



HIV Surveillance Annual Report, 2018

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The Ohio Department of Health
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Published 10/21/19

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Contents

Executive Summary	4
Introduction	5
HIV Surveillance	9
Reported New Diagnoses of HIV Infection	13
Figure 1: Reported new diagnoses of HIV infection by sex at birth, Ohio, 2014-2018.....	13
Figure 2: Reported new diagnoses of HIV infection by age at diagnosis, Ohio, 2018	14
Figure 3: Rates of reported new diagnoses of HIV infection by selected race/ethnicity, Ohio, 2014-2018 ..	14
Figure 4: Rates of reported new diagnoses of HIV infection by selected race/ethnicity and sex at birth, Ohio, 2018	15
Figure 5: Percent of reported new diagnoses of HIV infection by transmission category, adult/adolescent males, Ohio, 2014-2018.....	16
Figure 6: Percent of reported new diagnoses of HIV infection by transmission category, adult/adolescent females, Ohio, 2014-2018	16
Figure 7: Rates of reported new diagnoses of HIV infection by county, Ohio, 2018.....	18
Figure 8: Percent of late diagnoses in reported new diagnoses of HIV infection, Ohio, 2014-2018.....	19
Figure 9: Percent of late diagnoses in reported new diagnoses of HIV infection by age at diagnosis, Ohio, 2018	19
Figure 10: Percent of late diagnoses in reported new diagnoses of HIV infection by race/ethnicity and sex at birth, Ohio, 2018.....	20
Table 1: Reported new diagnoses of HIV infection by disease status and selected characteristics, Ohio, 2018.....	21
Table 2: Reported new diagnoses of HIV infection by disease status and transmission category, Ohio, 2018	22
Table 3: Reported new diagnoses of HIV infection by disease status and exposure category, Ohio, 2018...	22
Prevalence: Persons Living With Diagnosed HIV Infection	23
Figure 11: Persons living with diagnosed HIV infection by current age, Ohio, 2018.....	23
Figure 12: Rates of persons living with diagnosed HIV infection by race/ethnicity, Ohio, 2018.....	24
Figure 13: Rates of persons living with diagnosed HIV infection by race/ethnicity and sex at birth, Ohio, 2018	25
Figure 14: Percent of persons living with diagnosed HIV infection by transmission category, adult/adolescent males, Ohio, 2018.....	25
Figure 15: Percent of persons living with diagnosed HIV infection by transmission category, adult/adolescent females, Ohio, 2018	26
Figure 16: Rates of reported persons living with diagnosed HIV infection by county, Ohio, 2018	28
Table 4: Reported persons living with diagnosed HIV infection by current disease status and selected characteristics, Ohio, 2018	29

Table 5: Reported persons living with diagnosed HIV infection by current disease status and transmission category, Ohio, 2018	30
Table 6: Reported persons living with diagnosed HIV infection by current disease status and exposure category, Ohio, 2018	30
Deaths Among Persons With Diagnosed HIV Infection	31
Table 7: Trends in reported deaths among persons with diagnosed HIV infection by year of death and cumulative deaths by selected characteristics, Ohio, 2014-2018	32
Table 8: Trends in reported deaths among persons with diagnosed HIV infection by year of death and cumulative deaths by transmission category, Ohio, 2014-2018	33
Table 9: Trends in reported deaths among persons with diagnosed HIV infection by year of death and cumulative deaths by exposure category, Ohio, 2014-2018	33
Linkage to Care and Continuum of Care	34
Figure 17: Linkage to care, Ohio, 2015-2017	34
Figure 18: Linkage to care by sex at birth, Ohio, 2017	35
Figure 19: Linkage to care by age at diagnosis, Ohio, 2017	35
Figure 20: Linkage to care by selected race/ethnicity, Ohio, 2017	36
Figure 21: Linkage to care by transmission category, males, Ohio, 2017	36
Figure 22: Linkage to care by transmission category, females, Ohio, 2017	37
Figure 23: Linkage to care by region, Ohio, 2017	38
Figure 24: Continuum of care among persons living with diagnosed HIV infection, Ohio, 2015-2017	39
Figure 25: Continuum of care among persons living with diagnosed HIV infection by sex at birth, Ohio, 2017	40
Figure 26: Continuum of care among persons living with diagnosed HIV infection by current age, Ohio, 2017	40
Figure 27: Continuum of care among persons living with diagnosed HIV infection by selected race/ethnicity, Ohio, 2017	41
Figure 28: Continuum of care among males living with diagnosed HIV infection by transmission category, Ohio, 2017	42
Figure 29: Continuum of care among females living with diagnosed HIV infection by transmission category, Ohio, 2017	42
Figure 30: Receipt of care among persons living with diagnosed HIV infection by region, Ohio, 2017	43
Figure 31: Persons living with diagnosed HIV infection retained in care by region, Ohio, 2017	43
Figure 32: Viral suppression among persons living with diagnosed HIV infection by region, Ohio, 2017	44

Executive Summary

Reported new diagnoses of HIV infection: In 2018, there were 989 new reported diagnoses of HIV infection in Ohio. Eighty percent of the new reported diagnoses of HIV in Ohio in 2018 were among males and over half of all new reported diagnoses in 2018 were among persons aged 20-34 years. Forty-seven percent of all new reported diagnoses in 2018 were among blacks/African-Americans, while 43 percent were among whites. Among males, the leading mode of transmission was male-to-male sexual contact and among females, the leading mode of transmission was heterosexual contact. Over half of new reported diagnoses of HIV infection in Ohio in 2018 were in persons residing in Cuyahoga, Franklin, and Hamilton counties.

Prevalence: Persons living with diagnosed HIV infection: As of the end of 2018, there were 24,130 persons living with diagnosed HIV infection in the state of Ohio. Similar to new diagnoses, 79 percent of persons living with diagnosed HIV infection are males. Those who are aged 50-54 and 55-64 years have the highest number of persons living with diagnosed HIV in Ohio, compared to other age groups. Whites and blacks/African-Americans each make up about 44 percent of persons living with diagnosed HIV infection, but the rate for blacks/African-Americans was more than six times as high as that for whites. Over half of persons living with diagnosed HIV infection reported in Ohio resided in Cuyahoga, Franklin, and Hamilton counties.

Deaths among persons with diagnosed HIV infection: There were 310 deaths in 2018 reported among persons with diagnosed HIV infection in Ohio, 82 percent of which were among males. The number and percentage of deaths among persons with HIV infection reported in Ohio in 2018 was greatest among persons aged 55-64 years at the time of death. Forty-nine percent of all persons with diagnosed HIV infection who died in 2018 in Ohio were white, while 44 percent were black/African-American.

Linkage to care and continuum of care: Seventy-eight percent of adults/adolescents diagnosed with HIV infection in Ohio in 2017 were linked to care within 30 days of diagnosis. In 2016, 69 percent of adults/adolescents diagnosed with HIV infection were linked to care within 30 days of diagnosis. Of the persons living with diagnosed HIV in Ohio at the end of 2017, 66 percent were in receipt of care, 39 percent were retained in care, and 54 percent were virally suppressed. This shows an improvement when compared to 2016, when 58 percent received care, 37 percent were retained in care, and 48 percent were virally suppressed.

Questions or comments: Questions and/or comments about this report should be directed to the ODH HIV Surveillance Program. Additional HIV surveillance data and reports are available on the ODH website: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/hiv-aids-surveillance-program>.

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Introduction

Organization of this Report

The 2018 HIV Surveillance Annual Report is organized into six sections:

- ✂ Introduction: includes an explanation of terms and a description of the five stages of HIV infection.
- ✂ HIV Surveillance: includes an overview of the program, description of reporting delays/lags, and an explanation of data representativeness and limitations.
- ✂ Reported new diagnoses: includes tables, figures, and narrative about diagnoses of HIV infection (any stage) in Ohio.
- ✂ Prevalence: includes tables, figures, and narrative about persons living with diagnosed HIV infection (any stage) in Ohio.
- ✂ Deaths: includes tables and narrative about deaths among persons with diagnosed HIV infection (any stage) in Ohio.
- ✂ Linkage to Care and Continuum of Care: includes figures and narrative describing the continuum of HIV care in Ohio.

Explanation of Terms

HIV Diagnoses






The term *diagnosis of human immunodeficiency virus (HIV) infection* is defined as a diagnosis of HIV infection, regardless of the stage of disease (stage 0, 1, 2, 3 [acquired immunodeficiency syndrome (AIDS)], or unknown) at the time of initial diagnosis, and refers to all persons diagnosed with HIV infection in Ohio, in a given year. The term *HIV infection, stage 3 (AIDS)*, and its condensed version, *stage 3 (AIDS)*, refer specifically to persons diagnosed as stage 3 (AIDS) at initial diagnosis of HIV infection and/or persons living with a diagnosis of HIV infection who have progressed to stage 3 (AIDS).

In a given year, the number of diagnoses of HIV infection include:

- ✂ Persons diagnosed with HIV infection (stage 0, 1, 2, or unknown)—HIV (Not AIDS).
- ✂ Persons diagnosed with HIV infection with a stage 3 (AIDS) diagnosis within 12 months—HIV & later AIDS.
- ✂ Persons diagnosed with HIV infection and stage 3 (AIDS) concurrently—AIDS.

HIV Stage Classification

The stages are for public health surveillance purposes only and are classified based upon the following criterion:

-  **HIV infection, stage 0:** A negative (nonreactive) or indeterminate HIV-1 test result within six months before the first positive (reactive) HIV-1 test result, or a negative or indeterminate HIV-1 antibody test result within six months before or after the first HIV-1 nucleic acid test result (if the latter was not the first positive HIV test). The stage remains stage 0 until six months after the first positive test result. After six months, the stage may be reclassified as 1, 2, 3, or unknown if based on a CD4 lymphocyte test result or the diagnosis of an opportunistic infection (OI). The diagnosis of an AIDS-defining OI or a low CD4 lymphocyte test result before the six months have elapsed does not change the stage from stage 0 to stage 3.
-  **HIV infection, stage 1:** No AIDS-defining OI and either CD4 lymphocyte count of ≥ 500 cells/ μ L or CD4 percentage of total lymphocytes of ≥ 29 .
-  **HIV infection, stage 2:** No AIDS-defining OI and either CD4 lymphocyte count of 200–499 cells/ μ L or CD4 percentage of total lymphocytes of 14–28.
-  **HIV infection, stage 3 (AIDS):** Documentation of an AIDS-defining OI or either a CD4 lymphocyte count of < 200 cells/ μ L or CD4 percentage of total lymphocytes of < 14 if count is unknown. Documentation of an AIDS-defining OI supersedes a CD4 lymphocyte count or percentage that would not, by itself, be the basis for a stage 3 (AIDS) classification.
-  **HIV infection, stage unknown:** No reported information on AIDS-defining OIs and no information available on CD4 lymphocyte count or percentage.

New diagnoses of HIV infection do not necessarily represent all new infections (i.e., incidence or stage 0) as some individuals were infected recently, while others were infected at some time in the past but were unaware of their HIV status. In general, persons who are at stage 3 (AIDS) at the time of their initial HIV diagnosis are considered “late testers.” Late testers are often persons who have been infected with HIV for years, but never sought HIV testing until they became symptomatic. Real and/or perceived stigma, discrimination and/or fear surrounding HIV contributes to delays and avoidance of testing.

HIV surveillance data on diagnoses of HIV infection reflect the date of HIV diagnosis and not the date the case and/or lab result was reported to the Ohio Department of Health (ODH). Similarly, stage 3 (AIDS) infection data reflect the first date the criteria for stage 3 (AIDS) was met.

Persons Living with Diagnosed HIV Infection

The term *persons living with diagnosed HIV infection* (i.e., prevalence) represents all persons ever reported with an HIV infection in Ohio, regardless of stage of infection, who are not known to have died by the end of a calendar year. Some persons currently living with diagnosed HIV infection in Ohio received their HIV infection diagnosis while living outside of or prior to moving to Ohio.

Deaths

Deaths among persons with diagnosed HIV infection represent deaths attributable to any cause, and not only those with a death certificate listing HIV infection as the underlying cause of death. Caution should be used when interpreting trends in deaths due to lags in the finalization of death reports. The ODH Office of Vital Statistics is the source of the death data used in this report.

Rates

Throughout this report, both rates of new diagnoses of HIV infection and rates of persons living with diagnosed HIV infection are presented to provide different measures of HIV disease burden. Disease rates reflect the concentration of HIV diagnoses by accounting for differences in population size across demographic groups and geographic areas. All rates of HIV diagnoses are presented per 100,000 population and are calculated using U.S. Census estimates. Rates are not calculated for case counts fewer than five due to unstable rates.

Sex at Birth and Gender

Sex refers to the biological sex the person was assigned at birth (male or female). Transgender is a term used to describe persons whose current gender identity is different than their sex (male or female) assigned at birth. Gender identity is used to describe a person's internal experience of their own gender.

Age

Age in years at time of diagnosis is used when displaying new reported diagnoses of HIV infection by age group. Age in years at the end of the calendar year (current age) is used when displaying persons living with diagnosed HIV infection by age group. Age in years at time of death is used when displaying reported deaths among persons with diagnosed HIV infection. Adult/adolescent refers to persons aged ≥ 13 years.

Race/Ethnicity

Except where noted, race/ethnicity is presented using the following categories: American Indian/Alaska Native; Asian/Pacific Islander; Black/African-American; Hispanic/Latinx; White; and Multi-Race. Hispanic/Latinx is a gender-neutral term and Hispanics/Latinx may be of any race. Persons with a race of American Indian/Alaska Native, Asian/Pacific Islander,

black/African-American, white, or multi-race are not-Hispanic. Asian/Pacific Islander includes Native Hawaiians.

Transmission Category

The Centers for Disease Control and Prevention (CDC) defines transmission categories as risk factors arranged in a hierarchy based upon the likelihood of exposure to HIV. HIV transmission categories are mutually exclusive so that a person with multiple risks is placed in the highest-ranking category. The CDC transmission categories in rank order from highest to lowest are: male-to-male sexual contact, injection drug use (IDU), male-to-male sexual contact/IDU (if risk factor history indicates both sex with males AND injection drug use among males), and heterosexual contact followed by all other risks (e.g., blood transfusion, hemophiliac receipt of clotting factor, organ transplant) which are grouped together into one (lowest) category.

When a person assigned female at birth has risk factor history indicating sex with males, and indicates no injection drug use or it is unknown if she injects drugs, the transmission category will be calculated as 'heterosexual contact.' However, for a person assigned male at birth that has risk factor history indicating sex with females, no sex with males, and no injection drug use or it is unknown if he injects drugs, the transmission category will NOT be calculated as 'heterosexual contact.' Rather, the transmission category will be calculated as 'unknown.' This is because CDC requires additional risk factor history for persons assigned male at birth for the transmission category to be calculated as 'heterosexual contact.' The transmission category will be calculated as 'heterosexual contact' for a person assigned male at birth only when he has risk factor history indicating sex with females, no sex with males, no injection drug use or it is unknown if he injects drugs, AND, he indicates heterosexual sex with either a known HIV-positive female or a female who is a known injection drug user.

Transmission categories are mutually exclusive, hierarchical risk categories determined by the CDC and system-calculated using sex at birth and risk factor history to determine mode of transmission. Transgender women are included in the male-to-male sexual contact transmission category if assigned male at birth, and risk factor history indicates sex with males. *Please note this is for the categorization of HIV transmission categories only and not to describe sexual orientation.*

Exposure Category

Exposure categories are similar to transmission categories. The categories are the same (e.g., male-to-male sexual contact, IDU, heterosexual contact), but there is no hierarchy of risk assigned. As a result, every combination of exposure is considered, thereby, allowing a person with multiple risks to be represented in the exposure category which identifies all of the potential ways that individual may have been exposed to HIV.

Residence at Diagnosis

Reported new diagnoses of HIV infection are presented by county of residence at diagnosis. For

persons incarcerated in city or county jails, which usually consist of short-term stays (<1 year), county of residence at diagnosis is assigned by using the home address. Facility address is used only if home address is not available. Thus, persons incarcerated in city or county jails at the time of diagnosis are included in the county totals when the number of reported new diagnoses are displayed by county of residence. For persons incarcerated in state or federal correctional facilities (i.e., prisons) at the time of diagnosis, residence of diagnosis is defined as the address of the correctional facility. Persons incarcerated in state or federal correctional facilities at the time of diagnosis are included in the overall total, but are NOT included in the county totals when the number of reported new diagnoses are displayed by county of residence, as the county of residence at diagnosis is assigned to 'No County'.

Current Residence

Persons living with diagnosed HIV infection are presented by current county of residence. For persons currently incarcerated in city or county jails, current county of residence is assigned by using the home address. Facility address is used only if home address is not available. Thus, persons currently incarcerated in city or county jails are included in the county totals when the number of persons living with diagnosed HIV infection are displayed by current county of residence. For persons currently incarcerated in state or federal correctional facilities, current residence is defined as the address of the correctional facility. Persons currently incarcerated in state or federal correctional facilities are included in the overall total, but are NOT included in the county totals when the number of persons living with diagnosed HIV infection are displayed by current county of residence, as the current county of residence is assigned to 'No County'.

