

# HIV PREVALENCE IN NEW YORK CITY, 2002

*Estimating the total number of people living with HIV and AIDS in NYC*

## What's in this report?

HIV in New York City.....	1
Surveillance of AIDS and HIV Infection .....	1
The Total Number of Persons Living with HIV and AIDS in NYC .....	1
How Did We Estimate the Number of Persons in the Population at Risk? .....	2
Derivation of Population Sizes.....	2
Estimated Number of New Yorkers Receiving HIV Testing Since January 1, 2000 .....	2
Estimated Number of People Living with HIV/AIDS in NYC .....	3
Calculation of the Overall Prevalence Estimate.....	3
Estimated Seroprevalence Proportions and PLWHA in Each Undiagnosed Population .....	4
Estimated Diagnosed but Not Reportable (Pre-6/2000) HIV Infections ..	4
Estimated Diagnosed but Unreported HIV Infections .....	4
Number of PLWHA as Enumerated by HARS .....	4
Summary .....	4
References .....	4

## HIV IN NEW YORK CITY

On June 5, 1981, the Morbidity and Mortality Weekly Report (MMWR) of the federal Centers for Disease Control and Prevention (CDC) reported an unusual cluster of cases of *Pneumocystis pneumonia* from Los Angeles.<sup>1</sup> One month later, 26 cases of disseminated Kaposi's Sarcoma were reported, 20 from New York City.<sup>2</sup> Both conditions, generally seen only in severely immunocompromised or aged individuals, were diagnosed in previously healthy young men.

These were the first cases of what came to be known as AIDS, a disease that has claimed the lives of over 500,000 Americans and 83,000 New Yorkers and has raged uncontrolled throughout the developing world. Over twenty years later, New York City has the oldest, largest, and most heterogeneous epidemic in the U.S. By the end of 2002, more than 135,000 NYC residents had been diagnosed with AIDS. The city has the highest AIDS case rate (number of persons with AIDS per population) in the nation. AIDS has stricken New Yorkers of both genders, and all ages, races, and socioeconomic strata.

Despite more than two decades of HIV prevention, and despite public awareness of safe sex and safe injection, New Yorkers continue to become infected with HIV and to die of AIDS. In 2002, the second full calendar year of HIV reporting, 5,417 persons were diagnosed with HIV and 4,059 with AIDS. 1,744 people died of HIV-related causes. One quarter of the new HIV cases did not know they were infected with HIV until they developed AIDS. That is, they were not tested until they had already reached an advanced stage of disease, possibly ten or more years after they were first infected. During this time they missed the opportunity to take advantage of the effective HIV primary care that is available and may have unwittingly transmitted their infections to others. Late diagnosis represents a failure of the medical, diagnostic and public health systems to facilitate early detection. It is important to know the size and characteristics of this population so that prevention and care services can be targeted specifically to it.

## SURVEILLANCE OF AIDS AND HIV INFECTION

In 1983 New York State mandated named reporting of AIDS diagnoses through an emergency amendment to the state sanitary code. On June 1, 2000, the state implemented a 1998 law mandating named reporting of HIV infection and HIV-related clinical and laboratory events. Under the new law, clinical providers are required to report new diagnoses of HIV and HIV-related illness in previously unreported individuals.

Laboratories must report all positive Western Blot, CD4<500 and detectable viral load results. Information on NYC cases is verified by the NYC Department of Health and Mental Hygiene and entered into a secure database known as the HIV/AIDS Reporting System (HARS).

