

2010 Profile of HIV/AIDS in Michigan

Sexually Transmitted Diseases

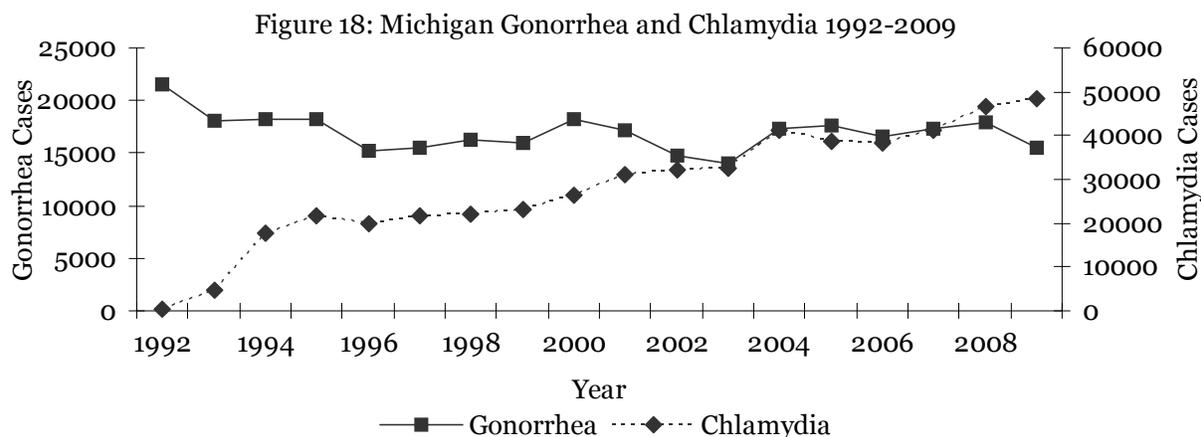
Data from STD Reporting System & HIV/AIDS Reporting System (eHARS)

Several sexually transmitted diseases (STDs) are more common than HIV infection, have a short incubation period, and are curable. Reviewing their patterns of transmission can provide additional information regarding recent sexual behavior and potential risk, not available from HIV/AIDS data. Studies have shown that the risk of both acquiring and spreading HIV is two to five times greater in people with STDs. Aggressive STD treatment in a community can help to reduce the rate of new HIV infections.

Gonorrhea and Chlamydia

During 2009 alone, there were over 48,000 cases of chlamydia and over 15,000 cases of gonorrhea reported in Michigan (Figure 18). See Table 12, page 3-93. For both diseases, the highest rates of infection were among persons age 20-24. This age group comprises 6.7 percent of the Michigan population but accounted for 32 percent of gonorrhea and 34 percent of chlamydia cases. The rates of chlamydia and gonorrhea among blacks were much higher than among whites. Even though 37 percent of gonorrhea cases and 41 percent of chlamydia cases were missing race information, the rates (number of cases per population) among blacks remain higher even if all unknown cases were among whites.

Forty percent of gonorrhea cases were male, however, approximately 74 percent of reported chlamydia cases were female. This is because chlamydia screening targets females specifically.



