

**Question 3**

## What are the indicators of risk for HIV/AIDS in Indiana?

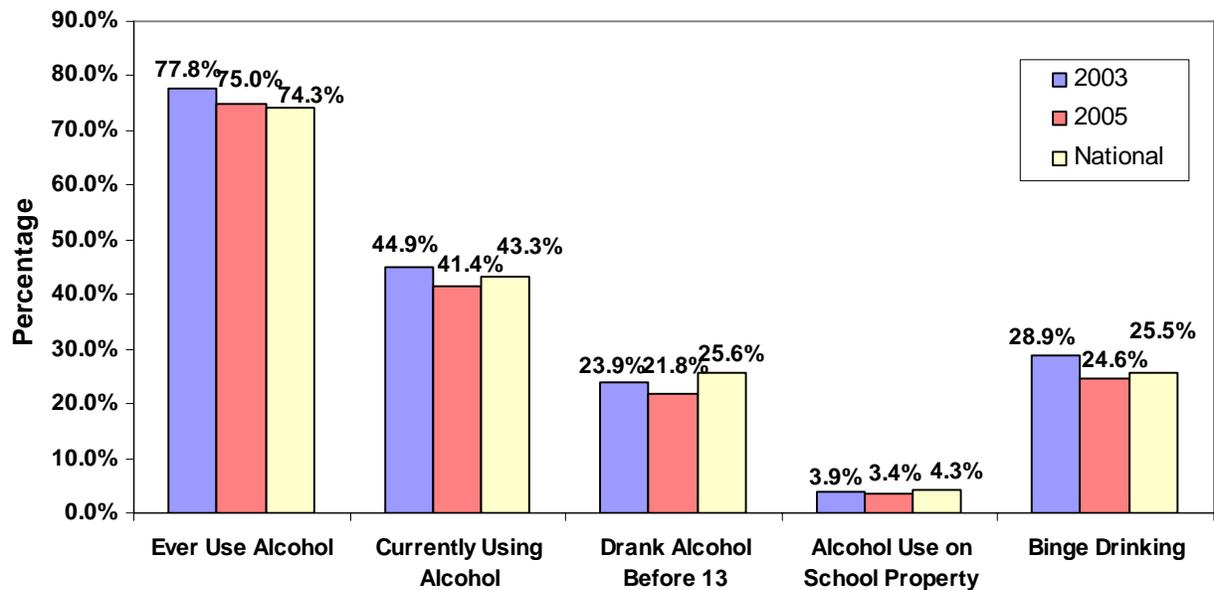
The risk indicators for this profile include results from the Youth Risk Behavior Survey (YRBS) 2005, the Behavioral Risk Factor Surveillance Report (BRFSS) 2006, the STD Surveillance System 2006, and Indiana's Pregnancy and Natality Report 2005, the latest data available for this report.

### **Youth Risk Behavior Survey (YRBS)**

The Youth Risk Behavior Survey (YRBS) developed by the Centers for Disease Control and Prevention (CDC) surveys youth health-risk behaviors in six domains: (1) behaviors which facilitate unintentional injuries and violence, (2) tobacco use, (3) alcohol and drug uses, (4) sexual behaviors related to pregnancy and sexually transmitted diseases, (5) unhealthy dietary behaviors, and (6) physical inactivity and being overweight. The YRBS began in 1991 and is conducted every two years. In 2005, 13,917 students in grades 9-12 participated in this national survey. Those items pertaining to alcohol and drug use and sexual behaviors are presented in this report.

As shown in Figure 50, 75.0% of adolescents in Indiana reported that they had had one or more drinks of alcohol on one or more days during their lifetime. This percentage is slightly higher than the national average (74.3%). Additionally, 24.6% of Indiana youth reported drinking five or more alcoholic beverages on one occasion in the last 30 days, a slightly smaller percentage than the national average (25.5%).

**Figure 50: Percentage of Indiana and National YRBS Respondents Endorsing Alcohol Use and Alcohol-related Behaviors, 2003 and 2005**

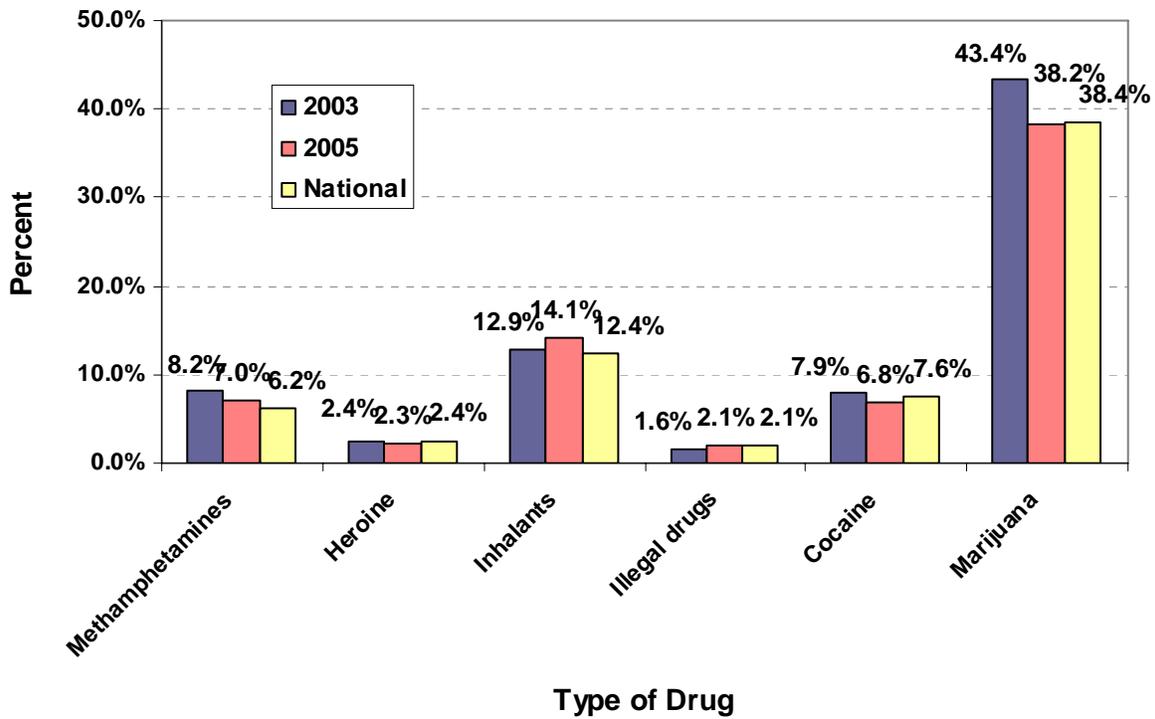


Source: YRBS, 2005; Centers for Disease Control and Prevention

Less than half of all questioned adolescents (41.4%) both in Indiana and on the National level are currently using alcohol. In general, Indiana is fairly close to the national average in alcohol consumption among its adolescents.

Another question related to the risk behavior among students deals with the use of illicit drugs. Figure 51 shows the types of drugs used, and lists the corresponding numbers of users.

**Figure 51: Percentage of Indiana and National YRBS Respondents Reporting Illicit Drug Use, 2003 and 2005**



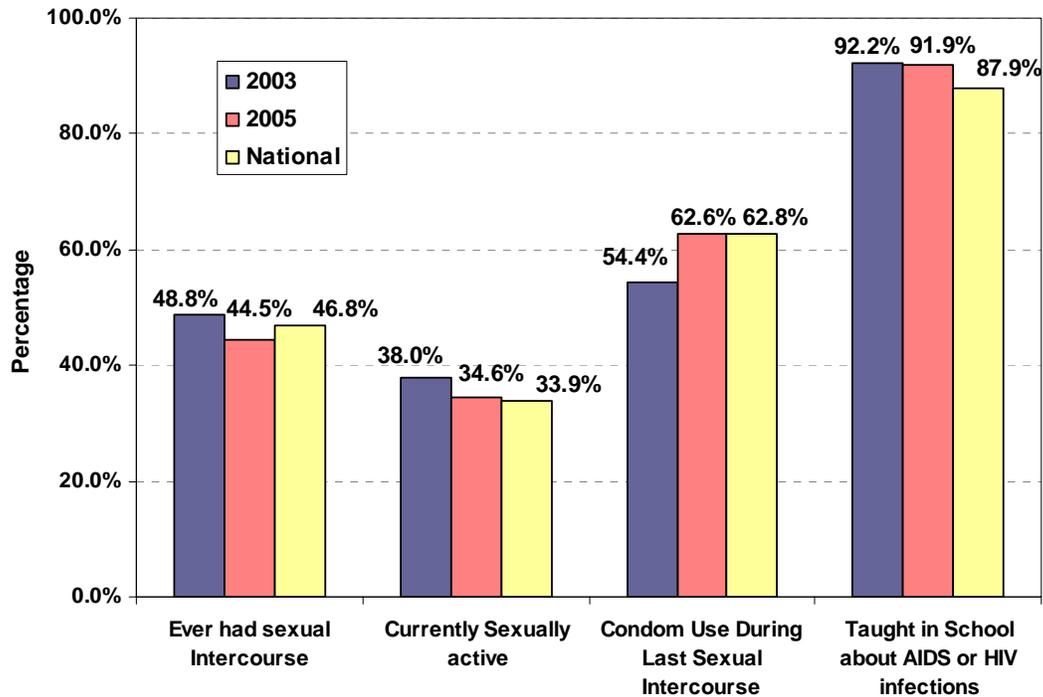
Source: YRBS, 2005; Centers for Disease Control and Prevention

By far the most commonly used illicit drug among adolescents was marijuana. Among youth in Indiana, 38.2% reported ever using marijuana, only slightly below the national level (38.4%), after dropping from the 2003 level of 43.4%. Though a distant second, the next most used drug was inhalants among Indiana (14.1%) and national youth (12.4%).

