

HIV/STI Surveillance Report, Chicago

December 2014



CHICAGO DEPARTMENT OF PUBLIC HEALTH

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Mayor



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Dear Friends,

Chicago is on the move. We are making real progress in fight against HIV, AIDS and sexually transmitted infections (STIs). The Chicago Department of Public Health's (CDPH) 2014 HIV/STI Surveillance Report highlights our continued efforts to reduce the annual number of infections by providing a current snapshot of the rates of HIV and STIs in Chicago. I'm especially happy that the number of new HIV infection diagnoses has been declining steadily for the past 13 years in Chicago. Though we are seeing declines in many areas, the report also reminds us of the work still to be done. The data from this report should be used by policy makers, community organizations and advocates to make better, more informed decisions in our shared efforts to reduce the impact of HIV, AIDS and STIs across our City.

I encourage everyone to read the entire report to get a better understanding of these issues. I would like to highlight a few key data points, specific to HIV:

- New HIV diagnoses continue to decline in Chicago year-over-year. In 2013, there were 1,091 new diagnoses, 41% below the peak of 1,857 recorded in 2001. Our efforts are working, and we need to continue to focus on prevention.
- Between 2009 and 2013, there was a 73% absolute decline in HIV transmission rates among intravenous drug users.
- Eight of ten adults newly diagnosed with HIV were linked to HIV medical care within the first three months of their diagnosis. Early care increases the chances of a healthier, fuller life.
- Among newly diagnosed individuals in care, 80% of those prescribed antiretroviral therapy have already achieved the ultimate goal, viral suppression, significantly decreasing their chances of transmitting the disease to others.

When it comes to the continuum of HIV care, Chicago fairs significantly better than the rest of the nation. In Chicago, we estimate that over half (54%) received HIV medical care in 2011, that is compared to only 40% nationally. Additionally, we fair better than the nation in the percentage of those found to be on ART and those who are virally suppressed.

Even with this progress, there is still more work to do. As the report shows, African Americans and men who have sex with men continue to be disproportionately impacted by HIV, AIDS and STIs. While this report outlines the decreases seen in rates of HIV infection, as well in rates of gonorrhea and chlamydia, there have been increases in some communities, while other STIs are not decreasing at fast enough rates. By identifying gaps in testing, diagnosis and care, CDPH and our partners can develop more effective ways to engage individuals, ensuring they can access the care they need to live longer, healthier lives.

This report is part of *Healthy Chicago*, the public health agenda first launched by Mayor Rahm Emanuel and CDPH in 2011. *Healthy Chicago* calls on public, private and community-based organizations to come together to implement policy, programmatic and public awareness strategies in 12 priority areas, including HIV and STI prevention. Since launching *Healthy Chicago*, we have already made significant progress. This report builds on that success, providing new information so we can continue to make progress in our fight, helping to ensure a healthier Chicago for us all.

Sincerely,

Bechara Choucair, M.D.

Commissioner, Chicago Department of Public Health

Overview of HIV/STIs in Chicago

For the last 13 years, there has been a steady decline in the number of diagnosed HIV and AIDS cases in Chicago. Since 2001, the number of new HIV and AIDS diagnoses has declined by more than 40%. In addition to these significant declines, Chicago outperforms the national percentage of HIV-positive individuals in care. Though the number of Primary and Secondary (P&S) syphilis infections has increased, there has been an overall decline in the number of gonorrhea infections. The report presents areas where progress has been made and areas where future work must be targeted to help those disproportionately impacted by HIV, AIDS and STIs, including African Americans and men who have sex with men (MSM).

This report highlights these and other notable trends observed through 2013, as of September 30, 2014. By collecting, analyzing and publishing the most recent data available, CDPH is helping our partners initiate, target and focus their outreach, testing, prevention and care approaches across the city to ensure resources and efforts are directed to populations in greatest need.

HIV Continuum of Care, Chicago, 2011

The HIV Continuum of Care is an important tool for monitoring progress and identifying opportunities for prevention and treatment interventions. Since ensuring HIV-positive individuals are engaged in care is critical to both individual health and slowing the spread of the disease, the Continuum was developed to show the percentage of people living with HIV at various levels of engagement in care. The report shows various areas in which Chicago is exceeding national outcomes. Two models of the Continuum have been developed to monitor local targets and compare against national figures. Though both models estimate the number of HIV-positive persons at different points of the care continuum, they differ in methodology.

The Continuum developed by CDPH (Figure 1), estimates the percentage of people with new diagnoses who were linked to care, and the percentage of people who were retained in care, prescribed ART, and virally suppressed is based on all known diagnoses. Eight out of ten (80%) adults diagnosed with HIV in 2011 were linked to HIV medical care within 3 months of their diagnosis. However, almost two-thirds, (63%) of all adults living with HIV in Chicago in 2011 received HIV medical care in 2011. In addition, it is estimated that of those who received HIV medical care in 2011, 88% were prescribed ART and 80% had achieved viral suppression (Figure 1).

The model developed by the Centers for Disease Control and Prevention (CDC) (Figure 2), calculates each indicator based on all persons living with HIV, including those unaware of their status (14%). This model allows for comparison between the Chicago HIV Continuum of Care and that of the US overall. If we examine the continuum of HIV care starting with the estimated number of people living with HIV in Chicago in 2011 (n=20,067 diagnosed, n=3,267 undiagnosed), Chicago fares significantly better than the nation overall. In Chicago, it is estimated that over half (53%) received HIV medical care in 2011, compared to 40% nationally. Additionally, 48% were found to be on ART and 40% were virally suppressed, compared to 37% and 30% nationally¹.

Who is most affected?

The impact of HIV on Chicago residents can be described at 3 levels of morbidity: prevalent disease (people living with HIV), new annual HIV diagnoses and new annual AIDS diagnoses (late stage disease). New HIV infection diagnoses in 2013 were highest among those who identify as male (84%), were reported as MSM (75%) and 39% were between the ages of 20-29 at diagnosis (Table 2). Among people living with HIV infection through 2012, the highest morbidity was found among those who identify as male (79%), MSM (75%) and those 30 years of age or older (88%) (Table 4). Similarly, new annual AIDS diagnoses in Chicago were comprised primarily of males (82%), MSM (69%) and persons 30 years of age or older (71%) (Table 5). Non-Hispanic (NH) Blacks continue to be affected by HIV more than any other race/ethnicity group; they represented over 50% of prevalent cases of new infection diagnoses and new AIDS diagnoses.

Compared to older adults, adolescents and young adults are disproportionately affected by sexually transmitted infections (STIs). Chlamydia and gonorrhea are most commonly diagnosed in youth and young adults aged 13-24 years and NH Blacks (Tables 8, 10). Gonorrhea is diagnosed in men and women nearly equally; chlamydia is diagnosed much more commonly among females (69.8%) (Table 10). The largest proportion of P&S syphilis diagnoses are observed among NH Blacks, males, MSM and those over the age of 30, although those between the ages 20-29 are heavily impacted (Table 12).

References:

1. Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report, Vol. 63, November 2014

Given that community areas across the City of Chicago can vary significantly by risk of infection, the geographic distribution of new infections is informative. The two community areas with the highest average HIV infection diagnosis rates were Uptown (132.2 per 100,000) and Edgewater (100.8 per 100,000) (Table 6); the two community areas with the highest prevalence rates were Uptown (2,372 per 100,000) and Edgewater (2,360.2 per 100,000) (Table 7). The two Chicago community areas with the highest gonorrhea infection diagnosis rates were West Garfield Park (1,294.4 per 100,000) and Washington Park (1,135.1 per 100,000) (Table 9); the two community areas with the highest average chlamydia case rates were West Garfield Park (2,899.8 per 100,000) and Washington Park (2,859.1 per 100,000) (Table 11); the two community areas with the highest syphilis infection diagnosis rates were Edgewater (63.7 per 100,000) and Avalon Park (58.9 per 100,000) (Table 13).

Racial/Ethnic Disparities

Racial/ethnic health disparities in Chicago continue and mirror disparities observed across the nation. In 2013, the rates of new HIV diagnoses in Chicago were highest among NH Blacks (64 per 100,000); more than double that of both Hispanics (28.1 per 100,000) and NH Whites (28.0 per 100,000). The overall number of reported HIV cases among NH Blacks (n=572) is more than twice that of NH Whites (n=239) and Hispanics (n=215), despite similar population distribution among these groups. The 2013 chlamydia diagnosis rate among NH Blacks (1,472.6 per 100,000) was over 10 times higher than that for NH Whites (143.1 per 100,000), and nearly 4 times higher than the rate among Hispanics (380.4 per 100,000). Additionally, the 2013 Chicago gonorrhea rate among NH Blacks is nearly 11 times higher than that for both Hispanics and NH Whites. (Tables 1, 2, 8, 12).

Recent Trends

Though trends differ among sub-populations, the overall five-year trend suggests stability in the number of new HIV infections diagnosed from 2009-2013. Significant decreases have been observed among the 40-49 year age group and all transmission groups, with the exception of MSM and MSM/IDU. In fact, MSM have experienced an average annual increase in HIV infections of nearly 5% since 2009 (Tables 1, 2, 8, 10, 12).

Overall, the number of P&S syphilis and chlamydia infections diagnosed from 2009-2013 remain constant, with an estimated annual percent change (EAPC) of <1% each. However, the number of P&S syphilis cases diagnosed among those between the ages of 20 and 29 years has experienced an estimated annual increase of 4% since 2009. Noteworthy increases in P&S syphilis cases have also been observed among Hispanics (9.4% estimated annual increase) as well as NH Asian/Pacific Islanders (A/PI) (25.9%). Congenital syphilis remains persistent in Chicago. Since 2009, there have been 76 diagnoses of congenital syphilis, reaching a high of 22 cases reported in 2012 (Table 14). Since 2009, NH A/PI have seen the largest increase in chlamydia cases (8.1% estimated annual increase) of any race/ethnicity group (Tables 10, 12).

Gonorrhea has decreased slightly from 10,509 cases in 2009 to 8,401 in 2013 and overall, gonorrhea cases have decreased by 3% per year since 2009. The largest decreases have been among NH Blacks and persons 19 years and older, though a significant decline was also observed among persons under the age of 13 years. Hispanics experienced an overall 5% average annual increase in gonorrhea during the past 5 years (Table 8).

While racial/ethnic disparities persist, it should be noted that progress is being made to reduce morbidity among those most affected. NH Blacks are the only racial/ethnic group for which there has been overall decline in the number and rate of HIV, chlamydia, gonorrhea, and P&S syphilis infections diagnoses from 2009-2013 (Tables 1, 2, 8, 10, 12).

How does Chicago compare to US?

Like most large urban centers, Chicago carries a heavier burden of HIV, AIDS and STI morbidity than suburban and rural areas. Similar to the national trends, rates in Chicago have remained stable or decreased in recent years.

