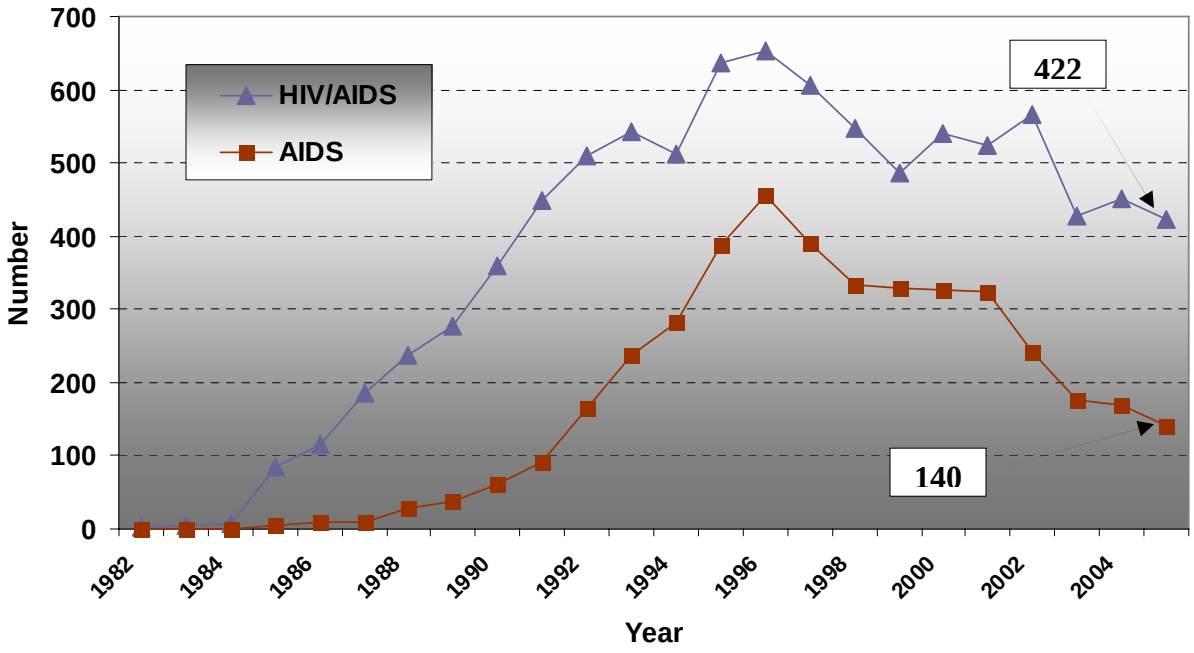
Incidence of HIV/AIDS in Indiana

Incidence describes the number and rates of new cases of a disease in a population in a certain amount of time, usually a year. In the case of this report, Incidence describes the number of new cases of HIV/AIDS that were treated or reported in Indiana between January 1, 2005 and December 31, 2005 and that were reported in the HIV/AIDS Surveillance Report.

Incidence Rates for Indiana 2005

Indiana started collecting data on HIV infections and AIDS diagnoses in 1982. Figure 26 shows the development of HIV/AIDS and AIDS over more than two decades, from 1982 up until the end of 2005.