Data Suppression

Data suppression rules are applied, where indicated, to limit the availability and detail of data to protect patient confidentiality. *Readers are strongly encouraged to read all table and figure titles and footnotes carefully to ensure a complete understanding of the displayed data to prevent misuse and/or misinterpretation.*

HIV Surveillance

Population-based HIV surveillance is the cornerstone of national, state and local HIV prevention and care activities. HIV infections and AIDS are reportable public health conditions in all 50 states, the District of Columbia, and six U.S. dependent areas. Confidential, named-based reporting of AIDS cases began in Ohio in the early-to-mid 1980's, and was followed by confidential, name-based HIV case reporting in 1990. ODH's HIV surveillance system collects confidential case information, including demographic data, geographic information and mode of HIV transmission on persons reported with a diagnosis of HIV infection. The detailed requirements for reporting HIV and AIDS cases in Ohio are available on the ODH web site: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/infectious-disease-control-manual/infectious-disease-control-manual>.

In 2012, the CDC revised the public health surveillance case definitions for HIV infection; however, CDC did not implement this change nationally until April 2014. The revisions were primarily made to address recent changes in diagnostic criteria. Laboratory diagnostic criteria now accommodate a new multi-step testing algorithm, including criteria for differentiating between HIV-1 and HIV-2 infections, and recommendations for testing to recognize an HIV infection at the earliest stage.

Revisions to Ohio's HIV reporting rule (Administrative Code 3701-3-12) were implemented to require the reporting of all CD4 total lymphocyte (CD4) counts and percents and viral load (VL) results, including undetectable levels, for persons diagnosed with HIV infection in Ohio. These changes went into effect July 1, 2014.

The local public health authority has dedicated personnel throughout Ohio's eleven HIV/STI prevention planning regions to interview persons recently diagnosed with HIV infection. Local disease intervention specialists (DIS) provide partner notification services, obtain risk-related information to offer patient education on risky behavior modification, and refer persons to their initial appointment for HIV care services, including further testing to monitor immunologic status and antiretroviral therapy options.

State and local public health department personnel identify reports of persons diagnosed with HIV infection through active and passive surveillance activities with health care providers and facilities using standardized confidential HIV case report forms. These forms are used to collect and report demographic information, mode(s) of HIV transmission, initial HIV-related laboratory results, opportunistic infections, and vital status.

Both case report forms and laboratory results are entered into Ohio's enhanced HIV/AIDS Reporting System (eHARS). eHARS is a CDC developed and supported database application used for state-level monitoring and analysis and reporting de-identified statistics to CDC for monitoring national HIV surveillance data trends. CDC's data security and confidentiality standards are followed by surveillance staff to ensure adherence in handling personally identifiable information and include release provisions surrounding identifiable health data.

The ODH HIV Surveillance Program is charged with active follow-up on all diagnosed cases reported to obtain missing and/or incomplete information essential for classifying the case according to the surveillance case definition. Timely and complete reporting is essential for accurately describing trends in the epidemiology of HIV infections in Ohio.

The ODH HIV Surveillance Program also analyzes the data received through case report forms and paper and electronic lab reports. The resulting data are summarized and disseminated to state and local HIV stakeholders to guide in the development and implementation of prevention programs and to evaluate the efficacy of associated public health prevention interventions. The data are also used to inform public health policy, determine state and local funding allocations for HIV prevention and testing activities, and to support the allocation of resources for all parts of the federal Health Resources and Services Administration's (HRSA)

Ryan White HIV/AIDS Treatment Extension Act.

The goals of the ODH HIV Surveillance Program are to:

- ✂ Describe the scope and identify trends in HIV infection in Ohio,
- ✂ Investigate modes of HIV transmission,
- ✂ Evaluate Ohio's HIV surveillance system,
- ✂ Maintain a secure and confidential database, and
- ✂ Disseminate high quality surveillance data.

Reporting Delays/Lags

A key consideration for the analysis of HIV surveillance data requires the factoring in of reporting delays. A reporting delay—the time between diagnosis of HIV infection and report of the case to the public health authority—can differ among exposure, geographic, racial/ethnic, age, sex and vital status categories. In some instances, reporting delays for mode of HIV transmission/exposure (i.e., risk factor) can be several years, even with active follow-up to obtain this key information. Reporting of behavioral risk information may not be complete as some persons diagnosed with an HIV infection may be reluctant to disclose their sexual and/or drug use history.

All population-based disease surveillance systems experience reporting lags and incomplete reporting. The reporting lags for Ohio's HIV surveillance data range from 6-18 months. This is an acceptable range and is recognized as meeting the CDC national quality standards for HIV/AIDS reporting. This allows states time to collect more complete and accurate information so that the data can be used to accurately identify trends in HIV transmission and populations at risk.

Data Representativeness and Limitations

HIV surveillance data represent confidential reports of HIV infection and AIDS diagnoses; the data do not represent all persons with an HIV infection as not all persons with an HIV infection have been tested, or may have tested anonymously. HIV diagnosis data represent the earliest date of diagnosis reported to the ODH HIV Surveillance Program. The earliest date reported may not be the earliest date an individual became aware of their HIV infection.

HIV surveillance data may underestimate the level of recently infected persons because some infected persons do not know they are infected as they have not sought testing or did seek testing but did not respond to learn their test results.

Due to the long and variable period from initial HIV infection to the development of stage 3 infection (AIDS), trends in AIDS surveillance data may be underrepresented. Additionally,

incomplete HIV diagnostic and/or CD4 testing may interfere with the representativeness of reporting.

As with reported new diagnoses and prevalence, continuum of care data includes only information on persons with diagnosed HIV infection who have confidentially tested and been reported to ODH. It does not represent persons who may have tested anonymously or who are infected but unaware of their HIV status.

Completeness of CD4/VL reporting may affect the calculations for linkage to care, receipt of care, retention in care, and viral suppression. Many laboratories and other facilities have been onboarded for electronic lab reporting (ELR) and this improves completion of CD4/VL reporting greatly. ODH continues to increase the number of laboratories and other facilities who report lab results electronically to improve the completion rate for reporting of CD4s and VLs. Additionally, ODH conducts active surveillance to obtain CD4 and VL lab results from laboratories and facilities that may not yet have been onboarded to ELR.

Some persons living with diagnosed HIV infection may move in and out of Ohio and HIV Surveillance works with other states to ensure that Ohio has the most updated residence information for persons living with diagnosed HIV infection. HIV Surveillance also receives and processes death records from multiple sources into eHARS to ensure that the number of persons living with diagnosed HIV infection is accurate. However, there may be instances when a person with diagnosed HIV infection is deceased and that information has not yet been reported to ODH. These scenarios may affect the denominators used in the calculations for receipt of care, retention in care, and viral suppression.

Every effort is made for continuous quality improvement of the data to ensure accuracy. As more laboratories and other facilities are onboarded to ELR, active surveillance efforts are performed to obtain CD4 and VL lab results from laboratories and facilities that may not be reporting via ELR, and focused programmatic initiatives are implemented. Thus, the percent of persons who are linked to care within 30 days of diagnosis, receive care, are retained in care, and are virally suppressed are expected to increase.

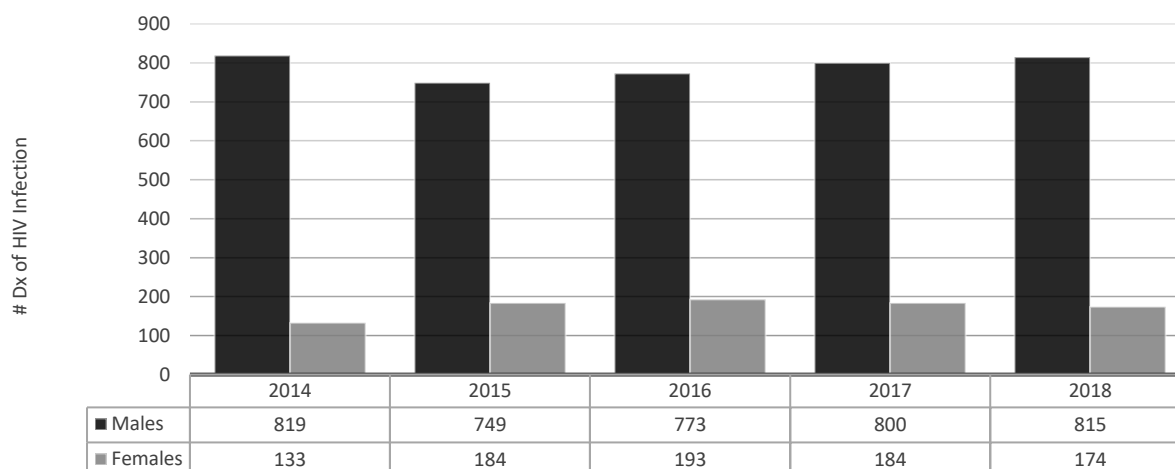
Reported New Diagnoses of HIV Infection

HIV infections continue to impact persons regardless of sex at birth, age, race/ethnicity and/or geographic region in Ohio, but the impact is not the same across all population groups.

There were 989 reported new diagnoses of HIV infection in Ohio in 2018, which equates to a rate of 8.5 (Table 1). This is a slight increase since 2014, when there were 952 new reported diagnoses of HIV infection in Ohio. The majority of persons (approximately 75 percent) diagnosed with an HIV infection in Ohio in 2018 were initially diagnosed with HIV (not AIDS). Approximately 20 percent progressed to stage 3 (AIDS) infection within 12 months of their initial HIV diagnosis, and nearly five percent had already progressed to stage 3 (AIDS) at the time they received their initial HIV diagnosis.

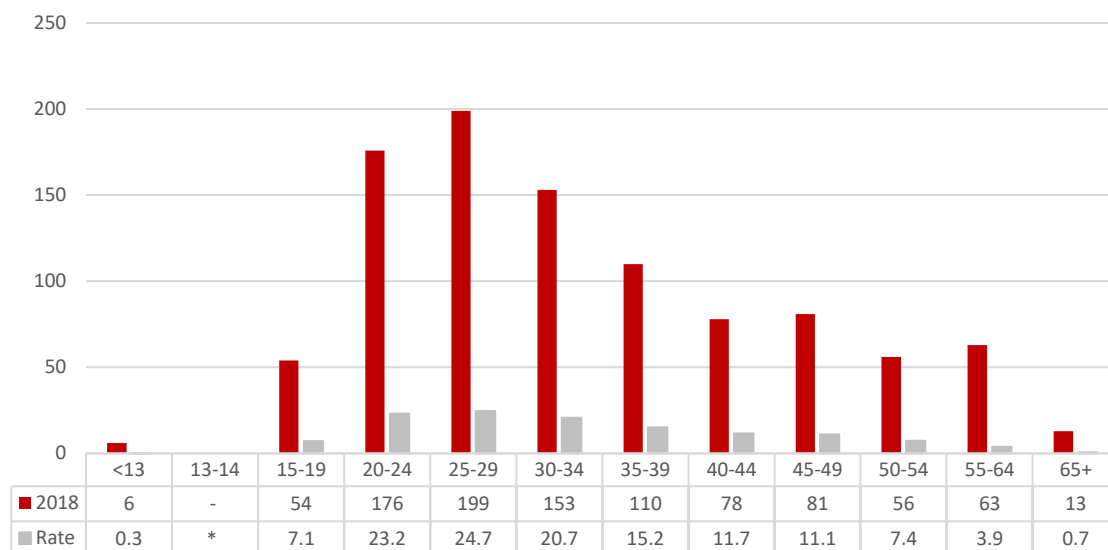
Sex at birth: The majority of diagnoses of HIV infection were and continue to be among males. In each of the past five years, males accounted for around 80 percent of diagnoses (Figure 1). In 2018, the rate for males (14.2) was more than four times as high as that for females (2.9).

Figure 1: Reported new diagnoses of HIV infection by sex at birth, Ohio, 2014-2018



Age at diagnosis: Over half (53 percent) of all diagnosed HIV infections reported in Ohio in 2018 occurred among persons 20-34 years of age (n=528). Persons 35-49 years of age accounted for 27 percent (n=269) of all HIV diagnoses reported in 2018, and approximately 13 percent of diagnosed HIV infections were among persons 50+ years of age (n=132). The rate of diagnosed HIV infections was highest among persons 25-29 years of age (24.7), followed closely by those 20-24 years of age (23.2) (Figure 2).

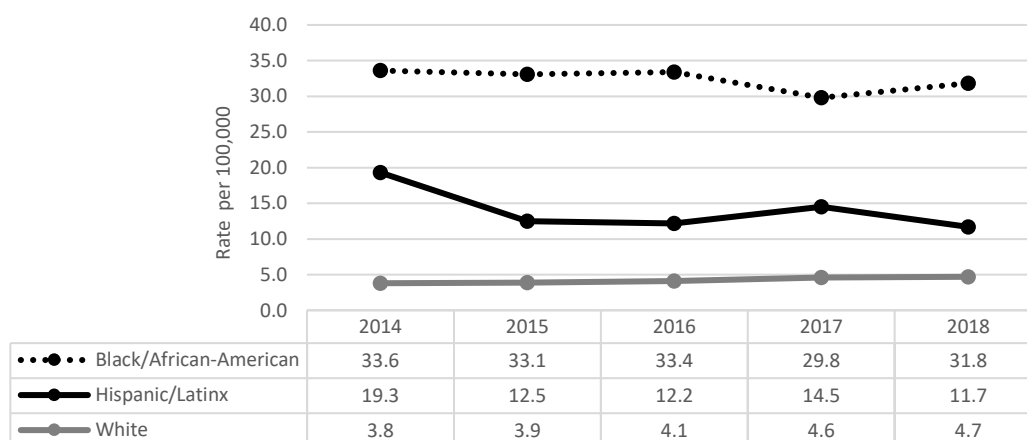
Figure 2: Reported new diagnoses of HIV infection by age at diagnosis, Ohio, 2018



Note: Asterisk (*) indicates rate not calculated for case count <5 due to unstable rates. Dash (-) indicates no cases were reported for the given category.

Race/ethnicity: In 2018, blacks/African-Americans accounted for 47 percent of all reported new diagnoses of HIV infections in Ohio. This was followed by whites (43 percent), Hispanics/Latinx (five percent), persons of multiple races (three percent), and Asians/Pacific Islanders (one percent). No new diagnoses were reported among American Indians/Alaska Natives in 2018 (Table 1). Ohio's black/African-American population continues to be disproportionately impacted by HIV compared to other race/ethnicity groups in the state. The rate of diagnoses among blacks/African-Americans was nearly seven times higher than that for whites, and the rate in Hispanics/Latinx was over twice as high as that for whites (Figure 3). This is concerning as blacks/African-Americans represent only 12.6 percent, and Hispanics/Latinx represent approximately four percent, of Ohio's overall population per U.S. Census estimates for 2018.

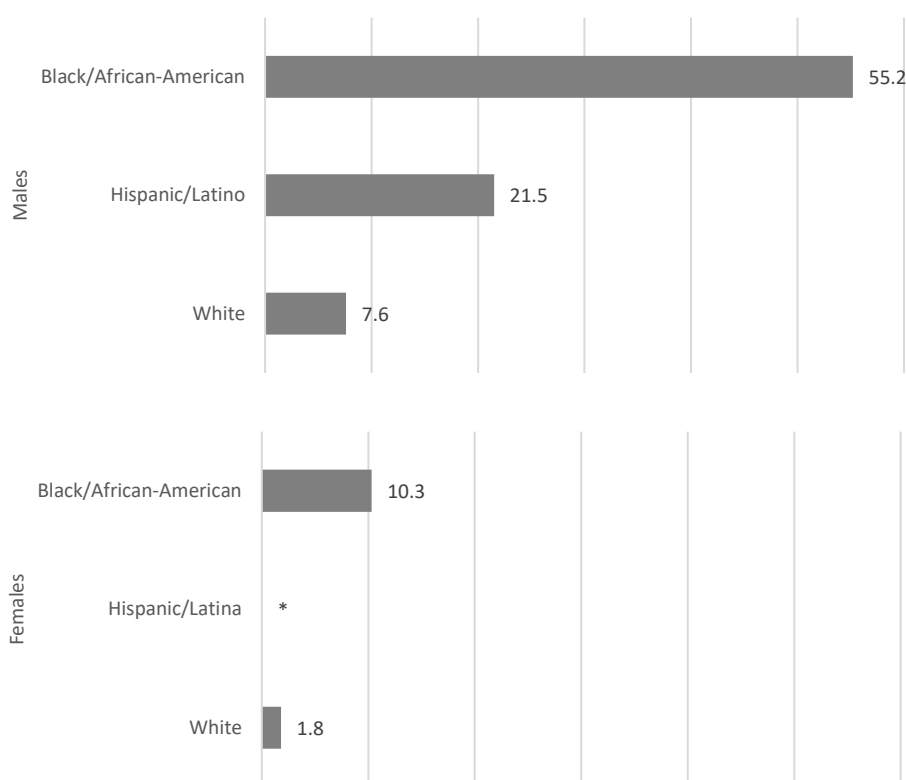
Figure 3: Rates of reported new diagnoses of HIV infection by selected race/ethnicity, Ohio, 2014-2018



Race/ethnicity by sex at birth: The differences in rates of HIV infection between race/ethnicity groups are even more pronounced among and between males and females. Among males, the rate of diagnosed HIV infections was more than seven times greater among black/African-Americans than whites (55.2 vs. 7.6). Among females, the rate of diagnosed HIV infections was nearly six times greater among blacks/African-Americans than whites (10.3 vs. 1.8) (Figure 4).