AIDS case reporting monitors the end stage of HIV infection. Its limitation is that it represents seroconversions that may have occurred many years prior to the AIDS diagnosis. Improvements in HIV primary care, prophylaxis of opportunistic infections, and, most dramatically, the introduction of highly active antiretroviral therapy (HAART), have lengthened the period between seroconversion and development of AIDS. Moreover, after the 1993 expansion of the AIDS case definition AIDS case rates could no longer reliably be used to back-calculate HIV incidence.<sup>20,21</sup> The introduction of named HIV reporting makes it possible for the first time to enumerate the leading edge (HIV) as well as the trailing edge (AIDS) of the epidemic. Accurate surveillance of HIV is key to our ability to understand epidemic trajectory and to plan and provide prevention and care services for all New Yorkers who need them. This publication presents our current best estimate of the total number of PLWHA in NYC as of December 31, 2002. As new behavioral and prevalence data become available, they will be incorporated into future estimates.

## THE TOTAL NUMBER OF PERSONS LIVING WITH HIV AND AIDS IN NYC

Despite the introduction and successful implementation of HIV reporting, routine surveillance does not account for all New Yorkers that are infected with HIV. The estimated total number of persons living with HIV/AIDS (PLWHA) is derived from two sources: the number of *known* (reported) infections and *projections* (estimates) of undiagnosed and unreported infections. The gaps occur in the following categories:

(1) *Persons who are infected but untested and therefore undiagnosed.* CDC estimates that approximately one quarter of prevalent HIV nationwide remains undiagnosed because the infected person has not yet been tested for HIV. 25% of new HIV infections diagnosed in NYC in 2000-2002 were reported in persons already meeting the AIDS case definition. The proportion of persons first learning of their HIV infection at the time of AIDS diagnosis has remained stable nationwide at approximately 25% for over a decade. Persons who are untested and undiagnosed are not reported to HARS.

HARS is population-based only to the extent that the population receives testing for HIV. This is a more prominent issue for reporting of HIV infection, where persons may remain symptom-free for a decade or more, than for AIDS. AIDS case reporting is considered to be relatively complete, at least for people with opportunistic infection who by definition are acutely sick and will seek care, ultimately leading to diagnosis and a case report. Persons who meet the AIDS definition by the immunologic criterion alone may or may not be acutely ill.

(2) *Persons who were diagnosed prior to June 1, 2000 and have not experienced a subsequent reportable laboratory or clinical event.* Persons who were diagnosed prior to June 1, 2000, and who have not subsequently had a reportable event, and persons who tested at any time anonymously either before or after June 1, 2000, and did not "convert" their anonymous test to a confidential test (required for eligibility for benefits or care), have not been reported. Persons diagnosed prior to June 1, 2000, may have no reportable laboratory event because they are not in care (laboratory tests must be ordered by a physician or other health care provider) or because they are in care, have achieved durable viral suppression on HAART, or are among the small proportion of persons classified as natural non-progressors.

(3) *Persons who were diagnosed before or after June 1, 2000 but are not yet reported or counted.* A steadily decreasing percentage of persons diagnosed either before or after June 1, 2000, is unreported or uncounted because the provider or laboratory did not report the case or because of technical failure of the reporting system.

## HOW DID WE ESTIMATE THE NUMBER OF PERSONS IN THESE THREE CATEGORIES?

HIV prevalence varies by demographic subgroup, and the prevalence of *unknown* HIV in these subgroups also varies because their testing rates vary. We used a combination of census, research and surveillance data to derive: (1) the estimated population sizes for the subgroups, (2) the estimated proportion receiving HIV tests and (3) the estimated prevalence ranges. We used surveillance data to estimate the number of diagnosed but unreported persons. These data sources are explained in the sections that follow.

The overall estimate of PLWHA in NYC is the sum of four categories of cases, known and estimated:

- 1. Known** PLWHA that have been diagnosed and reported to HARS and are presumed to be living according to NYC Vital Statistics and the National Death Index. Because newborn testing is mandatory in NY State, HARS is presumed to include all perinatally transmitted infections and all infected childbearing women.
- 2. Estimated** cases diagnosed with HIV prior to the introduction of named reporting who have not had a reportable clinical or laboratory event since HIV reporting began.
- 3. Estimated** cases who have had a reportable event but were not reported to HARS due to laboratory or provider error or a technical problem with data transmission.
- 4. Estimated** HIV+ persons who have not yet been tested for HIV and therefore have not yet been diagnosed and reported.