Figure 26: Incidence Numbers of HIV and AIDS for Indiana, 1982 to 2005

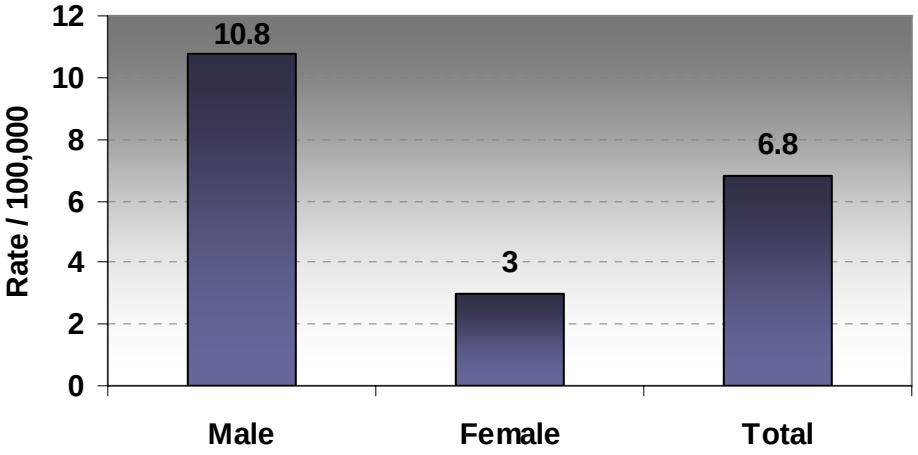


In the first decade after the recording of the infected and diagnosed persons in Indiana began, the numbers steadily climbed, until they reached a peak in the mid nineties (1996). At that point, the availability and effectiveness of anti-viral drugs, that, at least temporarily, slowed the progression from HIV infection to full AIDS, as well as educational campaigns to stop the spread of the virus brought the rise in the number of infected persons to a halt and in fact reversed them for the next four to five years. Beginning in or around the year 2000 however, the number of new HIV/AIDS infections and AIDS diagnoses started to plateau and haven't changed much in the past three years.

In 2005, the number of newly diagnosed persons with HIV/AIDS was 422, almost unchanged from 2004 (427). The incidence rate is calculated at 6.8 per 100,000 persons, compared to a incidence rate of 7.3 in 2004. During 2005 there were five persons who were diagnosed with HIV or AIDS and who died in the same year.

Similar to the prevalence numbers, the group of newly infected persons is predominantly male.

Figure 27: New Infection (Incidence) Rate for HIV/AIDS by Sex, 2005



Males continue to have a more than three times higher new infection rate than females. They contributed almost two thirds to the incidence rate in 2005.
A more detailed look at the incidence rates for HIV and AIDS separately is provided in Figure 28, which shows the difference in incidence rates by sex for HIV and AIDS separately.

Figure 28: Incidence Rate for HIV and AIDS by Sex, 2005

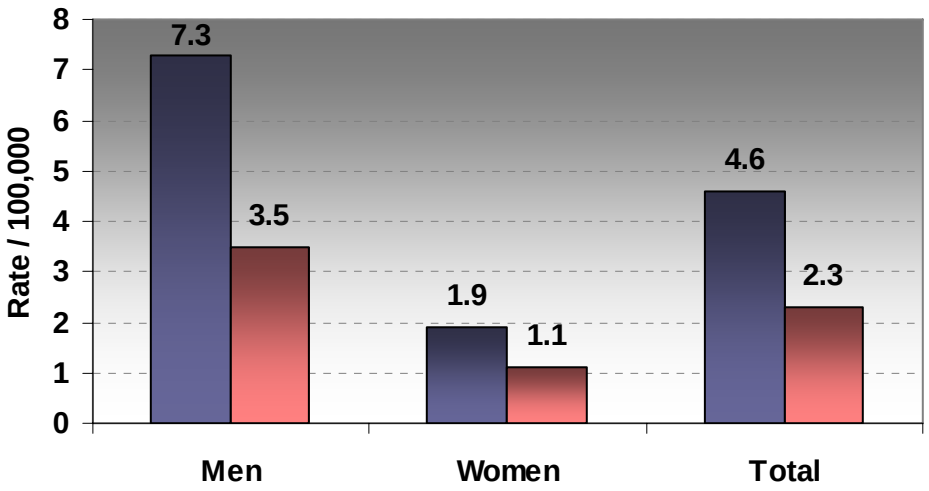


Table 18 shows the absolute number for HIV, AIDS and HIV/AIDS incidence in Indiana for 2005.

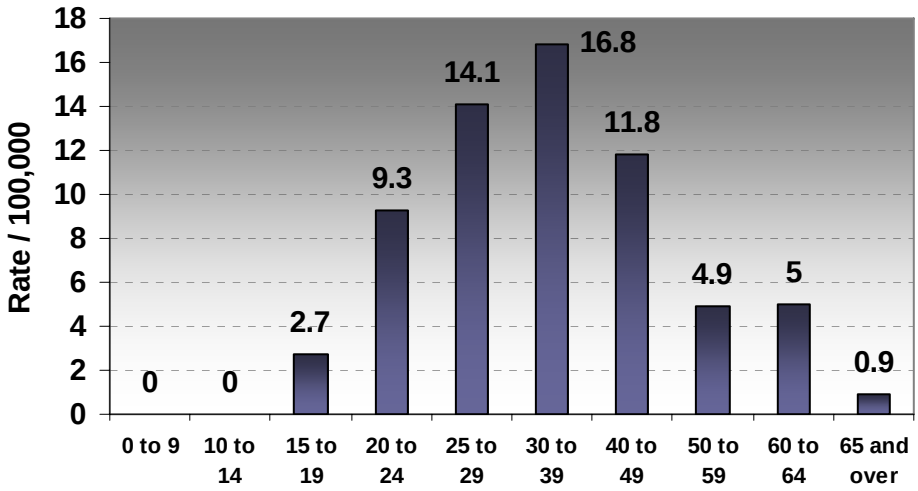
Table 18: Incidence Numbers, Percentages and Rates for HIV, AIDS, and HIV/AIDS by Sex, 2005

