



Hamilton County Public Health - Epidemiology and Assessment

# HIV Quarterly Report

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## New HIV Infections by Month, Hamilton County, Ohio (January 2013 - September 2014)

**Table 1. Hamilton County New HIV Infections**

Month	New Cases of HIV 2013	New Cases of HIV 2014
January	15	15
February	9	15
March	7	4
April	14	14
May	19	12
June	9	8
July	13	13
August	11	16
September	13	10
October	8	
November	14	
December	15	
<b>Total</b>	<b>147</b>	<b>107</b>

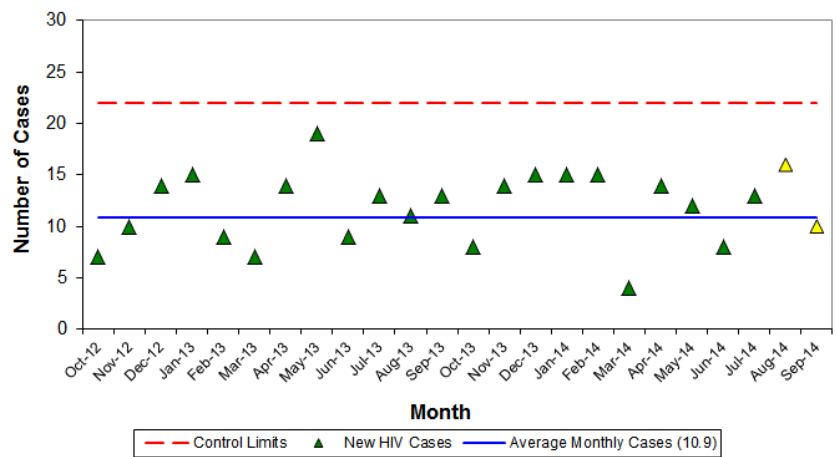
This report was created as a surveillance effort to help prevent new cases of HIV within Hamilton County. Table 1 displays the breakdown of new HIV cases for Hamilton County residents for 2013 and 2014 on a monthly basis. Only HIV cases where the resident was identified as a new HIV infection by a disease investigation specialist were counted for analysis purposes in this report. In 2013, the highest number of cases was seen in May (19 cases). In 2014, the highest number of new HIV cases occurred in August (16 cases). The average number of new HIV cases per month were 12.3 and 11.9 for the years 2013 and 2014, respectively. The 2014 monthly counts may change in future reports, as lag times in disposition of cases directly affect the case counts presented. Some HIV cases are unable to be located for follow-up and partner services, which may impact total number of cases. For 2013 and 2014 respectively, there were a total of 11 and 9 cases that were unable to be located.

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 11/12/2014.

## Surveillance of New HIV Cases Diagnosed in Hamilton County, Ohio (Oct 2012 - Sep 2014)

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 October 2012 to September 2014. All of the monthly counts in this time frame fell below the upper control limit for number of new HIV infections. The average (10.9) was calculated from October 2011 to September 2013.

**Figure 1. New HIV Infection Control Chart**

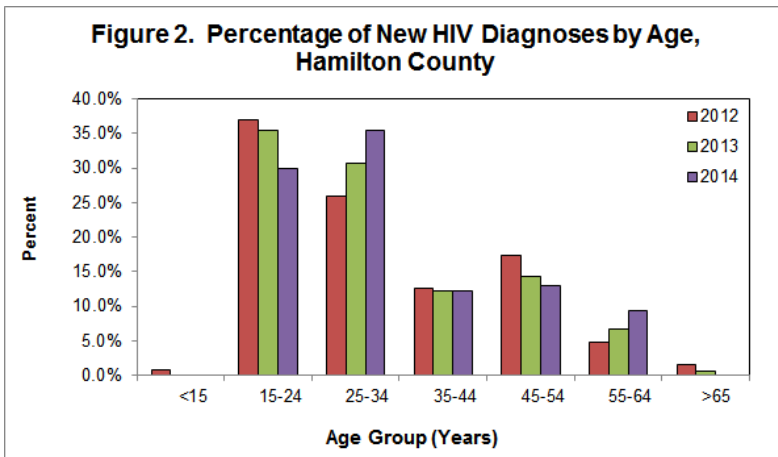


New HIV cases are derived from partner services data in the Ohio Disease Reporting System and may not fully represent all new cases of HIV. These data are provisional and subject to change when additional information is gained. Cases are selected based on address at diagnosis. Source: ODH, STD Surveillance. Data reported as of 11/12/2014.



## Demographics and Social Factors with High Risk for HIV Infection

Table 2 compares the race, sex, and risk behavior groups for new HIV infection cases from January 2013 through September 2014. 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 the percent of black Hamilton County residents can be seen in 2014 (59.8 percent) compared to 2013 (56.5 percent). A large disparity in the sex of cases was apparent in both 2013 and 2014 as males contributed to nearly 80 percent of cases in both years. Figure 2, below, illustrates the distribution of age to new HIV diagnoses in Hamilton County. A shift in age distribution among Hamilton County HIV cases has occurred from 2012 to 2014 as 25-34 years olds now contribute to the highest percentage of new cases (36.8 percent). As Table 2 illustrates, the MSM population accounted for 65.5 percent and 53.5 percent of male cases in 2013 and 2014, respectively. Fifty-five percent of MSMs newly diagnosed from January 2013 to September 2014 were black Hamilton County residents. 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 2014 are collected and updated, demographic percentages will become more reliable.



**Table 2. Demographics of New HIV Cases**

	Jan. - Dec. 2013		Jan. - Sep. 2014	
	#	%	#	%
<b>Race</b>				
Black	83	56.5	64	59.8
White	53	36.1	38	35.5
Other	11	7.5	5	4.7
<b>Sex</b>				
Male	115	78.2	86	80.4
Female	32	21.8	21	19.6
<b>Risk Groups*</b>				
MSM	74 of 113	65.5	46 of 86	53.5
HRHF	13 of 31	41.9	10 of 21	47.6

These data are provisional and subject to change when additional information is gained. New HIV positive cases between January 2013 and September 2014 were used for analysis. Cases were selected based on address at diagnosis. Source: ODH, STD Surveillance. Data reported as of 11/12/2014. Percentages may not total to 100 due to rounding. \*Cases were missing information from fields used to determine risk groups. Percentages for risk groups 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 2013 – September 2014**

	Black Residents	White Residents	All Residents
Previously Tested for HIV	104 of 132 (78.8%) (10.2%)	56 of 85 (65.9%) (6.6%)	169 of 228 (74.1%) (10.2%)

These data are provisional and subject to change when additional information is gained. Cases represent new HIV infections. Percentages and numbers are reflective of only completed data fields. Percentages given in red indicate the percent of cases with missing/unknown information for the 'Previously tested for HIV' variable. Source: ODH, STD Surveillance. Data reported as of 11/12/2014.

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 receive 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 2013 - September 2014 show that nearly 75 percent of new HIV infections were previ-

ously tested at least once before the current positive HIV result. This data may suggest that non-compliance may be a factor that is impacting HIV in our community. Interventions developed for the high-risk demographics shown above may benefit by focusing on improving HIV prevention education and compliance.