

# BIANNUAL HIV SURVEILLANCE REPORT, CALHOUN COUNTY July 2012

## Table of Contents: HIV Surveillance Statistics of Persons Diagnosed in Ingham County

| Front Matter  | Page |
|---|------|
| Acronyms and Definitions  | i    |
| Prevalence Estimate Calculations  | i    |
| Risk Transmission Categories  | i    |
| <b>Section 1: Data on Prevalent Cases</b>                                 |      |
| Table 1. Demographic Information on Prevalent HIV Infection Cases         | 1    |
| Table 2. Sex, Race, and Risk Among Prevalent HIV Infection Cases          | 2    |
| <b>Section 2: New Diagnoses, Deaths, and Prevalence</b>                   |      |
| Table 3. New Diagnoses, Deaths, and Prevalence of HIV Infection, by Year  | 3    |
| Figure 1. New Diagnoses, Deaths, and Prevalence of HIV Infection, by Year | 4    |
| Table 4. Comparison of HIV Infection Prevalence to Michigan               | 4    |

HIV/STD/VH/TB Epidemiology Section  
Division of Communicable Disease  
Bureau of Disease Control, Prevention and Epidemiology  
Michigan Department of Community Health

Lansing - HIV Surveillance Office  
201 Townsend St., 5th Floor  
Lansing, MI 48913  
517-335-8165

Detroit - HIV Surveillance Office  
1151 Taylor St., Room 211B  
Detroit, MI 48202  
313-876-0353

**\*\*WEBSITE\*\***

<http://www.michigan.gov/hivstd>

**\*\*WEBSITE\*\***



## General HIV

### AIDS (Acquired Immune Deficiency Syndrome)

Now referred to as stage 3 HIV infection (see "HIV Infection Stages" below).

### HIV (Human Immunodeficiency Virus)

Diagnosis with HIV requires both a positive HIV screening and positive supplemental antibody test or detectable quantity on a virologic test. A standard case definition for HIV infection is used by all states for surveillance. Specific information is required in order to count a case of HIV infection, including a method to uniquely identify an individual. Each case is classified in a HIV infection stage (see below). Once a case reaches stage 3 (AIDS), the case is always considered stage 3 for surveillance purposes, even if his/her health improves (MMWR; December 5, 2008 / Vol. 57 / No. RR--10 / Pg. 1 - 12).

### HIV Infection Stages

*Stage 1:* A case does not have any of the conditions associated with severe HIV infection (called an AIDS-defining condition) and has  $\geq 500$  CD4 cells/ $\mu$ l.

*Stage 2:* A case has no AIDS-defining condition, but the level of CD4 cells has fallen to 200-499 cells/ $\mu$ l.

*Stage 3:* Diagnosis with any one of 26 AIDS-defining conditions which are indicative of a severe immune deficiency, or a laboratory test demonstrating severe immune deficiency: CD4 count  $<200$  cells/ $\mu$ l or CD4 percent  $<14\%$ . **Previously referred to as AIDS.**

*Stage unknown:* A case of HIV without information available on CD4 levels or AIDS-defining conditions.

## Prevalence Estimate Calculations

HIV prevalence estimates include all persons living in INGHAM at diagnosis of HIV Infection (any stage) and incorporates an approximation of those not reported or not yet diagnosed. All estimates are rounded to the nearest ten, and the minimum estimate given is 10. Prevalence estimates were most recently revised in January 2011, so the estimates in this report may vary in comparison to reports published before the revision.

## Risk Transmission Categories - Definitions

### Blood Recipients

Hemophiliacs, blood transfusion recipients, and organ recipients who received blood products prior to 1985 & persons documented to have ever received an infected organ or unit of blood.

### Heterosexual Contact (HC):

*Heterosexual Contact w/ Female Risk (HCFR):* Males whose female sexual partners are known to be HIV-infected or at high risk for HIV. These partners meet one of the following criteria: IDU, hemophiliac, HIV infected transfusion recipient, or other HIV infected person of unknown risk.

*Heterosexual Contact w/ Male (HCM):* Females who have had sex with a male regardless of what is known about the male's HIV status or behaviors.

