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Surveillance and epidemiological data create the foundation for effective public health intervention and guide the Chicago Department of Public Health's (CDPH) investments in programs, activities and services that prevent and treat sexually transmitted infections (STI) and HIV. Behind the data presented in this report is a team of committed, highly skilled and inquisitive professionals who often go unnoticed by external partners. Their approach to work is meticulous and methodical, striving every day to ensure our data projects are conducted with utmost integrity and rigor.

Our **Core HIV Surveillance and STI Surveillance** teams hold responsibility for managing our city's HIV and STI reporting databases. These databases contain information about all diagnosed HIV and STI cases reaching back to the early days of the epidemics. With these data, we are able to understand which population groups are most impacted by these diseases and the health status of these groups (or the individuals in these groups). Using this information, we are able to direct services and resources to those most in need.

Our **Medical Monitoring Project** (MMP) team investigates the experiences and needs of people living with HIV (PLWH). Through structured interviews and medical chart reviews, the MMP team gathers comprehensive clinical and behavioral information. This information helps us understand who is receiving medical care and treatment and the influence these services have on their lives. The data also illuminate disparities in care and other supportive services, which allow us to identify areas in need of additional resources and capacity development.

Our **National HIV Behavioral Surveillance** (NHBS) team examines behaviors associated with trends seen in HIV surveillance data. Through structured anonymous interviews with people from populations most impacted by HIV – gay, bisexual and other men who have sex with men (MSM), persons who inject drugs and heterosexuals at increased risk for HIV – the NHBS team collects data related to behavioral risk factors, HIV testing behaviors and use of prevention strategies, including PrEP and condoms. This information helps us identify populations at increased risk for HIV infection and the factors associated with that risk. NHBS provides us a glimpse of the leading edge of the epidemic.

Our **Research and Data Analysis** team is responsible for analyzing and interpreting the data collected through surveillance, MMP and NHBS. Epidemiologists use these data, in tandem with data collected through our prevention, care and housing programs, to

evaluate the impact our services are having. The team graphically illustrates data to more clearly represent the intricacies of our epidemics, using maps, charts, graphs and continua. The team also looks at the connections between data to identify how diseases interact, such as the co-occurrence of HIV and syphilis among gay, bisexual and other MSM.

Without the work of our Surveillance, Epidemiology and Research teams, we would not have strong, population-level data to match against the empirical data we gather through our programs, services and activities. Together, these data allow us to make well-informed and evidence-driven investments. As you read through this report, take a moment to appreciate the contributions made by each of these teams.

David Kern
Deputy Commissioner
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# TABLE OF CONTENTS

SURVEILLANCE REPORT HIGHLIGHTS	1
EXECUTIVE SUMMARY	2
SECTION ONE: HIV/AIDS, STIs, CHICAGO	5
HIV	6
CHLAMYDIA	9
GONORRHEA	11
PRIMARY & SECONDARY (P&S) SYPHILIS	13
CONGENITAL SYPHILIS	15
TABLE 1.1: HIV and AIDS Infections and Late Diagnosis by Selected Demographic Characteristics, Chicago, 2015	17
TABLE 1.2: HIV, AIDS, and STI Case Rates and HIV Prevalence Rates by Race/Ethnicity and Birth Sex, Chicago and United States	18
TABLE 1.3: People Living with HIV Infection (PLWH) and AIDS (PLWA) in 2014, by Selected Demographic Characteristics, Chicago	19
TABLE 1.4: Reported Cases of Chlamydia, Gonorrhea, Primary & Secondary (P&S) Syphilis	
by Selected Demographic Characteristics, Chicago	20
TABLE 1.5: Co-Infection between HIV Infection Diagnoses & Reported Cases of Chlamydia, Gonorrhea,	
Primary & Secondary (P&S) Syphilis by Selected Demographic Characteristics, Chicago, 2015	21
TABLE 1.6: Congenital Syphilis Cases by Selected Demographic Characteristics, Chicago, 2011-2015	22
FIGURE 1.1: HIV Continuum of Care Among Cases 13 Years and Older, Chicago, 2015	23
FIGURE 1.2: Rate of HIV Infection Diagnoses by Community Area, Chicago, 2015	24
FIGURE 1.3: Rate of People Living with HIV/AIDS (PLWHA) by Community Area, Chicago, 2014	25
FIGURE 1.4: Chlamydia Case Rates by Community Area, Chicago, 2015	26
FIGURE 1.5: Gonorrhea Case Rates by Community Area, Chicago, 2015	27
FIGURE 1.6: Primary and Secondary (P&S) Syphilis Case Rates by Community Area, Chicago, 2015	28
FIGURE 1.7: Average Annual Congenital Syphilis Case Rates by Community Area, Chicago, 2011-2015	29
SECTION TWO: TRENDS IN HIV, AIDS & STIs, CHICAGO	30
TRENDS	
FIGURE 2.1: People Living with HIV Infection (PLWH), People Diagnosed with HIV Infection, People Diagnosed with AIDS, Concurrent	
HIV/AIDS Diagnoses, and Deaths Among PLWH, Chicago, 1990-2015	33
FIGURE 2.2: Number of Reported Sexually Transmitted Infections, Chicago, 1997-2015	34
TABLE 2.1: HIV/STI by Year of Diagnosis and Sex, Chicago, 2011-2015	35
TABLE 2.2: HIV/STI by Year of Diagnosis and Age Group, Chicago, 2011-2015	36
TABLE 2.3 HIV/STI by Year of Diagnosis and Race/Ethnicity, Chicago, 2011-2015	37
SECTION THREE: FUTURE	46
HIV/AIDS STRATEGY	
PRIORITY POPULATIONS	
FIGURE 3.1: HIV Continuum of Care Among Cases 13 Years and Older with NHAS Indicators # 4-6, Chicago, 2015	

# TABLE OF CONTENTS

FIGURE 3.2: HIV Continuum of Care Among Men who have Sex with Men (MSM) Cases 13 Years and Older, Chicago, 2015	46
FIGURE 3.3: Prevalence & Incidence (New Diagnoses) of HIV Infections among Men who have Sex with Men (MSM)	
Cases, 2000-2014, Chicago	47
FIGURE 3.4: HIV Continuum of Care Among Non-Hispanic Black Men who have Sex with Men (BMSM) Cases 13 Years and Older,	
Chicago, 2015	48
FIGURE 3.5: Prevalence and Incidence (New Diagnoses) of HIV Infections among Non-Hispanic Black Men who have Sex with Men	
(BMSM) Cases, 2000-2014, Chicago	49
FIGURE 3.6: HIV Continuum of Care Among Cisgender Non-Hispanic Black Heterosexual Women (BHW) Cases 13 Years & Older,	
Chicago, 2015	50
FIGURE 3.7: Prevalence and Incidence (New Diagnoses) of HIV Infections among Non-Hispanic Black Heterosexual Women	
(BHW) Cases, 2000-2014, Chicago	51
SECTION FOUR: SPOTLIGHT	52
STI SPECIALTY CLINICS	53
TABLE 4.1: Patient Populations at CDPH STI Specialty Clinics by Location: by Selected Demographic Characteristics, Chicago, 2015	55
TABLE 4.2: Number of Individuals Diagnosed with Chlamydia or Gonorrhea at CDPH STI Specialty Clinics by Location, Chicago, 2015	56
FIGURE 4.1: Proportion of Female, Male and MSM Diagnosed with Chlamydia at CDPH STI Specialty Clinics, Chicago, 2015	57
FIGURE 4.2: Proportion of Female, Male and MSM Diagnosed with Gonorrhea at CDPH STI Specialty Clinics, Chicago, 2015	58
FIGURE 4.3: Proportion of Female, Male and MSM Diagnosed with Primary & Secondary (P&S) Syphilis at CDPH STI Specialty Clinics,	
Chicago, 2015	59
APPENDICES	60
APPENDIX A: Technical Notes	
APPENDIX B: Geocoding Methodology and Limitations	
APPENDIX O LL L CA	67
TABLE A1: 2015 HIV Infection Diagnosis Rates by Community Area, Chicago	
TABLE A2: People Living with HIV Infection (Prevalence) in 2014 by Community Area, Chicago	
TABLE A3: Chlamydia Case Rates by Community Area, Chicago	
TABLE A4: 2015 Gonorrhea Case Rates by Community Area, Chicago	
TABLE A5: 2015 Primary and Secondary (P&S) Syphilis Case Rates by Community Area. Chicago	76-77

#### **5 SURVEILLANCE REPORT HIGHLIGHTS**

- 1. Chicago is close to meeting the National HIV/AIDS Strategy goal of 85% of new diagnoses linked to HIV medical care within 1 month of diagnosis, with 79% of newly diagnosed HIV positive individuals in 2015 being linked within this timeframe.
- 2. Non-Hispanic Blacks are the only racial/ethnic group for which there has been overall decline in HIV, chlamydia, gonorrhea, and P&S syphilis infection diagnoses from 2011-2015.
- 3. The increases seen in STIs in the city of Chicago follow the national trends reported for the United States according to the 2015 CDC STD Surveillance report released in October 2016. As Chicago is the third largest city in the United States and thus has a higher morbidity of STIs than suburban or rural areas. As Chicago is the third largest city in the United States and thus has a higher morbidity of STIs than suburban or rural areas, the increase in STIs is concerning, but not surprising.
- 4. In 2015, CDPH STI Specialty clinics provided STI diagnoses and treatment for over 20,000 Chicagoans.
- 5. The number of concurrent/late HIV diagnoses (an individual newly diagnosed with HIV and then subsequently AIDS within 12 months) are the lowest in Chicago since 1990, indicating significant progress has been made towards diagnosing infection and providing care to newly diagnosed HIV positive individuals.





#### **EXECUTIVE SUMMARY**

The City of Chicago Department of Public Health (CDPH) believes that all Chicagoans should have the ability to access resources, opportunities, and environments that allow them to lead their healthiest lives. Through collaborations with communities, researchers, and public and private organizations, CDPH is committed to taking action to prevent sexually transmitted infections (STI) and related health consequences in order to achieve a sexually healthy Chicago.

The annual CDPH HIV/STI Surveillance Report presents cases of HIV, AIDS, gonorrhea, chlamydia, syphilis, and congenital syphilis within the city of Chicago. Like most large urban areas, Chicago has a higher disease morbidity than suburban or rural areas. The opportunity to report annually on HIV/AIDS and STI provides data useful for service providers, community organizations, program planners, policy makers, and the general public.

This report highlights disease trends and links these trends to CDPH's Healthy Chicago 2.0 initiative for reducing health inequities. Throughout this report, health inequities demonstrated by the reported data will be identified by this symbol (HC2), in hopes of calling attention to areas for continued improvement as we strive to address the sexual health of the city's populations in greatest need.

#### **REPORT DATA SUMMARY**

#### **HIV CARE CONTINUUM**

- In 2015, 79% of those newly diagnosed with HIV were linked to HIV medical care within 1 month of HIV diagnosis, and by 12 months post-diagnosis 90% of individuals newly diagnosed had been linked to medical care.
- Among all PLWHA in Chicago, 58% had accessed care in 2015, and 40% were considered to be retained in care.
- Forty-eight percent of PLWHA in Chicago were virally suppressed.

#### HIV

- There was a total of 921 new HIV infection diagnoses among Chicago residents in 2015, corresponding to a rate of 34.1 per 100,000 population. There was a total of 23,355 Chicagoans who had been diagnosed with HIV through 2014 and were living with HIV in 2015, corresponding to a rate of 865.4 per 100,000 per population.
- There were 5.4 times as many new HIV diagnoses in men than in women.
- In 2015, individuals aged 20-29 years old were the most frequently diagnosed age group, representing 43.2% of all new HIV diagnoses.
- Non-Hispanic (NH) Blacks were the most frequently diagnosed population, representing 54.1% of new HIV diagnoses, 54.6% of AIDS diagnoses, and 49.7% of concurrent/late diagnoses in 2015.
- Compared with other HIV transmission groups, there were 4.7 times more new HIV diagnoses among MSM than those reporting heterosexual contact transmission (HET) and 17.9 times more new HIV diagnoses than those reporting injection drug use (IDU) transmission.
- In 2015, the highest rates of new HIV infection diagnoses were seen in individuals residing in Grand Boulevard, Uptown, Greater Grand Crossing, Chatham, and Edgewater; the highest rates of people living with HIV infections were observed in Uptown, Edgewater, and Rogers Park.

# CHLAMYDIA, GONORRHEA, AND PRIMARY & SECONDARY (P&S) SYPHILIS

- There were a total of 29,018 chlamydia cases, 8,786 gonorrhea cases, and 758 P&S syphilis cases reported to CDPH in 2015.
- There were 1.8 times as many reported chlamydia cases in women than men, 1.4 times as many reported gonorrhea cases in men than women, and 12.1 times as many reported syphilis cases in men than women. The largest proportion of P&S syphilis cases (62.0%) were among MSM.
- In 2015, individuals aged 20-29 years old were the most frequently diagnosed age group for chlamydia, gonorrhea, and P&S syphilis.
- NH Blacks were the most frequently diagnosed population among all three reportable STIs, representing 47.9% of reported chlamydia cases, 55.2% of reported gonorrhea cases, and 43.5% of reported P&S syphilis cases in Chicago.
- In 2015, the highest chlamydia case rates were observed among individuals living in North Lawndale, Riverdale, and West Garfield Park; the highest gonorrhea case rates were in North Lawndale, West Garfield Park, and Englewood; and the highest P&S syphilis case rates were in Uptown, Englewood, and Washington Park.

The data presented in this report show important progress being made towards reducing the transmission of HIV and STI in Chicago. However, the data also highlight inequities among particular populations, whether defined by demographics or geographic region, that need to be prioritized when striving for interrupting transmission of disease and providing treatment and quality health care. CDPH looks forward to working with and within our communities to achieve a sexually healthy city for all Chicagoans.





## **HIV CONTINUUM OF CARE, CHICAGO 2015**

The HIV continuum of care is an important tool for monitoring progress and identifying opportunities for HIV prevention and treatment interventions. Since ensuring HIV-positive individuals are engaged in care is critical to both individual and population level health, the continuum was developed to depict two paths: (1) The percentages of newly diagnosed individuals linked to HIV medical care over the course of 1 year; and (2) The percentages of people living with HIV at specific levels of care engagement and viral suppression.

In 2015, 79% of those diagnosed with HIV were linked to HIV medical care within 1 month of HIV diagnosis. By 12 months post-diagnosis, 90% of the newly diagnosed had been linked to medical care. For individuals diagnosed with HIV through 2014 and living with HIV in 2015, 58% had accessed medical care (having at least 1 medical visit in 2015), 40% were considered to be retained in care (having at least 2 medical visits in 2015), and 56% had a viral load test in the past 12 months. Reaching viral suppression for individuals that are HIV positive is essential to living a high-quality and healthy life and to reducing the likelihood HIV will be transmitted to others. For individuals diagnosed with HIV through 2014 and living with HIV in 2015, only 48% were considered to be virally suppressed (< 200 copies/mL), indicating an opportunity to strengthen HIV prevention and treatment interventions. The data represented in the continuum highlight Chicago's continuing efforts to ensure that those newly diagnosed are rapidly linked to medical care and the need for increased attention on services that assist individuals living with HIV to obtain viral suppression (Figure 1.1).

### **HIV IN CHICAGO**

In 2015, a total of 921 individuals were newly diagnosed with HIV in the city of Chicago, and 372 individuals were newly diagnosed with AIDS (Stage 3 HIV infection) (Table 1.1). These case counts correspond to rates of 34.1 per 100,000 population and 13.8 per 100,000 population, respectively (Table 1.2). Of those newly diagnosed in 2015, a total of 173 individuals were considered to have a late/concurrent diagnosis, indicating that those individuals were diagnosed with HIV and subsequently AIDS within the 12-month period (Table 1.1).

There was a total of 23,355 individuals who had been diagnosed with HIV through 2014 and living with HIV in 2015 (Table 1.3). This case count corresponds to a rate of 865.4 per 100,000 population (Table 1.2). Of those living with HIV in 2015, a total of 12,451 individuals were living with AIDS (Table 1.3).

#### **HIV BY CHICAGO COMMUNITY AREA**

In 2015, the rates of reported cases of HIV ranged from 0 to 91.2 per 100,000 population throughout the city of Chicago (Figure 1.2). In 2015, the five community areas with the highest HIV infection diagnosis rates were Grand Boulevard (91.2 per 100,000), Uptown (86.9 per 100,000), Greater Grand Crossing (70.5 per 100,000), Chatham (67.7 per 100,000), and Edgewater (67.2 per 100,000) (Figure 1.2; Appendix Table A1). (HC2)

In 2014, the rates of people living with HIV/AIDS ranged from 47.1 to 2,267.5 per 100,000 population throughout the city of Chicago (Figure 1.3). The three community areas with the highest HIV prevalence rates were Uptown (2,267.5 per 100,000), Edgewater (2,061.2 per 100,000), and Rogers Park (1,694.8 per 100,000) (Figure 1.3; Appendix Table A2).(HC2)

#### **HIV BY SEX**

In 2015, there were 5.4 times as many new HIV diagnoses in men than women, with 763 cases reported among males and 139 cases reported among females (Table1.1). $^{\text{(HC2)}}$  The largest number of late diagnoses occurred among males when compared to females (Table 1.1). $^{\text{(HC2)}}$  New diagnoses among transgendered individuals accounted for < 2.0% of the total 2015 new diagnoses (Table 1.1).

In 2014, there were 4.1 times as many men living with HIV than women (18,570 males and 4,571 females) (Table 1.3). (HC2) HIV prevalence among transgendered individuals accounted for < 1% of the total Chicago prevalence (Table 1.3).

#### **HIV BY AGE**

In 2015, individuals aged 20-29 years old were the most frequently diagnosed age group, representing 43.2% of all new HIV diagnoses and were the age group with the largest percentage of late diagnosed individuals (Table 1.1). If this group were combined with those aged 30-39 years old, then those individuals would represent two-thirds (66.6%) of new HIV diagnoses in 2015 (Table 1.1). (HC2)

In 2014, individuals aged 40-59 years old accounted for over half (56.8%) of those individuals living with HIV in the city of Chicago (Table 1.3). (HC2) Individuals aged 20-29 years old (who accounted for the largest number of new diagnoses) only represented 11.4% of those living with HIV (Table 1.3).

