

**TABLE 1: Characteristics of Michigan Residents Living with HIV or AIDS
 as of July 1, 2004**

	Estimate of HIV Prevalence ¹	Estimated Prevalence Rate ²	Reported Living with AIDS ³		Reported Living with HIV not AIDS ³	
			Number	Percent ⁴	Number	Percent ⁴
MICHIGAN TOTAL	16,200	163	5,645	100%	5,866	100%
SEX						
Male	12,540	257	4,503	80%	4,405	75%
Female	3,660	72	1,142	20%	1,461	25%
BEHAVIOR						
Male-Male Sex	7,530	N/A	2815	58%	2534	55%
Injecting Drug Use ⁵	2,390	N/A	896	18%	802	17%
IDU w/ heterosexual	1,120	N/A	420	9%	378	8%
IDU w/o heterosexual	1,270	N/A	476	10%	424	9%
Male-Male Sex/IDU	820	N/A	301	6%	285	6%
Blood Products	180	N/A	79	2%	49	1%
Heterosexual ⁶	2,220	N/A	725	15%	854	18%
Partner IDU	680	N/A	224	5%	261	6%
Partner Bisexual	110	N/A	34	1%	47	1%
Partner Rec'd Bld	60	N/A	17	0%	23	0%
Partner HIV +	1,370	N/A	450	9%	523	11%
Perinatal	190	N/A	35	1%	103	2%
Undetermined ⁴	Not Applicable	N/A	794	(14%)	1239	(21%)
Presumed Heterosexual ⁷	Not Applicable	N/A	638	(11%)	837	(14%)
Other ⁸	Not Applicable	N/A	156	(3%)	402	(7%)
AGE AT DIAGNOSIS						
0 -12 years	220	12	35	1%	118	2%
13 -19 years	360	36	53	1%	205	3%
20 -24 years	1,460	227	264	5%	771	13%
25 -29 years	2,500	382	676	12%	1098	19%
30 -34 years	3,270	462	1161	21%	1161	20%
35 -39 years	3,260	414	1253	22%	1063	18%
40 -44 years	2,380	293	991	18%	701	12%
45 -49 years	1,390	189	608	11%	382	7%
50 -54 years	790	125	350	6%	211	4%
55 -59 years	340	70	148	3%	95	2%
60 -64 years	150	40	69	1%	40	1%
65 years and over	80	7	37	1%	21	0%
Unspecified ⁴	Not Applicable		0	(0%)	0	(0%)
RACE / ETHNICITY						
White, Non-Hisp.	5,930	76	2,147	38%	2,070	36%
Black, Non-Hisp.	9,330	665	3,219	57%	3,414	60%
Hispanic	590	182	229	4%	190	3%
Asian/Pacific Islander	70	39	27	0%	20	0%
American Indian	50	94	14	0%	25	0%
Unspecified/Multi-race ⁴	Not Applicable	N/A	9	(0%)	147	(3%)

* See Technical Notes for footnotes to Table 1.

**TABLE 2a: Michigan Residents Living with HIV or AIDS by County, as of 7/1/04
 and Residents Ever Diagnosed with AIDS, 1981 to Date**

Residence at Time of Diagnosis	Estimate of HIV Prevalence ¹	Estimated Prevalence Rate ²	Persons Living with AIDS ³	Persons Living with HIV not AIDS ³	Persons Ever Diagnosed with AIDS
Total Michigan	16,200	163.0	5,645	5,866	13,606
Alcona	10	----	0	0	3
Alger	10	----	1	0	1
Allegan	110	104.1	43	28	82
Alpena	10	----	1	1	8
Antrim	10	----	4	1	8
Arenac	10	----	0	2	3
Baraga	10	----	4	3	8
Barry	30	52.9	12	9	24
Bay	70	63.5	19	30	53
Benzie	10	----	0	1	2
Berrien	280	172.4	95	91	188
Branch	20	43.7	1	11	13
Calhoun	160	116.0	51	57	109
Cass	40	78.3	10	17	19
Charlevoix	20	76.7	4	6	6
Cheboygan	10	----	3	0	6
Chippewa	20	51.9	3	8	5
Clare	20	64.0	4	6	9
Clinton	50	77.2	17	14	29
Crawford	10	----	2	0	4
Delta	20	51.9	6	6	7
Dickinson	10	----	2	2	5
Eaton	50	48.2	14	16	32
Emmet	10	----	4	3	8
Genesee	620	142.2	180	234	434
Gladwin	10	----	4	1	6
Gogebic	10	----	0	3	7
Grand Traverse	60	77.3	17	26	35
Gratiot	10	----	2	3	8
Hillsdale	10	----	3	6	16
Houghton	10	----	4	3	8
Huron	10	----	2	0	8
Ingham	450	161.1	127	174	339
Ionia	20	32.5	11	3	20
Iosco	10	----	1	2	2
Iron	10	----	0	1	2
Isabella	20	31.6	8	4	20
Jackson	150	94.7	47	55	105
Kalamazoo	350	146.7	111	119	240
Kalkaska	10	----	1	3	4
Kent	860	149.7	288	282	651
Keweenaw	10	----	0	0	0

