Table of Contents

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List of Figures

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List of Tables

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Abbreviations

AETC	AIDS Education and Training Center
AIDS	Acquired Immunodeficiency Syndrome
ART	Anti-Retroviral Therapy
ASO	AIDS Service Organization
BRFSS	Behavioral Risk Factor Surveillance System
CADR	CARE Act Data Report
CARE Act	Comprehensive AIDS Resources Emergency Act
CDC	Centers for Disease Control and Prevention
CPG	Community Planning Group
CTR	Counseling, Testing and Referral Sites
CY	Calendar Year
EIS	Early Intervention Services
ELR	Electronic Laboratory Reporting
EMA	Eligible Metropolitan Area
FPL	Federal Poverty Level
HAART	Highly Active Antiretroviral Therapy
HAB	HIV/AIDS Bureau of the Health Resources and Services Administration
eHARS	enhanced HIV/AIDS Reporting System
HCS	HIV Care Services Section
HIPP	Health Insurance Premium Payment
HIV	Human Immunodeficiency Virus
HRSA	Health Resources and Services Administration
IDU	Injection Drug Use
MSM	Men who have Sex with Men

NSSATS	National Survey of Substance Abuse Treatment Services
NIR	No Identified Risk
NRR	No Reported Risk
ODRS	Ohio Disease Reporting System
OFHS	Ohio Family Health Survey
OHDAP	Ohio HIV Drug Assistance Program
PLWA	People Living with AIDS
PLWHA	People Living with HIV/AIDS
PLWH	People Living with HIV (Not AIDS)
PRAMS	Pregnancy Risk Assessment Monitoring System
QM	Quality Management
RAG	Regional Advisory Group
RDR	Ryan White Data Report
RSR	Ryan White Service Report
RWHAP	Ryan White HIV/AIDS Program
RWHATEA	Ryan White HIV/AIDS Treatment Extension Act
SAMHSA	Substance Abuse and Mental Health Services Administration
SES	Socioeconomic Status
SPNS	Special Projects of National Significance
STD	Sexually Transmitted Disease
TB	Tuberculosis
TEDS	Treatment Episode Data Set
TGA	Transitional Grant Area
YRBS	Youth Risk Behavioral Survey

Executive Summary

HIV/AIDS affects persons across sex, age, race and ethnicity groups, and/or geographic areas of Ohio, but the impact is not the same across all demographic groups. White males who report having sex with men (MSM) continue to account for the greatest number of new HIV infections diagnosed and reported in Ohio; however, black/African Americans males and females, and persons under 35 years of age are continuing to see a disproportionate number of new HIV infections compared to other race and age groups. Among persons newly diagnosed with an HIV infection in Ohio in 2014:

Sex: Eighty six percent (86%) of persons newly diagnosed with an HIV infection in Ohio in 2014 were male.

Age: Persons newly diagnosed with an HIV infection in Ohio are increasingly younger than in previous years. In 2014, the highest number (217 cases) and proportion (23 percent) of persons diagnosed with an HIV infection in Ohio were 20-24 years of age. This represents an increase of 12 percent within this age group since 2010. The proportion of persons 24-29 years of age diagnosed with HIV infection saw the largest proportional increase (28 percent) in new HIV diagnoses reported between 2010 (142 cases) and 2014 (181 cases). Conversely, the number and proportion of new HIV diagnoses decreased among persons 15-19 years of age, and all age groups among persons 35 years of age and older between 2010 and 2014.

Race/ethnicity: Black/African Americans accounted for 47-52 percent of new diagnoses of HIV infection between 2010 and 2014, but represented only 12 percent of Ohio's population in each year per U.S. Census estimates. Hispanic/Latinos accounted for four-seven percent of new diagnoses of HIV infection each year, but represented only three percent of Ohio's population in each year per U.S. Census estimates. In 2014, black/African-American males accounted for 43 percent of diagnosed HIV infections in Ohio, followed by white males (33 percent), black/African-American females (9 percent), Hispanic/Latino males (6 percent) and white females (4 percent). Males and females of all other race/ethnicities combined, accounted for two percent of diagnosed HIV infections.