	HIV			AIDS			HIV/AIDS		
Sex	**Number**	**%**	**Rate**	**Number**	**%**	**Rate**	**Number**	**%**	**Rate**
Male	223	79.1	7.3	106	75.7	3.5	329	78.0	10.8
Female	59	20.9	1.9	34	24.3	1.1	93	22.0	3.0
Total	282	100.0	4.6	140	100.0	2.3	422	100.0	6.8

Incidence of HIV/AIDS by Age

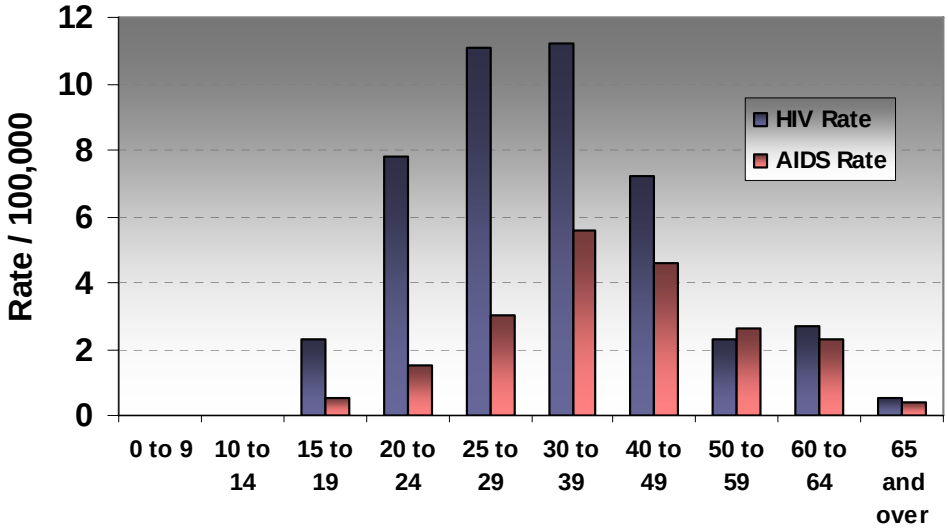
In 2005, the incidence rate for HIV/AIDS peaked among 30 to 39 year olds (16.8 per 100,000).

Figure 29: Incidence Rate for HIV/AIDS by Age, 2005



A more detailed look at the HIV and AIDS incidence rates by age for 2005 show some reveal a more detailed picture of the age distribution among newly diagnosed persons.

Figure 30: Incidence Rate for HIV and AIDS by Age, 2005



For most all age groups the HIV incidence rate exceeds the rate of newly diagnosed AIDS cases. The vast majority of newly diagnosed HIV cases in 2005 were in the age ranges of 20 to 39, while the majority of new AIDS diagnose occurred for persons in the age ranges of 30 to 49 years of age.

Table 19 shows the absolute numbers, percentages and rates for the combined disease as well as the separate diagnoses for 2005.

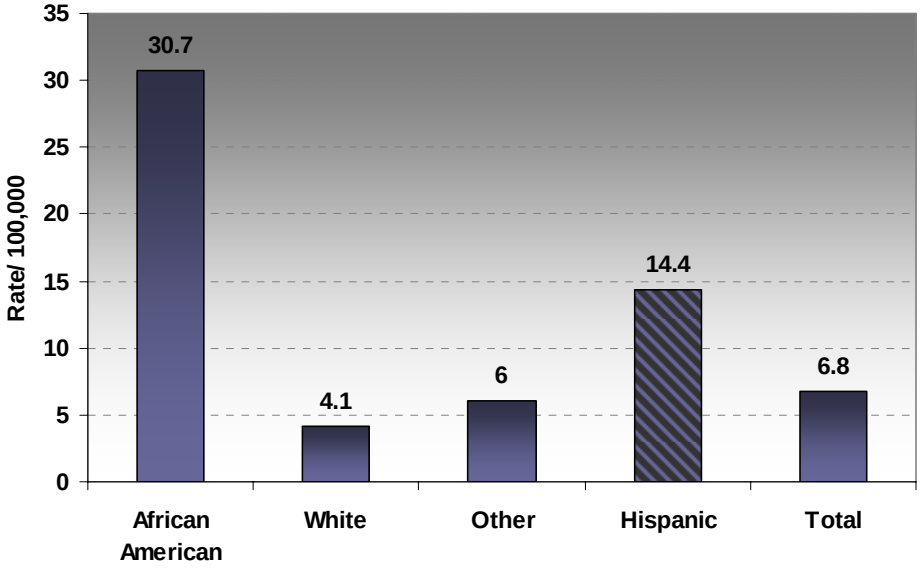
Table 19: Incidence Numbers, Percentages and Rates for HIV, AIDS, and HIV/AIDS by Age, 2005