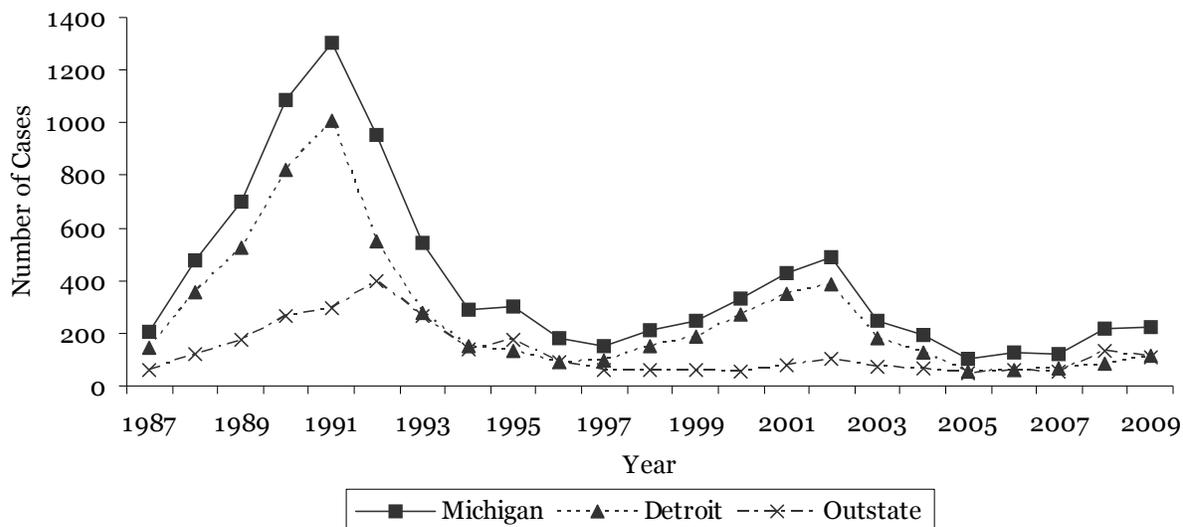
Syphilis

Figures 18 & 19 show that P & S syphilis was diagnosed much less frequently than gonorrhea and chlamydia (224 primary and secondary syphilis cases) in 2009. Syphilis in Michigan and nationally has followed a cyclical trend, increasing every ten years. Major outbreaks peaked in 1991 and decreased until 1997. Reported syphilis cases have increased each year in Michigan since 1997, peaking in 2002, with 486 cases. There was a steady and statistically significant downward trend in reported cases during the 2002 and 2003 calendar years, resulting in a nearly 50 percent decrease in reported cases compared to 2002. This decrease has continued and cases reported in 2005 represented a 55 percent decrease from 2004. However, syphilis cases have increased slightly steady since that time, due to general increases in MSM, many of whom are HIV+ and because of an outbreak in Genesee County in 2008. Approximately 28 percent of cases were reported in those younger than 25 years, representing a trend towards younger syphilis cases. However, an equal percentage of cases (28 percent) are still over the age of 40, representing an older at-risk population than gonorrhea or chlamydia (as shown in Table 12 on page 3-93). Syphilis cases reported in 2009 were 70 percent black and 83 percent male.

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Figure 19: Michigan Primary and Secondary Syphilis Cases, by Area, 1987-2009



Sexual Orientation

Nationwide, there have been increases in STD cases among self-identified men who have sex with men. Michigan does not collect data on sexual orientation for gonorrhea or chlamydia cases. Sexual orientation data are collected for syphilis cases. Of primary and secondary syphilis cases in 2009, approximately 61 percent of male syphilis cases in Detroit and 62 percent of male syphilis cases in the rest of the state are men who have sex with men. Of these men, 80 percent of Detroit MSM cases are HIV+ as are 46 percent of cases outside of Detroit. Between 2001 and 2004, the syphilis epidemic in Detroit was largely heterosexual with the male female ratio being closer to 1:1 while MSM transmission was prevalent in most other areas. In 2005, the male to female ratio was 3.1:1 in the Detroit area to 6.3:1 in the out-state areas. In 2009, the male to female ratio was almost 4.5 in Detroit and seven in the out-state areas (not including Genesee County), showing a greater increase in the number of male cases compared to female cases. This is a trend that is mirrored nationally and is the focus of prevention efforts around the country.

Geographic Distribution

There are several areas in Michigan that consistently report high rates of STDs. For gonorrhea, there are six areas with rates above the Healthy Michigan (HM) 2010 goal of 180 gonorrhea cases per 100,000. The five areas with the highest rate per 100,000 persons are the City of Detroit (837), Genesee County (273), Calhoun County (242), Kalamazoo County (237), and Muskegon County (231). For chlamydia, there are 19 areas with rates above the HM 2010 goal of 215 cases of chlamydia per 100,000. The five areas with the highest rate per 100,000 persons are the City of Detroit (1,945), Muskegon County (782), Genesee County (765), Kalamazoo County (648), and Ingham County (614). For primary and secondary syphilis, the HM 2010 goal is 0.2 cases per 100,000 persons. There are 21 health departments with rates higher than the HM 2010 goal. The health departments reporting the highest rates per 100,000 are City of Detroit (31), Ingham County (10), Genesee County (15), and Kent County (6). See Table 13 on page 3-94.