## DERIVATION OF POPULATION SIZES: UNTESTED PERSONS

### *New York City Residents Aged >=13 years*

The base population was derived from 2000 US Census data showing the population of New York City residents aged >=13 years to be 6,578,603. The base census distribution was 3,514,252 women and 3,064,349 men.

### *Populations at Risk for HIV Infection*

The NYC population was classified into three CDC-defined categories of transmission—heterosexual transmission, sexual transmission by men who have sex with men (MSM), and injecting drug use (IDU). Each was further divided into two or more subpopulations based on risk gradient. All adults were assigned to only one risk category. The sexual risk distributions were based on results of the 2002 New York City Community Health Survey (CHS), a geographically stratified random digit-dialing household telephone survey of 9,674 persons aged 18-64. The population of MSM was calculated based on self-reported sex with men or women (10%) by male CHS respondents by race (6-14%). The population of IDU was taken as the midpoint (162,500) of the estimated 150,000-175,000 IDU in NYC. IDU were distributed as 70% male and 30% female.

The heterosexual population was divided into three subpopulations—persons aged 13-20, persons aged 21-64 and persons aged 65+. Heterosexuals aged 21-64 were further divided into a high-risk category vs. a general population category. The high-risk heterosexual category contains three subcategories: (1) 23.8% of male and 11.3% of female heterosexual CHS respondents were at high risk because they reported 2 or more sex partners. (2) 54,228 cases of STD were reported to the Department of Health in 2001; 66% of them were among males, 34% among females. Many STDs are clinically diagnosed and not reported, and other STDs are not reportable; thus the true STD incidence in NYC is unknown. We doubled the reported STD cases and used the STD clinic risk distributions to estimate that 86% are heterosexual (non-MSM, non-IDU). (3) Women terminating pregnancy were placed in the high-risk category because the pregnancy is an indicator of at least one unprotected sexual encounter.

Among 21-64 year-olds, the female heterosexual population was derived from the base census population minus 1.6% women reporting sexual contact exclusively with women. The 124,023 women giving birth were also removed from the estimate because they are routinely tested for HIV, and thus reported to HARS. 243,608 women were placed in the high-risk category based on 11.3% of heterosexual women meeting the high-risk definition. Another 0.9% representing female IDU were removed. IDU are at risk both for parenteral and sexual transmission but are assigned to the IDU category.

Among 21-64 year-olds, the male heterosexual population was derived from the base census population minus 2.1% male injecting drug users and MSM as self-reported on the 2002 NYC CHS. 434,356 men (23.8%) were classified into the high-risk heterosexual category based on the definition above.

Adolescents and those aged 65 and older are listed separately as lower-risk populations because their known prevalence proportions are lower than those in persons aged 21-64.

The MSM population was subdivided into two categories. The first represents MSM who self-identify as gay or bisexual; it is broken down by race per the CHS. The second category represents MSM that do not self-identify as gay or bisexual, that self-identify as straight, or do not acknowledge contact with men or define it as sexual. The size of this population ranges from 5-25% of MSM (midpoint=15%); it is derived from behavioral risk and sexual orientation data from the NYC DOHMH Young Men's Survey, 1997-2000, the STD Clinic Blinded Serosurveys, 1990-1999, the HIV Testing Survey 2000-2002, the CHS, and data gathered during the qualitative phase of a new epidemiologic survey of black MSM. Not enough data exist to permit a race/ethnicity breakdown of this population.