	HIV			AIDS			HIV/AIDS		
Age	**Number**	**%**	**Rate/ 100,000**	**Number**	**%**	**Rate/ 100,000**	**Number**	**%**	**Rate/ 100,000**
0 to 9	0	0.0	0	0	0.0	0	0	0.0	0
10 to 14	0	0.0	0	0	0.0	0	0	0.0	0
15 to 19	10	3.5	2.3	2	1.4	0.5	12	2.8	2.7
20 to 24	36	12.8	7.8	7	5.0	1.5	43	10.2	9.3
25 to 29	44	15.6	11.1	12	8.6	3	56	13.3	14.1
30 to 39	96	34.0	11.2	48	34.3	5.6	144	34.1	16.8
40 to 49	68	24.1	7.2	43	30.7	4.6	111	26.3	11.8
50 to 59	17	6.0	2.3	19	13.6	2.6	36	8.5	4.9
60 to 64	7	2.5	2.7	6	4.3	2.3	13	3.1	5
over 65	4	1.4	0.5	3	2.1	0.4	7	1.7	0.9
Total	282	100.0	4.6	140	100.0	2.3	422	100.0	6.8

Incidence Rate of HIV/AIDS by Race/Ethnicity

In Figure 31 the incidence rates are shown by race and ethnicity. In order to calculate the rate per 100,000 persons, the number of infected and diagnosed persons for each race and ethnicity was divided by the number of the entire Indiana population that were identified in the 2003 Census Estimates as belonging to that particular racial and ethnic category.

Figure 31: Incidence Rate of HIV/AIDS by Race/Ethnicity, 2005



The overwhelming majority of newly infected and diagnosed persons were Black/African American. They had an incidence rate of 30.7 per 100,000 people of the population, twice as large as the next largest group of Hispanics (14.4 per 100,000). It is interesting to note that Black/African Americans make up a minority of the general population of about 8.4%, yet they account for 38% of all new cases of HIV/AIDS in 2005.

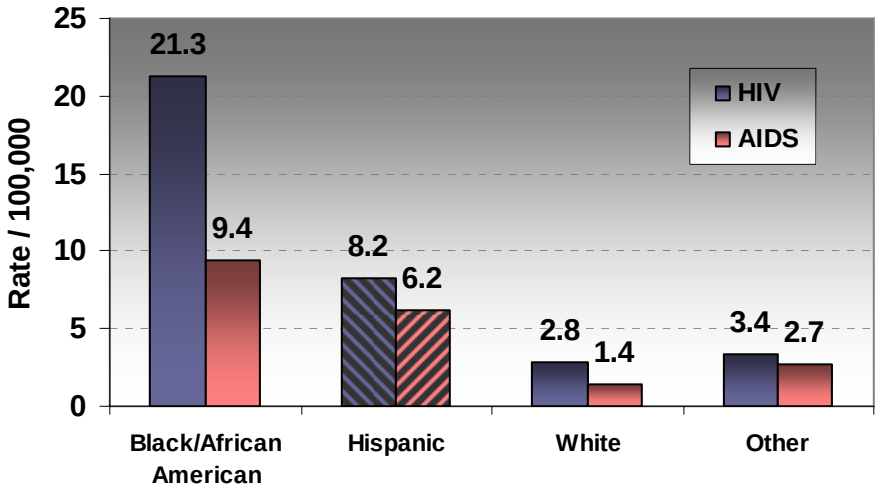
The incidence numbers for HIV/AIDS for absolute numbers, percentages and rates per 100,000 are listed in Table 20.