Mode of transmission: Ohio's estimated leading mode of transmission for new diagnoses of HIV infection in 2014 was male-to-male sexual contact followed by heterosexual contact. Among males, an estimated 87 percent of cases were attributed to male-to-male sexual contact, six percent to heterosexual contact and four percent to injection drug use. Among females, an estimated 82 percent of cases were attributed to heterosexual contact and 18 percent to injection drug use.

Geographic area: While HIV affects the entire state, the majority of cases are from the counties containing the eight largest urban areas in Ohio. These counties include Summit County (Akron), Stark County (Canton), Hamilton County (Cincinnati), Cuyahoga County (Cleveland), Franklin County (Columbus), Montgomery County (Dayton), Lucas County (Toledo) and Mahoning County (Youngstown). When combined, these eight counties account for 73 percent of all persons living with a diagnosis of HIV infection in Ohio in 2014, but represent 48 percent of Ohio's total population. Allen County (Lima) had the highest rate of persons living with a diagnosis of HIV infection in 2014 among Ohio's counties with 152.3 cases per 100,000 population.

Among persons living with a diagnosed HIV infection in Ohio as of December 31, 2014:

As people live longer with a diagnosis of HIV infection, the cumulative number of persons living with HIV in Ohio continues to increase each year. The number of persons living with a diagnosis of HIV infection reflects all persons ever reported with HIV or AIDS who are not known to have died.

In 2014, 21,162 persons in Ohio were known to be living with a diagnosis of HIV infection. This is an increase of 23 percent since 2010. Persons 25-29 years of age represented six to eight percent of all persons in Ohio living with a diagnosis of HIV infection from 2010-2014, numbers increased by 51 percent – from 1,120 in 2010 to 1,688 in 2014. The number of blacks/African Americans living with a diagnosis of HIV infection increased 26 percent, Hispanic/Latinos living with a diagnosis of HIV infection increased 25 percent and whites living with a diagnosis of HIV infection increased 19 percent. Persons living with a diagnosis of HIV infection categorized as “other” or unknown race also increased, but represented no more than three percent of all cases in any given year. During this same time, persons living with a diagnosis of HIV infection among persons 34 years of age or younger increased by 27 percent.

Rates depict the extent to which populations are impacted by diagnoses of HIV infection. The rate of persons living with a diagnosis of HIV infection in Ohio in 2014 was 186.4 cases per 100,000 population. The rate of blacks/African Americans living with a diagnosis of HIV infection per 100,000 population was more than six times the rate among whites (670.1 per 100,000 black/African American compared to 107.6 per 100,000 whites). Among Ohio’s Hispanic/Latino population, the rate was almost three times the rate among whites (310.0 per 100,000 Hispanic/Latinos). The rate of males living with a diagnosis of HIV infection was 303.2 per 100,000 population compared to 74.5 per 100,000 population for females.

The disproportionate impact of HIV infections among Ohio black/African Americans and Hispanic/Latinos is observed among males and females. The rate of persons living with a diagnosis of HIV infection was 1,027.7 per 100,000 population for black/African American males and 450.9 per 100,000 population for Hispanic/Latino males, compared to 189.4 per 100,000 population for white males. For females, the rate was 343.3 per 100,000 population for black/African American females, 161.2 per 100,000 population for Hispanic/Latina females and 28.9 per 100,000 population for white females.

For persons living with a diagnosis of HIV infection, the leading estimated mode of transmission continues to be male-to-male sexual contact, followed by heterosexual contact and primary injection drug use. The proportion of persons living with a diagnosis of HIV infection among the three estimated modes of transmission remains relatively stable during the five-year period. Estimates indicate the number of persons living with a diagnosis of HIV infection reporting male-to-male sexual contact increased 27 percent from 2010 through 2014. Those reporting heterosexual contact increased 18 percent and those reporting injection drug use increased 15 percent during the same period.

