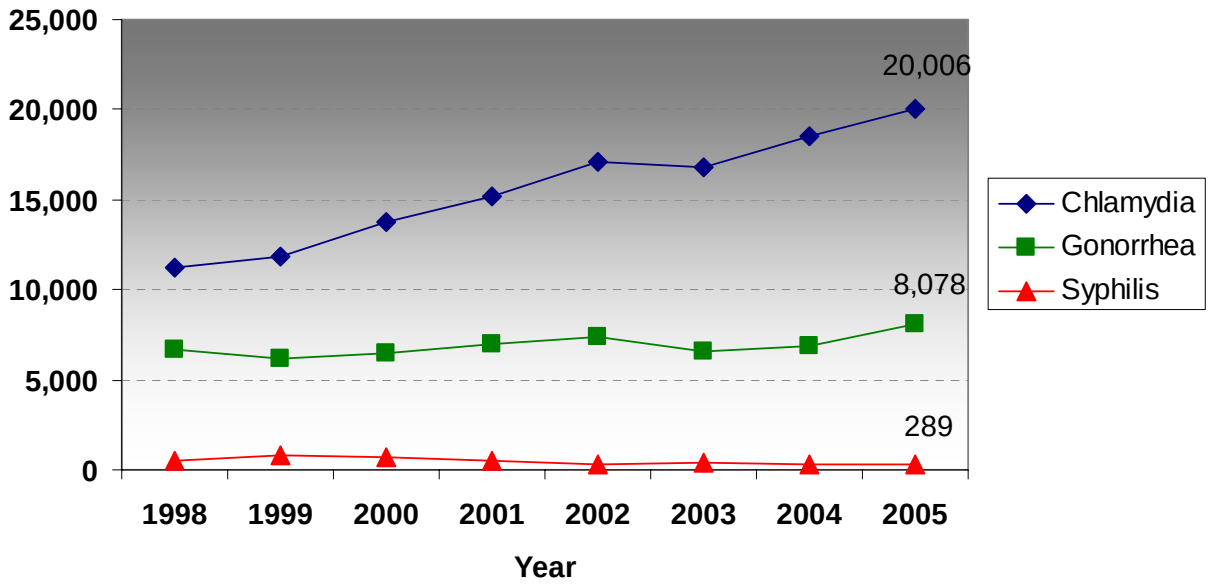
STD's in Indiana

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 STDs 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 STD's, Chlamydia, Gonorrhea and Syphilis. The results of the STD Surveillance Report 2005 for Indiana are presented in the following tables and figures. Figure 56 shows the number of cases for Chlamydia, Gonorrhea and Syphilis from 1998 to 2005.

Figure 56: Number of STD Cases in Indiana, 1998-2005



In the case of Syphilis and Gonorrhea, both diseases have seen a rise in numbers from their decrease from a high in recent years. The number of Chlamydia cases rose to a new high in 2005. It continued the trend of the last seven years that seemed briefly stalled in 2003. 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 STD's.

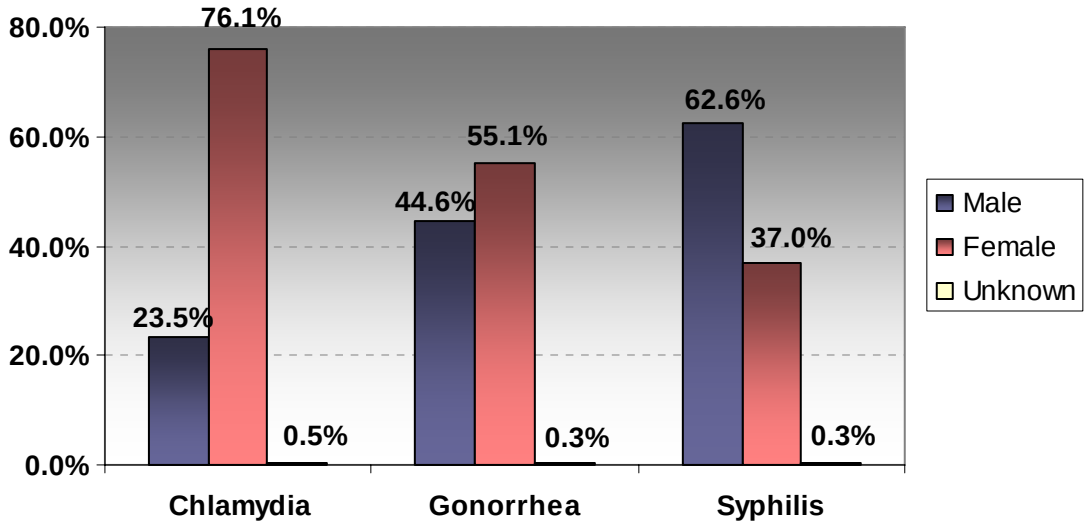
As a result of these efforts the number of new Syphilis cases has decreased by 28% from the levels in 2003. Table 50 lists the numbers for all three STD's by year.