Table 20: Incidence Numbers for HIV/AIDS by Race/Ethnicity, 2005

	Number	Percent	Rate
Black	9	2.1	6.0
Hispanic	160	37.9	30.7
White	35	8.3	14.4
Other	218	51.7	4.1
Total	422	100.0	6.8

The absolute numbers for the combined disease as well as the percentage numbers show that all Black/African-American and Hispanic groups are overrepresented in the number of newly infected and diagnosed persons, when compared to their part of the overall population.

Figure 32: Incidence Rate for HIV and AIDS by Race/Ethnicity, 2005



The separate view of HIV and AIDS by race and ethnicity reveals further information about the different behavior of new infections and diagnoses. Displayed in Figure 32 are the new HIV infections and newly diagnosed cases of AIDS by race and ethnicity. Black/African Americans show the highest rate of new HIV infections as well as new AIDS diagnoses among all racial and ethnic groups in Indiana. The second largest minority population group, Hispanics, have also the second largest incidents rates for both HIV and AIDS. In other words, the results in Figure 31 and Figure 32 show that new infections of HIV and AIDS are spreading much more rapidly among minority population groups than among Whites, a finding that is consistent with the status of the prevalence ratings. However, by absolute numbers, the new infections and diagnosis for Whites outnumber all other racial and ethnic groups.

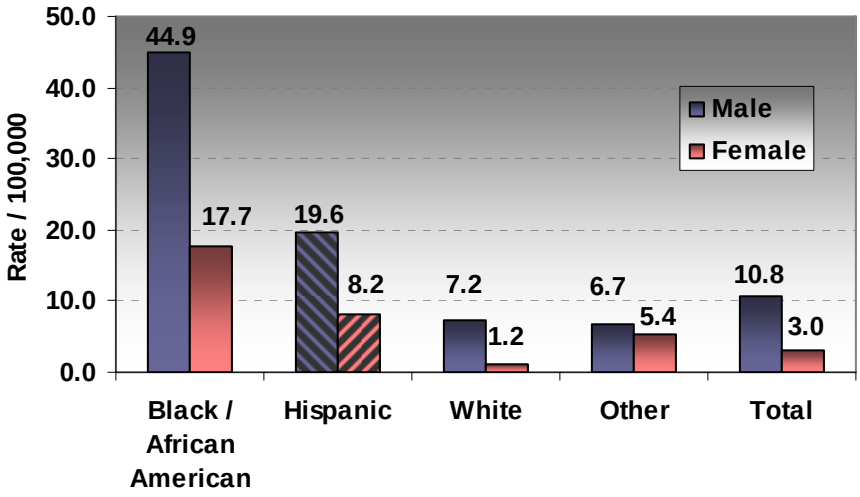
Table 21 lists the absolute numbers of newly infected and diagnosed persons by race/ethnicity, as well as the percentage of the overall infections and the rates per 100,000 people of the population.

Table 21: Incidence Numbers for HIV and AIDS by Race/Ethnicity, 2005

	HIV			AIDS		
Race/ Ethnicity	**Total**	**Percent**	**Rate**	**Total**	**Percent**	**Rate**
Black	111	39.4	21.3	49	35.0	9.4
Hispanic	20	7.1	8.2	15	10.7	6.2
White	146	51.8	2.8	72	51.4	1.4
Other	5	1.8	3.4	4	2.9	2.7
Total	**282**	**100.0**	**4.6**	**140**	**100.0**	**2.3**

In addition to racial and ethnic differences in the new infection rates, there are also differences in the number of male and female incidences among racial and ethnic groups. Figure 33 shows the incidence rate breakout by race/ethnicity and gender.

Figure 33: Incidence Rates for HIV/AIDS by Race/Ethnicity and Sex, 2005



The incidence rate results for males and females mirror the earlier assessments, in which new infections and diagnoses rates are highest among the male groups of racial and ethnic minorities. The rates for African-American and Hispanic males are three to six times the White male incidence rate (see Figure 33 and Table 22).

Comparing the female incidence rates among these racial/ethnic groups shows a similar result. HIV/AIDS incidence rates are lowest among White females and highest among African-American females. In absolute numbers White females make up the majority of new infections with HIV. African American females have the highest absolute number of new AIDS diagnoses. The results for all racial and ethnic groups for the combined disease HIV/AIDS are summarized in Table 22.