Black/African-American males had the highest number (n=390), percentage (39 percent) and rate (55.2) of HIV diagnoses reported in Ohio in 2018 compared to all other race/ethnicity groups by sex at birth (Table 1).

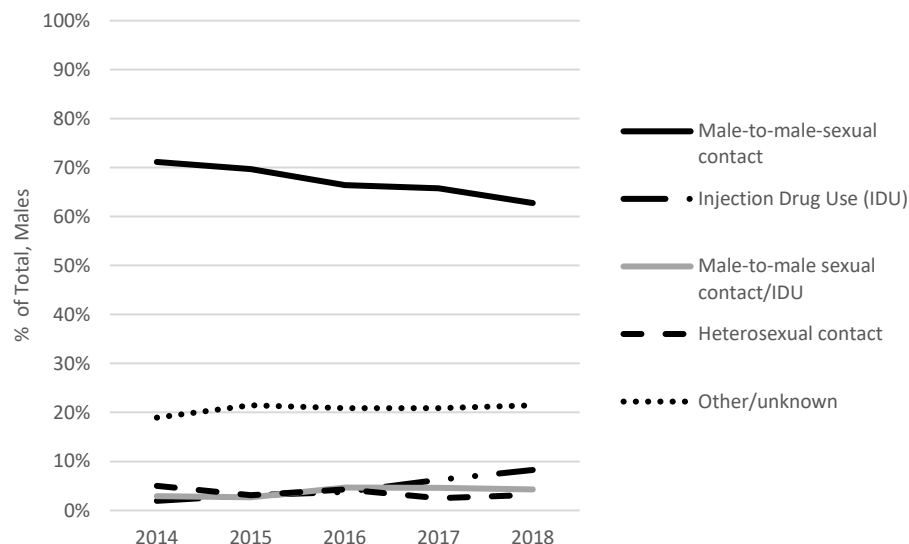
Figure 4: Rates of reported new diagnoses of HIV infection by selected race/ethnicity and sex at birth, Ohio, 2018



Note: Asterisk (*) indicates rate not calculated for case count <5 due to unstable rates.

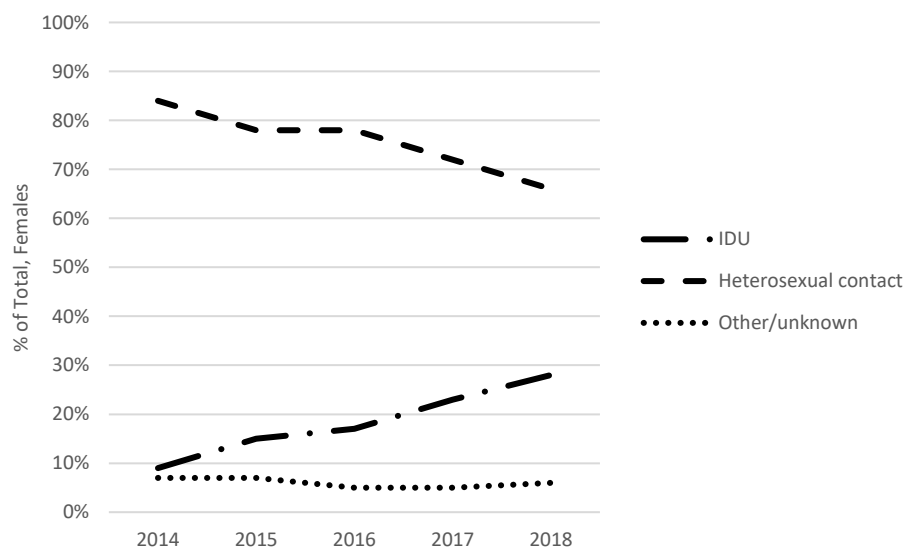
Transmission and exposure categories: A transmission category is assigned to a hierarchy based on risks, with the highest category being the most likely route of HIV transmission. Male-to-male sexual contact (63 percent) was the leading mode of transmission reported among all adult/adolescent males diagnosed with an HIV infection in Ohio in 2018. IDU accounted for eight percent and male-to-male sexual contact/IDU accounted for four percent of HIV transmissions reported among adult/adolescent males in Ohio in 2018 (Table 2). Three percent of adult/adolescent males were reported with heterosexual contact as the transmission category and the transmission category was unknown for 21 percent of adult/adolescent males diagnosed with HIV infection in 2018 (Figure 5).

Figure 5: Percent of reported new diagnoses of HIV infection by transmission category, adult/adolescent males, Ohio, 2014-2018



Heterosexual contact was the leading mode of HIV transmission reported among adult/adolescent females in Ohio in 2018, accounting for 66 percent. IDU was reported as the HIV mode of transmission for 28 percent of the diagnosed HIV infections reported among adult/adolescent females in 2018 (up from 17 percent in 2016) and the transmission category was unknown for six percent of adult/adolescent females diagnosed with HIV infection in 2018 (Figure 6).

Figure 6: Percent of reported new diagnoses of HIV infection by transmission category, adult/adolescent females, Ohio, 2014-2018



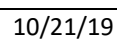
Nineteen percent of all HIV infections diagnosed and reported in Ohio in 2018 did not identify/report the mode of HIV transmission. As a result, validity in trends in HIV transmission could be affected by the high proportion of those with missing or no reported risks if these individuals differ significantly from persons diagnosed with HIV infection in Ohio with reported risks. The magnitude of this bias cannot easily be determined.

HIV exposure categories present an alternate option for displaying risks associated with HIV transmission. Table 3 demonstrates all combinations of risk exposures reported in 2018 among persons diagnosed and reported with an HIV infection in Ohio. An individual with multiple risk exposures is represented in the exposure category identifying all the potential ways in which that person reported they may have been exposed to HIV.

Geographic area: Over half of HIV diagnoses reported in Ohio in 2018 were among persons residing in the three most densely populated counties of the state (Cuyahoga, Franklin, and Hamilton counties). Franklin County accounted for 21 percent of all new diagnoses of HIV infection reported in 2018, followed by Hamilton County with 19 percent, and Cuyahoga County, which accounted for 15 percent.

Although Franklin had the highest number of cases (n=203); the highest rate was Hamilton (22.7), followed by Franklin (15.5), and Cuyahoga (12.1) (Figure 7).

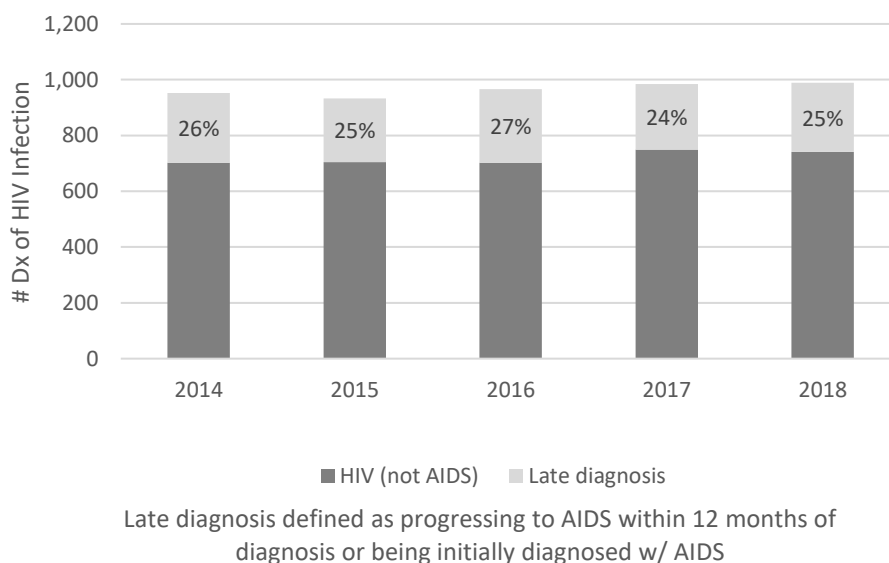
Ohio Department of Health, HIV Surveillance



18 | Page

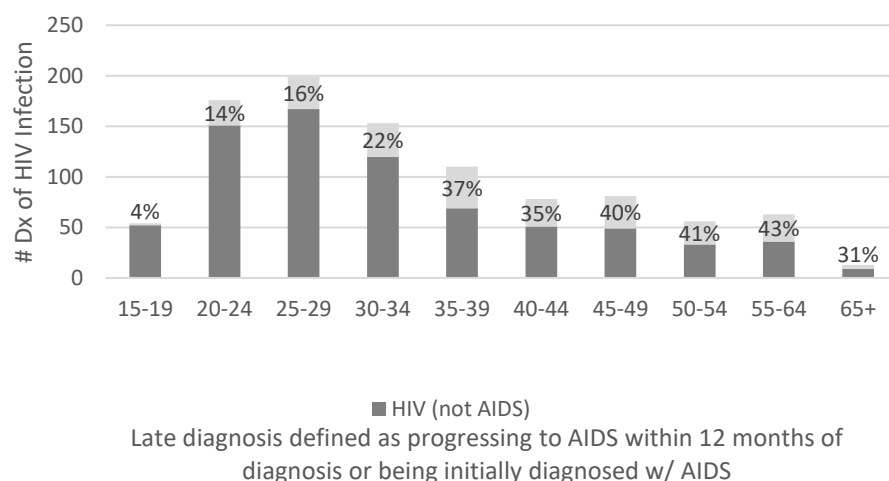
Late diagnoses: In 2018, 25 percent of reported new diagnoses of HIV in Ohio were initially diagnosed with a late infection, defined as progressing to Stage 3 (AIDS) within 12 months of diagnosis or having already progressed to Stage 3 (AIDS) at time of diagnosis (Figure 8). This suggests that 25 percent (n=248) of reported new diagnoses in 2018 were “late-testers” and may have been unaware of their status for some time, potentially transmitting the virus. This is just one of the reasons to encourage earlier HIV testing.

Figure 8: Percent of late diagnoses in reported new diagnoses of HIV infection, Ohio, 2014-2018



Twenty-six percent of males and 21 percent of females with a reported new diagnosis of HIV in Ohio in 2018 were diagnosed with a late infection. Generally, persons diagnosed at 35 and older are more likely to have a late diagnosis of HIV infection than persons under 35 (Figure 9).

Figure 9: Percent of late diagnoses in reported new diagnoses of HIV infection by age at diagnosis, Ohio, 2018



Twenty-six percent of blacks/African-Americans, 30 percent of Hispanics/Latinx, and 24 percent of whites with a reported new diagnosis of HIV in Ohio in 2018 were diagnosed with a late infection. The percent of late infection of reported new diagnoses in Ohio in 2018 among black/African-American males was 26 percent, while the percent among black/African-American females was 25 percent. The percent of late infection of reported new diagnoses in Ohio in 2018 among white males was 26 percent, while the percent among white females was 19 percent (Figure 10).

Figure 10: Percent of late diagnoses in reported new diagnoses of HIV infection by race/ethnicity and sex at birth, Ohio, 2018

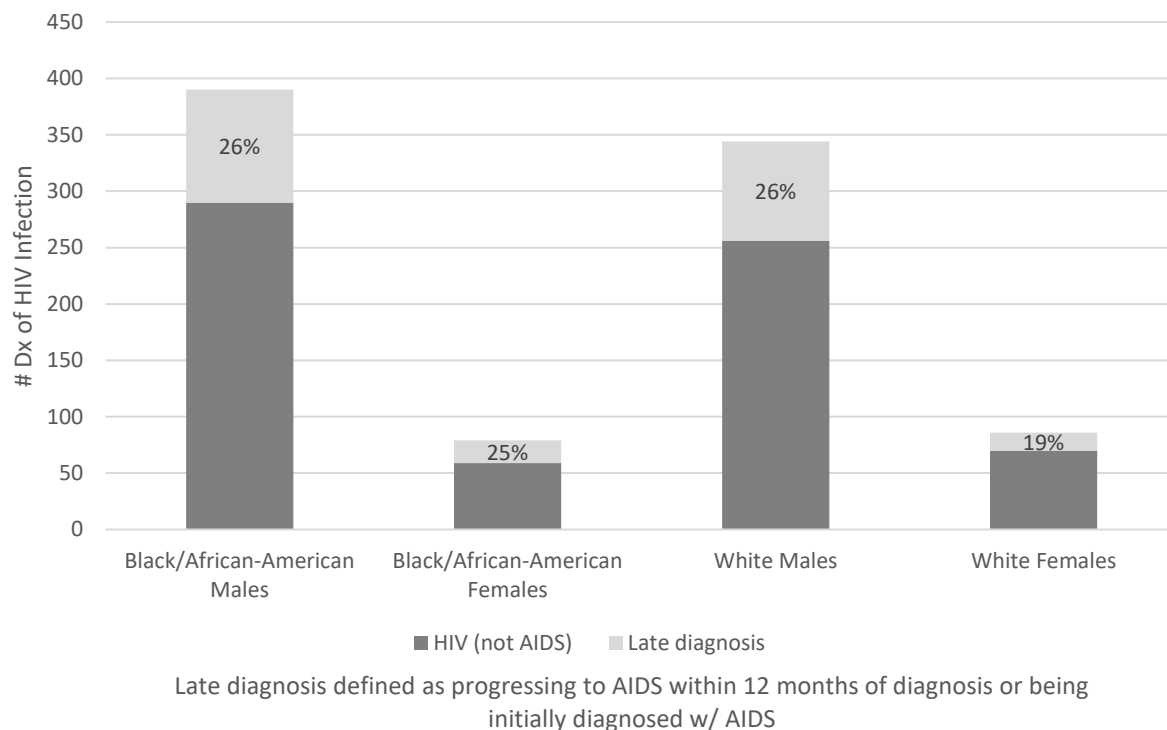


Table 1: Reported new diagnoses of HIV infection by disease status and selected characteristics, Ohio, 2018

Characteristic	2018 diagnosis of HIV infection			Disease Status					
	Rate ^a	No.	%	HIV (not AIDS)		HIV & later AIDS		AIDS	
	No.	%	No.	%	No.	%	No.	%	
Sex at birth									
Males	14.2	815	82%	604	82%	171	85%	40	87%
Females	2.9	174	18%	137	18%	31	15%	6	13%
Age at diagnosis (yr)									
<13	0.3	6	1%	4	1%	1	<1%	1	2%
13-14	*	-	-	-	-	-	-	-	-
15-19	7.1	54	5%	52	7%	2	1%	-	-
20-24	23.2	176	18%	151	20%	17	8%	8	17%
25-29	24.7	199	20%	167	23%	26	13%	6	13%
30-34	20.7	153	15%	120	16%	28	14%	5	11%
35-39	15.2	110	11%	69	9%	32	16%	9	20%
40-44	11.7	78	8%	51	7%	20	10%	7	15%
45-49	11.1	81	8%	49	7%	30	15%	2	4%
50-54	7.4	56	6%	33	4%	21	10%	2	4%
55-64	3.9	63	6%	36	5%	22	11%	5	11%
65+	0.7	13	1%	9	1%	3	1%	1	2%
Race/Ethnicity^b									
American Indian/Alaska Native	*	-	-	-	-	-	-	-	-
Asian/Pacific Islander	2.8	8	1%	6	1%	2	1%	-	-
Black/African-American	31.8	469	47%	349	47%	98	49%	22	48%
Hispanic/Latinx	11.7	54	5%	38	5%	11	5%	5	11%
White	4.7	430	43%	326	44%	86	43%	18	39%
Multi-Race	11.3	28	3%	22	3%	5	2%	1	2%
Race/Ethnicity^b and Sex at birth									
American Indian/Alaska Native Males	*	-	-	-	-	-	-	-	-
American Indian/Alaska Native Females	*	-	-	-	-	-	-	-	-
Asian/Pacific Islander Males	5.0	7	1%	5	1%	2	1%	-	-
Asian/Pacific Islander Females	*	1	<1%	1	<1%	-	-	-	-
Black/African-American Males	55.2	390	39%	290	39%	81	40%	19	41%
Black/African-American Females	10.3	79	8%	59	8%	17	8%	3	7%
Hispanic/Latino Males	21.5	51	5%	35	5%	11	5%	5	11%
Hispanic/Latina Females	*	3	<1%	3	<1%	-	-	-	-
White Males	7.6	344	35%	256	35%	73	36%	15	33%
White Females	1.8	86	9%	70	9%	13	6%	3	7%
Multi-Race Males	18.7	23	2%	18	2%	4	2%	1	2%
Multi-Race Females	4.0	5	1%	4	1%	1	<1%	-	-
Total	8.5	989		741		202		46	

Notes:

Reported new diagnoses of HIV infection include persons with a diagnosis of HIV (not AIDS), a diagnosis of HIV and an AIDS diagnosis within 12 months (HIV & later AIDS), and concurrent diagnoses of HIV and AIDS (AIDS) who were residents of Ohio at time of initial diagnosis.

