



Hamilton County Public Health - Epidemiology and Assessment

HIV Quarterly Report

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New HIV Infections by Month, Hamilton County, Ohio (January 2012 - March 2013)

Table 1. Hamilton County New HIV Infections

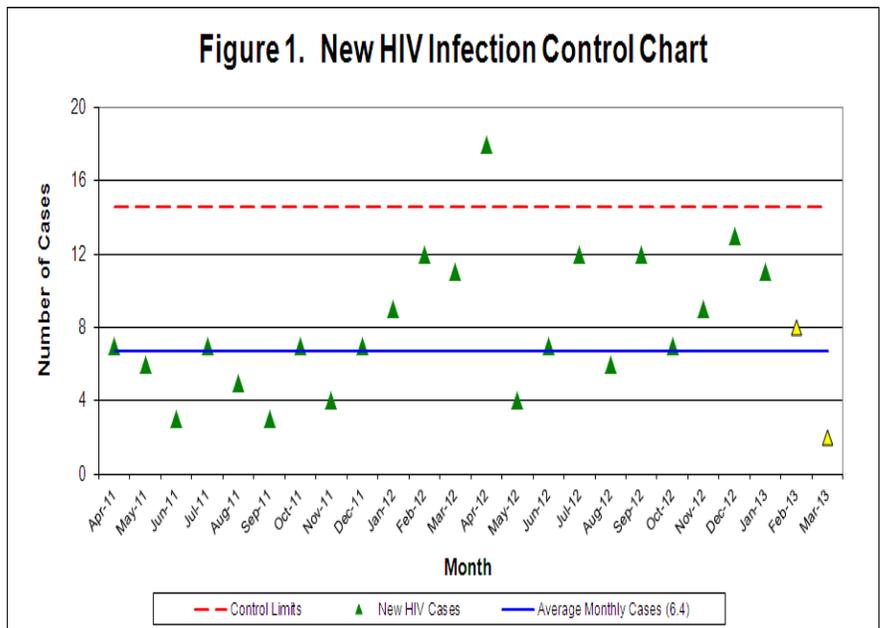
Month	New Cases of HIV 2012	New Cases of HIV 2013
January	9	11
February	12	8
March	11	2
April	18	
May	4	
June	7	
July	12	
August	6	
September	12	
October	7	
November	9	
December	13	
Total	120	21

This report was created as a surveillance effort to help prevent new cases of HIV within Hamilton County. Table 1 displays the breakdown of new, confirmed HIV cases for Hamilton County residents for 2012 and 2013 on a monthly basis. Only HIV cases where the resident previously tested negative, or where the resident had not been tested and then tested positive in the respective year, were counted for analysis purposes in this report. In 2012, the highest number of confirmed cases was seen in April (18 cases). In 2013, the highest number of new confirmed HIV cases occurred in January (11 cases). The average number of new HIV cases per month were 10.0 and 7.0 for the years 2012 and 2013, respectively. The 2013 monthly counts are likely to change in future reports, as lag times in disposition of cases directly affect the case counts presented.

New HIV cases are derived from partner services data in the Ohio Disease Reporting System and do not fully represent all new HIV infections. These data are provisional and subject to change when additional information is gained. Cases are selected based on address at diagnosis. Source: Ohio Department of Health (ODH), STD Surveillance. Data reported as of 4/21/2013.

Surveillance of New HIV Cases Diagnosed in Hamilton County, Ohio (2011 - 2013)

One way to monitor HIV infections within Hamilton County is through the use of surveillance control charts. Factors that these control charts show are the number of new HIV cases for each month (green triangles), control limits (red dashed lines) and the average number of cases (solid blue line). Yellow triangles indicate data that are most likely to change in future reports. Control charts are used to detect unexpected events, such as a single point outside of the control limit, consecutive points above or below the average line, or two or three consecutive points near a control limit. When anomalies such as these occur it may be beneficial to examine events surrounding the anomalies in order to devise a strategy to reduce the number of cases in subsequent months or see which strategies already in place are working. Figure 1 illustrates the control chart for new HIV infections from April 2011 to March 2013. All of the monthly counts in this time frame fell below the upper control limit for number of new HIV infections, except April 2012. Future control charts will give a better understanding of the 2013 data. The monthly average number of cases (6.4) was calculated from January 2010-December 2012.



