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Hamilton County Public Health - Epidemiology and Assessment

HIV Quarterly Report

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New HIV Diagnoses by Month, Hamilton County, Ohio (January 2014 - December 2015)

Table 1. Hamilton County New HIV Infections

Month	New Cases of HIV 2014	New Cases of HIV 2015
January	15	15
February	15	12
March	4	12
April	14	13
May	13	8
June	8	11
July	14	11
August	16	11
September	10	13
October	17	13
November	9	6
December	12	20
Total	**147**	**139**

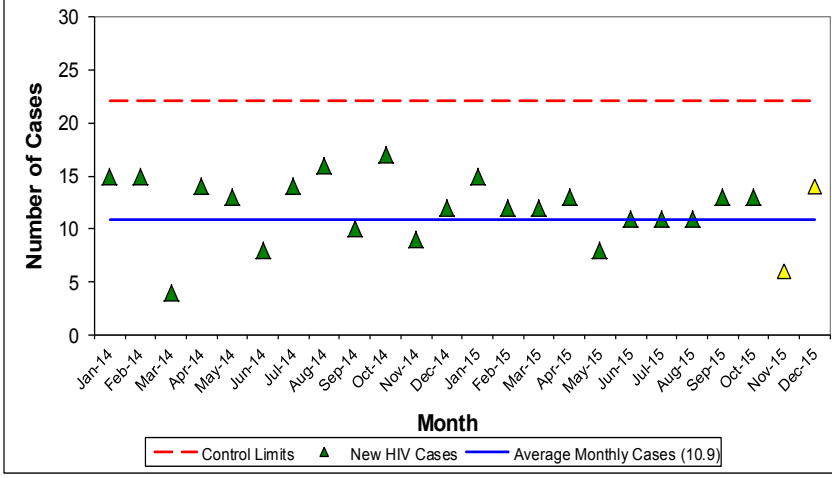
This report was created as a surveillance effort to help prevent new cases of HIV within Hamilton County. Table 1 displays the breakdown of new HIV cases for Hamilton County residents for 2014 and 2015 on a monthly basis. Only HIV cases where the resident was identified as a new HIV infection by a disease investigation specialist were counted for analysis purposes in this report. In 2014, the highest number of cases was seen in October (17 cases). In 2015, the highest number of new HIV cases occurred in December (20 cases). The average number of new HIV cases per month was 12.3 and 11.6 for the years 2014 and 2015, respectively. The 2015 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 2014 and 2015 respectively, there were a total of 8 and 4 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 2/29/2016.

Surveillance of New HIV Cases Diagnosed in Hamilton County, Ohio (Jan 2014 - Dec 2015)

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 January 2014 to December 2015. 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 2/29/2016.

Demographics and Social Factors Associated with High Risk for HIV Infection

Table 2 compares the race, sex, and risk behavior groups for new HIV infections from January 2014 through December 2015. The data reflect confirmed HIV cases 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 2015 (72.0 percent) compared to 2014 (61.2 percent). A large disparity in the sex of cases was apparent in 2014 and 2015 as males contributed to approximately 75-80 percent of cases in both years. Figure 2, below, illustrates the distribution of age among new HIV diagnoses in Hamilton County. A shift in age distribution among Hamilton County HIV cases has occurred from 2012 to 2015 as 25-34 years olds now contribute to the highest percentage of new cases (37.4 percent). As Table 2 illustrates, the men who have sex with men (MSM) population accounted for 50.8 percent and 64.5 percent of male cases in 2014 and 2015, respectively. Sixty-five percent of MSMs newly diagnosed with HIV during 2015 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 2015 are collected and updated, demographic percentages will become more reliable.

Figure 2. Percentage of New HIV Diagnoses by Age, Hamilton County

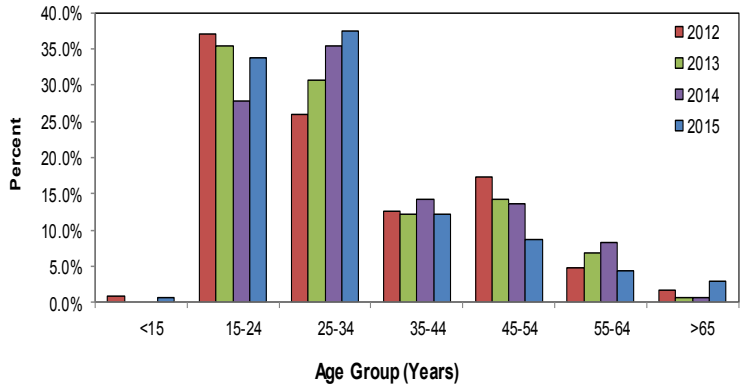


Table 2. Demographics of New HIV Cases

	Jan - Dec 2014		Jan - Dec 2015	
	#	%	#	%
Race				
Black	90	61.2	100	72.0
White	51	34.7	37	26.6
Other	6	4.0	2	1.4
Sex				
Male	118	80.3	108	77.7
Female	29	19.6	31	22.3
Risk Groups*				
MSM	60 of 118	50.8	69 of 107	64.5
HRHF	14 of 29	48.3	22 of 30	73.3
IDU	11 of 147	7.5	2 of 137	1.5

These data are provisional and subject to change when additional information is gained. New HIV positive cases between January 2014 and December 2015 were used for analysis. Cases were selected based on address at diagnosis. Source: ODH, STD Surveillance. Data reported as of 2/29/2016. 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 Newly Diagnosed HIV Persons January 2014 – December 2015

	Black Residents	White Residents	All Residents
Previously Tested for HIV	146 of 177 (82.5%) (5.9%)	61 of 79 (77.2%) (10.2%)	214 of 264 (81.1%) (7.0%)

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 2/29/2016.

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 diagnoses 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 2015 show that over 75 percent of new HIV infections were previously tested at least once before the current positive HIV test. These 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.