Asterisk (*) indicates rate not calculated for case count <5 due to unstable rates. Dash (-) indicates no cases were reported for the given category.

^aThe rate is the number of persons with a reported diagnosis of HIV infection per 100,000 population calculated using 2018 U.S. Census estimates.

^bHispanics/Latinx may be of any race. Persons with a race of American Indian/Alaska Native, Asian/Pacific Islander, Black/African-American, White, or Multi-Race are not-Hispanic. Asian/Pacific Islander includes Native Hawaiians.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Table 2: Reported new diagnoses of HIV infection by disease status and transmission category, Ohio, 2018

Transmission Category ^a	2018 diagnosis of HIV infection		Disease Status					
			HIV (not AIDS)		HIV & later AIDS		AIDS	
	No.	%	No.	%	No.	%	No.	%
Male adult or adolescent								
Male-to-male sexual contact	509	63%	392	65%	94	55%	23	59%
Injection drug use (IDU)	67	8%	56	9%	10	6%	1	3%
Male-to-male sexual contact and IDU	35	4%	30	5%	4	2%	1	3%
Heterosexual contact	26	3%	13	2%	12	7%	1	3%
Other/unknown	174	21%	111	18%	50	29%	13	33%
Subtotal	811	100%	602	100%	170	100%	39	100%
Female adult or adolescent								
Injection drug use	48	28%	40	30%	7	23%	1	17%
Heterosexual contact	113	66%	89	66%	19	61%	5	83%
Other/unknown	11	6%	6	4%	5	16%	-	-
Subtotal	172	100%	135	100%	31	100%	6	100%
Child (<13 yrs at diagnosis)								
Perinatal	5	83%	3	75%	1	100%	1	100%
Other/unknown	1	17%	1	25%	-	-	-	-
Subtotal	6	100%	4	100%	1	100%	1	100%
Total	989		741		202		46	

Notes:

Reported new diagnoses of HIV infection include persons with a diagnosis of HIV (not AIDS), a diagnosis of HIV and an AIDS diagnosis within 12 months (HIV & later AIDS), and concurrent diagnoses of HIV and AIDS (AIDS) who were residents of Ohio at time of initial diagnosis.

Dash (-) indicates no cases were reported for the given category.

^a Transmission categories are mutually exclusive, hierarchical risk categories determined by the CDC and system-calculated using sex at birth and risk factor history to determine mode of transmission. A person with multiple risks is only represented in the highest category based on the CDC hierarchical algorithm. Thus, transgender women are included in the male-to-male sexual contact transmission category if assigned male at birth and risk factor history indicates sex with males. Please note this is for the categorization of HIV transmission categories only and not to describe sexual orientation.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Table 3: Reported new diagnoses of HIV infection by disease status and exposure category, Ohio, 2018

Exposure Category ^a	2018 diagnosis of HIV infection		Disease Status					
			HIV (not AIDS)		HIV & later AIDS		AIDS	
	No.	%	No.	%	No.	%	No.	%
Male-to-male sexual contact only	494	50%	378	51%	93	46%	23	50%
Injection drug use (IDU) only	49	5%	39	5%	10	5%	-	-
Heterosexual contact only	139	14%	102	14%	31	15%	6	13%
Male-to-male sexual contact & IDU	29	3%	25	3%	4	2%	-	-
IDU & Heterosexual contact	66	7%	57	8%	7	3%	2	4%
Male-to-male sexual contact & Heterosexual contact	15	2%	14	2%	1	<1%	-	-
Male-to-male sexual contact & IDU & Heterosexual contact	6	1%	5	1%	-	-	1	2%
Perinatal exposure	5	1%	3	<1%	1	<1%	1	2%
Other/unknown	186	19%	118	16%	55	27%	13	28%
Total	989		741		202		46	

Notes:

Reported new diagnoses of HIV infection include persons with a diagnosis of HIV (not AIDS), a diagnosis of HIV and an AIDS diagnosis within 12 months (HIV & later AIDS), and concurrent diagnoses of HIV and AIDS (AIDS) who were residents of Ohio at time of initial diagnosis.

Dash (-) indicates no cases were reported for the given category.

^a Exposure categories are mutually exclusive risk categories. All possible combinations of risks are represented among exposure categories. A person with multiple risks is represented in the exposure category identifying all the reported ways in which that person may have been exposed to HIV.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Prevalence: Persons Living With Diagnosed HIV Infection

Advances in HIV medication and adherence to treatment regimens contribute to persons living longer with HIV infection, and thus, are partly responsible for the growing number of cumulative cases of persons living with diagnosed HIV infection in Ohio.

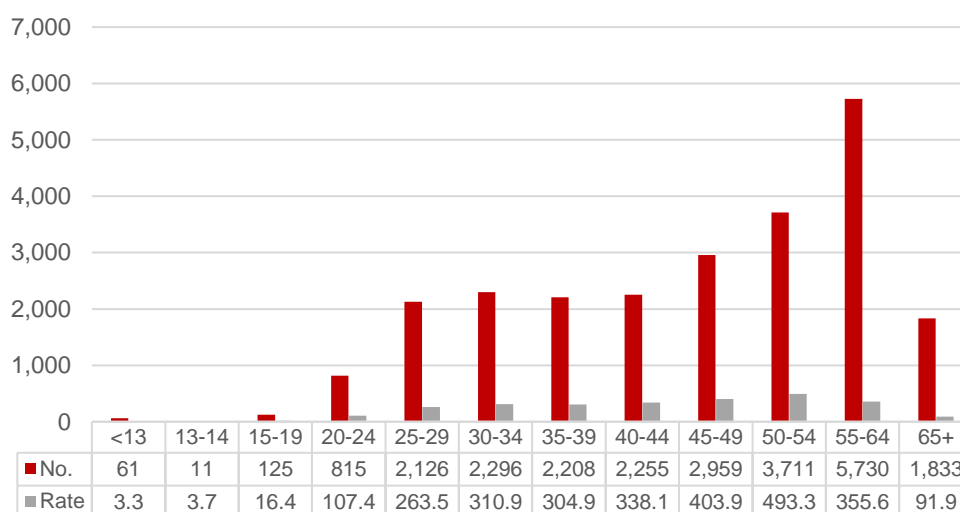
As of December 31, 2018, there were 24,130 persons living with diagnosed HIV infection in Ohio. Of these, 52 percent were living with an HIV (not AIDS) diagnosis, and 48 percent were living with a stage 3 (AIDS) diagnosis. The rate of persons living with diagnosed HIV infection in Ohio in 2018 was 206.4. As expected, the number of persons living with diagnosed HIV infection in Ohio has increased since 2014, when there were 21,373 persons living with diagnosed HIV.

Sex at birth: Males accounted for 79 percent of persons living with diagnosed HIV infection in Ohio at the end of 2018, while females accounted for 21 percent. The rate of males living with diagnosed HIV infection was four times higher in 2018 than that of females (Table 4).

Current age: At the end of 2018, nearly 60 percent of all persons living with diagnosed HIV infection in Ohio were 45 years of age and older. Persons 55-64 years of age comprised the largest number and percentage of persons living with diagnosed HIV infection in Ohio at the end of 2018 (n=5,730; 24 percent) compared to all other age groups. This was followed by persons aged 50-54 (n=3,711; 15 percent), and 45-49 (n=2,959; 12 percent), respectively (Figure 11).

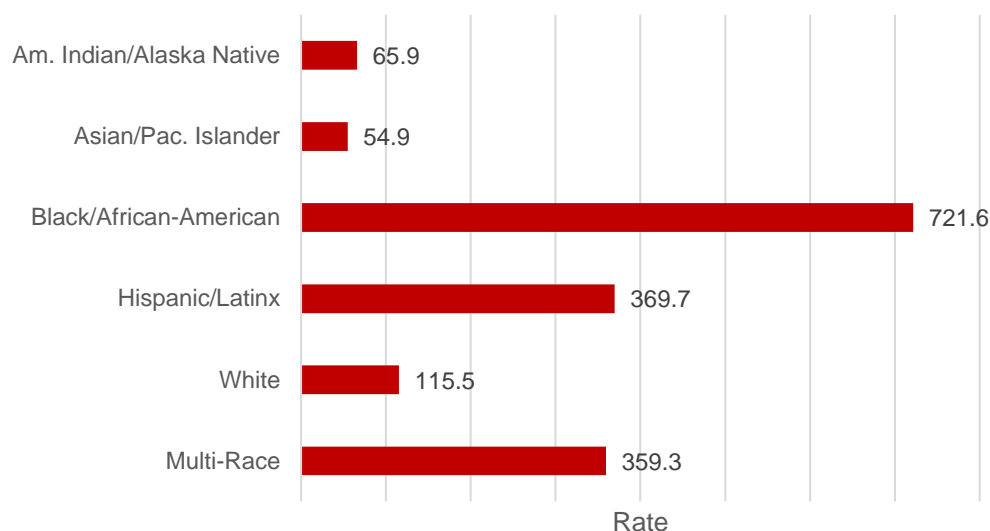
Rates of persons living with diagnosed HIV infection were highest among persons aged 50-54, 45-49, and 55-64, (493.3, 403.9, and 355.6, respectively). These age group-specific rates will continue to rise as persons age and live longer as a result of treatment adherence and related retention in care intervention successes (Table 4).

Figure 11: Persons living with diagnosed HIV infection by current age, Ohio, 2018



Race/ethnicity: Whites and blacks/African-Americans each make up approximately 44 percent of persons living with diagnosed HIV infection (Table 4). However, the rate for blacks/African-Americans (721.6) was more than six times as high as that for whites (115.5) (Figure 12). This demonstrates the disproportionate burden of HIV on a population level among Ohio's black/African-American population.

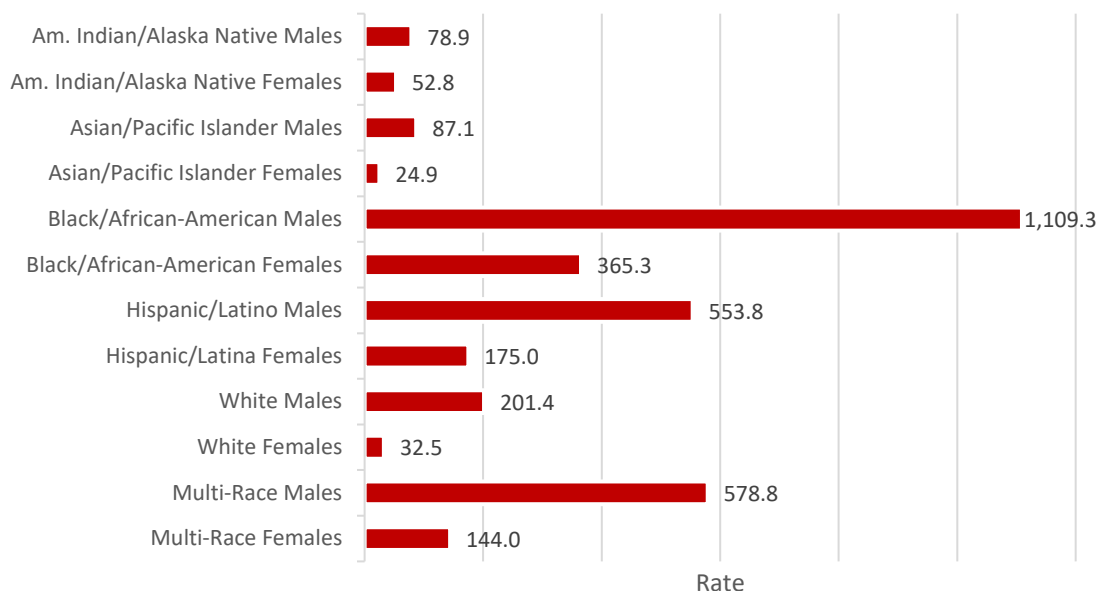
Figure 12: Rates of persons living with diagnosed HIV infection by race/ethnicity, Ohio, 2018



Race/ethnicity by sex at birth: White males comprised the largest number and percentage of all persons living with diagnosed HIV infection in Ohio at the end of 2018 (n=9,094; 38 percent), followed closely by black/African-American males (n=7,834; 32 percent). Black/African-American females accounted for 12 percent (n=2,806), white females accounted for six percent (n=1,523), and Hispanic/Latino males accounted for five percent (n=1,312) of all Ohioans living with diagnosed HIV infection at the end of 2018 (Table 4).

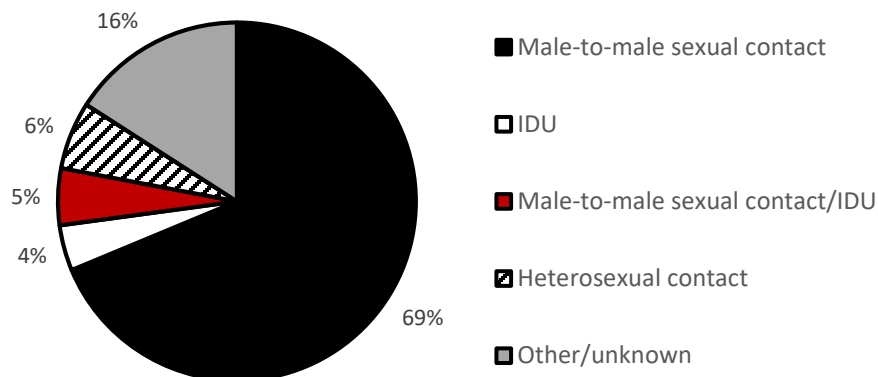
Profound differences in rates of persons living with diagnosed HIV infection are observed on a population level when comparing race/ethnicity groups by sex at birth. The rate of persons living with diagnosed HIV infection in Ohio at the end of 2018 was 1,109.3 for black/African-American males. This was followed by 578.8 for multi-race males, 553.8 among Hispanic/Latino males, and 365.3 among black/African-American females (Figure 13). The rate for black/African-American males was more than five times higher than that for white males and the rate for black/African-American females was more than 11 times higher than that for white females.

Figure 13: Rates of persons living with diagnosed HIV infection by race/ethnicity and sex at birth, Ohio, 2018



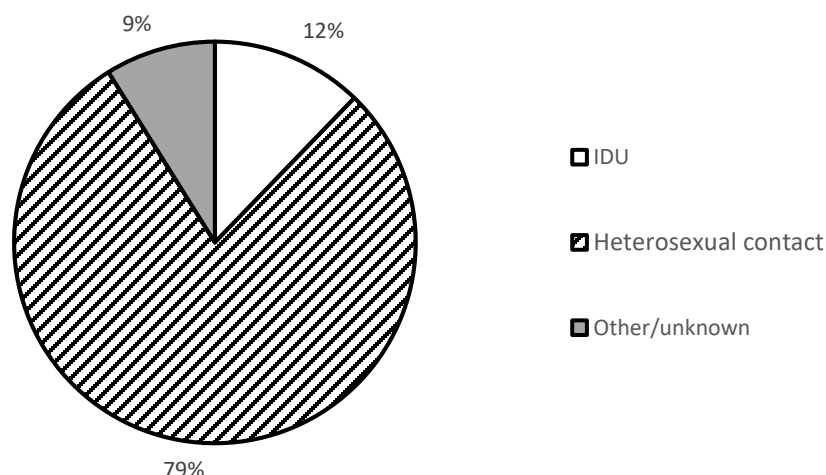
Transmission and exposure categories: At the end of 2018, male-to-male sexual contact (69 percent) was the leading mode of transmission reported among all adult/adolescent males living with diagnosed HIV infection in Ohio. IDU and male-to-male sexual contact/IDU combined to account for approximately nine percent of HIV transmissions reported among adult/adolescent males in Ohio in 2018 (Table 5). Six percent of adult/adolescent males living with diagnosed HIV infection in Ohio were reported with heterosexual contact as the mode of transmission and the transmission category is unknown for 16 percent of adult/adolescent males living with diagnosed HIV infection at the end of 2018 (Figure 14).

Figure 14: Percent of persons living with diagnosed HIV infection by transmission category, adult/adolescent males, Ohio, 2018



At the end of 2018, heterosexual contact was the leading mode of HIV transmission reported, accounting for 79 percent of all adult/adolescent females living with diagnosed HIV infection in Ohio. IDU was reported as the HIV mode of transmission for 12 percent of adult/adolescent females and the transmission category is unknown for nine percent of adult/adolescent females living with diagnosed HIV infection at the end of 2018 (Figure 15).