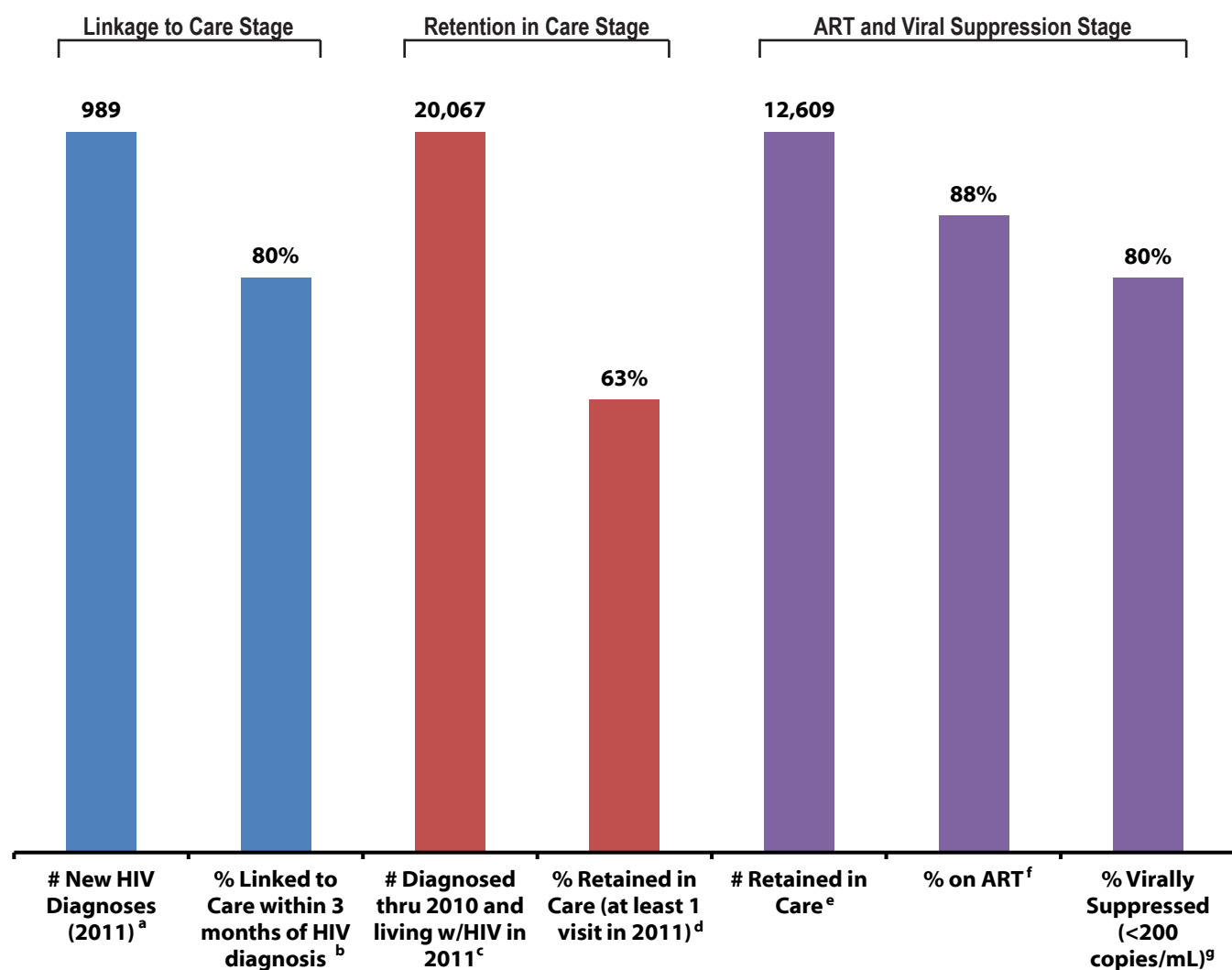
Overall, the estimated number of diagnoses of HIV infection in the United States remained stable from 2008-2012 at approximately 47,000 annually. Given population growth, this resulted in estimated rates of infection decreasing from 16.2 per 100,000 populations in 2008 to 15.3 per 100,000 in 2012. In Chicago, the number of new HIV infection diagnoses has remained stable from 2009-2013, with approximately 1,000 new infections annually. Much of the HIV and STI burden in the US is concentrated in large metropolitan areas, such as Chicago, where infection rates exceeded national rates. The 2013 rate of HIV infection diagnoses in Chicago (40.4 per 100,000) is approximately 2.5 times higher than the national rate, and the prevalence rate for Chicago (827.9/100,000) is nearly 3 times the national rate. Similarly, the rate of P&S syphilis is nearly 5 times higher in Chicago than the US. The chlamydia rate is 2 times higher, and the rate for gonorrhea is nearly 3 times higher than the national rate.

Impacting HIV Transmission

Overall, the data presented show significant progress has been made toward reducing transmission of HIV and STIs in Chicago. However, the data also underscore the need to continue to intercept the spread of infection at as many points along transmission pathways as possible. The HIV Continuum of Care should be utilized to assess both the need for and success of interventions implemented along the continuum of healthcare and social services, which have the potential to contribute to decreased transmission, morbidity and mortality.

HIV Continuum of Care, Chicago, 2011

Figure 1. HIV Continuum of Care Among Cases 18 Years and Older, Chicago, 2011 (as of 9/30/2014)



^aNumber of persons ≥18 years of age diagnosed with HIV infection between 1/1/2011 and 12/31/2011.

^bPercent of persons ≥18 years of age with ≥1 CD4 or Viral Load or HIV-1 Genotype test reported within 3 months of HIV diagnosis among those diagnosed with HIV infection from 1/1/2011 to 12/31/2011.

^cNumber of persons ≥18 years of age on 12/31/2010 diagnosed with HIV infection through 12/31/2010 and living with HIV on 12/31/2011.

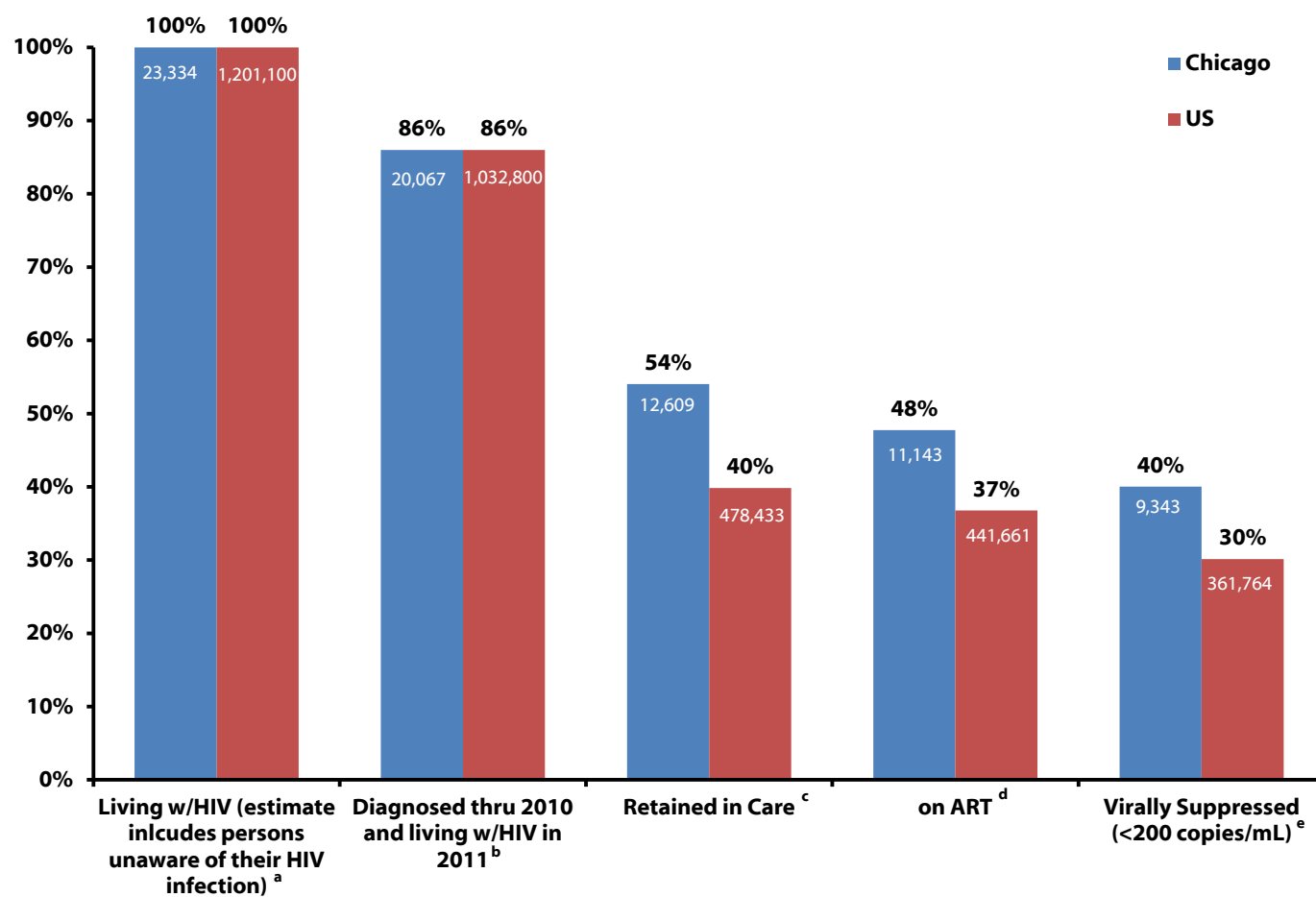
^dTotal weighted population estimate of HIV-infected adults who had at least one documented HIV medical care visit in 2011 applied to number of persons ≥18 years of age diagnosed with HIV infection through 12/31/2010 and living on 12/31/2011. [12,609/20,067 = 63%]

^eTotal weighted population estimate of HIV-infected adults who had at least one documented HIV medical care visit in 2011.

^fTotal weighted percent of HIV-infected adults who had at least one documented HIV medical care visit in 2011 with a documented prescription for antiretroviral therapy in 2011.

^gTotal weighted percent of HIV-infected adults who had at least one documented HIV medical care visit in 2011 and had a documented HIV viral load of undetectable or ≤200 copies/mL at most recent viral load test.

Figure 2. Alternate Perspective to the HIV Continuum of Care Among Cases 18 Years and Older, Chicago and the United States, 2011 (as of 9/30/2014)



^a CDC National Estimated Persons Living with Undiagnosed HIV¹

^b Number of persons ≥18 years of age on 12/31/2010 diagnosed with HIV infection through 12/31/2010 and living with HIV on 12/31/2011.

^c Total weighted population estimate of HIV-infected adults who had at least one documented HIV medical care visit in 2011.

^d Total HIV-infected adults (# of Retained, % of Living) who had at least one documented HIV medical care visit in 2011 with a documented prescription for antiretroviral therapy in 2011.

^e Total HIV-infected adults (# of on ART, % of Living) who had at least one documented HIV medical care visit in 2011 and had a documented HIV viral load of undetectable or ≤200 copies/mL at most recent viral load test.

HIV/AIDS Highlights

Incidence

- From 2009 to 2013, the number of HIV infection diagnoses fell from 1,106 to 1,091, representing a 1.4% absolute decrease and an estimated annual percent change (EAPC) decrease of 0.3%. A 2.1% EAPC decline was observed among NH Blacks and a 7.8% EAPC decline among NH AI/PI. During this time period, the number of infections diagnosed among females decreased (6.2% EAPC), but increased slightly among males (1.3% EAPC).
- The largest decline in the number of HIV infection diagnoses among transmission groups occurred among IDUs (27.9% EAPC decrease). Consequently, from 2009 to 2013, the percentage of IDU cases overall dropped from 11% to 3% of all diagnoses. In 2013, as in previous years, male-to-male sexual (MSM) contact was the leading mode of transmission (75%), followed by heterosexual contact (16%).
- There have been considerable differences in HIV trends by age group. Between 2009 and 2013, the number of HIV infection diagnoses decreased among those under 13 and between ages 40-49 years, while all other ages saw an average increase between 2.2-3.8%.
- While males account for 84% of all 2013 HIV infection diagnoses, this percentage varied by race/ethnicity. Among NH Black diagnoses, 76% were males, compared to 97% for Whites, and 94% for Hispanic men. Among MSM who were diagnosed with HIV Infection in 2013, 47% were Black, 26% were White, and 22% were Hispanic.
- Among females, heterosexual contact accounts for 86% of all HIV infection diagnoses in 2013 for all race/ethnicity groups. In 2013, 81% of new female HIV infections were among NH Blacks.
- In 2013, 24% of all new HIV diagnoses were diagnosed with AIDS within 12 months, down from 35% in 2003.

Prevalence

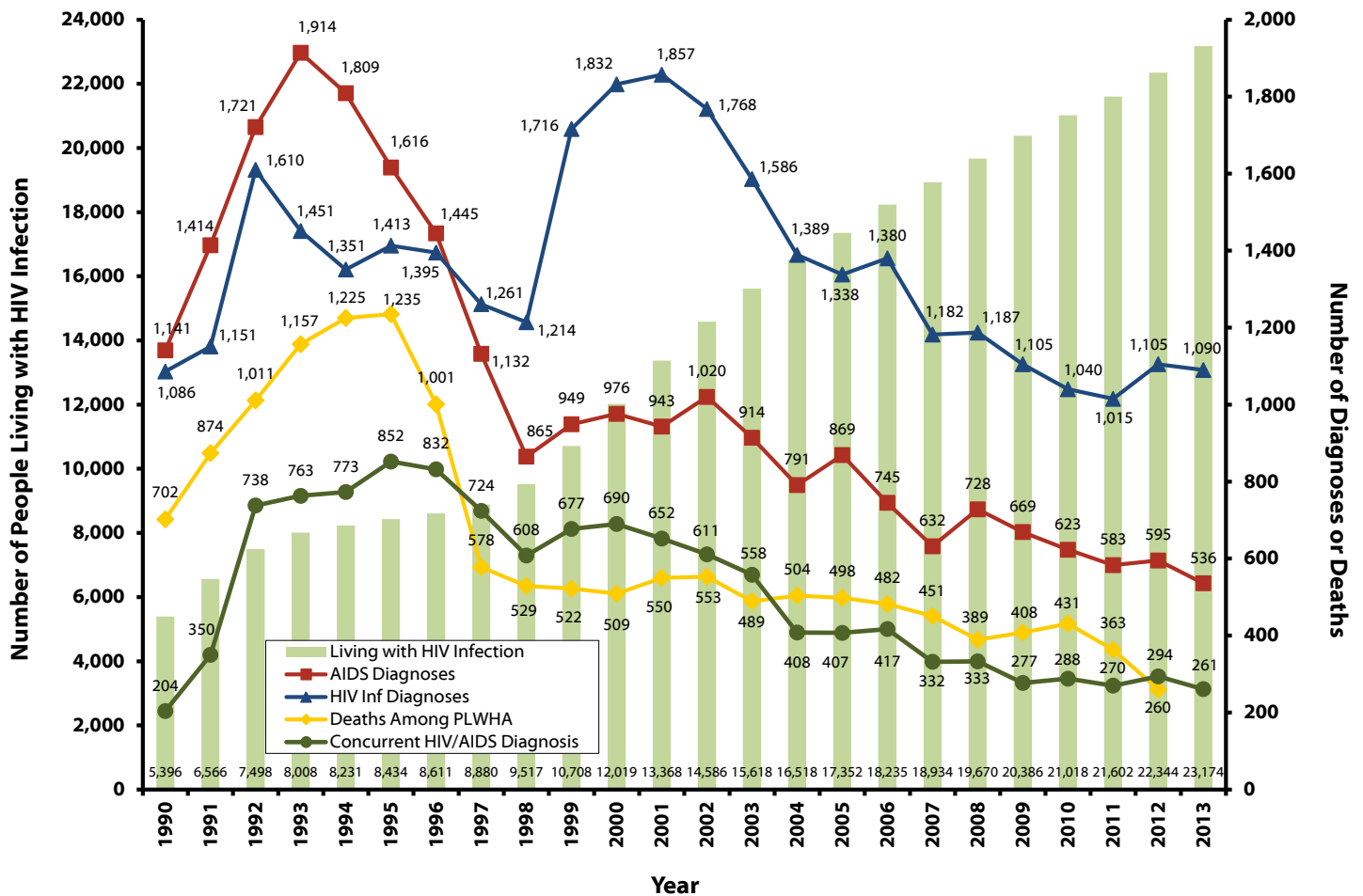
- Of the 22,346 people living with HIV infection in 2012, 79% were men, 51% were NH Black, and 59% were MSM.
- Among NH Black men living with HIV infection, 65% were infected as a result of male-to-male sexual contact, compared with 90% of NH White, 75% of Hispanic, and 81% of NH AI/PI men.