Table 22: Incidence Numbers, Rates and Percents for HIV/AIDS by Race/Ethnicity and Sex, 2005

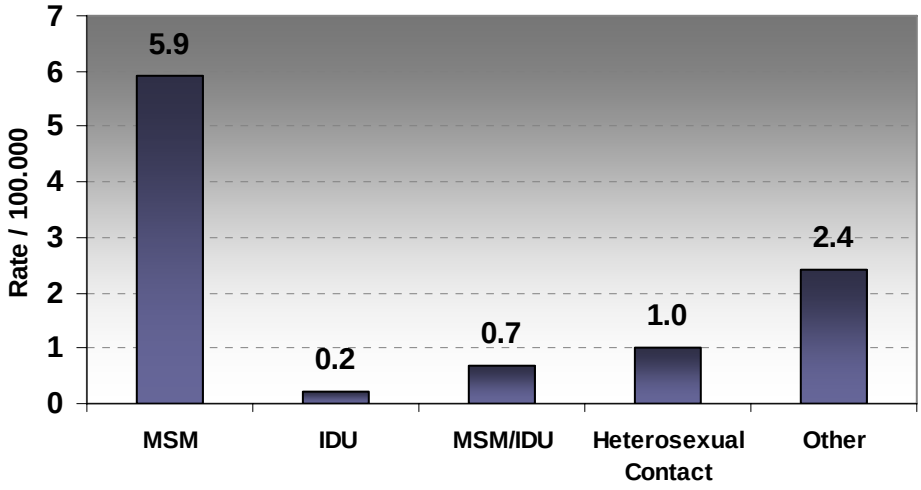
Race/ Ethnicity	Male			Female		
	Total	Rate	Percent	Total	Rate	Percent
Black	112	44.9	34.0	48	17.7	51.6
Hispanic	26	19.6	7.9	9	8.2	9.7
White	186	7.2	56.5	32	1.2	34.4
Other	5	6.7	1.5	4	5.4	4.3
Total	329	10.8	100.0	93	3.0	100.0

The rates in Table 22 were calculated by dividing the absolute number of new cases of HIV/AIDS by the number of the racial and ethnic male or female population respectively, and multiplying that number by 100,000. The reduction of the absolute numbers to the rates per 100,000 allows for direct comparison of rates between the different racial and ethnic groups as well as between the gender categories.

Incidence of HIV/AIDS by Mode of Transmission

The incidence rates of HIV/AIDS vary widely by mode of transmission for 2005, as shown in Figure 34.

Figure 34: Incidence Rates for HIV/AIDS by Mode of Transmission, 2005



Note: For categories MSM and MSM/IDU, rates are relative to the number of men.

The vast majority of new cases registered in 2005 are in the category of Men having Sexual Contact with Men (MSM). The incidence rate of 5.9 per 100,000 is more than twice that of the

next closest category, *Other*, with a rate of 2.4 per 100,000. The *MSM* rate is virtually unchanged from the previous year (5.8/100,000).

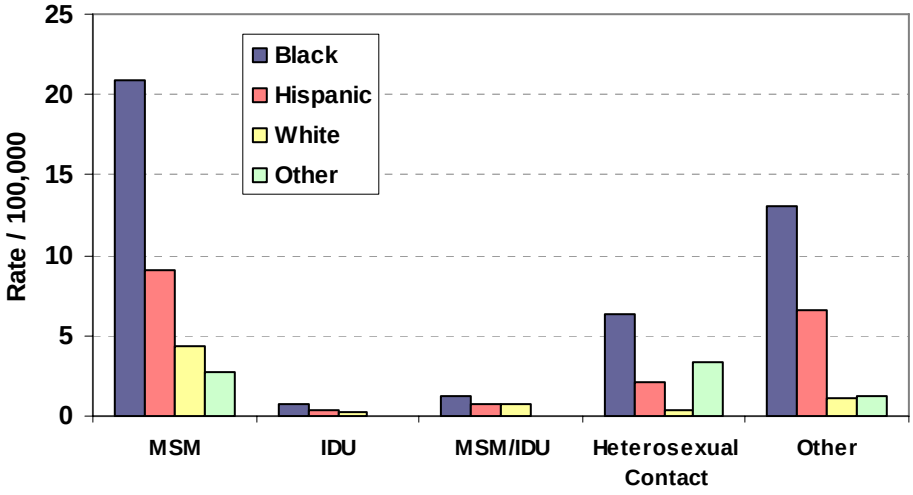
In absolute numbers, the most new cases of HIV are transmitted by MSM. Table 23 shows the absolute numbers, their respective percentages and the rates per 100,000 people for HIV/AIDS by mode of transmission.