#### **HIV BY RACE/ETHNICITY**

In 2015, Non-Hispanic (NH) Blacks were the most frequently diagnosed population, representing 54.1% of new HIV diagnoses, 54.6% of AIDS diagnoses, and 49.7% of late diagnoses (Table 1.1). When compared to the next two populations with the largest number of individuals newly diagnosed, there were 2.5 times as many new HIV diagnoses in NH Blacks than Hispanics and 2.8 times as many than NH White new HIV diagnoses. (HC2)

In 2014, NH Blacks accounted for just over half (50.5%) of those individuals living with HIV in the city of Chicago (Table 1.3). When compared with the next two populations with the largest number of people living with HIV, there were 2.7 times more NH Blacks living with HIV than Hispanics living with HIV and 2.1 times more than NH Whites living with HIV (Table 1.3). (HC2)

#### **HIV BY TRANSMISSION GROUP**

In 2015, men who have sex with men (MSM) accounted for the majority (75.8%) of new HIV diagnoses in the city of Chicago (Table 1.1). (HC2) Compared with other HIV transmission groups, there were 4.7 times more new HIV diagnoses among MSM than those reporting heterosexual contact transmission (HET) and 17.9 times more new HIV diagnoses than those reporting injection drug use (IDU) transmission (Table 1.1). (HC2)

In 2014, MSM represented 61.6% of individuals living with HIV in the city of Chicago (Table 1.3). In comparison to other HIV transmission groups, there were 3.5 times as many MSM living with HIV than HET and 4.6 times as many MSM living with HIV than IDU (Table 1.3). (HC2)

#### CHLAMYDIA IN CHICAGO

Chlamydia, a sexually transmitted bacterial infection caused by *Chlamydia trachomatis*, is the most common notifiable disease in the United States. According to the CDC 2015 STD Surveillance Report, chlamydia is one of the most prevalent STIs and has comprised the largest proportion of all STIs reported to CDC since 1944. In 2015, a total of 29,018 chlamydia cases were reported in the city of Chicago (Table 1.4). This case count corresponds to a rate of 1,075.2 per 100,000 population (Table 1.2).

#### CHLAMYDIA BY CHICAGO COMMUNITY AREA

In 2015, the rates of reported cases of chlamydia ranged from 134.1 to 3,210.6 per 100,000 population throughout the city of Chicago (Figure 1.4). In 2015, the highest chlamydia case rates were North Lawndale (3,210.6 per 100,000), Riverdale (2,962.0 per 100,000), and West Garfield Park (2,933.2 per 100,000) (Figure 1.4; Appendix Table A3). (HC2)

#### **CHLAMYDIA BY BIRTH SEX**

In 2015, there were 1.8 times as many reported chlamydia cases in women than men, with 18,635 cases reported among females and 10,299 cases reported among males (Table 1.4). (HC2) This disparity between the sexes is consistent with previous years and likely reflects a larger number of females screened for this infection. It is also likely that many of the sex partners of women with chlamydia did not receive a diagnosis nor were they reported as having chlamydia infections.

### **CHLAMYDIA BY AGE**

In 2015, individuals aged 20-29 years old were the most frequently diagnosed age group, representing 54.6% of all reported chlamydia cases (Table 1.4). If this group were combined with those aged 13 to 19 years old, then all those individuals (13 to 29 years) would represent 82.4% of all reported chlamydia cases in 2015 (Table 1.4). (HC2)

#### CHLAMYDIA BY RACE/ETHNICITY

In 2015, NH Blacks were the most frequently diagnosed population, representing 47.9% of reported chlamydia cases in Chicago (Table 1.4). When compared to the next two populations with the largest number of reported cases, there were 3.6 times as many chlamydia cases in NH Blacks than Hispanics and 6.5 times as many than in NH Whites (Table 1.4). (HC2)

#### CHLAMYDIA + HIV CO-INFECTION

In 2015, a total of 839 reported chlamydia cases were also co-infected with HIV (Table 1.5). The majority of co-infected individuals were male (88.9%), NH Black (42.2%), aged 20-29 years (43.3%), and were MSM (61.2%) (Table 1.5). (HC2)

#### **GONORRHEA IN CHICAGO**

Gonorrhea is a sexually transmitted bacterial infection caused by *Neisseria gonorrhoeae* and is the second most commonly reported notifiable disease in the United States. According to the CDC 2015 STD Surveillance Report, gonorrhea infections are a major cause of pelvic inflammatory disease (PID) in the United States and certain strains of the bacteria have developed resistance to many of the antimicrobials used for treatment. In 2015, a total of 8,786 gonorrhea cases were reported in the city of Chicago (Table 1.4). This case count corresponds to a rate of 325.5 per 100,000 population (Table 1.2).

#### **GONORRHEA BY CHICAGO COMMUNITY AREA**

In 2015, the rates of reported cases of gonorrhea ranged from 0 to 1,086.0 per 100,000 population throughout the city of Chicago (Figure 1.5). In 2015, the community areas with the highest gonorrhea case rates were North Lawndale (1,086.0 per 100,000), West Garfield Park (961.1 per 100,000), and Englewood (929.7 per 100,000) (Figure 1.5; Appendix Table A4).(HC2)

#### **GONORRHEA BY BIRTH SEX**

In 2015, there were 1.4 times as many reported gonorrhea cases in men than women, with 5,173 cases reported among males and 3,583 cases reported among females (Table 1.4). (HC2) This disparity between the sexes may be reflective of either increased transmission or increased case ascertainment (e.g., through increased extra-genital screening) among men. Since 2011, gender of sex partner was added to the Illinois National Electronic Disease Surveillance System (INEDSS), which allows providers to report this information to the health department to assess trends of gonorrhea cases among MSM.

#### **GONORRHEA BY AGE**

Similar to reported cases of chlamydia, gonorrhea cases in Chicago are concentrated among adolescents and young adults. In 2015, individuals aged 20-29 years old were the most frequently diagnosed age group, representing 51.5% of all reported gonorrhea cases (Table 1.4). If this group were combined with those aged 13 to 19 years old, then all those individuals (13 to 29 years) would represent 76.2% of all reported gonorrhea cases in 2015 (Table 1.4). (HC2)

#### **GONORRHEA BY RACE/ETHNICITY**

In 2015, NH Blacks were the most frequently diagnosed population, representing 55.2% of reported gonorrhea cases in Chicago (Table 1.4). When compared to the next two populations with the largest number of reported cases, there were 7.5 times as many gonorrhea cases in NH Blacks than Hispanics and 5.1 times as many than in NH Whites (Table 1.4). (HC2)

### **GONORRHEA + HIV CO-INFECTION**

In 2015, a total of 761 reported gonorrhea cases were also co-infected with HIV (Table 1.5). The majority of co-infected individuals were male (96.6%), NH Black (41.3%), aged 20-29 years (45.5%), and were MSM (67.8%) (Table 1.5). (HC2)

#### **P&S SYPHILIS IN CHICAGO**

Syphilis is a sexually transmitted bacterial infection caused by *Treponema pallidum* and results in a genital ulcerative disease that if left untreated can result in significant medical complications and facilitate the transmission and acquisition of HIV infection (CDC STD Surveillance Report, 2015). Primary and secondary syphilis are the earliest stages of the infection that reflect symptomatic disease and are used as indicators of new infection. In 2015, a total of 758 P&S syphilis cases were reported in the city of Chicago (Table 1.4). This case count corresponds to a rate of 28.1 per 100,000 population (Table 1.2).

#### P&S SYPHILIS BY CHICAGO COMMUNITY AREA

In 2015, the rates of reported cases of P&S syphilis ranged from 0 to 122.4 per 100,000 population throughout the city of Chicago (Figure 1.6). In 2015, the three community areas with the highest P&S syphilis case rates were Uptown (122.4 per 100,000), Edgewater (88.5 per 100,000), and Washington Park (85.3 per 100,000) (Figure 1.6; Appendix Table A5). (HC2)

#### **P&S SYPHILIS BY BIRTH SEX**

In 2015, there were 12.1 times as many reported syphilis cases in men than women, with 700 cases reported among males and 58 cases reported among females (Table 1.4). (HC2) This disparity between the sexes may be reflective of either increased transmission or increased diagnostic screening among men, especially MSM.

#### **P&S SYPHILIS BY AGE**

In 2015, individuals aged 20-29 years old were the most frequently diagnosed age group, representing 40.2% of all reported syphilis cases (Table 1.4). However, unlike cases reported for chlamydia and gonorrhea, older age groups made up the majority of reported P&S syphilis cases. Thus, individuals aged 20 to 39 represented 66.5% of all reported P&S syphilis cases in 2015 (Table 1.4). (HC2)

#### **P&S SYPHILIS BY RACE/ETHNICITY**

Like with other reportable STIs in 2015, NH Blacks were the most frequently diagnosed population, representing 43.5% of reported P&S syphilis cases in Chicago (Table 1.4). When compared to the next two populations with the largest number of reported cases, there were 2.2 times as many P&S syphilis cases in NH Blacks than Hispanics and 1.3 times as many than in NH Whites (Table 1.4). (HC2)

#### P&S SYPHILIS BY TRANSMISSION GROUP

According to the 2015 CDC STD Surveillance Report, MSM accounted for the majority of reported P&S syphilis cases in 2015 in the United States. Similarly in Chicago, the largest proportion of P&S syphilis cases (62.0%) were among MSM, while men who have sex with females represented close to 11% (Table 1.4). (HC2) Notably, 19.4% of male syphilis cases were reported as 'unknown' risk, which, if known, could potentially increase the number of MSM cases.

#### **P&S SYPHILIS + HIV CO-INFECTION**

In 2015, a total of 301 reported P&S syphilis cases were also co-infected with HIV (Table 1.5). The majority of co-infected individuals were male (99.7%), NH Black (45.8%), aged 20-29 years (36.2%), and were MSM (77.7%) (Table 1.5). (HC2)

#### **CONGENITAL SYPHILIS IN CHICAGO**

If an early syphilis infection is left untreated in a pregnant woman, it can lead to congenital syphilis which can lead to infection of the fetus and increase the risk for stillbirth or death of the infant. According to the 2015 CDC STD Surveillance Report, after decreasing from 2008-2012, there has been a national increase in congenital syphilis cases from 2012-2015. In 2015, there were 24 congenital syphilis cases reported in Chicago, the highest number of cases in the past 5 years (Table 1.6). In 2016, CDPH launched a campaign to bring awareness to this disease. (https://www.cityofchicago.org/city/en/depts/cdph/supp\_info/hiv/protect-your-baby-from-congenital-syphilis.html)

# CONGENITAL SYPHILIS BY CHICAGO COMMUNITY AREA

In 2015, the rates of reported cases of congenital syphilis ranged from 0 to 392.2 per 100,000 population throughout the city of Chicago (Figure 1.7). The Chicago community areas with the highest average congenital syphilis case rates from 2011 to 2015 were West Garfield Park, North Lawndale, Oakland, Fuller Park, Calumet Heights, Roseland, Riverdale, West Englewood, and Greater Grand Crossing (Figure 1.7). (HC2)

#### **CONGENITAL SYPHILIS BY MATERNAL AGE**

In 2015, mothers aged 20-29 accounted for 79.2% of the congenital syphilis cases in the city of Chicago (Table 1.6). This age group has accounted for the majority of congenital syphilis cases for the past 5 years, with mothers aged 20-24 years consistently representing nearly half of those cases (Table 1.6). The median maternal age for congenital syphilis cases in 2015 was 23 years old, a decrease from the median age of 26 years in 2014 (Table 1.6).

### **CONGENITAL SYPHILIS BY RACE/ETHNICITY**

NH Blacks accounted for the majority (75%) of reported congenital syphilis cases in 2015 and have consistently accounted for the majority of these cases for the past 5 years (Table 1.6). (HC2) When compared to the next two populations with the largest number of reported cases, there were 3.6 times as many congenital syphilis cases in NH Blacks than Hispanics and 18 times as many than in NH Whites (Table 1.6). (HC2)

Table 1.1 - HIV and AIDS Infections and Late Diagnosis by Selected Demographic Characteristics, Chicago, 2015 (as of 09/30/2016)

Domonyouhia Chavastavistiss	Н	IV*	Al	DS*	LATE DI	AGNOSIS
<b>Demographic Characteristics</b>	No.	%	No.	%	No.	%
Gender**		'				
Male	763	82.8%	304	81.7%	143	82.7%
Female	139	15.1%	61	16.4%	29	16.8%
Transgender: MtF	15	1.6%	< 5	< 1%	< 5	< 1%
Transgender: FtM	< 5	< 1%	< 5	< 1%	0	0.0%
Race/Ethnicity^						
Black, non-Hispanic	498	54.1%	203	54.6%	86	49.7%
White, non-Hispanic	176	19.1%	61	16.4%	22	12.7%
Hispanic	195	21.2%	84	22.6%	51	29.59
Asian/PI, non-Hispanic	25	2.7%	9	2.4%	7	4.0%
AI/AN, non-Hispanic	< 5	< 1%	< 5	< 1%	< 5	< 1%
Multiple, non-Hispanic	25	2.7%	14	3.8%	6	3.5%
Unknown	0	0.0%	0	0.0%	0	0.0%
Transmission Group  Male Sex w/Male	698	75.8%	244	65.6%	116	67.1%
Injection Drug Use	39	4.2%	32	8.6%	14	8.1%
MSM and IDU§	28	3.0%	18	4.8%	6	3.5%
Heterosexual	150	16.3%	75	20.2%	35	20.29
Other¶	7	0.8%	< 5	< 1%	< 5	< 1%
Other	,	0.070		170		170
Age Category <sup>†</sup>						
Less than 13	< 5	< 1%	0	0.0%	0	0.0%
13-19	55	6.0%	< 5	< 1%	< 5	< 1%
20-29	398	43.2%	89	23.9%	50	28.99
20-24	203	22.0%	29	7.8%	18	10.4%
25-29	195	21.2%	60	16.1%	32	18.5%
30-39	216	23.5%	82	22.0%	34	19.7%
40-49	119	12.9%	90	24.2%	40	23.1%
50-59	98	10.6%	72	19.4%	35	20.29
60+	31	3.4%	37	9.9%	12	6.9%
Tota	921		372		173	

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. \* HIV infection diagnoses represents people newly diagnosed with HIV, at any stage of disease through 09/30/2016. AIDS represents all newly diagnosed as AIDS, or stage 3 HIV, through 09/30/2016.\*\* Current gender identity or gender with which a person identifies. Because total diagnoses were calculated using current gender, independently of values using birth sex, total diagnoses may differ slightly across tables. ^ AI/AN refers to American Indian/Alaskan Native. Multiple, non-Hispanic indicates more than one race identified. § Men who have sex with men and inject drugs. ¶ Includes perinatal transmission, blood transfusion, hemophilia, and no indicated risk (NIR). † Age at time of diagnosis. ‡ Late diagnosis represents those diagnosed with stage 3 HIV (AIDS) within 1 year of being diagnosed with HIV.

#### Table 1.2 - HIV, AIDS, and STI Case Rates and HIV Prevalence Rates by Race/ Ethnicity and Birth Sex, Chicago and United States

				Diagnos	Diagnosed/Reported Cases, 2015*	ted Case	s, 2015¥				Ī	IV Preval	HIV Prevalence <sup>§</sup> , 2014	4
Demographic	HIV INFECTION <sup>§</sup>	ECTION <sup>§</sup>	AIDS	SC	GONORRHEA	REHEA	CHLAMYDIA	ИУДІА	SYPHILIS®	ILIS <sup>©</sup>	CHICAGO	AGO	UNITED STATES**	TATES**
Characteristics	No.	Rate*	No.	Rate*	No.	Rate*	Š	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
Race/Ethnicity														
Black, non-Hispanic	498	55.6	230	25.7	4,812	537.5	13,786	1,539.8	330	36.9	11,804	1,318.4	405,321	1,069.5
White, non-Hispanic	176	20.6	61	7.1	948	111.0	2,106	246.6	251	29.4	5,698	667.3	300,156	152.4
Hispanic	195	25.5	84	11.0	639	83.6	3,785	495.4	147	19.2	4,438	580.9	198,456	391.1
Asian/PI, non-Hispanic	25	16.8	6	6.1	67	45.1	264	177.6	11	7.4	242	162.8	13,189	-87.7
AI/AN, non-Hispanic	< 5	67.2	< 5	33.6	12	403.0	30	1,007.4	× 5	134.3	23	772.3	2,908	140.2
Multiple, non-Hispanic	25	36.7	14	20.6	73	107.3	254	373.3	15	22.0	1,147	1,685.8	35,051	525.7
Sex														
Male	778	59.6	307	23.5	5,173	396.1	10,299	788.6	700	53.6	18,715	1,433.0	722,244	474.9
Female	143	10.3	65	4.7	3,583	257.2	18,635	1,337.9	28	4.2	4,640	333.1	230,360	146.5
Chicago	921	34.1	372	13.8	8,786	325.5	29,018	1,075.2	758	28.1	23,355	865.4	:	:
United States <sup>‡∗∗</sup>	39,393	12.7	18,274	5.9	395,216	123.9	1,526,658	478.8	23,872	7.5		:	955,081	308.7

¥2015 Diagnoses for HIV and AIDS; 2015 Reported Cases for STIs; 2014 HIV Prevalence . § HIV infection diagnosis and prevalence represents people with HIV at any stage of disease (including AIDS) through 9/30/16. \*Rate per 100,000 population using 2010 U.S. Census Bureau population figures. € Primary and secondary syphilis (symptomatic and infectious stages) only. \*\*Centers for Disease Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2015. Atlanta: U.S. Department of Health and Human Services; 2016. ^ Counts based on birth sex; does not include unknown.