### Please note:

-Males whose only documented risk is sex with a female, and their female partner's risk and HIV status is unknown fall into the undetermined risk category.

-Exposure categories are only calculated at the state level due to small numbers at the county and city level. For more information regarding exposure categories, and how they differ from transmission categories, please refer to the statewide statistics.

### Injection Drug Users (IDU)

Persons who have a history of injection drug use.

### Men who have sex with men (MSM)

Males who have a history of sexual contact with other men.

### MSM/IDU

MSM who also have a history of injection drug use.

### Perinatal

HIV transmission from mother to child during birth or through breastfeeding.

### Undetermined

Males and females with no identified risk.

**TABLE 1. Demographic Information on Prevalent HIV Infection Cases Living in CALHOUN CO. at Diagnosis**

|                                    | REPORTED PREVALENCE <sup>†</sup> |                              |             |                                 |             |            |             |                                   | CENSUS 2010    |             |
|------------------------------------|----------------------------------|------------------------------|-------------|---------------------------------|-------------|------------|-------------|-----------------------------------|----------------|-------------|
|                                    | EST<br>PREV*                     | HIV Infection<br>Non-Stage 3 |             | HIV Infection<br>Stage 3 (AIDS) |             | Total      |             | Rate per<br>100,000 <sup>‡§</sup> | Num            | Percent     |
|                                    | Num                              | Num                          | Percent     | Num                             | Percent     | Num        | Percent     |                                   |                |             |
| <b>RACE/ ETHNICITY<sup>¶</sup></b> |                                  |                              |             |                                 |             |            |             |                                   |                |             |
| White                              | 90                               | 34                           | 49%         | 35                              | 53%         | 69         | 51%         | 63.5                              | 108,664        | 80%         |
| Black                              | 70                               | 28                           | 40%         | 27                              | 41%         | 55         | 40%         | 375.9                             | 14,630         | 11%         |
| Hispanic                           | 10                               | <5                           | **          | <5                              | **          | <5         | **          | **                                | 6,177          | 5%          |
| Asian/PI                           | 10                               | 6                            | 9%          | <5                              | **          | 8          | 6%          | ---                               | 2,199          | 2%          |
| Am Indian/AN                       | 0                                | 0                            | 0%          | 0                               | 0%          | 0          | 0%          | **                                | 714            | 1%          |
| Multi/Other/Unk                    | 10                               | <5                           | **          | <5                              | **          | <5         | **          | N/A                               | 3,762          | 3%          |
| <b>SEX &amp; RACE</b>              |                                  |                              |             |                                 |             |            |             |                                   |                |             |
| Male                               | 120                              | 47                           | 67%         | 47                              | 71%         | 94         | 69%         | 141.3                             | 66,519         | 49%         |
| White Male                         | 60                               | 25                           | 36%         | 23                              | 35%         | 48         | 35%         | 90.8                              | 52,858         | 39%         |
| Black Male                         | 50                               | 19                           | 27%         | 20                              | 30%         | 39         | 29%         | 539.0                             | 7,235          | 5%          |
| Hispanic Male                      | 10                               | 0                            | 0%          | <5                              | **          | <5         | **          | **                                | 3,136          | 2%          |
| Other Male                         | 10                               | <5                           | **          | <5                              | **          | 6          | 4%          | ---                               | 3,290          | 2%          |
| Female                             | 60                               | 23                           | 33%         | 19                              | 29%         | 42         | 31%         | 60.3                              | 69,627         | 51%         |
| White Female                       | 30                               | 9                            | 13%         | 12                              | 18%         | 21         | 15%         | 37.6                              | 55,806         | 41%         |
| Black Female                       | 20                               | 9                            | 13%         | 7                               | 11%         | 16         | 12%         | 216.4                             | 7,395          | 5%          |
