

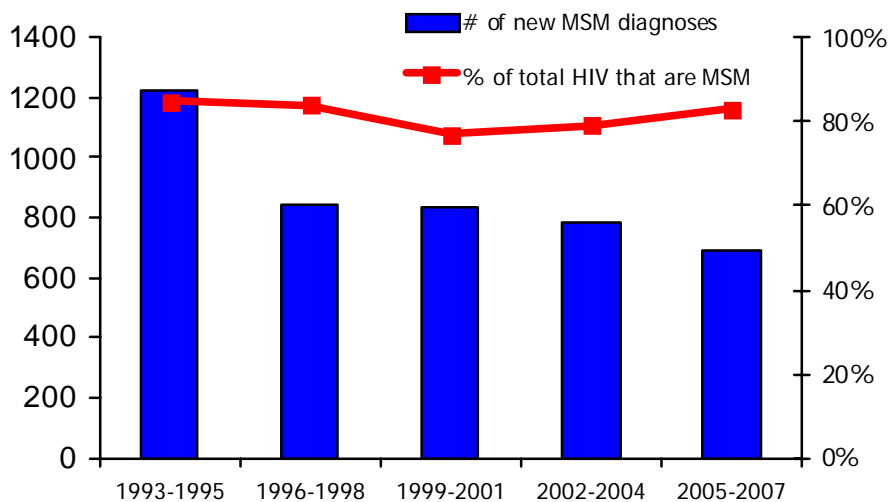
## Facts about... HIV/AIDS in Men Who Have Sex With Men

**Summary:** Men who have sex with men (MSM) were affected earliest by HIV/AIDS, have the most new HIV/AIDS diagnoses, and have the largest numbers of people living with HIV/AIDS. In King County, 82% of people living with HIV/AIDS are MSM, including MSM who have injected drugs (MSM-IDU). The proportion of HIV diagnoses who are MSM increased from 77% to 83% from 1999-2007. Of nearly 6,300 people living with HIV in King County, about 4,900 were MSM.

### Trends (Figure 1):

- King County data show only minor changes in the proportion of HIV diagnoses for MSM from 1993 to 2007.
- The numbers of newly reported HIV diagnoses decreased from an average 400 per year to about 250 per year in MSM from 1993 to 2007.
- From 1999 through 2007 the proportion of new HIV cases in MSM, including MSM IDU, has increased.
- MSM account for over three-quarters of all HIV diagnoses.
- The proportion of new HIV diagnoses among MSM not injecting drugs increased from 70% of those with known risk 1999-2001 to 72% 2005-2007.
- The proportion of new HIV diagnoses among MSM-IDU increased from 7% to 11% of all diagnoses with known risk between 1999 and 2007.

**Figure 1: Number and percent (%) of new HIV diagnoses among MSM**



- A higher proportion of HIV cases diagnosed among residents of the City of Seattle have been MSM or MSM-IDU (81%) compared to residents of King County outside of Seattle (62%).
- Hispanic MSM make up an increasing proportion of all MSM cases. The proportion of all MSM cases who are Hispanic increased from 9% in 1999-2001 to 13% in 2005-07. Meanwhile the proportion of people who were diagnosed with HIV of Hispanic ancestry who were MSM increased from 73% to 87%.

**Population of MSM in King County:** Public Health-Seattle & King County (PHSKC) estimates the current number of MSM as approximately 41,000, including 39,000 MSM without and 2,000 MSM with a recent history of injection drug use<sup>1</sup>.