## ESTIMATED PROPORTION OF NEW YORKERS RECEIVING HIV TESTING SINCE JANUARY 1, 2000

### *HIV Testing Among Heterosexual Men and Heterosexual Women*

The NYC CHS was the source of the estimates on history of HIV testing city-wide for heterosexual men and women aged 21-64. 29% of heterosexuals overall, 30% of heterosexual women, and 27% of heterosexual men reported a history of HIV testing since January 1, 2000. All women carrying pregnancies to term receive HIV antibody testing before or at delivery through the New York State Comprehensive Newborn Screening Program. The HIV seroprevalence rates among women carrying pregnancies to term and those terminating pregnancy were parallel through four separate annual measurements conducted in 1989-1996 by the NYC DOHMH. The proportion of adolescents tested was derived from CHS and HITS data for persons aged 18-20 and assumes a linear decrease in proportion tested for each younger year. The population over 65 was assigned the testing rate of the non-MSM CHS respondents not reporting high-risk behaviors. Among high-risk heterosexuals with 2+ sexual partners in the past year, 41.3% of males and 47.3% of females reported an HIV test since January 1, 2000 on the CHS. The percent of women aged 18-44 reporting an HIV test since 1/1/2000 (48.4%) was used to estimate testing by women electing to terminate pregnancies. Approximately 50% of STD cases are estimated to have been tested based on data from the HIV Testing Survey.

### *HIV Testing Among Men who have Sex with Men*

Multiple data sources were used to estimate the proportions of MSM with an HIV test since January 1, 2000. 48% of MSM respondents to the NYC CHS, 82% of MSM respondents to the Young Men's Survey (NYC DOHMH 1997-2000), and 85% of MSM respondents to the HIV Testing Survey (NYC DOHMH 2000-2002) reported a history of HIV testing within the two years prior to their survey participation. The range was therefore calculated as 48-85%, representing a community sample at the lower end and high-risk samples at the higher end. The midpoint was selected as the proportion tested for each race of MSM. The testing rate for the second category of MSM, those who are not gay or bisexual or do not acknowledge same sex contact, was assumed to be the same as the test rate of heterosexual men responding to the CHS.

### *HIV Testing among Injecting Drug Users*

The NYC DOHMH HIV Testing Survey 2000-2002 was used to estimate the proportion receiving HIV testing among IDU stably connected to drug treatment and social services, where HIV risk reduction interventions are provided and HIV testing is routine. 15% of IDU are presumed not to be stably connected to such services and thus to have unknown test rates. IDU not in stable services include "dually diagnosed" individuals with mental illness and chemical dependency, homeless and other marginalized persons. IDU not connected to drug treatment or social services receive services for acute medical conditions in hospitals and/or within correctional facilities; the rate of ascertainment is estimated here as the proportion of non-MSM males reporting a high-risk behavior in the CHS who had been tested for HIV in a hospital or emergency room setting or prison since the beginning of 2000 (11.1%).

## CALCULATION OF THE OVERALL PREVALENCE ESTIMATE

HIV prevalence varies by demographic subgroup, and the prevalence of unknown HIV in the subgroups varies. We estimated the size of the subgroups, the percent receiving HIV tests, and the prevalence of HIV in each subgroup. The total NYC HIV prevalence is the sum of the estimated prevalence in each of the three unknown categories added to the known (reported) cases of HIV and AIDS, that, as of October 1, 2003, were presumed to be living through the quarterly HARS: NYC Vital Statistics: National Death Index match. For purposes of this report the prevalence was estimated by distributing the subpopulation(s) in each category and multiplying the estimated population size by the estimated prevalence proportions. A high estimate and a low estimate, based on the range of prevalence estimates derived from research and surveillance sources, have been offered for each population. The calculations and their components are found in the table; the data sources are cited in the various sections on pages 2 and 4.

## ORGANIZATION OF THE PREVALENCE TABLE

The table is organized into four sections. The first three sections represent estimates. Section 4 represents cases reported to surveillance as of December 31, 2002.

