected with HIV.¹¹² Although there are excellent drug treatment programs in New York City, access and coordination among health care providers, case managers, and drug treatment providers need to be improved,

¹⁰⁸ Williams CT, Latkin CA. The role of depressive symptoms in predicting sex with multiple and high-risk partners. *Journal of Acquired Immune Deficiency Syndrome*, 2005 Jan 1; 38(1):69-73.

¹⁰⁹ Koblin BA, Husnik MJ, Colfax G, Huang Y, Madison M, Mayer K, Barresi PJ, Coates TJ, Chesney MA, Buchbinder S. Risk factors for HIV infection among men who have sex with men. *AIDS*. 2006 Mar 21;20(5):731-9

¹¹⁰ Miller M. A model to explain the relationship between sexual abuse and HIV risk among women. *AIDS Care* 1999; 11(1):3-20.

¹¹¹ Pao M, Lyon M, D'Angelo LJ, Schuman WB, Tipnis T, Mrazek DA. Psychiatric diagnoses in adolescents seropositive for the human immunodeficiency virus. *Archives of Pediatric and Adolescent Medicine* 2000;154:240-4

¹¹² Stall R, Mills TC, Williamson J, et al. Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. *American Journal of Public Health* 2003;93:939-42

and low-threshold drug treatment programs that incorporate a harm reduction approach need to be expanded. Substance use is a significant problem for many PLWHA; about a quarter of non-HIV-related deaths among PLWHA in New York City are due to use of alcohol or drugs. IDUs are at extremely high-risk of contracting and spreading HIV. Crystal methamphetamine and other 'club drug' use is not only associated with increasing spread of HIV, but can also reduce effectiveness of antiretroviral therapy and result in higher viral loads.¹¹³ Both crack and powder cocaine continue to be a significant problem in New York City. A study of HIV transmission risk factors in homeless, chemically addicted, and mentally ill persons found that cocaine users were more than three times more likely to have shared needles than others.¹¹⁴ Drug treatment programs and medical treatment services for persons who use drugs should be expanded so they have the capacity to serve anyone who seeks treatment (i.e., low-threshold drug treatment on demand). Substance use treatment, HIV prevention, and AIDS care services for drug users should be more tightly integrated.

Stigma: Stigma related to HIV/AIDS results in prejudice and discrimination directed at people perceived to have HIV or AIDS, and at the individuals, groups or communities with which they are associated. Stigma manifests itself in loss of social support, persecution, isolation, job loss, and problems accessing health services. HIV/AIDS-related stigma diverts attention from dealing with the disease to blaming individuals, thus making it easier to reinforce social divisions and for individuals to deny their own risk. Stigma can potentially drive individuals living with HIV and those most vulnerable to becoming infected further underground¹¹⁵.

Stigma and discrimination operate in relation to structural inequality and, therefore, are social rather than individual processes^{116, 117}. Moreover, stigma as it relates to HIV has tended to focus exclusively on the disease and contributes to our inability to address this vague concept. There is a need to broaden the definition (and subsequently our approaches) to include the many types of stigma that are also associated with HIV. These include stigma around gender identity, sexual orientation, and non-mainstream sexual choices; mental illness; xenophobia and anti-immigrant sentiment; substance use and abuse, including alcohol; stereotypes around race, gender, and ethnicity; and the reality that HIV/AIDS increasingly affects those who live in poverty¹¹⁸. Understanding the role of stigma may improve New York City's efforts to increase the number of people who, through testing, know their HIV status.

¹¹³ Ellis RJ, Childers ME, Cherner M, Lazzaretto D, Letendre S, and Grant I. Increased human immunodeficiency virus loads in active methamphetamine users are explained by reduced effectiveness of antiretroviral therapy. *Journal of Infectious Diseases* 2003; 188:1820-6.

¹¹⁴ Levounis P, Galanter M, Dermatis H, Hamowy A, and De Leon G. Correlates of HIV transmission risk factors and considerations for interventions in homeless, chemically addicted and mentally ill patients. *Journal of Addiction Disorders* 2002; 21:61-72.

¹¹⁵ Parker R and Aggleton P. HIV and AIDS-related stigma and discrimination: a conceptual framework and implications for action. *Social Science Medicine* 2003; 57:13-24.