Table 50: Number of STD Cases in Indiana, 1998 to 2005

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

The three STD's also show a different infection pattern between the sexes. The following figures and tables will take a look at the available data for 2005. Figure 57 breaks out the STD's by Sex.

Figure 57: Percentages of STD Cases in Indiana by Sex, 2005



Chlamydia affects predominantly women, even though men do act as carriers of the disease. Three-quarters of Chlamydia cases in 2005 were female. In the case of Gonorrhea a majority of infection cases also occurred among women (55.1%). 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. Six out of ten persons infected with Syphilis were male.

There are differences in how the different STD's are present at different age groups. Figure 58 shows the breakout for all Chlamydia and Gonorrhea, while Figure 59 shows the age distribution for Syphilis for a comparison.

Figure 58: Number of Chlamydia and Gonorrhea Cases in Indiana by Age, 2005

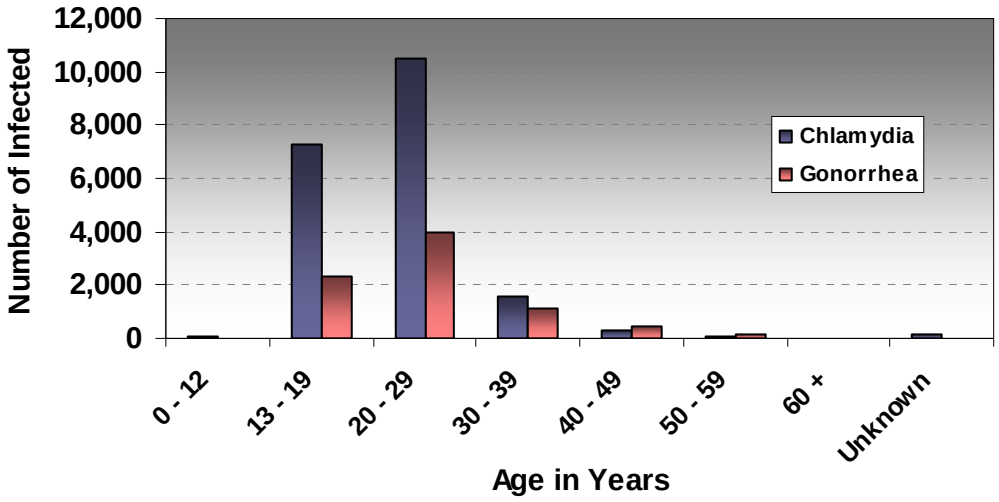
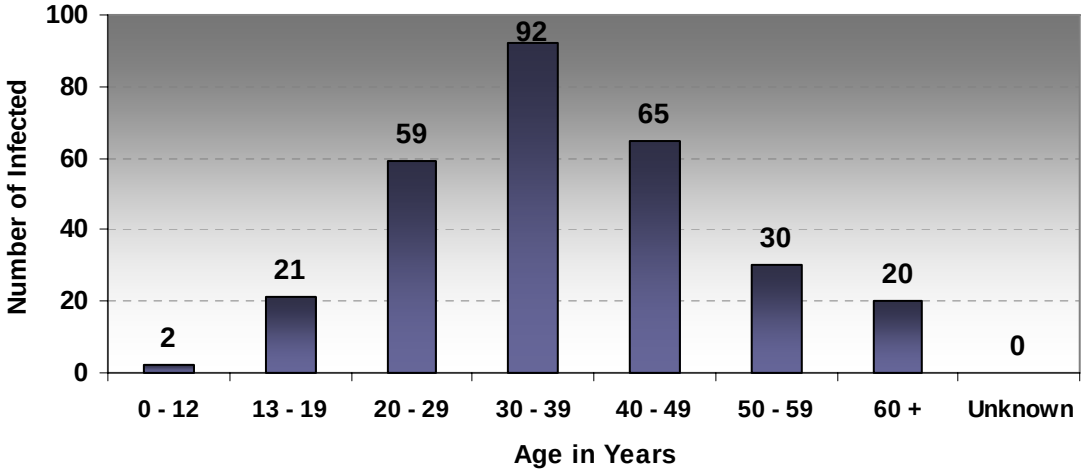


