HIV Infrastructure Study

Cincinnati, OH

June 2015

http://southernaidsstrategy.org

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With support from:

FORDFOUNDATION

EXECUTIVE SUMMARY

BACKGROUND |

Data from the CDC indicate that the Southern United States, particularly the US Deep South, has the highest HIV diagnosis rates and highest death rates among individuals diagnosed with HIV of any US region.[1] To determine best approaches for improving HIV-related outcomes in communities within Deep South, this study examines existing HIV-related prevention and care infrastructure and community characteristics of Deep South state[i] metropolitan statistical areas (MSAs) that are consistently among the 10 areas in the US with the highest HIV diagnosis rates. The study also examines HIV-related prevention and care infrastructure and community characteristics of MSAs with similar demographic characteristics to the high HIV impact MSAs but with less pronounced HIV/AIDS statistics. The Cincinnati MSA was selected to be one of these control MSAs.

METHODS |

This case study examined the infrastructure for HIV prevention and care in the Cincinnati MSA and explored the strengths and challenges of addressing HIV within the area by reviewing available data on HIV and related health conditions and by conducting interviews with 13 individuals working in the Cincinnati MSA HIV prevention and care system and two focus groups involving individuals living with HIV in the Cincinnati MSA. The interviews and focus groups gathered information about participants' experiences and perspectives regarding HIV prevention and care, stigma, and other factors that may influence HIV epidemiology in the Cincinnati region. Data collection was completed in the spring of 2015.

RESULTS |

The Cincinnati MSA spans three states - Ohio, Kentucky, and Indiana - and 15 corresponding counties. The counties vary widely in demographic characteristics and HIV epidemiology. Hamilton County, which contains the city of Cincinnati, has the highest HIV prevalence rates and some of the greatest poverty levels in the MSA. The HIV and AIDS diagnosis rates in the Cincinnati MSA are lower than the US overall;[2] however, Hamilton County has HIV diagnosis rates that are higher than US averages.[3]

[i] "Deep South states" from the purposes of this study include Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and East Texas.

Study participants describe an HIV care and prevention system with significant strengths including an Infectious Diseases (ID) Clinic at the University of Cincinnati that provides comprehensive HIV services and has an extensive HIV research program and a private Infectious Diseases Clinic in Northern Kentucky that provides services to individuals with various reimbursement sources and to some without any health insurance. The medical care system has experienced a shift in reimbursement with the initiation of Medicaid expansion in Ohio, Kentucky, and Indiana. Medicaid expansion has resulted in a substantial decrease in the number of HIV-positive individuals without any health insurance who were previously dependent on Ryan White reimbursement for their care. Participants reported that this shift has led to more private ID practices accepting clients but has also resulted in complication of care, as there has been confusion regarding what services and services providers are covered by the various health Medicaid expansion plans. The Cincinnati MSA also has linkage to care services, HIV case management and ER and community-based HIV testing services widely available for individuals living with HIV. In Cincinnati, syringe exchange services have recently been initiated to address the burgeoning injection drug use problem in the area.

However, people living with HIV in the Cincinnati MSA are reported to experience considerable challenges including a shortage of readily accessible mental health and substance abuse services (despite having some services at the University of Cincinnati ID clinic and a local ASO), not enough transportation services to meet the need, particularly for individuals living in the Indiana counties of the MSA and in the MSA areas of Ohio that are outside of Cincinnati. HIV prevention efforts are stymied in the MSA due to lack of funding for general prevention efforts and a lack of comprehensive sex education in many of the school districts in the area. Finally, HIV stigma is reported to be substantial in the MSA despite some reported decreases over time. This stigma has had a significant negative effect on willingness to participate in HIV testing and care.

Participants in the study had a number of suggestions for improving the community response to HIV, including the creation of a community HIV coalition that would consist of individuals working in HIV prevention and care and individuals living with HIV to enhance community information sharing and collaboration. Additional recommendations included using state lab data to improve linkage efforts, expanding syringe exchange to Northern Kentucky; and enhancing and better organizing HIV-related advocacy efforts.

HIV INFRASTRUCTURE STUDY – CINCINNATI MSA

BACKGROUND |

Data from the Centers for Disease Control and Prevention (CDC) regarding new HIV diagnoses in 2011, summarized in a Southern HIV/AIDS Strategy Initiative (SASI) manuscript, indicated that the South[ii] had the highest HIV diagnosis rate of any US region.[1] In 2011, nearly half (49%) of new HIV diagnoses reported (including any new HIV diagnoses regardless of stage of HIV disease) were located in the Southern US, while the South accounted for only 37% of the US population.[1,4]

A subset of Southern states is particularly affected by HIV disease and shares characteristics such as overall poorer health, high poverty rates, an insufficient supply of medical care providers and a cultural climate that likely contributes to the spread of HIV.[5-7] These states include Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and East Texas, henceforth referred to as the "targeted states." HIV and other STDs disproportionally affect individuals within the targeted states and these states share similarities in HIV-related outcomes including the highest death rates among individuals living with HIV in the US.[8] In fact, 32% of new HIV diagnoses were in the targeted states in 2011 while this region accounted for only 22% of the US population.[9,10] In addition, in 2012 all 10 metropolitan areas with the highest AIDS diagnosis rates were located in the Southern region; nine of these areas were within the targeted states.[11]

To gain a better understanding of the factors contributing to the disproportionate HIV epidemic in the targeted states, we examined existing HIV-related prevention and care infrastructure and community characteristics of targeted state metropolitan statistical areas (MSAs) that are consistently among the 10 metropolitan areas with the highest HIV diagnosis rates. The study also examined HIV-related prevention and care infrastructure and community characteristics of MSAs with similar demographic characteristics to the high HIV-impact MSAs but with less severe HIV epidemiology. Due to lower HIV and AIDS diagnosis rates,[2] Cincinnati, Ohio was selected to be one of the contrast MSAs.

[ii] The United States Census Bureau defines the Southern Region as including Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, North Carolina, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

METHODS |

To gain a more in-depth understanding of the HIV epidemic in Cincinnati as a comparison to the targeted state MSAs, we conducted a community case study using quantitative and qualitative data sources. This case study examined the infrastructure for HIV prevention and care in the Cincinnati metropolitan area and the strengths of and challenges in addressing the HIV epidemic within the area. The study included 13 structured individual interviews with personnel working within the HIV prevention and care system in the metropolitan area, community leaders, and HIV advocates. In addition, two focus groups were conducted with individuals living within the Cincinnati MSA, one in Cincinnati and one in Northern Kentucky, to gather their experiences and perspectives regarding HIV prevention and care, stigma and factors that may impact HIV disease rates in their area. Data collection was completed in the winter of 2015.

In addition to qualitative data collection, we identified and summarized existing data sources regarding HIV and STD epidemiology, other health status indicators, community health needs, and gaps in services in the Cincinnati MSA. These data sources included community needs assessments, national surveillance reports, and state HIV epidemiologic reports.

FINDINGS |

METROPOLITAN AREA DESCRIPTION

Cincinnati is located at the southwest corner of Ohio, bordering Kentucky and close to the Indiana border and had an estimated population of 297,517 residents in 2013.[12] Cincinnati is the third largest city in Ohio and is the largest city within Hamilton County, where it is located.[13] Cincinnati is well-established in key industries including aerospace, automotive, chemistry and plastics and financial services; many companies have regional or national headquarters in the area.[14] In 2014, nine Cincinnati-based companies were among the Fortune 500 including Macy's, Procter & Gamble, Kroger, and American Financial Group.[15]

The Cincinnati OH-KY-IN Metropolitan Statistical Area (Cincinnati MSA) covers the tri-state area of Ohio, Kentucky and Indiana and includes five counties in Ohio, seven counties in Kentucky and three counties in Indiana.[16] The estimated total population of the Cincinnati MSA in 2012 was 2,128,603, ranking the area 28th in population size among the 381 total MSAs in the country.[17] The total estimated population, population density and racial/ethnic breakdown for each of the 15 counties within the Cincinnati MSA are depicted in Table 1 below, from largest to smallest total population size within the MSA. The city of Cincinnati is located in Hamilton County, the most densely populated county, with over

806,000 residents in 2014. However, it is estimated that Hamilton County's population will decrease to 786,090 by 2040 according to the Ohio Development Services Agency.[18]