Table 23: Incidence Number, Percent, and Rates per 100,000 for HIV/AIDS by Mode of Transmission, 2005

Transmission Mode	Total	Rate	Percent
MSM	179	5.9	42.4
IDU	14	0.2	3.3
MSM/ IDU	21	0.7	5.0
Heterosexual Contact	62	1.0	14.7
Other	146	2.4	34.6
Total	422	6.8	100.0

In Figure 35, HIV/AIDS incidence rates are computed separately by race/ethnicity categories and mode of transmission.

Figure 35: Incidence Rate of HIV/AIDS by Mode of Transmission and Race/Ethnicity, 2005



Consistent across all race/ethnic categories, the highest HIV/AIDS incidence rates are associated with *MSM*. For nearly all race/ethnic categories, the *Other* risk category accounts for the second highest HIV/AIDS incidence rates. The reason that *Other* category is so prominent in the Figure 35, when it is designed as a collection of less numerous risk categories is a result of the large number of *Unknown* risk categories for many newly diagnosed cases. The incidence numbers and rates per 100,000 for all racial and ethnic groups by mode of transmission are listed in Table 24.

Table 24: Incidence Numbers for HIV/AIDS by Race/Ethnicity and Mode of Transmission, 2005

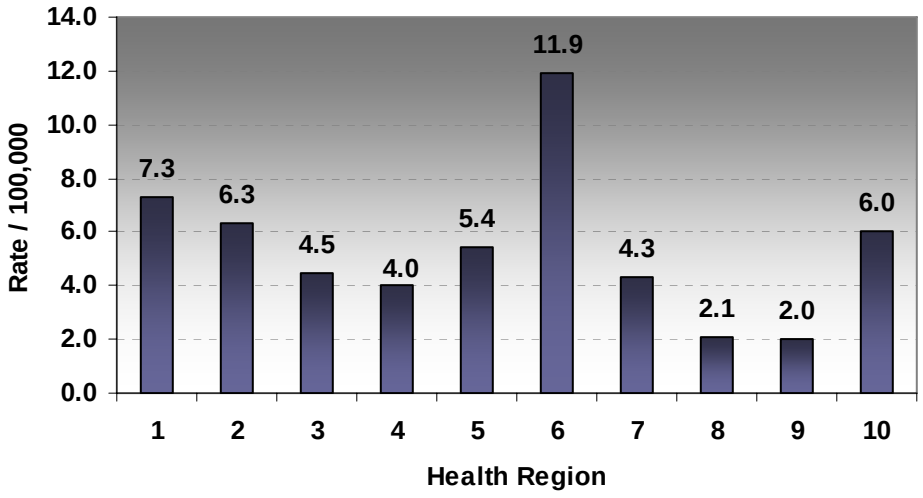
	Black		Hispanic		White		Other	
Transmission Mode	Number	Rate	Number	Rate	Number	Rate	Number	Rate
MSM	52	20.9	12	9.1	113	4.4	2	2.7
IDU	4	0.8	1	0.4	9	0.2	0	0.0
MSM/IDU	3	1.2	1	0.8	17	0.7	0	0.0
Heterosexual Contact	33	6.3	5	2.1	19	0.4	5	3.4
Other	68	13.0	16	6.6	60	1.1	2	1.3
Total	160	30.7	35	14.4	218	4.1	9	6.0

In order to calculate the rate/100,000 people of the general population, the absolute number of people per risk category was divided by the number of the corresponding general population. However, the rate for MSM and MSM/IDU was calculated using the corresponding number of males of that particular racial and ethnic group.

Incidence Rate for HIV/AIDS by Health Regions and Counties

The geographic distribution of incident cases in Indiana shows regional differences. For the most part the highest incidents rates are corresponding to the population size and proximity of the health region to large urban areas in the state. The distribution of incidence rates for all ten Indiana Health Regions is provided in Figure 36.

Figure 36: Incidence Rate by Health Region in Indiana, 2005



*Note: Four new HIV infections (0.1/100,000) did not have a county of residence associated, they are omitted from Figure 36.

Region 6, which corresponds to the Greater Indianapolis area, shows by far the largest share in the number of newly infected people. Their rate of 11.9 persons per 100,000 people of the

population far exceeds the rates of the next closest regions (1, 2, and 10), which correspond to the areas around Gary, South Bend and Indiana's southeastern region respectively.