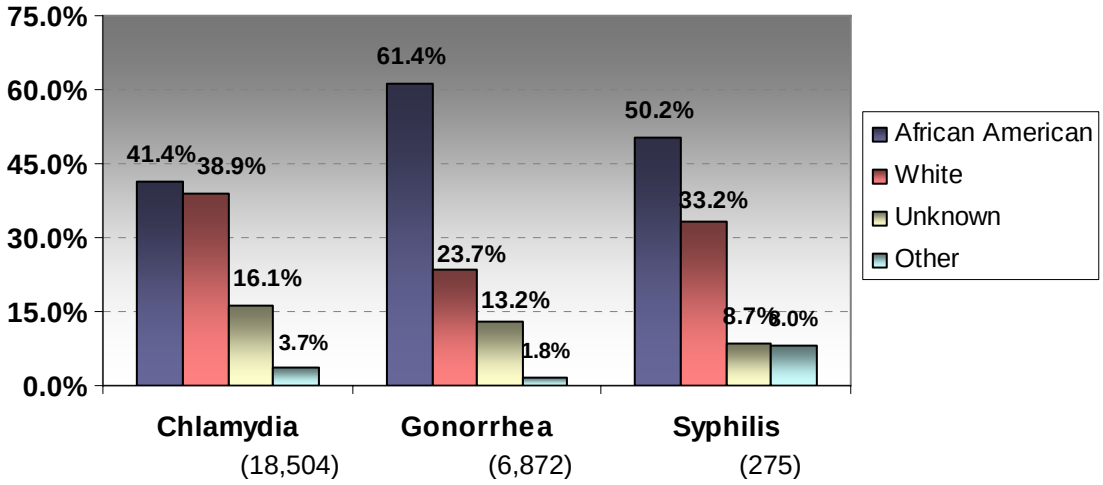
Figure 59: Number of Syphilis Cases in Indiana by Age, 2005



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 30 to 39 years of age. It is also 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 13 to 30 years of age.

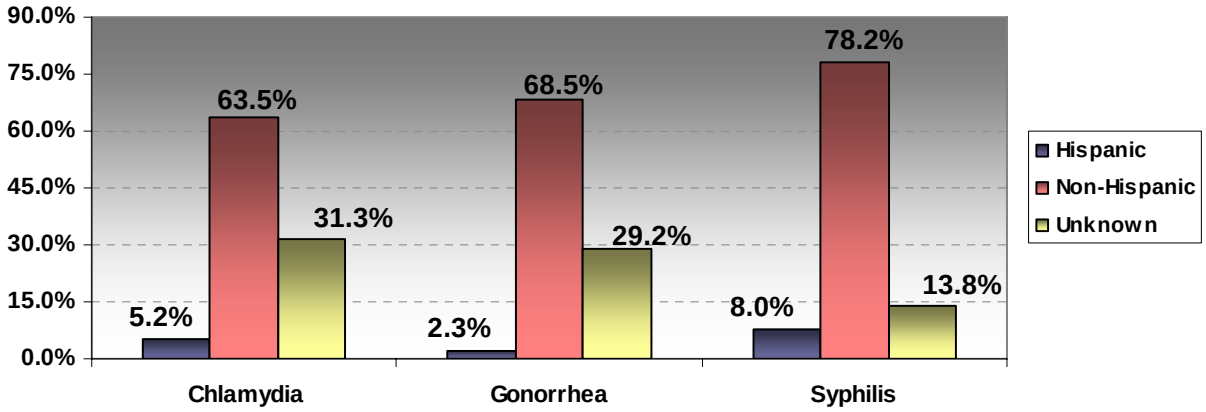
Similar to the racial and ethnic distribution of the HIV/AIDS infection, STD's are more prevalent among minorities than among the White population. Figure 60 shows the distribution of STD cases in Indiana by race.