Table 1

POPULATION DEMOGRAPHICS AMONG THE CINCINNATI MSA COUNTIES[19]			
County, State	**Total Estimated Population (2014)**	**Population Density – Persons per Square Mile (2010)**	**Racial/Ethnic Breakdown (2013)**
Hamilton County, OH	806,631	1,976.7	White: 69.2% Black: 26.0% Latino: 2.8%
Butler County, OH	374,158	788.2	White: 86.8% Black: 8.0% Latino: 4.3%
Warren County, OH	221,659	530.0	White: 90.3% Black: 3.5% Latino: 2.5%
Clermont County, OH	201,560	436.5	White: 95.9% Black: 1.4% Latino: 1.7%
Kenton County, KY	163,929	996.7	White: 91.6% Black: 4.9% Latino: 2.8%
Boone County, KY	126,413	482.3	White: 92.4% Black: 3.0% Latino:3.9%
Campbell County, KY	91,833	597.0	White: 94.4% Black: 2.9% Latino: 1.8%
Dearborn County, IN	49,506	164.1	White: 97.5% Black: 0.7% Latino: 1.2%
Brown County, OH	44,116	91.5	White: 97.4% Black: 0.9% Latino: 0.8%
Grant County, KY	24,875	95.6	White: 97.1% Black: 0.9% Latino: 2.4%
Pendleton County, KY	14,493	53.7	White: 98.0% Black: 0.6% Latino: 1.1%

Table 1 ***(continued)***

POPULATION DEMOGRAPHICS AMONG THE CINCINNATI MSA COUNTIES[19]			
County, State	**Total Estimated Population (2014)**	**Population Density – Persons per Square Mile (2010)**	**Racial/Ethnic Breakdown (2013)**
Gallatin County, KY	8,589	84.8	White: 96.0% Black: 1.6% Latino: 5.2%
Bracken County, KY	8.406	41.3	White: 97.9% Black: 0.6% Latino: 1.6%
Union County, IN	7,246	46.6	White: 97.4% Black: 0.6% Latino: 1.3%
Ohio County, IN	6,035	71.1	White: 98.2% Black: 0.5% Latino: 1.4%
Ohio	**11,594,163**	**282.3**	**White: 83.2% Black: 12.5% Latino: 3.4%**
Indiana	**6,596,855**	**181.0**	**White: 86.3% Black: 9.5% Latino: 6.4%**
Kentucky	**4,413,457**	**109.9**	**White: 88.5% Black: 8.2% Latino: 3.3%**

According to three-year estimates between 2011 and 2013 from the U.S. Census, within the Cincinnati MSA, approximately 85% of residents were white and 13% were black.[20] These numbers closely mirror the demographic trends in the state of Ohio, as shown above (83% white and 13% black); however, the proportion of black residents in the neighboring states of Kentucky and Indiana is slightly lower. Hamilton County has a significantly different demographic makeup than other counties in the MSA, with a much higher proportion of black residents than the surrounding counties. In 2010, 49.3% of Cincinnati residents were white and 44.8% were black. The Latino population within Cincinnati was similar to that of Hamilton County and Ohio and Kentucky, however lower than Indiana's Latino population.[19]

Socioeconomic Landscape

Tri-State Area

According to the US Census, in 2012, 24.8% percent of Kentucky residents were living in poverty, which was higher than the national average of 20.8%. The proportion of people living in poverty in Ohio and Indiana hovered around the national average (Ohio: 20.9%, Indiana: 20.3%). However, when looking at the changes in poverty rates over a 12-year period, the poverty rates in Ohio and Indiana increased by more than 3% between 2000 and 2012, and were among the top ten states in the country with the highest increases in poverty.[21]

In 2013, the national children's poverty level (defined as the proportion of children under age 18 who live in families with incomes below the federal poverty level) was 22%. Among the states comprising the Cincinnati MSA, the children's poverty level was highest in Kentucky (25%), followed by Ohio (23%) and Indiana (22%), respectively.[22] In 2008, the proportion of children living in extreme poverty (subsisting at less than 50% of the federal poverty level) was higher in the three MSA states than in the nation overall (7.9%), with Kentucky having the highest children's extreme poverty level among the three states (11.1%).[23]

Cincinnati MSA

According to the US Bureau of Labor Statistics, employees in all sectors within the Cincinnati MSA had a mean annual salary of $45,510 and a median hourly wage of $17.01 (May 2013), just over the national median hourly wage of $16.87.[24] In addition, in 2012, the per capita personal income (PCPI) of the Cincinnati MSA ranked 86th in the U.S. and was 99% of the national average.[17] However, within the city of Cincinnati, the median household income between 2009 and 2013 was $34,116, well below Ohio's median household income of $48,308 during the same time period. Furthermore, the poverty rate between 2009 and 2013 in the city of Cincinnati was 30.4%, almost double the overall state poverty rate of 15.8%.[19]

Within the Cincinnati MSA, the differences in income levels and poverty rates among the 15 individual counties reflect the socioeconomic disparities within the region (See Table 2 below, sorted from highest to lowest overall poverty rates). The poverty rates in the MSA counties (2009-2013) ranged from a low of 6.3% (Warren County, OH) to a high of 20.7% (Gallatin County, KY) and median household incomes ranged from $39,196 (Bracken County, KY) to $72,487 (Warren County, OH). Hamilton County, which contains the city of Cincinnati, was tied with Grant County, KY for the second highest overall poverty rate among the 15 MSA counties (18%). At $48,593, the median household income for Hamilton County was just slightly above Ohio's median household income of $48,308.

Table 2

POVERTY AND INCOME DATA FROM CINCINNATI MSA COUNTIES[19]		
County, State	**Poverty Rate-All Persons (2009-2013)**	**Median Household Income (2009-2013)**
Gallatin County, KY	20.7%	$43,793
Hamilton County, OH	18.0%	$48,593
Grant County, KY	18.0%	$46,159
Bracken County, KY	16.8%	$39,196
Pendleton County, KY	15.6%	$45,480
Brown County, OH	14.1%	$44,341
Kenton County, KY	13.7%	$54,270
Butler County, OH	13.6%	$56,610
Campbell County, KY	13.0%	$54,306
Union County, IN	12.7%	$44,161
Clermont County, OH	10.2%	$60,365
Dearborn County, IN	9.1%	$56,946
Boone County, KY	9.0%	$67,225
Ohio County, IN	8.3%	$50,377
Warren County, OH	6.3%	$72,487
Ohio	15.8%	$48,308
Kentucky	18.8%	$43,036
Indiana	15.4%	$48,248
U.S.	15.4%	$53,046

Moreover, according to a report from the Brookings Institution, among the 100 largest metropolitan areas between 2005 and 2009, at 14.3%, the Cincinnati MSA was rated number 29 for concentrated poverty rates. (Concentrated poverty rate is defined as neighborhoods with at least 40% of individuals living below the poverty line).[25] Another report from the Brookings Institution found that between 2000 and 2008, the Cincinnati MSA experienced a 7.6% increase in the "suburbanization of the poor" (a shift of poverty from its concentration within cities to the suburbs), representing the ninth highest increase among the top 95 largest metropolitan areas in the country.[26]

Within Hamilton County, between 2009 and 2013, just over one-third of county residents aged 25 and older possessed a Bachelor's degree or higher, which was higher than the state rate (25.2%) and just slightly higher than the rate in the city of Cincinnati (31.5%). For possession of a high school diploma or beyond among residents aged 25 and older between 2009 and 2013, the rates among residents in Hamilton County (88.6%) was nearly identical to Ohio's overall high school graduation rate (88.5%). However, among Cincinnati city residents, the rate (84.3%) was lower than in Hamilton County and the state.[19]

Community Health Needs

In 2012, an in-depth, collaborative community health needs assessment (CHNA), called *A.I.M. For Better Health*, was conducted by Health Care Access Now on behalf of several community partners comprising nine counties within the greater Cincinnati area in southwest Ohio and southeast Indiana. It contained an extensive review of secondary data by county within the greater Cincinnati area, as well as input from residents and organizations from the local community. Survey results and provider interviews found that respondents believed that Hamilton County possessed enough health care providers, but costs and insurance coverage issues posed challenges for vulnerable people to utilize health services. Seventy-eight percent of survey respondents stated that transportation issues did not prevent them from seeing a healthcare professional and the majority did not need to travel more than 10 miles to access necessary healthcare services. Providers believed that an improvement in prevention services in all arenas (medical, dental and mental health) and increased support for healthy lifestyle were crucial to improve the health of Hamilton County residents.[27]

Between 2012 and 2013, a CHNA was also conducted by Truven Health for the University of Cincinnati Medical Center (UCMC), utilizing quantitative and qualitative sources. The report focused on the counties containing the majority of admitted patients served by four medical centers in the University of Cincinnati Health (UC Health) system. Summarizing key demographic trends in the three counties, the report mentioned that over the past 10 years, the population of Hamilton County decreased by 5%– the only UC Health county area to experience a decrease. The Latino population in the area more than doubled between 2000 and 2010 – with the largest percentage growth in Butler County. Key health needs for the four UC Health medical centers were identified and grouped together, resulting in prioritized health needs that included infant mortality, diabetes/adult obesity/hypertension, stroke, mental health, and cancer.[28]