¹¹⁶ Goffman E. *Stigma: Notes on the Management of Spoiled Identity*. New York, NY: Simon & Schuster, Inc; 1963.

¹¹⁷ Link BG, Phelan JC. Stigma and its public health implications, *Lancet*. 2006 Feb 11; 367(9509):528-9.

¹¹⁸ Treichler PS. *How to Have Theory in an Epidemic: Cultural Chronicles of AIDS*. Durham, NC: Duke University Press; 1999

The NYC PPG also recommends that to effectively prevent further HIV infections in New York City, attention to four *additional* co-factors, which are not currently represented in the portfolio, is required: homelessness, domestic violence and intimate partner violence, immigration status, and poverty.

Homelessness: HIV is far more common among homeless populations than among the housed. Among those who used the New York City single adult shelter system between 2001 and 2003, substance use and HIV/AIDS accounted for nearly one-third of all deaths, compared with less than 5% in the New York City adult population. Among women who used the single adult system¹¹⁹, the largest proportion of deaths was due to HIV/AIDS.

From 2001 through 2003, there were 98 cases of tuberculosis (TB) and 766 new HIV diagnoses among those who used the single adult shelter system; there were 19 cases of TB and 319 new HIV diagnoses among adults who used the family shelter system. Compared with the general New York City adult population, adults who used Department of Homeless Services shelters had higher rates of TB and new HIV diagnoses. The average rates of TB and new HIV diagnoses were 11 and 16 times higher, respectively, among those who used the single adult shelter system than among the New York City adult population. The average rates of TB and new HIV diagnoses were 3 and 8 times higher, respectively, among adults who used the family shelter system than among the New York City adult population¹²⁰.

Domestic Violence and Intimate Partner Violence: The connection between HIV and domestic violence and intimate partner violence is clearly established. The New York State Department of Health Office for the Prevention of Domestic Violence and the CDC Intimate Partner Violence Prevention websites list a variety of ways that domestic violence and intimate partner violence put victims at risk of contracting HIV/AIDS; ways that abusers use their own or the victim's HIV status as a weapon of coercion; as well as other obstacles to health and safety for PLWHA who are also victims of domestic violence and intimate partner violence. In its *Guidelines for Integrating Domestic Violence Screening into HIV Counseling, Testing, Referral & Partner Notification*¹²¹, New York State requires that domestic violence screenings are included in a way that addresses the complexity of abuse. Even so, there continues to be a gap in services and integration of domestic violence and intimate partner violence screening and referral in HIV prevention and HIV/AIDS services in New York City, which subsequently exacerbates barriers to prevention.

Immigration Status: Over the past 20 years, there has been rapid growth in New York City's foreign-born population. Foreign-born New Yorkers face a number of unique health concerns, as well as specific barriers to accessing health care services. Immigration to the United States can mean changes in social and/or socioeconomic status, language, culture, and many other aspects of life that may affect one's health. The undocumented face an additional set of barriers. Foreign-born adults 18-65 are more than twice as likely as

¹¹⁹ Kerker B, Bainbridge J, Li W, Kennedy J, Bennani Y, Agerton T, Marder D, Torian L, Tsoi B, Appel K, and Gutkovich A. The Health of Homeless Adults in New York City: A report from the New York City Departments of Health and Mental Hygiene and Homeless Services, 2005.

¹²⁰ Ibid.

¹²¹ <http://www.health.state.ny.us/nysdoh/rfa/hiv/guide.htm>

US-born to be uninsured (27% vs. 10%).¹²² In 2007, foreign-born and US-born New Yorkers reported similar rates of HIV testing in the past year (both 29%).¹²³ While the rate of HIV diagnosis in 2006 was lower for foreign-born than non-foreign born (33 v. 55 per 100,000), rates varied by country of birth. Many country-specific rates for foreign-born were higher than for US-born.¹²⁴

One challenge that many foreign-born New Yorkers face is access to health care. As seen in the 2006 DOHMH report on the health of immigrants in New York City, foreign-born New Yorkers are less likely to have insurance and a primary care provider than U.S.-born New Yorkers. They are also more likely to use an emergency department as their usual place of care and to report difficulty getting needed care, compared to U.S.-born New Yorkers—although this has changed since September 11, 2001. As a result of the hostile climate experienced by immigrants in need of medical care since September 11th, many undocumented individuals are fearful of large bureaucratic institutions, preferring instead either to access care through community-based organizations, where available, or go without the care.