Figure 60: Number of STD Cases in Indiana by Race, 2005



Black/African Americans are disproportionably affected by all three STD's. Figure 61 breaks out the numbers of STD cases by ethnicity.

Figure 61: Number of STD Cases in Indiana by Ethnicity, 2005



Among Indiana's general population 4.3% claim Hispanic background. Chlamydia affects Hispanics almost proportionally to that share (5.2%), while Gonorrhea affects slightly less Hispanics. However, Syphilis affects Hispanics more severely than Non-Hispanics. The number of Syphilis infections among Hispanics in 2005 (8.0%) was almost twice the share of Hispanics among the general population.

Finally, the geographic distribution of the three STD's varies strongly by county. Table 51 lists the absolute numbers and percentages for all three STD's by county of residence in 2005.

Table 51: STD Cases in Indiana by County, 2005

County	Chlamydia	%	Gonorrhea	%	Syphilis	%
Adams	26	0.1%	4	0.0%	1	0.3%
Allen	1705	8.5%	698	8.6%	21	7.3%
Bartholomew	138	0.7%	23	0.3%	0	0.0%
Benton	9	0.0%	3	0.0%	1	0.3%
Blackford	16	0.1%	1	0.0%	0	0.0%
Boone	41	0.2%	4	0.0%	0	0.0%
Brown	5	0.0%	1	0.0%	0	0.0%
Carroll	16	0.1%	3	0.0%	0	0.0%
Cass	49	0.2%	6	0.1%	2	0.7%
Clark	153	0.8%	52	0.6%	7	2.4%
Clay	35	0.2%	3	0.0%	0	0.0%
Clinton	42	0.2%	3	0.0%	0	0.0%
Crawford	4	0.0%	1	0.0%	0	0.0%
Daviess	47	0.2%	4	0.0%	0	0.0%
De Kalb	33	0.2%	6	0.1%	1	0.3%
Dearborn	62	0.3%	12	0.1%	0	0.0%
Decatur	30	0.1%	2	0.0%	0	0.0%
Delaware	351	1.8%	91	1.1%	1	0.3%
Dubois	23	0.1%	5	0.1%	0	0.0%
Elkhart	695	3.5%	248	3.1%	4	1.4%
Fayette	39	0.2%	9	0.1%	0	0.0%
Floyd	161	0.8%	59	0.7%	2	0.7%
Fountain	20	0.1%	3	0.0%	0	0.0%
Franklin	7	0.0%	0	0.0%	0	0.0%
Fulton	11	0.1%	7	0.1%	0	0.0%
Gibson	30	0.1%	7	0.1%	0	0.0%
Grant	109	0.5%	38	0.5%	0	0.0%
Greene	25	0.1%	6	0.1%	0	0.0%
Hamilton	191	1.0%	42	0.5%	1	0.3%
Hancock	87	0.4%	16	0.2%	0	0.0%
Harrison	40	0.2%	5	0.1%	0	0.0%
Hendricks	160	0.8%	39	0.5%	7	2.4%
Henry	72	0.4%	8	0.1%	0	0.0%
Howard	180	0.9%	105	1.3%	0	0.0%
Huntington	32	0.2%	8	0.1%	0	0.0%
Jackson	85	0.4%	4	0.0%	0	0.0%
Jasper	23	0.1%	3	0.0%	0	0.0%
Jay	22	0.1%	1	0.0%	0	0.0%
Jefferson	54	0.3%	7	0.1%	2	0.7%
Jennings	37	0.2%	4	0.0%	0	0.0%
Johnson	219	1.1%	50	0.6%	4	1.4%