The section headings are:

- 1: Untested/undiagnosed adults**
- 2: Diagnosed, not reportable**
- 3: Diagnosed, not reported**
- 4: Known cases**

## ESTIMATED NUMBER OF PEOPLE LIVING WITH HIV/AIDS IN NEW YORK CITY

Population	N	% Tested <i>since 1/1/00</i>	N Untested	Prevalence (%) <i>Low Estimate</i>	Prevalence (%) <i>High Estimate</i>	N HIV+ <i>Low Estimate</i>	N HIV+ <i>High Estimate</i>
<b>(1) UNTESTED/UNDIAGNOSED ADULTS</b>							
Heterosexuals (ages 13+)							
A) Adolescents (13-20) <sup>3,4,19</sup>							
Women	410,875	39.5%	248,579	0.01%	0.05%	25	124
Men	423,693	9.9%	381,790	0.01%	0.04%	38	153
B) High risk, ages 21-64							
<i>Two or more sexual partners<sup>4</sup></i>							
Women	244,453	47.3%	128,900	0.5%	1.0%	645	1,289
Men	419,414	41.3%	246,028	0.5%	1.3%	1,230	3,198
<i>Diagnosed with STDs<sup>17</sup></i>							
Women	31,344	50.0%	15,672	0.5%	1.1%	78	166
Men	60,844	50.0%	30,422	0.5%	1.7%	152	520
<i>Women electing to terminate pregnancies</i>	91,792	48.4%	47,337	0.01%	0.5%	5	237
C) Adults ages 21-64 not meeting high-risk definition <sup>3,7</sup>							
Women	1,913,122	30.4%	1,330,768	0.01%	0.5%	133	6,654
Men	1,343,570	27.4%	975,297	0.01%	0.5%	98	4,876
D) Ages 65 and over <sup>3,4</sup>							
Women	577,904	10.7%	516,068	0.0009%	0.02%	5	103
Men	359,953	16.4%	300,921	0.0060%	0.09%	18	271
MSM (gay/bisexual identified) <sup>9-12</sup>	275,512						
White	123,407	67.3%	40,354	3.1%	10.6%	1,251	4,278
Black	37,136	66.1%	12,589	8.9%	28.0%	1,120	3,525
Hispanic	93,639	72.2%	26,032	6.6%	19.0%	1,718	4,946
Other	21,330	64.1%	7,658	4.7%	10.5%	360	804
MSM (non-gay/bisexual identified) <sup>4, 9,12,13</sup>	48,620	27.4%	35,293	5.5%	16.0%	1,941	5,647
Injecting Drug Users	162,500						
In Services <sup>8,12,14</sup>	138,125	92.0%	11,050	7.0%	20.0%	774	2,210
Not in Services	24,375	11.1%	21,660	7.0%	20.0%	1,516	4,332
<b>TOTAL UNDIAGNOSED HIV+</b>						<b>11,106</b>	<b>43,333</b>
<b>(2) DIAGNOSED &lt;6/2000, NOT REPORTABLE</b>							
	N			<i>Low Estimate</i>	<i>High Estimate</i>	<i>N HIV+ Low Estimate</i>	<i>N HIV+ High Estimate</i>
Not in care by Dec 31, 2002		12-16% of reported living HIV (non-AIDS) cases		12.0%	16.0%	3,567	4,982
In care, no reportable event		10-20% of reported living HIV (non-AIDS) cases		10.0%	20.0%	2,906	6,540
<b>TOTAL DIAGNOSED &lt;6/2000 AND NOT REPORTABLE</b>						<b>6,473</b>	<b>11,522</b>
<b>(3) DIAGNOSED, NOT REPORTED</b>							
	N			<i>Low Estimate</i>	<i>High Estimate</i>	<i>N HIV+ Low Estimate</i>	<i>N HIV+ High Estimate</i>
HIV+		7-12% of reported living HIV (non-AIDS) cases		7.0%	12.0%	1,969	3,567
AIDS dx <sup>16</sup>		5-7% of reported living AIDS cases		5.0%	7.0%	2,879	4,118
<b>TOTAL DIAGNOSED AND NOT REPORTED</b>						<b>4,848</b>	<b>7,685</b>
<b>TOTAL UNDIAGNOSED OR UNREPORTED</b>						<b>22,428</b>	<b>62,540</b>
<b>(4) KNOWN CASES (INCLUDES ALL CASES UNDER AGE 13 DUE TO COMPLETE ASCERTAINMENT OF PERINATALLY TRANSMITTED INFECTIONS)</b>							
				<i>% of known cases</i>	<i>N HIV+</i>	<i>N HIV+</i>	
Male				69.3%	56,070	56,070	
Female				30.4%	24,598	24,598	
Black				44.0%	35,596	35,596	
Hispanic				31.8%	25,754	25,754	
White				21.5%	17,404	17,404	
Other/Unknown				2.6%	2,108	2,108	
MSM				25.9%	20,920	20,920	
IDU				25.5%	20,586	20,586	
Heterosexual				17.9%	14,458	14,458	
Perinatal				2.9%	2,381	2,381	
Transfusion history				0.6%	451	451	
Unknown/under investigation				27.3%	22,066	22,066	
<b>TOTAL DIAGNOSED AND REPORTED</b>					<b>80,862</b>	<b>80,862</b>	
<b>TOTAL PEOPLE LIVING WITH HIV/AIDS IN NYC<sup>5</sup></b>						<i>Low Estimate</i>	<i>High Estimate</i>
						<b>103,290</b>	<b>143,402</b>