| Hispanic Female                    | 10                               | <5                           | **          | 0                               | 0%          | <5         | **          | **                                | 3,041          | 2%          |
| Other Female                       | 10                               | <5                           | **          | 0                               | 0%          | <5         | **          | **                                | 3,385          | 2%          |
| <b>RISK*</b>                       |                                  |                              |             |                                 |             |            |             |                                   |                |             |
| Male-Male Sex (MSM)                | 80                               | 32                           | 46%         | 26                              | 39%         | 58         | 43%         | --                                | --             | --          |
| Injection Drug Use (IDU)           | 20                               | <5                           | **          | 8                               | 12%         | 12         | 9%          | --                                | --             | --          |
| MSM/IDU                            | 10                               | <5                           | **          | <5                              | **          | <5         | **          | --                                | --             | --          |
| Blood Products                     | 10                               | 0                            | 0%          | <5                              | **          | <5         | **          | --                                | --             | --          |
| Heterosexual Contact (HC)          | 50                               | 21                           | 30%         | 20                              | 30%         | 41         | 30%         | --                                | --             | --          |
| HCFR (Males)                       | 10                               | <5                           | **          | 6                               | 9%          | 10         | 7%          | --                                | --             | --          |
| HCM (Females)                      | 40                               | 17                           | 24%         | 14                              | 21%         | 31         | 23%         | --                                | --             | --          |
| Perinatal                          | 10                               | <5                           | **          | <5                              | **          | <5         | **          | --                                | --             | --          |
| Undetermined                       | 20                               | 10                           | 14%         | 7                               | 11%         | 17         | 13%         | --                                | --             | --          |
| <b>AGE AT HIV DIAGNOSIS</b>        |                                  |                              |             |                                 |             |            |             |                                   |                |             |
| 0 - 12 years                       | 10                               | <5                           | **          | <5                              | **          | <5         | **          | --                                | --             | --          |
| 13 - 19 years                      | 10                               | <5                           | **          | 7                               | 11%         | 10         | 7%          | --                                | --             | --          |
| 20 - 24 years                      | 30                               | 12                           | 17%         | 10                              | 15%         | 22         | 16%         | --                                | --             | --          |
| 25 - 29 years                      | 30                               | 15                           | 21%         | 9                               | 14%         | 24         | 18%         | --                                | --             | --          |
| 30 - 39 years                      | 50                               | 16                           | 23%         | 24                              | 36%         | 40         | 29%         | --                                | --             | --          |
| 40 - 49 years                      | 30                               | 17                           | 24%         | 9                               | 14%         | 26         | 19%         | --                                | --             | --          |
| 50 - 59 years                      | 10                               | 5                            | 7%          | 5                               | 8%          | 10         | 7%          | --                                | --             | --          |
| 60 years and over                  | 10                               | <5                           | **          | <5                              | **          | <5         | **          | --                                | --             | --          |
| Unspecified                        | 0                                | 0                            | 0%          | 0                               | 0%          | 0          | 0%          | --                                | --             | --          |
| <b>TOTAL</b>                       | <b>180</b>                       | <b>70</b>                    | <b>100%</b> | <b>66</b>                       | <b>100%</b> | <b>136</b> | <b>100%</b> | <b>100</b>                        | <b>136,146</b> | <b>100%</b> |

