HIV is both a sexually transmitted disease and a blood-borne pathogen. In the developed world, blood borne infection is transmitted almost exclusively through needle sharing during injection drug use (IDU). Since the beginning of the epidemic in the United States, over 700,000 persons have been diagnosed with AIDS, and there have been over 410,000 deaths from complications of HIV-related immune deficiency. Best estimates put the number of persons currently living with HIV infection in the U.S. at 650,000 to 800,000. Oregon has recorded 6,000 persons living with HIV in our state. Twelve percent of the AIDS cases occurred as a result of blood exchange (transfusion or IDU), with 87% as a result of a sexual encounter.

Oregon is one of a few states that systematically collects information on HIV risk behavior from every person that receives HIV counseling and testing through its county health departments. Since July 1, 1998, all persons requesting HIV testing at the county health departments are asked detailed information about their HIV risk in a pre-test interview. This tremendous commitment on the part of our counseling and testing teams has allowed us to obtain additional information on HIV risk behaviors.

Data has been collected from 34,054 person since the expanded HIV risk interview was instituted. Of these tests, 49.4% were women and 47.5% men, 3.1% were unknown. The mean age at the time of testing was 27.9 years, with 18% were <20. Race/ethnicity was documented for 97.2%, with 71.6% being white, 6.4% were African-American and 14.4% were Hispanic.

HIV tests were negative in 33,708 of the tests performed. Positive HIV tests are divided into two groups: 211 were repeat positives, while 135 (.39%) were new positives. In the six months before the HIV test, 68% had engaged in at least one episode of vaginal sex, with only 28% using a condom, and 54% reported at least one episode of oral sex, with only 4.8% using a condom. Twenty five percent reported that their last sex partner was someone other than their main partner, and 15% (5,158) had more than 6 sex partners in the twelve months before the HIV test. Significantly, a disproportionate percentage of the new positive tests (36%) occurred in this latter group.

Eighty-three percent (20,977/25,051) who answered the question about their estimated degree of HIV risk ranked themselves as having “low risk” or “no risk” of HIV infection. Over 7,400 clients who fit the OHDS criteria for being at “high risk” for HIV infection actually considered themselves to not be at risk for HIV.

**RISK BEHAVIORS AMONG IDUs**

There were 5211 clients who identified themselves as having used injection drugs at some point in their lives, with 2,215 having used injection drugs within the 6 months before the HIV test. Only 26 (0.5%) of the IDU at-risk persons were found to be newly HIV positive. Of those who used drugs, 3,067 admitted to sharing rigs with another user at least once. Another 1,576 shared needles only with close friends or their main sexual partner, and 400 people reported sharing needles with “casual acquaintances.” Nearly 11% of those who shared needles reported sharing “often” or “always” as part of their drug habit. The reasons for sharing were quite varied, but only 388 clients stated that the reason they shared a needle was because they couldn’t afford a new needle or they didn’t know a source for clean needles. In this group of IDUs, 1,094 reported “always” combining sex with alcohol and/or drug use. Alcohol was the most often reported drug used associated with sex, followed by methamphetamine and crack/cocaine. Marijuana was used with sex by 1,327 clients and heroin by 1,065.

The responses suggest that a substantial number of persons use multiple drugs.

**RISK BEHAVIORS AMONG MSM**

Of the 16,172 men tested, 3,556 reported having sex with other men as their HIV risk. During the 6 months before the HIV test, 37% of the MSM (men who have sex with men) reported having had anal receptive sex, and 40% (1,416) reported having had sex with a total stranger. Bisexuality was evident in the data, with 26% of the MSM also reporting having had vaginal sex during the last 6 months. During the last 12 months before testing, 42% reported having had more than 6 different sex partners. Condoms were not used with anal receptive sex by 33% of persons, and yet only 17% of MSM considered themselves to be at “high risk” for HIV infection. Six percent of clients always used alcohol or drugs when having sex with over 60% of these persons using alcohol and/or marijuana. 42% never used alcohol or drugs with sex.

**THE OREGON HITS SURVEY**

There is evolving evidence that some MSM may be re-engaging in high risk behavior. The HIV Testing Survey, or HITS, consisted of two cross-sectional survey administered to Oregonians at high risk for infection with HIV in 1996 (HITS-1; n=331) and repeated in 1998 (HITS-2; n=374). Its purpose was to investigate whether risk behaviors and perceptions of personal risk for HIV infection have changed among high-risk persons over the 2 year period when effective antiviral therapy became widespread in Oregon. After adjusting for race, HIV status, and sexual preference, the two survey groups were similar with regard to sexually transmitted disease (STD) history and injection drug use history. The HITS-2 group was more likely than the HITS-1 group to perceive their personal risk for infection as “low” (OR=1.5; 95% CI: 1.1, 2.0), as were those HITS-2 respondents who have ever used injection drugs (OR=2.9; 95% CI: 1.7, 4.9) and those...
LIMITATIONS OF THE DATA

These data gives us a very rich and probing look into the risk behaviors of a subset of the population. That said, this method has significant limitations. The client is asked to relate the details of stigmatized behaviors to a trained interviewer, with no mechanism to independently verify its accuracy. The likelihood of getting truthful responses will vary with the skill of the interviewer, the trust of the client, and the setting in which the counseling and testing takes place. In addition, these data may not be representative of the entire population, since persons who seek testing at the local public health department may not be the same as those private clinicians. In addition, two-thirds of persons receiving HIV testing do so through their private clinicians and are not asked to provide HIV risk behavior information. This selection bias may result in an under- or over-representation of specific risk behaviors in the county HIV testing population. The number of persons who test positive is relatively small; only 0.4% persons tested were new positives. This low number limits the accuracy of an analysis of the differences between risk behaviors of infected versus uninfected persons.

CONCLUSIONS AND IMPLICATIONS

These data confirm that behaviors putting persons at risk for HIV infection still continue among MSM and IDU in Oregon. A significant number of MSM report unprotected anal receptive or insertive intercourse. Condoms are less often used by heterosexuals—particularly by those having oral sex. Needle sharing is not uncommon among IDUs, where it appears to be active choice made by users rather than being forced on them by lack of availability or money to purchase clean needles and syringes. Many clients seem to be sexually adventurous, having more than 6 different sex partners in the previous year.

Persons who are engaging in high-risk behaviors appear to underestimate their personal HIV infection risk. This could be a manifestation of ongoing denial, or it actually may be fairly accurate risk assessment for a person living in a region with a low HIV prevalence and incidence. In addition, there appears to be a trend towards less concern over HIV risk since 1996. The HITS identified a reduced level of concern over HIV infection which may relate to an increased awareness of the effectiveness of antiretroviral therapy for HIV infection.

In spite of this information, the good news is that the number deaths due to AIDS, AIDS cases, and the number of newly diagnosed HIV tests in Oregon have decreased. This data reveals that even those people who have engaged regularly in “high risk” behaviors have a relatively low likelihood of being diagnosed with a new HIV infection. HIV prevention programs will be challenged in the future to focus on those groups of persons who persistently engage in high-risk behaviors. Programs to assist persons who are living with HIV infection to reduce the risk of infection in their sexual and needle sharing partners will be increasingly important in the coming years.