Morbidity and Mortality

In 2010, Kentucky's life expectancy at birth was lower than the national average (76 years in Kentucky versus an average 78.9 years nationally); Ohio's life expectancy was 77.8 years

and Indiana's was 77.6 years.[29] In addition, Indiana was among the states with the highest age-adjusted mortality rates (914.9 deaths per 100,000 population) and both Ohio's (815.7 per 100,0000) and Kentucky's rates (826.0 per 100,000) were higher than the national age-adjusted death rate (746.2 deaths per 100,000).[30]

The leading six causes of death in Ohio and Indiana in 2010 were 1) heart disease, 2) cancer, 3) chronic lower respiratory disease, 4) stroke, 5) accidents and 6) Alzheimer's disease; these mirror the top six causes of death in the U.S. from the same year.[31-33] In 2012, Kentucky was ranked first among all US states and District of Columbia for cause of death due to cancer and chronic lower respiratory diseases and was ranked second in the country, after West Virginia, for age-adjusted death rate due to drug poisonings (25.0 in Kentucky vs. 13.1 nationally).[34]

Obesity and its related comorbidities are also of growing concern in the Cincinnati MSA and the tri-state region. Kentucky was ranked fifth in the nation for adult obesity rates (33.4 %), Indiana was ranked ninth (31.8%), and Ohio was ranked 16th (30.4%). Similar to national trends, all three states have experienced increases in the adult obesity rate over the past twenty years.[35] In the greater Cincinnati area, according to the 2010 Greater Cincinnati Community Health Status Survey (GCCHSS), a randomly-sampled phone survey on self-reported health measures among residents, the diabetes rate was 11%, which was higher than the national rate of 8.3%. In addition, about 64% of adults in the greater Cincinnati area have ever been told by a doctor or healthcare provider that they have a chronic condition.[36] Moreover, the proportion of greater Cincinnati area adults who have been told they have hypertension or high cholesterol has increased.[27] In 2008, 23% of Hamilton County adult residents smoked cigarettes, 32.4% were overweight and 24.5% were obese, each of which increases the risk of developing a chronic disease.[37]

Violent crime is also a concern within the Cincinnati area. The estimated violent crime rate in Ohio in 2013 was 275.7 per 100,000 population.[38] However, during the same year, within Hamilton County, the violent crime rate was much higher (535 per 100,000).[39,40] In addition, despite a 5% *decrease* in the overall murder rate in Ohio and the country overall between 2012 and 2013, the city of Cincinnati experienced a 52% *increase* in the murder rate during the same time period.[40]

Sexual and Perinatal Health

In 2010, Ohio was ranked number 24 out of the 50 states (with 1 being the lowest rate and 50 being the highest rate) for teen pregnancy rate (54 pregnancies per 1,000 teenage girls). Indiana had a teen pregnancy rate of 53 pregnancies per 1,000 girls in 2010 and Kentucky's rate was 62 pregnancies per 1,000 girls. Moreover, in 2012, at 41.5 births per 1,000 girls aged 15 to 19, Kentucky's teen birth rate was the highest among the three states and higher than the national rate of 29.4 births per 1,000 girls.[41]

The infant mortality rate (defined as the number of deaths among infants less than one year of age per 1,000 live births) has been targeted as an area for improvement in the Cincinnati region. Stakeholder interviews for the *A.I.M. Report* in Hamilton County identified infant mortality as an area where there has been some success; however, overall, it was felt to be an underfunded arena.[27] According to a report by the Hamilton County Public Health Department, the infant mortality rate in 2009 (the most recent year of available data) was 13.4 in Cincinnati and 9.9 in Hamilton County. In contrast, the Ohio infant mortality rate in 2009 was 7.4 and the national average was 6.4.[42]

Sexually transmitted diseases (STDs) are also prevalent within Hamilton County and in Ohio. In 2012, the gonorrhea rate in Hamilton County was 295.7, the chlamydia rate was 832.6, and the primary and secondary syphilis rate was 16.7 - all per 100,000 population. As compared to Ohio's overall STD rates, Hamilton County had a gonorrhea rate that was more than double the Ohio rate, a chlamydia rate that was 1.8 times Ohio's rate and a primary and secondary syphilis rate that was more than four times the overall Ohio rate.[3] In Ohio in 2013, the rate of new syphilis diagnoses among blacks was 39.3 per 100,000 population, as compared to 4.2 per 100,000 among whites. Hamilton County has contended with a significant syphilis outbreak over recent years; in 2011, Hamilton County ranked sixth nationally for primary and secondary syphilis rates prompting a syphilis epidemic to be declared in 2012 for the area.[43] County medical providers and the local health department conducted an aggressive education and awareness campaign which appears to have resulted in a decrease in local syphilis numbers. Although Ohio has higher STD rates overall than Kentucky and Indiana, these two states have been experiencing increasing STD rates in recent years.[44] In 2012, rates of primary and secondary syphilis in Kentucky and Indiana were identical (3.4 per 100,000); however the rates of gonorrhea and chlamydia were higher in Indiana than in Kentucky.[45,46]

Health Care Access

Health insurance coverage is lower in the city of Cincinnati compared to Hamilton County and Ohio overall (See Table 3 below). According to the US Census, between 2008 and 2012, Cincinnati had lower insurance coverage rates in all four groups that lacked health insurance (under age 18, employed, unemployed, and not in labor force) than Ohio as a whole. Hamilton County had lower insurance coverage rates than Ohio in the unemployed and not in labor force sectors.

Table 3

Uninsured Rates Comparison of Cincinnati, Hamilton County and Ohio (2008-2012)[47]				
Location	**No health insurance, under 18 years old**	**Employed, no health insurance**	**Unemployed, no health insurance**	**Not in labor force, no health insurance**
Cincinnati	**6.6%**	**16.3%**	**49.6%**	**22.3%**
Hamilton County	5.4%	12.4%	**44.7%**	**19.1%**
Ohio	5.9%	13.0%	42.7%	17.7%
U.S.	8.1%	17.4%	46.4%	21.7%

NOTE: *bolded figures indicate rates that are higher than Ohio's overall insurance status rates.*

Shortages of primary care physicians are another problem in several of the Cincinnati MSA counties, particularly among the Kentucky counties (See Table 4 below). According to the Health Resources and Services Administration (HRSA), as of May 2014, four entire counties out of the 15 Cincinnati MSA counties were designated as primary care health professional shortage areas (HPSA), of which three were located in Kentucky. Hamilton County possessed several service areas and facilities that were HPSA-designated. The HPSA designation indicates that more than 3,500 people are served by one primary care physician within the county.

Table 4

Cincinnati MSA Health Professional Shortage Areas (HPSA) and Medically Underserved Areas (MUA), 2014		
County, State	**HPSA Designee[48]**	**MUA Designee[49]**
Hamilton County, OH	2 service areas and 7 facilities	Yes
Butler County, OH	1 facility	Yes
Warren County, OH	3 facilities	Yes; Low income population
Clermont County, OH	2 facilities	Yes
Brown County, OH	No	Yes
Kenton County, KY	No	Yes
Boone County, KY	No	No
Campbell County, KY	1 service area, 1 facility	Yes
Grant County, KY	No	No
Pendleton County, KY	**Entire county**	No

Table 4 ***(continued)***

Cincinnati MSA Health Professional Shortage Areas (HPSA) and Medically Underserved Areas (MUA), 2014		
County, State	**HPSA Designee[48]**	**MUA Designee[49]**
Gallatin County, KY	**Entire county**	No
Bracken County, KY	**Entire county**	Yes
Dearborn County, IN	No	No
Union County, IN	Low-income county	Yes; Low income population
Ohio County, IN	**Entire county**	Yes

With regards to HRSA's medically underserved area (MUA) designation, the vast majority of counties within the Cincinnati MSA had service areas and/or Census Tracts that were deemed as MUAs. Warren County, Ohio and Union County, Indiana were also deemed to be low-income population areas. The MUA determination is calculated from four variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population aged 65 or over.[50]

HIV/AIDS LANDSCAPE |

Tri-State Area

In 2013, among the tri-state area, Ohio had the highest estimated HIV diagnosis rate among adults and adolescents (12.4 per 100,000 population), followed by Kentucky (11.0), and Indiana (9.3), ranking Ohio 23rd, Kentucky 25th and Indiana 28th, respectively, among the 50 U.S. states for highest HIV diagnosis rates.[51] At the end of 2012, the CDC estimated that 5,604 people in Kentucky were living with diagnosed HIV; 9,268 people in Indiana were living with HIV; and 18,619 people in Ohio were living with HIV.[2]

Since the early 1980s, AIDS diagnoses have been reportable in Ohio and confidential, name-based HIV reporting has occurred in Ohio since 1990. In 2011, the number of people living with HIV in Ohio increased by 29% from four years prior and the number of people living with HIV aged 34 years or younger increased by 83%. The leading transmission method among those living with an HIV diagnosis continues to be male-to-male sexual contact, followed by heterosexual contact and primary injection drug use.[52]

Among individuals newly-diagnosed with HIV in Ohio in 2011, the majority were male (80%). In addition, the largest proportion of new diagnoses was among African Americans, who accounted for 49% of new diagnoses of HIV between 2007 and 2011, but represented

only 12% of Ohio's population in 2011, per U.S. Census estimates. HIV is not distributed equally geographically throughout Ohio, In fact, the eight largest urban areas in the state, including Hamilton County, accounted for 74% of those living with HIV in Ohio in 2011, despite only comprising 48% of the state's population. The HIV diagnosis rate in Hamilton County (289.4 per 100,000) in 2011 was the third highest in the state after Franklin County (Columbus) and Cuyahoga County (Cleveland).[52]

The Cincinnati MSA was ranked 77th among MSAs for AIDS diagnosis rates in 2013.