AIDS

- Over the past five years, AIDS cases have declined annually by nearly 5% on average, from 669 AIDS diagnoses in 2009 to 537 in 2013. Although the decline occurred in both sexes, males continue to represent approximately 5 out of every 6 AIDS diagnoses.
- All racial/ethnic groups in Chicago experienced a decrease in the number of annual AIDS diagnoses. However, NH Blacks accounted for 57% of all AIDS diagnoses while NH Whites and Hispanics represented 18% and 19% of the diagnoses, respectively.
- Men who have sex with men continue to represent the largest percentage of AIDS diagnoses, accounting for nearly 7 out of every 10 cases in 2013. Heterosexual transmission accounted for nearly 1 in 6 diagnoses, and IDU accounted for 1 in 13 AIDS cases.
- While the number of annual AIDS cases has declined across all transmission groups, the largest decline occurred among injection drug users (IDU); from 2009 to 2013 the number of cases due to IDU fell on average by 19% each year.
- The most notable increase in the proportion of AIDS diagnoses from 2009 to 2013 took place among young adults. In 2009, about 1 in 10 people diagnosed with AIDS were between the ages of 20 and 24 years. In 2013, about 1 in 8 people diagnosed with AIDS were under the age of 30.

HIV/AIDS: Figures and Tables

Figure 3. People Living and Diagnosed with HIV Infection, Chicago, 1990-2013 (as of 9/30/2014)



Notes:

1. 1983 - AIDS case reporting
2. 1995 - Effective drug therapy against HIV became available
3. 1999 - Code-based HIV reporting
4. 2006 - HIV-name based reporting
5. 2012 - All CD4 and viral load labs became reportable.

Table 1. HIV/STI Case Rates by Race/Ethnicity and Birth Sex, Chicago

Demographic Characteristics	Diagnosed/Reported Cases [†]						HIV Prevalence [‡]							
	HIV Infection [§]		AIDS		Gonorrhea		Chlamydia		Syphilis [¶]		Chicago		United States ^{**}	
Race/Ethnicity	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
Black, non-Hispanic	572	63.9	305	34.1	5,357	598.4	13,184	1,472.6	288	32.2	11,363	1,269.2	379,985	990.5
White, non-Hispanic	239	28.0	94	11.0	465	54.5	1,222	143.1	167	19.6	5,536	648.3	288,760	146.2
Hispanic	215	28.1	102	13.4	424	55.5	2,906	380.4	104	13.6	4,088	535.1	172,411	332.3
Asian/PI, non-Hispanic	17	11.4	4	2.7	26	17.5	159	107.0	0	0.0	223	150.0	11,136	74.0
AI/AN, non-Hispanic	2	67.2	0	0.0	9	302.2	11	369.4	0	0.0	30	1,007.4	2,797	122.2
Other, non-Hispanic	45	66.1	31	45.6	62	91.1	273	401.2	2	2.9	1,104	1,622.6	25,351	435.2
Sex [^]														
Male	927	71.0	446	34.1	4,286	328.2	7,520	575.8	422	32.3	17,794	1,362.5	661,072	523.7
Female	163	11.7	90	6.5	4,107	294.9	17,396	1,249.0	92	6.6	4,550	326.7	216,756	163.7
Chicago	1,090	40.4	536	19.9	8,401	311.3	24,957	924.7	618	22.9	22,344	827.9	N/A	N/A
United States	47,989	15.3	27,928	8.9	334,826	107.5	1,422,976	456.7	15,667	5.0	N/A	N/A	880,440	282.6

* 2013 Diagnoses for HIV and AIDS; 2012 HIV Prevalence; 2013 Reported Cases for STIs. † Prevalence rate per 100,000 population. § HIV infection diagnosis and prevalence represents people with HIV at any stage of disease through 9/30/14. **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 Control and Prevention. HIV Surveillance Report, 2012; vol. 24, pp. 19, 32 and 52 CDC Factsheet - Reported STDs in the United States: 2012 National Data for Chlamydia, Gonorrhea, and Syphilis.
 ^ To tal based on birth sex.

Table 2. HIV Infections* by Year of Diagnosis and Selected Demographic Characteristics, Chicago, 2009-2013

Table 1 HIV Infections by Year of Diagnosis and Selected Demographic Characteristics, Chicago, 2009-2015											
Demographic Characteristics	Year of Diagnosis										Estimated Annual Percent Change
	2009		2010		2011		2012		2013		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Gender**											
Male	865	78.2	855	82.2	826	81.4	903	81.7	921	84.4	1.3
Female	228	20.6	174	16.7	175	17.2	182	16.5	162	14.8	-6.2
Transgender: MtF	11	1.0	9	0.9	10	1.0	18	1.6	7	0.6	-2.1
Transgender: FtM	2	0.2	2	0.2	4	0.4	2	0.2	1	0.1	N/A
Race/Ethnicity^											
Black, non-Hispanic	639	57.8	578	55.6	546	53.8	580	52.5	573	52.5	-2.1
White, non-Hispanic	195	17.6	201	19.3	156	15.4	232	21.0	239	21.9	5.7
Hispanic	197	17.8	185	17.8	214	21.1	225	20.4	215	19.7	3.8
Asian/PI, non-Hispanic	10	0.9	15	1.4	13	1.3	10	0.9	17	1.6	6.8
AI/AN, non-Hispanic	3	0.3	2	0.2	2	0.2	2	0.2	2	0.2	-7.8
Multiple, non-Hispanic	55	5.0	53	5.1	82	8.1	50	4.5	33	3.0	-10.2
Unknown	7	0.6	6	0.6	2	0.2	6	0.5	12	1.1	11.4
Transmission Group											
Male Sex w/Male	701	63.3	703	67.6	701	69.1	821	74.3	818	75.0	4.7
Injection Drug Use	126	11.4	90	8.6	63	6.2	47	4.3	34	3.1	-27.9
MSM and IDU§	26	2.3	25	2.4	34	3.3	25	2.2	28	2.5	1.5
Heterosexual	238	21.5	215	20.7	210	20.7	184	16.6	177	16.2	-7.2
Other¶	16	1.4	8	0.8	8	0.8	29	2.6	34	3.1	32.3
Age Category†											
Less than 13	7	0.6	3	0.3	2	0.2	10	0.9	7	0.6	12.8
13-19	60	5.4	49	4.7	66	6.5	75	6.8	54	4.9	2.2
20-29	368	33.3	340	32.7	343	33.8	363	32.9	421	38.6	3.4
20-24	200	18.1	187	18.0	183	18.0	170	15.4	242	22.2	2.9
25-29	168	15.2	153	14.7	160	15.8	193	17.5	179	16.4	3.7
30-39	266	24.1	274	26.3	234	23.1	288	26.1	259	23.7	0.0
40-49	260	23.5	229	22.0	216	21.3	197	17.8	189	17.3	-7.6
50-59	109	9.9	115	11.1	119	11.7	121	11.0	128	11.7	3.8
60+	36	3.3	30	2.9	35	3.4	51	4.6	33	3.0	3.6
Total	1,106	100.0	1,040	100.0	1,015	100.0	1,105	100.0	1,091	100.0	0.3

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 infection diagnoses represents people newly diagnosed with HIV in a given year, at any stage of disease through 9/30/2014. **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. §Men who have sex with men and inject drugs. ¶Includes perinatal transmission, blood transfusion, hemophilia, and NIR. †Age at time of diagnosis.

Table 3. HIV Infection Diagnoses* in 2013: Race/Ethnicity[^] by Gender, Mode of Transmission, and Age Category, Chicago, 9/30/14**

Males	Mode of Transmission	Black, NH		White, NH		Hispanic		Race/Ethnicity [^]				Multiple, NH		Total		
		No.	%	No.	%	No.	%	Asian/PI, NH	AI/AN, NH	No.	%	No.	%	No.	%	
Total Males	Male Sex w/Male	382	87.7	215	93.1	177	87.5	14	94.7	1	100.0	22	91.3	813	88.3	
	Injection Drug Use	13	2.9	1	0.3	8	3.9	0	1.3	0	0.0	0	0.4	21	2.3	
	MSM and IDU [§]	11	2.6	8	3.3	5	2.4	0	0.7	0	0.0	2	8.3	26	2.8	
	Heterosexual	25	5.7	2	0.8	9	4.3	1	3.3	0	0.0	0	0.0	36	3.9	
	Other [¶]	5	1.1	6	2.6	4	2.0	0	0.0	0	0.0	0	0.0	25	2.7	
	Age category [†]															
	<13	1	0.2	0	0.0	1	0.5	0	0.0	0	0.0	0	0.0	2	0.2	
	13-19	34	7.8	0	0.0	6	3.0	0	0.0	0	0.0	1	4.2	41	4.5	
	20-24	141	32.3	33	14.3	36	17.8	2	13.3	0	0.0	3	12.5	216	23.5	
	25-29	64	14.7	40	17.3	43	21.3	4	26.7	1	100.0	5	20.8	160	17.4	
30-39	74	17.0	70	30.3	63	31.2	6	40.0	0	0.0	5	20.8	223	24.2		
40-49	54	12.4	58	25.1	31	15.3	1	6.7	0	0.0	7	29.2	154	16.7		
50-59	58	13.3	24	10.4	16	7.9	1	6.7	0	0.0	2	8.3	101	11.0		
60+	10	2.3	6	2.6	6	3.0	1	6.7	0	0.0	1	4.2	24	2.6		
		436	100.0	231	100.0	202	100.0	15	100.0	1	100.0	24	100.0	921	100.0	
Females	Mode of Transmission															
	Injection Drug Use	9	6.9	0	3.8	1	11.8	1	35.0	0	0.0	1	13.3	13	7.8	
	Heterosexual	114	86.9	8	96.3	10	88.2	1	65.0	1	100.0	7	75.6	140	86.7	
	Other [¶]	8	6.1	0	0.0	0	0.0	0	0.0	0	0.0	1	11.1	9	5.6	
	Age category [†]															
	<13	4	3.1	0	0.0	0	0.0	0	0.0	0	0.0	1	11.1	5	3.1	
	13-19	10	7.6	1	12.5	2	18.2	0	0.0	0	0.0	0	0.0	13	8.0	
	20-24	21	16.0	2	25.0	0	0.0	0	0.0	0	0.0	0	0.0	23	14.2	
	25-29	13	9.9	1	12.5	2	18.2	0	0.0	0	0.0	1	11.1	17	10.5	
	30-39	25	19.1	2	25.0	2	18.2	0	0.0	1	100.0	3	33.3	33	20.4	
	40-49	29	22.1	0	0.0	4	36.4	0	0.0	0	0.0	2	22.2	35	21.6	
	50-59	23	17.6	1	12.5	0	0.0	2	100.0	0	0.0	1	11.1	27	16.7	
	60+	6	4.6	1	12.5	1	9.1	0	0.0	0	0.0	1	11.1	9	5.6	
		131	100.0	8	100.0	11	100.0	2	100.0	1	100.0	9	100.0	162	100.0	
Total Females																
	Total Transgender: MtF	5	100.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	7	100.0	
	Total Transgender: FtM	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
	All HIV Infections in 2013	573	100.0	239	100.0	215	100.0	17	100.0	2	100.0	33	100.0	1,091	100.0	

Note: Groups may not total 100% due to rounding; values <0.5 are rounded to zero. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. *HIV infection diagnoses represents people newly diagnosed with HIV in a given year, at any stage of disease through 9/30/2014. **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 values may differ slightly across tables. ^Multiple, non-Hispanic indicates more than one race identified; totals include cases with unknown race ethnicity. §Men who have sex with men and inject drugs. ¶Includes perinatal transmission, blood transfusion, hemophilia, and NIR. †Age at time of diagnosis, does not include <13 years of age due to small numbers.