1. This estimate includes all persons living with HIV or AIDS, including those not yet diagnosed. The minimum estimate given is 10 persons.
2. Rates are calculated per 100,000 population in 2000. Rates are unreliable for counties with the minimum estimated prevalence of 10, and are therefore not listed.
3. Includes reports of HIV infection or AIDS that contain patient name or are otherwise unduplicated.

**TABLE 2b: Michigan Residents Living with HIV or AIDS by County, as of 7/1/04
 and Residents Ever Diagnosed with AIDS, 1981 to Date**

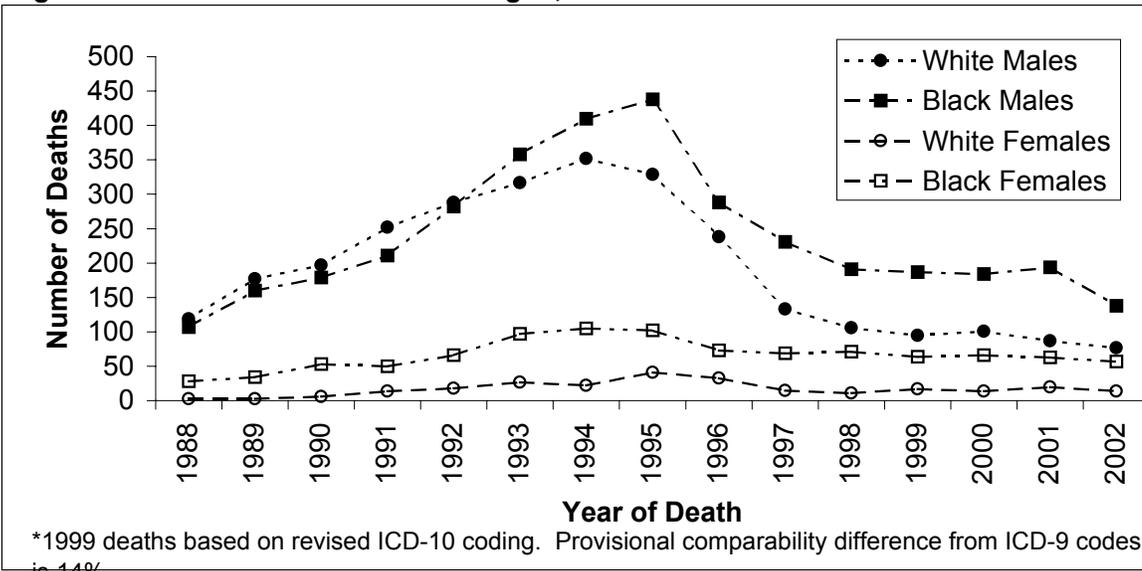
Residence at Time of Diagnosis	Estimate of HIV Prevalence ¹	Estimated Prevalence Rate ²	Persons Living with AIDS ³	Persons Living with HIV not AIDS ³	Persons Ever Diagnosed with AIDS
TOTAL MICHIGAN	16,200	163.0	5,645	5,866	13,606
Lake	10	----	6	3	10
Lapeer	30	34.1	5	13	14
Leelanau	10	----	4	0	14
Lenawee	60	60.7	19	20	41
Livingston	50	31.9	17	14	37
Luce	10	----	0	0	1
Mackinac	10	----	1	0	2
Macomb	600	76.1	202	196	504
Manistee	20	81.5	8	4	11
Marquette	30	46.4	6	13	19
Mason	20	70.7	8	4	11
Mecosta	20	49.3	5	8	13
Menominee	10	----	0	4	3
Midland	30	36.2	15	8	27
Missaukee	10	----	1	4	3
Monroe	60	41.1	26	16	64
Montcalm	30	49.0	8	10	21
Montmorency	10	----	2	0	3
Muskegon	140	82.3	41	55	90
Newaygo	20	41.8	8	5	22
Oakland	1,750	146.5	574	587	1,253
Oceana	10	----	3	4	9
Ogemaw	10	----	1	1	3
Ontonagon	10	----	0	1	0
Osceola	10	----	2	2	8
Oscoda	10	----	0	1	2
Otsego	10	----	5	4	8
Ottawa	110	46.2	44	29	101
Presque Isle	10	----	0	0	2
Roscommon	20	78.5	8	3	15
Saginaw	210	100.0	64	73	164
Sanilac	20	44.9	6	5	13
Schoolcraft	10	----	1	1	3
Shiawassee	30	41.8	11	6	19
St. Clair	100	60.9	28	39	75
St. Joseph	40	64.1	15	10	36
Tuscola	20	34.3	5	5	13
Van Buren	80	104.9	26	27	49
Washtenaw	530	164.1	175	180	372
Wayne	1,590	143.3	566	489	1,296
City of Detroit	7,000	735.9	2,369	2,282	6,175
Wexford	10	----	2	6	4
PRISONS ⁴	760	N/A	252	499	538
Unknown	10	N/A	0	4	1