Cincinnati MSA

As of the end of 2011, an estimated total of 3,246 people were living with HIV in the Cincinnati MSA, representing an overall prevalence rate of 152.9 per 100,000 population. As a point of comparison, the overall HIV prevalence rate among MSAs with greater than 500,000 residents nationally for the same time period was 358.2 per 100,000 population.[53] (See Table 5 below for a summary of HIV prevalence among the individual Cincinnati MSA counties, sorted in descending order of HIV prevalence rate, by county).

In 2013, the Cincinnati MSA possessed an HIV diagnosis rate of 11.8 per 100,000, ranking it 58nd in the country among MSAs with populations greater than 500,000.[2] In 2011, among males aged 13 to 24 years, the diagnosis rate in the Cincinnati MSA was 21.1 per 100,000, ranking the area 68th among the MSAs in the country for male diagnosis rates. Among females, the HIV diagnosis rate among adolescent and adult women in the Cincinnati MSA was 7.5 per 100,000, less than the rate among females in the MSAs overall (9.5) and representing an overall rank of 38th in diagnosis rates among adolescent and adult females in the MSAs.[54]

Further, the Cincinnati MSA was ranked 77th among MSAs for AIDS diagnosis rates in 2013 and had an AIDS diagnosis rate (5.0 per 100,000 population) lower than the AIDS diagnosis rate in the country overall during the same year (8.5 per 100,000 population). In addition, in 2011, the Cincinnati MSA was ranked 76th among the nation's MSAs for the highest death rate among males with HIV; the death rate for males with HIV in the Cincinnati MSA was 5.0 per 100,000, nearly three times lower than the death rate for males among large MSAs and less than half the death rate among males in the U.S.[10]

Table 5

HIV Prevalence by Cincinnati MSA County (2012)[3]		
County, State	**HIV Prevalence Number**	**HIV Prevalence Rate, per 100,000 population**
Hamilton County, OH	2,415	362.2
Kenton County, KY	264	200.0
Campbell County, KY	90	118.3
Grant County, KY	19	95.8
Boone County, KY	93	94.3
Butler County, OH	275	90.0
Warren County, OH	131	74.2
Bracken County, KY	5	71.2
Pendleton County, KY	7	57.3
Brown County, OH	19	51.0
Clermont County, OH	75	45.8
Dearborn County, IN	16	38.4
Gallatin County, KY	*Data suppressed*	*Data suppressed*
Ohio County, IN	*Data suppressed*	*Data suppressed*
Union County, IN	*Data suppressed*	*Data suppressed*
Ohio	18,619	192.7
Indiana	9,268	171.6
Kentucky	5,604	153.7
U.S.	912,308	349.5

Note: To ensure confidentiality, data were suppressed at county level if the population denominator was less than 100 or the total HIV case count was less than 5.

As demonstrated in Table 5, among the Cincinnati MSA counties, Hamilton County had the highest HIV prevalence rate in 2012, followed by Kenton County, KY. However, the majority of the Cincinnati MSA counties possessed HIV prevalence rates that were much lower than other MSA counties and their respective states' HIV prevalence rate. Kenton County, however, possessed an HIV prevalence rate that was above the Kentucky state prevalence rate and Hamilton County possessed an HIV prevalence rate that was much higher than the overall Ohio state prevalence rate. More recent data from the Ohio Department of Health demonstrated that as of the end of 2013, there were 2,561 people

living with HIV/AIDS in Hamilton County (rate of 319.3 per 100,000). The diagnoses were roughly split between those diagnosed with HIV only (1,321) and those diagnosed with AIDS (1,240).[55]

HIV/AIDS Funding Sources

During the 2013 fiscal year, Ohio received over $47.5 million in total HIV/AIDS federal grant funds from a variety of agencies, with the HRSA Ryan White Program comprising roughly 75% of the total federal funds provided. In contrast, Indiana received $22.7 million in total funding, with just over 70% from the Ryan White program, and Kentucky received over $17.5 million, with around 76% from HRSA Ryan White funds.[56]

In 2013, Ohio was awarded over $23 million in Ryan White Part B funding to provide HIV/AIDS core medical and support services to indigent state residents; Indiana received $11.6 million and Kentucky received just over $9 million.[57] During fiscal year 2012, five providers in Ohio received Part A funding (in the Cleveland or Columbus area) and the Ohio Department of Health in Columbus received Part B funding. Eight providers in the state received Part C funding, including one Cincinnati-based organization, the University of Cincinnati Infectious Diseases Center.[58]

Funding from Medicaid also covers medical care for HIV-positive individuals who are eligible. According to the Kaiser Family Foundation, to be eligible for Medicaid in Indiana, Ohio and Kentucky, all of which have expanded Medicaid under the Affordable Care Act, as of April 2015, parents of dependent children (family of three) and other non-disabled adults are eligible for coverage provided they subsist at 138% of the federal poverty level (FPL) or below.[59] The expansion of Medicaid in Ohio has allowed Ryan White funded organizations to utilize portions of their funding for other much-needed supportive services in addition to core medical care. In early 2015, Indiana implemented an amended waiver to their prior Healthy Indiana Plan to expand Medicaid under the demonstration. According to the Kaiser Family Foundation, Indiana's demonstration is more complicated than those of other states; it includes multiple parts, including different Medicaid benefits for populations covered by the waiver, requires tracking a number of different parts, such as premium payments, and beneficiaries are treated differently depending on their income level, medical status and whether they possess paid premiums.[60]

The expansion of Medicaid in Ohio has allowed Ryan White funded organizations to utilize portions of their funding for other much-needed supportive services in addition to core medical care.

HIV INFRASTRUCTURE |

Medical Care

For individuals living with HIV in the Ohio counties in the MSA, the primary option for care is the University of Cincinnati Infectious Diseases Clinic. This clinic was reported to be the only HIV primary care option in the Ohio area for those without insurance. There are some private Infectious Diseases (ID) physicians in the Cincinnati suburbs that will treat HIV-positive individuals who have private insurance, though it was reported that some private physicians in the area were reluctant to treat individuals living with HIV. Some of the University of Cincinnati (UC) ID care providers were reported to see privately insured individuals at satellite clinics in Cincinnati. In addition, some younger individuals living with HIV receive their care at the UC Children's Hospital. UC Children's Hospital has an LGBT clinic for youth that provides medical care regardless of HIV status.

The UC ID clinic receives Ryan White Part B and C funding and treats approximately 1700 individuals living with HIV. According to an interview participant, 75-80% of the UC ID clinic patients are virally suppressed. The clinic also provides treatment for individuals living with HIV who are housed in the county jail system. In addition to employing ID physicians and nurses, the UC ID clinic has a PharmD to assist with medications and medication adherence and a psychiatrist who is available to offer treatment one day a week. Medical research is integrated as a part of the clinic and UC was reported to have a very active AIDS Clinical Trials Group. The clinic also has a part-time behavioral health care provider (3 days a week), mental health and psychology students who provide short term counseling once a week, and patient navigators to assist with appointment reminders. The addition of patient navigators to the clinic resulted in an increase in the percentage of individuals attending their appointments from 66% to 78%. The UC ID does not have a dedicated social worker, however, an HIV case manager from an AIDS Services Organization (ASO), Caracole, is in the clinic on a part-time basis to address resource needs and linkages for social services. UC ID staff also collaborate closely with a community case manager from the Healthcare for Homeless program in Cincinnati. The Healthcare for the Homeless program is a network of medical, dental and behavioral health providers that provide care for homeless individuals. The UC ID clinic provides PrEP but this resource has not been well-utilized according to interview participants. A few private physicians were reported to provide PrEP for their patients.