While the ability of foreign-born New Yorkers to access health care is linked to health care coverage, improving health insurance coverage does not fully guarantee equal access to care and better health. There are a variety of other factors that also influence access to care among foreign-born New Yorkers, including country of birth; English language use; duration of residence in the United States; problems of health literacy (or health illiteracy); the fact that, except for reproductive health concerns, immigrant economic survival needs (e.g., food, clothing, shelter) take precedence; the fact that transphobia and homophobia within one's own ethnic and/or cultural community as well as in the larger American society keeps LGBT immigrants with fragile social networks who are already disconnected from their families from seeking help for health issues; and a lack of culturally sensitive front-line health services. There are many mechanisms through which these factors may influence health, including birth culture, acculturation, quality of care, access to housing, and citizenship status. A more complete understanding of these factors among foreign-born populations can aid in focusing health promotion programs and messages. In part due to access disparities, foreign-born adults use preventive services less.¹²⁵

Poverty: One in five New Yorkers is living in poverty and the experience of poverty is closely tied to where one lives. Half of the city's 1.4 million poor people live in neighborhoods where the poverty rate is at least 24.8% (compared to a citywide rate of 19.2%), and 25% live in neighborhoods where the rate is at least 34.1%.¹²⁶ These neighborhoods are all found in Upper Manhattan, the South Bronx, and Central Brooklyn—

¹²² New York City Department of Health and Mental Hygiene. Community Health Survey. <http://www.nyc.gov/html/doh/html/survey/survey.shtml>. Viewed December 2, 2008.

¹²³ New York City Department of Health and Mental Hygiene. Community Health Survey. <http://www.nyc.gov/html/doh/html/survey/survey.shtml>. Viewed December 2, 2008.

¹²⁴ HIV Epidemiology and Field Services Program, New York City Department of Health and Mental Hygiene. Unpublished data reported through September 30, 2007.

¹²⁵ Ibid.

¹²⁶ Community Service Society. Mapping Poverty in New York City: Pinpointing the Impact of Poverty, Community by Community. March 2008. accessed on 4/16/08 at www.cssny.org/pdfs/Mapping_booklet.pdf.

which means that people of color are disproportionately represented among those living in poverty¹²⁷. Poor communities experience higher rates of illness and death for most major chronic diseases and infections, including HIV infection. Research has shown a connection between HIV infection and indicators of low socioeconomic status, such as low income, lower educational attainment, and recent concern about having enough food. Studies have also identified associations between poverty and HIV infection which may be linked through a variety of pathways. Lack of access to health services, social and physical environments unresponsive of healthy behavior, injection drug use and other substance use, commercial sex work, multiple sex partners, sex with partners who are high-risk, low personal perception of risk, and the prioritization of immediate needs such as maintaining food, housing, and income over issues such as HIV, are some factors associated with poverty that may contribute to increased HIV risk¹²⁸. These conditions provide a context for understanding why people living in poverty are at increased risk for HIV infection.

The Collection of Epidemiological Data

The epidemic in New York City poses special challenges to prevention, as New York City's great diversity makes the epidemic especially complex. As the gateway to the United States, New York City has a large immigrant population, and its population overall is multiracial and multiethnic. HIV affects all segments of New York City's population. In fact, New York City can be thought of as having "multiple" HIV epidemics, which complicates the process of collecting HIV/AIDS epidemiological data. In particular, New York City lacks clear epidemiological data about the prevalence and incidence of HIV and STIs in its transgender community, and does not regularly disseminate epidemiological data about New York City's Asian/Pacific Islander, Black, Arabic, and Middle Eastern communities. This not only limits our understanding of the full impact of the epidemic in New York City, but also may prevent communities in need from receiving life-changing and life-saving services, as HIV prevention funding is based, in part, on epidemiological data.

Data on the Transgender Community: One of the greatest challenges to HIV prevention planning among the transgender communities of New York City is the lack of available data. While the NYC DOHMH has collected HIV surveillance data on the transgender community since 2005, ascertainment is difficult. Medical records and case reports, which are the source of most surveillance data, do not always report data about transgender people accurately. It is only when physicians report that an HIV-infected person is transgender that NYC DOHMH staff records the information. Combined, these challenges limit our understanding of the full impact of the epidemic on the transgender community in New York City.