\*See front matter page i for descriptions of prevalence estimate calculations and risk category groupings. Risk categories used in Michigan are redefined as of January 2012. NOTE: Heterosexual contact for males includes only males whose sexual partners are known to be HIV infected or at high risk for HIV (HCFR). Heterosexual contact for females includes all females who have had sex with a male regardless of what is known about the male's HIV status or behaviors (HCM).

<sup>†</sup> Includes reports that contain patient name or are otherwise unduplicated. <5 and \*\* = 1, 2, 3, or 4 cases.

<sup>‡</sup> To calculate "1 out of x" statements, divide the census number by total reported prevalence. For example, for non-Hispanic whites: 108,664 / 69 = 1,575. Thus, 1 out of every 1,575 non-Hispanic white persons in CALHOUN CO. are living with HIV. Rates and "1 out of x" statements are not reliable for <10 cases. Thus, rates for <10 cases are shown as "----".

<sup>§</sup> Rates are not reported for risk categories and age at diagnosis because no reliable denominator data exist for these groups.

<sup>¶</sup> In this report, persons described as white, black, Asian/Pacific Islander (PI), or American Indian/Alaska Native (AN) are all non-Hispanic; persons described as Hispanic might be of any race.

**TABLE 2. Sex, Race, and Risk Among Prevalent HIV Infection Cases Living in CALHOUN CO. at Diagnosis**

|                             | White     |            | Black     |            | Hispanic     |           | Other or Unknown |           | All Male   |             |
|-----------------------------|-----------|------------|-----------|------------|--------------|-----------|------------------|-----------|------------|-------------|
|                             | Num       | Percent    | Num       | Percent    | Num          | Percent   | Num              | Percent   | Num        | Percent     |
| <b>MALE</b>                 |           |            |           |            |              |           |                  |           |            |             |
| Male-Male sex               | 39        | 81%        | 18        | 46%        | 0            | 0%        | <5               | **        | 58         | 62%         |
| Injection Drug Use          | 0         | 0%         | 5         | 13%        | <5           | **        | <5               | **        | 7          | 7%          |
| MSM/IDU                     | <5        | **         | <5        | **         | 0            | 0%        | 0                | 0%        | <5         | **          |
| Blood Products              | <5        | **         | 0         | 0%         | 0            | 0%        | 0                | 0%        | <5         | **          |
| Heterosexual Contact (HCFR) | <5        | **         | 6         | 15%        | 0            | 0%        | <5               | **        | 10         | 11%         |
| Perinatal                   | 0         | 0%         | 0         | 0%         | 0            | 0%        | 0                | 0%        | 0          | 0%          |
| Undetermined                | <5        | **         | 8         | 21%        | 0            | 0%        | <5               | **        | 14         | 15%         |
| <b>Male Subtotal</b>        | <b>48</b> | <b>51%</b> | <b>39</b> | <b>41%</b> | <b>&lt;5</b> | <b>**</b> | <b>6</b>         | <b>6%</b> | <b>94</b>  | <b>100%</b> |
|                             |           |            |           |            |              |           |                  |           |            |             |
| <b>FEMALE</b>               |           |            |           |            |              |           |                  |           |            |             |
|                             |           |            |           |            |              |           |                  |           |            |             |
| Injection Drug Use          | <5        | **         | <5        | **         | 0            | 0%        | 0                | 0%        | 5          | 12%         |
| Blood Products              | <5        | **         | 0         | 0%         | 0            | 0%        | 0                | 0%        | <5         | **          |
| Heterosexual Contact (HCM)  | 14        | 67%        | 14        | 88%        | <5           | **        | <5               | **        | 31         | 74%         |
| Perinatal                   | <5        | **         | 0         | 0%         | 0            | 0%        | <5               | **        | <5         | **          |
| Undetermined                | <5        | **         | 0         | 0%         | 0            | 0%        | <5               | **        | <5         | **          |
| <b>Female Subtotal</b>      | <b>21</b> | <b>50%</b> | <b>16</b> | <b>38%</b> | <b>&lt;5</b> | <b>**</b> | <b>&lt;5</b>     | <b>**</b> | <b>42</b>  | <b>100%</b> |
|                             |           |            |           |            |              |           |                  |           |            |             |
| <b>ALL</b>                  |           |            |           |            |              |           |                  |           |            |             |
|                             |           |            |           |            |              |           |                  |           |            |             |
| Male-Male sex               | 39        | 57%        | 18        | 33%        | 0            | 0%        | <5               | **        | 58         | 43%         |
| Injection Drug Use          | <5        | **         | 7         | 13%        | <5           | **        | <5               | **        | 12         | 9%          |
| MSM/IDU                     | <5        | **         | <5        | **         | 0            | 0%        | 0                | 0%        | <5         | **          |
| Blood Products              | <5        | **         | 0         | 0%         | 0            | 0%        | 0                | 0%        | <5         | **          |
| Heterosexual Contact (HC)   | 17        | 25%        | 20        | 36%        | <5           | **        | <5               | **        | 41         | 30%         |
| HCFR (Males)                | <5        | **         | 6         | 11%        | 0            | 0%        | <5               | **        | 10         | 7%          |
| HCM (Females)               | 14        | 20%        | 14        | 25%        | <5           | **        | <5               | **        | 31         | 23%         |
| Perinatal                   | <5        | **         | 0         | 0%         | 0            | 0%        | <5               | **        | <5         | **          |
| Undetermined                | 5         | 7%         | 8         | 15%        | 0            | 0%        | <5               | **        | 17         | 13%         |
| <b>RACE ALL</b>             | <b>69</b> | <b>51%</b> | <b>55</b> | <b>40%</b> | <b>&lt;5</b> | <b>**</b> | <b>10</b>        | <b>7%</b> | <b>136</b> | <b>100%</b> |