Interview participants reported that new patients are usually able to make an initial appointment with the UC ID intake nurse within three weeks. The intake nurse facilitates the initial assessment and provides basic HIV education and assures that labs/genotyping are completed. The patient has an appointment with an HIV medical care provider approximately 2 weeks later, as the initial lab results are complete by that time. Due to the

recent initiation of Medicaid expansion, the clinic has undergone a shift in the payer mix of the patients. One interview participant reported that less than 10% of their client population is dependent on Ryan White funds now that many of those previously without health insurance have been able to access a Medicaid plan. This shift, while freeing Ryan White funds for use in other areas, has complicated the financial systems, as there are a variety of Medicaid expansion plans that cover different services and facilities, even within the same hospital system. Additionally, interview participants reported that many newly-insured clients have difficulty navigating the health care system and there exist significant educational needs in the community regarding the availability of services covered by insurance as well as how to access these services. Consequently, UC is now requiring that ID clinic patients meet with the UC system financial department at the onset of their treatment. Several participants mentioned that this process had slowed entry to care for some individuals. Caracole HIV case managers are trained in patient navigation and are available to assist clients to navigate these complex insurance issues as needed.

One interview participant reported that now that many individuals living with HIV are covered through Medicaid expansion, Cincinnati hospital systems outside of UC are starting to recruit them to receive medical care there. Some participants also reported receiving quality care at the VA in Cincinnati. Interview and focus group participants generally described the HIV medical care in the MSA as being high quality, accessible care, with caring and knowledgeable providers. For example, one focus group participant stated:

> ***"So my experience is I think Cincinnati has great healthcare; it is known worldwide to have great healthcare."***

Another participant spoke of their appreciation of a centralized health system, saying:

> ***"I got all my stuff at UC. So I can go to the dentist at UC, I can see my psych doctor at UC, I can see my therapist, I can see my OB/GN, I can see everybody right there in that circle."***

For HIV-positive individuals living in the Indiana counties of the Cincinnati MSA, access to HIV medical care was reported to be difficult because they usually have to travel to Cincinnati to receive care at the UC ID or travel to a metropolitan area in Indiana. They must rely on Ryan White funding for that area to assist with transportation if they lack reliable transportation to care. For individuals living with HIV in the Cincinnati MSA but in areas of OH outside of Cincinnati, they also often must travel to UC ID for care, particularly if they are un- or underinsured. Until recently there was an HIV care provider in Butler County (north of Cincinnati) but this provider relocated, leaving a gap in medical provision for that area.

For individuals living with HIV in the North Kentucky area of the Cincinnati MSA, about half were reported to travel to UC ID for care and the remaining half availed themselves of other treatment options. One of these options is an ID practice, Infectious Disease Consultants of Northern Kentucky, which is part of the St. Elizabeth health care network and provides HIV care to privately insured individuals including those with Medicaid. The clinic will also treat some individuals who are under- or uninsured and was reported to provide high quality care. Kentucky has also participated in Medicaid expansion, which has decreased the number of individuals dependent on Ryan White to pay for medical care in the Northern Kentucky area of the Cincinnati MSA from 80 clients down to nine, according to a study participant.

For individuals living with HIV in Northern Kentucky, there is an HIV case management system that utilizes Ryan White funds to assist with transportation to medical care for all who need this assistance. The transportation program provides gas cards and has even paid cab fares to medical care at times if necessary. Some individuals in the Southern edge of the Northern Kentucky area go to Lexington or Louisville ID clinics for HIV care, though these individuals must travel a significant distance for their care. Although HIV care was said to be generally available for individuals in the MSA in Kentucky, obtaining primary care and other specialty care was said to be challenging, particularly for those without medical insurance.

Transportation assistance for HIV-positive individuals in the Cincinnati MSA (excluding Northern Kentucky) was reported to be limited. Several participants reported that the state had cut funds for transportation assistance. The ASO, Caracole, uses Ryan White funding and grant funding through Broadway Cares to provide some assistance with transportation for clients, primarily using bus tickets. In addition, some participants are able to access transportation through Medicaid, which necessitates 48 hours advanced notice. Transportation was reported to be particularly problematic to arrange for individuals living in the Ohio and IN areas of the MSA that are outside of Cincinnati. In contrast, HIV medications were said to be readily available for individuals through the AIDS Drug Assistance Program (ADAP) for those with no insurance who were unable to pay for them. The state of OH also has a Health Insurance Policy Program (HIPP). The HIPP program makes premium payments for eligible individuals living with HIV to continue their existing health insurance.[61]

Transportation assistance for HIV-positive individuals in the Cincinnati MSA (excluding Northern Kentucky) was reported to be limited.

Barriers

A number of barriers to HIV care entry and retention were noted by interview and focus group participants. These barriers included HIV-related stigma, shame, and fear of being identified as HIV-positive and lack of follow through in terms of care and behavior change once diagnosed. Some participants discussed the concern that many people in the community know that the UC ID clinic provides HIV care so they fear being identified as HIV-positive if they receive care there. Other barriers include poverty, housing instability, substance abuse/mental illness, lack of transportation, lack of awareness of available resources, turnover in client phones, a conservative political climate, lack of trust in health care systems, and complex HIV care systems, which can be challenging to navigate. Focus group participants discussed that the relatively new requirement that patients entering care at the UC ID clinic must meet with the UC financial department to determine reimbursement for services is acting as a barrier to care for some individuals. One focus group participant described this requirement, saying:

> ***"I remember my first appointment at UC here, they didn't necessarily tell you that you had to go see the financial office first, and the first time you go there, I waited an hour and a half to two hours and was two hours late for my appointment."***

Continuity of care for individuals being discharged from the prison system was also noted as a barrier. In addition, denial/lack of acceptance of HIV status and the need for care was reported to be a significant barrier to initiating and maintaining HIV care. Some felt that within the community, there were greater barriers to being tested than to receiving care, due to either a lack of desire to know one's status and deal with associated consequences, especially stigma and sexual identity issues, or lack of due gravity placed on a positive diagnosis. Young men who have sex with men (MSM) were reported to be particularly challenging to engage in testing and to retain in HIV care.

Young men who have sex with men (MSM) were reported to be particularly challenging to engage in testing and to retain in HIV care.

Linkage to Care

The Ohio Department of Health allocates funding for HIV care linkage coordinators throughout the state based on HIV statistics for the area. Hamilton County has 1.5 linkage coordinators. One linkage coordinator is situated at Hamilton County Public Health and a part-time position is situated at the University of Cincinnati Hospital Emergency Room (ER). The ER also provides some additional linkage activities through grant funding. The linkage coordinators work with individuals newly diagnosed with HIV and those identified by the ER and other organizations who are not receiving HIV care routinely. The linkage

coordinators provide transportation, such as bus passes or rides to medical appointments, and assist in addressing other barriers to care entry and retention such as financial difficulties and need for HIV education. The ER linkage program includes flagging the records of individuals not currently in HIV care so that if they come to the ER, the staff will work to reconnect them with HIV care. The linkage program was described by one interview participant, saying:

> ***"UC [percentage of linked clients] is probably in the 80 -- they definitely have the harder clients. Because if you don't have insurance in our region, you end up in the emergency room at University Hospital. These are IDUs. These are people with psychological issues, substance abuse issues, so those are going to be harder to link anyway. I like this approach to disease prevention, just because I think it's -- I can go out and do a million presentations for schools and whatnot but it's really not measurable, am I really making too much of an impact…"***

Planned Parenthood also provides some linkage to HIV care through their HIV testing program, which is housed at Caracole. They provide HIV education and assist individuals who test positive for HIV through their testing program to access HIV case management and HIV medical care. The program, conducted in conjunction with Hamilton County Public Health has proven quite successful, with 92% of clients linked with care at UC. This includes following the individual through a second medical visit and following up six months later to assess whether the individual is still in HIV care. The Planned Parenthood testing program covers all three states in the MSA, however the linkage program extends only to those in Hamilton County. In Kentucky, the Northern Kentucky Health District program has a testing specialist who works to get individuals testing positive for HIV linked to HIV care using the ARTAS linkage to care model.[62] In Cincinnati, the Health Department is moving toward using HIV laboratory data to detect individuals not in care and in need of linkage services but they have several data systems that will need to be reconciled before this can be accomplished.

General Medical Care

Study participants reported that it was generally more difficult to obtain primary and specialty care than infectious disease care in the Cincinnati MSA, though most care was described as high quality. Many care providers require insurance, a limitation that should ease in the wake of the ACA. Focus group participants felt that care was difficult to find without financial means if you were not also homeless. Difficulties in accessing care in the emergency department were also reported by participants, as there were long wait times, a reported lack of attention to HIV in favor of more emergent matters, and confidentiality concerns regarding status disclosure. Additionally, primary and specialty care were

reportedly difficult to access in outlying counties, as transportation remains a significant barrier. The VA was described as providing quality care for both HIV and primary care issues. Dental care can be obtained at UC. Interview participants spoke about the desire to increase education about HIV among primary care providers so that they are better equipped to provide primary care to HIV-positive patients.