1. This estimate includes all persons living with HIV or AIDS, including those not yet diagnosed. The minimum estimate given is 10 persons.
2. Rates are calculated per 100,000 population in 2000. Rates are unreliable for counties with the minimum estimated prevalence of 10, and are therefore not listed.
3. Includes reports of HIV infection or AIDS that contain patient name or are otherwise unduplicated.
4. The category PRISONS includes those persons who were in prison at the time of their HIV or AIDS

TABLE 3: Michigan Residents Reported Living with HIV or AIDS: Sex by Race by Behavior

MALES:	White		Black		Hispanic		Other/Unknown or Multi-race		TOTAL	
Male-Male Sex	2,766	75%	2,358	50%	156	48%	69	38%	5,349	60%
Injecting Drug Use	182	5%	775	16%	58	18%	11	6%	1,026	12%
Male-Male Sex/IDU	229	6%	335	7%	14	4%	8	4%	586	7%
Blood Recipient	80	2%	23	0%	1	0%	3	2%	107	1%
Heterosexual	88	2%	326	7%	33	10%	6	3%	453	5%
Perinatal	12	0%	57	1%	2	1%	2	1%	73	1%
Undetermined	308	8%	862	18%	61	19%	83	46%	1,314	15%
<i>Presumed Heterosexual</i>	196	5%	621	13%	51	16%	26	14%	894	10%
<i>Other</i>	112	3%	241	5%	10	3%	57	31%	420	5%
Male Subtotal	3,665 (41%)		4,736 (53%)		325 (4%)		182 (2%)		8,908 100%	
FEMALES:	White		Black		Hispanic		Other/Unknown or Multi-race		TOTAL	
Injecting Drug Use	122	22%	527	28%	16	17%	7	12%	672	26%
Blood Recipient	11	2%	10	1%	0	0%	0	0%	21	1%
Heterosexual	285	52%	766	40%	54	57%	21	35%	1126	43%
Perinatal	12	2%	47	2%	5	5%	1	2%	65	2%
Undetermined	122	22%	547	29%	19	20%	31	52%	719	28%
<i>Presumed Heterosexual</i>	101	18%	449	24%	17	18%	14	23%	581	22%
<i>Other</i>	21	4%	98	5%	2	2%	17	28%	138	5%
Female Subtotal	552 (21%)		1,897 (73%)		94 (4%)		60 (2%)		2,603 100%	
GRAND TOTAL	4,217 37%		6,633 58%		419 4%		242 2%		11,511 100%	