Deaths:

Although deaths attributed to HIV have decreased with improvements in treatments, HIV remains a leading cause of death among certain population groups. According to the U.S. National Health Statistics Center, HIV was the fourteenth leading underlying cause of death for males 25 to 64 years of age in Ohio in 2014. For white and Hispanic/Latino males between 25 and 64 years of age in Ohio, HIV did not rank as a leading underlying cause of death in 2014. HIV ranked as the

twelfth leading underlying cause of death for black/African American males 25 to 64 years of age in Ohio in 2014. Although white males had more deaths with HIV as the underlying cause compared to black males, black males were almost six times more likely to have a death with HIV as the underlying cause. HIV was not a leading underlying cause of death for any race/ethnicity or age group among Ohio females in 2014.

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Introduction

The *HIV/AIDS Integrated Epidemiologic Profile for Ohio* provides a detailed description of HIV/AIDS in Ohio from public health programs funded to provide prevention, care services and surveillance. It is primarily based upon data collected and analyzed as part of HIV case surveillance activities conducted by the Ohio Department of Health (ODH), but also includes secondary sources of data collected and analyzed by other ODH areas, including the Ryan White Part B HIV Care Services Program. The profile is a valuable resource for HIV prevention and care planning initiatives at the state level, by prevention planning region, and care service areas. This report describes Ohio's general population characteristics, persons with diagnosed HIV infections in Ohio, persons at risk for HIV infection in Ohio, as well as care service utilization patterns among HIV-infected persons in Ohio. The data presented in this report are used to support and help guide HIV prevention and care service efforts, justify and promote funding for HIV prevention and care service programs in Ohio, and evaluate associated HIV program(s) and related policies in Ohio. The purpose of the comprehensive profile is to address five key questions:

1. What are the sociodemographic characteristics of the general population in Ohio?
2. What is the scope of the HIV/AIDS epidemic in Ohio?
3. What are the indicators of HIV/AIDS infection risk in Ohio?
4. What is the impact of the care and treatment services of the Ryan White HIV/AIDS Programs on people living with HIV in Ohio?
5. What are some things to keep in mind as a Ryan White HIV/AIDS Program grantee prepares the epidemiologic profile document for HRSA's HIV/AIDS Bureau?

History of Epidemiologic Profiles

HIV epidemiologic profiles began with the advent of HIV Prevention Community Planning efforts in 1994 to provide data to assist HIV prevention planning groups charged with prioritizing prevention efforts to help reduce the spread of HIV infection in Ohio. In 2004, the scope of the Epidemiologic Profile was expanded to address questions pertaining to both HIV prevention and care planning. In August 2014, CDC and HRSA issued revised guidelines for creating an Epidemiologic Profile with updated questions pertaining to HIV care planning. This profile was prepared in accordance with the *Revised Integrated Guidelines for Developing Epidemiologic Profiles: HIV Prevention and Ryan White CARE Act Community Planning,* developed by the Centers of Disease Control and Prevention (CDC) and the Health Resources Services Administration (HRSA), 2014.

Data Sources

The primary source of data for the profile is HIV/AIDS surveillance. The primary purpose of HIV/AIDS case surveillance data is threefold: to identify changing trends in HIV transmission patterns, identify populations at increased risk for HIV infection, and estimate incidence of HIV infection in the population. In addition to HIV/AIDS surveillance data, other data sources are included to provide a more comprehensive picture of the HIV epidemic in Ohio. Each data source has strengths and limitations that should be considered when interpreting the data. A brief description of the sources used in the profile follows. For a more detailed description of these sources, please refer to Appendix A.