Table 1.3 - People Living with HIV Infection (PLWH) and AIDS (PLWA) in 2014, by Selected Demographic Characteristics, Chicago (as of 09/30/2016)

Dama manhia Charratairtia	H	IV*	AIDS¥			
Demographic Characteristics	No.	%	No.	%		
Gender**			_			
Male	18,570	79.5%	9,967	80.0%		
Female	4,571	19.6%	2,377	19.1%		
Transgender: MtF	140	0.6%	68	0.5%		
Transgender: FtM	72	0.3%	37	0.3%		
Jnknown	< 5	< 1%	< 5	< 1%		
Race/Ethnicity^						
Black, non-Hispanic	11,804	50.5%	6,528	52.4%		
White, non-Hispanic	5,698	24.4%	2,634	21.2%		
Hispanic	4,438	19.0%	2,514	20.2%		
Asian/PI, non-Hispanic	242	1.0%	119	1.0%		
AI/AN, non-Hispanic	26	0.1%	11	0.1%		
Multiple, non-Hispanic	1,147	4.9%	645	5.2%		
Jnknown	0	0.0%	0	0.0%		
Transmission Group						
Male Sex w/Male	14,397	61.6%	7,123	57.2%		
njection Drug Use	3,137	13.4%	2,068	16.6%		
MSM and IDU§	1,275	5.5%	877	7.0%		
Heterosexual	4,157	17.8%	2,192	17.6%		
Other¶	386	1.7%	191	1.5%		
Age Category <sup>†</sup>						
ess than 13	66	0.3%	8	0.1%		
13-19	210	0.9%	51	0.4%		
20-29	2,661	11.4%	785	6.3%		
20-24	988	4.2%	258	2.1%		
25-29	1,673	7.2%	527	4.2%		
30-39	4,123	17.7%	1,744	14.0%		
40-49	6,545	28.0%	3,544	28.5%		
50-59	6,712	28.7%	4,259	34.2%		
60+	3,038	13.0%	2,060	16.5%		
Tatal	22.255		12 451			
Total	23,355		12,451			

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. \* HIV prevalence represents people diagnosed with HIV through 2014 and living with HIV or AIDS in 2015. ¥ AIDS represents people diagnosed with AIDS through 2014 and living with AIDS in 2015. \*\* Current gender identity or gender with which a person identifies. Because total diagnoses were calculated using current gender, independently of values using birth sex, total diagnoses may differ slightly across tables. ^ AI/AN refers to American Indian/Alaskan Native. Multiple, non-Hispanic indicates more than one race identified. § Men who have sex with men and inject drugs. ¶ Includes perinatal transmission, blood transfusion, hemophilia, and NIR. \* Current age as of 2014.

Table 1.4 - Reported Cases of Chlamydia, Gonorrhea, Primary and Secondary (P&S)
Syphilis by Selected Demographic Characteristics, Chicago, 2015

Dama mankia Chamataniatia	CHLA	MYDIA	GONO	RRHEA	P&S SYPHILIS		
<b>Demographic Characteristics</b>	No.	%	No.	%	No.	%	
Birth Sex <sup>¥</sup>							
Male	10,299	35.6%	5,173	59.1%	700	92.3%	
Female	18,635	64.4%	3,583	40.9%	58	7.7%	
Race/Ethnicity^							
Black, non-Hispanic	13,786	47.9%	4,812	55.2%	330	43.5%	
White, non-Hispanic	2,106	7.3%	948	10.9%	251	33.1%	
Hispanic	3,785	13.2%	639	7.3%	147	19.4%	
Asian/PI, non-Hispanic	264	0.9%	67	0.8%	11	1.5%	
AI/AN, non-Hispanic	30	0.1%	12	0.1%	< 5	< 1%	
Multiple, non-Hispanic	254	0.9%	73	0.8%	15	2%	
Unknown	8,793	30.6%	2,235	25.7%	0	0.0%	
Transmission Group <sup>‡</sup> Male Sex w/Male	-	-	-	-	470	62.09	
Heterosexual Males	_	_	_		83	10.9%	
Females	-	_	_	_	58	7.7%	
Male Unknown	_	_	_	_	147	19.4%	
Age Category <sup>†</sup>							
Less than 13	26	0.1%	8	0.1%	0	0.0%	
13-19	8,036	27.7%	2,165	24.6%	23	3.0%	
20-29	15,833	54.6%	4,529	51.5%	305	40.29	
20-24	10,229	35.3%	2,740	31.2%	137	18.1%	
25-29	5,604	19.3%	1,789	20.4%	168	22.2%	
30-39	3,689	12.7%	1,413	16.1%	199	26.3%	
40-49	1,013	3.5%	438	5.0%	132	17.4%	
50-59	340	1.2%	194	2.2%	84	11.1%	
60+	81	0.3%	39	0.4%	15	2.0%	
Total**	29,018		8,786		758		
iotai	23,010		0,700		750		

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. ¥ Does not include unknown. † Transmission Group represents the sex of sexual partner of syphilis cases. Data are not collected for chlamydia and gonorrhea. † Age a time of diagnosis. \*\* Includes cases with unknown sex or age. ^ Al/AN refers to American Indian/Alaskan Native. Multiple, non-Hispanic indicates more than one race identified.

Table 1.5 - Co-Infection between HIV Infection Diagnoses & Reported Cases of Chlamydia, Gonorrhea, Primary & Secondary (P&S) Syphilis by Selected Demographic Characteristics, Chicago, 2015°

Domographic Characteristics	HIV + Ch	HLAMYDIA	HIV + GO	NORRHEA	HIV + P&S	SYPHIL
Demographic Characteristics	No.	%	No.	%	No.	%
Gender**						•
Male	746	88.9%	735	96.6%	300	99.7%
Female	93	11.1%	23	3.0%	< 5	< 1%
Unknown	0	0.0%	< 5	< 1%	0	0.0%
Race/Ethnicity^						
Black, non-Hispanic	354	42.2%	314	41.3%	138	45.8%
White, non-Hispanic	141	16.8%	159	20.9%	101	33.6%
Hispanic	132	15.7%	119	15.6%	43	14.3%
Asian/PI, non-Hispanic	11	1.3%	< 5	< 1%	6	2.0%
AI/AN, non-Hispanic	< 5	< 1%	< 5	< 1%	< 5	< 1%
Multiple, non-Hispanic	11	1.3%	7	0.9%	< 5	< 1%
Unknown	188	22.4%	155	20.4%	11	3.7%
Transmission Group <sup>¥</sup>						
Male Sex w/Male	514	61.2%	516	67.8%	234	77.7%
Injection Drug Use	16	1.9%	7	0.9%	< 5	< 1%
MSM and IDU§	39	4.7%	41	5.4%	13	4.5%
Heterosexual	75	8.9%	21	2.7%	< 5	< 1%
Other¶	12	1.4%	< 5	< 1%	0	0.0%
Missing	184	21.9%	173	22.7%	47	15.69
Age Category <sup>†</sup>						
Less than 13	0	0.0%	0	0.0%	0	0.0%
13-19	23	2.7%	23	3.0%	< 5	< 1%
20-29	363	43.3%	346	45.5%	109	36.29
20-24	140	16.7%	118	15.5%	48	15.9%
25-29	223	26.6%	228	30.0%	61	20.39
30-39	242	28.8%	220	28.9%	83	27.6%
40-49	141	16.8%	109	14.3%	62	20.69
50-59	60	7.2%	51	6.7%	38	12.6%
60+	10	1.2%	12	1.6%	7	2.3%
Total	839		761		301	

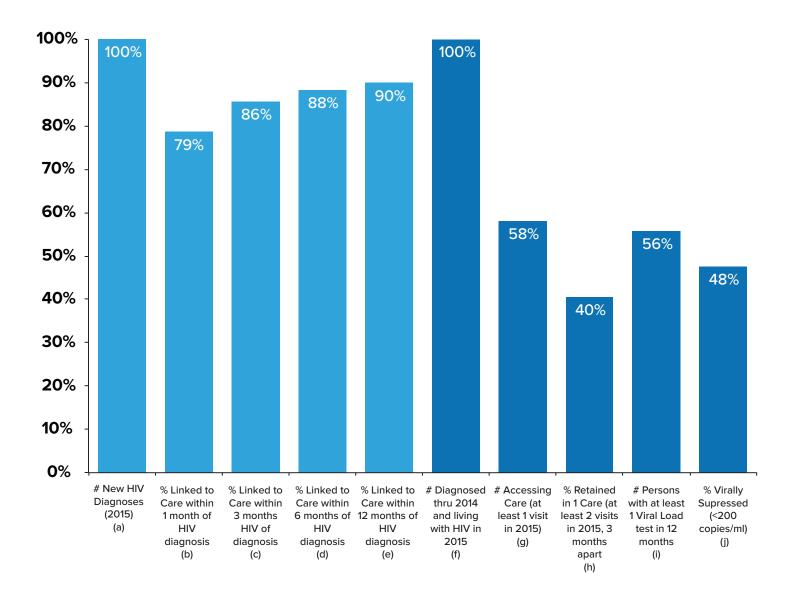
Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. HIV+Chlamydia, HIV+Gonorrhea and HIV+Syphilis diagnoses represents people living with HIV and also diagnosed with the respective STI during 2015. © Data Source: Illinois Department of Public Health (IDPH) as of 6/21/2016. \*\* Current gender identity or gender with which a person identifies. Because total diagnoses were calculated using current gender, independently of values using birth sex, total diagnoses may differ slightly across tables. ^Multiple, non-Hispanic indicates more than one race identified. Al/AN refers to American Indian/ Alaskan Native. \$\frac{1}{2}\$ Transmission Group data based on HIV surveillance data as of 9/30/2016. § Men who have sex with men and inject drugs. ¶ Includes perinatal transmission, blood transfusion, hemophilia, and NIR. † Age at time of STI diagnosis.

# Table 1.6 - Congenital Syphilis Cases by Selected Demographic Characteristics, Chicago, 2011-2015

#### **Year of Report**

Demographic	2	011	20	012	20	)13	20	)14	20	15
Characteristics	No.	%	No.	%	No.	%	No.	%	No.	%
Case Classification										
Presumptive Cases	9	90.0%	22	100.0%	13	87.0%	18	90.0%	24	100.0%
Stillborns	< 5	10.0%	0	0.0%	< 5	13.0%	< 5	10.0%	0	0.0%
Race/Ethnicity^										
Black, non-Hispanic	9	90.0%	17	77.3%	9	60.0%	13	65.0%	18	75.0%
White, non-Hispanic	0	0.0%	< 5	4.5%	< 5	13.3%	< 5	5.0%	< 5	4.2%
Hispanic	O	0.0%	< 5	9.1%	< 5	20.0%	< 5	5.0%	5	20.8%
Asian/PI, non-Hispanic	0	0.0%	< 5	9.0%	0	0.0%	0	0.0%	0	0.0%
Al/AN, non-Hispanic	O	0.0%	0	0.0%	0	0.0%	O	0.0%	0	0.0%
Other/Unknown	< 5	10.0%	0	0.0%	< 5	6.7%	5	25.0%	0	0.0%
Maternal Age Category <sup>†</sup>										
Less than 13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
13-19	< 5	20.0%	5	22.7%	< 5	20.0%	0	0.0%	< 5	8.3%
20-29	6	60.0%	15	68.2%	10	66.7%	15	75.0%	19	79.2%
20-24	< 5	40.0%	13	59.1%	7	46.7%	9	45.0%	12	50.0%
25-29	< 5	20.0%	< 5	9.1%	< 5	20.0%	6	30.0%	7	29.2%
30-39	< 5	20.0%	< 5	4.5%	< 5	13.3%	5	25.0%	< 5	8.3%
40+	0	0.0%	< 5	4.5%	0	0.0%	0	0.0%	< 5	4.2%
Median Age	22	_	22	_	22	_	26	_	23	_
Total	10		22		15		20		24	

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. † Age at time of diagnosis. ^ Al/AN refers to American Indian/Alaskan Native. Multiple, non-Hispanic indicates more than one race identified.



(a) Number of persons ≥ 13 years of age at diagnosis and diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(b) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 1 month of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(c) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 3 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(d) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 6 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(e) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 12 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

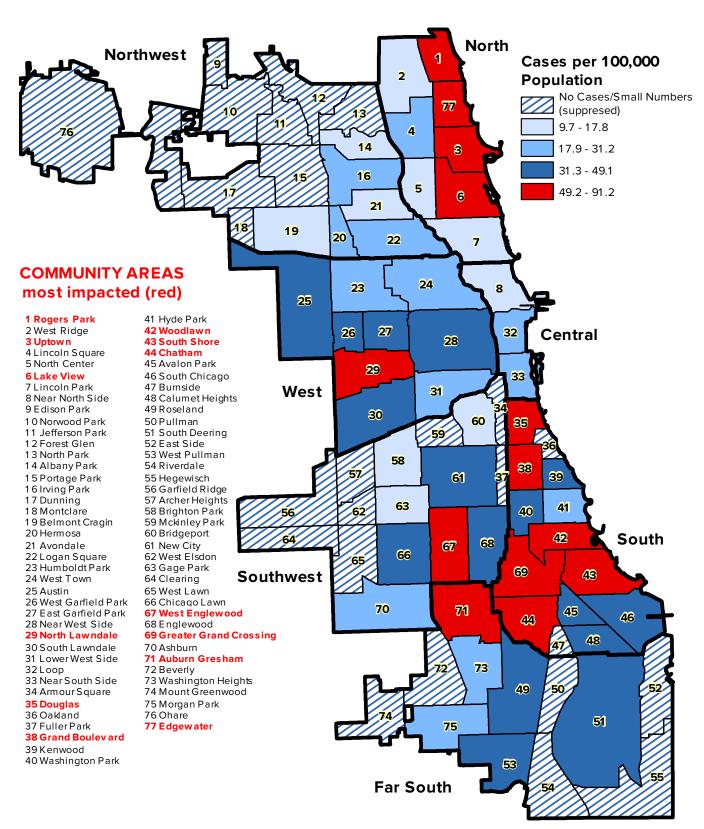
(f) Number of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 and VL1 Tables.

(g) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one medical care visit (at least one CD4 or VL) between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Carel Table.

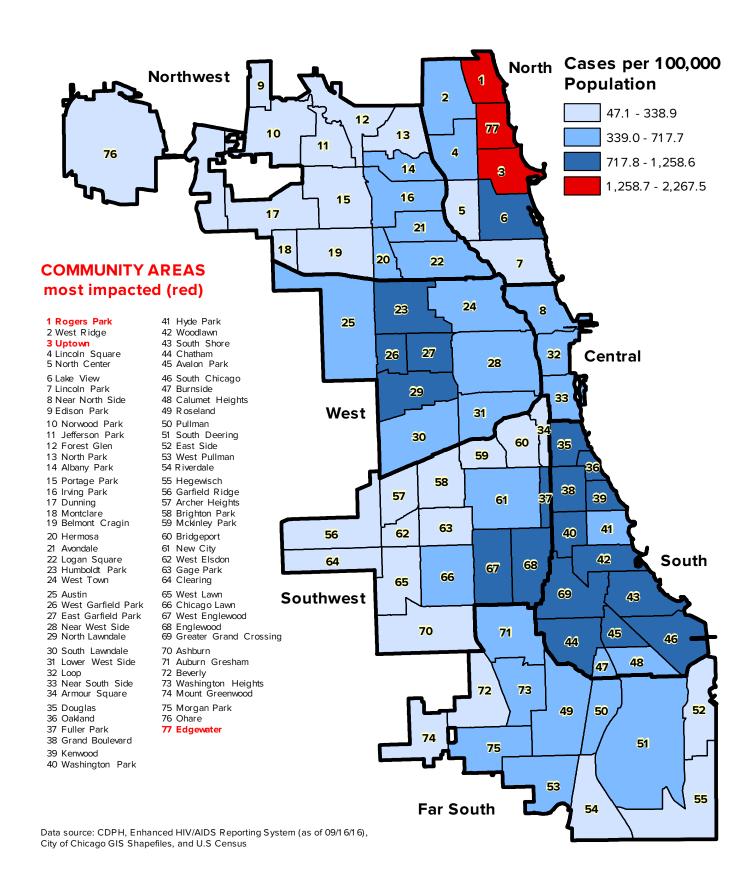
(h) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least two medical care visits (at least one CD4 or VL at each), 3 months apart, between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.

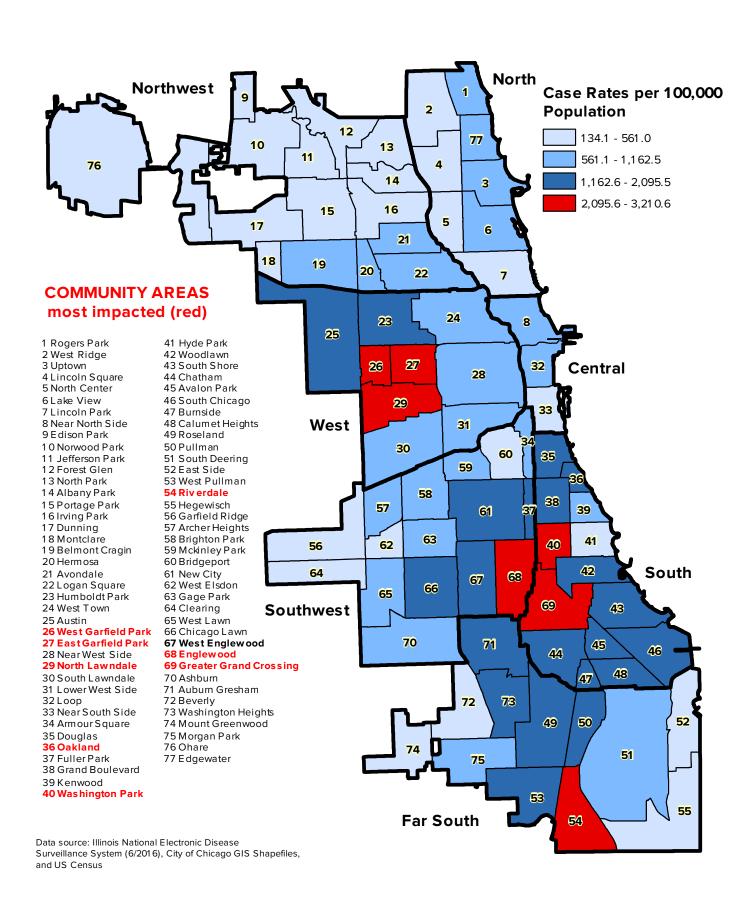
(i) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one VL test in the past 12 months. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, VL1 Table.