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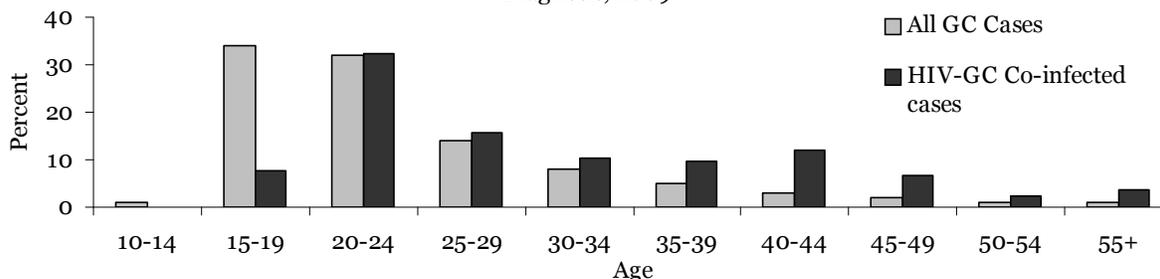
Sexually Transmitted Diseases

Co-infection with HIV:

HIV/Gonorrhea:

In 2009, 167 of the 15,539 gonorrhea cases were HIV co-infected (1.1 percent). More than half of these cases resided in the City of Detroit (54 percent), however cases were also found in Wayne (12), Oakland (18), Saginaw (5), Washtenaw (3), Kent (4), Genesee (8), and Ingham counties (5). The majority (82 percent) of cases were diagnosed with HIV first. Two percent of cases were Hispanic, 86 percent of the cases were black, and 13 percent were White. The majority of cases were male (83 percent). The majority of co-infected females (93 percent) had an HIV mode of transmission of heterosexual sex and seven percent were IDUs. Among these males, 77 percent were MSM, six percent had a risk of heterosexual sex, and three percent were IDUs. Of the cases, the majority had HIV (62 percent) and 35 percent had progressed to AIDS. The age distribution of all gonorrhea cases compared to co-infected cases is shown in Figure 20.

Figure 20: Percent of Gonorrhea (GC) cases and HIV/GC Co-infected Cases by Age at GC Diagnosis, 2009



HIV/Syphilis:

In 2008, 110 of the 590 syphilis cases were HIV co-infected (19 percent), although this represented 27 percent of the male cases. In 2009, this percentage increased to 30 percent of overall cases and 40 percent of male cases. The increase was mostly due to an increase of co-infected cases in the Detroit Metro Area (DMA). Of the co-infected cases in 2009, 47 percent were P & S syphilis, overall 60 percent were residents of the DMA, 72 percent were black, 26 percent were white and two percent were Hispanic. Forty percent were between 20-29 years old. The distribution of co-infected cases by selected county is shown in Figure 21.

Syphilis infections increase the likelihood of acquiring and spreading HIV infection two to five fold. Increases among syphilis in HIV+ MSM may be attributed to prevention fatigue, serosorting, the high rate of anonymous partners met on the Internet, and prevention messages not reaching marginalized populations.

Figure 21: Percent of Syphilis Cases Co-infected with HIV Statewide and by Selected County, 2009

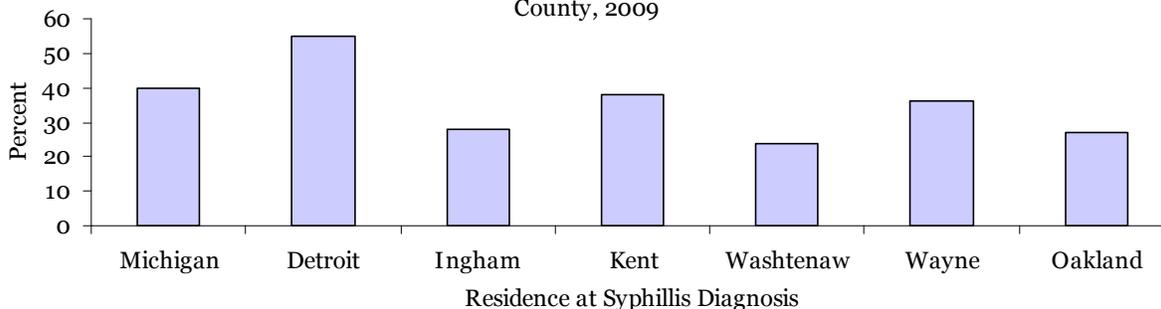


Table 12: Gonorrhea, Syphilis, and Chlamydia Case by Sex, Race and Age Group, Michigan, 2009