HIV/AIDS Surveillance System

Population-based HIV/AIDS surveillance is the cornerstone of national, state and local HIV/AIDS activities. HIV and AIDS are reportable conditions in all 50 states and U.S. territories. AIDS cases have been reportable in Ohio since the early 1980s and are defined according to the current CDC

case definition (last revised in 1993). Confidential, name-based HIV reporting began in Ohio in 1990. The HIV/AIDS surveillance system monitors newly reported HIV infections and those living with a diagnosis of HIV infection to provide a demographic profile of the cases and the modes of HIV transmission among persons diagnosed. These data are used to guide the development and implementation of public health intervention and prevention programs and assist in the evaluation of the efficacy of public health interventions. HIV/AIDS surveillance data are also used to allocate resources for all parts of the Ryan White HIV/AIDS Treatment Extension Act.

State and local health departments actively seek case reports from health care providers and health care facilities using standardized case report forms. These forms are used to collect socio-demographic information, mode(s) of exposure, laboratory and clinical information and vital status. There is also a section on the forms to document referrals for treatment services. All information is entered at the state level into eHARS, CDC's web-based HIV/AIDS surveillance application.

The mandate to report HIV infections to local health authorities is an integral part of surveillance activities and has been recommended by CDC and other professional organizations since HIV was first identified. This was strengthened when a test for HIV was licensed in 1990. As part of ongoing active HIV surveillance, health departments educate providers on their reporting responsibilities and establish liaisons with laboratories conducting CD4+ lymphocyte cell analysis and HIV testing (e.g. EIA and Western Blot testing). Cases of epidemiologic importance receive follow-up.

Laboratories play a key role in HIV/AIDS reporting and monitoring. Electronic laboratory reporting (ELR) initiatives allow timelier reporting to the state and local health authorities allowing for more timely partner services follow-up by local disease intervention specialists.

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based, random-digit dialed telephone survey that monitors state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. Each month, a sample of households is contacted and one person in the household who is 18 years or older is randomly selected for an interview. Multiple attempts are made to contact the sampled household. A Spanish translation of the interview is available. Respondents to the BRFSS questionnaire are asked a variety of questions about their personal health behaviors and health experiences. Since 1994, the BRFSS questionnaire has included questions related to HIV/AIDS for respondents aged 18 to 49 years. These questions include: perceived risk of getting an HIV infection; use of HIV testing; reasons for testing; if tested, the type of place where tested; receipt of post-HIV test counseling; attitudes toward condoms; and attitudes about when to initiate HIV/AIDS education in school. Since 2001, respondents have also been asked about their perception of the importance of HIV testing.

HIV Counseling, Testing and Referral Sites

All states, territories and select cities receive funding to support HIV counseling, testing and referral programs as part of the HIV prevention cooperative agreements they have entered into with CDC. To monitor these programs, the HIV counseling, testing and referral sites collect information to quantify and characterize counseling and testing services delivered at CDC-funded testing sites. Data captured include demographic, health insurance, risk information and testing information (e.g. testing history, test result, test type – anonymous or confidential). Personal identifying information is not collected.

National Survey of Substance Abuse Treatment Services
The NSSATS is an annual voluntary survey of all known drug and alcohol abuse treatment facilities maintained by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA). The survey is designed to collect data on the location, characteristics, services offered, and number of clients in treatment at alcohol and drug abuse facilities, both public and private. The NSSATS is conducted throughout the 50 States, the District of Columbia, and other U.S. jurisdictions that include territories of American Samoa and Guam, the Federated States of Micronesia, the Republic of Palau, the Commonwealth of Puerto Rico, and the Virgin Islands of the United States.

Ohio HIV/STD Surveillance Study
In 2011, The Ohio Department of Health (ODH) HIV/AIDS Surveillance Program retrospectively assessed all Ohio reports of syphilis, gonorrhea and HIV infections reported among persons 13 years of age and older during the 10-years between January 1, 2001 and December 31, 2010. All syphilis and gonococcal infections reported during the study period were exported out of the Ohio Disease Reporting System (ODRS) into a data set. Persons reported living with a diagnosis of HIV infection (PLWHA) as of June 30, 2011 during the 10-year study period were exported out of the enhanced HIV/AIDS Reporting System (eHARS) into a separate data set. Each data set was standardized and de-duplicated, and probabilistic matching determined which individuals had multiple disease reports amongst the two data sets.