The ways in which persons identifies themselves play an important role in their decision to access HIV prevention services. Thus, it is critical that specific programming be developed to take into account gender identity, culture, and transitioning issues. For example, among MSM (a behavioral category), a "gay" (male) identity may serve as a protective factor in HIV risk. That is, a man who clearly identifies as a gay man is more likely to be embedded in social networks that are knowledgeable about HIV and thus more likely to be tested for HIV

¹²⁷ Ibid.

¹²⁸ Adimora, AA, Schoenbach, VJ, Martinson, FEA, Coyne-Beasley, T, Doherty, I, Stancil, TR and Fullilove, RE. Heterosexually Transmitted HIV Infection Among African Americans in North Carolina. *Journal of Acquired Immune Deficiency Syndrome* 2006;41:616-623.

and to access HIV prevention services than a non-gay identified MSM. With regard to transgender people, some transgender men (e.g., female-to-male/FTM) and women (e.g., male-to-female/MTF) may identify as men and women and not transgender, while others in the transgender community identify as transgender, genderqueer, transsexual, gender variant, queer, or gender non-conforming.

Ideally, co-factors, identity, and culture guide organizations as they design services to target priority populations at highest risk for acquiring or transmitting HIV. While there is a set of co-factors (e.g., poverty, STIs) shared by all populations that increase a person's risk for HIV, there is a set of co-factors that is unique to transgenders including social isolation due to others' reaction to one's gender identity; transgender-related health care needs; histories of physical and sexual abuse; exposure to transphobia, gender-based discrimination or stigma; and invisibility. In order to collect the epidemiological data needed to effectively plan for New York City's transgender community, comprehensive data collection tools that record identity and the multiple co-factors that impact transgender clients' risk for HIV and STIs need to be developed. It has been suggested that to gather "accurate HIV prevalence estimates among [transgender women] and [transgender men]...[other states] should emulate ... California and collect HIV testing data using expanded gender categories"¹²⁹.

Elaborate on "Asian/Pacific Islander" and "Black" Racial Categories: The New York City DOHMH reports race using the standard United States Census five-category classification, i.e., Black, White, Asian/Pacific Islander, Native American, Other/Unknown and ethnicity using the dichotomous classification of "Latino/Hispanic" or "Not Latino/Hispanic." This obscures the great diversity among foreign-born New Yorkers within the broad racial and ethnic epidemiological categories. In New York City, the racial category "Asian/Pacific Islander" includes people from East, South, and South East Asian countries as diverse as Taiwan, Korea, Sri Lanka, the Philippines, Malaysia, and Bangladesh. "Black" people in New York City includes Africans, Caribbeans, and African Americans. Members of these various cultures differ from each other in ways that may significantly influence their risk of acquiring and transmitting HIV/AIDS.

Over 27% of new HIV diagnoses in 2006 in New York City were among foreign-born people. On a regional basis, the Caribbean is the largest contributor, but there are significant numbers of people born in Africa, Asia, and Latin America as well, and the immigrant proportion is increasing in many risk categories. While the DOHMH currently captures HIV prevalence and incidence data about the various ethnic categories in New York City, analyses of these multiple categories should be disseminated to community-based organizations and AIDS service organizations on a regular basis in order to enhance more specific and hence, more effective HIV intervention planning and service delivery.

Inclusion of 'Arab' and 'Middle Eastern' as Racial or Ethnic Categories: New York City has the largest Arab population of all American cities, according to Census 2000, although Arabs account for less than 1% of the city's population¹³⁰. About 28.8% of all Arabs living in the

¹²⁹ Herbst, JH, et al. Estimating HIV Prevalence and Risk Behaviors of Transgender Persons in the United States: A Systematic Review. *AIDS Behavior* 2008; 12(1):1-17.