Table 4. People Living with HIV Infection (PLWH)* in 2012: Race/Ethnicity[^] by Gender^{}, Mode of Transmission, and Age Category, Chicago**

Males	Mode of Transmission	Race/Ethnicity ^A																Total	
		Black, NH		White, NH		Hispanic		Asian/Pi, NH		AI/AN, NH		Multiple, NH		Unknown		Total	%		
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
Males	Male Sex w/Male	5,134	64.8	4,721	90.5	2,568	75.2	157	81.4	19	74.8	681	77.1	13	28.9	13,292	75.1		
		1,410	17.8	143	2.7	352	10.3	6	3.0	2	9.6	75	8.5	0	0.0	1,988	11.2		
		621	7.8	255	4.9	246	7.2	9	4.4	2	6.4	96	10.9	0	0.0	1,228	6.9		
		628	7.9	71	1.4	218	6.4	20	10.2	1	5.2	26	3.0	0	0.0	964	5.4		
		125	1.6	27	0.5	31	0.9	2	1.0	1	4.0	5	0.6	32	71.1	223	1.3		
	Age category†	< 13	32	0.4	0	0.0	4	0.1	0	0.0	0	0.0	1	0.1	0	0.0	37	0.2	
		13-19	112	1.4	3	0.1	17	0.5	0	0.0	1	4.0	2	0.2	0	0.0	135	0.8	
		20-24	539	6.8	54	1.0	99	2.9	3	1.6	2	8.0	38	4.3	0	0.0	735	4.2	
		25-29	681	8.6	191	3.7	240	7.0	6	3.1	2	8.0	56	6.3	8	17.8	1,184	6.7	
		30-39	1,315	16.6	769	14.7	812	23.8	64	33.2	4	16.0	184	20.8	15	33.3	3,163	17.9	
		40-49	2,163	27.3	1,904	36.5	1,199	35.1	71	36.8	9	36.0	299	33.9	11	24.4	5,656	32.0	
Total Males	50-59	2,135	27.0	1,648	31.6	740	21.7	35	18.1	7	28.0	235	26.6	8	17.8	4,808	27.2		
	60+	941	11.9	648	12.4	302	8.8	14	7.3	0	0.0	68	7.7	3	6.7	1,976	11.2		
		7,918	100.0	5,217	100.0	3,414	100.0	193	100.0	25	100.0	883	100.0	45	100.0	17,695	100.0		
Females	Mode of Transmission	972	28.9	134	42.7	136	21.1	4	13.8	2	34.0	62	40.3	1	12.5	1,311	29.0		
		2,256	67.0	168	53.8	484	74.8	25	86.2	3	66.0	86	55.8	1	12.5	3,023	66.8		
		139	4.1	11	3.5	27	4.2	0	0.0	0	0.0	6	3.9	6	75.0	189	4.2		
		29	0.9	0	0.0	4	0.6	0	0.0	0	0.0	3	1.9	0	0.0	36	0.8		
	Age category†	13-19	86	2.6	4	1.3	6	0.9	0	0.0	0	0.0	3	1.9	0	0.0	99	2.2	
		20-24	155	4.6	4	1.3	23	3.6	0	0.0	0	0.0	5	3.2	1	12.5	188	4.2	
		25-29	240	7.1	12	3.8	36	5.6	3	10.3	0	0.0	2	1.3	0	0.0	293	6.5	
		30-39	723	21.5	52	16.6	144	22.3	9	31.0	0	0.0	25	16.2	2	25.0	955	21.1	
		40-49	1,019	30.3	114	36.4	218	33.7	11	37.9	0	0.0	51	33.1	3	37.5	1,416	31.3	
		50-59	837	24.9	97	31.0	147	22.7	3	10.3	3	60.0	50	32.5	1	12.5	1,138	25.2	
Total Females	60+	278	8.3	30	9.6	69	10.7	3	10.3	2	40.0	15	9.7	1	12.5	398	8.8		
		3,367	100.0	313	100.0	647	100.0	29	100.0	5	100.0	154	100.0	8	100.0	4,523	100.0		
	Total Transgender: MtF	58	100.0	6	100.0	25	100.0	0	0.0	0	0.0	11	100.0	0	0.0	100	100.0		
	Total Transgender: FtM	20	100.0	0	0.0	2	100.0	1	100.0	0	0.0	3	100.0	0	0.0	26	100.0		
All HIV Infections in 2013		11,364	100.0	5,536	100.0	4,089	100.0	223	100.0	30	100.0	1,051	100.0	53	100.0	22,346	100.0		

Note: Groups may not total 100% due to rounding. 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 12/31/2011 and living through 12/31/2012 as of 09/30/2014. **Current gender identity or gender with which a person identifies. Because total values were calculated using current gender, independently of values using birth sex, total diagnoses values may differ slightly across tables. ^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 NLR. ‡Age at time of diagnosis.

Table 5. AIDS* Cases by Year of Diagnosis and Selected Demographic Characteristics, Chicago, 2009-2013 (as of 9/30/2014)

Demographic Characteristics	Year of Diagnosis										Estimated Annual Percent Change
	2009		2010		2011		2012		2013		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Gender**											
Male	516	77.1	469	75.3	440	75.5	472	79.3	440	81.9	-3.1
Female	148	22.1	146	23.4	136	23.3	120	20.2	90	16.8	-11.2
Transgender: MtF	2	0.3	5	0.8	6	1.0	3	0.5	7	1.3	22.1
Transgender: FtM	3	0.4	3	0.5	1	0.2	0	0.0	0	0.0	N/A
Race/Ethnicity^											
Black, non-Hispanic	395	59.0	374	60.0	347	59.5	341	57.3	306	57.0	-5.9
White, non-Hispanic	98	14.6	92	14.8	70	12.0	97	16.3	94	17.5	-0.3
Hispanic	128	19.1	111	17.8	120	20.6	114	19.2	102	19.0	-4.2
Asian/PI, non-Hispanic	5	0.7	7	1.1	4	0.7	9	1.5	4	0.7	-1.9
AI/AN, non-Hispanic	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	N/A
Multiple, non-Hispanic	41	6.1	36	5.8	42	7.2	34	5.7	31	5.8	-6.0
Other/Unknown	1	0.1	3	0.5	0	0.0	0	0.0	0	0.0	N/A
Transmission Group											
Male Sex w/Male	373	55.8	341	54.7	335	57.5	380	63.8	370	68.9	0.9
Injection Drug Use	107	16.0	86	13.8	65	11.2	75	12.6	41	7.7	-18.6
MSM and IDU§	33	5.0	33	5.3	26	4.4	16	2.7	28	5.2	-10.0
Heterosexual	153	22.8	151	24.2	141	24.1	115	19.2	85	15.8	-13.5
Other¶	3	0.3	12	1.8	16	2.7	10	1.7	13	1.9	36.7
Age Category†											
Less than 13	1	0.1	1	0.2	3	0.5	0	0.0	2	0.4	N/A
13-19	15	2.2	11	1.8	20	3.4	18	3.0	12	2.2	0.5
20-29	145	21.7	124	19.9	128	22.0	140	23.5	140	26.1	0.5
20-24	62	9.3	46	7.4	54	9.3	49	8.2	68	12.7	2.5
24-29	83	12.4	78	12.5	74	12.7	91	15.3	72	13.4	-1.3
30-39	173	25.9	170	27.3	143	24.5	147	24.7	141	26.3	-5.4
40-49	207	30.9	192	30.8	157	26.9	140	23.5	130	24.2	-11.7
50-59	101	15.1	93	14.9	100	17.2	107	18.0	88	16.4	-1.3
60+	27	4.0	32	5.1	32	5.5	43	7.2	24	4.5	0.6
Total	669	100.0	623	100.0	583	100.0	595	100.0	537	100.0	-4.7

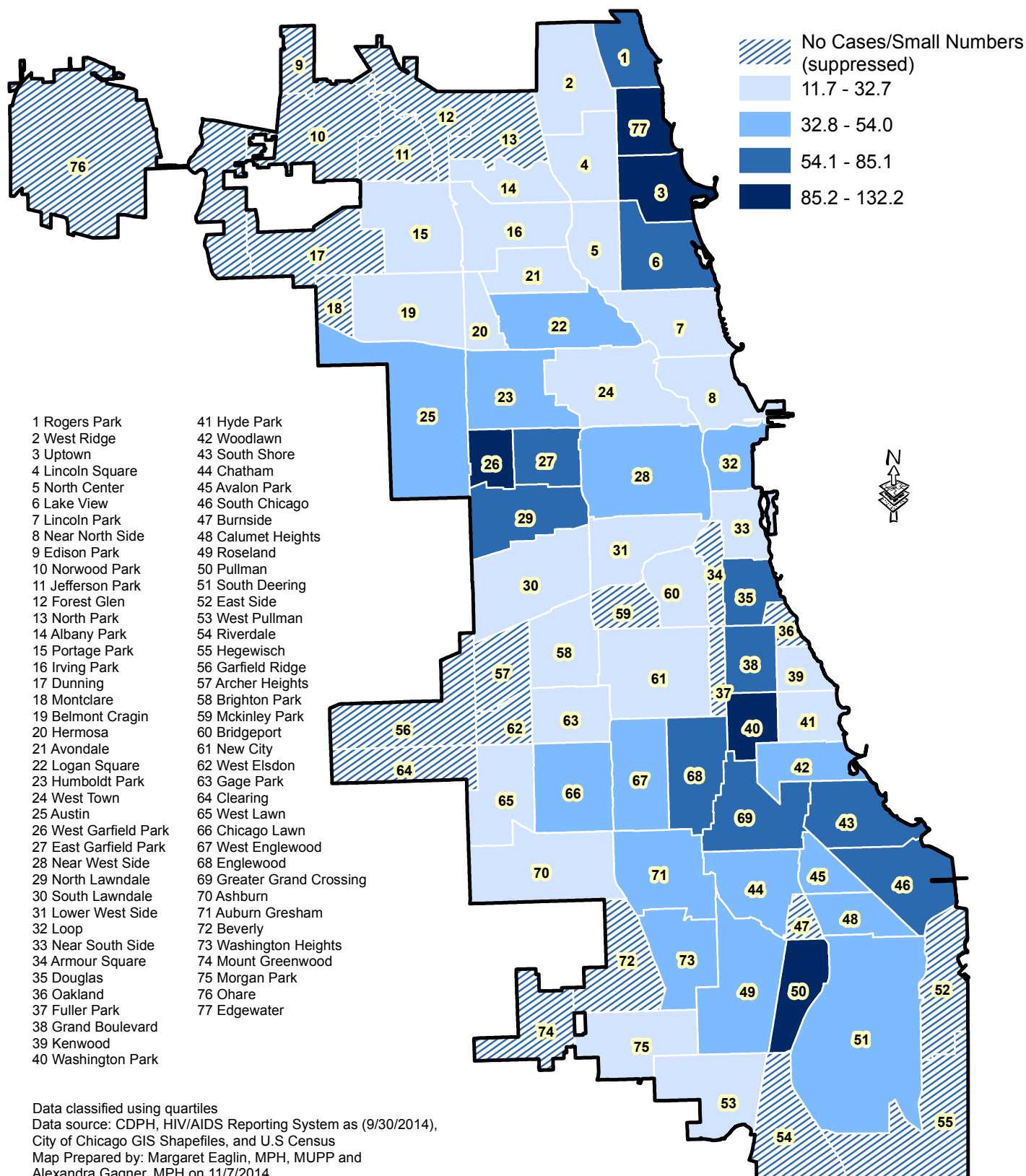
Note: Groups may not total 100% due to rounding. Use caution when interpreting data based on less than 20 events; rate/percent is unreliable. *All persons diagnosed with AIDS, from the beginning of the epidemic through 9/30/2014. **Current gender identity or gender with which a person identifies. Because total diagnoses were calculated using current gender, independently of values using birth sex, total diagnoses values may differ slightly across tables. ^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. †Age at time of diagnosis.