PSYCHOSOCIAL SERVICES |

HIV Case Management

The AIDS Service Organization (ASO), Caracole, provides all HIV case management services for the Cincinnati area. Caracole has 1500 clients, 16 HIV case managers, and covers an eight-county area surrounding Cincinnati. In addition to providing HIV case management services, the case managers are trained and registered to be ACA navigators. Caracole receives Ryan White Funding for HIV case management and provides these services for individuals who are Ryan White eligible as well as those with other forms of insurance or no coverage. At the time of interviews, there was not a waiting list to receive services. However, several interview participants perceived that there were limitations in their capacity to meet the entirety of client needs due to high caseloads, particularly as many of the clients have very complex needs. In Northern Kentucky, the Northern Kentucky Health District provides HIV case management for eight counties in Northern Kentucky, including six in the Cincinnati MSA. Currently there are no waiting lists to see an HIV case manager and the case managers were reported to have manageable caseloads. For the Cincinnati MSA counties in Indiana, Indiana Ryan White funding was reported to cover these services for the small number of HIV-positive individuals living in that area. The dedication of case managers in the MSA was described by one interview participant:

> ***"They're doing stellar work there, I think. Who they employ and they just have client's best interest in mind. People that have been in HIV care for, one case manager's been there since I've started, we started a month apart from each other. This is their issue and this is what they're going to do with their life. I think we are fortunate to have a good group of caring people that are working for this."***

Support Groups

In Cincinnati, there were several HIV support groups that were said to be ongoing. Caracole has a women's group and another HIV organization, the Central Community Health Board, has a group for MSM. Caracole had a men's group in the past, but has not been able to keep this going because of lack of consistent attendance. A relatively small support group for Hispanic/Latino individuals living with HIV was mentioned, although interview participants were not aware of the details about this group. In general, there seemed to be

a lack of current information among interview and focus group participants regarding the availability of support groups in the area and support groups were described as existing in waves, based on local attendance and support. There used to be an ASO called AVOC that provided consistent support groups, but this organization recently closed. One participant described the difficulty in maintaining support groups, saying:

> ***"And so when I moved in here it was a great place to have that, because I would go to places and they said they wanted to start them, but there was too much stigma and men did not want to go. They didn't want to be seen."***

A clearinghouse for support group information was suggested as a community need. In Northern Kentucky, there is an organization, AIDS Volunteers of Northern Kentucky, which meets regularly for support, education, and fellowship. No other organized support opportunities for individuals with HIV were identified in Northern Kentucky. It was reported that in both Cincinnati and Northern Kentucky, there was an increasing number of support groups for LGBT (regardless of HIV status), specifically transgender populations.

LEGAL SERVICES |

Interview participants stated that there used to be a local attorney who would provide legal assistance to individuals living with HIV in the MSA. Currently this attorney is primarily providing assistance and advice to HIV organizations on working with individuals living with HIV, rather than working directly with HIV-positive clients. However, according to several participants, he still takes some HIV discrimination cases. The local Legal Aid system was said to be very overworked but will assist with the legal needs of individuals living with HIV as their capacity allows.

MENTAL HEALTH AND SUBSTANCE ABUSE |

UC ID has a part-time behavioral health provider in their clinic and at the time of data collection there was a plan to have an intern from the UC psychiatric nursing program on a part-time basis to assist in the clinic. The use of students to provide behavioral healthcare in the past was criticized by some focus group participants who felt that they were spinning their wheels working with a different individual every time and felt a lack of an ongoing therapeutic relationship. This difficulty was described by one focus group participant:

> ***"I saw 12 different students over the course of my 12 visits with him. I had to -- so it did me no good. When you're talking mental health, it's important to build a rapport with who you're speaking to. If you have to go over your -- the first 20 minutes is rehashing what you said to the other person, then it's a waste of the time."***

Caracole has a grant-funded mental health counselor who is available to work with their clients. It was reported that the HIV-specific mental health services at Caracole and UC were not sufficient to meet the entirety of behavioral health needs, particularly for those with more severe mental health and substance abuse issues. Thus, many individuals living with HIV must access the public behavioral health system to address their needs. Opinions and experiences varied among interview participants as to the availability of public mental health services, as some reported more accessibility than others. Some study participants reported that mental health and substance abuse services can be difficult to access in the Cincinnati area public sector due to lack of capacity to treat all in need of services. Although there are a number of inpatient substance abuse treatment programs, participants reported that there are often waiting lists to access programs that will treat individuals without insurance or income to cover treatment costs. There are, however, services for pregnant women that provide substance abuse treatment on demand. There are also methadone clinics in the Cincinnati area. One participant stated that there has been confusion about what behavioral health services are covered under Medicaid expansion plans so it is not clear how much the expansion program will assist in meeting the behavioral health needs of individuals living with HIV. Interview participants stated that waiting lists for mental health and substance abuse services are also common in Northern Kentucky.

Interview and focus group participants described a substantial increase in heroin use in the region, as well as increases in heroin overdoses and substantial concerns regarding the potential for transmission of HIV and Hepatitis C through sharing of syringes. Some interview participants attributed the increase in injecting behavior to increased restrictions on prescription opiates, which they believe prompted individuals to change their usage behaviors. In response to these concerns, the local government allowed the creation of a syringe exchange program in Cincinnati. Although syringe exchange is not legal in the State of Ohio at this time, Cincinnati was declared to have a health emergency so syringe exchange could be allowed. The Cincinnati program was initiated in the last year and includes two syringe exchange sites in the city of Cincinnati. Kentucky was reported to have a similarly dire heroin problem; however, syringe exchange programs remain illegal. Advocates are working to address this concern in the state legislature. In both Ohio and Kentucky MSA counties, it was reported that the death rate attributable to heroin overdose had increased greatly over recent years.[63,64]

Interview participants reported that the heroin epidemic had not yet translated to an HIV outbreak within Cincinnati. It should be noted, however, that in counties adjacent to the MSA's Indiana counties, there has been a significant HIV outbreak linked to injection drug use, prompting the state to create a syringe exchange in the area in April 2015. In May 2015, the Indiana governor signed legislation enabling other Indiana counties to request

syringe exchange programs in situations of need.[65,66] Although the outbreak has not spread to Cincinnati MSA counties as of yet, it is important to recognize similarities in demographics, substance use and proximity for future prevention.[67]

HOUSING |

Interview and focus group participants described a shortage of housing for people living with HIV. This shortage reflects a larger shortage of affordable housing for individuals with low or no income in the Cincinnati MSA. Participants reported that adequate housing availability is lacking and there are usually waiting lists for the Section 8 and Shelter Plus Care housing programs. Several participants mentioned that there are shelter programs available for men that offer housing case management services and a Healthcare for the Homeless Program that works closely with the UC ID clinic. Shelter programs for women were reported to be less accessible than the programs for men although some programs do exist.

Interview and focus group participants described a shortage of housing for people living with HIV.

Lighthouse Youth Services provides services, such as transitional housing and outreach, for homeless youth and has developed a plan to address homelessness in LGBT youth. This plan includes a phone app to connect with LGBT youth and provide information about safe housing options as well as providing LGBT-related training to organizations offering services to homeless and at-risk youth. A local organization, the Greater Cincinnati Homeless Coalition, was also reported to be active in organizing community agencies around issues of homelessness and advocating for resources and collaborations to reduce homelessness in the community. Hate crimes legislation was recently passed that included the homeless population, which was seen to be a triumph, and advocacy services for the homeless population, particularly for LGBT and youth populations were reported to be a community strength.

Caracole has transitional housing programs for individuals living with HIV as well as financial assistance for short-term housing funded through the Housing Opportunities for Persons with AIDS (HOPWA) program. These housing programs include a residential program for individuals living with HIV and substance abuse problems with 11 beds and a Shelter Plus Care program that provides vouchers for 108 households. To be eligible for Shelter Plus Care, a person living with HIV must be homeless. Caracole also has 30 housing vouchers funded through the HOPWA program. These vouchers do not have as stringent homelessness requirements as the Shelter Plus Care housing program. Caracole has a four-person housing team to assist clients with securing affordable housing. In addition, Caracole is opening a halfway house in their building that will also be available for individuals who are not HIV-positive. Limitations were cited regarding the HIV-specific

housing programs, as there are usually waiting lists for the transitional housing programs and vouchers as well as requirements regarding homelessness and exhaustion of all other resources in order to be eligible for assistance.

Housing was reported to be particularly challenging to find in the more rural areas of the MSA. One interview participant reported that housing availability was the worst issue they deal with in trying to serve individuals living with HIV in Northern Kentucky. No dedicated housing or vouchers were reported for people living with HIV in the areas of the MSA outside of Cincinnati. However, HOPWA short-term housing assistance programs were said to be available in these areas.