¹³⁰ Salome, M. Arab Americans and HIV Prevention. UCSF Center for HIV Information. October 2005. accessed on 4/16/08 at <http://hivinsite.ucsf.edu/InSite?page=pr-rr-11>

United States identified themselves as Lebanese. Egyptians are the second largest Arab group (14.5%), followed by Syrians (8.9%), Palestinians (7.3%), Jordanians (4.2%), Moroccans (3.6%), and Iraqis (3.5%)¹³¹. Many of these Arab Americans are of mixed ancestry and have lived in the United States for most or all of their lives. However, the standard classifications used to describe race and ethnicity may obscure the classification of New Yorkers who are Arab or Middle Eastern. The terms 'Arabic' or 'Arab' can refer to someone's ancestry, language, or geographic origin. 'Middle Eastern' refers to someone who was born in the Middle East, a historical and political region. Without specific and appropriate classifications for Arab and Middle Eastern New Yorkers, it is difficult for service providers to gather relevant data which can be used to design effective HIV prevention programs for these populations¹³².

As with other ethnic groups, analyses of data about Arab and Middle Eastern New Yorkers should be disseminated to community-based organization and AIDS service organizations on a regular basis in order to ensure that the specific HIV/STI prevention needs of these culturally distinct populations are addressed.

¹³¹ U.S Census Bureau. We the People of Arab Ancestry in the United States: Census 2000 Special Reports. March 2005. accessed on 4/17/08 at www.census.gov/prod/2005pubs/censr-21.pdf

¹³² Ibid.

SECTION VI: AREAS OF SPECIAL INTEREST TO THE NYC PPG IN 2008: TRANSGENDER NEW YORKERS AND THE INTERSECTION OF MENTAL ILLNESS AND HIV

In 2008, the NYC PPG undertook the exploration of two issues of particular importance to members. To further their understanding of both the effect of HIV on transgender New Yorkers and the impact of infections within this group upon the epidemic in New York City, the NYC PPG introduced the Transgender Advisory Committee during the 2008 planning year. The NYC PPG also sought to broaden their understanding of the interaction of mental illness and HIV and so established an ad hoc committee on mental illness and HIV prevention.

Transgender New Yorkers

Since it started in 2008, the Transgender Advisory Committee has been meeting monthly. The group is co-chaired by two full members of the NYC PPG. Like the NYC PPG's other advisory Committee, People Living with HIV/AIDS (PLWHA), the Transgender Advisory Committee draws participants from throughout the city to advise the PPG on preventing HIV among transgender New Yorkers. Some of the advisory committee's goals are to:

- Develop an outreach strategy for recruiting new participants and increase attendance at the committee meetings in order to have better understanding of what services exist and what is needed.
- Provide community members and organizations serving transgender individuals with a space and forum to share their experience and lessons learned.
- Offer presentations to inform and educate the community about the needs of transgender individuals.
- Designate meetings during the year as open forums for providers to share lessons learned in working with the transgender community.
- Improve and enhance the transgender populations HIV prevention recommendations in the New York City Comprehensive HIV Prevention Plan so that they fully reflect the needs of transgender communities in NYC.
- Facilitate focus groups to increase knowledge of bio-psycho-social issues faced by transgender individuals.
- Incorporate focus group findings in recommendations for planning and delivery of HIV prevention services for transgender individuals in New York City.

In addition to the foregoing, the committee has reviewed and discussed several other issues including the shortage of epidemiological data about the HIV infection rate among transgender people in New York City; legal issues of particular concern to transgender people, and access to

services that meet the needs of transgender people including medical care, job training, HIV prevention services and behavioral interventions.

Currently, there are no effective behavioral interventions in the CDC compendium specifically for transgender people. Therefore, the advisory group continues to explore appropriate interventions examining most recently "T-GIRLS: Transgender Group Intervention Reaffirming Living Safely". This CDC-funded project is intended to develop and evaluate an intervention for transgender women, addressing the specific HIV and STD prevention needs of this high risk group. The "T-Girls" project examines the violence, prejudice and discrimination that often interfere with coping skills leading to risk taking behaviors and poor self care.

One of the biggest challenges facing the Transgender Advisory group is the lack of epidemiological data concerning the numbers and rates of HIV infections among the transgender community in New York City. This is a major obstacle to effective prioritization. The Advisory group works has worked closely with the Epidemiology and Field Services Unit's liaison to the NYC PPG as well as with the NYC PPG's Interventions Behavioral Sciences and Evaluation/Implementation Committee to find ways to obtain accurate data about the transgender population in New York City.