County	Chlamydia	%	Gonorrhea	%	Syphilis	%
Knox	75	0.4%	5	0.1%	0	0.0%
Kosciusko	70	0.3%	9	0.1%	1	0.3%
La Porte	333	1.7%	114	1.4%	2	0.7%
LaGrange	28	0.1%	7	0.1%	0	0.0%
Lake	2166	10.8%	877	10.9%	61	21.1%
Lawrence	65	0.3%	2	0.0%	0	0.0%
Madison	399	2.0%	132	1.6%	4	1.4%
Marion	7241	36.2%	3956	49.0%	117	40.5%
Marshall	34	0.2%	3	0.0%	0	0.0%
Martin	5	0.0%	2	0.0%	0	0.0%
Miami	16	0.1%	3	0.0%	0	0.0%
Monroe	412	2.1%	72	0.9%	4	1.4%
Montgomery	71	0.4%	6	0.1%	0	0.0%
Morgan	118	0.6%	13	0.2%	0	0.0%
Newton	11	0.1%	2	0.0%	0	0.0%
Noble	57	0.3%	10	0.1%	1	0.3%
Ohio	5	0.0%	0	0.0%	0	0.0%
Orange	9	0.0%	1	0.0%	0	0.0%
Owen	17	0.1%	4	0.0%	0	0.0%
Parke	13	0.1%	2	0.0%	4	1.4%
Perry	8	0.0%	3	0.0%	1	0.3%
Pike	11	0.1%	0	0.0%	0	0.0%
Porter	171	0.9%	27	0.3%	10	3.5%
Posey	29	0.1%	11	0.1%	1	0.3%
Pulaski	9	0.0%	1	0.0%	0	0.0%
Putnam	80	0.4%	5	0.1%	4	1.4%
Randolph	21	0.1%	3	0.0%	1	0.3%
Ripley	41	0.2%	5	0.1%	0	0.0%
Rush	17	0.1%	3	0.0%	0	0.0%
Scott	34	0.2%	2	0.0%	0	0.0%
Shelby	68	0.3%	7	0.1%	3	1.0%
Spencer	10	0.0%	3	0.0%	0	0.0%
St Joseph	908	4.5%	456	5.6%	6	2.1%
Starke	15	0.1%	1	0.0%	0	0.0%
Steuben	36	0.2%	5	0.1%	0	0.0%
Sullivan	13	0.1%	3	0.0%	1	0.3%
Switzerland	5	0.0%	3	0.0%	0	0.0%
Tippecanoe	426	2.1%	115	1.4%	5	1.7%
Tipton	7	0.0%	1	0.0%	0	0.0%
Union	8	0.0%	0	0.0%	0	0.0%
Unknown	409	2.0%	147	1.8%	0	0.0%
Vanderburgh	780	3.5%	355	4.4%	6	2.1%
Vermillion	10	0.0%	2	0.0%	0	0.0%
Vigo	260	1.3%	25	0.3%	2	0.7%
Wabash	48	0.2%	7	0.1%	0	0.0%
Warren	5	0.0%	0	0.0%	0	0.0%
Warrick	60	0.3%	9	0.1%	0	0.0%

County	Chlamydia	%	Gonorrhea	%	Syphilis	%
Washington	20	0.1%	4	0.0%	1	0.3%
Wayne	179	0.9%	53	0.7%	0	0.0%
Wells	22	0.1%	2	0.0%	0	0.0%
White	23	0.1%	2	0.0%	0	0.0%
Whitley	44	0.2%	6	0.1%	0	0.0%
Total	**20,006**	**100.0**	**8,078**	**100.0**	**289**	**100.0**

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 an infected 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 2005, Indiana had 57 cases of acute Hepatitis B, down from 80 cases in 2004. There were four counties of significant infection of Hepatitis B in 2005; Lake (10.5%), Porter (8.8%) and St. Joseph County (15.8%) in northern Indiana and Marion County (21.1%) in central Indiana. There were only 3 counties with 5 or more cases of Hepatitis B in 2004, with Porter and Vanderburgh being the two new counties on this list. Of the total number of acute and chronic infections with HBV, 69 cases were pregnant women, which do not include Marion County.

Table 52: Number of Hepatitis B cases in Indiana by Sex, and Race/Ethnicity, 2005

	Number	Percent
Sex		
Female	16	28.1%
Male	41	71.9%
Race		
Asian	1	1.8%
Black	13	22.8%
Other	3	5.3%
Unknown	6	10.5%
White	34	59.6%
Total	**57**	100.0%

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 an infected person. The Indiana State Health Department collects the number of laboratory reports of persons testing positive for Hepatitis C. In 2006, there were 4,011 cases of Hepatitis C infection reported.
The geographic distribution of Hepatitis C is shown in Table 53 in descending order.