Whereas the two examples cited above point to risk behavior that would have a more indirect effect on the possibility to contract HIV or other STDs, the following figures and tables explore sexual activities among adolescents.

Other risk factors related to the transmission of HIV and STDs involve sexual behaviors and safe sex practices among adolescents. According to the YRBS results on sexual intercourse and condom use (Figure 52), 44.5% of Indiana youth have engaged in sexual intercourse, and 34.6% are currently sexually active. It is important to note that only 62.6% of Indiana youth used a condom on their last sex occasion, which is slightly lower than the national rate for this behavior (62.8%). However, condom use has been on the rise since 2003, when only slightly more than half of interviewed youth (54.4%) reported to have used a condom during the last sexual intercourse.

**Figure 52: Percentage of Indiana and National YRBS Respondents Engaging in Sexual Intercourse, Using Condoms, and Reporting AIDS Educational Experience, 2003 and 2005.**



Source: YRBS, 2005; Centers for Disease Control and Prevention

Taken together, the information gathered from the YRBS reveals that three-quarters of adolescents have used alcohol and more than a third have used marijuana. Almost half of adolescents in Indiana have had sexual intercourse, while more than a third is still sexually active at the present time. An encouraging 92% of Indiana adolescents have been taught about HIV and AIDS infection in school, yet only about six out of ten (62.6%) used a condom during the last sexual intercourse, which is an increase from previous years.

## **Behavioral Risk Factor Surveillance System (BRFSS)**

Since 1984, the ISDH has entered into a yearly cooperative agreement with the Centers for Disease Control and Prevention (CDC) to develop and implement the Behavioral Risk Factor Surveillance System (BRFSS) survey in Indiana. This national survey monitors modifiable risk factors associated with chronic and communicable diseases by collecting information from adults on health behaviors and preventive practices. Health risk factors of adults, many of which are behavioral in nature, are examined in the BRFSS. The surveys are conducted on a continuous basis to determine the proportion of Indiana residents who engage in health behaviors that increase the probability of negative health outcomes.

This survey also assesses behaviors and knowledge related to HIV and AIDS. The following presentation of results focuses on responses to these items. All survey participants were 18 to 64 years of age and were a representative sample of the Indiana population.

The information in the following table was derived from the CDC BRFSS database. The numbers do not reflect those respondents that did not answer a question or that refused to answer a question. The CDC does not use these numbers in their analysis and, therefore, they are not included here.

Participants were queried about whether they had ever been tested for HIV (excluding tests that were part of a blood donation). As shown in Table 44, less than a third (29.3%) of the surveyed population overall had ever been tested for HIV. In other words, the majority of Indiana residents, two-thirds of the population, is unaware of its current HIV status and is potentially engaging in unsafe activities that could contribute to the spread of the virus.

**Table 44: 2006 BRFSS Results: Have you ever been tested for HIV? (6,542 Respondents)**

Demographic	Percent	
Age Group	Yes	No
18-24	26.8	73.2
25-34	47.7	52.3
35-44	34.1	65.9
45-54	22.0	78.0
55-64	13.2	86.8
<b>Sex</b>		
Male	26.6	73.4
Female	32.0	68.0
<b>Race/Ethnicity</b>		
White, non-Hispanic	26.9	73.1
Black, non-Hispanic	51.9	48.1
Hispanic	30.8	69.2
<b>Totals</b>	<b>29.3</b>	<b>70.7</b>

Note: Denominator is number of respondents who are 18 to 64 years of age.  
SOURCE: 2006 Indiana BRFSS Statewide Survey Data

Only slightly more than a quarter (26.6%) of men had been tested for HIV, compared to 32.0% of women. Among the racial and ethnic groups of Indiana's population, Black, non-Hispanic people had the highest testing scores of all groups with 51.9%. These percentages were lower than in 2003, where the total percentage that had been tested was 32.7%

Respondents indicating that they had been tested were also asked where they were tested. Those surveyed were able to choose from a list of test locations and reasons. Table 45 shows the results. Among the test locations, the highest percentage of respondents (50.3%) had been tested at a hospital or drug treatment facility.

**Table 45: 2006 BRFSS Results: Where was your last HIV test? (6,542 Respondents)**

<b>Where did you have your last HIV test?</b>	
<b>Location</b>	<b>Percent</b>
Private doctor or HMO	36.8
Counseling and testing site	5.0
Hospital, Drug Treatment Facility	50.3
Jail or Prison	3.4
Home	4.5
<b>Total</b>	<b>100.0</b>

Note: Denominator is number of respondents who are 18 to 64 years of age.

Source: 2006 Indiana BRFSS Statewide Survey Data

Those that responded that they had been tested were asked when they were last tested as well, with the option of choosing from five possible time periods. Table 46 shows that a majority of the respondents (54.5%) had been tested between the years of 2000 and 2005. Another 12.7% of the respondents were tested in the past year.

**Table 46: 2006 BRFSS Results: When was your last HIV test? (6,542 Respondents)**

<b>When did you have your last HIV test?</b>	
<b>Year</b>	<b>Percent</b>
<b>Before 1990</b>	4.9
<b>1991-1995</b>	9.1
<b>1996-1999</b>	18.8
<b>2000-2005</b>	54.5
<b>2006</b>	12.7
<b>Total</b>	<b>100.0</b>

Note: Denominator is number of respondents who are 18 to 64 years of age.

Source: 2006 Indiana BRFSS Statewide Survey Data

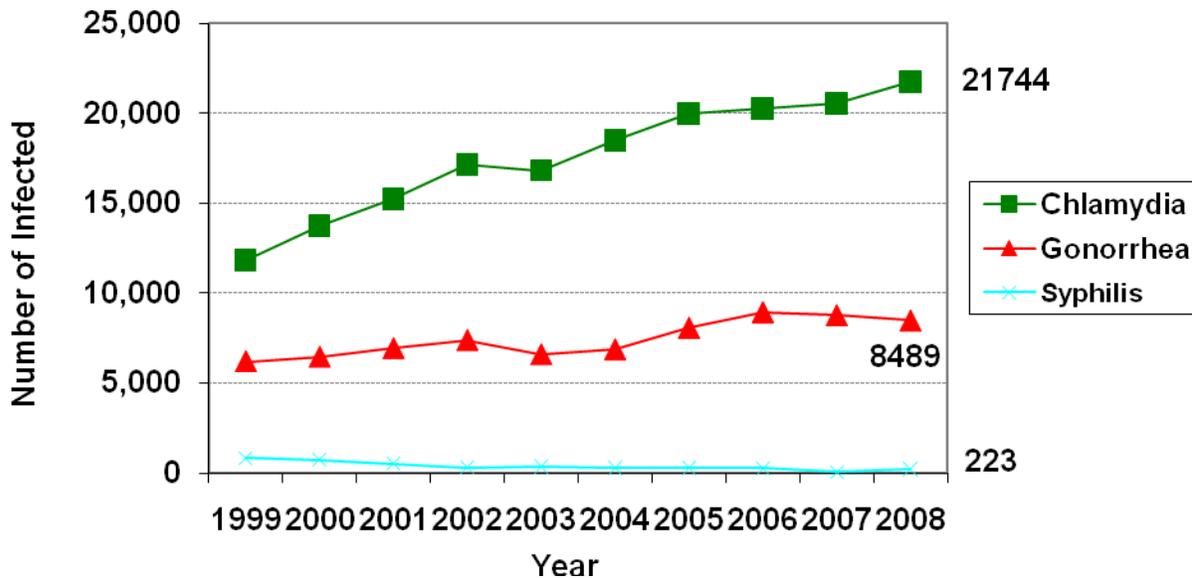
Questions about high risk situations, including using intravenous drugs or having unprotected sex, have been omitted from the 2006 questionnaire.