## ESTIMATED SEROPREVALENCE PROPORTIONS AND PLWHA IN EACH UNDIAGNOSED POPULATION

The seroprevalence ranges for heterosexual men and women were derived from testing of unique individuals in NYC clinic and blood donor serosurveys, aggregate HIV prevalence proportions reported by commercial and public laboratories, and the NY State Comprehensive Newborn Screening program, which ascertains maternal serostatus for all newborn infants. The range is 0.01% (first time blood donors)-0.5% (childbearing women [CBW]) for the general heterosexual population aged 21-64. The range for high-risk heterosexuals aged 21-64 has a lower limit of 0.5% (CBW) and an upper limit of 1.1/1.7% (STD clinic). For adolescents the lower limit is 0.01% (blood donors), and the upper limit is 0.04/0.05% (NYC military recruits aged 17-18). The MSM estimates were derived from serologic testing of self-identified gay or bisexual MSM in (1) STD clinics, (2) the NYC and NYS public laboratories, and (3) the Young Men's Survey, and self-reported serostatus in MSM responding to the HIV Testing Survey (9% in bisexual and 14% in exclusively homosexual men). The overall prevalence range is 5.5% (STD)-16% (YMS); ranges for each race/ethnicity category are derived from the same sources. The range is the same for non-gay/bisexual-identified MSM because although high-risk contacts may be more prevalent, fewer opportunities are available for non-identified than for gay or bisexual-identified MSM.

The seroprevalence estimates for IDU connected to services were derived from serologic testing of IDU at STD Clinics (7%), self-reported HIV serostatus by IDU in the HIV Testing Survey (19%), and IDU tested at the Beth Israel Medical Center Chemical Detoxification Center, 2002 (20%).

## ESTIMATED DIAGNOSED BUT NOT REPORTABLE (PRE-6/2000) HIV INFECTIONS

Persons diagnosed prior to June 1, 2000, and having a reportable laboratory event subsequent to June 1, 2000, will be reported to HARS and, if alive, included in the counts of known PLWHA. The proportion of persons diagnosed prior to June 1, 2000, having no subsequent reportable clinical or laboratory event because they were not in care as of December 31, 2002, was estimated at 12-16% using currently available data on timing of entry into care after diagnosis for HIV (non-AIDS) reported to HARS. The estimate

of persons diagnosed prior to June 1, 2000, in care, and experiencing no subsequent reportable clinical or laboratory event because they have successful viral suppression on HAART or are defined as 'natural non-progressors' is derived from the Adult Spectrum of Disease (ASD) study, a longitudinal prospective chart review initiated in 1992.