The Intersection of Mental Illness and HIV

In December, 2007, the NYC PPG voted unanimously to create an Ad Hoc Committee on Mental Health. The Committee was assigned two primary tasks. The first was to conduct an overall review of the data and research on HIV and mental health. The second task was, using the information obtained through the review, to develop NYC HIV Prevention Plan recommendations identifying the relationship between mental illness and HIV risk behaviors. In tandem with the efforts of the Ad Hoc Committee, and to support and inform its work, the NYC PPG's Women and Children Workgroup organized and convened a forum on the influence of trauma on HIV-related risk behaviors. In organizing the event, the Women and Children's Workgroup was joined by the Transgender Advisory Committee and the MSM and the Substance Use workgroups. Members of these groups as well as many other PPG members shared concerns about the ability of existing evidence based interventions to address the underlying mental health problems contributing to risk behavior. Dr. Gail Wyatt, the Director of the UCLA AIDS Institute and Associate Professor in the Department of Psychiatry and Behavioral Sciences at UCLA facilitated the forum."

The forum concentrated on the syndemic nature of co-occurring epidemics of psychosocial health problems and HIV among transgenders, women of color, and MSM. Many of these problems are precipitated by trauma, especially childhood sexual abuse, and are manifested by a variety of problems including binge drinking, street drug use, anxiety, intimate partner violence, sexual compulsivity, and depression.

Women

Research suggests that women are more likely than men to experience co-occurring mental health and substance abuse disorders¹³³. Depression and anxiety are two of the most prominent mental health conditions among women and are strongly linked to Childhood Sexual Abuse (CSA). During the forum, Dr. Wyatt observed that most HIV prevention interventions focus on consensual sex and drug related practices and teach skills to reduce unprotected sex. However, they do not take into account psychological distress resulting from trauma (e.g. post-traumatic stress disorder (PTSD), depression, and anxiety). Women with higher levels of emotional distress may be more likely to engage in the types of behaviors that put them at risk for HIV and other sexually transmitted diseases as a means of coping and may experience low self-efficacy, compulsivity, impulsivity, co-dependence, and feelings of hopelessness^{134, 135}.

Men that have sex with men

Research suggests that additive psychosocial health problems exist among urban MSM and that the interconnection of these problems function to magnify the effects of the HIV/AIDS epidemic in this population¹³⁶. Stigma and homophobia may contribute to the misuse of substances among MSM to cope. MSM also experience cultural silence about sex, homosexuality, and HIV which presents a barrier to addressing current or past mental health problems. Dr. Wyatt also described a variety of other issues faced by MSM including trauma, self-hatred, internalized homophobia (variegated by place of origin or culture), ostracism, physical abuse, and inter-racial and generational discrimination in the MSM community and the general population.

Research shows high rates of psychosocial stressors including verbal, sexual, and physical abuse leading to depression, suicidal tendencies, and risk-taking behaviors among young MSM. The CDC Young Men Survey (YMS) conducted in 1994-1998 found that the vast majority of school-based sex education programs do not address the concerns and questions of YMSM. CDC'S YMS also discovered that of those surveyed almost 90% of 15-22 year old MSM reported using alcohol, 66% reported use of illicit drugs, 29% used drugs on a regular basis, and 28% reported poly-drug use all within a 6 month period. In comparison to the general population the data showed that illicit drug use was much higher among this group of individuals¹³⁷.

Transgender

While transgender people frequently experience significant trauma, there are very few resources to help them address this. About 60% of transgender individuals know someone who has been attacked because of their trans status (on the street, in the course of sex work, or in other circumstances). Even within the Lesbian, Gay, Bisexual, and Transgender-focused medical and social service organizations, transpeople face discrimination, a lack of trans-sensitivity, and disrespect. Dr. Wyatt described the effects of this as "re-traumatization". The shortage of research

¹³³ National Institute on Drug Abuse, N. (1998). *Treatment of Drug-Dependent Individuals with Comorbid Mental Disorders*. Rockville, MD: National Institute of Drug Abuse.

¹³⁴ Morrill, A.C., Kasten, L., Urato, M., Larson, M.J. (2001). Abuse, addiction, and depression as pathways to sexual risk in women and men with a history of substance use. *Journal of Substance Abuse* 13 (1-2): 169- 184.

¹³⁵ Nyamathi, A.M. (1991). Relationship of resources to emotional distress, somatic complaints, and high risk behaviors in drug recovery and homeless minority women. *Research in Nursing & Health* 14(4): 269-277.