## STDs in Indiana

Sexually transmitted diseases are another strong indicator of unprotected sexual contact. With an STD there is a 2 to 5-fold increased risk of HIV seroconversion. HIV susceptibility is increased for both ulcerative and non-ulcerative STDs by 1) endocervical CD4 recruitment with a non-ulcerative STD and 2) an open portal-of-entry for the HIV is established with ulcerative STDs. There is a greater infectiousness because of the frequency and concentration of HIV shedding with a STD. STD treatment reduces shedding to baseline levels. Therefore, STD prevention and treatment are direct HIV prevention interventions.

This report will take a closer look at the three most prevalent STDs: Chlamydia, Gonorrhea and Syphilis. The results of the STD Surveillance Report 2008 for Indiana are presented in the following tables and figures. Figure 53 shows the number of cases for Chlamydia, Gonorrhea and Syphilis from 1998 to 2008.

**Figure 53: Total Number of STD Cases in Indiana, 1998-2008**



In the case of Syphilis and Gonorrhea, both diseases have seen a slight decrease in numbers from a high in recent years. The number of Chlamydia cases rose to a new high in 2008. It continued the trend of the last seven years that seemed briefly stalled in 2003. However, in 2007 for Gonorrhea the numbers seem to have tapered off from recent years. This includes a slight decrease in Syphilis from 259 in 2007 to 223 in 2008. The state and local health departments have worked together on numerous projects to educate the public about the risks and ways to prevent the spread of these STDs.

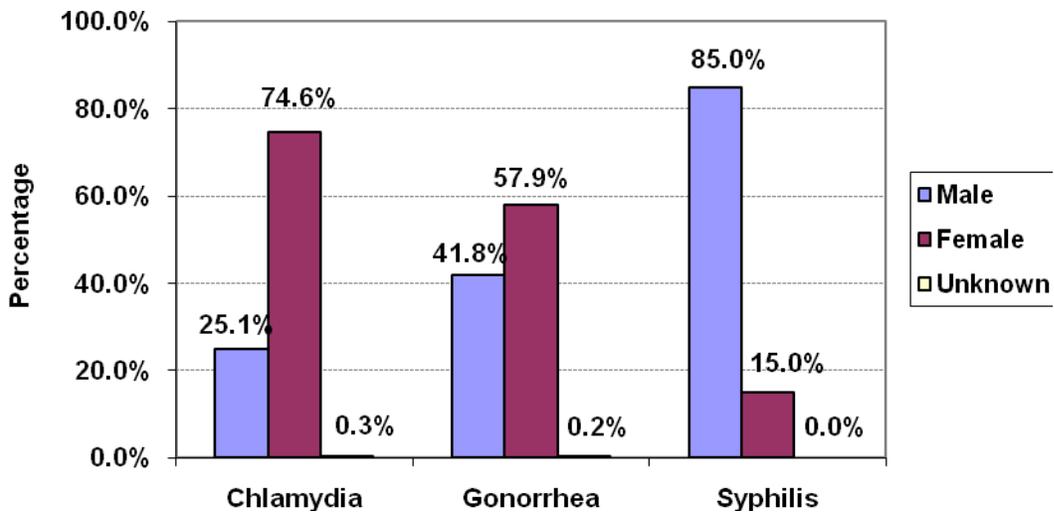
Table 47 lists the numbers for all three STDs by year.

**Table 47: Total Number of STD Cases in Indiana, 1998 to 2008**

Year	Chlamydia	Gonorrhea	Syphilis
1998	11,253	6,706	522
1999	11,829	6,203	829
2000	13,768	6,453	745
2001	15,223	6,941	524
2002	17,144	7,394	316
2003	16,838	6,596	370
2004	18,504	6,872	275
2005	20,006	8,078	289
2006	20,283	8,951	252
2007	20,578	8,788	259
2008	21,744	8,489	223

The three STDs also show a different infection pattern between the sexes. The following figures and tables will take a look at the available data for 2008. Figure 54 breaks out the STDs by Sex.

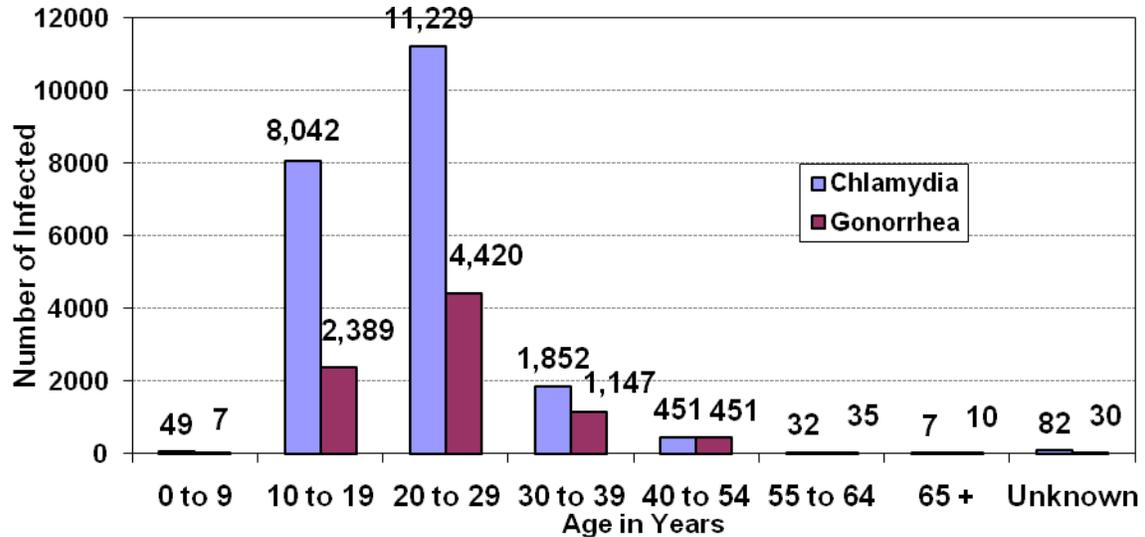
**Figure 54: Percentages of STD Cases in Indiana by Sex, 2008**



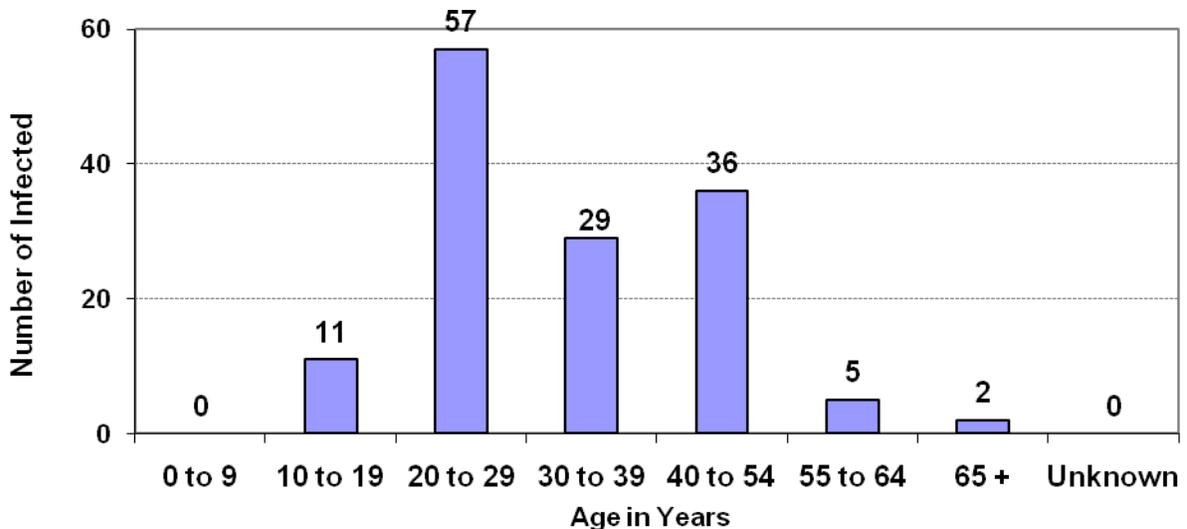
Chlamydia affects predominantly women, even though men do act as carriers of the disease. Three-quarters of Chlamydia cases in 2008 were female. In the case of Gonorrhea a majority of infection cases also occurred among women (57.9%). Syphilis on the other hand is affecting more males than females, another indicator of the predominantly MSM risk category for the transmission of that disease in Indiana. More than three-quarters (85.0%) of persons diagnosed with Syphilis were male.