Ohio Pregnancy Risk Assessment Monitoring System
The Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey designed to examine maternal behaviors and experiences before, during and after a woman's pregnancy, and during the early infancy of her child. The Centers for Disease Control and Prevention initiated PRAMS in 1987 in an effort to reduce infant mortality and the incidence of low birth weight. PRAMS was first implemented in Ohio in April of 1999.

Sexually Transmitted Disease Surveillance
Surveillance activities are conducted to monitor the levels of syphilis, gonorrhea and chlamydia; to establish prevention programs; to develop and revise treatment guidelines; and to identify populations at risk for sexually transmitted diseases. Case report forms include information on patient demographics, type of infection and source of report (private or public sector). In Ohio, the local public health authority via the Ohio Disease Reporting System (ODRS) reports cases to the Ohio Department of Health.

U.S. Bureau of the Census
The U.S. Bureau of the Census collects and provides timely information about the people and economy of the United States. The Web site for the Census Bureau, http://www.census.gov/, includes data on the demographic characteristics (e.g., age, race, Hispanic ethnicity, and sex) of the population, family structure, educational attainment, income level, housing status and the percentage of persons living at or below the poverty level. Tables and maps of census data are available for all geographic areas to the block level. Summaries of the most requested data for states and counties are provided, as well as analytical reports on population change, race, age, family structure and apportionment.

Vital Statistics Death Data
In the United States, state laws require death certificates to be completed for all deaths and federal law mandates the national collection and publication of deaths. A standard certificate of death is used to record death information on each decedent. In Ohio, 88 local registrars report birth and death data to the Ohio Department of Health Office of Vital Statistics.

Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) was established to monitor six priority, high-risk behaviors that contribute to leading causes of mortality, morbidity and social problems among youth and adults in the United States. The YRBSS was developed to collect data that are comparable among national, state and local samples of youth. Using a self-administered questionnaire, the YRBSS collects information on six categories of behaviors, including sexual behaviors that contribute to unintended pregnancy, STDs and HIV. Questions are asked about availability of HIV prevention education materials, sexual activity (e.g. age of onset, number of partners, condom use, preceding drug or alcohol use), contraceptive use and pregnancy history.

Strengths and Limitations

The strengths and limitations of this document should be considered when making planning decisions pertaining to HIV prevention and care. While the profile is comprehensive and draws from a number of different data sources, it may not address all questions end users may have about HIV testing, care and treatment services.

The Ohio HIV/AIDS Surveillance Program conducts both active and passive surveillance activities. Case finding techniques are employed to maximize the number of infections reported. However, the system includes only persons tested confidentially for HIV; therefore persons infected with HIV who have not been tested or those who choose to be tested anonymously are not included in surveillance system. Because persons may be tested at variable times following HIV exposure and because many individuals are not tested until they have progressed to AIDS, HIV data are not necessarily representative of persons recently infected with HIV.

The purpose of the epidemiologic profile is to describe the Ohio HIV/AIDS epidemic in terms of sociodemographic, geographic, behavioral and clinical characteristics. As more than 25 percent of newly reported diagnoses of HIV infections are reported with no risk information, estimates based upon CDC algorithms are included to describe behavioral characteristics by transmission mode(s) adjusted for reporting delays and for redistribution of cases in persons initially reported without an identified risk.

Planning and Preparation

Planning, information and data collection for the profile occurs throughout the year. The profile is prepared by the Ohio Department of Health (ODH) HIV/AIDS Surveillance Program in collaboration with ODH's HIV/STD Prevention Programs and HIV Care Services Section. A workgroup was created to develop the epidemiologic profile following CDC's and HRSA's *Integrated Guidance for Developing Epidemiologic Profiles: HIV Prevention and Ryan White HIV/AIDS Care Planning CARE Community Planning, 2014.* The workgroup included staff from ODH's HIV/AIDS Surveillance Program, HIV/STD Prevention Program, HIV Care Services Section and community members who represent both prevention and care planning groups at the local level. The HIV/AIDS Surveillance Program staff served as lead writers for all sections and questions of the profile with the exception of Section 3: Question 1. The Ryan White Part B HIV Care Services Section served as lead writers for this section. This profile is to be used for the HIV Prevention and Ryan White Part B grant years 2016-2017.