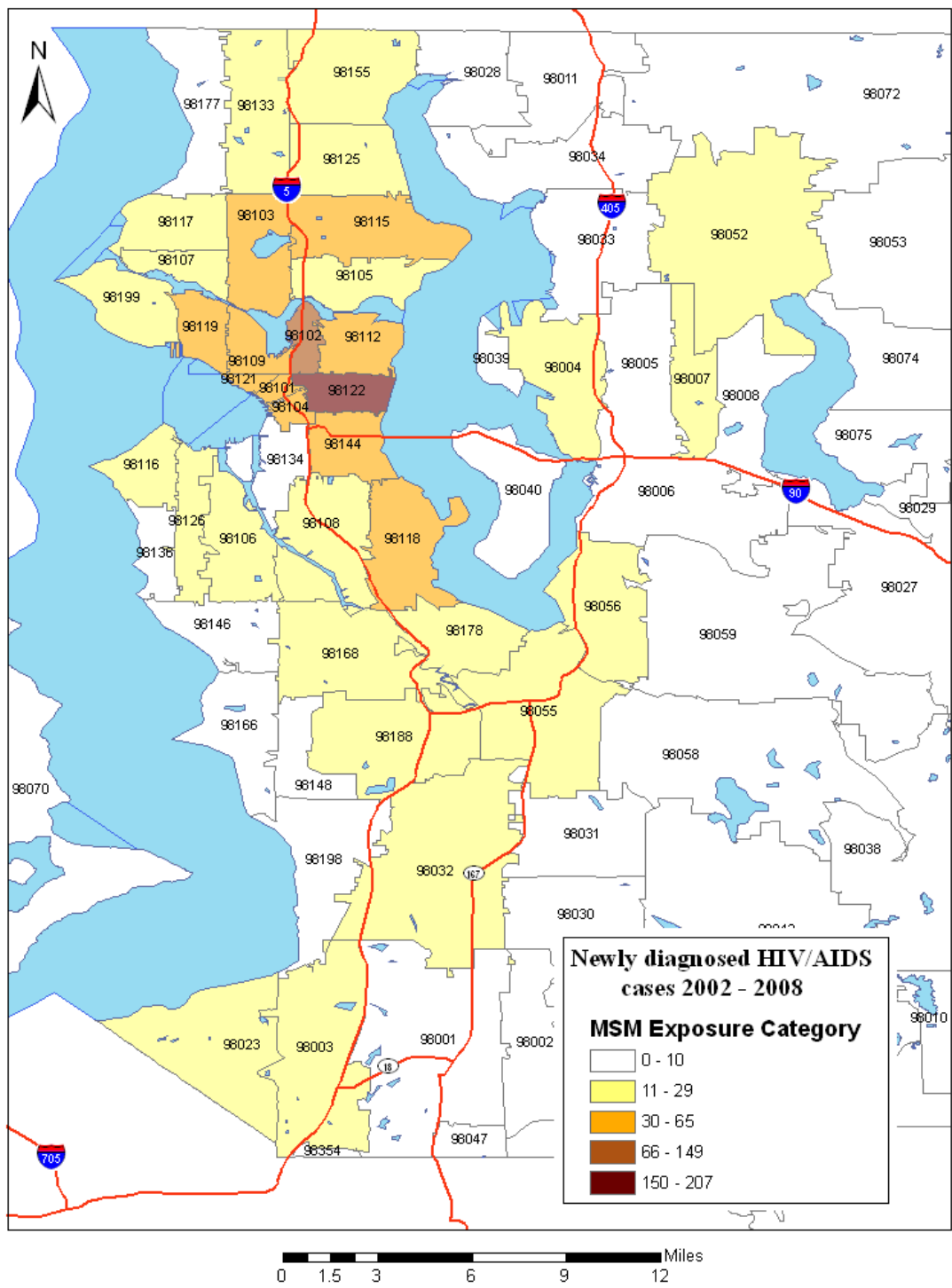
**HIV prevalence:**

- Among 6,283 people reported with HIV or AIDS in King County and presumed alive as of June 30, 2008, 74% of those with known risk are MSM (excluding MSM-IDU) and 9% are MSM-IDU.
- Local HIV prevalence estimates range from 13 to 16% for MSM overall. The estimate among MSM-IDU is 20-29%, and among MSM without an IDU history, 11-15% are infected.
- In the National HIV Behavioral Surveillance MSM survey conducted in 2008, 368 King County MSM were identified through by venue-based sampling and interviewed. A total of 56 (16%) were HIV-infected, 86% of whom already knew of their HIV infection.
- The prevalence of MSM in King County has probably increased over the past 10 years as people are living longer with HIV due to effective treatments. Two projects gave conflicting results.
  - Random digit dialing surveys conducted among Seattle MSM in 1992, 2003, and 2006 showed a small decline in the proportion of HIV-infected MSM who knew their HIV status: 19%, 15%, and 14% respectively.
  - A blinded analysis of remnant sera from MSM at the PHSKC Sexually Transmitted Disease (STD) Clinic showed that HIV prevalence rose from a low of 5% in 1997-1998 to 13% 2003-2004.
- Additional results from the 2003-2004 STD blinded HIV seroprevalence surveys include:
  - 12% seroprevalance among MSM who did not inject drugs and 28% among MSM-IDU.
  - 6% in MSM age 20-29 years; 18% in MSM age 30–39 years and 21% in MSM age 40+ years.
  - 11% in those without a diagnosis of gonorrhea relative to 31% with gonorrhea.
  - 29% of black MSM relative to 12% of white MSM and 10% of Hispanic MSM.
  - An estimated 85% of HIV+ MSM knew their status after the visit.