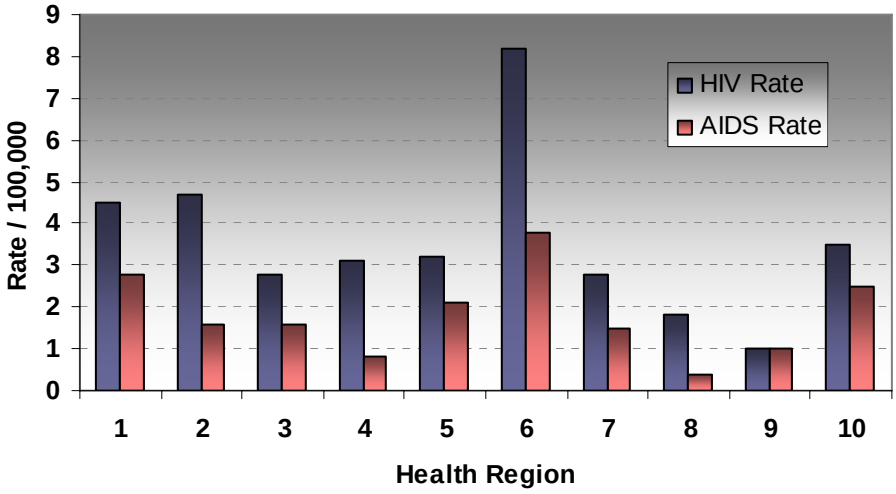
The incidence details of the combined disease HIV/AIDS for Indiana Health Regions are listed in Table 25.

Table 25: Incidence Numbers, Rates and Percentages for HIV/AIDS by Health Region, 2005

Health Region	HIV/AIDS		
	Total	**Rate**	**Percent**
1	55	7.3	13.0
2	35	6.3	8.3
3	33	4.5	7.8
4	14	4.0	3.3
5	30	5.4	7.1
6	184	11.9	43.6
7	31	4.3	7.3
8	6	2.1	1.4
9	6	2.0	1.4
10	24	6.0	5.7
Unknown	4	0.1	0.9
Total	**422**	**6.8**	**100.0**

The incidence rate distribution with HIV and AIDS for each Health Region is displayed in Figure 37 below.

Figure 37: Incidence Rates for HIV and AIDS by Health Region, 2005



Consistent with the numbers for the combined disease the majority of newly diagnosed cases of HIV and AIDS occur in Region 6, the greater Indianapolis area.

The separate HIV and AIDS incidence numbers are listed in Table 26 by Health Region.

Table 26: Incidence Numbers, Rates, and Percentages for HIV and AIDS by Health Region

Health Region	HIV			AIDS		
	Number	Rate	Percent	Number	Rate	Percent
1	34	4.5	12.1	21	2.8	15.0
2	26	4.7	9.2	9	1.6	6.4
3	21	2.8	7.4	12	1.6	8.6
4	11	3.1	3.9	3	0.8	2.1
5	18	3.2	6.4	12	2.1	8.6
6	126	8.2	44.7	58	3.8	41.4
7	20	2.8	7.1	11	1.5	7.9
8	5	1.8	1.8	1	0.4	0.7
9	3	1.0	1.1	3	1.0	2.1
10	14	3.5	5.0	10	2.5	7.1
Unknown	4	0.1	1.4	0	0	0.0
Total	**282**	**4.6**	**100.0**	**140**	**2.3**	**100.0**

In order to refine the geographic distribution of the newly diagnosed cases this profile also takes a look at the number of cases per county. Table 27 below is listing the incidence numbers for HIV, AIDS and the combined disease by the counties of residence, in declining order of magnitude for the combined disease. For reasons of confidentiality

no incidence numbers smaller than 5 is reported. All counties with less than dive infected persons are combined into an *Other* category.

Table 27: Incidence Numbers for HIV, AIDS and HIV/AIDS by County, 2005

County	HIV Number	AIDS Number	HIV/AIDS Number
Marion	113	54	167
LaPorte	5	less than 5	9
St. Joseph	18	less than 5	22
Allen	15	8	23
Vanderburgh	8	8	16
Tippecanoe	6	less than 5	8
Clark	6	less than 5	9
Elkhart	6	less than 5	10
Howard	less than 5	less than 5	7
Lake	26	16	42
Madison	9	less than 5	12
Hamilton	5	less than 5	7
Miami	5	less than 5	6
Other	66	34	100
Total	**282**	**140**	**422**