**TABLE 3. New Diagnoses, Deaths, and Prevalence of HIV Infection in CALHOUN CO., by Year**

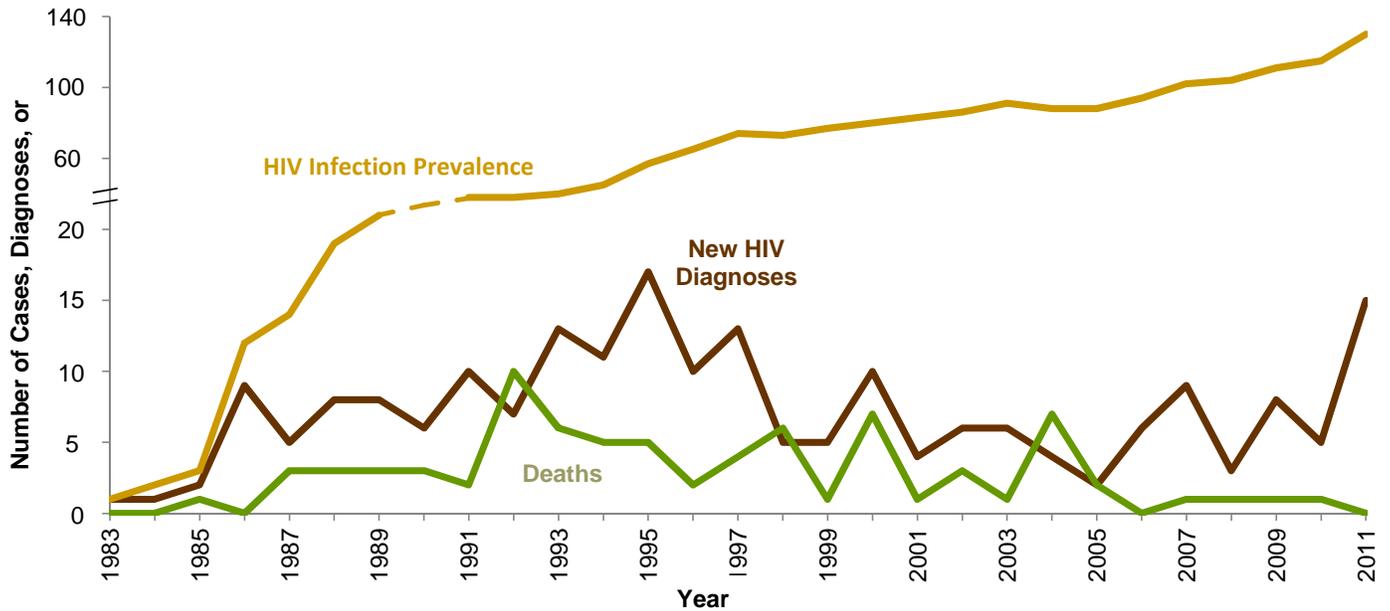
| Year         | <i>HIV Infection (all stages)</i> |           |            | <i>HIV Infection Stage 3 (AIDS)</i> |           |            |
|--------------|-----------------------------------|-----------|------------|-------------------------------------|-----------|------------|
|              | New HIV Diagnoses                 | Deaths    | Prevalence | New Stage 3 Diagnoses               | Deaths    | Prevalence |
| 1983         | 1                                 | 0         | 1          | 1                                   | 0         | 1          |
| 1984         | 1                                 | 0         | 2          | 1                                   | 0         | 2          |
| 1985         | 2                                 | 1         | 3          | 0                                   | 1         | 1          |
| 1986         | 9                                 | 0         | 12         | 3                                   | 0         | 4          |
| 1987         | 5                                 | 3         | 14         | 4                                   | 3         | 5          |
| 1988         | 8                                 | 3         | 19         | 5                                   | 3         | 7          |
| 1989         | 8                                 | 3         | 24         | 5                                   | 3         | 9          |
| 1990         | 6                                 | 3         | 27         | 3                                   | 3         | 9          |
| 1991         | 10                                | 2         | 35         | 6                                   | 2         | 13         |
| 1992         | 7                                 | 10        | 32         | 8                                   | 10        | 11         |
| 1993         | 13                                | 6         | 39         | 9                                   | 5         | 15         |
| 1994         | 11                                | 5         | 45         | 7                                   | 5         | 17         |
| 1995         | 17                                | 5         | 57         | 12                                  | 4         | 25         |
| 1996         | 10                                | 2         | 65         | 8                                   | 2         | 31         |
| 1997         | 13                                | 4         | 74         | 6                                   | 3         | 34         |
| 1998         | 5                                 | 6         | 73         | 1                                   | 5         | 30         |
| 1999         | 5                                 | 1         | 77         | 2                                   | 1         | 31         |
| 2000         | 10                                | 7         | 80         | 3                                   | 6         | 28         |
| 2001         | 4                                 | 1         | 83         | 4                                   | 1         | 31         |
| 2002         | 6                                 | 3         | 86         | 7                                   | 3         | 35         |
| 2003         | 6                                 | 1         | 91         | 6                                   | 1         | 40         |
| 2004         | 4                                 | 7         | 88         | 5                                   | 7         | 38         |
| 2005         | 2                                 | 2         | 88         | 6                                   | 2         | 42         |
| 2006         | 6                                 | 0         | 94         | 3                                   | 0         | 45         |
| 2007         | 9                                 | 1         | 102        | 6                                   | 1         | 50         |
| 2008         | 3                                 | 1         | 104        | 1                                   | 1         | 50         |
| 2009         | 8                                 | 1         | 111        | 2                                   | 1         | 51         |
| 2010         | 5                                 | 1         | 115        | 8                                   | 1         | 58         |
| 2011         | 15                                | 0         | 130        | 7                                   | 0         | 65         |
| 2012         | 6                                 | 0         | 136        | 1                                   | 0         | 66         |
| <b>TOTAL</b> | <b>209</b>                        | <b>79</b> |            | <b>139</b>                          | <b>74</b> |            |