Figure 2: HIV-Related Deaths in Michigan, 1988-2002



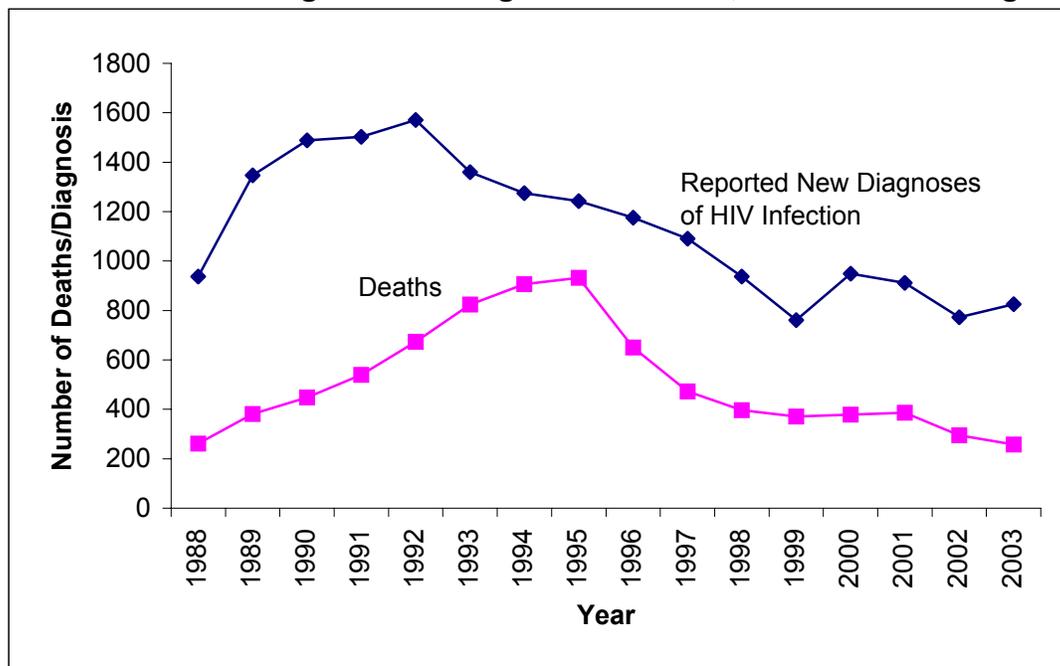
Mortality Trends
 HIV-related deaths declined among all groups between 1995 and 2002. These data (MDCH HIV/AIDS reporting system) show the trend among white men, black men, black women, and white women. There was a statistical difference in the 1995-2002 declines among white men (77%), black men (68%), and women (50%). There were too few deaths to show other groups.

TABLE 4: States and Territories With Most AIDS Cases Ever Reported to CDC, 1981-12/31/02

State	Cases	Rate ¹	State	Cases	Rate ¹	State	Cases	Rate ¹	State	Cases	Rate ¹
1. NY	155,755	820.8	6. IL	28,426	228.9	11. MA	17,774	279.9	16. OH	12,733	112.2
2. CA	128,064	378.1	7. PA	28,136	229.1	12. VA	14,959	211.3	17. MI ³	12,645	127.2
3. FL	90,233	564.6	8. PR ²	27,242	715.3	13. DC ²	14,882	2,601.5	18. NC	12,384	153.9
4. TX	59,772	286.7	9. GA	26,008	317.7	14. LA	14,624	327.2	19. SC	11,055	275.5
5. NJ	45,237	537.6	10. MD	25,358	478.8	15. CT	12,765	374.8	20. WA	10,473	177.7

1. Cumulative Rate per 100,000 Population, 2000 Census. The average U.S. rate was 304.8.
 2. Abbreviations include PR for Puerto Rico, and DC for District of Columbia.
 3. Michigan annual rate per 100,000 population ranks 30th among U.S. states and territories.