Figure 15: Percent of persons living with diagnosed HIV infection by transmission category, adult/adolescent females, Ohio, 2018



Perinatal exposure to HIV is the reported mode of HIV transmission for one percent of all persons currently living with diagnosed HIV infection in Ohio. Mode of HIV transmission reflects the route of HIV transmission at the time of initial diagnosis. Some persons who were originally infected at birth (i.e., in the past) are now adults, but they are counted for statistical purposes in the perinatal transmission category. For example, a 30-year-old adult living with diagnosed HIV infection in Ohio in 2018 who was infected and diagnosed at the time of their birth in 1988, remains in the HIV perinatal transmission category (Table 5).

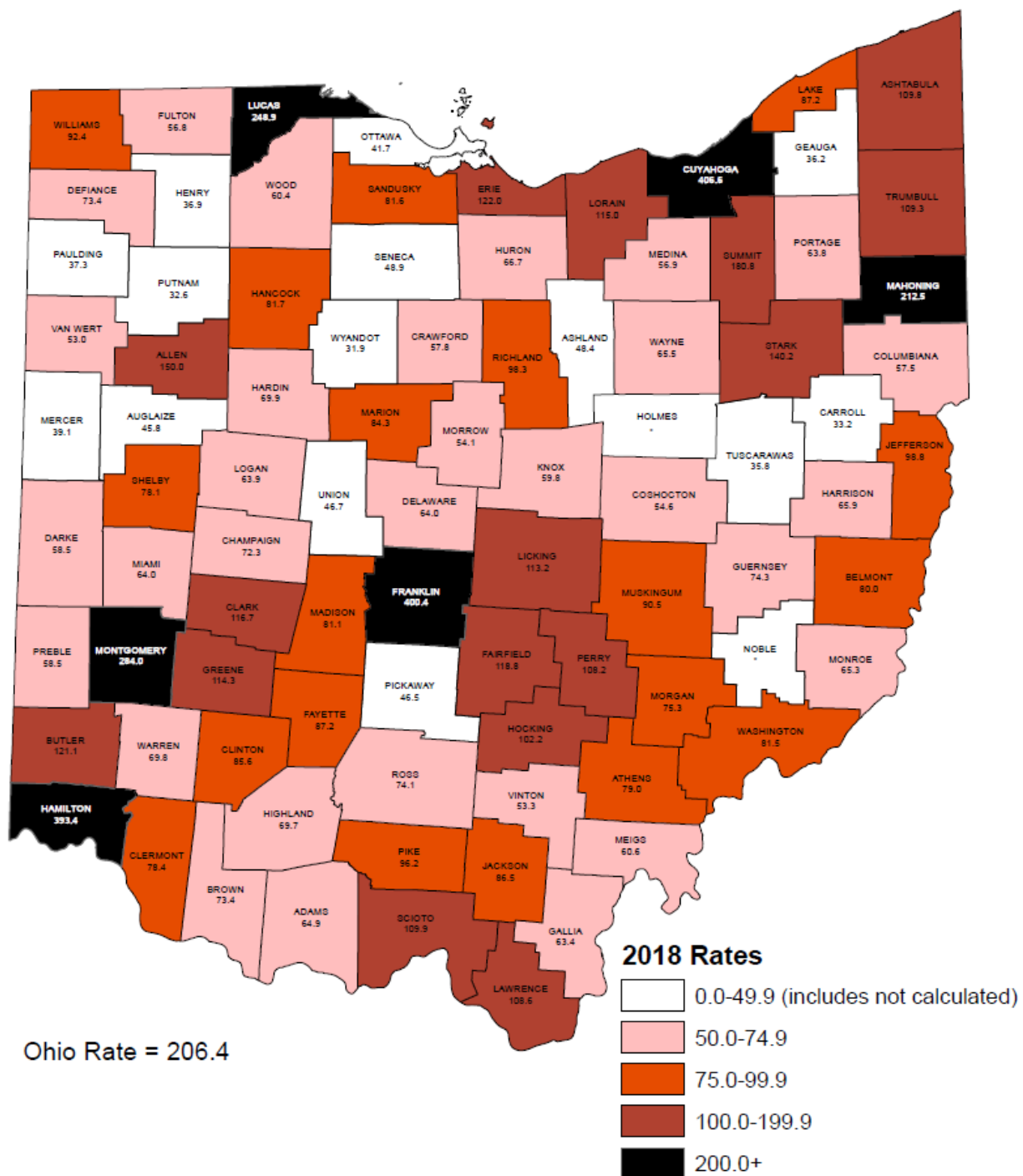
Table 6 demonstrates all combinations of risk exposures reported among persons living with diagnosed HIV infection at the end of 2018 in Ohio. An individual with multiple risk exposures is represented in the exposure category identifying all the potential ways in which that person reported they may have been exposed to HIV.

Geographic area: Each of Ohio's 88 counties had persons living with diagnosed HIV infection at the end of 2018. The number of persons living with diagnosed HIV infection varies across geographic areas of the state, with the fewest number of prevalent cases and lowest rates of persons living with diagnosed HIV infection observed in the less densely populated, rural counties, and the highest number and rates in the more densely populated, urban counties.

The number of persons living with diagnosed HIV infection ranged from two (Noble County) to 5,247 (Franklin County). Sixty-seven percent of all persons living with diagnosed HIV infection

in Ohio in 2018 resided in Franklin County (22 percent), Cuyahoga County (21 percent), Hamilton County (13 percent), Montgomery County (6 percent), or Lucas County (4 percent). Cuyahoga County had the highest rate (406.6), followed by Franklin (400.4), and Hamilton (393.4) (Figure 16).

Figure 16: Rates of reported persons living with diagnosed HIV infection by county, Ohio, 2018



Notes:
 Living with diagnosed HIV infection represents all persons ever diagnosed and reported with HIV or AIDS who have not been reported as having died as of December 31, 2018.
 Persons living with diagnosed HIV infection represent persons living in Ohio as of December 31, 2018, regardless of whether or not the person was a resident of Ohio at time of initial HIV or AIDS diagnosis.
 Asterisk (*) indicates rate not calculated for case counts <5 due to unstable rates.
 County reflects current county of residence. Cases in a state or federal correctional facility or whose current county of residence is unknown are not included.
 The rate is the number of persons living with diagnosed HIV infection per 100,000 population calculated using 2018 U.S. Census estimates.
 Source: Ohio Department of Health, HIV Surveillance Program. Data reported through June 30, 2019.

Table 4: Reported persons living with diagnosed HIV infection by current disease status and selected characteristics, Ohio, 2018

Characteristic	Living with diagnosed HIV infection in 2018			Current Disease Status			
	Rate ^a	No.	%	HIV (not AIDS)		AIDS	
	No.	%	No.	%	No.	%	
Sex at birth							
Males	334.2	19,154	79%	9,886	79%	9,268	80%
Females	83.5	4,976	21%	2,693	21%	2,283	20%
Age at end of year							
<13	3.3	61	<1%	48	<1%	13	<1%
13-14	3.7	11	<1%	9	<1%	2	<1%
15-19	16.4	125	1%	100	1%	25	<1%
20-24	107.4	815	3%	668	5%	147	1%
25-29	263.5	2,126	9%	1,594	13%	532	5%
30-34	310.9	2,296	10%	1,506	12%	790	7%
35-39	304.9	2,208	9%	1,304	10%	904	8%
40-44	338.1	2,255	9%	1,222	10%	1,033	9%
45-49	403.9	2,959	12%	1,410	11%	1,549	13%
50-54	493.3	3,711	15%	1,568	12%	2,143	19%
55-64	355.6	5,730	24%	2,406	19%	3,324	29%
65+	91.9	1,833	8%	744	6%	1,089	9%
Race/Ethnicity^b							
American Indian/Alaska Native	65.9	15	<1%	8	<1%	7	<1%
Asian/Pacific Islander	54.9	158	1%	105	1%	53	<1%
Black/African-American	721.6	10,640	44%	5,569	44%	5,071	44%
Hispanic/Latinx	369.7	1,704	7%	843	7%	861	7%
White	115.5	10,617	44%	5,509	44%	5,108	44%
Multi-Race	359.3	890	4%	439	3%	451	4%
Unknown	*	106	<1%	106	1%	-	-
Race/Ethnicity^b and Sex at birth							
American Indian/Alaska Native Males	78.9	9	<1%	7	<1%	2	<1%
American Indian/Alaska Native Females	52.8	6	<1%	1	<1%	5	<1%
Asian/Pacific Islander Males	87.1	121	1%	83	1%	38	<1%
Asian/Pacific Islander Females	24.9	37	<1%	22	<1%	15	<1%
Black/African-American Males	1,109.3	7,834	32%	4,075	32%	3,759	33%
Black/African-American Females	365.3	2,806	12%	1,494	12%	1,312	11%
Hispanic/Latino Males	553.8	1,312	5%	667	5%	645	6%
Hispanic/Latina Females	175.0	392	2%	176	1%	216	2%
White Males	201.4	9,094	38%	4,630	37%	4,464	39%
White Females	32.5	1,523	6%	879	7%	644	6%
Multi-Race Males	578.8	710	3%	350	3%	360	3%
Multi-Race Females	144.0	180	1%	89	1%	91	1%
Unknown	*	106	<1%	106	1%	-	-
Total	206.4	24,130		12,579		11,551	

Notes:

Living with diagnosed HIV infection represents all persons ever diagnosed and reported with HIV and/or AIDS who have not been reported as having died as of December 31, 2018. Persons living with diagnosed HIV infection represent persons living in Ohio as of December 31, 2018, regardless of whether the person was a resident of Ohio at time of initial HIV and/or AIDS diagnosis.

Asterisk (*) indicates rate not calculated for case count <5 due to unstable rates. Dash (-) indicates no cases were reported for the given category.

^a The rate is the number of persons living with diagnosed HIV infection per 100,000 population calculated using U.S. Census estimates for that year.

^b Hispanics/Latinx may be of any race. Persons with a race of American Indian/Alaska Native, Asian/Pacific Islander, Black/African-American, White, or Multi-Race are not-Hispanic. Asian/Pacific Islander includes Native Hawaiians.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Table 5: Reported persons living with diagnosed HIV infection by current disease status and transmission category, Ohio, 2018

Transmission Category ^a	Living with diagnosed HIV infection		Current Disease Status			
	in 2018		HIV (not AIDS)		AIDS	
	No.	%	No.	%	No.	%
Male adult or adolescent						
Male-to-male sexual contact	13,085	69%	6,712	68%	6,373	69%
Injection drug use (IDU)	785	4%	344	4%	441	5%
Male-to-male sexual contact and IDU	976	5%	404	4%	572	6%
Heterosexual contact	1,162	6%	477	5%	685	7%
Other/unknown	3,029	16%	1,882	19%	1,147	12%
Subtotal	19,037	100%	9,819	100%	9,218	100%
Female adult or adolescent						
Injection drug use	591	12%	282	11%	309	14%
Heterosexual contact	3,815	79%	1,984	76%	1,831	83%
Other/unknown	430	9%	351	13%	79	4%
Subtotal	4,836	100%	2,617	100%	2,219	100%
Child (<13 yrs at diagnosis)						
Perinatal	220	86%	120	84%	100	88%
Other/unknown	37	14%	23	16%	14	12%
Subtotal	257	100%	143	100%	114	100%
Total	24,130		12,579		11,551	

Notes:

Living with diagnosed HIV infection represents all persons ever diagnosed and reported with HIV and/or AIDS who have not been reported as having died as of December 31, 2018. Persons living with diagnosed HIV infection represent persons living in Ohio as of December 31, 2018, regardless of whether the person was a resident of Ohio at time of initial HIV and/or AIDS diagnosis.

Dash (-) indicates no cases were reported for the given category.

^a Transmission categories are mutually exclusive, hierarchical risk categories determined by the CDC and system-calculated using sex at birth and risk factor history to determine mode of transmission. A person with multiple risks is only represented in the highest category based on the CDC hierarchical algorithm. Thus, transgender women are included in the male-to-male sexual contact transmission category if assigned male at birth and risk factor history indicates sex with males. Please note this is for the categorization of HIV transmission categories only and not to describe sexual orientation.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Table 6: Reported persons living with diagnosed HIV infection by current disease status and exposure category, Ohio, 2018

Exposure Category ^a	Living with diagnosed HIV infection		Current Disease Status			
	in 2018		HIV (not AIDS)		AIDS	
	No.	%	No.	%	No.	%
Male-to-male sexual contact only	12,386	51%	6,421	51%	5,965	52%
Injection drug use (IDU) only	658	3%	308	2%	350	3%
Heterosexual contact only	4,982	21%	2,463	20%	2,519	22%
Male-to-male sexual contact & IDU	756	3%	325	3%	431	4%
IDU & Heterosexual contact	718	3%	318	3%	400	3%
Male-to-male sexual contact & Heterosexual contact	699	3%	291	2%	408	4%
Male-to-male sexual contact & IDU & Heterosexual contact	220	1%	79	1%	141	1%
Perinatal exposure	232	1%	128	1%	104	1%
Other/unknown	3,479	14%	2,246	18%	1,233	11%
Total	24,130		12,579		11,551	

Notes:

Living with diagnosed HIV infection represents all persons ever diagnosed and reported with HIV and/or AIDS who have not been reported as having died as of December 31, 2018. Persons living with diagnosed HIV infection represent persons living in Ohio as of December 31, 2018, regardless of whether the person was a resident of Ohio at time of initial HIV and/or AIDS diagnosis.

Dash (-) indicates no cases were reported for the given category.

^a Exposure categories are mutually exclusive risk categories. All possible combinations of risks are represented among exposure categories. A person with multiple risks is represented in the exposure category identifying all the reported ways in which that person may have been exposed to HIV.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Deaths Among Persons With Diagnosed HIV Infection

Persons are living longer with a diagnosis of HIV infection as a result of successful antiretroviral treatment (ART). Unlike the earliest days of Ohio's HIV epidemic, it is rare for a death certificate to be the initial reporting source to public health of a person's HIV infection. The ODH Office of Vital Statistics is the source of the death data used in this section.

There were 310 deaths in 2018 reported among persons with diagnosed HIV infection in Ohio, bringing the cumulative deaths reported in Ohio since the beginning of the HIV epidemic to 13,639 (Table 7). This is very similar to the number of deaths reported among persons with diagnosed HIV infection in 2014, when there were 311 deaths. Deaths among persons with diagnosed HIV infection represent deaths attributable to any cause.

Sex at Birth: Eighty-two percent of the 310 deaths reported among persons with diagnosed HIV in Ohio in 2018 were male.

Age at death: The number and percentage of deaths reported in Ohio in 2018 among persons with diagnosed HIV infection was greatest among persons 55-64 years of age at the time of death in 2018 (n=83; 27 percent). This was followed by persons aged 50-54 (n=56; 18 percent), 65 and over (n=50; 16 percent), 45-49 (n=42; 14 percent), 40-44 (n=27; nine percent), 35-39 (n=18; six percent), 25-29 (n=15; five percent), 30-34 (n=14; five percent), and 20-24 (n=5; two percent).

Race/ethnicity: Forty-nine percent of all persons with diagnosed HIV infection in Ohio who died in 2018 were white (n=152), 44 percent were black/African-American (n=136), four percent were of multiple races (n=13), three percent were Hispanic/Latinx (n=8), and less than one percent (n=1) was Asian/Pacific Islander.

Race/ethnicity by sex at birth: Forty percent (n=125) of persons with diagnosed HIV infection who died in Ohio in 2018 were white males. This was followed by black/African-American males (n=113; 36 percent), white females (n=27; nine percent), black/African-American females (n=23; seven percent), multi-race males (n=11; four percent), Hispanic/Latino males (n=5; two percent), Hispanic/Latina females (n=3; one percent), multi-race females (n=2; one percent), and Asian/Pacific Islander males (n=1; less than one percent).

Transmission and exposure categories: Of the 255 adult/adolescent males with diagnosed HIV infection who were reported as having died in 2018, 52 percent had a transmission category of male-to-male sexual contact, nine percent had a transmission category of male-to-male sexual contact/IDU, 10 percent had a transmission category of IDU, seven percent had a transmission category of heterosexual contact, and 22 percent had a transmission category of other/unknown. Of the 55 adult/adolescent females with diagnosed HIV infection in Ohio who died in 2018, 55 percent had a transmission category of heterosexual contact, 36 percent had IDU as the category of transmission, and nine had a transmission category of other/unknown (Table 8).