**Table 6. 2012-2013 Average Annual HIV Infection* Diagnosis Rates by Community Area, Chicago
(as of 9/30/2014)**

Community Area	Average HIV Infection		Community Area	Average HIV Infection	
	Average HIV Infections [†]	Rate [§]		Average HIV Infections [†]	Rate [§]
1 Rogers Park	42	76.4	40 Washington Park	12	98.1
2 West Ridge	15	20.2	41 Hyde Park	7	27.3
3 Uptown	75	132.2	42 Woodlawn	12	44.3
4 Lincoln Square	6	13.9	43 South Shore	36	71.3
5 North Center	7	20.4	44 Chatham	17	53.2
6 Lake View	71	75.2	45 Avalon Park	6	54.0
7 Lincoln Park	8	11.7	46 South Chicago	19	60.9
8 Near North Side	18	22.4	47 Burnside	1	34.3
9 Edison Park	0	0.0	48 Calumet Heights	6	39.8
10 Norwood Park	3	8.1	49 Roseland	20	44.8
11 Jefferson Park	2	5.9	50 Pullman	7	88.7
12 Forest Glen	1	5.4	51 South Deering	6	39.7
13 North Park	2	8.4	52 East Side	2	8.7
14 Albany Park	11	21.3	53 West Pullman	10	32.0
15 Portage Park	9	14.0	54 Riverdale	2	23.1
16 Irving Park	12	21.6	55 Hegewisch	0	0.0
17 Dunning	3	7.2	56 Garfield Ridge	2	5.8
18 Montclare	2	11.2	57 Archer Heights	2	14.9
19 Belmont Cragin	17	21.6	58 Brighton Park	11	24.2
20 Hermosa	7	28.0	59 McKinley Park	3	16.0
21 Avondale	9	21.6	60 Bridgeport	8	23.5
22 Logan Square	27	36.0	61 New City	13	28.2
23 Humboldt Park	26	45.3	62 West Elsdon	2	8.3
24 West Town	24	28.9	63 Gage Park	8	18.8
25 Austin	45	45.2	64 Clearing	1	2.2
26 West Garfield Park	18	100.0	65 West Lawn	6	18.0
27 East Garfield Park	18	85.1	66 Chicago Lawn	23	40.4
28 Near West Side	29	51.9	67 West Englewood	17	46.5
29 North Lawndale	25	68.2	68 Englewood	18	58.7
30 South Lawndale	19	24.0	69 Gr. Grand Crossing	25	75.1
31 Lower West Side	12	32.2	70 Ashburn	8	19.5
32 Loop	11	35.9	71 Auburn Gresham	20	40.0
33 Near South Side	7	32.7	72 Beverly	4	17.5
34 Armour Square	2	14.9	73 Washington Heights	13	49.1
35 Douglas	13	68.5	74 Mount Greenwood	1	5.2
36 Oakland	4	67.6	75 Morgan Park	5	22.2
37 Fuller Park	1	34.8	76 O'Hare	1	3.9
38 Grand Boulevard	18	79.8	77 Edgewater	57	100.8
39 Kenwood	5	28.0	Unknown CA	84	--
Chicago Total[¶]			1,098	40.7	

*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 9/30/2014.*

Figure 4. 2012-2013 Average Annual HIV Infection Diagnosis Case Rates (per 100,000) by Community Area, Chicago

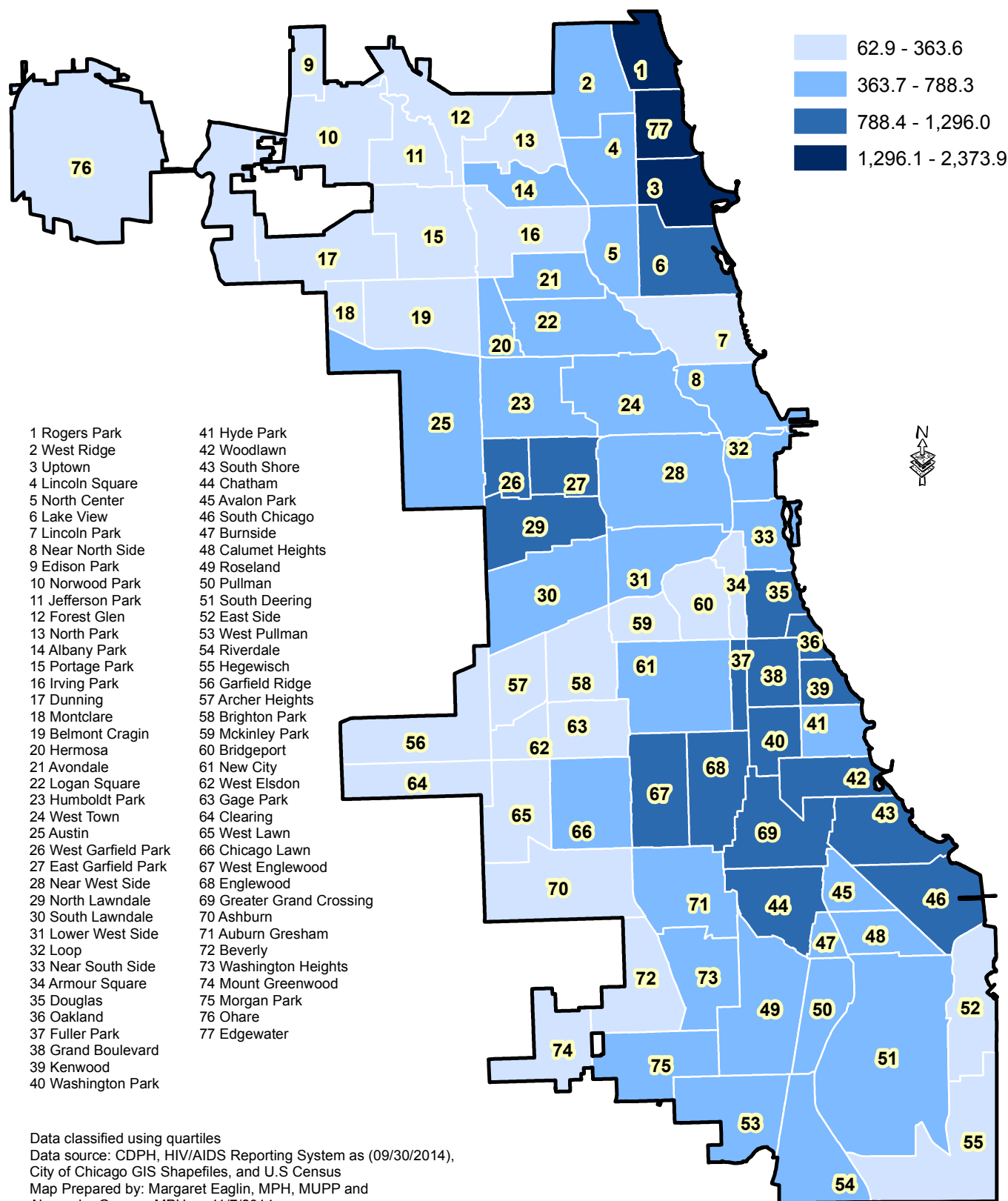


**Table 7. People Living with HIV Infection (PLWH) in 2012 by Community Area, Chicago
(as of 9/30/2014)**

Community Area	Prevalent Cases [†]	Prevalence Rate [§]	Community Area	Prevalent Cases [†]	Prevalence Rate [§]
1 Rogers Park	941	1,711.2	40 Washington Park	146	1,246.1
2 West Ridge	310	430.9	41 Hyde Park	144	560.7
3 Uptown	1,338	2,373.9	42 Woodlawn	261	1,004.5
4 Lincoln Square	195	493.8	43 South Shore	645	1,296.0
5 North Center	126	395.4	44 Chatham	293	944.3
6 Lake View	1,187	1,257.8	45 Avalon Park	78	765.8
7 Lincoln Park	198	308.8	46 South Chicago	269	862.2
8 Near North Side	376	467.2	47 Burnside	19	651.6
9 Edison Park	9	80.5	48 Calumet Heights	80	579.2
10 Norwood Park	29	78.3	49 Roseland	279	625.3
11 Jefferson Park	37	145.4	50 Pullman	52	709.9
12 Forest Glen	36	194.5	51 South Deering	83	549.3
13 North Park	51	284.4	52 East Side	31	134.5
14 Albany Park	237	459.8	53 West Pullman	190	640.8
15 Portage Park	118	184.0	54 Riverdale	26	401.1
16 Irving Park	194	363.6	55 Hegewisch	10	106.1
17 Dunning	53	126.4	56 Garfield Ridge	40	115.9
18 Montclare	32	238.3	57 Archer Heights	18	134.4
19 Belmont Cragin	209	265.4	58 Brighton Park	117	257.9
20 Hermosa	104	415.8	59 McKinley Park	29	185.8
21 Avondale	188	478.8	60 Bridgeport	80	250.2
22 Logan Square	397	539.4	61 New City	207	466.5
23 Humboldt Park	444	788.3	62 West Elsdon	25	138.1
24 West Town	438	537.9	63 Gage Park	91	228.1
25 Austin	756	767.4	64 Clearing	29	125.3
26 West Garfield Park	203	1,127.7	65 West Lawn	40	119.9
27 East Garfield Park	251	1,220.4	66 Chicago Lawn	255	458.4
28 Near West Side	384	699.7	67 West Englewood	307	864.7
29 North Lawndale	370	1,030.3	68 Englewood	280	913.4
30 South Lawndale	543	684.8	69 Gr. Grand Crossing	318	975.4
31 Lower West Side	146	408.2	70 Ashburn	96	233.7
32 Loop	140	478.1	71 Auburn Gresham	338	693.4
33 Near South Side	116	542.3	72 Beverly	42	209.6
34 Armour Square	30	224.0	73 Washington Heights	165	622.8
35 Douglas	195	1,069.2	74 Mount Greenwood	12	62.9
36 Oakland	48	811.1	75 Morgan Park	104	461.3
37 Fuller Park	27	938.8	76 O'Hare	21	164.6
38 Grand Boulevard	270	1,231.2	77 Edgewater	1,334	2,360.2
39 Kenwood	159	891.2	Unknown CA	4,905	--
Chicago Total[¶]			22,344	828.9	

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 12/31/2011 and living through 12/31/2012 as of 09/30/2014. §Rate per 100,000 population using 2010 U.S. Census Bureau population figures. ¶Includes all persons with unknown/undetermined community area.

Figure 5. People Living with HIV Infection (PLWH) in 2012 by Community Area, Chicago



STI Highlights

- *Chlamydia trachomatis* is the most common reportable communicable disease in both men and women in Chicago. In 2013, a total of 24,957 chlamydia infections were reported to CDPH. Between 2009–2013, the total number of reported chlamydia infections decreased by 7% from 26,792 to 24,957 cases. Chlamydia cases among females decreased by 10%, from 19,365 to 17,396 cases. However, the total number of reported cases among males increased by 1.4% (from 7,413 to 7,520 cases). As in previous years, the reported number of cases among females was about two times the number of cases among men in 2013, likely reflecting a larger number of women screened for this infection. It is also likely that many of the sex partners of women with chlamydia did not receive a diagnosis of chlamydia nor were they reported as having chlamydia (Table 10).
- The combination of persistently high gonorrhea morbidity along with resistance and decreased treatment options are reinforcing the need to better understand the epidemiology of gonorrhea. From 2012 to 2013, the total number of reported gonorrhea cases decreased by 13% (from 9,715 to 8,401 cases). Notably in 2013, the number of gonorrhea cases among women were slightly lower than those among men since 2009 (48.9% of cases were among females and 51% among males). An increase among men in 2013 compared to women is suggestive of either increased transmission or increased case ascertainment (e.g., through increased extra-genital screening) among men. Our participation in the STD Surveillance Network (SSuN) demonstrated that there is a need to collect data on gender of sex partner for males. As a result, in addition to updating our STI surveillance morbidity form in 2011, gender of sex partner was added to the surveillance system (INEDSS) which allows providers to report this information to the health department and assess trends in gonorrhea cases among MSM (Table 8).
- The total number of reported P&S syphilis cases increased 6.5% from 2012. Overall, P&S syphilis has increased 11% since 2009 reaching a high of 686 cases in 2010. The total number of P&S syphilis cases increased 7.8% among men (from 526 to 567 cases) during 2012–2013. During this same period, the number of cases among women decreased 6.7% (from 59 to 55 cases) (Table 12).
- NH Blacks comprise the majority of individuals diagnosed with STIs in Chicago, at 53% of 2013 chlamydia infections, 64% of gonorrhea infections and 47% of P&S syphilis infections. Hispanics have accounted for an increasing proportion of gonorrhea infections since 2010, and P&S syphilis cases since 2011 (Table 8, 10, 12).
- The majority of STI diagnoses in Chicago are concentrated among adolescents and young adults. Those 13 to 24 years old accounted for 65% of gonorrhea cases and 70% of chlamydia cases, while 44% of P&S syphilis cases were among those under age 30 (Table 8, 10, 12).
- The largest proportion of P&S syphilis cases (61%) remains among MSM, while men who have sex with women (MSW) represented close to 11%. Notably, 18% of male P&S syphilis cases were reported as 'unknown' risk, which, if known, would likely increase the number of MSM cases. Based on the provisional data, forty percent of men newly diagnosed with P&S syphilis in 2013 were also infected with HIV (Table 12).
- Trends in congenital syphilis usually follow trends for P&S syphilis among women, with a lag of 1–2 years. During 2009–2013, the total number of P&S syphilis among women increased by 77% (from 31 cases to 55). As a result, the total number of congenital syphilis also increased by 50% (from 10 cases to 15 cases) during the same time period. However, between 2012 and 2013, the total number of reported cases decreased by 32% (from 22 to 15 cases).