Table 53: Number of Hepatitis C Infections by County in Indiana in 2006

County	Number of Infections	Percentage of Infections
Marion	1,109	27.6%
Lake	366	9.1%
Hendricks	226	5.6%
Vanderburgh	192	4.8%
St. Joe	180	4.5%
Wayne	122	3.0%
Allen	114	2.8%
Delaware	91	2.3%
Clark	79	2.0%
Hamilton	77	1.9%
Tippecanoe	72	1.8%
Vigo	72	1.8%
LaPorte	71	1.8%
Porter	71	1.8%
Henry	68	1.7%
Howard	65	1.6%
Madison	50	1.2%
Monroe	50	1.2%
Bartholomew	43	1.1%
Floyd	41	1.0%
Elkhart	40	1.0%
Knox	40	1.0%
Scott	31	0.8%
Warrick	30	0.7%
Morgan	29	0.7%
Johnson	28	0.7%
Dearborn	27	0.7%
Jackson	26	0.6%
Daviess	25	0.6%
Hancock	21	0.5%
Washington	19	0.5%
Putnam	18	0.4%
Sullivan	18	0.4%
Boone	17	0.4%
Greene	17	0.4%

County	Number of Infections	Percentage of Infections
Harrison	17	0.4%
Jennings	17	0.4%
Clinton	16	0.4%
Randolph	16	0.4%
Cass	15	0.4%
Gibson	15	0.4%
Fayette	14	0.3%
Grant	14	0.3%
Jefferson	14	0.3%
Shelby	14	0.3%
Unknown	14	0.3%
Lawrence	13	0.3%
Wells	13	0.3%
Marshall	12	0.3%
Perry	12	0.3%
Clay	11	0.3%
Dubois	11	0.3%
Jasper	11	0.3%
Posey	11	0.3%
Rush	11	0.3%
Wabash	11	0.3%
Dekalb	9	0.2%
Miami	9	0.2%
Steuben	9	0.2%
Franklin	8	0.2%
Kosciusko	8	0.2%
Montgomery	8	0.2%
Owen	8	0.2%
Parke	8	0.2%
Starke	8	0.2%
Crawford	7	0.2%
Orange	7	0.2%
Pike	7	0.2%
White	7	0.2%
Adams	6	0.1%
Pulaski	6	0.1%
Tipton	6	0.1%
Vermillion	6	0.1%
Blackford	*	0.1%
Fountain	*	0.1%
Lagrange	*	0.1%
Switzerland	*	0.1%
Whitley	*	0.1%
Benton	*	0.1%

County	Number of Infections	Percentage of Infections
Carroll	*	0.1%
Decatur	*	0.1%
Ripley	*	0.1%
Huntington	*	0.1%
Noble	*	0.1%
Warren	*	0.1%
Fulton	*	0.0%
Jay	*	0.0%
Brown	*	0.0%
Spencer	*	0.0%
Union	*	0.0%
Total	**4,011**	**100.0%**

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

The absolute numbers and percentages by sex and race are listed in Tables 54 and 55. Please note that no data for a breakout by ethnicity was available at the time of this report.

Table 54: Number of Hepatitis C Infections By Sex

Gender	Number of Infections	Percentage of Infections
Male	2,440	62.2%
Female	1,478	37.8%
Total	3,918	100.0%

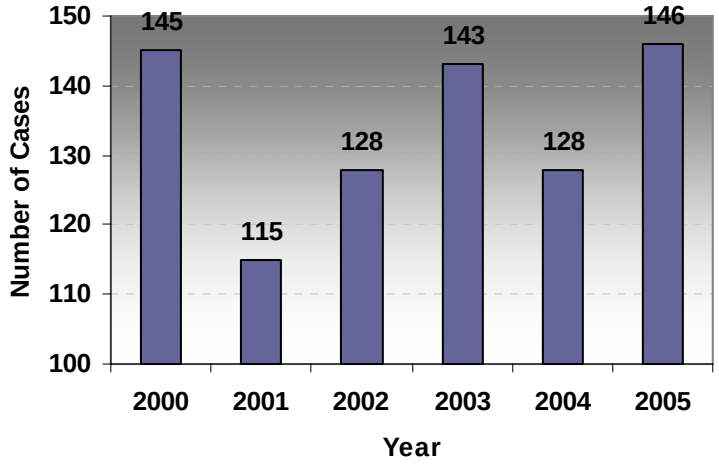
Table 55: Number of Hepatitis C Infections By Race