There are differences in how STDs are present at different age groups. Figure 55 shows the breakout for all Chlamydia and Gonorrhea, while Figure 56 shows the age distribution for Syphilis for a comparison.

**Figure 55: Number of Chlamydia and Gonorrhea Cases in Indiana by Age, 2008**



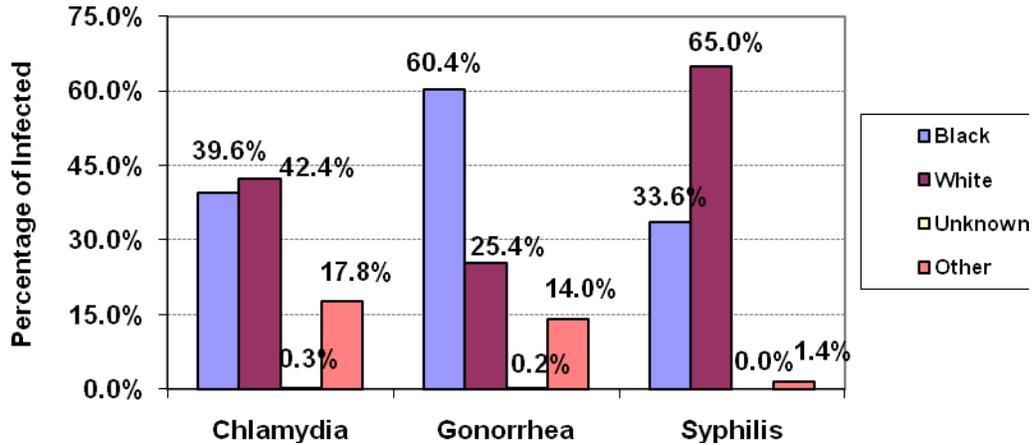
**Figure 56: Number of Primary & Secondary Syphilis Cases in Indiana by Age, 2008**



Both Chlamydia and Gonorrhea are affecting people at a much younger age than Syphilis in Indiana. While Chlamydia and Gonorrhea peak in the age group of 20 to 29 year olds, Syphilis is more predominant in the age bracket of both 20 to 29 years and 40 to 54 years of age. It is interesting to note that Syphilis is affecting a larger percentage of the population, age 40 and older, than the two other diseases, which are most prevalent between the ages of 10 to 29 years of age.

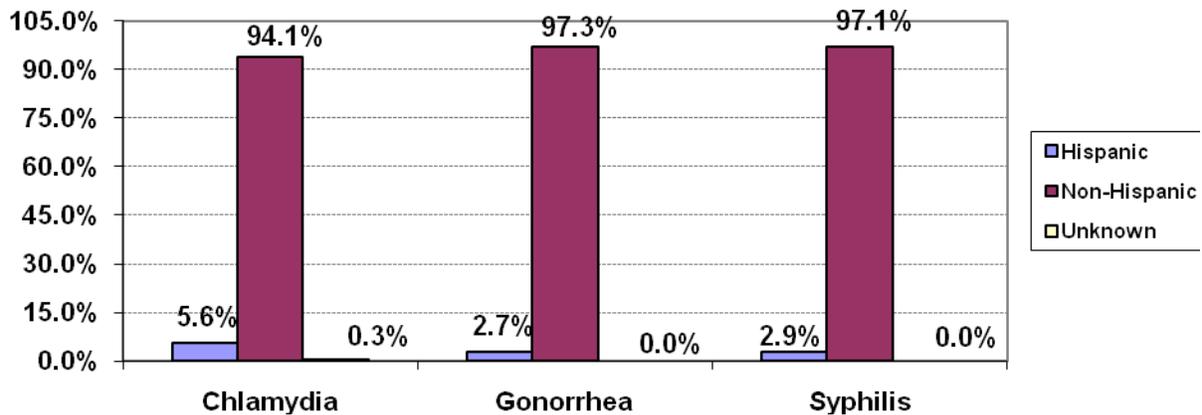
Similar to the racial and ethnic distribution of the HIV/AIDS disease, STDs are more prevalent among minorities than among the White population. Figure 57 shows the distribution of STD cases in Indiana by race.

**Figure 57: Percentage of STD Cases in Indiana by Race, 2008**



Blacks are disproportionately affected by all three STDs. Figure 58 breaks out the numbers of STD cases by ethnicity.

**Figure 58: Percentage of STD Cases in Indiana by Ethnicity, 2008**



Among Indiana's general population, 5.2% claim Hispanic background. Chlamydia affects Hispanics almost proportionally to that share (5.6%), while Gonorrhea affects slightly less Hispanics. The number of Syphilis infections among Hispanics in 2008 (2.9%) decreased from 7.5% in 2007.

Finally, the geographic distribution of the three STDs varies strongly by county. Table 48 lists the absolute numbers and percentages for all three STDs by county of residence in 2008

**Table 48: STD Cases and Percentages in Indiana by County, 2008\***

County	Chlamydia	%	Gonorrhea	%	Primary and Secondary Syphilis	%
Adams	47	0.2%	6	0.1%	0	0.0%
Allen	1,875	8.6%	932	11.0%	4	2.9%
Bartholomew	121	0.6%	23	0.3%	0	0.0%
Benton	13	0.1%	3	0.0%	0	0.0%
Blackford	12	0.1%	3	0.0%	0	0.0%
Boone	90	0.4%	15	0.2%	0	0.0%
Brown	7	0.0%	1	0.0%	0	0.0%
Carroll	26	0.1%	4	0.0%	0	0.0%
Cass	47	0.2%	7	0.1%	1	0.7%
Clark	269	1.2%	66	0.8%	4	2.9%
Clay	17	0.1%	1	0.0%	0	0.0%
Clinton	78	0.4%	31	0.4%	0	0.0%
Crawford	8	0.0%	1	0.0%	0	0.0%
Daviess	47	0.2%	6	0.1%	0	0.0%
De Kalb	64	0.3%	7	0.1%	0	0.0%
Dearborn	71	0.3%	13	0.2%	0	0.0%
Decatur	28	0.1%	2	0.0%	2	1.4%
Delaware	566	2.6%	128	1.5%	1	0.7%
Dubois	28	0.1%	0	0.0%	0	0.0%
Elkhart	762	3.5%	324	3.8%	1	0.7%
Fayette	32	0.1%	3	0.0%	0	0.0%
Floyd	225	1.0%	61	0.7%	1	0.7%
Fountain	28	0.1%	2	0.0%	0	0.0%
Franklin	11	0.1%	0	0.0%	0	0.0%
Fulton	20	0.1%	0	0.0%	0	0.0%
Gibson	67	0.3%	14	0.2%	0	0.0%
Grant	153	0.7%	55	0.6%	0	0.0%
Greene	20	0.1%	3	0.0%	0	0.0%
Hamilton	295	1.4%	61	0.7%	3	2.1%
Hancock	88	0.4%	22	0.3%	1	0.7%
Harrison	44	0.2%	6	0.1%	0	0.0%
Hendricks	137	0.6%	35	0.4%	0	0.0%
Henry	94	0.4%	12	0.1%	2	1.4%
Howard	316	1.5%	65	0.8%	0	0.0%
Huntington	39	0.2%	13	0.2%	1	0.7%
Jackson	86	0.4%	5	0.1%	0	0.0%
Jasper	38	0.2%	1	0.0%	0	0.0%