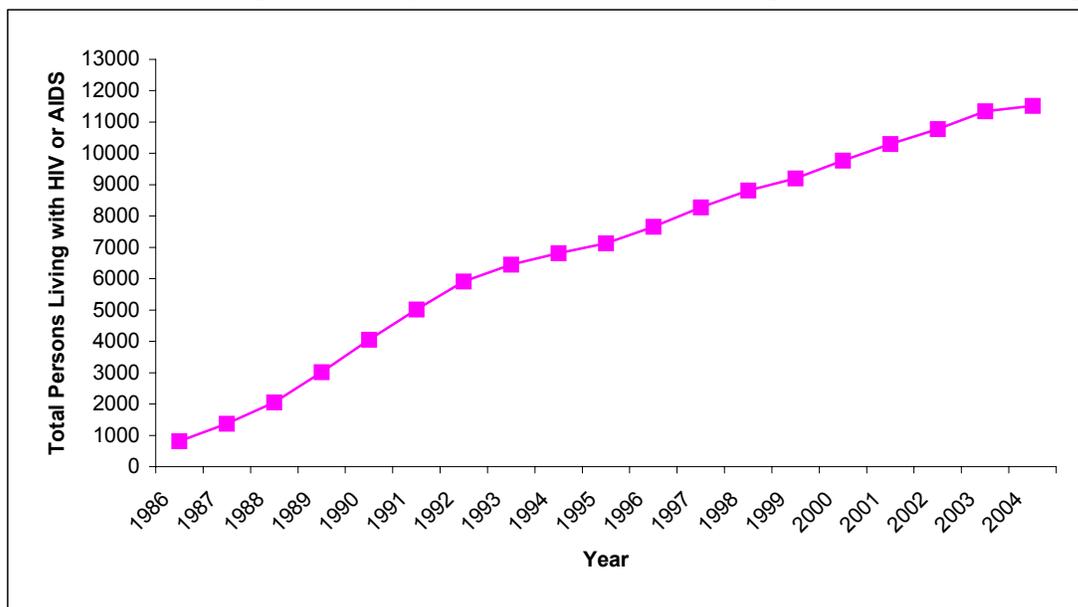
Figure 3: Michigan HIV Deaths, and New HIV Diagnoses, by Year



Deaths and Diagnoses
 The numbers of deaths due to HIV infection and AIDS have declined 72 percent from 1995 to 2003 primarily due to effective therapies. Meanwhile, the number of persons diagnosed with HIV infection each year was roughly level between 1998 and 2002 at 900 persons, but has since declined to 825 cases.

*1999 deaths based on revised ICD-10 coding. Provisional comparability difference from ICD-9 codes is 14%.

Figure 4: Reported Number of Michigan Residents Living with HIV or AIDS



Number of Infected Persons Is Increasing
 The total number of persons reported with a diagnosis of HIV infection or AIDS is increasing. This is caused by the two factors shown in Figure 3: the number of persons diagnosed exceeds the number who die each year, leading to increased prevalence. Currently we estimate there are about 16,200 persons living with HIV or AIDS in Michigan. This graph shows 11,511 living cases who have been diagnosed and reported.

TABLE 5: Characteristics of Michigan and U.S. Residents Ever Diagnosed with AIDS, 1981 to Date

	MI AIDS : 1981-7/1/2004			U.S. AIDS : 1981-12/31/2002 ¹		
	Cases	Percent	Rate ²	Cases	Percent	Rate ²
TOTAL	13,606	100%	136.9	859,000	100%	305.2
SEX						
Male	11,230	83%	230.4	702,448	82%	508.8
Female	2,376	17%	46.9	156,550	18%	109.2
Unknown	0	0%	---	2	0%	---
TRANSMISSION						
Male-Male Sex	6,699	49%	N/A	384,784	45%	N/A
Injecting Drug Use	2,941	22%	N/A	209,920	24%	N/A
Male-Male Sex/IDU	885	7%	N/A	54,224	6%	N/A
Blood Products ³	296	2%	N/A	15,144	2%	N/A
Heterosexual ⁴	1,299	10%	N/A	100,071	12%	N/A
Perinatal ⁵	96	1%	N/A	8,425	1%	N/A
Undetermined ⁶	1,390	10%	N/A	86,432	10%	N/A
AGE AT DIAGNOSIS						
0 -12 years	111	1%	5.9	9,210	1%	17.6
13 -19 years	95	1%	9.4	4,819	1%	17.0
20 -24 years	511	4%	79.4	30,214	4%	159.3
25 -34 years	4,436	33%	325.7	294,539	34%	738.3
35 -44 years	5,390	40%	337.2	336,365	39%	745.0
45 -54 years	2,315	17%	169.2	132,042	15%	350.4
55 -64 years	582	4%	67.4	38,813	5%	159.9
65 years and older	166	1%	13.6	12,354	1%	35.3
Unknown	----	----	----	----	----	----
RACE/ETHNICITY						
White, Non-Hisp.	5,378	40%	68.9	356,628	42%	183.3
Black, Non-Hisp.	7,722	57%	550.8	334,562	39%	985.5
Hispanic	415	3%	128.1	157,809	18%	447.0
Asian	41	0%	23.1	6,614	1%	65.3
American Indian	38	0%	71.1	2,743	0%	132.6
Unknown	12	0%	6.9	0	0%	0.0