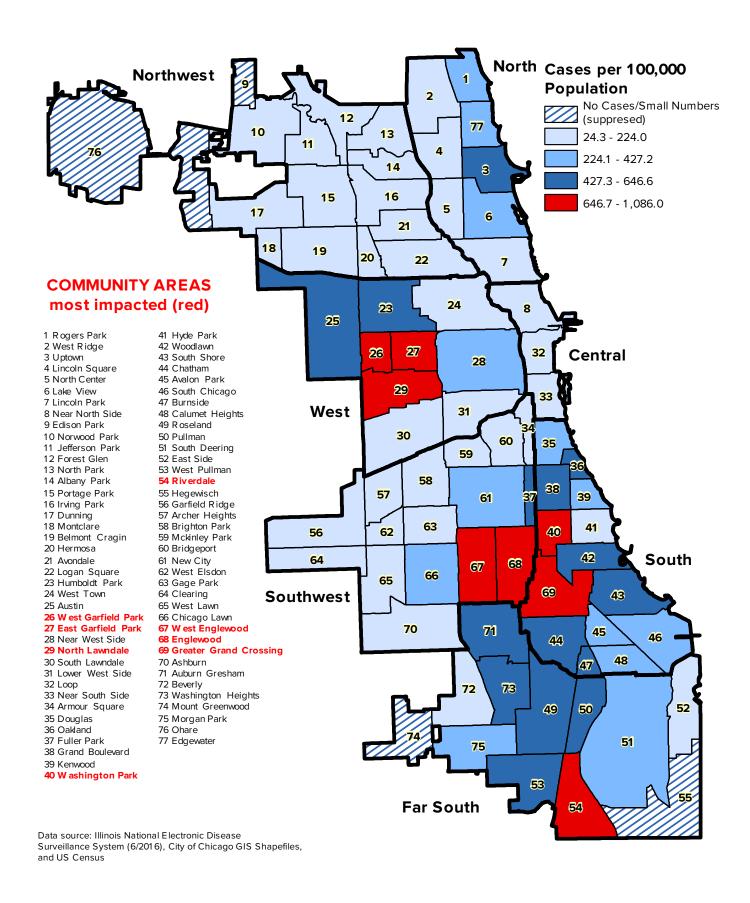
(j) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 whose most recent viral load test result was < 200 copies/mL.

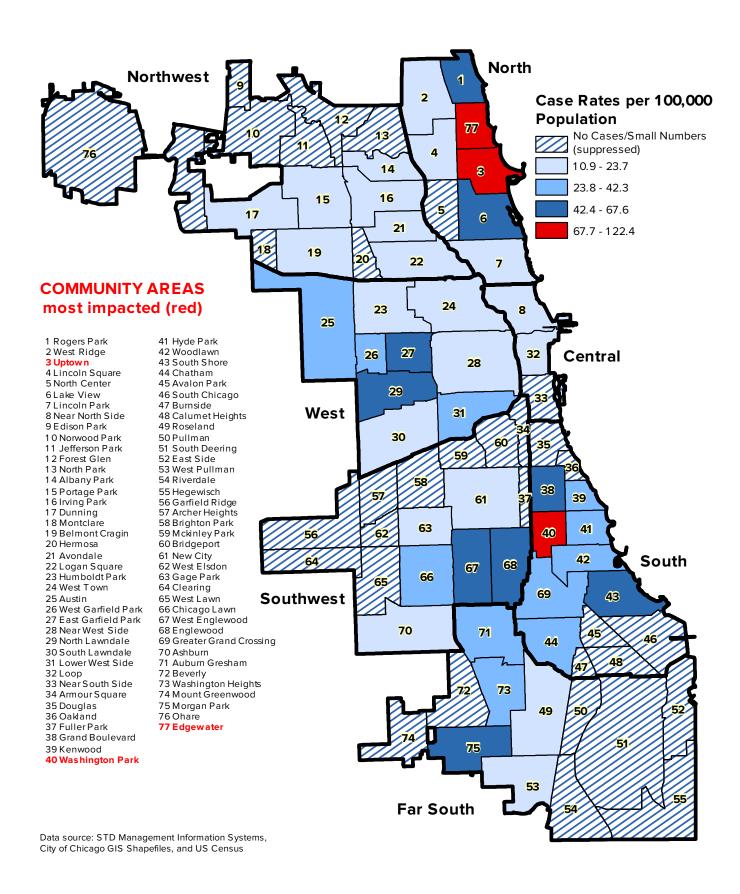


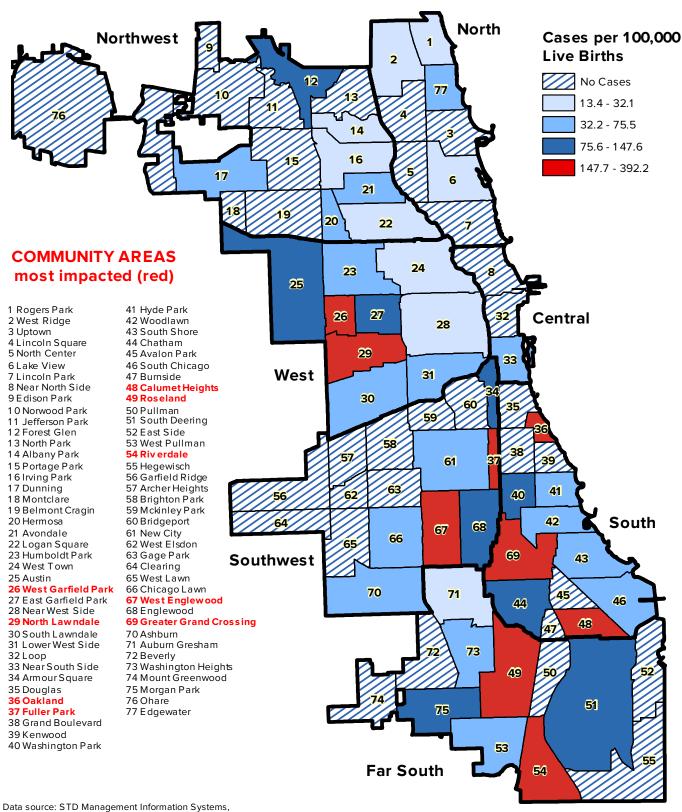
Data source: CDPH, Enhanced HIV/AIDS Reporting System (as of 09/1 6/1 6), City of Chicago GIS Shapefiles, and U.S Census











Data source: STD Management Information Systems, City of Chicago GIS Shapefiles, and US Census

Note: Rates per 100,000 were calculated using 2012 live births as the denominator





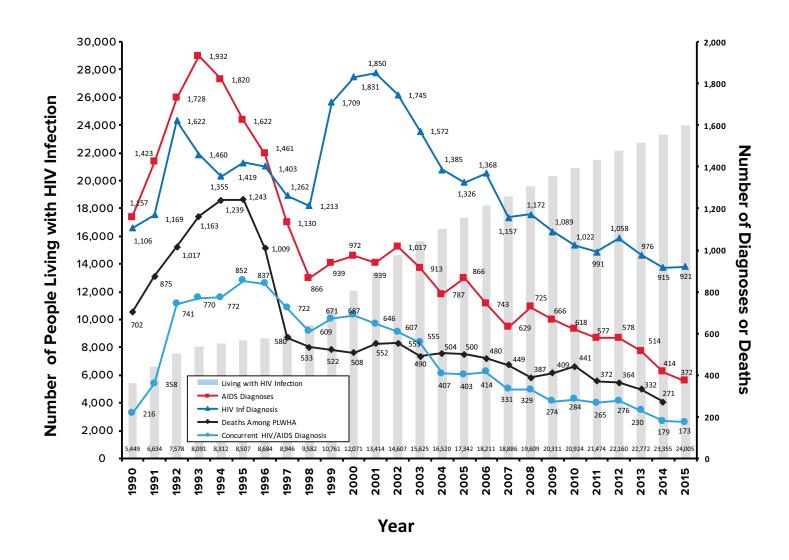
# TRENDS IN PEOPLE LIVING WITH & DIAGNOSED WITH HIV INFECTION IN CHICAGO

- In 2014, the number of people living with HIV was at the highest it has ever been at 23,355 individuals (Figure 2.1). This is over a four-fold increase compared to the 5,449 individuals living with HIV in 1990 (Figure 2.1).
- For the past five years, the number of HIV infection diagnoses have been relatively stable (Figure 2.1). From 2011 to 2015, there was a slight decrease from 991 to 921 new diagnoses, representing an absolute decrease of 7.1% and an estimated annual percent change (EAPC) decrease of 2.9 (Table 2.1).
- While the number of new HIV infections in men and women decreased slightly between 2011 to 2015, they remain relatively stable with more HIV infection diagnoses consistently occurring among men than women (Table 2.1). (HC2)
- There have been considerable differences in HIV trends by age group. Between 2011 and 2015, the number of HIV diagnoses increased among those 20-29 years old, while all other ages decreased annually (Table 2.2).(HC2)
- From 2011 to 2015, the largest proportion of HIV infection diagnoses occurred among NH Blacks (Table 2.3). (HC2) However, the number of new diagnoses within this population has decreased over time, resulting in an EAPC decrease of 2.4 over the past five years (Table 2.3).
- Over the past 5 years, AIDS cases have declined by an EAPC of 12, from 577 cases in 2011 to 372 in 2015 (Table 2.2).
- Although a decline in AIDS cases occurred among both men and women, men continue to represent the majority of AIDS cases with 3.4 times as many cases occurring in men than women in 2011 and 5.0 times as many cases occurring in men than women in 2015 (Table 2.1).<sup>(HC2)</sup>

- Unlike HIV diagnoses, there was little difference in AIDS trends among age groups, as all groups experienced declines over the past five years (Table 2.2).
- Similar to HIV infection diagnoses, AIDS cases were highest among NH Blacks from 2011 to 2015. (HC2) However, this population did experience a decrease in the number of cases over those 5 years, with an EAPC decrease of 13.6 (Table 2.3).

# TRENDS IN THE NUMBER OF REPORTED SEXUALLY TRANSMITTED INFECTIONS IN CHICAGO

- Between 2011 and 2015, the total number of reported chlamydia cases increased from 27,804 to 29,018, the total number of gonorrhea cases increased from 8,654 to 8,786, and the total number of P&S syphilis cases increased from 675 to 758 (Figure 2.2).
- Although the numbers of reported STI cases in both men and women have recently increased, the resulting EAPCs for 2011-2015 remain relatively small due to the fluctuation of cases over the 5 year span (Table 2.1).
- Between 2011 and 2015, the number of chlamydia cases increased among those 20 years and older (Table 2.2). (HC2) For reported gonorrhea cases during the same five year time period, individuals over 24 years old experienced increased EAPCs (Table 2.2). (HC2) P&S syphilis cases resulted in increased EAPCs for individuals 20-39 years old and over 50 years old (Table 2.2). (HC2)
- Among all three reported STIs, NH Blacks made up the majority of reported cases between 2011 and 2015 (Table 2.3). (HC2) However, the number of reported cases within this population have decreased over time, resulting in EAPCs of 3.8 in chlamydia cases, 7.1 in gonorrhea cases, and 2.9 in P&S syphilis cases (Table 2.3).



### **Notes on Surveillance Reporting:**

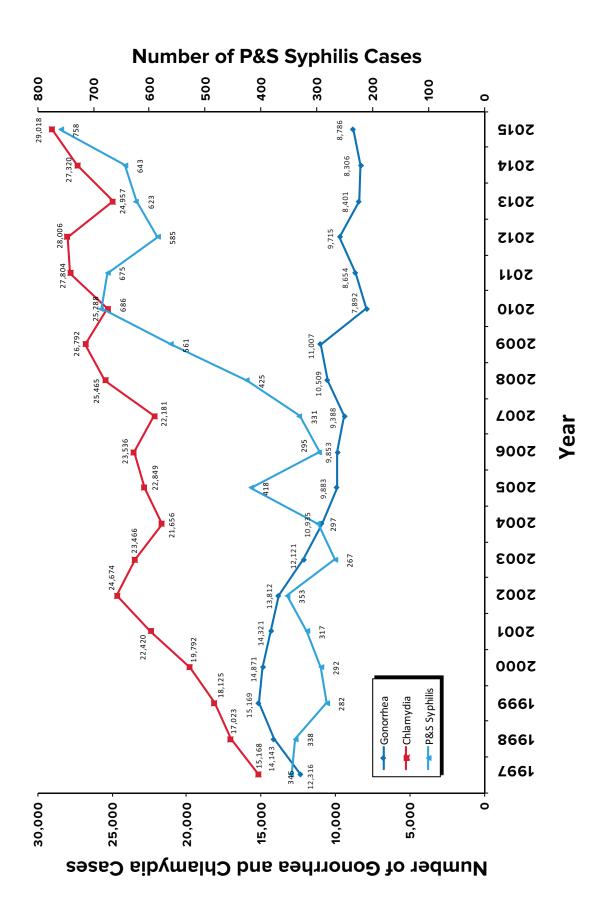
1983 = AIDS case reporting begins

1995 = Effective drug therapy against HIV becomes available

1999 = Code-based HIV reporting begins

2006 = Name-based HIV reporting begins

2012 = All CD4 and viral load labs become reportable



HIV/STI Cases by Year of Diagnosis and Sex\*, Chicago, 2011-2015

			2/4	I Cases Dy	leal of	iagiiosis ai	id Sea , Ci	IIIV/311 Cases by Teal Of Diagnosis and Sex , Cilicago, 2011-2013	502-1		
Year of Diagnosis	20	2011	2012	12	20	2013	2014	14	20	2015	EAPC€
Characteristics	No.	%	No.	%	No.	%	ò	%	No.	%	
HIV Infection Diagnosis											
Male	802	80.9%	855	80.8%	808	82.8%	761	83.2%	763	82.8%	<1
Female	170	17.2%	7.21	16.7%	155	15.9%	127	13.9%	139	15.1%	-2.1
Transgender: MtF	13	1.3%	21	2.0%	6	%6:0	5	1.6%	5	1.6%	-3.2
Transgender: FtM	9	%9:0	D	0.5%	< 5	< 1%	12	1.3%	< 5	< 1%	-10.6
Total	991	100.0%	1,058	100.0%	976	100.0%	915	100.0%	921	100.0%	-0.3
AIDS Cases											
Male	439	76.1%	455	78.7%	415	80.7%	311	75.1%	304	81.7%	<1
Female	130	22.5%	117	20.2%	88	17.1%	94	22.7%	61	16.4%	6.8-
Transgender: MtF	9	1.0%	2	%6:0	8	1.6%	< 5	< 1%	\ \ 5	< 1%	3.9
Transgender: FtM	< 5	< 1%	< 5	< 1%	< 5	< 1%	9	1.4%	< 5	< 1%	1.2
Total	577	100.0%	578	100.0%	514	100.0%	414	100.0%	372	100.0%	-2.3
Chlamydia Cases∗											
Male	8,500	30.7%	8,364	29.9%	7,520	30.2%	9,073	33.3%	10,299	35.6%	-2.7
Female	19,232	%8:69	19,574	70.1%	17,396	88.69	18,201	%2'99	18,635	64.4%	-1.9
Total	27,732	100.0%	27,938	100.0%	24,916	100.0%	27,274	100.0%	28,934	100.0%	-2.1
Gonorrhea Cases <sup>∗</sup>											
Male	4,141	47.9%	4,752	49.0%	4,286	51.1%	4,709	26.8%	5,173	59.1%	<b>^</b>
Female	4,497	52.1%	4,948	51.0%	4,107	48.9%	3,582	43.2%	3,583	40.9%	-2.0
Total	8,638	100.0%	9,700	100.0%	8,393	100.0%	8,291	100.0%	8,756	100.0%	<1
P&S Syphilis Cases*											
Male	616	91.3%	526	86.68	267	91.2%	581	90.4%	700	92.3%	-1.8
Female	29	8.7%	29	10.1%	52	8.8%	62	89.6	28	7.7%	<1
Total	675	100.0%	585	100.0%	622	100.0%	643	100.0%	758	100.0%	-1.6

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/ percent is unreliable. \* For HIV and AIDS cases, current gender identity or gender with which a person identifies. Because total diagnoses were calculated using current gender, independently of values using birth sex, total diagnoses may differ slightly across tables. HIV and AIDS cases as of 9/30/16. For STI cases, reported sex at birth. € Estimated Annual Percent Change (EAPC) is used to provide a general picture of disease trends across the 5 years of the report. EAPC assumes a constant rate of change and should not be over-interpreted. ¥ Totals do not include unknown.