<b>County</b>	<b>Chlamydia</b>	<b>%</b>	<b>Gonorrhea</b>	<b>%</b>	<b>Primary and Secondary Syphilis</b>	<b>%</b>
Jay	20	0.1%	2	0.0%	0	0.0%
Jefferson	72	0.3%	4	0.0%	1	0.7%
Jennings	40	0.2%	1	0.0%	0	0.0%
Johnson	321	1.5%	56	0.7%	1	0.7%
Knox	84	0.4%	14	0.2%	0	0.0%
Kosciusko	96	0.4%	17	0.2%	1	0.7%
La Porte	264	1.2%	65	0.8%	3	2.1%
LaGrange	10	0.0%	2	0.0%	1	0.7%
Lake	2,395	11.0%	1,130	13.3%	15	10.7%
Lawrence	61	0.3%	3	0.0%	2	1.4%
Madison	552	2.5%	239	2.8%	3	2.1%
Marion	7,297	33.6%	3,738	44.0%	73	52.1%
Marshall	30	0.1%	5	0.1%	0	0.0%
Martin	9	0.0%	1	0.0%	0	0.0%
Miami	52	0.2%	2	0.0%	0	0.0%
Monroe	414	1.9%	86	1.0%	4	2.9%
Montgomery	88	0.4%	15	0.2%	0	0.0%
Morgan	141	0.6%	14	0.2%	1	0.7%
Newton	6	0.0%	1	0.0%	0	0.0%
Noble	32	0.1%	5	0.1%	0	0.0%
Ohio	5	0.0%	0	0.0%	0	0.0%
Orange	31	0.1%	0	0.0%	0	0.0%
Owen	24	0.1%	2	0.0%	0	0.0%
Parke	8	0.0%	1	0.0%	0	0.0%
Perry	14	0.1%	0	0.0%	0	0.0%
Pike	9	0.0%	1	0.0%	0	0.0%
Porter	234	1.1%	46	0.5%	3	2.1%
Posey	25	0.1%	5	0.1%	0	0.0%
Pulaski	8	0.0%	0	0.0%	0	0.0%
Putnam	52	0.2%	5	0.1%	1	0.7%
Randolph	30	0.1%	5	0.1%	0	0.0%
Ripley	30	0.1%	5	0.1%	0	0.0%
Rush	18	0.1%	5	0.1%	0	0.0%
Scott	50	0.2%	12	0.1%	1	0.7%
Shelby	81	0.4%	8	0.1%	0	0.0%
Spencer	10	0.0%	1	0.0%	0	0.0%
St Joseph	1,090	5.0%	652	7.7%	5	3.6%
Starke	11	0.1%	0	0.0%	0	0.0%
Steuben	51	0.2%	6	0.1%	0	0.0%
Sullivan	10	0.0%	2	0.0%	0	0.0%
Switzerland	15	0.1%	2	0.0%	0	0.0%
Tippecanoe	540	2.5%	102	1.2%	1	0.7%
Tipton	12	0.1%	4	0.0%	0	0.0%
Union	6	0.0%	1	0.0%	0	0.0%
Unknown	13	0.1%	7	0.1%	1	0.7%
Vanderburgh	860	4.0%	187	2.2%	0	0.0%
Vermillion	8	0.0%	1	0.0%	0	0.0%

<b>County</b>	<b>Chlamydia</b>	<b>%</b>	<b>Gonorrhea</b>	<b>%</b>	<b>Primary and Secondary Syphilis</b>	<b>%</b>
Vigo	205	0.9%	45	0.5%	0	0.0%
Wabash	53	0.2%	3	0.0%	0	0.0%
Warren	7	0.0%	2	0.0%	0	0.0%
Warrick	78	0.4%	5	0.1%	0	0.0%
Washington	49	0.2%	8	0.1%	0	0.0%
Wayne	143	0.7%	19	0.2%	2	1.4%
Wells	43	0.2%	3	0.0%	0	0.0%
White	30	0.1%	5	0.1%	0	0.0%
Whitley	37	0.2%	8	0.1%	0	0.0%
<b>Total</b>	<b>21,743</b>	<b>100.0%</b>	<b>8,489</b>	<b>100.0%</b>	<b>140</b>	<b>100.0%</b>

\*2008 STD Cases reported as of 07/13/09

## Hepatitis Infections

Hepatitis B is a sexually transmitted liver disease caused by the hepatitis B virus (HBV). HBV is spread much like HIV, the virus that causes AIDS. HBV, however, is easier to catch than HIV because it is over 100 times more concentrated in a diagnosed person's blood and it can exist on surfaces outside the body. It is, therefore, a very sensitive indicator of risky sexual behavior that might lead to HIV infections among the general population. HBV infection can cause severe liver disease, including liver failure (cirrhosis) and liver cancer. Over 5,000 people die every year from hepatitis B-related liver disease. Indiana state law requires that only acute cases of Hepatitis B are reported.

In 2008, Indiana had 29 cases of acute Hepatitis B, down from 62 in 2007 and down from 80 cases in 2006. The percentage of males (58.6%) with HBV was slightly higher than females (41.4%). The majority of infections were among Whites (72.4%) with Blacks coming in at 10.3%.

**Table 49: Numbers, Percentages, and Rates of Hepatitis B Cases in Indiana by Sex, and Race/Ethnicity, 2008**

	<b>Number</b>	<b>Percent</b>
<b>Sex</b>		
Female	12	41.4%
Male	17	58.6%
<b>Race</b>		
White	21	72.4%
Black	3	10.3%
Other	0	0.0%
Unknown	5	17.2%
<b>Total</b>	<b>29</b>	<b>100.0%</b>

Hepatitis C is a liver disease caused by the Hepatitis C virus (HCV), which is found in the blood of persons who have the disease. HCV is spread by contact with the blood of a diagnosed person. The Indiana State Health Department collects the number of laboratory reports of persons testing positive for Hepatitis C. In 2007, there were 5,903 cases of Hepatitis C infection reported as compared with 2006, there were 4,011.

The geographic distribution of Hepatitis C is shown in Table 50 in descending order.

**Table 50: Numbers and Percentages of Hepatitis C Infections by County in Indiana in 2007**

<b>County</b>	<b>Number of Infections</b>	<b>Percentage of Infections</b>
Marion	1518	25.72
Lake	454	7.69
Hendricks	401	6.79
Vanderburgh	338	5.73
Allen	283	4.79
St. Joseph	214	3.63
Unknown	161	2.73
Clark	126	2.13
LaPorte	120	2.04
Porter	110	1.86
Hamilton	108	1.83
Monroe	108	1.83
Delaware	101	1.71
Vigo	99	1.68
Floyd	96	1.63
Wayne	91	1.54
Elkhart	84	1.42
Howard	84	1.42
Johnson	71	1.20
Henry	70	1.19
Madison	69	1.17
Scott	58	0.98
Grant	55	0.93
Tippecanoe	54	0.91
Bartholomew	52	0.88
Dearborn	45	0.76
Knox	37	0.63
Cass	34	0.58
Jefferson	34	0.58
Gibson	32	0.54
Jennings	32	0.54
Warrick	31	0.53
Jackson	27	0.46

<b>County</b>	<b>Number of Infections</b>	<b>Percentage of Infections</b>
Lawrence	27	0.46
Morgan	27	0.46
Washington	26	0.44
Fayette	25	0.42
Kosciusko	25	0.42
Boone	23	0.39
Daviess	23	0.39
Hancock	23	0.39
DeKalb	21	0.36
Parke	21	0.36
Greene	20	0.34
Harrison	20	0.34
Steuben	20	0.34
Sullivan	20	0.34
Putnam	19	0.32
Clinton	18	0.30
Montgomery	17	0.29
Perry	16	0.27
Clay	15	0.25
Shelby	15	0.25
Starke	15	0.25
Jasper	13	0.22
Pike	13	0.22
Randolph	13	0.22
Owen	12	0.20
Posey	12	0.20
White	11	0.19
Decatur	10	0.17
Spencer	10	0.17
Blackford	8	0.14
Carroll	8	0.14
Franklin	8	0.14
Marshall	8	0.14
Orange	8	0.14
Ripley	8	0.14
Brown	7	0.12
Dubois	7	0.12
Fountain	7	0.12
Huntington	7	0.12
LaGrange	7	0.12
Miami	7	0.11
Warren	7	0.12
Adams	6	0.10

<b>County</b>	<b>Number of Infections</b>	<b>Percentage of Infections</b>
Martin	6	0.10
Noble	6	0.10
Pulaski	6	0.10
Wabash	6	0.10
Fulton	5	0.08
Newton	5	0.08
Rush	5	0.08
Wells	5	0.08
Benton	<5	0.04
Crawford	<5	0.05
Jay	<5	0.07
Ohio	<5	0.03
Switzerland	<5	0.07
Tipton	<5	0.07
Union	<5	0.04
Vermillion	<5	0.07
Whitley	<5	0.05
<b>Total</b>	<b>5,903</b>	<b>100.0%</b>

Note: Counties with less than five infection cases are denoted by a '<5' for confidentiality reasons.

The absolute numbers and percentages by sex and race are listed in Tables 51 and 52. Please note that no data for a breakout by ethnicity was available at the time of this report.