1. U.S. figures are produced by the federal Centers for Disease Control and Prevention. Additional detail is available through the CDC web page at www.cdc.gov/nchstp/hiv_aids/stats/hasrlinc.htm.

2. Cumulative rates per 100,000 population are calculated using 2000 Census figures. Populations and rates are not available (N/A) for behaviors.

3. Blood products received for coagulation disorder (227 MI; 5,607 U.S.) or transfusion (69 MI; 9,537 U.S.).

4. A heterosexual partner is known to be: an injecting drug user (474 MI; 31,351 U.S.), a bisexual man (66 MI; 4,088 U.S.), a recipient of infected blood products (34 MI; 1,650 U.S.), or HIV positive with unknown behavior history (725 MI; 60,982 U.S.)

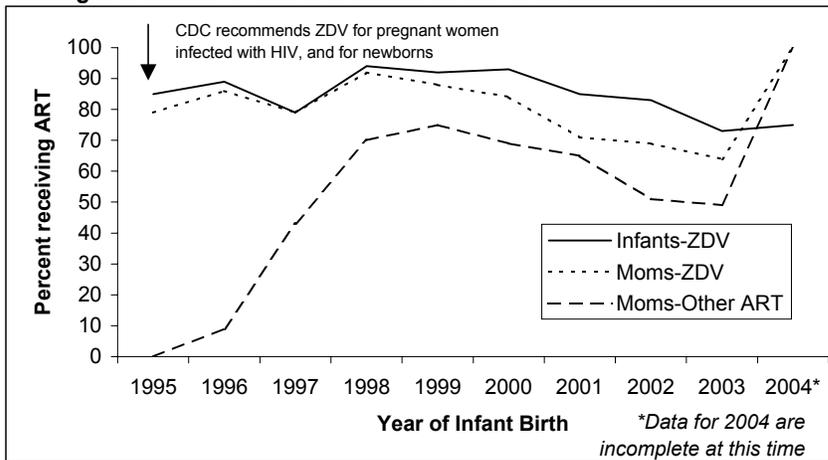
5. Perinatal transmission occurs from HIV-infected mothers to infants before or at birth, or from breast milk.

6. Patient risks are under investigation, or no risk was identified. Included are persons with documented exposure in the health care setting (2 MI; 57 U.S.), or receipt of donor products other than blood (14 U.S.).