## ESTIMATED DIAGNOSED BUT UNREPORTED HIV INFECTIONS

A final category is composed of persons who are diagnosed with HIV or AIDS and who remain unreported because of deficits in provider or laboratory reporting or technical problems with transmission of data to HARS. The estimates for unreported HIV infection are higher than those for AIDS because (1) the system is new and, despite widespread publicity and educational campaigns to mandated reporters, not all providers are aware that HIV as well as AIDS diagnoses must now be reported; (2) some providers may believe that the reporting is handled by the testing laboratory; (3) there may be lingering confusion about the type of event that must be reported, particularly in the case of longstanding HIV that is not progressing; (4) laboratories may fail to key in or scan a test, or may fail to transmit data for an interval of time; and (5) software issues with electronic transfer of data between the city and state health departments are still being refined. Three years after implementation of provider and laboratory reporting of HIV infection, provider compliance has improved and the majority of the technical problems with the computer systems have been resolved. There have also been continuous improvements in the completeness and timeliness of laboratory reporting due to quality assurance systems introduced by the state and city and outreach to laboratories. As the system matures, the number of diagnosed but uncounted cases is expected to continue to decline. It is currently estimated that AIDS case reporting is 93%-95% complete, and HIV reporting is 88-93% complete within 9 months of diagnosis date.

## NUMBER OF PLWHA AS ENUMERATED BY HARS

The number of known PLWHA cited is that published by the HIV Epidemiology Program of the NYC Department of Health and Mental Hygiene in the 4th Quarter Report dated October 1, 2003. The data include cases diagnosed through December 31, 2002 and reported through September 30, 2003. The table shows total known PLWHA broken down by sex, race, and risk factor.

## SUMMARY

Our analysis suggests that there are between 103,290 and 143,402 New Yorkers living with HIV/AIDS (1.3 - 1.8% of the city's population). The estimates demonstrate the high burden of undetected HIV in NYC. Their wide range is a function of the limitations of the data on the size and composition of each population and its HIV prevalence range.

CDC estimates that approximately 25% of HIV in the U.S. is undiagnosed and unreported. Applying CDC's estimate to NYC, the city's total PLWHA would be 107,816—a figure that is consistent with the range presented here and one that suggests the best estimate may be closer to our lower boundary than our higher boundary.<sup>15</sup> Readers will note that the prevalence ranges for Section 1, "Untested/Undiagnosed Adults," are derived from prevalence proportions of tested populations. With the possible exception of persons screened by insurance companies and those screened via their blood donations, the majority of persons electing HIV testing do so because they perceive themselves to be at risk for HIV. Their prevalence therefore represents a higher risk profile than that of the general population.

Moreover, since the majority of known HIV occurs in populations at risk via sexual or blood-borne transmission, the majority of estimated HIV appears in these risk categories as well. The 'background' prevalence is also a factor – for example, in some heterosexual populations STD incidence and prevalence are high, yet HIV incidence and prevalence have remained relatively low to date. All of these factors favor an estimate that is closer to our lower than our higher boundary.

An additional limitation is that the size and composition of the populations at risk are estimates derived from self-reported risk by respondents to the CHS. Some populations at risk for sexual transmission are more difficult to define and enumerate than others, e.g., persons who by behavior are MSM but by self-identification are heterosexual men. The estimates offered are those based on the best data that are available at this time; as new information is received, it will be incorporated into future estimates. It is also expected that the city's campaign to encourage HIV testing and the availability of rapid testing will increase the number of known HIV infections in previously undiagnosed persons, thereby gradually reducing the size of the "untested /undiagnosed" pool.

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