	<i>Gonorrhea</i>			<i>P&S Syphilis*</i>			<i>Chlamydia</i>			<i>Census 2006 Estimate</i>
	Num	%	Rate [^]	Num	%	Rate [^]	Num	%	Rate [^]	
<i>RACE/ ETHNICITY</i>										
White	1,550	10%	20.0	58	26%	0.7	8,964	19%	115.7	7,750,818
Black	7,813	50%	556.9	157	70%	11.2	17,471	36%	1245.2	1,403,051
Hispanic	203	1%	49.1	4	2%	1.0	1,017	2%	245.8	413,827
Other/Multi	207	1%	47.5	4	2%	0.9	827	2%	189.8	435,726
Unknown Race	5,773	37%	N/A	1	0%	N/A	20,008	41%	N/A	N/A
<i>SEX & RACE</i>										
Males	6,285	40%	127.6	185	83%	3.8	12,216	25%	248.1	4,923,929
<i>White Males</i>	393	3%	10.3	53	24%	1.4	2,072	4%	54.2	3,825,990
<i>Black Males</i>	3,761	24%	567.3	125	56%	18.9	5,649	12%	852.0	662,992
<i>Hispanic Males</i>	62	0%	28.4	3	1%	1.4	269	1%	123.4	217,942
<i>Other Males</i>	66	0%	N/A	3	1%	N/A	209	0%	N/A	217,005
<i>Unknown Males</i>	2,003	13%	N/A	1	0%	N/A	4,017	8%	N/A	N/A
Females	9,092	58%	179.0	39	17%	0.0	35,884	74%	706.4	5,079,493
<i>White Females</i>	1,156	7%	29.5	5	2%	0.1	6,890	14%	175.5	3,924,828
<i>Black Females</i>	3,965	26%	535.8	32	14%	4.3	11,800	24%	1594.5	740,059
<i>Hispanic Fem.</i>	141	1%	72.0	1	0%	0.5	748	2%	381.9	195,885
<i>Other Females</i>	140	1%	N/A	1	0%	N/A	615	1%	N/A	218,721
<i>Unknown Fem.</i>	3,690	24%	N/A	0	0%	N/A	15,831	33%	N/A	N/A
Unknown Sex - All Races	169	1%	N/A	0	0%	N/A	187	0%	N/A	N/A
<i>Age</i>										
0-4 years	11	0%	1.8	0	0%	0.0	12	0%	1.9	624,295
5-9 years	10	0%	1.5	0	0%	0.0	11	0%	1.7	645,446
10-14 years	153	1%	22.5	0	0%	0.0	625	1%	92.0	679,592
15-19 years	5,342	34%	722.3	18	8%	2.4	20,394	42%	2757.5	739,588
20-24 years	4,911	32%	737.0	43	19%	6.5	16,215	34%	2433.6	666,310
25-29 years	2,164	14%	339.1	45	20%	7.1	6,008	12%	941.6	638,091
30-34 years	1,236	8%	209.2	27	12%	4.6	2,408	5%	407.5	590,880
35-39 years	701	5%	103.7	28	13%	4.1	1,245	3%	184.2	676,048
40-44 years	395	3%	55.5	21	9%	3.0	604	1%	84.9	711,151
45-54 years	425	3%	27.6	34	15%	2.2	483	1%	31.4	1,539,667
55-64 years	110	1%	9.4	7	3%	0.6	105	0%	9.0	1,170,708
65 and over	57	0%	4.4	1	0%	0.1	77	0%	5.9	1,301,223
Unknown Age	31	0%	N/A	0	0%	N/A	100	0%	N/A	N/A
<i>Total</i>	15,546	100%	155.4	224	100%	2.2	48,287	100%	482.7	10,003,422

* P&S: Primary and Secondary Syphilis

[^] Rate per 100,000

Table 13: Gonorrhea, Syphilis, and Chlamydia by Area and Local Health Department Jurisdiction, 2009