Table 6: Michigan Infants Born to HIV-Infected Mothers

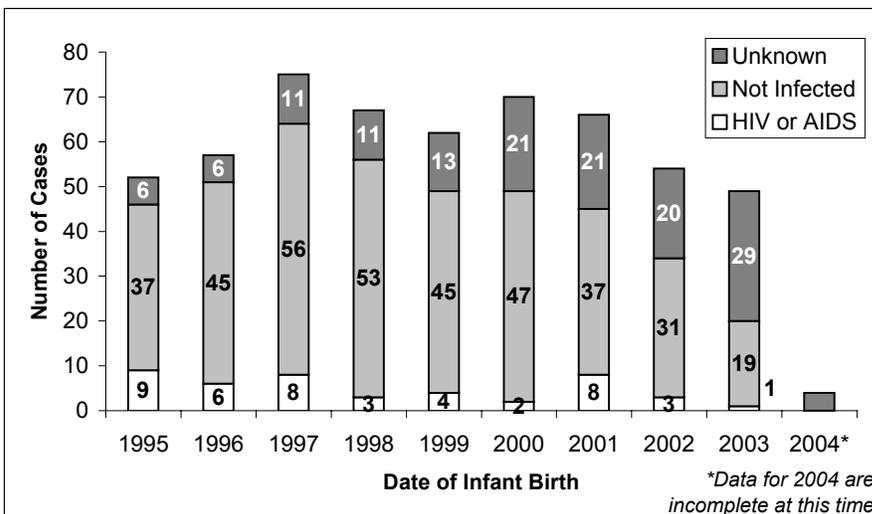
Year of Birth	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 ²
TOTAL										
Total Infants Reported	52	57	75	67	62	70	66	54	49	4
Total Mothers Reported	52	57	74	67	61	69	65	53	45	4
RESIDENCE AT TIME OF BIRTH¹										
Detroit MSA	32	44	53	47	39	52	39	34	32	0
Outside the Detroit MSA	20	13	22	20	23	18	27	20	17	4
RACE OF CHILD										
White, Non-Hisp.	10	8	16	13	11	13	10	10	10	1
Black, Non-Hisp.	42	47	57	50	45	50	48	38	35	3
Hispanic, Asian, Am. Indian, Unk.	0	2	2	4	6	7	8	6	4	0
1- Detroit Metropolitan Statistical Area includes Wayne, Oakland, Macomb, Monroe, Lapeer, and St. Clair counties.										
2- Data for 2004 are incomplete at this time.										

Figure 5: Efforts to Prevent HIV Transmission to Infants



This graph shows that an increasing proportion of mothers and infants receive therapies that reduce HIV transmission to infants since 1993. The number of mothers receiving ZDV any time during pregnancy, labor, and delivery has increased markedly since the July 1994 CDC recommendations to provide this treatment. The number of infants receiving ZDV within 72 hours of birth has increased almost as fast. The number of mothers receiving other antiretroviral therapies increased beginning in 1996. There appears to be a dramatic increase in mothers and infants who received anti-retroviral therapy (ART) in 2003-2004. This represents only 4 cases and is a factor of reporting lag. These data will be more complete in 2005.

Figure 6: Confirmed Infection Status Among Infants Born to HIV-Infected Mothers



The bars show the current reported status of children born to HIV-infected mothers. The bottom bar shows the number who are known to be infected with HIV or have AIDS. The middle bar shows the number who are confirmed or presumed not to be infected (through either laboratory testing or by physician examination). The upper bar shows the number whose HIV infection status is unknown because the child has been lost to follow up or the status has not yet been reported to surveillance.

TECHNICAL NOTES

Reports of HIV infection and AIDS are submitted to state and local health departments under Michigan law by providers making the diagnoses. Confidential case reports have been actively solicited for AIDS since 1986 and for HIV infection since April 1992. HIV reports passively collected between April 1989 and March 1992 are also included in these calculations. Anonymous HIV reports (without name or other identifier) are excluded from the calculations because we cannot estimate duplication, update status, or obtain missing data. A total of 1,438 complete anonymous reports are currently in our database.

Footnotes for Table 1:

1. This estimate includes all persons living in Michigan at diagnosis of HIV or AIDS, including those not reported or not yet diagnosed. All estimates are rounded to the nearest ten, and the minimum estimate given is 10. The formula used to gain these estimates was updated October 2003 and January 2004 so that numbers are only rounded at the end of the estimate calculation and so that cases with no identified risk are no longer part of the equation. This may result in minor variations when compared to past estimates.
2. Rates are calculated per 100,000 population in 2000.
3. Includes reports that contain patient name or are otherwise unduplicated.
4. Age, sex, race, and behavior percentages are calculated excluding missing data. The percentages of total cases missing this demographic information are given in parentheses.
5. The IDU risk category is further sub-divided to indicate the number and percentage of persons who also had a sexual partner who is considered to be a "high risk" heterosexual, (i.e., partner is an IDU, a bisexual male (for females), a recipient of HIV infected blood or blood products or a person who is known to be infected with HIV).
6. The heterosexual category includes only those persons with "high risk" heterosexual partners as defined in footnote 5.
7. This subset of undetermined includes persons who had heterosexual sex but their partner(s)' risk is unknown. This includes unconfirmed exposures in the healthcare setting (1).
8. Includes persons with confirmed exposure in the health care setting (2) and pediatric cases with probable sexual mode of transmission (3).