Table 7: Trends in reported deaths among persons with diagnosed HIV infection by year of death and cumulative deaths by selected characteristics, Ohio, 2014-2018

Characteristic	Year of Death among Persons with Diagnosed HIV Infection															Cumulative Deaths	
	2014			2015			2016			2017			2018				
	Rate ^a	No.	%	Rate ^a	No.	%	Rate ^a	No.	%	Rate ^a	No.	%	Rate ^a	No.	%	No.	%
Sex at birth																	
Males	4.6	262	84%	4.0	226	84%	4.2	241	81%	4.4	253	80%	4.4	255	82%	11,815	87%
Females	0.8	49	16%	0.7	44	16%	1.0	57	19%	1.1	65	20%	0.9	55	18%	1,824	13%
Age at death (yr)																	
<13	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	83	1%
13-14	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	3	<1%
15-19	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	32	<1%
20-24	0.6	5	2%	*	3	1%	*	4	1%	0.8	6	2%	0.7	5	2%	223	2%
25-29	1.7	13	4%	0.8	6	2%	1.5	12	4%	1.6	13	4%	1.9	15	5%	1,060	8%
30-34	2.2	16	5%	1.8	13	5%	3.3	24	8%	2.9	21	7%	1.9	14	5%	1,986	15%
35-39	2.4	16	5%	1.7	12	4%	2.4	17	6%	3.6	26	8%	2.5	18	6%	2,415	18%
40-44	4.8	35	11%	3.8	27	10%	3.1	21	7%	3.9	26	8%	4.0	27	9%	2,318	17%
45-49	5.8	44	14%	4.9	37	14%	4.8	36	12%	4.4	33	10%	5.7	42	14%	1,911	14%
50-54	6.7	57	18%	7.1	59	22%	7.8	62	21%	5.9	46	14%	7.4	56	18%	1,442	11%
55-64	6.2	98	32%	5.0	80	30%	4.7	75	25%	6.1	98	31%	5.2	83	27%	1,533	11%
65+	1.5	27	9%	1.8	33	12%	2.5	47	16%	2.5	49	15%	2.5	50	16%	633	5%
Race/Ethnicity ^b																	
American Indian/Alaska Native	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	13	<1%
Asian/Pacific Islander	*	-	-	*	1	<1%	*	-	-	*	-	-	*	1	<1%	22	<1%
Black/African-American	9.0	128	41%	8.5	122	45%	7.6	110	37%	9.5	139	44%	9.2	136	44%	5,046	37%
Hispanic/Latinx	2.2	9	3%	1.7	7	3%	1.9	8	3%	2.5	11	3%	1.7	8	3%	455	3%
White	1.8	164	53%	1.5	137	51%	1.8	169	57%	1.6	151	47%	1.7	152	49%	7,985	59%
Multi-Race	4.1	9	3%	*	3	1%	4.3	10	3%	7.1	17	5%	5.2	13	4%	100	1%
Unknown	*	1	<1%	*	-	-	*	1	<1%	*	-	-	*	-	-	18	<1%
Race/Ethnicity ^b and Sex at birth																	
American Indian/Alaska Native Males	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	9	<1%
American Indian/Alaska Native Females	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	4	<1%
Asian/Pacific Islander Males	*	-	-	*	1	<1%	*	-	-	*	-	-	*	1	<1%	22	<1%
Asian/Pacific Islander Females	*	-	-	*	-	-	*	-	-	*	-	-	*	-	-	-	-
Black/African-American Males	13.9	95	31%	13.1	90	33%	11.4	79	27%	15.1	106	33%	16.0	113	36%	4,027	30%
Black/African-American Females	4.4	33	11%	4.3	32	12%	4.1	31	10%	4.3	33	10%	3.0	23	7%	1,019	7%
Hispanic/Latino Males	3.9	8	3%	3.3	7	3%	3.2	7	2%	4.0	9	3%	2.1	5	2%	355	3%
Hispanic/Latina Females	*	1	<1%	*	-	-	*	1	<1%	*	2	1%	*	3	1%	100	1%
White Males	3.3	151	49%	2.7	125	46%	3.2	146	49%	2.8	125	39%	2.8	125	40%	7,304	54%
White Females	0.3	13	4%	0.3	12	4%	0.5	23	8%	0.6	26	8%	0.6	27	9%	681	5%
Multi-Race Males	6.5	7	2%	*	3	1%	6.9	8	3%	10.9	13	4%	9.0	11	4%	81	1%
Multi-Race Females	*	2	1%	*	-	-	*	2	1%	*	4	1%	*	2	1%	19	<1%
Unknown		1	<1%	*	-	-	*	1	<1%	*	-	-	*	-	-	18	<1%
Total	2.7	311		2.3	270		2.6	298		2.7	318		2.7	310		13,639	

Notes:

Deaths among persons with HIV/AIDS represent deaths attributed to any cause among persons reported with a diagnosis of HIV and/or AIDS who were living in Ohio at the time of initial diagnosis. Deaths by year (2014-2018) represent the number of deaths per year; cumulative deaths represent all reported deaths since the beginning of the epidemic through 2017 among persons reported with a diagnosis of HIV and/or AIDS who were living in Ohio at the time of initial diagnosis.

Asterisk (*) indicates rate not calculated for case count <5 due to unstable rates. Dash (-) indicates no cases were reported for the given category.

^a The rate is the number of deaths among persons living with diagnosed HIV infection per 100,000 population calculated using U.S. Census estimates for that year.

^b Hispanics/Latinx may be of any race. Persons with a race of American Indian/Alaska Native, Asian/Pacific Islander, Black/African-American, White, or Multi-Race are not-Hispanic. Asian/Pacific Islander includes Native Hawaiians.

Source: Ohio Department of Health, Bureau of Vital Statistics; analysis conducted by HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Table 8: Trends in reported deaths among persons with diagnosed HIV infection by year of death and cumulative deaths by transmission category, Ohio, 2014-2018

Transmission Category ^a	Year of Death among Persons with Diagnosed HIV Infection										Cumulative Deaths	
	2014		2015		2016		2017		2018			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Male adult or adolescent												
Male-to-male sexual contact	147	56%	112	50%	124	51%	152	60%	133	52%	7,443	63%
Injection drug use (IDU)	25	10%	25	11%	18	7%	19	8%	25	10%	1,093	9%
Male-to-male sexual contact and IDU	16	6%	23	10%	22	9%	17	7%	22	9%	891	8%
Heterosexual contact	18	7%	19	8%	20	8%	15	6%	18	7%	492	4%
Other/unknown	55	21%	46	20%	57	24%	49	19%	57	22%	1,829	16%
Subtotal	261	100%	225	100%	241	100%	252	100%	255	100%	11,748	100%
Female adult or adolescent												
Injection drug use	7	14%	7	16%	12	21%	20	31%	20	36%	464	26%
Heterosexual contact	39	80%	30	68%	38	68%	35	55%	30	55%	1098	62%
Other/unknown	3	6%	7	16%	6	11%	9	14%	5	9%	208	12%
Subtotal	49	100%	44	100%	56	100%	64	100%	55	100%	1,770	100%
Child (<13 yrs at diagnosis)												
Perinatal	1	100%	-	-	1	100%	2	100%	-	-	90	74%
Other/unknown	-	-	1	100%	-	-	-	-	-	-	31	26%
Subtotal	1	100%	1	100%	1	100%	2	100%	-	-	121	100%
Total	311		270		298		318		310		13,639	

Notes:

Deaths among persons with HIV/AIDS represent deaths attributed to any cause among persons reported with a diagnosis of HIV and/or AIDS who were living in Ohio at the time of initial diagnosis. Deaths by year (2014-2018) represent the number of deaths per year; cumulative deaths represent all reported deaths since the beginning of the epidemic through 2017 among persons reported with a diagnosis of HIV and/or AIDS who were living in Ohio at the time of initial diagnosis.

Dash (-) indicates no cases were reported for the given category.

^a Transmission categories are mutually exclusive, hierarchical risk categories determined by the CDC and system-calculated using sex at birth and risk factor history to determine mode of transmission. A person with multiple risks is only represented in the highest category based on the CDC hierarchical algorithm. Thus, transgender women are included in the male-to-male sexual contact transmission category if assigned male at birth and risk factor history indicates sex with males. Please note this is for the categorization of HIV transmission categories only and not to describe sexual orientation.

Source: Ohio Department of Health, Bureau of Vital Statistics; analysis conducted by HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Table 9: Trends in reported deaths among persons with diagnosed HIV infection by year of death and cumulative deaths by exposure category, Ohio, 2014-2018

Exposure Category ^a	Year of Death among Persons with Diagnosed HIV Infection										Cumulative Deaths	
	2014		2015		2016		2017		2018			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Male-to-male sexual contact only	140	45%	101	37%	114	38%	139	44%	120	39%	7,156	52%
Injection drug use (IDU) only	16	5%	13	5%	14	5%	22	7%	20	6%	983	7%
Heterosexual contact only	57	18%	49	18%	58	19%	50	16%	48	15%	1,593	12%
Male-to-male sexual contact & IDU	14	5%	19	7%	17	6%	13	4%	15	5%	731	5%
IDU & Heterosexual contact	16	5%	19	7%	16	5%	17	5%	25	8%	574	4%
Male-to-male sexual contact & Heterosexual contact	7	2%	11	4%	10	3%	13	4%	13	4%	287	2%
Male-to-male sexual contact & IDU & Heterosexual contact	2	1%	4	1%	5	2%	4	1%	7	2%	160	1%
Perinatal exposure	1	<1%	-	-	1	<1%	3	1%	1	<1%	92	1%
Other/unknown	58	19%	54	20%	63	21%	57	18%	61	20%	2,063	15%
Total	311		270		298		318		310		13,639	

Notes:

Deaths among persons with HIV/AIDS represent deaths attributed to any cause among persons reported with a diagnosis of HIV and/or AIDS who were living in Ohio at the time of initial diagnosis. Deaths by year (2014-2018) represent the number of deaths per year; cumulative deaths represent all reported deaths since the beginning of the epidemic through 2017 among persons reported with a diagnosis of HIV and/or AIDS who were living in Ohio at the time of initial diagnosis.

Dash (-) indicates no cases were reported for the given category.

^a Exposure categories are mutually exclusive risk categories. All possible combinations of risks are represented among exposure categories. A person with multiple risks is represented in the exposure category identifying all the reported ways in which that person may have been exposed to HIV.

Source: Ohio Department of Health, Bureau of Vital Statistics; analysis conducted by HIV/AIDS Surveillance Program. Data reported through June 30, 2019.

Linkage to Care and Continuum of Care

To calculate a care continuum and other related measurements for persons in Ohio diagnosed with HIV infection, HIV Surveillance data are used, including information on CD4s and VLs. CDC uses reported CD4s and VL lab results as a proxy measure to assess whether or not a person with HIV was in care. The following data presented on the Ohio HIV Continuum of Care are based on calculations made using CDC definitions, are population-based (i.e., for the state and for everyone reported with diagnosed HIV), and are based on the information reported to HIV Surveillance, which includes data from the Ohio Disease Reporting System and the Ryan White Application Database.

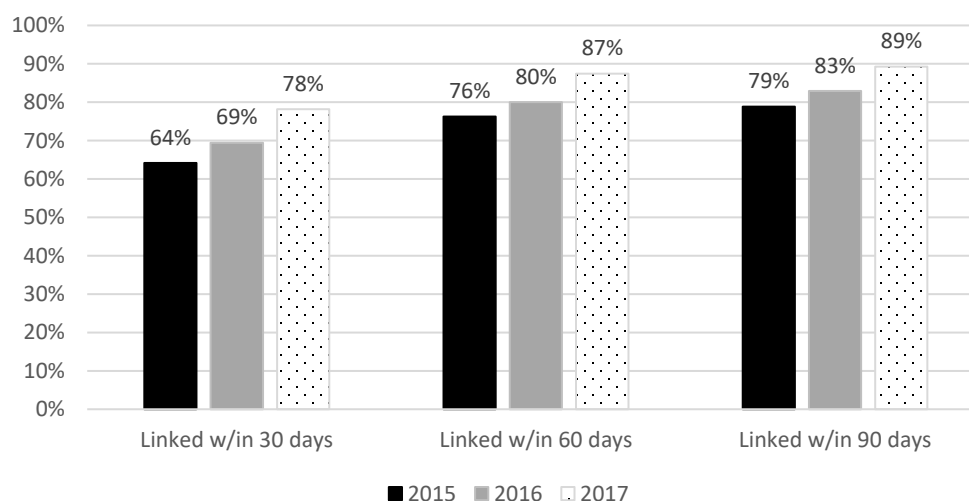
Linkage to Care

Numerator: The number of people in the denominator who had at least one CD4 and/or VL within 30, 60, and 90 days of the date of HIV diagnosis.

Denominator: The number of new diagnoses of HIV infection in Ohio among persons aged ≥ 13 years in each year. For example, the denominator for 2017 is the number of new diagnoses of HIV infection in Ohio in 2017 among persons aged ≥ 13 years (i.e., adults/adolescents).

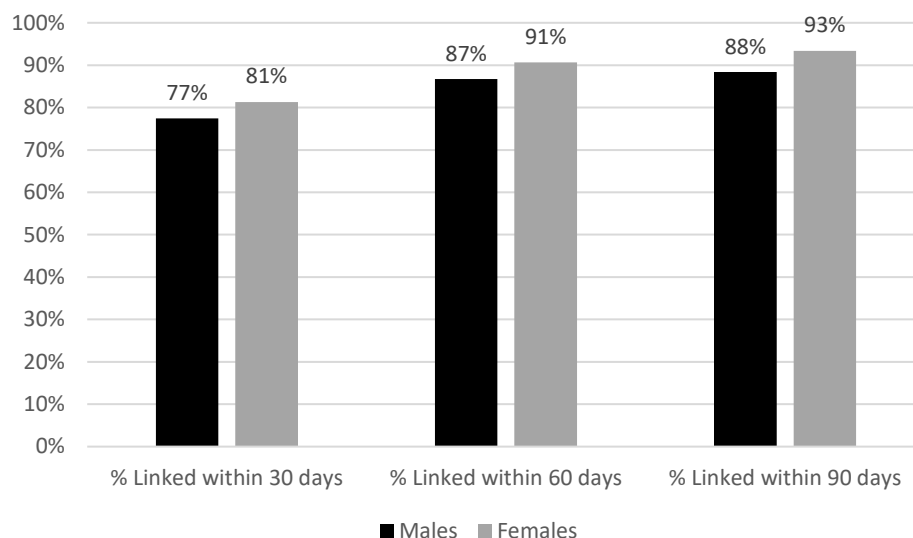
The objective is for 85 percent of new diagnoses of HIV to be linked to care within 30 days of HIV diagnosis. Seventy-eight percent of adults/adolescents diagnosed with HIV infection in Ohio in 2017 were linked to care within 30 days of diagnosis, 87 percent were linked within 60 days, and 89 percent were linked within 90 days (Figure 17). Of those that were linked to care, the average length of time to be linked to care after diagnosis was 29 days. The number of persons who were linked to care within 30 days of diagnosis are also considered to have been linked within 60 and 90 days, and thus, the measures are cumulative. The percent of persons diagnosed with HIV who were linked to care within 30 days has increased from 64 percent in 2015 to 78 percent in 2017.

Figure 17: Linkage to care, Ohio, 2015-2017



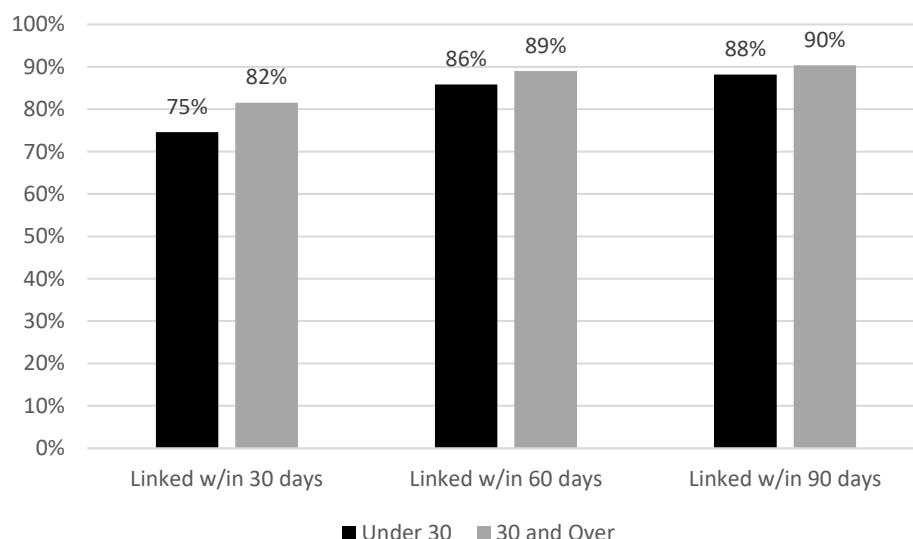
Sex at birth: Seventy-seven percent of adult/adolescent males and 81 percent of adult/adolescent females diagnosed with HIV in Ohio in 2017 were linked to care within 30 days of diagnosis (Figure 18).