**Table 51: Numbers and Percentages of Hepatitis C Infections by Sex, 2007**

<b>Gender</b>	<b>Number of Infections</b>	<b>Percentage of Infections</b>
<b>Male</b>	3,599	61.0
<b>Female</b>	2,194	37.1
<b>Unknown</b>	110	1.9
<b>Total</b>	<b>5,903</b>	<b>100.0%</b>

**Table 52: Numbers and Percentages of Hepatitis C Infections by Race, 2007**

<b>Race</b>	<b>Number of Infections</b>	<b>Percentage of Infections</b>
<b>Caucasian</b>	1,946	33.0
<b>Black</b>	559	9.5
<b>Other</b>	59	1.0
<b>Unknown</b>	3,339	56.5
<b>Total</b>	<b>5,903</b>	<b>100.0%</b>

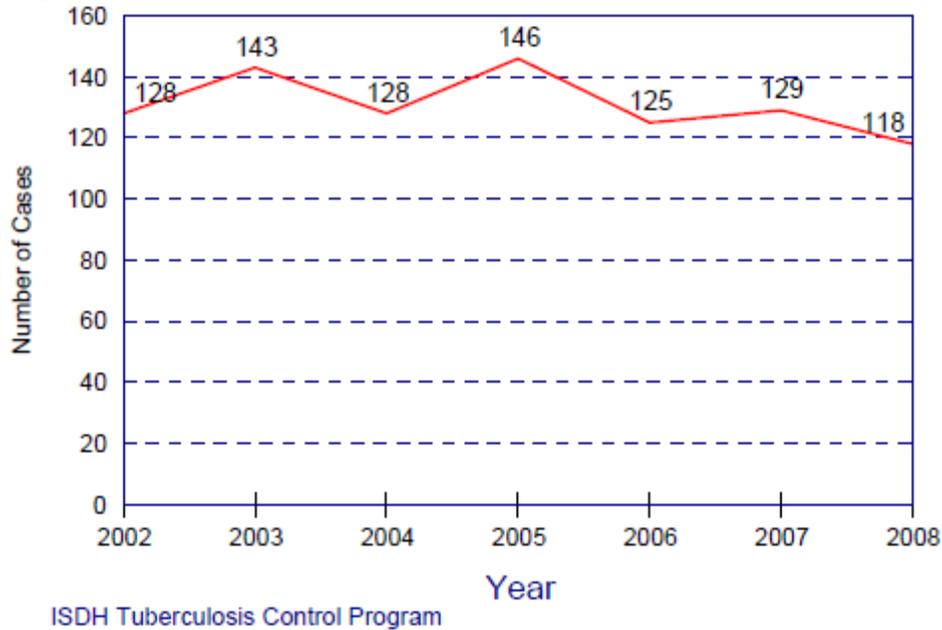
Note: The *Other* category encompasses people of Asian, Pacific Islander, and Native American descent, as well as persons of multiracial background

## Tuberculosis

Tuberculosis, or TB, is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria can attack any part of the body, but they usually attack the lungs.

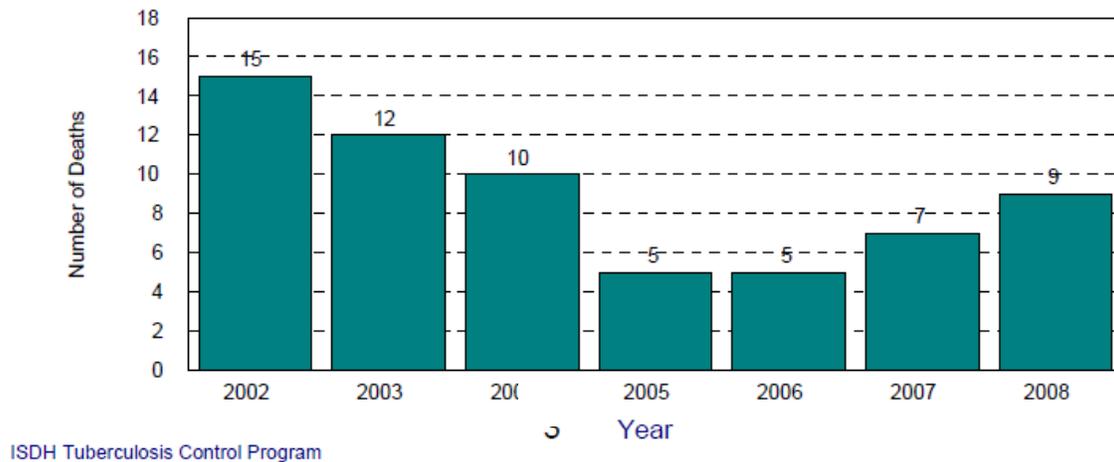
In 2008, there were 118 cases of TB reported in Indiana, down from 129 in 2007, and down from 125 in 2006. However, the overall trend of TB cases in the last fifty years has shown steady decline. The last seven years has shown a fairly consistent number of cases averaging around 131, as shown in Figure 59.

**Figure 59: Reported Tuberculosis Cases in Indiana, 2002-2008**



The number of TB related deaths has declined dramatically since they peaked in 2002. TB deaths have shown a steady decline since 2002, with a new low of five deaths in 2005 and 2006, as shown in Figure 60. In 2008, there has been a small increase since 2006 up to 9 deaths.

**Figure 60: Number of Tuberculosis-Related Deaths, 2002-2008**



The sex and racial/ethnic distribution of TB cases in Indiana is shown in Table 53.

**Table 53: Percentage of TB Cases by Sex, Race and Ethnicity, 2008**

<b>Category:</b>	<b>Number of Cases</b>	<b>Percent of Cases</b>
<b>Sex:</b>		
Male	69	58
Female	49	42
<b>Ethnicity:</b>		
Hispanic or Latino	23	19
<b>Race:</b>		
White	69	58
Black or African-American	23	19
Asian	25	21
American Indian or Alaska Native	1	1
Hawaiian Native or other Pacific Islander	0	N/A

Compared to their share of the overall population, Blacks and Hispanics are over-represented in the TB numbers.

**Table 54: Numbers and Percentages of TB Cases by Age Group, 2008**

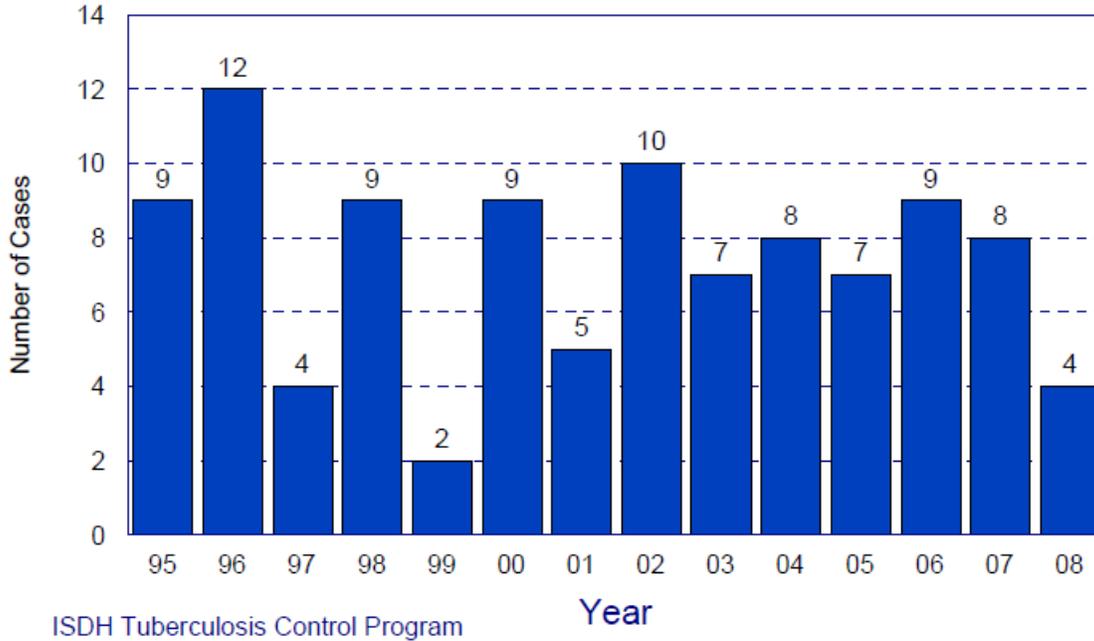
<b>Age Group:</b>	<b>Numbers of new cases</b>	<b>Percentage of all new cases:</b>
< 15 years	9	8
15-24 years	12	10
25-44 years	33	28
45-64 years	33	28
≥ 65 years	31	26

In 2008, there were nine cases of TB among ages less than 15 years reported in Indiana.

The TB bacteria are especially dangerous for HIV diagnosed persons whose immune systems are weakened. Of the total number of TB diagnosed persons in Indiana in 2008, four persons were also HIV positive, down from eight in 2007, and down from nine in 2006.