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Demographics and Social Factors with High Risk for HIV Infection

Table 2 compares the race, age, sex and route of transmission of new HIV infection cases from 2012 to 2013. The data reflect confirmed HIV cases that have been designated as newly testing positive and residing in Hamilton County. When race was examined, an increase in percentage of cases occurred between black Hamilton County residents in 2013 (85.7 percent) compared to 2012 (70.0 percent). This increase in percentage among black residents in 2013 may be due to having a small number of cases thus far through the year. A large disparity in the sex of cases was apparent in both 2012 and 2013 as males contributed to between 70-80 percent of cases in both years. Figure 2, below, illustrates the contribution of race and sex to new HIV diagnoses in Hamilton County. Age is an additional key factor in new cases, as youth between the ages of 15 - 24 made up the highest percentage of new HIV cases for 2012 (36.7 percent) and 2013 (42.9 percent). As Table 2 illustrates, MSM transmission accounted for 51.2 percent of male transmission in 2012. Among the female cases, High Risk Heterosexual Females (HRHF) accounted for nearly 46 percent of new infections. By understanding these demographics and high-risk factors that contribute most to new HIV infections, it is possible to create a specific and effective prevention strategy. As data for 2013 is collected and updated, demographic percentages will become more reliable.

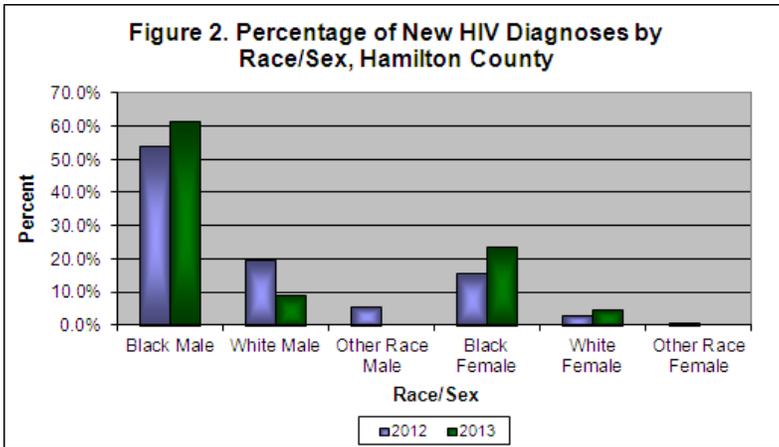


Table 2. Demographics of New HIV Cases

	2012		Jan-Mar 2013	
	#	%	#	%
Race				
Black	84	70.0%	18	85.7%
White	28	23.3%	3	14.3%
Other	8	6.7%	0	0.0%
Age				
<15	1	0.8%	0	0.0%
15-24	44	36.7%	9	42.9%
25-34	32	26.7%	7	33.3%
35-44	14	11.7%	1	4.8%
45-54	22	18.3%	2	9.5%
55-64	5	4.2%	2	9.5%
>65	2	1.7%	0	0.0%
Sex				
Male	96	80.0%	15	71.4%
Female	24	20.0%	6	28.6%
Transmission*				
MSM	44 of 86	51.2	10 of 14	71.4
HRHF	11 of 24	45.8	4 of 6	66.7

These data are provisional and subject to change when additional information is gained. New HIV positive cases between January 2012 and March 2013 were used for analysis. Cases were selected based on address at diagnosis. Source: ODH, STD Surveillance. Data reported as of 4/21/2013. Percentages may not total to 100 due to rounding. *Cases were missing information from fields used to determine transmission. Percentages for transmission are sex-specific and based only on cases that had valid information within the required fields. High risk heterosexual females (HRHF) are women who self-identified as participating in sex with a known MSM, HIV+, IDU, or anonymous person. HRHF status is also determined from factors such as having sex while intoxicated, exchanging sex for drugs, or having previous STIs.

Table 3. HIV Testing History of New HIV Infected Persons January 2012 – March 2013

	Black Residents	White Residents	All Residents
Previously Tested for HIV	66 of 81 (81.5%) (20.6%)	21 of 25 (84.0%) (19.4%)	94 of 113 (83.2%) (19.9%)

These data are provisional and subject to change when additional information is gained. Cases represent new confirmed HIV infections. Percentages and numbers are reflective of only completed data fields. Percentages given in red indicate the percent of cases with missing information for the previously tested for HIV variable. Source: ODH, STD Surveillance. Data reported as of 4/21/2013.

It is also important to evaluate the prevention and education processes being used to reduce the number of new HIV infections. As there was no direct way to evaluate HIV prevention education and compliance, using the Ohio Disease Reporting System, an alternative measure utilizing the number of new HIV infected individuals who were previously tested for HIV was used. During HIV testing, patients received education on

HIV prevention practices. Ideally, this education would have 100 percent compliance resulting in no new HIV infections from individuals who had a previous HIV test. However, data from January 2012 - March 2013 show that over 80 percent of new HIV infections were previously tested at least once before the current positive HIV result. This suggests there was a lack of education or compliance regarding HIV prevention within

certain parts of the community. Interventions developed for the high-risk demographics shown above may benefit by focusing on improving HIV prevention education and compliance.