	20	011	20	12	20	13	20	14	20	15	EAPC€
Year of Diagnosis	No.	%									
HIV Infection Diagno	osis										
Less than 13	< 5	< 1%	10	0.9%	7	0.7%	5	0.5%	< 5	< 1%	6.9
13-19	66	6.7%	75	7.1%	54	5.5%	59	6.4%	55	6.0%	-6.0
20-29	330	33.3%	354	33.5%	398	40.8%	380	41.5%	398	43.2%	4.5
20-24	179	18.1%	171	16.2%	239	24.5%	189	20.7%	203	22.0%	3.5
25-29	151	15.2%	183	17.3%	159	16.3%	191	20.9%	195	21.2%	5.5
30-39	228	23.0%	272	25.7%	223	22.8%	203	22.2%	216	23.5%	-4.0
40-49	210	21.2%	183	17.3%	154	15.8%	153	16.7%	119	12.9%	-13.2
50+	155	15.6%	164	15.5%	140	14.3%	115	12.6%	129	14.0%	-7.2
Total	991		1,058		976		915		921		-2.9
AIDS Cases											
Less than 13	0	0.0%	0	0.0%	0	0.0%	< 5	< 1%	0	0.0%	0.0
13-19	19	3.3%	20	3.5%	12	2.3%	8	1.9%	< 5	< 1%	-54.2
20-29	125	21.7%	141	24.4%	130	25.3%	83	20.0%	89	23.9%	-12.1
20-24	52	9.0%	50	8.7%	66	12.8%	33	8.0%	29	7.8%	-15.8
25-29	73	12.7%	91	15.7%	64	12.5%	50	12.1%	60	16.1%	-9.9
30-39	143	24.8%	136	23.5%	140	27.2%	107	25.8%	82	22.0%	-13.5
40-49	157	27.2%	135	23.4%	120	23.3%	106	25.6%	90	24.2%	-13.5
50+	133	23.1%	146	25.3%	112	21.8%	107	25.8%	109	29.3%	-7.1
Total	577		578		514		414		372		-12.1
Chlamydia Cases											
Less than 13	41	0.1%	58	0.2%	49	0.2%	28	0.1%	26	0.1%	-16.4
13-19	10,282	37.0%	10,304	36.8%	8,545	34.2%	8,427	30.8%	8,036	27.7%	-6.9
20-29	13,671	49.2%	13,822	49.4%	12,783	51.2%	14,497	53.1%	15,833	54.6%	3.4
20-24	9,359	33.7%	9,548	34.1%	8,898	35.7%	9,789	35.8%	10,229	35.3%	2.0
25-29	4,312	15.5%	4,274	15.3%	3,885	15.6%	4,708	17.2%	5,604	19.3%	6.2
30-39	2,804	10.1%	2,839	10.1%	2,594	10.4%	3,144	11.5%	3,689	12.7%	6.5
40-49	755	2.7%	722	2.6%	748	3.0%	845	3.1%	1,013	3.5%	7.5
50+	251	0.9%	261	0.9%	238	1.0%	379	1.4%	421	1.5%	14.1
Total	27,804		28,006		24,957		27,320		29,018		<1

### Continued on next page >

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. HIV and AIDS cases as of 9/30/16.

\* Age at time of diagnosis. € Estimated Annual Percent Change (EAPC) is used to provide a general picture of disease trends across the 5 years of the report. EAPC assumes a constant rate of change and should not be over-interpreted.

Table 2.2 - HIV/STI by Year of Diagnosis and Age\* Group, Chicago, 2011-2015

v (5:	20	)11	20	12	20	13	20	14	20	15	EAPC€
Year of Diagnosis	No.	%									
Gonorrhea Cases											
Less than 13	29	0.3%	21	0.2%	16	0.2%	6	0.1%	8	0.1%	-38.3
13-19	3,136	36.2%	3,261	33.6%	2,682	31.9%	2,162	26.0%	2,165	24.6%	-11.5
20-29	4,022	46.5%	4,644	47.8%	4,099	48.8%	4,273	51.4%	4,529	51.5%	1.5
20-24	2,767	32.0%	3,173	32.7%	2,780	33.1%	2,798	33.7%	2,740	31.2%	-1.5
25-29	1,255	14.5%	1,471	15.1%	1,319	15.7%	1,475	17.8%	1,789	20.4%	7.1
30-39	929	10.7%	1,138	11.7%	1,017	12.1%	1,196	14.4%	1,413	16.1%	8.9
40-49	392	4.5%	467	4.8%	422	5.0%	458	5.5%	438	5.0%	2.0
50+	146	1.7%	184	1.9%	165	2.0%	211	2.5%	233	2.7%	10.7
Total	8,654		9,715		8,401		8,306		8,786		-1.3
P&S Syphilis Cases	•		•		•		, ,				
Less than 13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0.0
13-19	43	6.4%	36	6.2%	27	4.3%	26	4.0%	23	3.0%	-15.8
20-29	258	38.2%	240	41.0%	249	39.7%	257	40.0%	305	40.2%	4.0
20-24	136	20.1%	115	19.7%	134	21.4%	114	17.7%	137	18.1%	< 1
25-29	122	18.1%	125	21.4%	115	18.3%	143	22.2%	168	22.2%	7.7
30-39	174	25.8%	152	26.0%	175	27.9%	175	27.2%	199	26.3%	4.1
40-49	140	20.7%	112	19.1%	108	17.2%	113	17.6%	132	17.4%	-1.1
50+	60	8.9%	45	7.7%	68	10.8%	72	11.2%	99	13.1%	14.7
Total	675		585		627		643		758		3.3

Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. HIV and AIDS cases as of 9/30/16.

\* Age at time of diagnosis. € Estimated Annual Percent Change (EAPC) is used to provide a general picture of disease trends across the 5 years of the report. EAPC assumes a constant rate of change and should not be over-interpreted.

v (5:	20	011	20	12	20	)13	20	14	20	15	EAPC <sup>€</sup>
Year of Diagnosis	No.	%									
UIV Infaction Diagra	. ci c										
HIV Infection Diagno Black, non-Hispanic	528	53.3%	552	52.2%	526	53.9%	488	53.3%	498	54.1%	-2.4
White, non-Hispanic	156	15.7%	218	20.6%	188	19.3%	176	19.2%	176	19.1%	-2. <del>4</del> <1
Hispanic	212	21.4%	224	21.2%	206	21.1%	210	23.0%	195	21.2%	-2.3
Asian/PI, non-Hispanic	12	1.2%	10	0.9%	15	1.5%	18	2.0%	25	2.7%	20.6
Al/AN, non-Hispanic	< 5	< 1%	< 5	< 1%	0	0.0%	0	0.0%	< 5	< 1%	<1
Other, non-Hispanic	82	8.3%	53	5.0%	41	4.2%	23	2.5%	25	2.7%	-32.1
Other, non Thispanic	02	0.570	33		-71	7.270	23	2.5%	23	2.7 /0	J2.1
Total	991	100.0%	1,058	100.0%	976	100.0%	915	100.0%	921	100.0%	-2.9
AIDS Cases											
Black, non-Hispanic	340	58.9%	328	56.7%	299	58.2%	237	57.2%	203	54.6%	-13.6
White, non-Hispanic	70	12.1%	91	15.7%	83	16.1%	57	13.8%	61	16.4%	-7.4
Hispanic	123	21.3%	114	19.7%	97	18.9%	92	22.2%	84	22.6%	-9.8
Asian/PI, non-Hispanic	< 5	< 1%	9	1.6%	< 5	< 1%	5	1.2%	9	2.4%	10.3
AI/AN, non-Hispanic	0	0.0%	< 5	< 1%	0	0.0%	0	0.0%	< 5	< 1%	< 1
Other, non-Hispanic	40	6.9%	35	6.1%	31	6.0%	23	5.6%	14	3.8%	-25.2
Total	577	100.0%	578	100.0%	514	100.0%	414	100.0%	372	100.0%	-12.1
Chlorovdia Casas											
Chlamydia Cases  Black, non-Hispanic	15,714	56.5%	14,479	51.7%	13,184	52.8%	12,858	47.1%	13,786	47.5%	-3.8
White, non-Hispanic	1,292	4.6%	1,125	4.0%	1,222	4.9%	1,516	5.5%	2,106	7.3%	12.8
Hispanic	3,456	12.4%	3,107	11.1%	2,906	11.6%	3,298	12.1%	3,785	13.0%	2.4
Asian/PI, non-Hispanic	131	0.5%	152	0.5%	159	0.6%	172	0.6%	264	0.9%	15.3
Al/AN, non-Hispanic	14	0.1%	12	0.0%	11	0.0%	20	0.1%	30	0.1%	20.4
Other, non-Hispanic	481	1.7%	279	1.0%	273	1.1%	311	1.1%	254	0.9%	-11.7
Unknown	6,716	24.2%	8,852	31.6%	7,202	28.9%	9,145	33.5%	8,793	30.3%	5.7
Total	27,804	100.0%	28,006	100.0%	24,957	100.0%	27,320	100.0%	29,018	100.0%	<1

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V (D'	20	<b>D11</b>	20	012	20	013	20	014	20	)15	EAPC€
Year of Diagnosis	No.	%	No.	%	No.	%	No.	%	No.	%	
Gonorrhea Cases											
Black, non-Hispanic	5,756	66.5%	5,991	61.7%	5,357	63.8%	4,200	50.6%	4,812	54.8%	-7.1
White, non-Hispanic	393	4.5%	469	4.8%	465	5.5%	680	8.2%	948	10.8%	21.3
Hispanic	439	5.1%	437	4.5%	424	5.0%	495	6.0%	639	7.3%	8.8
Asian/PI, non-Hispanic	28	0.3%	39	0.4%	26	0.3%	25	0.3%	67	0.8%	13.0
AI/AN, non-Hispanic	8	0.1%	5	0.1%	9	0.1%	6	0.1%	12	0.1%	9.9
Other, non-Hispanic	116	1.3%	63	0.6%	62	0.7%	62	0.7%	73	0.8%	-9.4
Unknown	1,914	22.1%	2,711	27.9%	2,058	24.5%	2,838	34.2%	2,235	25.4%	3.6
Total	8,654	100.0%	9,715	100.0%	8,401	100.0%	8,306	100.0%	8,786	100.0%	-1.3
iotai	0,034	100.070	3,713	100.070	0,401	100.070	0,500	100.070	0,700	100.070	1.5
P&S Syphilis Cases											
Black, non-Hispanic	375	55.6%	290	49.6%	291	46.7%	280	43.5%	330	43.5%	-2.9
White, non-Hispanic	170	25.2%	156	26.7%	169	27.1%	191	29.7%	251	33.1%	9.8
Hispanic	86	12.7%	99	16.9%	104	16.7%	103	16.0%	147	19.4%	11.1
Asian/PI, non-Hispanic	8	1.2%	9	1.5%	21	3.4%	10	1.6%	11	1.5%	7.4
Al/AN, non-Hispanic	0	0.0%	0	0.0%	0	0.0%	< 5	< 1%	< 5	< 1%	< 1
Other, non-Hispanic	36	5.3%	31	5.3%	38	6.1%	56	8.7%	15	2.0%	-11.6
Total	675	100.0%	585	100.0%	623	100.0%	643	100.0%	758	100.0%	3.3





# NATIONAL HIV/AIDS STRATEGY INDICATORS & THE CHICAGO HIV CONTINUUM OF CARE

In July 2015, the White House released the National HIV/AIDS Strategy (NHAS) for the United States: Updated to 2020. This strategy incorporates scientific advances that could one day bring the United States and the world closer to virtually eliminating new HIV infections. Thus, the indicators are representative of supporting all people living with HIV to lead long and healthy lives and of eliminating the disparities that persist among some populations. The strategy remains a steady foundation on which to build future efforts (NHAS, 2020).

The HIV care continuum has long been used as a tool to evaluate the health of people living with HIV/AIDS and to help identify areas of improvement and populations of significance in order to reduce HIV transmission. In Chicago, the care continuum represents both the successes of HIV efforts and areas for continued growth. Chicago is close to achieving NHAS indicator #4: linkage to care of 85% of newly diagnosed individuals within 1 month of HIV diagnosis. Currently, 79% of newly diagnosed individuals in Chicago are getting linked to care within 1 month of their HIV diagnosis (Figure 3.1).

Chicago has opportunities for improvement when it comes to meeting the indicators for retention in care (indicator #5) and viral suppression (indicator #6). Currently, 40% of people living with HIV are retained in care, and 48% are virally suppressed. This means Chicago would need to increase the percent of individuals who are retained by 50% to reach the 90% NHAS goal and would need to increase the percent of individuals who are virally suppressed by 32% to reach the 80% NHAS goal (Figure 3.1).

## **HIV PRIORITY POPULATIONS**

While HIV affects people of all ages, races, ethnicities, and genders, surveillance data collected over the years have indicated that the greatest impact occurs among specific populations in Chicago. Moving forward, prioritizing care and prevention services among these populations will allow us to focus resources where they will have the greatest impact, clearing a path toward the end of the epidemic. CDPH continues to strive to serve all individuals affected by HIV; however based on historical surveillance data from the past five years, CDPH has chosen to prioritize three populations for increased emphasis: men who have sex with men (MSM) of all races and ethnicities, Non-Hispanic Black men who have sex with men (BMSM), and Cisgender Non-Hispanic Black Heterosexual women (BHW).

### Men Who Have Sex with Men (MSM)

Men who have sex with men (MSM) represented 67% of all prevalent cases in 2014 and 79% of all new infections in 2015. (HC2) Among newly diagnosed MSM, linkage to care is slightly higher than that of all PLWHA in Chicago and closer to the NHAS goal of 85%, with MSM achieving 82% linkage to care within 1 month (Figure 3.2). MSM also access (62%) are retained in care (43%) and achieve viral suppression (53%) at slightly higher proportions than all PLWHA in Chicago (Figure 3.2). New diagnoses among MSM decreased between 2000 and 2006, but have since leveled off, remaining fairly constant through 2015 (Figure 3.3). The age demographics of newly diagnosed MSM have changed over time, with the proportion of new infection diagnoses among the 13-29 age group surpassing new diagnoses among those aged 30+ in 2014 (Figure 3.3).

Based on 2015 new HIV diagnoses, there were 27 times as many new HIV diagnoses in MSM than male heterosexuals (HET) and 61 times as many new HIV diagnoses in MSM than males who inject drugs (IDU) (Chicago NHAS data, 2016). (HC2) Looking at viral suppression among 2014 prevalent HIV cases in males, MSM had the highest percent of individuals virally suppressed (53%), higher than male HET (43%) or IDU (37%) counterparts (Chicago NHAS data, 2016).

## Non-Hispanic Black MSM (BMSM)

Among all MSM, NH Black MSM comprise the majority of all prevalent cases and new diagnoses, accounting for 38% of all prevalent cases among MSM in 2014 and 46% of new diagnoses among MSM in 2015. The care continuum shows that while MSM meet the goal of 85% linked to care at 3 months post-diagnosis, BMSM do not meet this goal until 6 months post-diagnosis. While linkage to care takes longer, percentages of BMSM accessing, being retained in care, and accessing care are similar to other MSM, however a lower percentage of BMSM achieve viral suppression compared to MSM (Figure 3.4). (HC2) As with MSM overall, the number of newly diagnosed cases among BMSM decreased between 2000 and 2005, but has since stabilized and remained fairly constant through 2015 (Figure 3.5). New diagnoses among BMSM aged 13-29 have grown steadily since 2000 and overtook newly diagnosed cases among BMSM aged 30+ in 2008 (Figure 3.5). (HC2) Sixty-six percent of newly diagnosed cases among BMSM are in the 13-29 age group. This group accounted for more than 25% of all new infections among individuals aged 13+ in Chicago in 2015 (Figure 3.5).

Based on 2015 new HIV diagnoses, there were 2 times as many new HIV diagnoses in BMSM than in Non-Hispanic White MSM or in Hispanic MSM, 13 times as many new HIV diagnoses than in Asian MSM, and 17 times as many new HIV diagnoses than in Multiracial MSM (Chicago NHAS data, 2016). (HC2) Looking at viral suppression in the 2014 HIV infection prevalent population, BMSM had one of the lowest percentages of viral suppression (48%); lower than Non-Hispanic White MSM (55%), Hispanic MSM (55%), Asian MSM (65%), and Multiracial MSM (66%) (Chicago NHAS data, 2016). (HC2)

# Cisgender Non-Hispanic Black Heterosexual Women (BHW)

Although the significance of the HIV epidemic among MSM can be attributed to the volume of prevalent and newly diagnosed cases, it is important to note its impact on smaller populations. Cisgender Heterosexual women represent less than 14% of all prevalent cases, however, among heterosexual women, NH Black heterosexual women (BHW) are disproportionately represented, accounting for 74% of all prevalent cases among heterosexual women in 2014, and 85% of all new infections among heterosexual women in 2015. (HC2)

## PRIORITY POPULATIONS

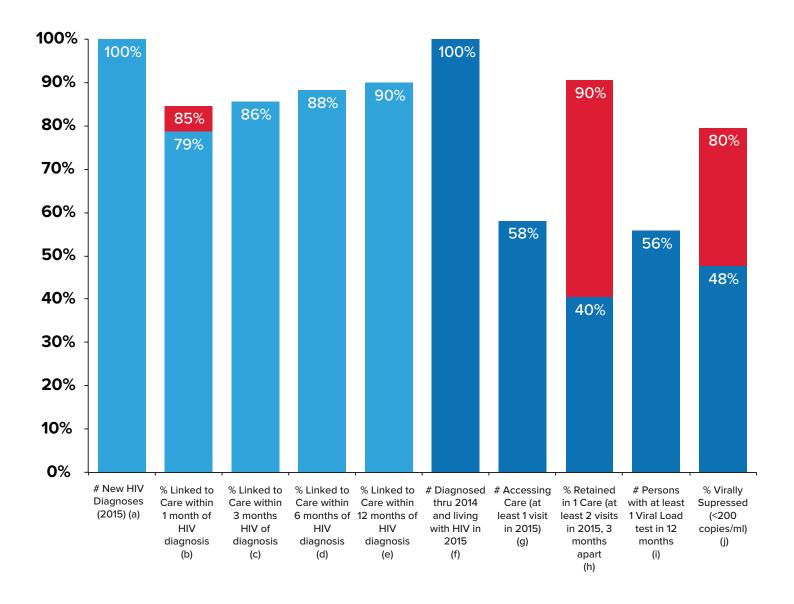
While linkage to care within one month is slightly lower among BHW than for all PLWHA in Chicago, this group achieves 94% linkage to care within a period of 6 months (Figure 3.6). However, accessing care, retention in care, and viral suppression are all slightly lower for BHW than for all PLWHA in Chicago (Figure 3.6). (HC2)

BHW ages 20-59 represented 10% of all new infections among individuals aged 13+ in Chicago in 2015. New HIV diagnoses among women have decreased steadily since 2000, as have new HIV diagnoses among BHW. The demographics of this population have remained somewhat stable over time, with older women comprising the majority of new diagnoses between 2000 and 2014 (Figure 3.7).