STI: Figures and Tables

Figure 6. Number of Reported Sexually Transmitted Infections, Chicago, 1998-2013

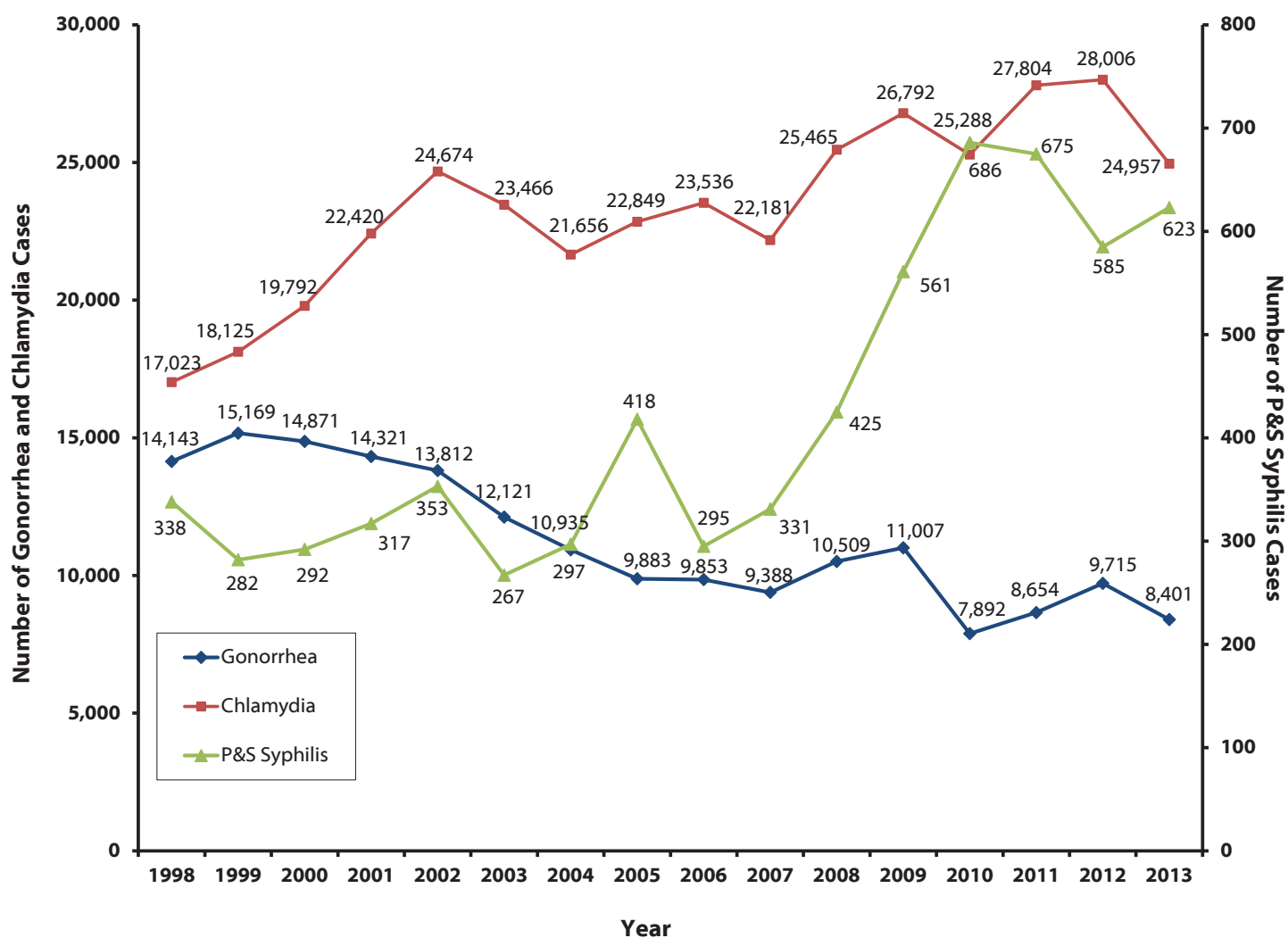


Table 8. Trends in Gonorrhea Cases by Selected Demographic Characteristics, Chicago, 2009-2013

Demographic Characteristics	Year of Report										Estimated Annual Percent Change
	2009		2010		2011		2012		2013		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Sex											
Male	5,023	45.6	3,623	45.9	4,141	47.9	4,752	48.9	4,286	51.0	-0.5
Female	5,983	54.4	4,248	53.8	4,497	52.0	4,948	50.9	4,107	48.9	-5.8
Race/Ethnicity											
Black, non-Hispanic	8,839	80.3	4,821	61.1	5,756	66.5	5,991	61.7	5,357	63.8	-7.5
White, non-Hispanic	429	3.9	343	4.3	393	4.5	469	4.8	465	5.5	4.9
Hispanic	387	3.5	333	4.2	439	5.1	437	4.5	424	5.0	4.5
Asian/PI, non-Hispanic	24	0.2	15	0.2	28	0.3	39	0.4	26	0.3	21.9
AI/AN, non-Hispanic	4	0.0	7	0.1	8	0.1	5	0.1	9	0.1	2.9
Other, non-Hispanic	60	0.5	34	0.4	116	1.3	63	0.6	62	0.7	7.1
Unknown	1,264	11.5	2,339	29.6	1,914	22.1	2,711	27.9	2,058	24.6	11.9
Age[†]											
Less than 13	22	0.2	23	0.3	29	0.3	21	0.2	16	0.2	-7.0
13-19	3,142	28.5	2,730	34.6	3,136	36.2	3,261	33.6	2,682	31.9	-1.4
20-29	5,700	51.8	3,694	46.8	4,022	46.5	4,644	47.8	4,099	48.8	-4.2
20-24	3,832	34.8	2,520	31.9	2,767	32.0	3,173	32.7	2,780	33.1	-4.0
25-29	1,868	17.0	1,174	14.9	1,255	14.5	1,471	15.1	1,319	15.7	-4.6
30-39	1,420	12.9	938	11.9	929	10.7	1,138	11.7	1,017	12.1	-4.6
40-49	510	4.6	368	4.7	392	4.5	467	4.8	422	5.0	-1.4
50+	213	1.9	139	1.8	146	1.7	184	1.9	165	2.0	-2.3
Total**	11,007	100.0	7,892	100.0	8,654	100.0	9,715	100.0	8,401	100.0	-3.3
<i>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. **Includes cases with unknown sex or age.</i>											

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. **Includes cases with unknown sex or age.

Table 9. Gonorrhea Case Rates by Community Area, Chicago, 2013

Gonorrhea			Gonorrhea		
Community Area	Cases [†]	Rate [§]	Community Area	Cases [†]	Rate [§]
1 Rogers Park	158	287.3	40 Washington Park	133	1,135.1
2 West Ridge	66	91.7	41 Hyde Park	43	167.4
3 Uptown	195	346.0	42 Woodlawn	157	604.2
4 Lincoln Square	23	58.2	43 South Shore	331	665.1
5 North Center	23	72.2	44 Chatham	182	586.6
6 Lake View	226	239.5	45 Avalon Park	57	559.6
7 Lincoln Park	36	56.1	46 South Chicago	160	512.9
8 Near North Side	108	134.2	47 Burnside	20	685.9
9 Edison Park	<5	--	48 Calumet Heights	53	383.7
10 Norwood Park	<5	--	49 Roseland	246	551.3
11 Jefferson Park	5	19.6	50 Pullman	27	368.6
12 Forest Glen	6	32.4	51 South Deering	62	410.4
13 North Park	12	66.9	52 East Side	15	65.1
14 Albany Park	35	67.9	53 West Pullman	162	546.4
15 Portage Park	38	59.3	54 Riverdale	60	925.6
16 Irving Park	49	91.8	55 Hegewisch	7	74.3
17 Dunning	9	21.5	56 Garfield Ridge	26	75.3
18 Montclare	8	59.6	57 Archer Heights	6	44.8
19 Belmont Cragin	59	74.9	58 Brighton Park	15	33.1
20 Hermosa	11	44.0	59 McKinley Park	6	38.4
21 Avondale	28	71.3	60 Bridgeport	22	68.8
22 Logan Square	67	91.0	61 New City	155	349.3
23 Humboldt Park	268	475.8	62 West Elsdon	8	44.2
24 West Town	122	149.8	63 Gage Park	38	95.3
25 Austin	831	843.5	64 Clearing	7	30.3
26 West Garfield Park	233	1,294.4	65 West Lawn	19	57.0
27 East Garfield Park	198	962.7	66 Chicago Lawn	232	417.1
28 Near West Side	202	368.1	67 West Englewood	361	1,016.8
29 North Lawndale	355	988.5	68 Englewood	283	923.2
30 South Lawndale	60	75.7	69 Gr. Grand Crossing	276	846.6
31 Lower West Side	26	72.7	70 Ashburn	91	221.5
32 Loop	39	133.2	71 Auburn Gresham	331	679.1
33 Near South Side	33	154.3	72 Beverly	18	89.8
34 Armour Square	21	156.8	73 Washington Heights	126	475.6
35 Douglas	74	405.7	74 Mount Greenwood	<5	--
36 Oakland	34	574.5	75 Morgan Park	90	399.2
37 Fuller Park	19	660.6	76 O'Hare	5	39.2
38 Grand Boulevard	174	793.5	77 Edgewater	146	258.3
39 Kenwood	52	291.5	Unknown CA	516	0.0
			Chicago Total[¶]	8,401	311.3

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.

Figure 7. Gonorrhea Case Rates (per 100,000) by Community Area, Chicago, 2013

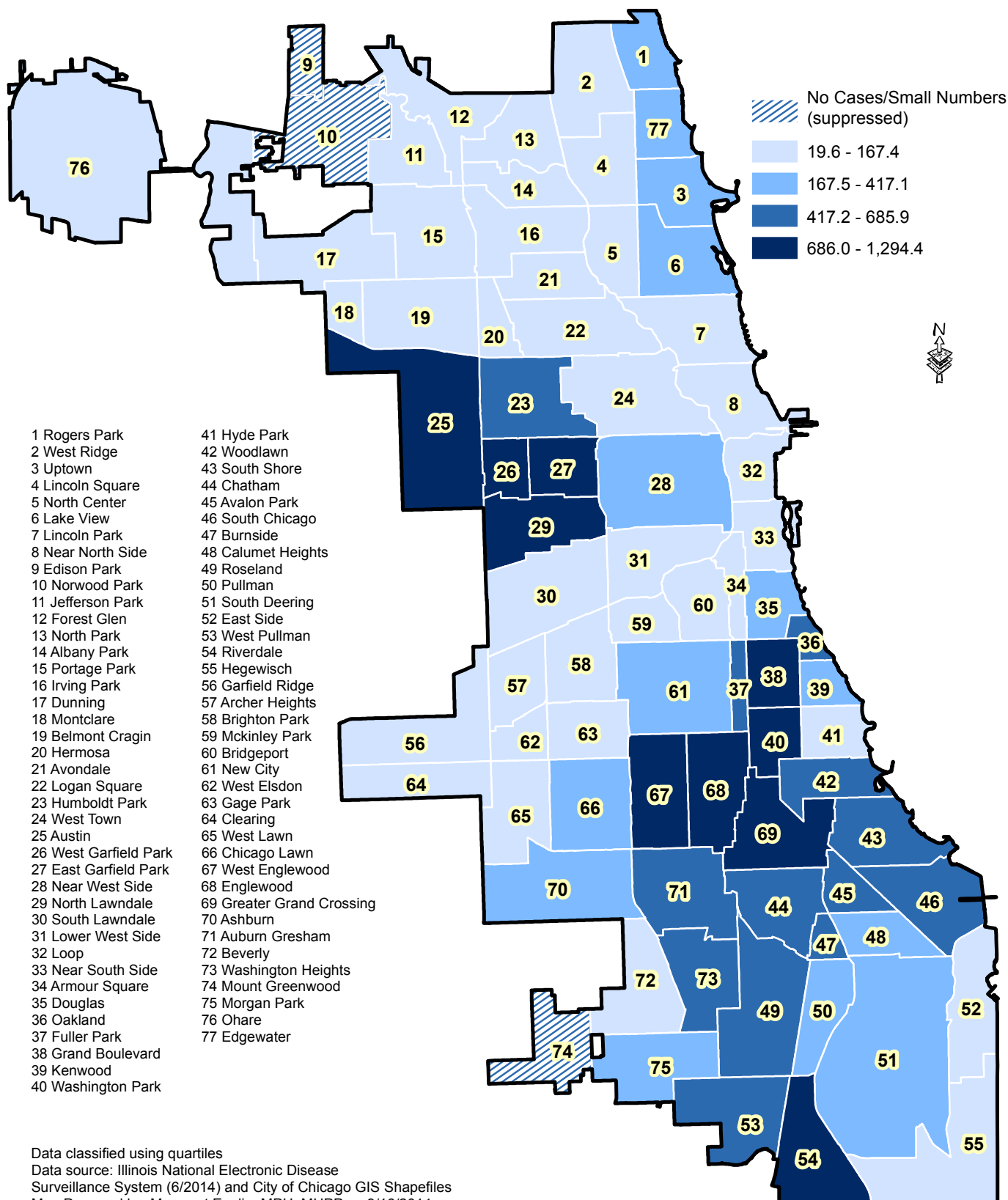


Table 10. Trends in Chlamydia Cases by Selected Demographic Characteristics, Chicago, 2009-2013