HIV PREVENTION |

HIV prevention efforts are primarily concentrated on providing HIV testing and linking individuals who test positive to medical treatment. The Ohio Department of Health allocates HIV prevention funding to each region of the state and each region has an HIV prevention coordinator who in turn allocates this funding to local agencies for prevention activities. In the Cincinnati region, the prevention coordinator is located at Hamilton County Public Health. Hamilton County Public Health provides some HIV testing onsite, such as partner testing, but the majority of HIV testing in the Cincinnati area is provided by Planned Parenthood and the UC Medical Center Emergency Room. The Health Department does provide syphilis testing, and reported that they see a large number of new positives who are co-infected with HIV and syphilis.

HIV prevention efforts are primarily concentrated on providing HIV testing and linking individuals who test positive to medical treatment.

The UC Emergency Room (ER) initiated an HIV testing program in 1998 and has been a leader in research regarding best practices for HIV screening and testing in hospital ERs.[68] The ER testing program includes standard HIV risk screening and protocols for when to recommend HIV testing for individuals seeking care in the ER. As mentioned above, the ER has a part-time linkage coordinator to assist individuals newly-diagnosed with HIV to enter HIV treatment. This coordinator also assists individuals who have fallen out of HIV care to return to care if they are amenable to reengagement. Individuals newly-diagnosed with

The UC Emergency Room (ER) initiated an HIV testing program in 1998 and has been a leader in research regarding best practices for HIV screening and testing in hospital ERs.

HIV who are referred to the UC ID clinic through the linkage coordinator can often be seen at the clinic the day they test positive in the ER.

Planned Parenthood receives funding from Hamilton County Public Health to provide HIV/HCV testing in the community, including rapid HIV testing. They test onsite, at substance abuse treatment facilities, and in the community using their mobile testing van. The mobile testing van provides testing at local bars, neighborhoods frequented by sex workers (including transgender sex workers), correctional facilities, and community events. Planned Parenthood cannot use their funding to travel to parts of the MSA that are located in IN or KY to do testing but can test individuals from these states that have some means of transportation to Ohio.

In Northern Kentucky, the Northern Kentucky Health District has one prevention worker who facilitates HIV testing, education and linkage to treatment for individuals testing positive for HIV. A number of barriers to testing and prevention efforts in general in Northern Kentucky were noted, including a lack of testing efforts in local ERs, difficulty in getting primary care practitioners to discuss sexual health including HIV testing with patients, lack of CDC prevention funding due to lower HIV prevalence than other US regions, as well as lack of funding for prevention from the state. Another barrier reported in all areas of the MSA was a reluctance to engage in HIV testing, particularly among youth.

In addition to HIV testing, Planned Parenthood provides a number of evidence-based prevention interventions including Personal Cognitive Counseling (PCC),[69] Healthy Relationships,[70] and Comprehensive Risk Counseling and Services (CRCS).[71] Also Central Community Health Board in Cincinnati, in conjunction with the Drug Court, has SAMHSA funding to provide intensive outpatient therapy and medication-assisted therapy as well as trauma-informed care for high risk/high need offenders.[72]

In the last year, Planned Parenthood initiated a syringe exchange program to address the burgeoning injection drug use problem in the area. The syringe exchange program is available twice a week at two sites in Cincinnati. HIV/Hepatitis C testing is available at the syringe exchange sites and assistance with accessing substance abuse treatment is provided for individuals willing to seek this care. In the last year, 50,000 syringes were exchanged and 14 individuals initiated and were retained in substance abuse treatment. Planned Parenthood is planning to expand the program to Butler County, OH. The Northern Kentucky Health Department previously had an HCV testing grant that ended in October 2014, and interview participants reported a large population with HCV and STIs, but a lack of HCV care

In the last year, Planned Parenthood initiated a syringe exchange program to address the burgeoning injection drug use problem in the area.

options close by for those testing positive.

Interview and focus group participants reported that there is very little funding available in the MSA for primary prevention initiatives such as TV ads, billboards or other media campaigns. As a result, there is a lack of education about HIV in the community. Several participants believed this lack of investment and interest in HIV/STD education reflects the conservative and religion-focused leanings of the community. These leanings were also reported to affect prevention efforts in schools. Participants noted that most school programs were abstinence-based, therefore, lack a comprehensive sex education focus. However, some local schools have adopted a broader focus for their sex education curriculum. In Northern Kentucky, there is also a lack of evidence-based HIV education in schools. One participant noted that there is a state-approved comprehensive sex education program available to school districts in Kentucky but most districts have not adopted the curriculum. Instead, the schools have maintained an abstinence-only focus. Education about HIV among medical providers and clinic staff was also noted as a need within the community.

Many churches are reportedly not providing HIV information to their parishioners; however, some churches in the Cincinnati area were identified as offering HIV education and support for members and the larger community. These churches included Methodist churches and some primarily African-American churches. A faith-based organization, IV Charis, provides HIV education and testing in the community and in African-American churches. IV Charis has also participated in a research partnership with UC to address HIV stigma and prevention needs in African American communities of faith[73] and provided HIV/STD education for women in the Cincinnati Region through a collaboration with the organization Every Child Succeeds. This education was associated with an increase in sexual health literacy and ability to make better decisions around communication and sexual behaviors among participants. In addition to HIV testing and education, IV Charis launched an innovative website for minority youth that provides HIV/STD and substance use education in an interactive format designed specifically to engage youth.[74]

Pre-exposure prophylaxis (PrEP) is available in the UC clinic and also in the private UC-affiliated clinics in the suburbs. UC provides HIV education and condoms to individuals enrolled in PrEP, as well as for partners and friends of UC ID clinic clients.

Some participants reported concerns that there has been little financial support for minority organizations in Cincinnati to provide HIV prevention and education services and little minority representation in decisions regarding funding and prevention planning. These participants believed this was needed to adequately address HIV, as HIV is now predominantly affecting minority populations.

STIGMA |

The majority of interview and focus group participants reported that significant levels of HIV-related stigma and fear are present in the community and have persisted over time. Stigma was cited as a substantial barrier to testing and medical care because of fear of being identified as HIV-positive. The Northern Kentucky Health District was reported to have 41% concurrent diagnosis of HIV and AIDS last year, showing evidence of late diagnosis and delayed testing behaviors that an interview participant attributed to effects of stigma and denial.

Focus group participants shared the following regarding stigma:

> ***"Stigma is still so relevant, so profound, it has us to be able to have support groups and be okay with going to the doctor and sitting in the rooms. It's a lot of people living with HIV that don't go to IDC, they don't go because..."***
>
> ***"Right."***
>
> ***"...if you go to IDC everybody knows."***
>
> ***"People break people's confidentiality on an everyday basis."***
>
> ***"You can get killed."***
>
> ***"You can get killed.""There's a whole lot of things happening."***
>
> ***"Or they'll talk -- people don't talk to nobody, just because they have it."***
>
> ***"... I got people in the hood screaming, she got that shit, people that jump me, shot at me, tried to kill me.... I got to know that at the end of the day I'm either going to let it eat me alive and kill me or I can get above and beyond it and at least keep somebody else from going through what I went through."***

Rural areas were thought to be particularly vulnerable to HIV-related stigma. Factors such as continued stigma in churches and HIV criminalization laws were said to perpetuate stigma. However, a few participants believed that stigma had decreased over time. For example, one participant detected less stigma and more hope among individuals diagnosed with HIV but thought that there was still residual stigma in certain areas such as churches and places of concentrated poverty, and surrounding issues of sexuality. Another participant believed that education being facilitated in African-American churches by a local ASO, IV Charis, had assisted in reducing HIV-related stigma.

Focus group participants reported that stigma is both internalized by people living with HIV as well as experienced in the community. They described instances of people living with HIV being shunned, verbally—and even physically abused. They also discussed how stigma negatively impacts participation in HIV testing and treatment as well as having a negative influence on community prevention efforts. For instance, participants described situations where communities have refused to allow an HIV testing van to park in their area and do outreach testing, which participants attributed to stigma and denial regarding the severity of HIV in their neighborhoods. Focus group participants also discussed stigma concerns due to having one central treatment center for HIV; they felt that people knowing that the UC ID clinic was associated with HIV discouraged some from seeking care.

Participants reported a greater concentration of stigma in the African-American community, particularly around issues of sexuality, and were split on whether men experienced more stigma than women. However, most participants mentioned differences in stigma by age. The general perception was that stigma was greater in the older generations, whose views may further perpetuate stigma. Younger individuals were more likely to take the risk of HIV less seriously, thinking that they could just "take a pill" if infected, which participants believed discouraged risk reduction behaviors. Several participants expressed the perception that younger minority MSM are more out about their identity and seem to experience less stigma about their sexuality than their older counterparts. However, one participant described that while younger individuals often present a blasé attitude about HIV, once they become infected they often show considerable fears about revealing their HIV status and being identified as HIV-positive by others. Some participants also described a sense of fatalism among younger minority MSM, as they hear many of these individuals expressing feelings that acquiring HIV is inevitable. For example, one interview participant said:

> ***"I think the stigma that we see since we have such a high number of our positives being young African-American MSMs, we've had some of them test positive and they were expecting it, and almost kind of like the bug chaser thing. Like they just thought it was inevitable, that it's just going to happen."***

Focus group participants also described the following:

> ***"It's the older generation label that we still deal with, with society today. These young people, 24 and under…"***
>
> ***"They're cool with it."***
>
> ***"oh you got -- oh, okay, you're cool, you got AIDS."***
>
> ***"It's crazy."***

"Girl you take your medicine today? Okay. Let's go to the party."