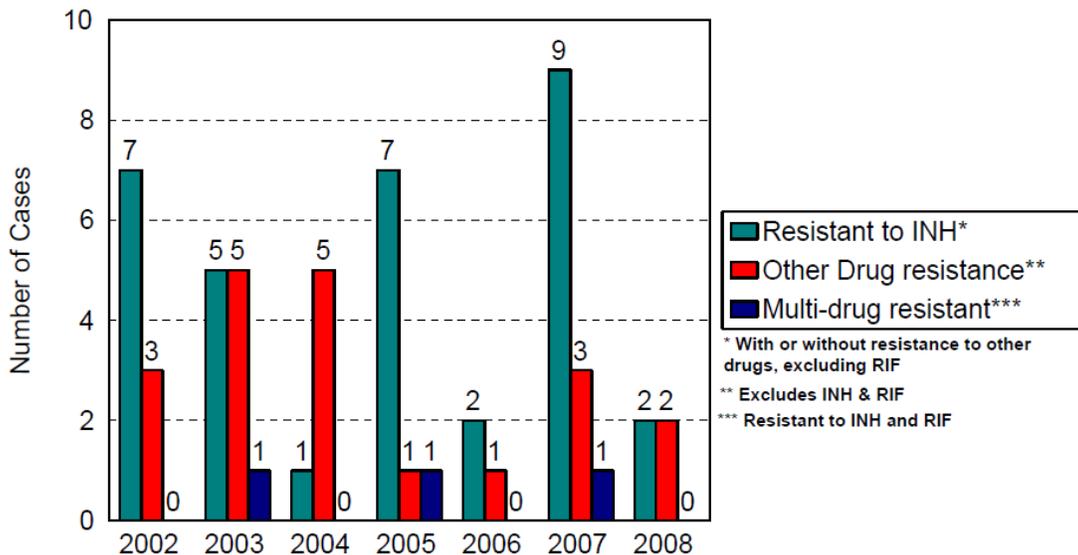
Figure 61 lists the number of HIV and TB co-infection for the past 14 years.

**Figure 61: HIV and TB Co-infection Cases, 1995-2008.**



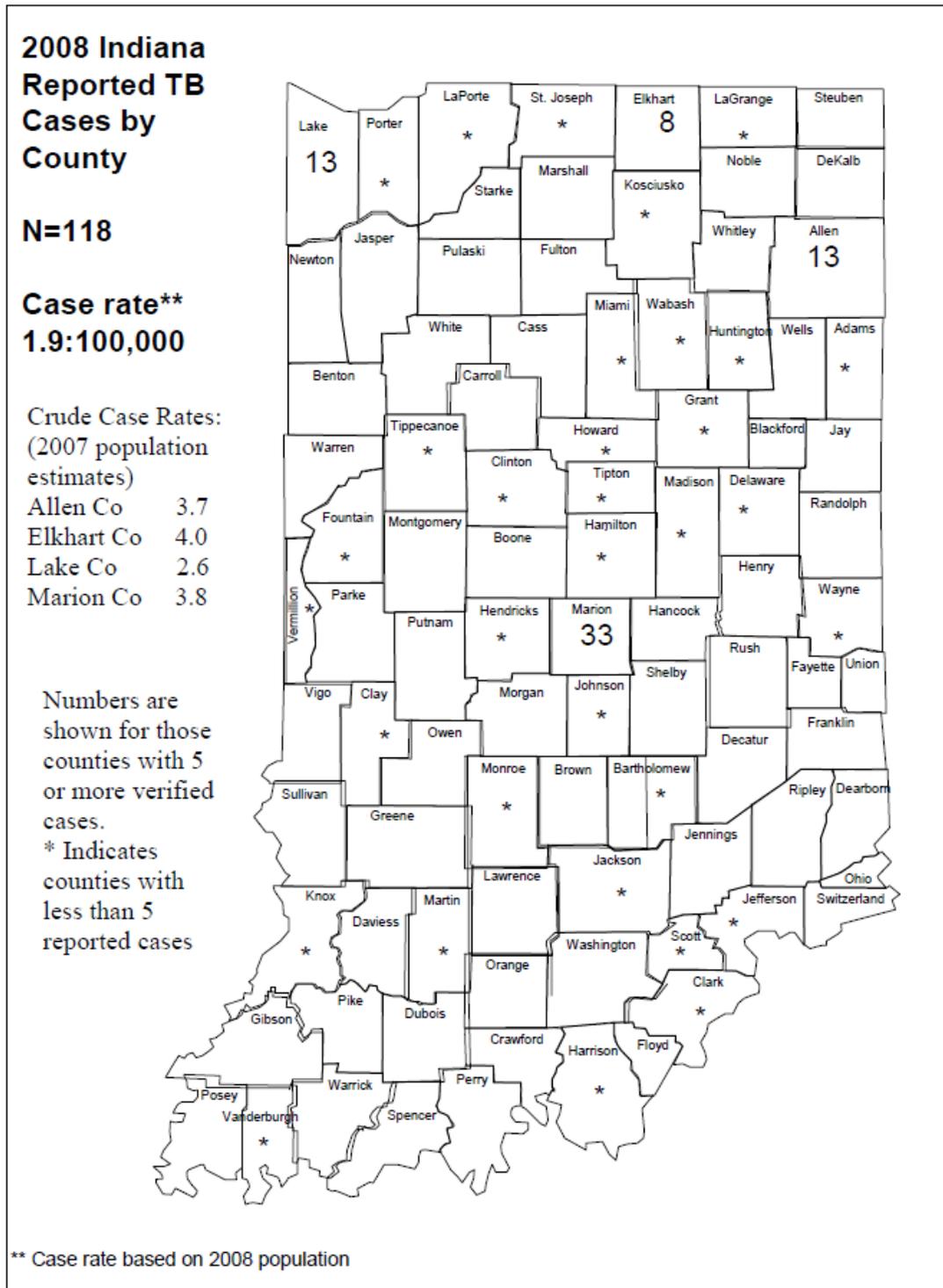
In 2008, 4 cases showed resistance to either INH (Isoniazid – antibiotic specifically described to treat TB), had multi-drug resistance, or had other drug resistance. Figure 62 shows the number of drug resistant TB cases for the period of 2002 to 2008.

**Figure 62: TB Cases with Drug Resistance, 2002-2008**



Finally, the geographic distribution of TB cases for 2008 is listed in Figure 63.

**Figure 63: Reported TB Cases by County, 2008**

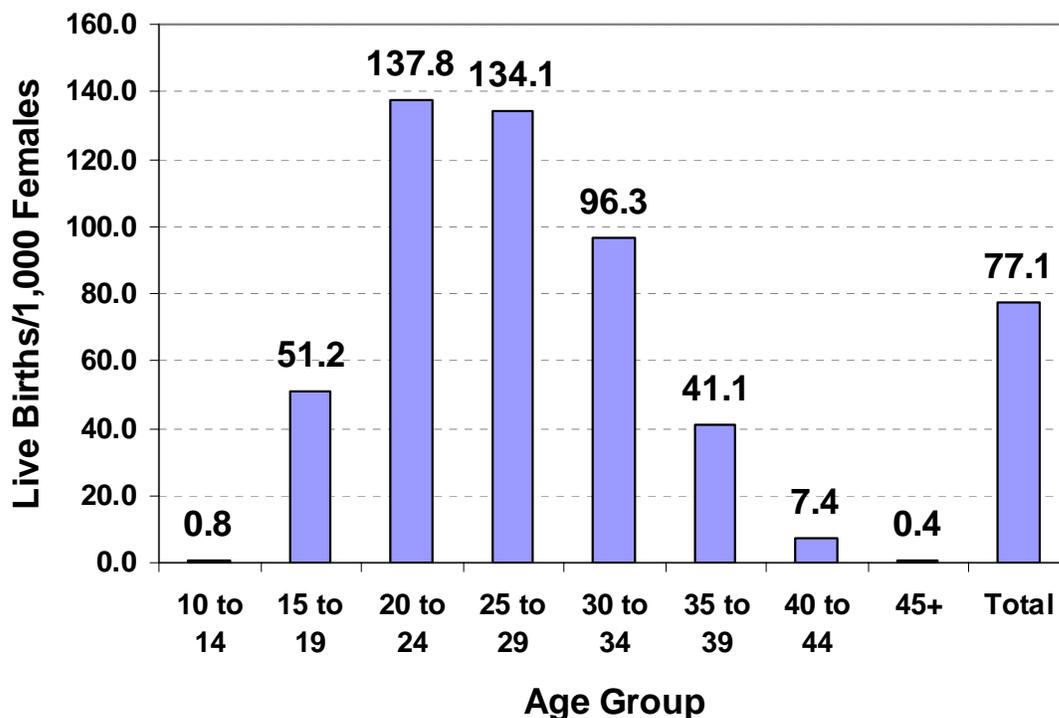


## Pregnancy and Natality Report

The number of live births and pregnancies are indicators of HIV risk factors (e.g. sexual behavior). This report includes live births as well as pregnancies. Pregnancies include births, fetal deaths and induced terminated pregnancies. In 2006, the latest data available for this report, the overall birth rate was 77.1 per 1,000 females aged 10-49 in Indiana<sup>(7)</sup>. In absolute terms there were 89,404 births in Indiana in 2006.