HIV Prevalence Estimates for Michigan

MDCH estimates that there are up to 16,200 HIV-infected persons (including those with AIDS) living in Michigan. This estimate is based on adding the following three components and rounding: 1) the number of cases living with HIV/AIDS as of 07/01/04 (11,511), 2) the number of known HIV+ cases not yet reported, estimated at 20 percent of the reported living HIV/AIDS cases, and 3) the number of HIV+ cases that have not yet been tested, estimated at 30 percent of the total cases living with HIV/AIDS (identical to the CDC estimate). The estimate of HIV-infected persons has increased from the estimate given in January of 2003. This is the result of an increase in the number of reported cases, currently living in Michigan.

Categorical estimates of HIV infection are calculated from the distribution of reported cases among each group of confidentially-reported persons living with HIV or AIDS. The proportion of total cases is multiplied by 16,200. For example, 77 percent of combined HIV and AIDS reports are among men. Therefore, with rounding, the number of HIV-infected men in Michigan is estimated to be 12,540 = (77% X 16,200). Since the estimates are rounded to the nearest 10, totals may not equal 16,200. The minimum estimate is 10.

TECHNICAL NOTES (Continued)

TABLES 1, 2, 3 AND FIGURE 1: HIV AND AIDS AMONG MICHIGAN RESIDENTS

These tables describe Michigan residents living with HIV infection or AIDS, by sex, mode of transmission, age, race, and residence. For tables 1 and 2, the estimated total number of HIV-infected persons is shown in column 2, the rate is shown in column 3, the numbers of persons reported living with AIDS is in column 4, and the number reported living with HIV infection is in column 5. The estimated number living with HIV or AIDS for each county (from column 2) is shown in Figure 1. In Michigan, there have been two cases in which exposure to HIV has been confirmed by the CDC to have occurred in the health care setting. There has been one case which was unable to be confirmed by the CDC so is considered to be a possible exposure in the health care setting.

TABLES 2 and 5: PERSONS EVER DIAGNOSED WITH AIDS

These tables describe all Michigan residents who were diagnosed with AIDS, most of whom have died. The final column of Table 2 (Cumulative AIDS) shows these cases by residence. Table 5 shows sex, race, mode of transmission, and age when diagnosed for Michigan and the U.S.

FIGURES 2 AND 3: HIV-RELATED DEATHS IN MICHIGAN, 1988-2003

The number of Michigan residents whose underlying cause of death is HIV or AIDS is shown, by race and sex (Figure 2), and total only (Figure 3). Deaths occurring from 1999 to 2001 are based on revised ICD-10 coding. The ICD-9/ICD-10 comparability ratio is 1.14. Being that the codings are not 100% comparable, any changes in HIV/AIDS mortality between 1998 and 1999 should be interpreted with caution, because a portion of the change in mortality is directly attributable to changes in the coding (Grigg et al. [Coding Changes and Apparent HIV/AIDS Mortality Trends in Florida, 1999](#). JAMA 2001; 286(15): 1839).

FIGURE 3: HIV INFECTIONS BY YEAR OF DIAGNOSIS

Figure 3 shows the estimated number of persons diagnosed with HIV infection each year, adjusted for reporting delays. The number of persons diagnosed with HIV infection was roughly level between 1995 and 1997 at 1,100 cases. Data before 1994 (a compressed reporting period) and after 1998 (too incomplete) are not reliable for making these estimates.

FIGURE 4: REPORTED NUMBER OF MICHIGAN RESIDENTS WITH HIV INFECTION OR AIDS

The total number of living persons with a diagnosis of HIV infection changes as some persons are newly diagnosed and some persons die (see Figure 3).

TABLE 6: PERINATAL DATA

Infants born to HIV-infected mothers are described, first by residence and race. Prevention efforts to identify infected women during pregnancy and to treat with ZDV are listed next. Most of these infants are not themselves infected. Finally, the graph shows the confirmed infection status of these children.