<i>Local Health Department Jurisdiction</i>	<i>Gonorrhea</i>		<i>P&S Syphilis*</i>		<i>Chlamydia</i>		<i>Census 2008 Estimate</i>
	<i>Cases</i>	<i>Rate[^]</i>	<i>Cases</i>	<i>Rate[^]</i>	<i>Cases</i>	<i>Rate[^]</i>	
Allegan	46	40.7	0	0.0	236	208.9	112,975
Barry/Eaton	50	30.2	0	0.0	379	228.8	165,671
Bay	38	35.4	0	0.0	305	283.7	107,495
Benzie/Leelanau	7	17.9	0	0.0	60	153.1	39,179
Berrien	332	208.2	1	0.6	846	530.5	159,481
Br/Hills/St Joseph	27	17.5	0	0.0	271	175.8	154,170
Calhoun	329	242.2	2	1.5	786	578.5	135,861
Chippewa	-	0.0	1	2.6	51	130.9	38,971
Central MI Dist	55	29.4	1	0.5	359	191.6	187,343
Delta/Menominee	6	9.8	0	0.0	76	123.8	61,381
Dickinson/Iron	2	5.2	0	0.0	56	144.3	38,813
District #2	10	14.9	0	0.0	83	123.3	67,340
District #4	8	10.0	0	0.0	61	76.4	79,859
District #10	28	10.7	3	1.2	456	174.9	260,696
Genesee	1,169	272.6	18	4.2	3,279	764.7	428,790
Grand Traverse	29	33.7	0	0.0	256	297.4	86,071
Huron	1	3.0	0	0.0	35	106.7	32,805
Ingham	384	138.4	13	4.7	1,705	614.4	277,528
Ionia	9	14.1	0	0.0	96	150.4	63,833
Jackson	149	93.0	1	0.6	678	423.3	160,180
Kalamazoo	583	237.1	4	1.6	1,594	648.2	245,912
Kent	869	143.6	16	2.6	3,008	497.0	605,213
Lapeer	16	17.6	0	0.0	115	126.5	90,875
Lenawee	41	40.7	1	1.0	229	227.2	100,801
Livingston	27	14.8	3	1.6	203	111.2	182,575
LMAS District	6	17.2	0	0.0	29	83.1	34,896
Macomb	572	68.9	2	0.2	2,221	267.4	830,663
Marquette	2	3.1	0	0.0	117	178.6	65,492
Midland	28	33.9	1	1.2	118	142.8	82,605
Monroe	51	33.3	0	0.0	306	200.1	152,949
Muskegon	403	231.2	1	0.6	1,364	782.4	174,344
Mid-MI District	32	18.3	2	1.1	289	165.2	174,942
NW Michigan	9	8.4	1	0.9	144	134.1	107,388
Oakland	984	81.9	17	1.4	3,668	305.1	1,202,174
Ottawa	55	21.1	0	0.0	502	192.8	260,364
Saginaw	245	122.0	0	0.0	1,084	540.0	200,745
Sanilac	6	13.9	0	0.0	46	106.9	43,024
Shiawassee	21	29.6	1	1.4	100	141.1	70,880
St Clair	123	72.8	0	0.0	397	235.1	168,894
Tuscola	15	26.7	0	0.0	97	172.6	56,187
Van Buren/Cass	40	31.3	0	0.0	337	263.3	127,986
Washtenaw	329	94.7	8	2.3	1,145	329.6	347,376
Wayne excl Detroit	778	75.0	11	1.1	3,262	314.3	1,037,867
City of Detroit	7,631	836.7	116	12.7	17,741	1945.2	912,062
WestUpDist	1	1.5	0	0.0	97	141.1	68,766
Detroit Metro Area ^{ff}	10,154	231.0	146	3.3	27,694	630.1	4,395,484
Out-State	5,392	96.1	78	1.4	20,594	367.2	5,607,938
Total	15,546	155.4	224	2.2	48,287	482.7	10,003,422

^{ff}Detroit Metro Area includes Lapeer, Monroe, Macomb, Oakland, St. Clair, and Wayne Counties

* P&S: Primary and Secondary Syphilis

[^] Rate per 100,000