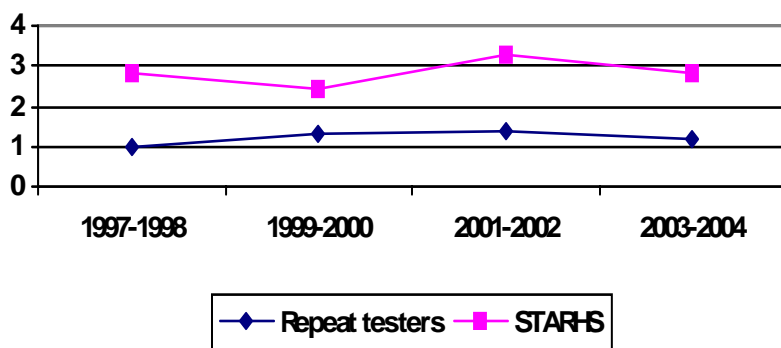
**HIV incidence (Figures 2 and 3):**

- HIV incidence (the number of new infections) was estimated at publicly-funded HIV test sites in King County by examining sera of MSM who had two or more HIV tests 1997-2004 (Figure 2). The sites included the Harborview STD Clinic, Public Health-Seattle & King County testing sites, and one community clinic. At these sites, the incidence appears to have remained fairly stable over those 8 years, between one and two infections per 100 MSM per year.
- HIV incidence was also estimated at publicly funded sites in King County by applying STARHS (serologic testing algorithm for recent HIV seroconversion). STARHS combines two tests on a single serum sample to identify probable recent HIV infection. STARHS results suggest about three per 100 MSM become infected with HIV each year. There was no significant change in incidence from 1997 to 2004 (Figure 3). Within each two year period at least 4,000 MSM were tested for HIV. The higher incidence measured by STARHS relative to that among repeat testers may suggest HIV-infected MSM were less likely to have prior HIV tests relative to MSM uninfected with HIV.
- New diagnosis of HIV infection is concentrated among MSM living in the Capitol Hill zip code 98122, with over 150 during the period 2002-07 (Figure 2). Residents of the Eastlake zip code 98102 had the second highest number of new diagnoses.

**Figure 2: Number of new HIV diagnoses among MSM in King County (2002-2008) by zip code**



**Figure 3: HIV incidence in MSM**



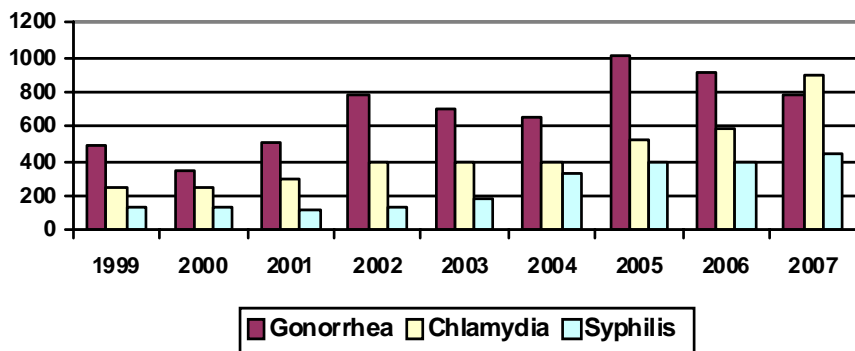
**Behavioral risks:**

- In a 2006 random digit dialing survey of MSM, 7% of HIV-negative MSM and 22% of HIV-positive MSM recently engaged in behaviors that placed them at high-risk for acquiring or transmitting HIV (non-concordant unprotected anal sex). These proportions are slightly lower than those from a similar survey<sup>2</sup> in 2003 where 10% of HIV-negative and 31% of HIV-positive men engaged in unprotected sex with a partner of unknown or non-concordant HIV status.
- Health department counseling and testing data between 1993 and 2006 indicate that the proportion of MSM with two or more sexual partners in the past two months increased between 1993 and 1999 (from 24% to 34%), but has been level from 2000 through 2006 (around 36%).
- In the Seattle Area Men's Study (SAMS), 32 newly infected MSM were interviewed and compared to 110 MSM who had recently tested negative for HIV. Among those newly infected with HIV, 34% had used methamphetamine during unprotected anal intercourse during the previous six months relative to 13% of MSM without HIV infection. Poppers were also used more frequently by newly HIV-infected MSM relative to uninfected MSM, 44% versus 22%.
- An anonymous survey in 2006 showed 44% of 276 MSM reported using poppers (amyl nitrate), but HIV-infected men had a much reduced rate of use relative to uninfected men (19% versus 72%).

**Trends in sexually transmitted infection rates as an indicator of HIV risk (Figure 4):**

- The presence of a sexually transmitted infection (STI) increases the likelihood of HIV transmission by two-fold to five-fold according to the Centers for Disease Control and Prevention (CDC). STIs are a marker for high risk sexual behavior, including both the risk of acquiring and transmitting HIV.
- After a low point in 1996 (not shown) the incidence rate of syphilis has increased dramatically among MSM in King County. Chlamydia and gonorrhea rates have also increased, partially due to more comprehensive screening and ascertainment of MSM status. (Figure 3)
- Early syphilis incidence rates 1999–2007 for HIV-infected MSM were four to five times higher than rates for HIV-uninfected MSM (Figure 4).
- Of 194 syphilis cases in 2007 in King County, 188 (97%) were in MSM. Among the 188 MSM diagnosed with early syphilis in 2007, 57% had known HIV infection.
- In 2007, the estimated rates of gonorrhea, chlamydia and syphilis among MSM were 786, 971 and 436 cases per 100,000, respectively. (Rates of these infections among heterosexuals were 60, 294, and 0.33 per 100,000, respectively.)
- Of 180 MSM in the 2006-2007 Care and Prevention survey, 6% reported a diagnosis of syphilis; 5% Chlamydia; 3% gonorrhea; 12% herpes; and 9% were diagnosed with genital warts in the last year.