Based on 2015 new HIV diagnoses, there were 32 times as many new HIV diagnoses in BHW than in Cisgender Non-Hispanic White Heterosexual Women, 13 times as many new HIV diagnoses than in Cisgender Hispanic Heterosexual Women, and 64 times as many new HIV diagnoses than in Cisgender Asian HW or Multiracial Heterosexual, each (Chicago NHAS data, 2016). (HC2)

Looking at viral suppression among 2014 prevalent HIV cases in women, BHW had the lowest percent of individuals virally suppressed (43%) when compared to Non-Hispanic White (44%), Hispanic (48%), Asian (50%), and Multiracial HW (72%) (Chicago NHAS data, 2016). (HC2)

# Figure 3.1 - HIV Continuum of Care Among Cases 13 Years and Older with NHAS Indicators # 4-6 (red), Chicago, 2015 (as of 9/30/2016)



(a) Number of persons ≥ 13 years of age at diagnosis and diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(b) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 1 month of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(c) Percent of persons  $\geq$  13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 3 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(d) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 6 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(e) Percent of persons ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 12 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(f) Number of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 and VL1 Tables.

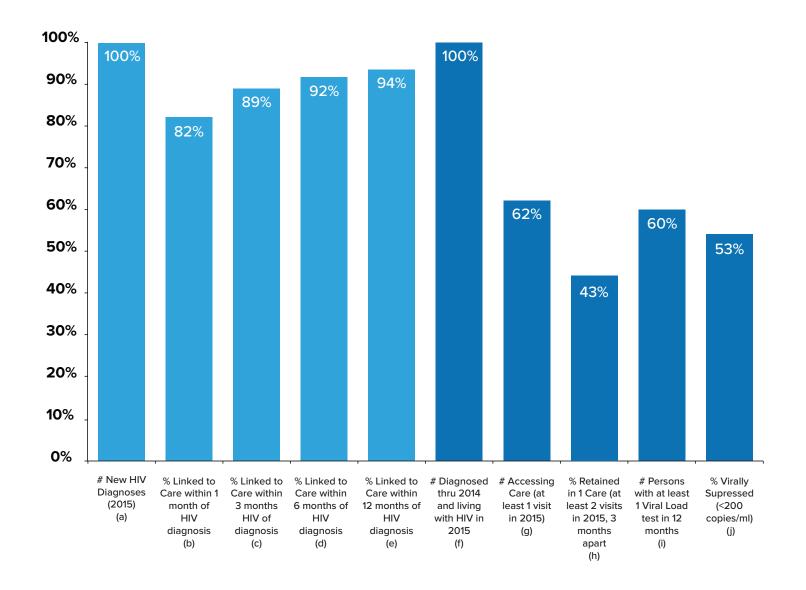
(g) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one medical care visit (at least one CD4 or VL) between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Carel Table.

(h) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least two medical care visits (at least one CD4 or VL at each), 3 months apart, between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.

(i) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one VL test in the past 12 months. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, VL1 Table.

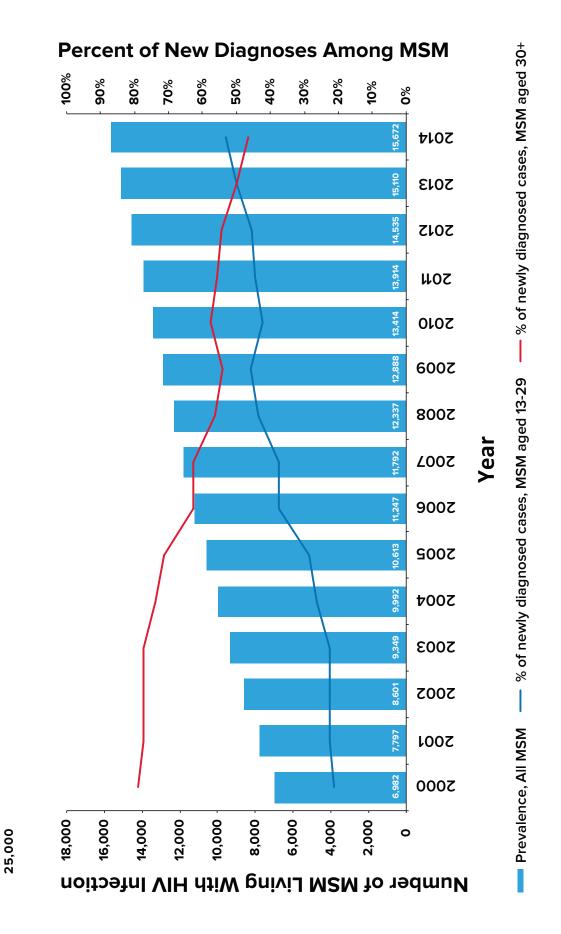
(j) Percent of persons ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 whose most recent viral load test result was < 200 copies/mL.

# Figure 3.2 - HIV Continuum of Care Among Men who have Sex with Men (MSM) Cases 13 Years and Older, Chicago, 2015 (as of 9/30/2016)

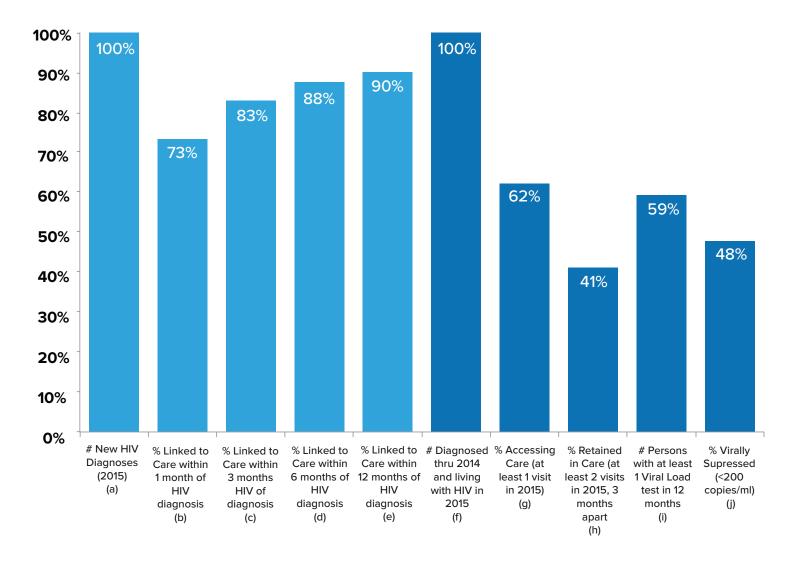


- (a) Number of MSM ≥ 13 years of age at diagnosis and diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.
- (b) Percent of MSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 1 month of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.
- (c) Percent of MSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 3 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.
- (d) Percent of MSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 6 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.
- (e) Percent of MSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 12 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

- (f) Number of MSM  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 and VL1 Tables.
- (g) Percent of MSM  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one medical care visit (at least one CD4 or VL) between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.
- (h) Percent of MSM ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least two medical care visits (at least one CD4 or VL at each), 3 months apart, between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.
- (i) Percent of MSM ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one VL test in the past 12 months. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, VL1 Table.
- (j) Percent of MSM  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 whose most recent viral load test result was < 200 copies/mL.



# Figure 3.4 - HIV Continuum of Care Among Non-Hispanic Black Men who have Sex with Men (BMSM) Cases 13 Years and Older, Chicago, 2015 (as of 9/30/2016)



(a) Number of BMSM ≥ 13 years of age at diagnosis and diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(b) Percent of BMSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 1 month of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(c) Percent of BMSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 3 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(d) Percent of BMSM  $\geq$  13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 6 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(e) Percent of BMSM ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 12 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

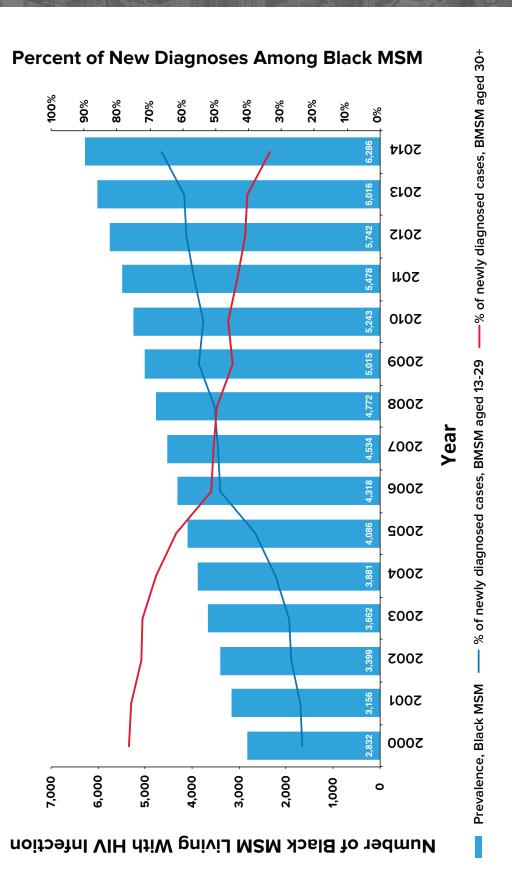
(f) Number of BMSM  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 and VL1 Tables.

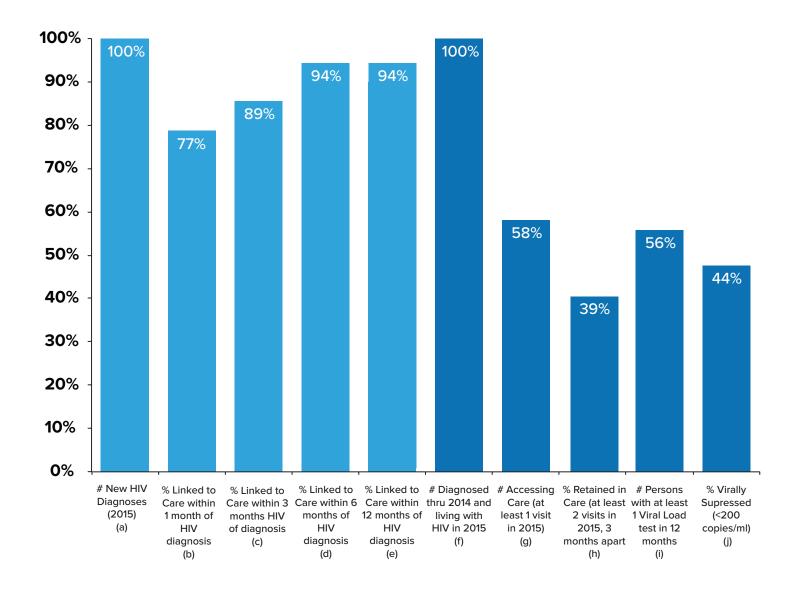
(g) Percent of BMSM  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one medical care visit (at least one CD4 or VL) between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.

(h) Percent of BMSM ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least two medical care visits (at least one CD4 or VL at each), 3 months apart, between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.

(i) Percent of BMSM ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one VL test in the past 12 months. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, VL1 Table.

(j) Percent of BMSM  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 whose most recent viral load test result was < 200 copies/mL.





(a) Number of BHW ≥ 13 years of age at diagnosis and diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(b) Percent of BHW ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 1 month of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(c) Percent of BHW ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 3 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(d) Percent of BHW ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 6 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

(e) Percent of BHW ≥ 13 years of age linked to care (at least one CD4, VL, or HIV-1 genotype test) within 12 months of HIV diagnosis among those diagnosed with HIV infection between 1/1/2015 and 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Link1 Table.

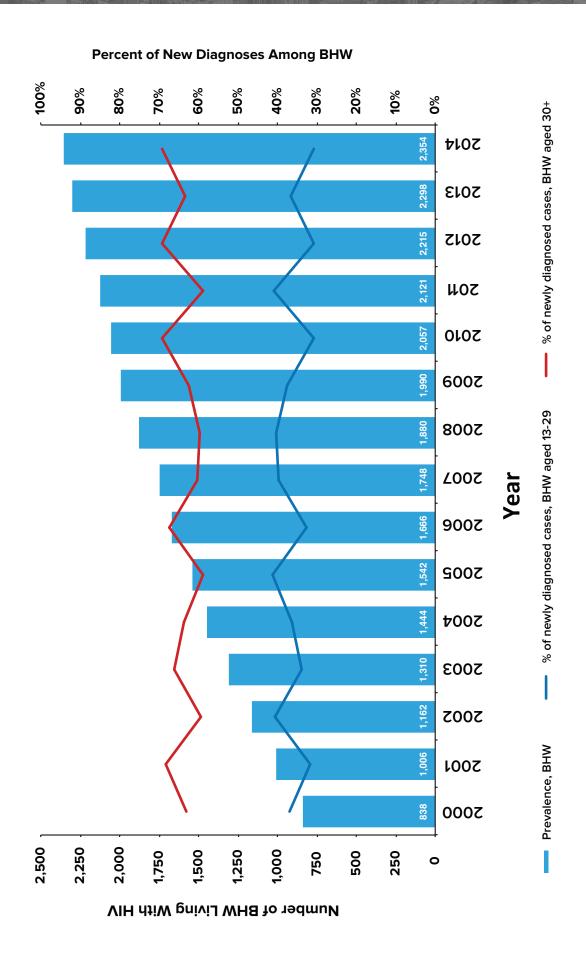
(f) Number of BHW  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 and VL1 Tables.

(g) Percent of BHW ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one medical care visit (at least one CD4 or VL) between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Carel Table.

(h) Percent of BHW ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least two medical care visits (at least one CD4 or VL at each), 3 months apart, between January 2015 and December 2015. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, Care1 Table.

(i) Percent of BHW ≥ 13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 who received at least one VL test in the past 12 months. Source: Chicago enhanced HIV/AIDS reporting system (eHARS) (as of 9/30/2016). NHAS output, VL1 Table.

(j) Percent of BHW  $\geq$  13 years of age on 12/31/2014 diagnosed with HIV through 12/31/2014 and living with HIV on 12/31/2015 whose most recent viral load test result was < 200 copies/mL.







# SPOTLIGHT: STI SPECIALTY CLINICS

For more than 80 years, CDPH has operated municipal STI specialty clinics in the city as a part of its mission to treat and prevent STIs in our communities. Through the HIV/STI Bureau, CDPH operates five large, high-volume STI specialty clinics located throughout the city (Englewood, Lakeview, Roseland, South Austin, and West Town), serving the needs of Chicago's diverse communities. CDPH STI specialty clinics have a large and varied clientele (with regard to gender, race, ethnicity, and sexual orientation) who experiences a range of STIs. In addition to the three reportable STIs (chlamydia, gonorrhea, and syphilis), CDPH STI specialty clinics provide diagnostic and treatment services for other common but non-reportable STIs, such as genital herpes, genital HPV infection, and trichomonoiasis.

Combined, CDPH STI clinics had more than 21,000 patient visits in 2015. Among those patients seen, 62.5% were male and 37.3% were female. Approximately 22% (2,883) of male clients identified as men who have sex with men (MSM) (Table 4.1). The majority of clients were non-Hispanic Blacks (56.3%), 16.2% were non-Hispanic Whites, 2.6% were non-Hispanic Asians, 11.3% were among Hispanics, and 12.3% were other/unknown races (Table 4.1). Individuals aged 20-29 years accounted for 51.0% of all patients seen (Table 4.1). Among clients seen and diagnosed at the CDPH STI clinics in 2015, 66.1% were diagnosed with chlamydia and 33.9% were diagnosed with gonorrhea (Table 4.2).

The proportion of STI clinic patients diagnosed with chlamydia, gonorrhea, and P&S syphilis varied by sex, sexual orientation, and clinic location (Figures 4.1-4.3). The Englewood STI Specialty clinic's 2015 clientele was mostly male for all three reported STIs. However, 33.0% and 22.9% of diagnosed chlamydia and gonorrhea patients, respectively, were among females. Sixty percent of P&S syphilis diagnoses were among MSM (Figures 4.1-4.3). The Lakeview STI Specialty clinic's clientele was also mostly male and had the largest percentages of all three STIs diagnosed in MSM (Figures 4.1-4.3). The Roseland, South Austin, and West Town STI Specialty clinics had similar proportional breakdowns of clientele for both chlamydia and gonorrhea, with the majority of diagnoses occurring in males and very few occurring in those identifying as MSM (Figures 4.1-4.3). For P&S syphilis diagnoses at South Austin and West Town clinics, the majority of diagnoses in males were among MSM, while for the Roseland clinic, all male diagnoses were among MSM (Figures 4.1-4.3).

## STI SPECIALTY CLINICS

As an integrated HIV/STI Bureau, HIV testing services are also delivered at all five CDPH STI specialty clinic sites, providing both conventional and rapid HIV tests. Fourth generation HIV testing was implemented in 2015 to identify acute HIV infection among patients accessing services at all specialty clinics. This integration of HIV testing at STI specialty clinics allows the knowledgeable staff to engage with individuals about potentially risky sexual behaviors, effective methods of protecting partners, and educating HIV-negative individuals about pre-exposure prophylaxis (PrEP). Currently, two PrEP navigators are located at the clinic sites with the highest patient volume, Englewood and Lakeview, and refer interested individuals to providers who can help them obtain PrEP.