Race	Number of Infections	Percentage of Infections
Caucasian/White	1,642	57.3%
Unknown	743	25.9%
African American	460	16.0%
Other/Multiracial*	23	0.8
Total	2,868	100.0%

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

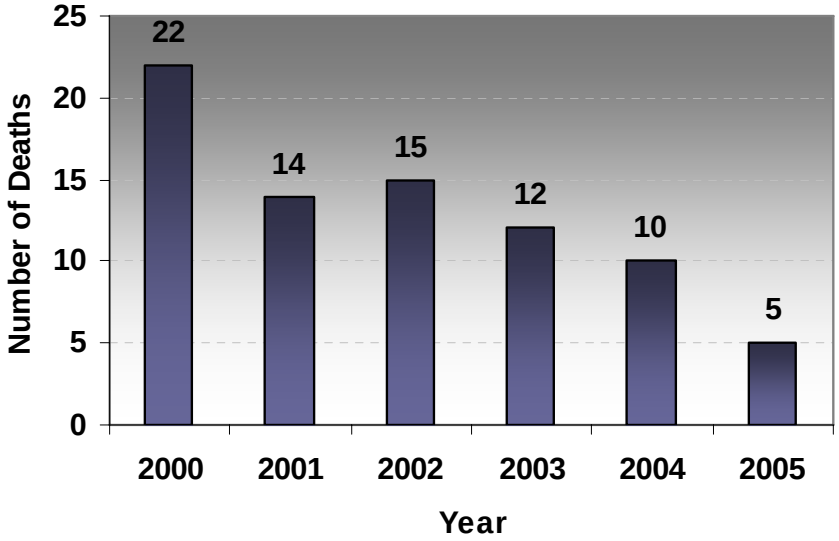
Tuberculosis, or TB, is a disease caused by bacteria called *Mycobacterium tuberculosis.* The bacteria can attack any part of the body, but they usually attack the lungs.
In 2005, there were 146 cases of TB reported in Indiana, up from 128 in 2004. However, the overall trend of TB cases in the last fifty years has shown steady decline. The last six years has shown a fairly consistent number of cases averaging around 134, as shown in Figure 62.

Figure 62: Reported Tuberculosis Cases in Indiana, 2000-2005



The number of TB related deaths have declined dramatically since they peaked in 2000. TB deaths have shown a steady incline since 2000, with a new low of 5 deaths in 2005, as shown in Figure 63.

Figure 63: Number of Tuberculosis Related Deaths, 2000-2005



The sex and racial/ethnic distribution of TB cases in Indiana is shown in Table 54.

Table 56: Percentage of TB-Cases by Sex, Race and Ethnicity

Category	Percentage of all New Cases
Sex	
Male	62
Female	38
Race/Ethnicity	
White	34
Black/African American	28
Hispanic	21
Asian	17
Native American	N/A
Hawaiian Native or Pacific Islander	<1

Compared to their share of the overall population, Black/African Americans and Hispanics are over-represented in the TB numbers.

Table 57: Number and Percentages of TB-Cases by Age Group

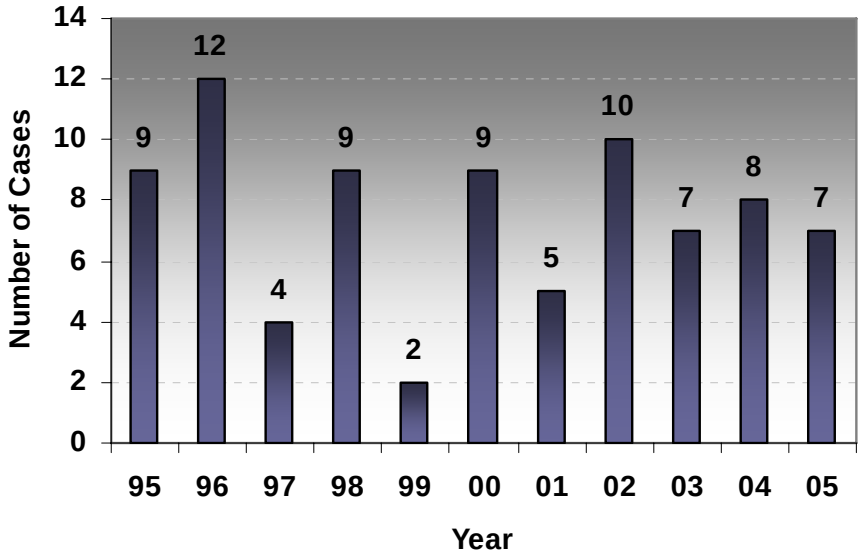
Age Group	Number of New Cases	Percentage of New Cases
Less than 15 Years	9	6
15-24 Years	18	12
25-44 Years	44	30
45-64 Years	43	30
Over 65 Years	32	22
Total	**146**	**100**