¹³⁶ This is the only reference? "(Am J Public Health, 2003)"?

¹³⁷ What's the reference for this?

about transgender people has left the community to battle the devastation of the epidemic ill-informed about the connection between mental health disparities and HIV/AIDS.

Interventions

Dr. Wyatt described two interventions that are showing significant progress in addressing trauma and childhood sexual abuse (CSA): ***Healing Our Women (HOW)*** and ***The Enhanced Sexual Health Intervention for Males***. These interventions are premised on 5 core elements.

1. Disclosure of childhood sexual abuse and trauma is central to making the link between childhood sexual abuse and HIV.
2. Processing of trauma reduces the effects of trauma.
3. Making the link between emotions and behavior reduces risk and re-victimization.
4. Awareness of culture, gender and spiritual beliefs enhances well-being.
5. Coping and resilience maintain health and well-being.

Each intervention is 11-sessions. They integrate a thorough assessment of physical and sexual abuse and focus on processing the trauma, teaching cognitive and emotional coping skills, and developing participant awareness of the cultural, gender, and spiritual beliefs that influence sexual decision-making. These interventions require trained staff and solid preparation for participants to manage the emotional risks confronted in working with issues related to trauma.

Recommendations

Forum participants divided into population-specific discussion groups and drafted a list of recommendations summarized here.

General Recommendations

- ◆ Keep in mind that working on mental health problems is a process that depends on building relationships over time.
- ◆ Ask about clients' support systems and implement inter-supportive networks and strategies.
- ◆ Ask clients about their environments since sometimes people want to change but the environments they live in are not conducive to change. Validate clients for trying.
- ◆ Be aware of non-verbal communication.
- ◆ Develop strong listening skills and strive to be open, flexible, and non-judgmental.
- ◆ Consider that people may engage in risky behavior for survival or to just feel loved.
- ◆ Use harm-reduction and risk-reduction techniques.
- ◆ Use motivational interviewing techniques and client centered counseling skills.
- ◆ Provide staff with support and opportunities for de-briefing.
- ◆ As part of their intake process, community based organizations need to ascertain sexual abuse and sexual compulsivity histories of their clients.
- ◆ The PPG needs to conduct more research and develop recommendations about the impact of sexual compulsivity on HIV risk.
- ◆ Assess community service providers' ability to deal with mental health issues.
- ◆ Strongly encourage referrals to organizations and individuals with the capacity to provide comprehensive mental health services.

- ◆ Understand the dynamics of sexually compulsive behavior as similar to binge drinking or drug misuse. Clear understanding of sexual compulsivity will make it easier to assess it, talk about it, and educate others about it.
- ◆ Assess clients for childhood sexual abuse, post-traumatic stress disorder, anxiety and depression.

Recommendations for Working with Women

- ◆ Understand clients' economic situations (children, bills, access to health insurance, etc.).
- ◆ Cultural dynamics may cause women to not feel that it appropriate to self-advocate when speaking with a male partner about sex.
- ◆ Have comprehensive discussions about sex.
- ◆ Create sex positive messages specifically targeting women.

Recommendations for Working with Men that have Sex with Men

- ◆ Recognize the effects of internalized homophobia, self-hatred, and fear of ostracism.
- ◆ Recognize that male-to-male sex is very diverse and many people may practice what others may consider "kinky" but may actually be a safer form of sexual expression.
- ◆ Validate healthy relationships between men whether intimate or platonic.
- ◆ Have comprehensive discussions about sex in a MSM- and sex-positive environment.
- ◆ Implement more trainings dealing with bias and cultural-competency in regards to MSM's
- ◆ Creating messages to raise the awareness of available mental health support for MSM.

Recommendations for Working with Transgenders

- ◆ Be keenly aware of trans-phobia and the need to respect of gender self-identification.
- ◆ Understand the importance of drawing critical distinctions when assessing trauma or abuse. Ask clients to detail whether trauma was due to their transgender identification or not.
- ◆ Create a trans-positive environment where clients are comfortable defining their "family", describing hormone therapies, and discussing whether gender reassignment surgery is part of their plans.
- ◆ Implement more trainings dealing with bias and cultural-competency about trans-gender individuals.
- ◆ Creating messages to raise the awareness of available mental health support for transgender people.