Demographics Characteristics	Year of Report										Estimated Annual Percent Change
	2009		2010		2011		2012		2013		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Sex											
Male	7,413	27.7	7,023	27.8	8,500	30.6	8,364	29.9	7,520	30.1	2.0
Female	19,365	72.3	18,192	71.9	19,232	69.2	19,574	69.9	17,396	69.6	-1.4
Race/Ethnicity											
Black, non-Hispanic	18,552	69.2	13,359	52.8	15,714	56.5	14,479	51.7	13,184	52.8	-5.8
White, non-Hispanic	1,118	4.2	977	3.9	1,292	4.6	1,125	4.0	1,222	4.9	3.2
Hispanic	2,478	9.2	2,838	11.2	3,456	12.4	3,107	11.1	2,906	11.6	4.2
Asian/PI, non-Hispanic	88	0.3	129	0.5	131	0.5	152	0.5	159	0.6	8.1
AI/AN, non-Hispanic	12	0.0	28	0.1	14	0.1	12	0.0	11	0.0	-25.6
Other, non-Hispanic	174	0.6	170	0.7	481	1.7	279	1.0	273	1.1	15.0
Unknown	4,370	16.3	7,787	30.8	6,716	24.2	8,852	31.6	7,202	28.8	11.9
Age [†]											
Less than 13	57	0.2	115	0.5	41	0.1	58	0.2	49	0.2	-9.4
13-19	8,612	32.1	9,245	36.6	10,282	37.0	10,304	36.8	8,545	34.2	0.9
20-29	14,033	52.4	12,334	48.8	13,671	49.2	13,822	49.4	12,783	51.2	-0.7
20-24	9,449	35.3	8,405	33.2	9,359	33.7	9,548	34.1	8,898	35.6	0.1
25-29	4,584	17.1	3,929	15.5	4,312	15.5	4,274	15.3	3,885	15.5	-2.4
30-39	3,059	11.4	2,636	10.4	2,804	10.1	2,839	10.1	2,594	10.4	-2.5
40-49	769	2.9	716	2.8	755	2.7	722	2.6	748	3.0	-0.5
50+	262	1.0	242	1.0	251	0.9	261	0.9	238	1.0	-1.2
Total**	26,792	100.0	25,288	100.0	27,804	100.0	28,006	100.0	24,957	100.0	-0.4
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. **Includes cases with unknown sex or age.											

Table 11. Chlamydia Case Rates by Community Area, Chicago, 2013

Chlamydia			Chlamydia		
Community Area	Cases [†]	Rate [§]	Community Area	Cases [†]	Rate [§]
1 Rogers Park	355	645.6	40 Washington Park	335	2,859.1
2 West Ridge	245	340.6	41 Hyde Park	94	366.0
3 Uptown	313	555.3	42 Woodlawn	437	1,681.9
4 Lincoln Square	97	245.6	43 South Shore	787	1,581.4
5 North Center	67	210.2	44 Chatham	493	1,588.9
6 Lake View	429	454.6	45 Avalon Park	130	1,276.4
7 Lincoln Park	194	302.6	46 South Chicago	453	1,452.0
8 Near North Side	335	416.2	47 Burnside	36	1,234.6
9 Edison Park	7	62.6	48 Calumet Heights	156	1,129.5
10 Norwood Park	44	118.8	49 Roseland	715	1,602.5
11 Jefferson Park	42	165.0	50 Pullman	79	1,078.5
12 Forest Glen	27	145.9	51 South Deering	170	1,125.2
13 North Park	43	239.8	52 East Side	110	477.4
14 Albany Park	208	403.6	53 West Pullman	416	1,403.0
15 Portage Park	214	333.7	54 Riverdale	155	2,391.2
16 Irving Park	184	344.8	55 Hegewisch	36	381.9
17 Dunning	76	181.2	56 Garfield Ridge	106	307.1
18 Montclare	49	365.0	57 Archer Heights	65	485.3
19 Belmont Cragin	422	535.9	58 Brighton Park	240	529.0
20 Hermosa	145	579.8	59 McKinley Park	72	461.2
21 Avondale	172	438.1	60 Bridgeport	119	372.1
22 Logan Square	331	449.8	61 New City	502	1,131.2
23 Humboldt Park	776	1,377.8	62 West Elsdon	91	502.5
24 West Town	479	588.2	63 Gage Park	273	684.3
25 Austin	2,012	2,042.3	64 Clearing	60	259.3
26 West Garfield Park	522	2,899.8	65 West Lawn	154	461.7
27 East Garfield Park	561	2,727.7	66 Chicago Lawn	730	1,312.3
28 Near West Side	663	1,208.1	67 West Englewood	855	2,408.1
29 North Lawndale	1,006	2,801.3	68 Englewood	788	2,570.6
30 South Lawndale	546	688.6	69 Gr. Grand Crossing	668	2,049.0
31 Lower West Side	194	542.4	70 Ashburn	291	708.4
32 Loop	122	416.6	71 Auburn Gresham	867	1,778.7
33 Near South Side	84	392.7	72 Beverly	64	319.5
34 Armour Square	74	552.6	73 Washington Heights	376	1,419.2
35 Douglas	204	1,118.5	74 Mount Greenwood	27	141.4
36 Oakland	102	1,723.6	75 Morgan Park	236	1,046.8
37 Fuller Park	67	2,329.6	76 O'Hare	21	164.6
38 Grand Boulevard	430	1,960.9	77 Edgewater	246	435.2
39 Kenwood	167	936.0	Unknown CA	1,496	
			Chicago Total[¶]	24,957	924.7

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.

Figure 8. Chlamydia Case Rates (per 100,000) by Community Area, Chicago, 2013

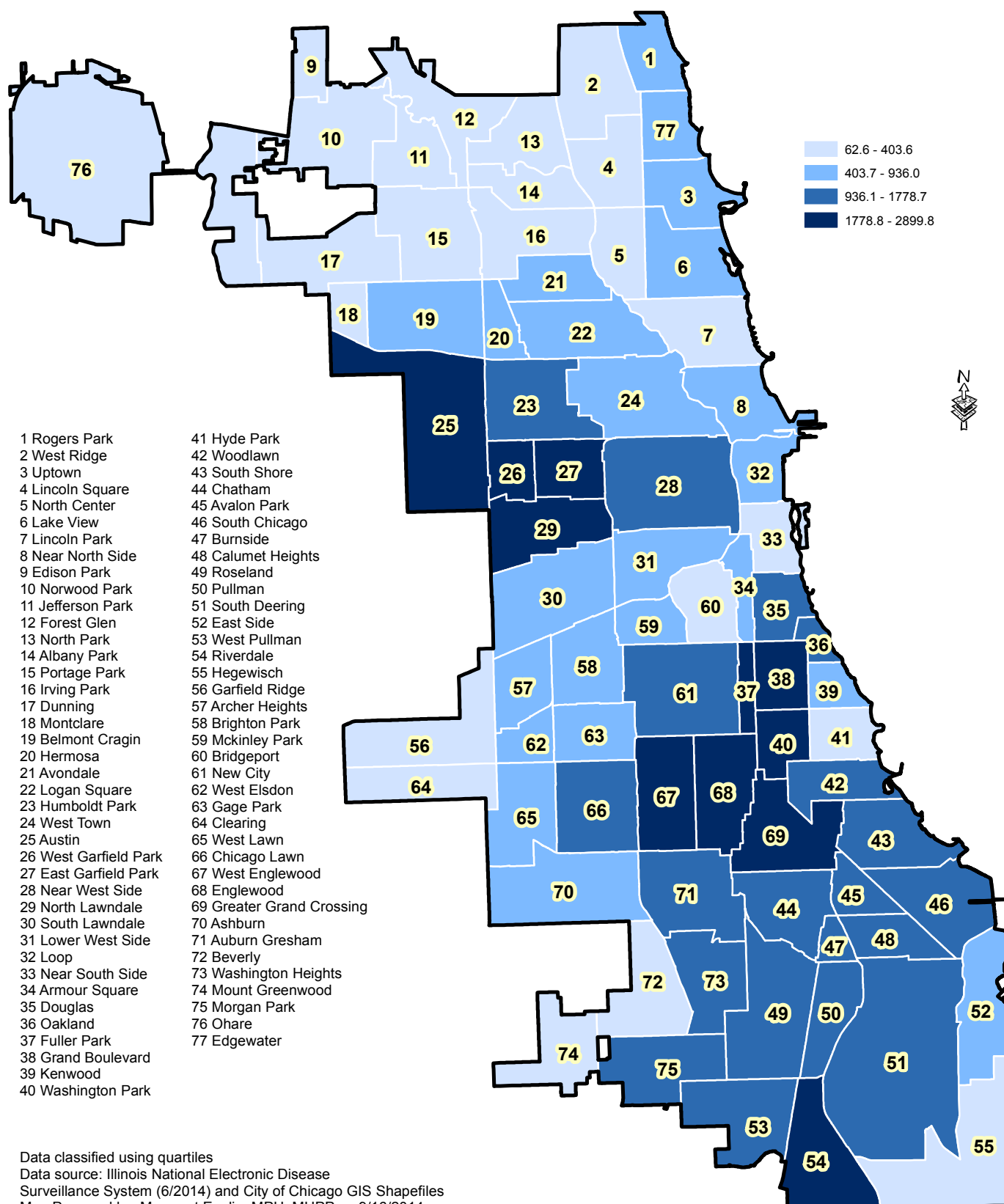


Table 12. Trends in Primary and Secondary Syphilis Cases by Selected Demographic Characteristics, Chicago, 2009-2013

Demographic Characteristic	Year of Report										Estimated Annual Percent Change
	2009		2010		2011		2012		2013		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Sex*											
Male	530	94.5	602	87.8	616	91.3	526	89.9	567	91.0	0.0
Female	31	5.5	84	12.2	59	8.7	59	10.1	55	8.8	8.3
Race/Ethnicity*											
Black, non-Hispanic	315	56.1	402	58.6	375	55.6	290	49.6	291	46.7	-4.7
White, non-Hispanic	153	27.3	152	22.2	170	25.2	156	26.7	169	27.1	2.3
Hispanic	69	12.3	92	13.4	86	12.7	99	16.9	104	16.7	9.4
Asian/PI, non-Hispanic	6	1.1	11	1.6	8	1.2	9	1.5	21	3.4	25.9
AI/AN, non-Hispanic	5	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Other/Unknown	13	2.3	29	4.2	36	5.3	31	5.3	38	6.1	24.8
Transmission Group											
Male sex w/ Male	345	61.5	340	49.6	452	67.0	356	60.9	385	61.8	2.7
Heterosexual Males	40	7.1	86	12.5	73	10.8	51	8.7	70	11.2	6.1
Females	31	5.5	84	12.2	59	8.7	59	10.1	55	8.8	8.3
Male unknown	145	25.8	176	25.7	90	13.3	117	20.0	113	18.1	-8.7
Age[†]											
Less than 13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
13-19	36	6.4	35	5.1	43	6.4	36	6.2	27	4.3	-5.3
20-29	196	34.9	260	37.9	258	38.2	240	41.0	249	40.0	4.1
20-24	109	19.4	136	19.8	136	20.1	115	19.7	134	21.5	2.5
25-29	87	15.5	124	18.1	122	18.1	125	21.4	115	18.5	5.8
30-39	170	30.3	167	24.3	174	25.8	152	26.0	175	28.1	-0.4
40-49	121	21.6	162	23.6	140	20.7	112	19.1	108	17.3	-5.8
50+	38	6.8	62	9.0	60	8.9	45	7.5	68	10.1	6.9
HIV Co-Infection											
Male	271	48.3	292	42.6	292	43.2	229	39.1	248	39.8	-4.9
Female	2	0.3	4	0.6	2	0.3	5	0.8	3	0.5	22.8
Total Co-Infected	273	48.6	296	43.2	294	43.5	234	40.0	252	40.4	-4.6
Total**	561	100.0	686	100.0	675	100.0	585	100.0	623	100.0	0.5

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. **Includes cases with unknown sex, age, or transmission group.