In 2005, there were seven cases of pediatric TB reported in Indiana.

The TB bacteria are especially dangerous for HIV infected persons whose immune systems are weakened. Of the total number of TB infected persons in Indiana in 2005, 7 persons were also HIV positive, down from 8 in 2004.

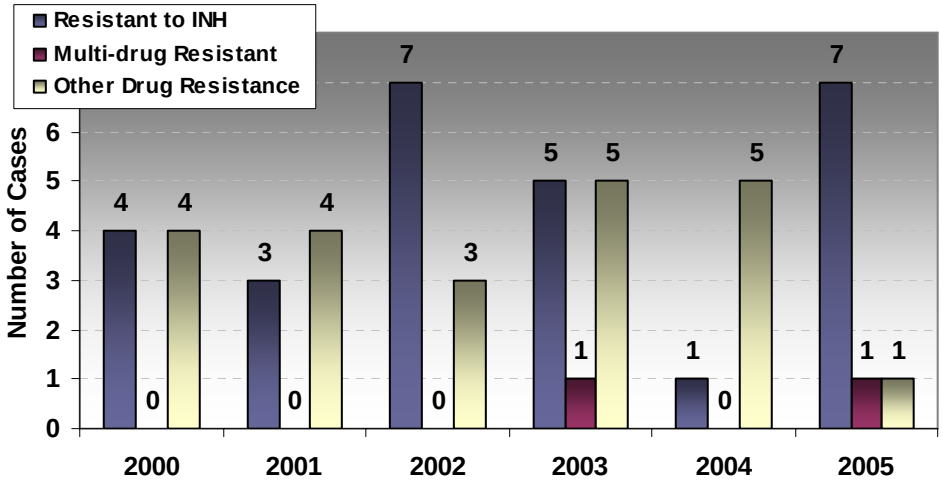
Of the total number of TB cases in 2005, seven cases were co-occurring with HIV. Figure 64 lists the number of HIV and TB co-infection for the past 10 years.

Figure 64: HIV and TB Co-infection, 1995-2005.



In 2005, nine cases showed resistance to either INH (Isoniazid – antibiotic specifically described to treat TB), had multi-drug resistance, or had other drug resistance. Figure 65 shows the number of drug resistant TB cases for the period of 200 to 2005.

Figure 65: TB Cases with Drug Resistance, 2000-2005



Finally, the geographic distribution of TB cases for 2005 is listed in Table 56.

Table 58: Reported TB Cases by County, 2005

County	Number of Cases
ALLEN	17
BARTHOLOMEW	*
BOONE	*
CLARK	*
CLINTON	*
DEARBORN	*
DELAWARE	*
DUBOIS	*
FLOYD	*
GIBSON	*
HAMILTON	*
HENDRICKS	*
HENRY	*
JACKSON	*
JEFFERSON	*
JOHNSON	*
KOSCIUSKO	10
LAGRANGE	*
LAKE	17
LAWRENCE	*
MADISON	*
MARION	45
MARSHALL	*
MONROE	*
MONTGOMERY	*
PORTER	*
RANDOLPH	*
RIPLEY	*
RUSH	*
ST. JOSEPH	8
STARKE	*
STEUBEN	*
SULLIVAN	*
TIPPECANOE	5
TIPTON	*
VANDERBURGH	*
VIGO	*
WHITE	*
INDIANA	**146**

* Indicates counties with less than 5 reported cases