Table 4.1 - Patient Populations at CDPH STI Specialty Clinics by Location: by Selected Demographic Characteristics, Chicago, 2015<sup>€</sup>

Demographic	ENGLE	WOOD	LAKE	VIEW	ROSE	LAND	S. AL	ISTIN	WEST	TOWN	TO	TAL
Characteristics	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Gender**												
Male	4,895	59.6%	5,095	67.9%	842	58.3%	968	57.7%	1,415	61.3%	13,215	62.5%
Female	3,313	40.4%	2,385	31.8%	598	41.4%	707	42.1%	891	38.6%	7,894	37.3%
Unknown	< 5	< 1%	23	0.3%	< 5	< 1%	< 5	< 1%	< 5	< 1%	33	0.2%
Race/Ethnicity^												
Black, non-Hispanic	6,718	81.8%	2,192	29.2%	967	67.0%	1,069	63.7%	957	41.5%	11,903	56.3%
White, non-Hispanic	112	1.4%	2,877	38.3%	12	0.8%	129	7.7%	287	12.4%	3,417	16.2%
Hispanic	372	4.5%	1,356	18.1%	27	1.9%	255	15.2%	383	16.6%	2,393	11.3%
Asian/PI, non-Hispanic	29	0.4%	463	6.2%	< 5	< 1%	23	1.4%	37	1.6%	554	2.6%
AI/AN, non-Hispanic	< 5	< 1%	16	0.2%	< 5	< 1%	< 5	< 1%	< 5	< 1%	24	0.1%
Multiple, non-Hispanic	51	0.6%	168	2.2%	< 5	< 1%	13	0.8%	15	0.6%	250	1.2%
Unknown	925	11.3%	431	5.7%	431	29.8%	187	11.1%	627	27.2%	2,601	12.3%
Sex of Partners												
Among Males <sup>§</sup>												
MSM	386	7.9%	2,067	40.6%	41	4.9%	149	15.4%	240	17.0%	2,883	21.8%
Not MSM	2,552	52.1%	2,540	49.9%	525	62.4%	545	56.3%	596	42.1%	6,758	51.1%
Unknown	1,957	40.0%	488	9.6%	276	32.8%	274	28.3%	579	40.9%	3,574	27.0%
Age Category <sup>†</sup>												
Less than 13	< 5	< 1%	< 5	< 1%	0	0.0%	<5	< 1%	0	0.0%	9	0.0%
13-19	813	9.9%	421	5.6%	121	8.4%	156	9.3%	168	7.3%	1,679	7.9%
20-29	3,889	47.4%	4,238	56.5%	630	43.6%	822	49.0%	1,198	51.9%	10,777	51.0%
20-24	2,110	25.7%	2,109	28.1%	339	23.5%	471	28.1%	624	27.0%	5,653	26.7%
25-29	1,779	21.7%	2,129	28.4%	291	20.2%	351	20.9%	574	24.9%	5,124	24.2%
30-39	1,754	21.4%	1,752	23.4%	350	24.2%	403	24.0%	567	24.6%	4,826	22.8%

111

36

1,444

7.7%

2.5%

6.8%

75

28

1,678

4.5%

1.7%

7.9%

104

32

2,308

4.5%

1.4%

10.9%

1,136

435

21,142

5.4%

2.1%

100.0%

50-59

60+

552

204

8,209

**Total** 

6.7%

2.5%

38.8%

294

135

7,503

3.9%

1.8%

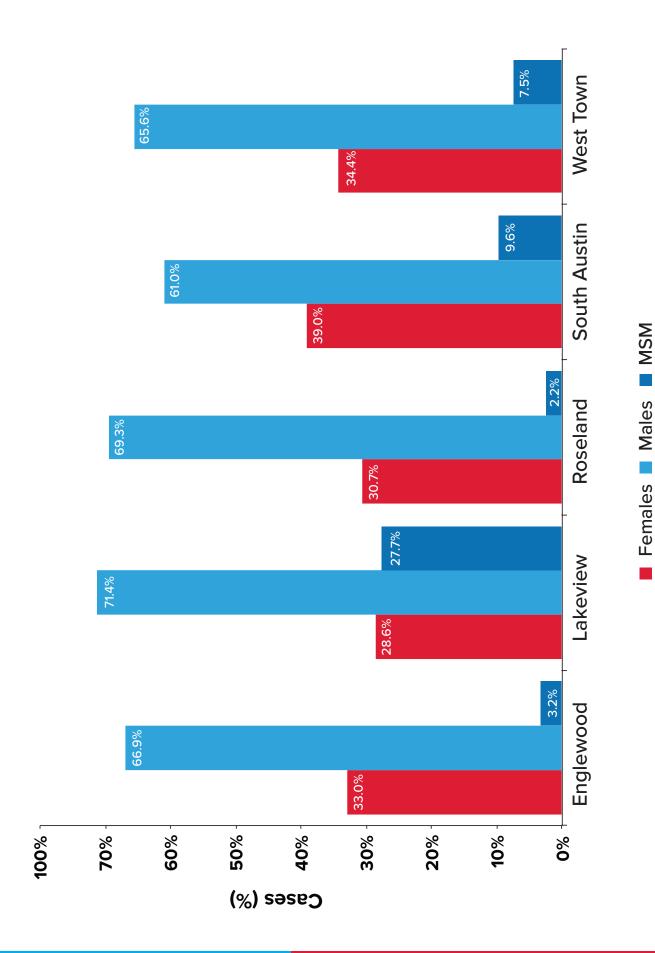
35.5%

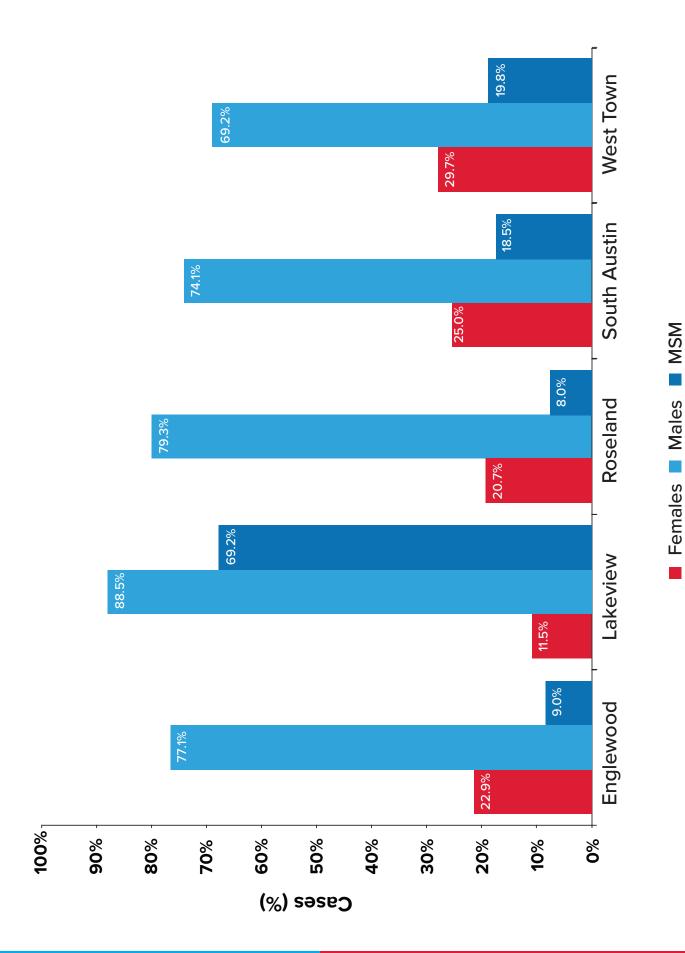
Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. € Source of the data: CDPH reference laboratory at the University of Illinois at Chicago (UIC). \*\*Current gender identity or gender with which a person identifies. Because total diagnoses were calculated using current gender, independently of values using birth sex, total diagnoses may differ slightly across tables. ^ Al/AN refers to American Indian, Alaskan Native. Multiple, non-Hispanic indicates more than one race identified. Individuals that had discordant ethnicity responses across >1 visit were classified as unknown. § Men who have sex with men. † Age at time of diagnosis.

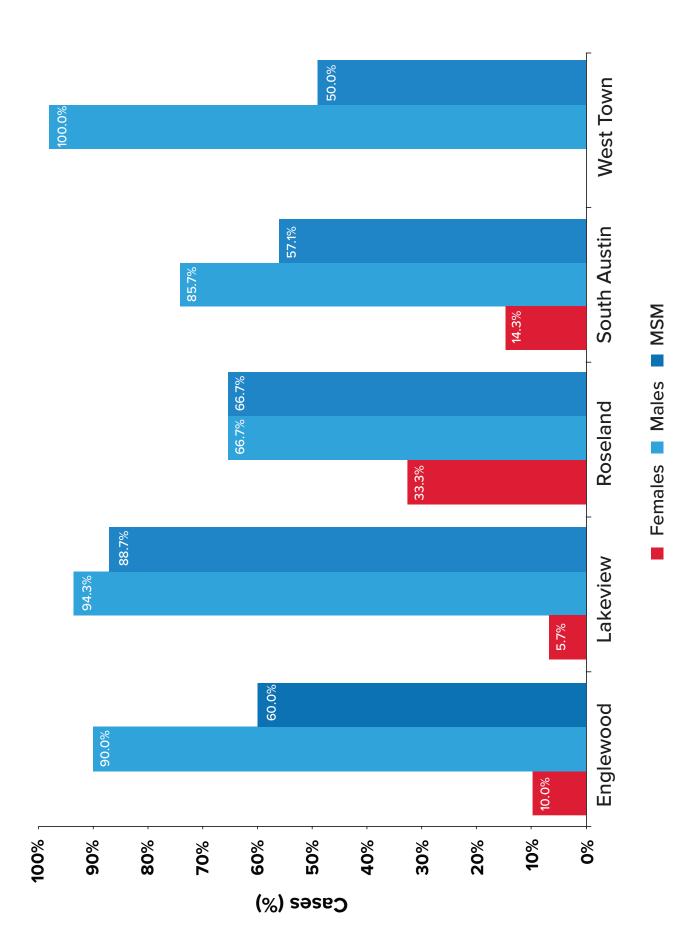
Table 4.2 - Number of Individuals Diagnosed with Chlamydia or Gonorrhea at CDPH STI Specialty Clinics by Location, Chicago, 2015

	ENGLE	WOOD	LAKE	VIEW	ROSE	LAND	S. AU	ISTIN	WEST	TOWN	TO <sup>-</sup>	TAL
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Reportable STI <sup>€</sup>												
Chlamydia	1,017	43.8%	685	29.5%	137	5.9%	228	9.8%	253	10.9%	2,320	66.1%
Gonorrhea	581	48.9%	321	27.0%	87	7.3%	108	9.1%	91	7.7%	1,188	33.9%
Total	1,598	45.6%	1,006	28.7%	224	6.4%	336	9.6%	344	9.8%	3,508	100.0%

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. € Source of the data: CDPH reference laboratory at the University of Illinois at Chicago (UIC)











# **APPENDIX A: TECHNICAL NOTES**

As the HIV epidemic and HIV reporting systems change, new opportunities arise to better describe the epidemic. Thus, in keeping with these changes we have a made a number of modifications to STI/HIV Chicago. A description of the changes and other technical notes follow.

Diagnoses data are presented through 2015. While STI data are final, AIDS and HIV data for 2015 are still provisional. Estimated Annual Percent Change (EAPC) is used to provide a general picture of disease trends across the 5 years of the report. EAPC assumes a constant rate of change and should not be over-interpreted.

### **HIV/AIDS**

When interpreting data in this report, keep in mind that the Enhanced HIV/AIDS Reporting System (eHARS) database is updated continuously to reflect the most current and complete information on people infected and newly diagnosed with HIV or AIDS. Data in this report were up-to-date as a of 9/30/2016. Reporting delays are important when interpreting trends in case numbers and rates over time, especially the most recent year of diagnosis. Report delay is defined as the interval between the date an HIV or AIDS case is diagnosed and the date the case is reported to the health department. Within three years, the total number of HIV diagnoses reported are relatively stable (fluctuating < 10 cases), and the data are no longer considered provisional. In order to provide the most complete data, we will be presenting trend data through 2015. Additional cases continue to be reported in subsequent years and new cases are identified through laboratory reporting and registry matches. Thus, the numbers of cases diagnosed for each year are subject to change as new information is received from any of the reporting sources.

The "HIV Infection Diagnosis" data presented in this issue include three categories of diagnoses: (1) a diagnosis of HIV infection, (2) a diagnosis of HIV infection with a later diagnosis of AIDS, and (3) concurrent diagnoses of HIV infection and AIDS [defined as receiving an AIDS diagnosis within 12 months of an HIV diagnosis]. Data from the HIV reporting system should be interpreted with caution. HIV surveillance reports may not be representative of all persons infected with HIV because not all infected persons have been diagnosed. The guidelines for cell suppression used in this report try to balance data

accessibility with confidentiality and confidence in the stability of the estimates published. Rates and percentages based on twenty or fewer cases can vary widely just by random chance even when there is no meaningful statistical difference between measurements. Thus, the number and rate for categories with less than five are suppressed.

For surveillance purposes, HIV and AIDS cases are counted only once in a hierarchy of modes of transmission. Persons with more than one reported mode of transmission are classified in the transmission mode first in the hierarchy. The exception is men who have sex with men and also inject drugs, which has its own category. Persons whose transmission mode is classified as male-to-male sexual contact (MSM) include men who report sexual contact with other men and men who report sexual contact with both men and women. Persons who mode of transmission is classified as heterosexual contact are persons who report specific heterosexual contact with a person with, or at increased risk for, HIV infection (e.g., an injection drug user).

Because many cases of HIV infection and AIDS are initially reported without a defined mode of transmission, multiple imputation is used to assign a mode of transmission for these cases. Multiple imputation is a statistical approach in which each missing mode of transmission is replaced with a set of plausible values that represent the uncertainty about the true, but missing, value. The plausible values are analyzed by using standard procedures, and the results from these analyses are then combined to produce the final results. Multiple imputation is used by the Centers for Disease Control and Prevention (CDC) in their national HIV Surveillance Report.

#### GONORRHEA

Gonorrhea is one of three sexually transmitted infections (STI) that local providers are required to report to CDPH per 77 Illinois Administrative Code 693 (Control of sexually transmissible infections code). Gonorrhea is a bacterial STI caused by *Neisseria gonorrhoeae*; infection varies in course, severity, and symptoms among males and females (Heymann, 2004). Co-infection with chlamydia can occur. Left untreated, disease sequelae can include pelvic inflammatory disease (PID), ectopic pregnancy, and infertility. *Neisseria gonorrhoeae* has progressively developed resistance to each of the antibiotics used for treatment of gonorrhea. Most recently, declining susceptibility to cefixime resulted in a change in the CDC treatment guidelines, so that dual therapy with ceftriaxone and either azithromycin or doxycycline is now a CDC recommended treatment regimen for gonorrhea.

#### **CHLAMYDIA**

Chlamydia trachomatis infection is the most commonly reported notifiable disease and is one of three sexually transmitted infections (STI) that local providers are required to report to CDPH per 77 Illinois Administrative Code 693 (Control of sexually transmissible infections code). Chlamydial infections in women are usually asymptomatic. However, these can result in pelvic inflammatory disease (PID), which is a cause of infertility, ectopic pregnancy, and chronic pelvic pain. In addition, pregnant women infected with chlamydia can pass the infection to their infants during delivery, potentially resulting in neonatal ophthalmia and pneumonia. Because of the large burden of disease and risks associated with infection, CDC recommends that all sexually active women younger than age 26 years receive annual chlamydia screening.

### **SYPHILIS**

Syphilis is one of three sexually transmitted infections that local providers are required to report to CDPH per 77 Illinois Administrative Code 693 (Control of sexually transmissible infections code). Syphilis is caused by a bacterial STI called *Treponema pallidum*. Syphilis, a genital ulcerative disease, causes significant complications if untreated and facilitates the transmission of HIV infection. Syphilis is characterized by stages: primary (can have a lesion known as a chancre, usually occurring 3 weeks post exposure), secondary (symptoms include rash and fatigue), early latent (less than 1 year post exposure), and late latent (greater than 1 year post exposure). Primary and secondary syphilis are the most infectious and symptomatic stages. Periods of latency vary and may lead to increased morbidity and, potentially, mortality.

A probable case of congenital syphilis is defined as: "A condition affecting an infant whose mother had untreated or inadequately treated syphilis at delivery, regardless of signs in the infant, or an infant or child who has a reactive treponemal test for syphilis and any one of the following:

- Any evidence of congenital syphilis on physical examination
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive cerebrospinal fluid (CSF) venereal disease research laboratory (VDRL)
- An elevated CSF cell count or protein (without other cause)
- A reactive fluorescent treponemal antibody absorbed 19S-IgM antibody test or
- Igm enzyme-linked immunosorbent assay" (CDC 1997)

A syphilitic stillbirth is defined as: "A fetal death that occurs after a 20-week gestation or in which the fetus weighs >500g and the mother had untreated or inadequately treated syphilis at delivery" (CDC 1997).

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# APPENDIX B: GEOCODING METHODOLOGY AND LIMITATIONS

# ILLINOIS NATIONAL ELECTRONIC DISEASE SURVEILLANCE SYSTEM (INEDSS) ADDRESS VALIDATION PROCEDURE

On March 24, 2012, INEDSS Release 10.2 was deployed. This release included address validation within INEDSS and geocoded data. Before case information is submitted to the Illinois Department of Public Health (IDPH) for counting, addresses are verified to ensure the accuracy and standardization of the data. Addresses that are verified in INEDSS will be assigned latitude and longitude coordinates. For addresses not validated, INEDSS geocodes the data using the zip code centroid, followed by the city and then the country.

Twice a month, IDPH submits an updated morbidity file to the Chicago Department of Public Health (CDPH) via MOVEit File Transfer, a secured application for exchanging confidential files and data between servers and organizations. This file does not include the geocoded address field. Once CDPH receives the electronic file, it is prepared for submission to the City of Chicago GIS FTP server for validation and geocoding.

#### **GEOCODING OF HIV/STI MORBIDITY FILES**

Gonorrhea and Chlamydia infection data are obtained from INEDSS. P&S and Congenital Syphilis infection data are obtained from STD Management Information System (STD MIS). HIV Infection and Prevalence data are obtained from eHARS.

Before the data from INEDSS/eHARS/STD MIS are submitted to the City of Chicago GIS FTP site for geocoding, the street address is rounded (e.g., 8634 to 8600) in order to preserve confidentiality. A new data file is created containing only the rounded street address and a record identifier (state case number). This file is converted from Microsoft Excel to a comma delimited (.csv) file and submitted to the City of Chicago GIS FTP server for processing.

The files submitted are assigned a name that does not associate it with a person, case, health condition, or CDPH. Once the geographic identifiers (e.g., community

area number, zip code, ward, and 2010 census tract) are selected, the file is submitted. After the geocoder has received the request, an email is sent notifying the user that the geocoding process has commenced.