POLITICS AND ADVOCACY EFFORTS |

Interview participants described the Cincinnati MSA as politically conservative, quite religious, and not generally focused on or receptive to creating or expanding HIV prevention efforts. However, participants described how the OH governor championed Medicaid expansion despite resistance in his political party, which has ultimately increased access to health insurance for people living with HIV.

Participants reported very little in the way of advocacy for HIV-related issues at the local level and some advocacy directed at the state level. Most of the advocacy efforts related to HIV in both the Ohio and Kentucky regions of the MSA have focused on syringe exchanges and on LGBT concerns. One participant spoke about increased complacency regarding HIV advocacy since the disease is much more treatable than it has been in the past. It was also mentioned by one participant that more advocacy efforts existed earlier on in the epidemic, but that advocates have either passed away or lost their drive to continue working on these issues. There is a statewide advocacy network, the Ohio AIDS Coalition, which is part of the AIDS Resource Center of Ohio. The Ohio AIDS Coalition provides leadership development and advocacy opportunities, including a statewide advocacy day at the state capital.[75]

COMMUNITY STRENGTHS |

Interview and focus group participants listed a number of strengths of the MSA in addressing HIV including strong and productive collaborations between organizations including the UC ID clinic, Caracole and Planned Parenthood. Quality HIV medical and social services care and dedicated, compassionate HIV care providers and prevention programs were also cited as community strengths. Many of these care and prevention providers have considerable expertise and experience, as they have been working in the HIV field for years. The AIDS Clinical Trials Group (ACTG) community advisory board was also cited as a community strength. This group reviews research applications and provides consumer input to the ACTG and clinic and provides a forum for newly-diagnosed individuals at the UC ID clinic to talk to peers.

Interview and focus group participants listed a number of strengths of the MSA in addressing HIV including strong and productive collaborations between organizations.

Additional strengths cited by the study participants included a strong men's shelter program and collaboration between housing agencies; the recently initiated syringe exchange program; and the expansion of Medicaid in OH and KY—a factor that has resulted

in a shift to a greater proportion of HIV-positive individuals in the area having insurance coverage. Finally, the UC ER HIV testing program has been a leader in the development of best practices in ER HIV testing.[68] In addition to providing HIV testing activities, the program includes a linkage coordinator to connect newly-diagnosed individuals and individuals not currently engaged in HIV care with care resources.

CONCLUSIONS |

The Cincinnati MSA covers a large geographic area with a heterogeneous population. HIV epidemiology, needs and resources also differ across the MSA. The highest levels of HIV disease are in the inner city of Cincinnati, mirroring the higher concentration of poverty and other diseases in the inner city as compared to the outlying areas of the MSA. The MSA has significant resources available to address and abate HIV disease; however, there are a number of gaps that prevent the region from more optimally responding to HIV. Community resources include availability of quality HIV medical care and medical research; extensive testing outreach through venues and a mobile van; HIV case management availability; a newly-instituted syringe exchange program to address the significant injection drug use problem in the region; and expansion of Medicaid in IN, Ohio and Kentucky, allowing for wider access to medical care for individuals living with HIV and less reliance on Ryan White funds to provide for core medical services. However, the expansion has not been without complications, as both clients and providers report difficulty in ascertaining benefit information and complexity in working with the new plans as significant concerns. In addition, since the completion of data collection, Medicaid expansion in Kentucky is significantly threatened by the election of a new governor (November 2015) who notably campaigned on reducing the scope of Medicaid expansion.

Barriers:

- *Lack of a sufficient supply of affordable housing, transportation, and mental health and substance abuse treatment*
- *Significant HIV-related stigma*
- *Lack of access to comprehensive sex education in schools*
- *Lack of comprehensive prevention efforts*

Additional gaps and barriers to services in the Cincinnati area include a lack of enough critical resources including affordable housing, mental health and substance abuse treatment, transportation, and HIV support groups as well as a lack of access to comprehensive sex education in schools. For example, in Northern Kentucky, evidence-based comprehensive sex education programs are available and legal to provide but most local school systems will not implement them due to cultural beliefs and norms. This cultural climate reinforces the significant stigma reported by interview and focus group

participants alike. Although some participants reported improvements in stigma over time, most believed stigma remains prevalent and results in discrimination against people living with HIV and reluctance to participate in HIV testing and treatment. The barriers raised by study participants were often more acute in the outlying areas of the MSA.

Participants had a number of suggestions for improving the community response to HIV, including the creation of a community HIV coalition that would consist of individuals working in HIV prevention and care and individuals living with HIV. The purpose of the coalition would be to enhance collaboration between agencies, increase knowledge of services provided across agencies, reduce service duplication, and improve community HIV planning regarding care and prevention efforts. Additional recommendations included using state lab data to improve linkage efforts, expanding syringe exchange to Northern Kentucky; and enhancing and better organizing HIV-related advocacy efforts.

Recommendations:

- *Create a community HIV coalition*
- *Use state HIV lab data to improve linkage efforts*
- *Expand syringe exchange to Northern Kentucky*
- *Enhance HIV-related advocacy*

Figure 1: Service Strengths and Gaps on the Prevention/Treatment Cascade

Prevent New Infections	Identify Those Infected	Link to Care	Retain in Care	Treat/Suppress Viral Load
SERVICE STRENGTHS				
HIV PREVENTION	**HIV TESTING**	**LINKAGE TO HIV CARE**	**RETENTION IN HIV CARE**	**VIRAL SUPPRESSION**
▸ PrEP provided at UC ID and outlying clinics ▸ HIV/STD partner testing/notification services through Planned Parenthood, the Hamilton Public Health (PH), Northern Kentucky Health District ▸ Evidence-based prevention programs provided by Planned Parenthood ▸ HIV prevention/ education and testing in churches (IV Charis) ▸ Syringe Exchange program that also provides HIV/HCV testing at 2 sites in Cincinnati	▸ HIV/STD testing in the community through Planned Parenthood, Northern Kentucky Health District, and IV Charis ▸ County health departments testing (on-site) ▸ UC Emergency Room provides HIV screening and testing as well as linkage to care ▸ Mobile outreach testing van (Planned Parenthood)	▸ Linkage coordination available through UC ER, Hamilton PH, Planned Parenthood ▸ Northern KY Health District provides linkage to care program in Northern KY region ▸ Some funding for transportation to medical appointments	▸ Linkage coordinators work with individuals not receiving care to reduce barriers and facilitate re-entry to care ▸ UC ER able to identify individuals not currently in care who come to ER and offer linkage services ▸ Bus passes/gas stipends for medical care through Caracole and linkage coordinators ▸ Case management services ▸ HOPWA and other housing services provided through Caracole ▸ Healthcare for Homeless Project provides case management and collaborate closely with UC ID	▸ University of Cincinnati Medical Center ID clinic - HIV care, mental health care, pharmacy services, clinical trial ▸ ID Consultants of Northern Kentucky and other private ID clinics in the region ▸ University of Cincinnati Children's Hospital provides HIV care and has LGBT youth clinic ▸ In KY and OH, Medicaid expansion has significantly reduced number of HIV-positive individuals without health insurance
SERVICE GAPS				
▸ Lack of funding for HIV/STD education and health promotion programs in the community ▸ Challenges reaching youth with effective prevention programs as many schools districts do not have comprehensive sex education programs ▸ PrEP reported to be not well utilized ▸ No syringe exchange available outside of Cincinnati	▸ Stigma and denial result in reluctance to participate in testing ▸ Lack of ER testing in Northern Kentucky ▸ Absence of routine HIV testing by medical providers	▸ Some reported barriers in entering care at UC due to requirement of first meeting with a financial counselor ▸ Need for travel to care for most living outside of the immediate Cincinnati area ▸ Lack of consistently available transportation resources	▸ Stigma/disclosure avoidance affect client engagement ▸ Lack of stable housing ▸ Not enough transportation funding – particularly in more rural OH ▸ Complicated service networks ▸ Limited mental health/substance abuse care ▸ Not currently able to use state laboratory to identify individuals out of care but are working toward this	▸ Stigma re UC ID clinic identified as HIV provider in the area ▸ Lack of trust in health systems reported by some ▸ Travel is necessary for individuals in outlying areas - particularly OH and IN and transportation assistance limited

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