**Figure 4: Sexually transmitted infection incidence per 100,000 MSM**



**Subgroup highlights:**

**Young MSM (Table 3):**

- Young MSM are at high risk of acquiring HIV. Data from Public Health – Seattle & King County HIV/AIDS surveillance indicate that of 4,929 HIV-infected MSM presumed alive as of December 2008, 1% were 15-19 years at time of HIV diagnosis, 30% were 20-29 years, and 44% were 30-39 years old.
- In the 2008 Seattle-area National HIV Behavioral Surveillance activity, 6.9% of MSM ages 18-29 were HIV-infected. Also, 31% of MSM in this age group reported unprotected anal sex with a male partner of opposite or unknown HIV status.
- Younger men were more likely to have multiple recent sex partners and higher rates of alcohol and drug use. For one-quarter of YMS participants who had multiple sex partners recently, being high on alcohol or drugs was state as a reason for unprotected sex. These risks were more common among MSM age 23-29 compared to those 15-22 years of age, as shown in Table 3.

**Table 3: Risk behaviors in past six months among young MSM in King County**

Past six months	15-22 years (n=368)	23-29 years (n=462)
≥ 5 male sex partners	23%	29%
Sex while high on alcohol or drugs	54%	71%
Anal sex	67%	78%
Unprotected anal sex	38%	48%

**Men of color:**

- Among 1,524 Men of Color currently living with HIV/AIDS, 68% were MSM or MSM-IDU; this proportion is lower than among white men (93% MSM including MSM-IDU).
- Of male HIV/AIDS cases reported through 6/2008, 55% of blacks were MSM or MSM-IDU, compared to 79% of Latinos, 82% of Am. Indian/AK Natives, and 76% of Asians/Pacific Islanders.
- Overall, 11% of MSM living with HIV/AIDS were also IDU. This ranged widely among MSM of Color, including 34% of American Indian/AK Natives and 4% of Asians/Pacific Islanders.

**Bisexual men:**

- Among 806 MSM captured in the blinded (unlinked) STD HIV seroprevalence survey 2003-2004, 21% also had sex with women in the last year.
- In the same survey, five percent of men who had sex with both men and women were found to be HIV-infected, relative to 15% of MSM without female partners.

- Of 15,767 MSM who sought HIV counseling and testing at Public Health's HIV/AIDS Program testing site between January 1988 and December 2004, 23% also reported one or more female sex partner(s) in the past year. Fewer HIV-infected MSM (10%) had female sexual partners relative to MSM without HIV (26%).
- The proportion of MSM using condoms for vaginal intercourse was 56%; however, 70% of HIV-infected MSM used condoms for vaginal intercourse. Condom use among MSM having vaginal intercourse may be even higher as some HIV-infected MSM knew their HIV status prior to the visit where this question was answered and others did not. Even for MSM who knew they had HIV infection, the question may have included time prior to their seroconversion and/or diagnosis.

#### **Amphetamine use in MSM:**

- In the Kiwi study of incarcerated IDU, 1,811 people interviewed at two King County correctional facilities were tested for HIV between August 1998 and December 2002. MSM had a higher prevalence of HIV infection (9%) relative to other male IDU (2%); MSM who primarily injected amphetamines had the highest prevalence of HIV (20%) relative to MSM who primarily injected heroin (5%).
- The DUIT (Drug Users Intervention Trial) study included 404 men, 13% of whom were MSM. Thirty percent of the MSM amphetamine injectors were HIV-infected relative to only 10% of the MSM heroin injectors.
- Of 222 MSM cases reported with HIV/AIDS in the first 11 months of 2008, about half (99) had data on methamphetamine use on their HIV case report. Of the 99, 22 (22%) used meth, and 40% of the MSM who use methamphetamine inject it.

#### **References:**

1. How many men who have sex with men live in King County? HIV/AIDS Epidemiology Report 2<sup>nd</sup> Half 2008, page 37.
2. Unsafe sexual behavior and correlates of risk in a probability sample of men who have sex with men in the era of highly active antiretroviral therapy. DD Brewer, MR Golden, HH Handsfield, Sexually Transmitted Diseases, April 2006, 33(4): 250-255.