When the geocoding job is completed, the results (output) file is downloaded to a secure server that meets HIPPA security requirements. Lastly, the original (input) file that was submitted and the results (output) file are both deleted from the FTP folders.

Addresses that are not geocoded in the output file are cleaned using the Geocoder website by identifying the correct street components. All apartment components (e.g., FL, BSMT, Apt #1) are also removed from the address field. The file is resubmitted to the GIS FTP server for validation and geocoding. To increase the number of geocoded addresses, the match standard code can be changed from medium (default) to low to obtain nearest matches.

#### REASONS WHY ADDRESSES FAIL TO MATCH

- A. Addresses may be missing street segments or in the wrong format (AVE, ST, King Dr. instead of Dr. Martin Luther King Drive).
- B. Address may incorporate typographical errors that result in erroneous street names or local street names that are different that those officially recorded by the government.
- C. Addresses may end at jurisdictional boundaries.

## LIMITATIONS IN DETERMINING GEOGRAPHIC PATTERNS IN RATES OF HEALTH-RELATED EVENTS

- Unable to determine if the geographical variation in the incidence rates across years is due to a true change in the progression of the disease or an artifact of the address validation process in INEDSS.
- Inflation of the rates due to increase in the proportion of exact or nearest matched addresses.

#### APPENDIX C: LIST OF ACRONYMS

AI/AN = AMERICAN INDIAN/ALASKAN NATIVE

AIDS = ACQUIRED IMMUNODEFICIENCY SYNDROME

ART = ANTI-RETROVIRAL THERAPY

CDC = CENTERS FOR DISEASE CONTROL AND PREVENTION

CDPH = CHICAGO DEPARTMENT OF PUBLIC HEALTH

**EAPC** = ESTIMATED ANNUAL PERCENT CHANGE

EHARS = ENHANCED HIV/AIDS REPORTING SYSTEM

FTM = FEMALE TO MALE TRANSGENDER

HAART = HIGHLY ACTIVE ANTI-RETROVIRAL THERAPY

HIV = HUMAN IMMUNODEFICIENCY VIRUS

IDPH = ILLINOIS DEPARTMENT OF PUBLIC HEALTH

IDU = INJECTION DRUG USE/INJECTION DRUG USER

INEDSS = ILLINOIS NATIONAL ELECTRONIC DISEASE SURVEILLANCE SYSTEM

MTF = MALE TO FEMALE TRANSGENDER

MSM = MEN WHO HAVE SEX WITH MEN

MSM/IDU = MEN WITH A HISTORY OF INJECTION DRUG USE WHO HAVE SEX

WITH MEN

NIR = NO IDENTIFIED RISK

NH = NON-HISPANIC

PI = PACIFIC ISLANDER

PLWHA = PEOPLE LIVING WITH HIV/AIDS

P&S = PRIMARY AND SECONDARY SYPHILIS

STI = SEXUALLY TRANSMITTED INFECTION

STD MIS = STD MANAGEMENT INFORMATION SYSTEM

## Table A1 - 2015 HIV Infection\* Diagnosis Rates by Community Area, Chicago (as of 09/30/16)

Community Area	HIV Infections	HIV Infection	Community Area	HIV Infections	HIV Infection
Rogers Park	33	60.0	Washington Park	5	42.7
West Ridge	12	16.7	Hyde Park	8	31.2
Uptown	49	86.9	Woodlawn	14	53.9
Lincoln Square	10	25.3	South Shore	29	58.3
North Center	< 5	15.7	Chatham	21	67.7
Lake View	50	53.0	Avalon Park	5	49.1
Lincoln Park	10	15.6	South Chicago	11	35.3
Near North Side	11	13.7	Burnside	0	0.0
Edison Park	< 5	8.9	Calumet Heights	5	36.2
Norwood Park	0	0.0	Roseland	16	35.9
Jefferson Park	< 5	3.9	Pullman	< 5	13.7
Forest Glen	0	0.0	South Deering	6	39.7
North Park	< 5	22.3	East Side	< 5	8.7
Albany Park	5	9.7	West Pullman	11	37.1
Portage Park	< 5	3.1	Riverdale	0	0.0
Irving Park	14	26.2	Hegewisch	0	0.0
Dunning	< 5	9.5	Garfield Ridge	< 5	8.7
Montclare	< 5	22.3	Archer Heights	< 5	22.4
Belmont Cragin	14	17.8	Brighton Park	7	15.4
Hermosa	5	20.0	McKinley Park	< 5	12.8
Avondale	6	15.3	Bridgeport	5	15.6
Logan Square	15	20.4	New City	17	38.3
Humboldt Park	13	23.1	West Elsdon	< 5	22.1
West Town	20	24.6	Gage Park	5	12.5
Austin	39	39.6	Clearing	< 5	8.6
West Garfield Park	6	33.3	West Lawn	< 5	3.0
East Garfield Park	8	38.9	Chicago Lawn	24	43.1
Near West Side	22	40.1	West Englewood	19	53.5
North Lawndale	19	52.9	Englewood	14	45.7
South Lawndale	26	32.8	Gr. Grand Crossing	23	70.5
Lower West Side	10	28.0	Ashburn	9	21.9
Loop	7	23.9	Auburn Gresham	30	61.5

# Table A1 - 2015 HIV Infection\* Diagnosis Rates by Community Area, Chicago (as of 09/30/16)

Community Area	HIV Infections	HIV Infection Rate§	Community Area	HIV Infections	HIV Infection Rate§
Near South Side	6	28.1	Beverly	< 5	5.0
Armour Square	< 5	14.9	Washington Heights	5	22.6
Douglas	10	54.8	Mount Greenwood	< 5	10.5
Oakland	< 5	16.9	Morgan Park	5	22.2
Fuller Park	< 5	69.5	O'Hare	< 5	7.8
Grand Boulevard	20	91.2	Edgewater	38	67.2
Kenwood	8	44.8	Unknown CA	98	_
			Chicago Total 1	879	32.6

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. § Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶ Includes all persons with unknown/undetermined community area. \* HIV infection diagnoses represents newly diagnosed with HIV in a given year, at any stage of the disease through 09/30/2016.

Table A2 - People Living with HIV Infection (Prevalence)<sup>†</sup> in 2014 by Community Area, Chicago (as of 09/30/2016)

Community Area	Prevalent Cases	Prevalent Rate§	Community Area	Prevalent Cases	Prevalent Rate <sup>§</sup>
Rogers Park	932	1,694.8	Washington Park	129	1,101.0
West Ridge	299	415.6	Hyde Park	140	545.2
Uptown	1,278	2,267.5	Woodlawn	249	958.3
Lincoln Square	181	458.3	South Shore	626	1,257.9
North Center	108	338.9	Chatham	314	1,012.0
Lake View	967	1,024.7	Avalon Park	76	746.2
Lincoln Park	165	257.3	South Chicago	278	891.1
Near North Side	308	382.7	Burnside	20	685.9
Edison Park	9	80.5	Calumet Heights	79	572.0
Norwood Park	30	81.0	Roseland	271	607.4
Jefferson Park	37	145.4	Pullman	46	628.0
Forest Glen	26	140.5	South Deering	91	602.3
North Park	46	256.5	East Side	31	134.5
Albany Park	223	432.7	West Pullman	174	586.8
Portage Park	127	198.1	Riverdale	19	293.1
Irving Park	192	359.8	Hegewisch	8	84.9
Dunning	53	126.4	Garfield Ridge	41	118.8
Montclare	35	260.7	Archer Heights	18	134.4
Belmont Cragin	227	288.3	Brighton Park	126	277.7
Hermosa	98	391.8	McKinley Park	33	211.4
Avondale	162	412.6	Bridgeport	70	218.9
Logan Square	336	456.6	New City	169	380.8
Humboldt Park	465	825.6	West Elsdon	27	149.1
West Town	366	449.5	Gage Park	97	243.1
Austin	707	717.7	Clearing	28	121.0
West Garfield Park	183	1,016.6	West Lawn	56	167.9
East Garfield Park	211	1,025.9	Chicago Lawn	260	467.4
Near West Side	348	634.1	West Englewood	264	743.6
North Lawndale	349	971.8	Englewood	276	900.4
South Lawndale	515	649.5	Gr. Grand Crossing	334	1,024.5
Lower West Side	141	394.2	Ashburn	91	221.5
Loop	116	396.1	Auburn Gresham	330	677.0

#### Continued on next page >

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. † All persons diagnosed with HIV, from the beginning of the epidemic through 12/31/2014 and living through 12/31/2015 as of 09/30/2016. § Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶ Includes all persons with unknown/undetermined community area.

Table A2 - People Living with HIV Infection (Prevalence)<sup>†</sup> in 2014 by Community Area, Chicago (as of 09/30/2016)

Community Area	Prevalent Cases	Prevalent Rate <sup>§</sup>	Community Area	Prevalent Cases	Prevalent Rate <sup>§</sup>
Near South Side	103	481.5	Beverly	44	219.6
Armour Square	33	246.4	Washington Heights	144	543.5
Douglas	170	932.1	Mount Greenwood	9	47.1
Oakland	49	828.0	Morgan Park	104	461.3
Fuller Park	26	904.0	O'Hare	18	141.1
Grand Boulevard	276	1,258.6	Edgewater	1,165	2,061.2
Kenwood	151	846.4	Unknown CA	7,107	-
			Chicago Total <sup>1</sup>	23,410	868.5

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. § Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶ Includes all persons with unknown/undetermined community area. \* HIV infection diagnoses represents newly diagnosed with HIV in a given year, at any stage of the disease through 09/30/2016.

### Table A3 - 2015 Chlamydia Case Rates by Community Area, Chicago

Community Area	Chlamydia Cases	Rate <sup>§</sup>	Community Area	Chlamydia Cases	Rate§
Rogers Park	471	856.5	Washington Park	335	2,859.1
West Ridge	287	398.9	Hyde Park	120	467.3
Uptown	546	968.7	Woodlawn	472	1,816.6
Lincoln Square	142	359.6	South Shore	858	1,724.0
North Center	80	251.0	Chatham	511	1,646.9
Lake View	673	713.2	Avalon Park	127	1,246.9
Lincoln Park	331	516.3	South Chicago	467	1,496.9
Near North Side	486	603.8	Burnside	38	1,303.2
Edison Park	15	134.1	Calumet Heights	177	1,281.5
Norwood Park	69	186.4	Roseland	701	1,571.1
Jefferson Park	54	212.2	Pullman	87	1,187.7
Forest Glen	36	194.5	South Deering	158	1,045.7
North Park	49	273.3	East Side	105	455.7
Albany Park	212	411.3	West Pullman	477	1,608.7
Portage Park	264	411.7	Riverdale	192	2,962.0
Irving Park	245	459.2	Hegewisch	38	403.1
Dunning	103	245.6	Garfield Ridge	145	420.1
Montclare	62	461.8	Archer Heights	89	664.5
Belmont Cragin	527	669.3	Brighton Park	324	714.2
Hermosa	178	711.7	McKinley Park	97	621.3
Avondale	234	596.0	Bridgeport	119	372.1
Logan Square	489	664.4	New City	579	1,304.7
Humboldt Park	932	1,654.7	West Elsdon	99	546.7
West Town	615	755.2	Gage Park	330	827.2
Austin	1,924	1,953.0	Clearing	118	510.0
West Garfield Park	528	2,933.2	West Lawn	215	644.6
East Garfield Park	529	2,572.1	Chicago Lawn	813	1,461.5
Near West Side	638	1,162.5	West Englewood	744	2,095.5
North Lawndale	1,153	3,210.6	Englewood	668	2,179.2
South Lawndale	710	895.5	Gr. Grand Crossing	707	2,168.6
Lower West Side	312	872.3	Ashburn	338	822.8
Loop	185	631.8	Auburn Gresham	811	1,663.8

### Table A3 - 2015 Chlamydia Case Rates by Community Area, Chicago

Community Area	Chlamydia Cases	Rate§	Community Area	Chlamydia Cases	Rate⁵
Near South Side	120	561.0	Beverly	95	474.2
Armour Square	82	612.4	Washington Heights	391	1,475.9
Douglas	247	1,354.3	Mount Greenwood	39	204.3
Oakland	116	1,960.1	Morgan Park	215	953.7
Fuller Park	42	1,460.4	O'Hare	36	282.2
Grand Boulevard	389	1,773.9	Edgewater	386	682.9
Kenwood	201	1,126.6	Unknown CA	2,521	-
			Chicago Total 1	29,018	1,076.5

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. § Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶ Includes all persons with unknown/undetermined community area.

### Table A4 - 2015 Gonorrhea Case Rates by Community Area, Chicago

Community Area	Gonorrhea Cases	Rate <sup>§</sup>	Community Area	Gonorrhea Cases	Rate§
Rogers Park	216	392.8	Washington Park	96	819.3
West Ridge	77	107	Hyde Park	40	155.8
Uptown	359	637	Woodlawn	133	511.9
Lincoln Square	46	116.5	South Shore	295	592.8
North Center	20	62.8	Chatham	167	538.2
Lake View	362	383.6	Avalon Park	35	343.6
Lincoln Park	64	99.8	South Chicago	131	419.9
Near North Side	76	94.4	Burnside	14	480.1
Edison Park	< 5	17.9	Calumet Heights	59	427.2
Norwood Park	9	24.3	Roseland	282	632
Jefferson Park	12	47.2	Pullman	34	464.2
Forest Glen	6	32.4	South Deering	48	317.7
North Park	7	39	East Side	17	73.8
Albany Park	43	83.4	West Pullman	149	502.5
Portage Park	44	68.6	Riverdale	60	925.6
Irving Park	67	125.6	Hegewisch	< 5	42.4
Dunning	19	45.3	Garfield Ridge	29	84
Montclare	12	89.4	Archer Heights	8	59.7
Belmont Cragin	67	85.1	Brighton Park	20	44.1
Hermosa	24	96	McKinley Park	11	70.5
Avondale	44	112.1	Bridgeport	13	40.7
Logan Square	116	157.6	New City	123	277.2
Humboldt Park	268	475.8	West Elsdon	6	33.1
West Town	126	154.7	Gage Park	57	142.9
Austin	637	646.6	Clearing	18	77.8
West Garfield Park	173	961.1	West Lawn	16	48
East Garfield Park	172	836.3	Chicago Lawn	230	413.5
Near West Side	165	300.7	West Englewood	286	805.5
North Lawndale	390	1086	Englewood	285	929.7
South Lawndale	79	99.6	Gr. Grand Crossing	269	825.1
Lower West Side	58	162.2	Ashburn	70	170.4
Loop	42	143.4	Auburn Gresham	258	529.3

### Table A4 - 2015 Gonorrhea Case Rates by Community Area, Chicago

Community Area	Gonorrhea Cases	Rate <sup>§</sup>	Community Area	Gonorrhea Cases	Rate <sup>§</sup>
Near South Side	35	163.6	Beverly	17	84.9
Armour Square	30	224	Washington Heights	124	468
Douglas	76	416.7	Mount Greenwood	< 5	15.7
Oakland	34	574.5	Morgan Park	72	319.4
Fuller Park	15	521.6	O'Hare	< 5	7.8
Grand Boulevard	115	524.4	Edgewater	234	414
Kenwood	66	369.9	Unknown CA	899	_
			Chicago Total 1	8,776	325.6

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. § Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶ Includes all persons with unknown/undetermined community area.

## Table A5 - 2015 Primary and Secondary (P&S) Syphilis Case Rates by Community Area, Chicago

Community Area	P&S Syphilis Cases	Rate§	Community Area	P&S Syphilis Cases	Rate§
Rogers Park	35	63.6	Washington Park	10	85.3
West Ridge	13	18.1	Hyde Park	7	27.3
Uptown	69	122.4	Woodlawn	11	42.3
Lincoln Square	7	17.7	South Shore	26	52.2
North Center	< 5	_	Chatham	10	32.2
Lake View	59	62.5	Avalon Park	< 5	_
Lincoln Park	9	14	South Chicago	< 5	_
Near North Side	9	11.2	Burnside	0	0
Edison Park	0	0	Calumet Heights	< 5	_
Norwood Park	0	0	Roseland	10	22.4
Jefferson Park	< 5	_	Pullman	< 5	_
Forest Glen	< 5	_	South Deering	< 5	_
North Park	< 5	_	East Side	0	0
Albany Park	10	19.4	West Pullman	5	16.9
Portage Park	7	10.9	Riverdale	< 5	
Irving Park	10	18.7	Hegewisch	0	0
Dunning	8	19.1	Garfield Ridge	< 5	
Montclare	0	0	Archer Heights	< 5	
Belmont Cragin	10	12.7	Brighton Park	< 5	
Hermosa	< 5	_	McKinley Park	< 5	
Avondale	6	15.3	Bridgeport	< 5	
Logan Square	13	17.7	New City	6	13.5
Humboldt Park	13	23.1	West Elsdon	< 5	_
West Town	18	22.1	Gage Park	6	15
Austin	30	30.5	Clearing	0	0
West Garfield Park	5	27.8	West Lawn	< 5	
East Garfield Park	10	48.6	Chicago Lawn	18	32.4
Near West Side	13	23.7	West Englewood	24	67.6
North Lawndale	18	50.1	Englewood	19	62
South Lawndale	13	16.4	Gr. Grand Crossing	12	36.8
Lower West Side	10	28	Ashburn	9	21.9
Loop	5	17.1	Auburn Gresham	19	39

## Table A5 - 2015 Primary and Secondary (P&S) Syphilis Case Rates by Community Area, Chicago

Community Area	P&S Syphilis Cases	Rate§	Community Area	P&S Syphilis Cases	Rate§
Near South Side	< 5	-	Beverly	< 5	-
Armour Square	0	0	Washington Heights	7	26.4
Douglas	< 5	_	Mount Greenwood	0	0
Oakland	< 5	-	Morgan Park	11	48.8
Fuller Park	< 5	-	O'Hare	0	0
Grand Boulevard	13	59.3	Edgewater	50	88.5
Kenwood	6	33.6	Unknown CA	22	_
			Chicago Total 1	753	27.9

Note: Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. § Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶ Includes all persons with unknown/undetermined community area.