As shown in Figure 64, women aged 20 to 24 years had the highest birth rate (137.8 per 1,000 females) and women aged 45 and older years had the lowest (0.4 per 1,000 females).

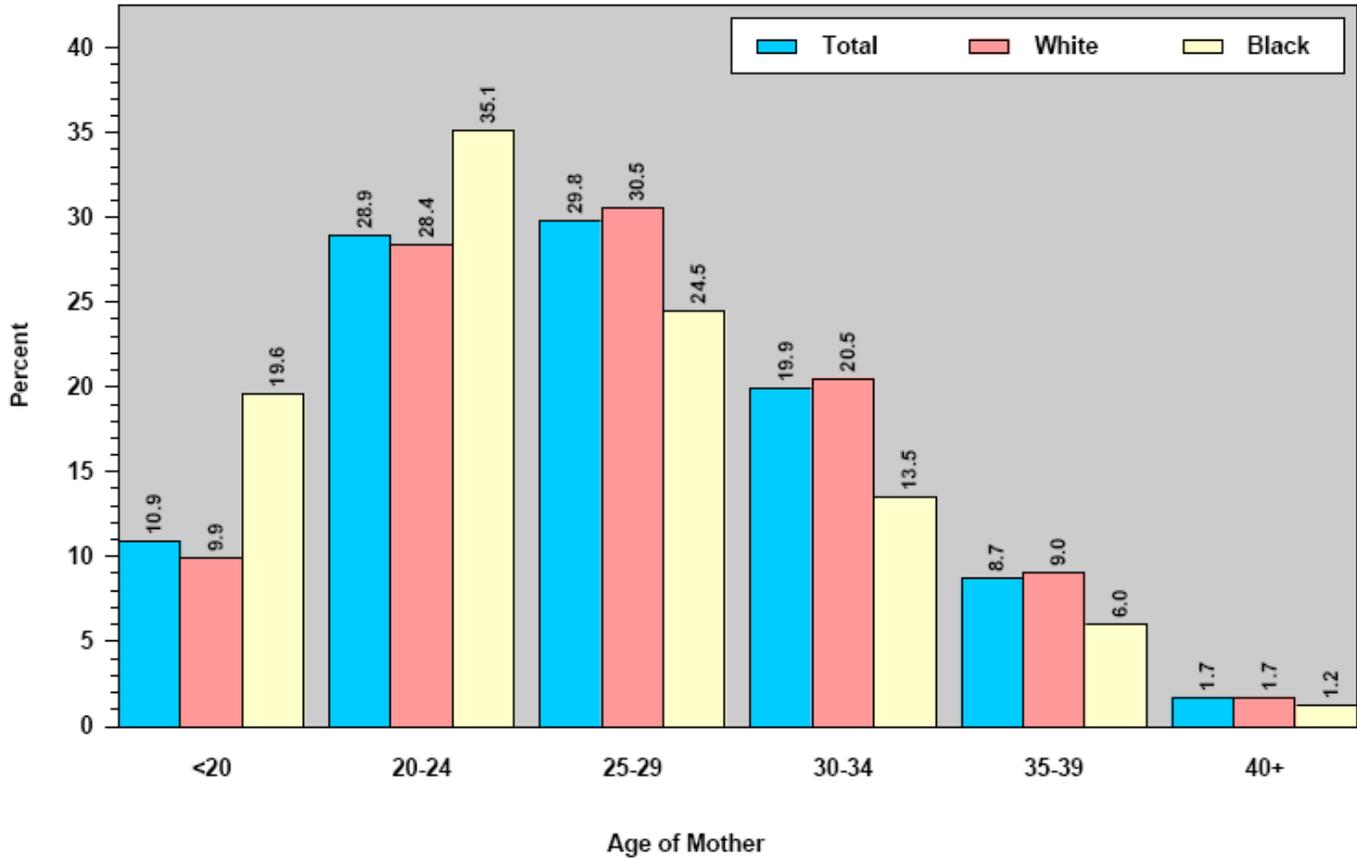
**Figure 64: Live Birth Rates by Age Category, 2006** <sup>(6)</sup>



<sup>7</sup> Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2006

Figure 65 shows the percentage distribution of live births by age and race of the mother for Indiana.

**Figure 65: Percentage of Live Births by Age and Race, 2006**



This figure was run on July 2, 2008.  
Source: ISDH, PHSD, DAT; Table 3

Source: Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team 2006

It is interesting to note that the share of pregnancies among White mothers age 24 and under is lower than for Black mothers. However, the share of live births among White mothers is higher than Black mothers in the age groups 25 and older.

Table 55 lists the number of reported pregnancies for each county in 2006, as well as the percentage and rate per 1,000 females by county.

**Table 55: Pregnancies by County of Residence of the Mother, 2006**

County	Total Births	Percent	Crude Birth Rate
Adams	654	0.7%	19.4
Allen	5,492	6.1%	15.8
Bartholomew	1,096	1.2%	14.7
Benton	110	0.1%	12.2
Blackford	148	0.2%	10.9
Boone	676	0.8%	12.6
Brown	97	0.1%	6.4
Carroll	214	0.2%	10.4
Cass	567	0.6%	14.2
Clark	1,513	1.7%	14.6
Clay	368	0.4%	13.6
Clinton	524	0.6%	15.3
Crawford	135	0.2%	12.1
Daviess	536	0.6%	17.7
Dearborn	587	0.7%	11.8
Decatur	365	0.4%	14.6
DeKalb	545	0.6%	13.0
Delaware	1,229	1.4%	10.7
Dubois	575	0.6%	14.0
Elkhart	3,562	4.0%	18.0
Fayette	300	0.3%	12.2
Floyd	840	0.9%	11.6
Fountain	200	0.2%	11.4
Franklin	293	0.3%	12.5
Fulton	249	0.3%	12.1
Gibson	431	0.5%	12.9
Grant	877	1.0%	12.6
Greene	392	0.4%	11.8
Hamilton	3,713	4.2%	14.8
Hancock	901	1.0%	13.9
Harrison	447	0.5%	12.1
Hendricks	1,686	1.9%	12.9
Henry	486	0.5%	10.4
Howard	1,115	1.2%	13.2
Huntington	481	0.5%	12.6
Jackson	572	0.6%	13.5
Jasper	470	0.5%	14.6
Jay	306	0.3%	14.2
Jefferson	369	0.4%	11.3
Jennings	391	0.4%	13.7
Johnson	1,838	2.1%	13.8
Knox	514	0.6%	13.4
Kosciusko	1,167	1.3%	15.2
LaGrange	714	0.8%	19.1
Lake	6,937	7.8%	14.0
LaPorte	1,371	1.5%	12.4
Lawrence	534	0.6%	11.5
Madison	1,594	1.8%	12.2
Marion	15,545	17.4%	18.0

County	Total	Percent	Crude Birth Rate
Marshall	662	0.7%	14.0
Martin	126	0.1%	12.2
Miami	449	0.5%	12.6
Monroe	1,298	1.5%	10.6
Montgomery	448	0.5%	11.7
Morgan	871	1.0%	12.4
Newton	138	0.2%	9.7
Noble	766	0.9%	16.0
Ohio	71	0.1%	12.2
Orange	246	0.3%	12.5
Owen	237	0.3%	10.4
Parke	194	0.2%	11.4
Perry	236	0.3%	12.5
Pike	158	0.2%	12.3
Porter	1,836	2.1%	11.5
Posey	252	0.3%	9.4
Pulaski	177	0.2%	12.8
Putnam	368	0.4%	10.0
Randolph	295	0.3%	11.1
Ripley	389	0.4%	14.0
Rush	226	0.3%	12.8
St. Joseph	4,013	4.5%	15.0
Scott	352	0.4%	14.8
Shelby	539	0.6%	12.2
Spencer	237	0.3%	11.5
Starke	298	0.3%	12.9
Steuben	396	0.4%	11.8
Sullivan	235	0.3%	10.9
Switzerland	128	0.1%	13.2
Tippecanoe	2,205	2.5%	14.1
Tipton	175	0.2%	10.7
Union	92	0.1%	12.6
Vanderburgh	2,520	2.8%	14.5
Vermillion	171	0.2%	10.3
Vigo	1,375	1.5%	13.3
Wabash	393	0.4%	11.7
Warren	94	0.1%	10.8
Warrick	677	0.8%	11.9
Washington	345	0.4%	12.3
Wayne	920	1.0%	13.4
Wells	387	0.4%	13.7
White	322	0.4%	13.2
Whitley	361	0.4%	11.1
UNKNOWN	0	0	0
<b>Indiana</b>	<b>89,404</b>	<b>100.0%</b>	<b>14.2</b>