To allow for comparisons across data sources, CDC suggests general data standards. These standards were utilized upon approval of the profile advisory group. However, since some data sources are available only in aggregate form, variation from the standards does occur to provide data that are more comprehensive.

Demographic Data

Except where noted, 2014 data was used. Where possible, race/ethnicity is presented using the following categories: white, not Hispanic; black/African American, not Hispanic; Hispanic/Latino; Asian/Pacific Islander; and American Indian/Alaskan Native. In narrative discussions, white, not Hispanic is referred to as white; and black/African American, not Hispanic is referred to as black/African American. Where possible, age is presented using the following age groups (in years): less than 13, 13-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-64 and 65 and older. Due to rounding, percent's may not always add to 100.

Layout of Profile

The epidemiologic profile is divided into four main sections. Five key questions are addressed and summary data by HIV prevention region and Ryan White Part A area as outlined below.

Because Ohio has 21 separate planning bodies for HIV prevention and care-related activities, it was not feasible to create separate epidemiologic profiles for each planning region. However, for planning at the regional level, it is critical for each region to have data to identify populations most impacted and most at risk for HIV infection to allow for the allocation of resources for HIV prevention and care initiatives.

Section 1: Core Epidemiologic Questions

This section of the profile provides an overall understanding of the characteristics of the general population in Ohio, the distribution of HIV disease and a detailed look at persons at risk for HIV infection. This section addresses three key questions.

> **Question 1: What are the sociodemographic characteristics of the general population in Ohio?** Describes the overall demographic and socioeconomic characteristics of the general population in Ohio.
>
> **Question 2: What is the scope of the HIV/AIDS epidemic in Ohio?** Examines the impact of the HIV/AIDS epidemic among population groups in Ohio to assist planning groups with targeting prevention efforts and care services.
>
> **Question 3: What are the indicators of HIV/AIDS infection risk in Ohio?** Provides an in-depth view of three high-risk behaviors associated with HIV transmission: male/male sex; injection drug use/substance abuse; and high-risk heterosexual contact. Examines data sources that provide both direct and indirect measures of these risk behaviors.

Section 2: HIV Surveillance Data by HIV Prevention Planning Region

This section presents summary data for the 11 HIV Prevention Community Planning Regions of Ohio. Data presented include HIV/AIDS surveillance data on reported diagnoses of HIV infection, reported persons living with a diagnosis of HIV infection and reported cases of AIDS.

Section 3: Ryan White HIV/AIDS Comprehensive AIDS Resources Emergency (CARE) Act Special Questions and Considerations

This section describes patterns of HIV service utilization among HIV-positive persons and provides demographic overview by the various Parts funded by the Ryan White HIV/AIDS Treatment Extension Act. Two key questions are addressed:

Question 1: What is the impact of the care and treatment services of the Ryan White HIV/AIDS Programs on people living with HIV in Ohio? Describes the utilization of Ryan White HIV AIDS Treatment Modernization Act CARE Act Data Report (CADR) and Ryan White Data Report (RDR).

Question 2: What are some things to keep in mind as a Ryan White HIV/AIDS Program grantee prepares the epidemiologic profile document for HRSA's HIV/AIDS Bureau? Describes the framework used by Ryan White Part B to answer this question and estimates the proportion of HIV-positive individuals not receiving primary medical care.

Section 4: HIV Surveillance Data for Ryan White Part A Regions

This section presents summary HIV/AIDS surveillance data for the Ryan White Part A Cleveland and Columbus service regions. Data presented include reported diagnoses of HIV infection, reported persons living with a diagnosis of HIV infection, and reported cases of AIDS.