Figure 18: Linkage to care by sex at birth, Ohio, 2017



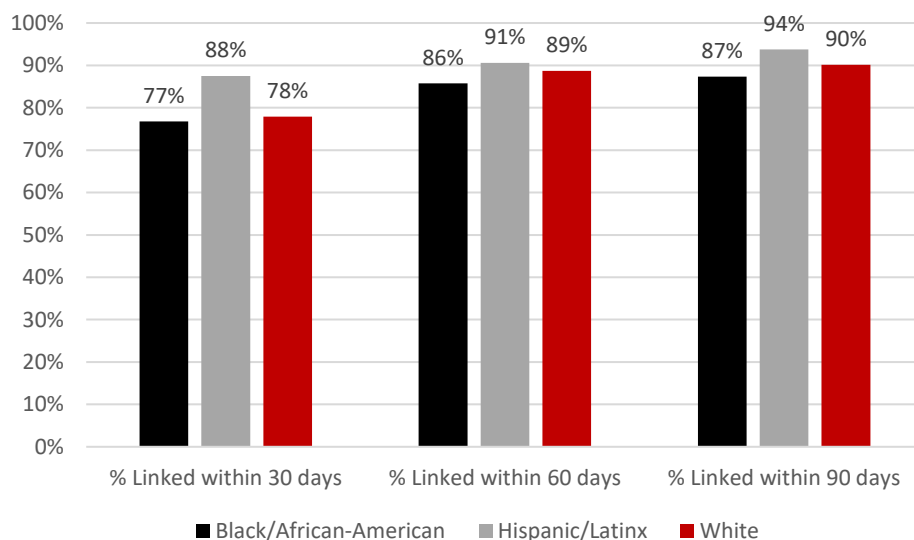
Age at diagnosis: Seventy-five percent of persons aged 13-29 years and 82 percent of persons aged 30 and over diagnosed with HIV in Ohio in 2017 were linked to care within 30 days of diagnosis (Figure 19).

Figure 19: Linkage to care by age at diagnosis, Ohio, 2017



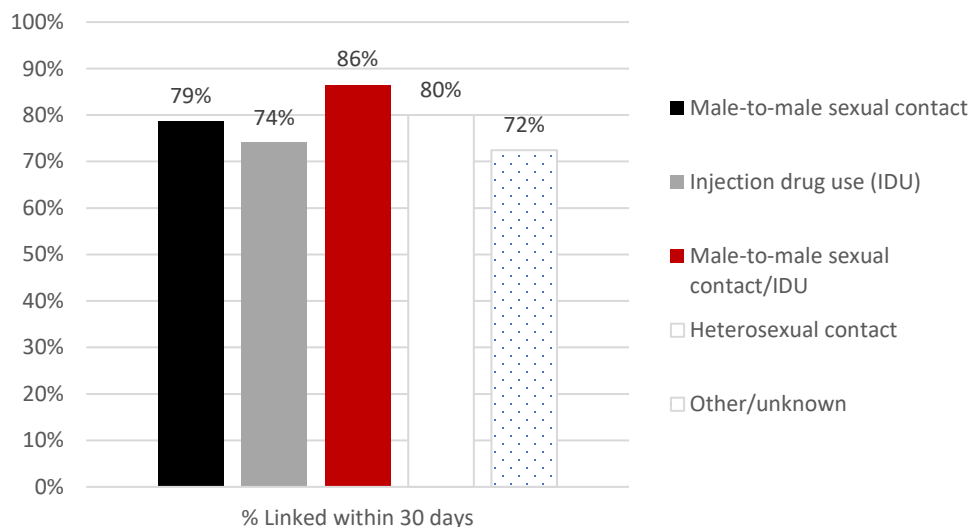
Race/ethnicity: Seventy-seven percent of blacks/African-Americans, 88 percent of Hispanics/Latinx, and 78 percent of whites diagnosed with HIV in Ohio in 2017 were linked to care within 30 days of diagnosis (Figure 20).

Figure 20: Linkage to care by selected race/ethnicity, Ohio, 2017



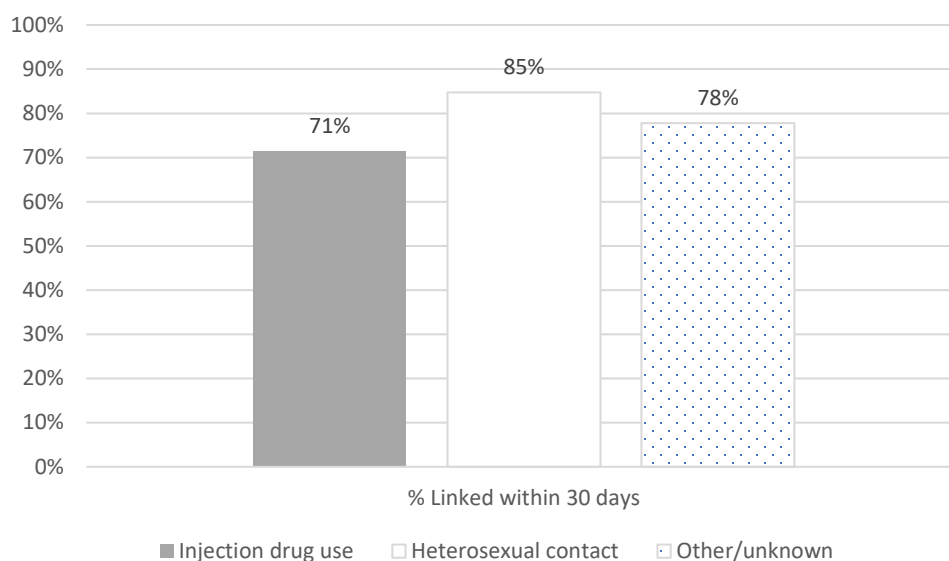
Transmission category: Seventy-nine percent of males with a transmission category of male-to-male sexual contact and 74 percent of males with a transmission category of IDU diagnosed with HIV in Ohio in 2017 were linked to care within 30 days of diagnosis. Eighty-six percent of males with a transmission category of male-to-male sexual contact/IDU and 80 percent of heterosexual males diagnosed with HIV in Ohio in 2017 were linked to care within 30 days of diagnosis (Figure 21).

Figure 21: Linkage to care by transmission category, males, Ohio, 2017



Seventy-one percent of females with a transmission category of IDU and 85 percent of heterosexual females diagnosed with HIV in Ohio in 2017 were linked to care within 30 days of diagnosis (Figure 22).

Figure 22: Linkage to care by transmission category, females, Ohio, 2017



Geographic area: Linkage to care measures are presented by HIV/STI Prevention and HIV Care regions. The percent of adults/adolescents diagnosed with HIV infection in Ohio in 2017 that were linked to care within 30 days of diagnosis ranges from 55 percent in Region 4 to 90 percent in Region 1 (Figure 23). Regional differences in completion of CD4/VL reporting may affect these data.

Region 1: Defiance, Fulton, Henry, Lucas, Ottawa, Sandusky, Williams, Wood;

Region 2: Ashland, Crawford, Erie, Huron, Knox, Marion, Richland, Seneca, Wyandot;

Region 3/Part A-Cleveland: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina;

Region 4: Columbiana, Mahoning, Portage, Summit, Trumbull;

Region 5: Carroll, Coshocton, Harrison, Holmes, Jefferson, Stark, Tuscarawas, Wayne;

Region 6: Athens, Belmont, Guernsey, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Washington;

Region 7: Adams, Fayette, Gallia, Hocking, Jackson, Lawrence, Pike, Ross, Scioto, Vinton;

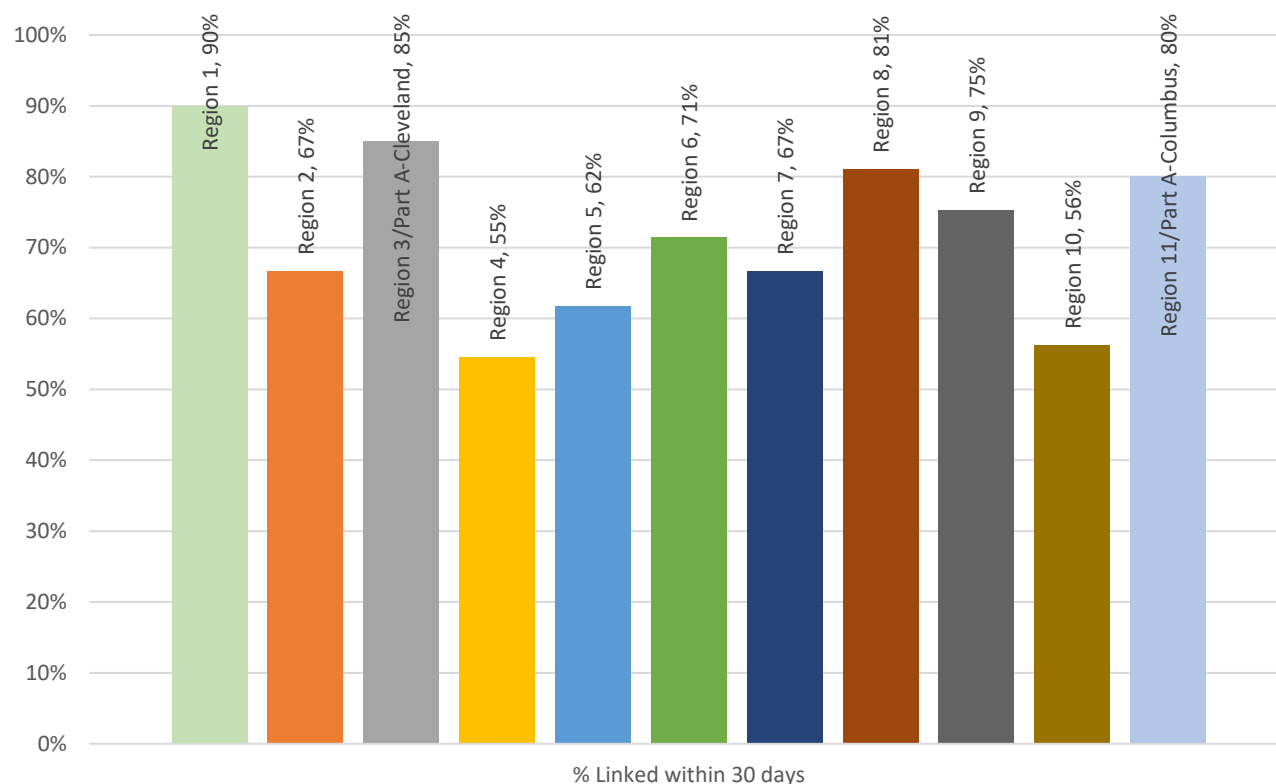
Region 8: Brown, Butler, Clermont, Clinton, Hamilton, Highland, Warren;

Region 9: Clark, Darke, Greene, Miami, Montgomery, Preble;

Region 10: Allen, Auglaize, Champaign, Hancock, Hardin, Logan, Mercer, Paulding, Putnam, Shelby, Van Wert;

Region 11/Part A-Columbus: Delaware, Fairfield, Franklin, Licking, Madison, Morrow, Pickaway, Union.

Figure 23: Linkage to care by region, Ohio, 2017



Continuum of Care

The measures for Receipt of Care, Retained in Care, and Virally Suppressed are calculated using the same denominator, but each measure uses a different numerator.

Receipt of Care Numerator: The number of persons in the denominator who had at least one CD4 and/or VL through the end of the following year (e.g., living with HIV as of 12/31/17 and having a CD4 and/or VL in 2018).

Retained in Care Numerator: The number of persons in the denominator who had at least two CD4 and/or VLs at least three months apart through the end of the following year (e.g., living with HIV as of 12/31/17 and having at least two CD4/VL tests three months apart in 2018).

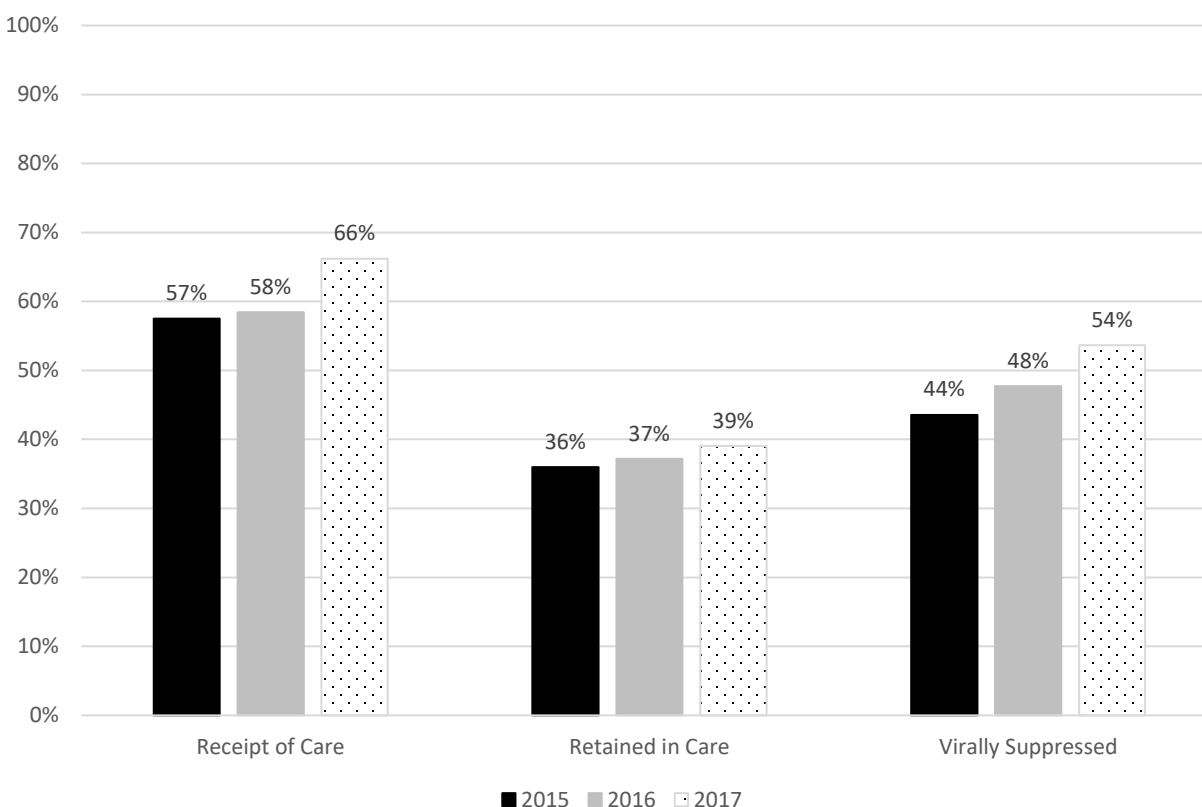
Virally Suppressed Numerator: The number of persons in the denominator whose most recent VL test in the following year was ≤ 200 copies/mL (e.g., living with HIV as of 12/31/17 and the most recent VL test in 2018 was ≤ 200 copies/mL).

Denominator: The number of adults/adolescents living with HIV infection through the end of each year, and still living in Ohio at the end of the next year (e.g., living with HIV as of 12/31/17 and still living in Ohio as of 12/31/2018).

Of the persons living with diagnosed HIV in Ohio at the end of 2017, 66 percent were in receipt of care, 39 percent were retained in care, and 54 percent were virally suppressed (Figure 24).

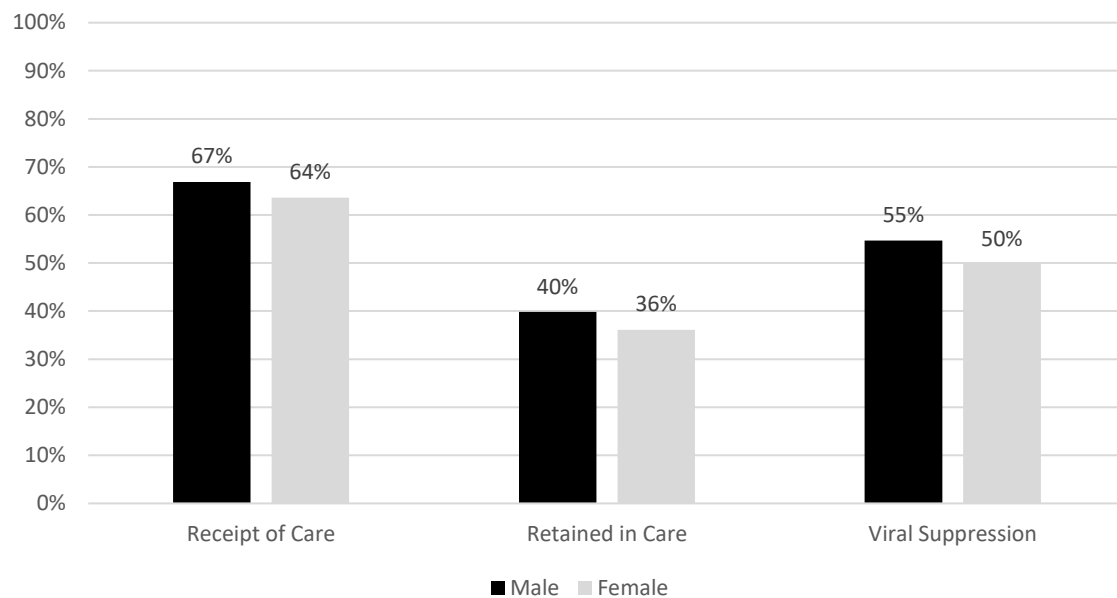
As previously stated, each of these measures uses the same denominator and thus the percentage for viral suppression may be higher than the percentage for retained in care (i.e., a person may be counted in the numerator for viral suppression because their most recent VL test was ≤ 200 , but not counted in the numerator for retained in care because they did not have at least two tests three months apart). However, of persons who were in receipt of care, 81 percent were virally suppressed. Thirty-four percent of the persons living with HIV infection in Ohio at the end of 2017, and still living in Ohio at the end of 2018, did not have a CD4 or VL in 2017. These persons are considered to be 'out of care,' or, have an 'unmet need'. The percent of persons living with diagnosed HIV who received care, were retained in care, and were virally suppressed increased from 2015 to 2017.