The prevalence of HIV in Michigan has steadily increased, since persons with HIV are living longer. This is largely due to improved anti-retroviral therapy.

The increase in HIV prevalence is also reflected in Figure 1 on page 4, which shows that the number of persons diagnosed, while stable for the last several years, is greater than the number of deaths each year. This directly contributes to the increase in prevalence. The current reported prevalence of HIV infection in CALHOUN CO. is 136. The prevalence of Stage 3 infection, which is a subset of the overall HIV infection prevalence, is 66.

As implied, the HIV infection section displays data on all persons with HIV, including those with Stage 3 infection, as well as those who have not progressed to Stage 3. Thus, persons represented in the Stage 3 section are also represented in the HIV infection section. The number of reported deaths includes deaths directly attributable to presence of HIV infection as well as deaths due to other causes.

NOTE: Reporting for recent years may not be complete. Data are not adjusted to account for reporting delays.

**FIGURE 1. New Diagnoses, Deaths, and Prevalence of HIV Infection in CALHOUN CO., by Year****TABLE 4. Comparison of HIV Infection Prevalence in CALHOUN CO. to State**

| <i>Residence at<br/>Diagnosis</i> | <i>Estimated<br/>Prevalence</i> | <i>Reported Prevalence</i>   |                                 |        |      | <i>Cumulative<br/>Stage 3</i> |
|-----------------------------------|---------------------------------|------------------------------|---------------------------------|--------|------|-------------------------------|
|                                   |                                 | HIV Infection<br>Non-Stage 3 | HIV Infection<br>Stage 3 (AIDS) | Total  | Rate |                               |
| Calhoun Co.                       | 180                             | 70                           | 66                              | 136    | 100  | 139                           |
| Michigan Total                    | 19,300                          | 7,057                        | 7,966                           | 15,023 | 152  | 17,891                        |