Figure 24: Continuum of care among persons living with diagnosed HIV infection, Ohio, 2015-2017



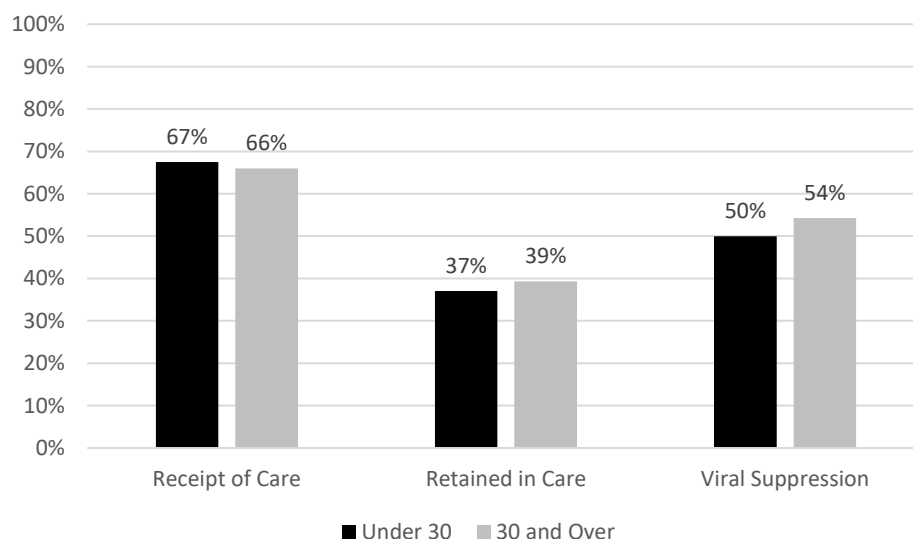
Sex at birth: Of males living with diagnosed HIV in Ohio at the end of 2017, 67 percent were in receipt of care, 40 percent were retained in care, and 55 percent were virally suppressed. Of females living with diagnosed HIV in Ohio at the end of 2017, 64 percent were in receipt of care, 36 percent were retained in care, and 50 percent were virally suppressed (Figure 25).

Figure 25: Continuum of care among persons living with diagnosed HIV infection by sex at birth, Ohio, 2017



Current age: Of persons aged 13-29 years living with diagnosed HIV in Ohio at the end of 2017, 67 percent were in receipt of care, 37 percent were retained in care, and 50 percent were virally suppressed. Of persons aged 30 years and over living with diagnosed HIV in Ohio at the end of 2017, 66 percent were in receipt of care, 39 percent were retained in care, and 54 percent were virally suppressed (Figure 26).

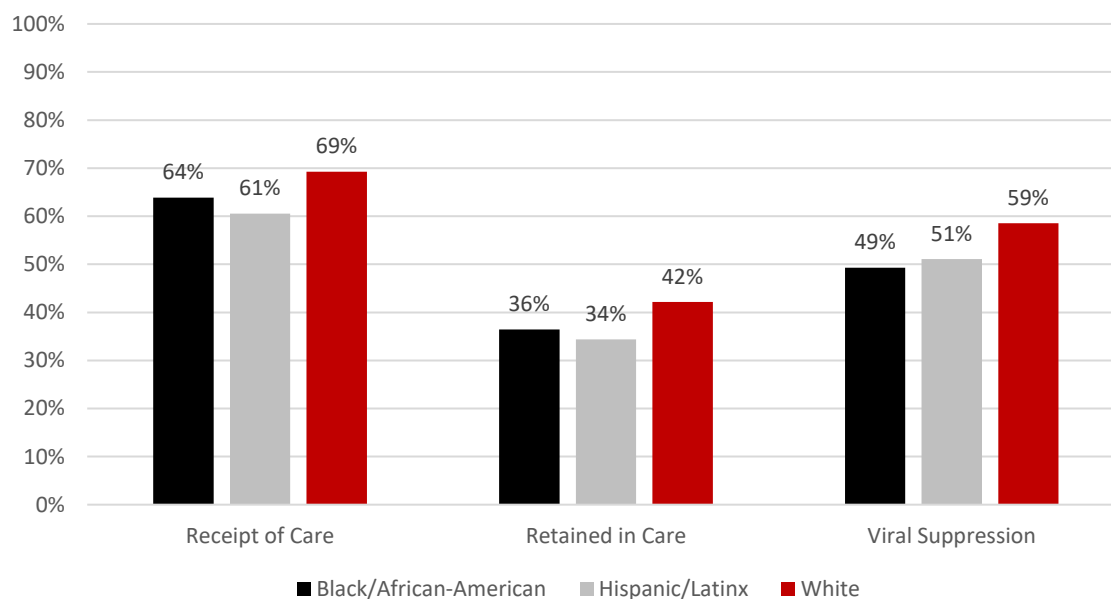
Figure 26: Continuum of care among persons living with diagnosed HIV infection by current age, Ohio, 2017



Race/ethnicity: Of blacks/African-Americans living with diagnosed HIV in Ohio at the end of

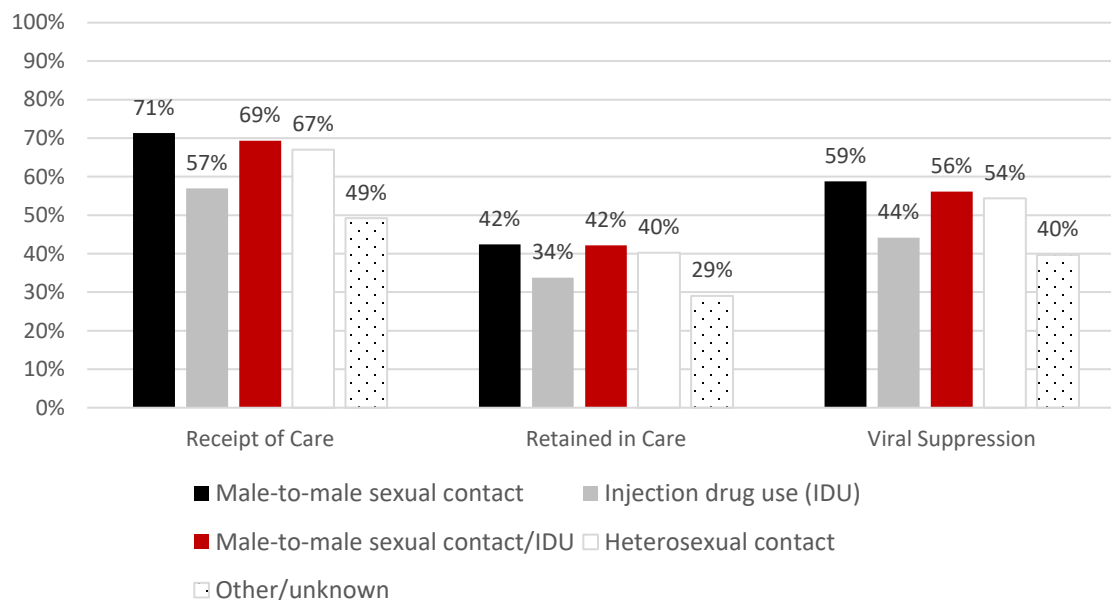
2017, 64 percent were in receipt of care, 36 percent were retained in care, and 49 percent were virally suppressed. Of Hispanics/Latinx living with diagnosed HIV in Ohio at the end of 2017, 61 percent were in receipt of care, 34 percent were retained in care, and 51 percent were virally suppressed. Of whites living with diagnosed HIV in Ohio at the end of 2017, 69 percent were in receipt of care, 42 percent were retained in care, and 59 percent were virally suppressed (Figure 27).

Figure 27: Continuum of care among persons living with diagnosed HIV infection by selected race/ethnicity, Ohio, 2017



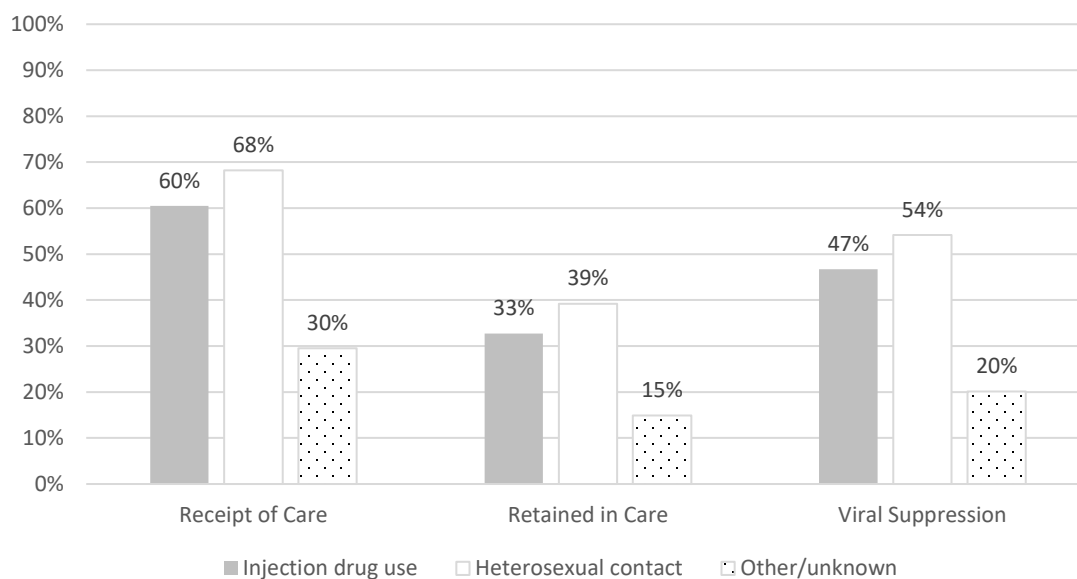
Transmission category: Of males living with diagnosed HIV in Ohio at the end of 2017 with a transmission category of male-to-male sexual contact, 71 percent were in receipt of care, 42 percent were retained in care, and 59 percent were virally suppressed. Of males living with diagnosed HIV in Ohio at the end of 2017 with a transmission category of IDU, 57 percent were in receipt of care, 34 percent were retained in care, and 44 percent were virally suppressed. Of males living with diagnosed HIV in Ohio at the end of 2017 with a transmission category of male-to-male sexual contact/IDU, 69 percent were in receipt of care, 42 percent were retained in care, and 56 percent were virally suppressed. Of males living with diagnosed HIV in Ohio at the end of 2017 with a transmission category of heterosexual contact, 67 percent were in receipt of care, 40 percent were retained in care, and 54 percent were virally suppressed (Figure 28).

Figure 28: Continuum of care among males living with diagnosed HIV infection by transmission category, Ohio, 2017



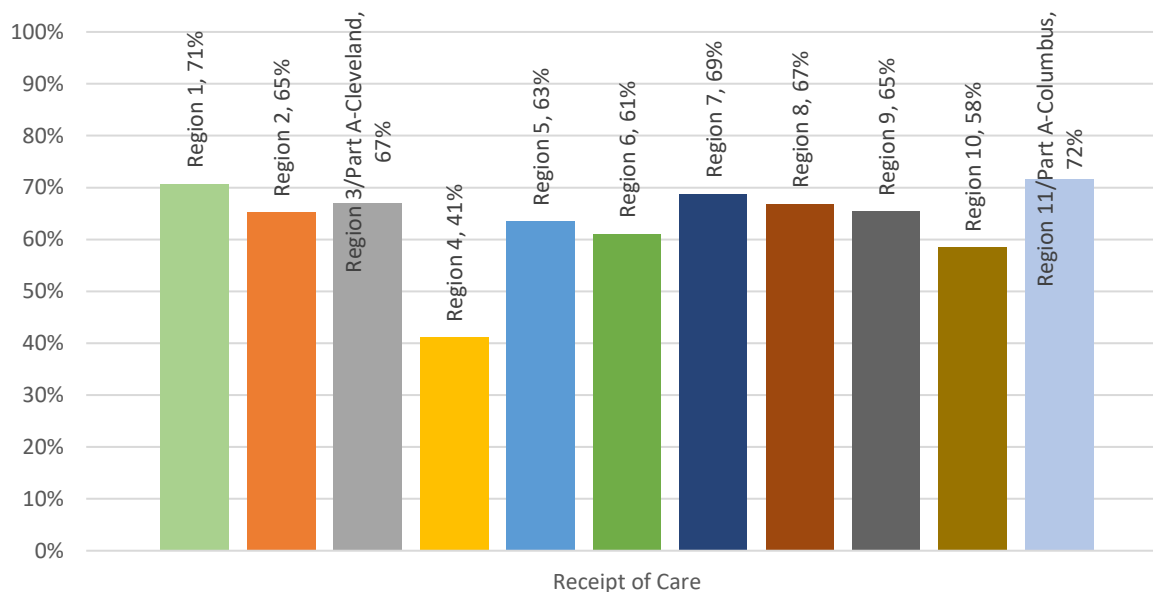
Of females living with diagnosed HIV in Ohio at the end of 2017 with a transmission category of IDU, 60 percent were in receipt of care, 33 percent were retained in care, and 47 percent were virally suppressed. Of females living with diagnosed HIV in Ohio at the end of 2017 with a transmission category of heterosexual contact, 68 percent were in receipt of care, 39 percent were retained in care, and 54 percent were virally suppressed (Figure 29).

Figure 29: Continuum of care among females living with diagnosed HIV infection by transmission category, Ohio, 2017



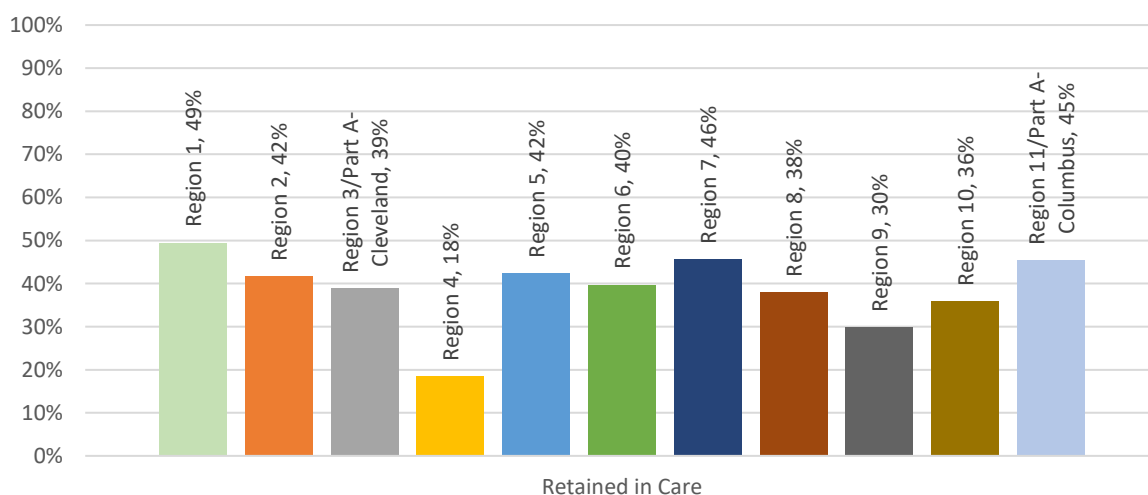
Geographic area: Continuum of care measures are presented by HIV/STI Prevention and HIV Care regions. The denominator for each region reflects the number of adults/adolescents living with diagnosed HIV at the end of 2017 and still living in that region at the end of 2018. Regional differences in completion of CD4/VL reporting may contribute to these data. The percent of adults/adolescents living with diagnosed HIV at the end of 2017 who were in receipt of care ranges from 41 percent in Region 4 to 72 percent in Region 11 (Figure 30).

Figure 30: Receipt of care among persons living with diagnosed HIV infection by region, Ohio, 2017



The percent of adults/adolescents living with diagnosed HIV at the end of 2017 who were retained in care ranges from 18 percent in Region 4 to 49 percent in Region 1 (Figure 31).

Figure 31: Persons living with diagnosed HIV infection retained in care by region, Ohio, 2017



The percent of adults/adolescents living with diagnosed HIV at the end of 2017 who were virally suppressed ranges from 31 percent in Region 4 to 62 percent in Region 1 (Figure 32).

Figure 32: Viral suppression among persons living with diagnosed HIV infection by region, Ohio, 2017