Table 13. Syphilis Case Rates by Community Area, Chicago, 2013

Community Area	P&S Syphilis Cases [†]	Rate [§]	Community Area	P&S Syphilis Cases [†]	Rate [§]
1 Rogers Park	32	58.2	40 Washington Park	<5	--
2 West Ridge	5	7	41 Hyde Park	<5	--
3 Uptown	53	94	42 Woodlawn	9	34.6
4 Lincoln Square	9	22.8	43 South Shore	23	46.2
5 North Center	6	18.8	44 Chatham	8	25.8
6 Lake View	49	51.9	45 Avalon Park	6	58.9
7 Lincoln Park	13	20.3	46 South Chicago	11	35.3
8 Near North Side	8	9.9	47 Burnside	<5	--
9 Edison Park	<5	--	48 Calumet Heights	<5	--
10 Norwood Park	<5	--	49 Roseland	10	22.4
11 Jefferson Park	<5	--	50 Pullman	<5	--
12 Forest Glen	<5	--	51 South Deering	<5	--
13 North Park	<5	--	52 East Side	<5	--
14 Albany Park	7	13.6	53 West Pullman	7	23.6
15 Portage Park	6	9.4	54 Riverdale	<5	--
16 Irving Park	6	11.2	55 Hegewisch	<5	--
17 Dunning	<5	--	56 Garfield Ridge	<5	--
18 Montclare	<5	--	57 Archer Heights	<5	--
19 Belmont Cragin	5	6.3	58 Brighton Park	5	11
20 Hermosa	<5	--	59 McKinley Park	<5	--
21 Avondale	5	12.7	60 Bridgeport	<5	--
22 Logan Square	16	21.7	61 New City	6	13.5
23 Humboldt Park	14	24.9	62 West Elsdon	<5	--
24 West Town	18	22.1	63 Gage Park	<5	--
25 Austin	17	17.3	64 Clearing	<5	--
26 West Garfield Park	9	50	65 West Lawn	<5	--
27 East Garfield Park	5	24.3	66 Chicago Lawn	12	21.6
28 Near West Side	6	10.9	67 West Englewood	11	31
29 North Lawndale	15	41.8	68 Englewood	10	32.6
30 South Lawndale	5	6.3	69 Gr. Grand Crossing	15	46
31 Lower West Side	9	25.2	70 Ashburn	<5	--
32 Loop	<5	--	71 Auburn Gresham	16	32.8
33 Near South Side	<5	--	72 Beverly	<5	--
34 Armour Square	<5	--	73 Washington Heights	6	22.6
35 Douglas	6	32.9	74 Mount Greenwood	<5	--
36 Oakland	<5	--	75 Morgan Park	<5	--
37 Fuller Park	<5	--	76 O'Hare	<5	--
38 Grand Boulevard	8	36.5	77 Edgewater	36	63.7
39 Kenwood	<5	--	Unknown CA	5	
Chicago Total[¶]			623	23.1	

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.

Figure 9. Primary and Secondary Syphilis Case Rates (per 100,000) by Community Area, Chicago, 2013

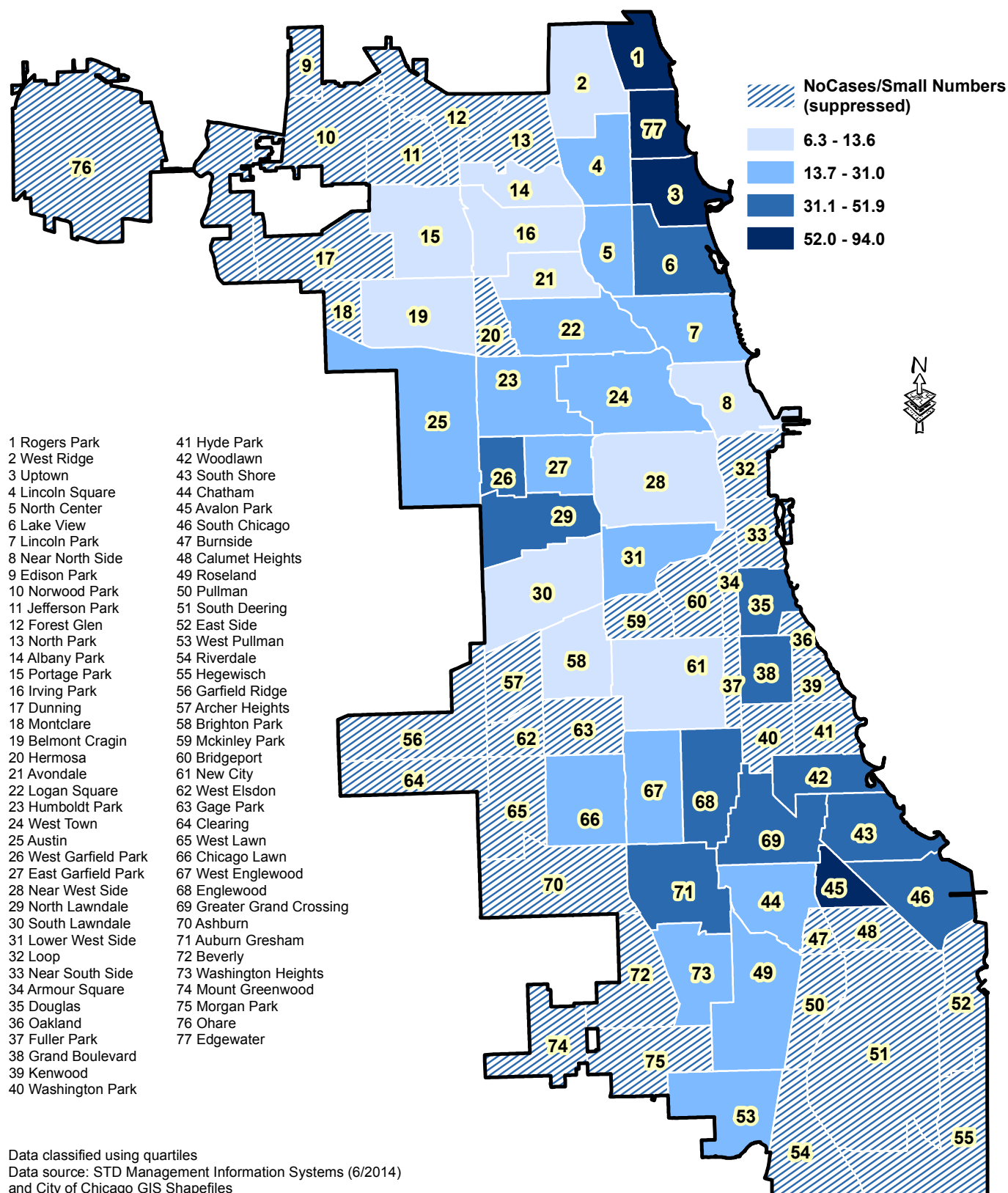
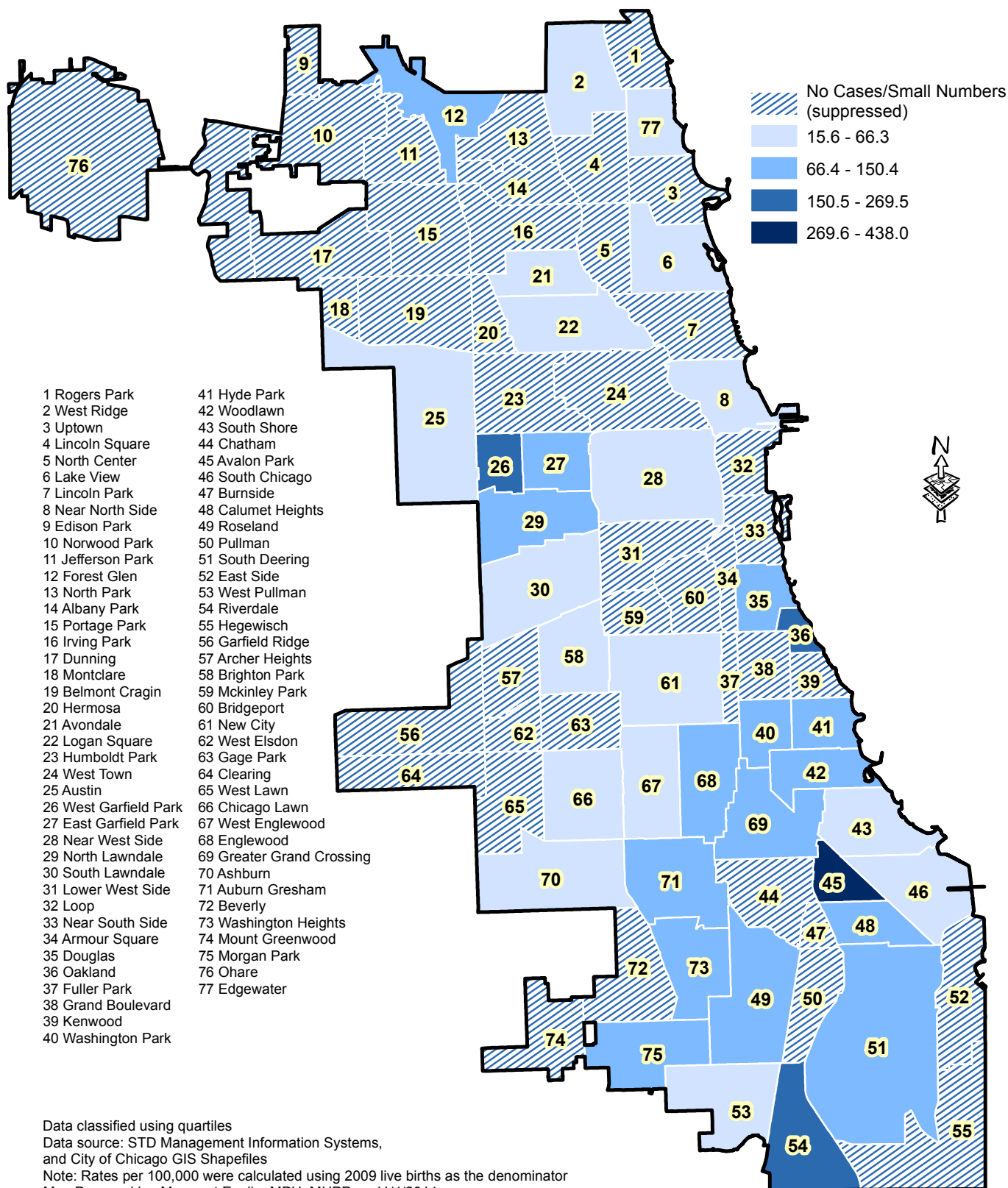


Table 14. Congenital Syphilis Cases by Selected Demographic Characteristics, Chicago, 2009-2013

Demographics Characteristics	Year of Report										Estimated Annual Percent Change
	2009		2010		2011		2012		2013		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Case Classification											
Presumptive Cases	10	100.0	18	95.0	9	90.0	22	100.0	13	87.0	7.5
Stillborns	0	0.0	1	5.0	1	10.0	0	0.0	2	13.0	0.0
Race/Ethnicity											
Black, non-Hispanic	9	90.0	16	84.2	9	90.0	17	77.3	9	60.0	0.6
White, non-Hispanic	0	0.0	0	0.0	0	0.0	1	4.5	2	13.3	N/A
Hispanic	0	0.0	2	10.5	0	0.0	2	9.1	3	20.0	N/A
Asian/PI, non-Hispanic	1	10.0	0	0.0	0	0.0	2	9.0	0	0.0	N/A
AI/AN, non-Hispanic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	N/A
Other/Unk	0	0.0	1	5.3	1	10.0	0	0.0	1	6.7	N/A
Multiple, non-Hispanic^	N/A	0.0	N/A		N/A		N/A		N/A		N/A
Maternal Age Category†											
Less than 13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	N/A
13-19	2	20.0	3	15.8	2	20.0	5	22.7	3	20.0	14.1
20-29	3	30.0	12	63.2	6	60.0	15	68.2	10	66.7	30.1
20-24	3	33.3	9	47.4	4	40.0	13	59.1	7	46.7	22.9
25-29	0	0.0	3	15.8	2	20.0	2	9.1	3	20.0	N/A
30-39	3	33.3	3	15.8	2	20.0	1	4.5	2	13.3	-17.4
40+	2	20.0	1	5.3	0	0.0	1	50.0	0	0.0	N/A
Median Age	24		25		22		22		22		
Total	10		19		10		22		15		10.0

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.

**Figure 10. Average Annual Congenital Syphilis Case Rates
(per 100,000 live births) by Community Area, Chicago,
2009-2013 (city total rate = 32.4)**



Appendix A: Technical Notes

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

In January 2006, Illinois transitioned from a code-based to a name-based HIV reporting system. To date, approximately 90% of previously reported code-based cases now have names and are in the new surveillance database (named eHARS), provided by the Centers for Disease Control and Prevention (CDC) in June of 2009. While efforts are periodically made to ascertain names on code-based HIV cases, epidemiological analyses of HIV and AIDS in this section will be based only on name-based HIV cases in eHARS and thus prevalence numbers in this report may be smaller than those in older reports. When interpreting data in this report, keep in mind that the 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 of 9/30/2014.

The “HIV Infection Diagnosis” data presented in this issue includes three categories of diagnoses: (1) a diagnosis of HIV infection (not AIDS), (2) a diagnosis of HIV infection with a later diagnosis of AIDS, and (3) concurrent diagnoses of HIV infection and AIDS. HIV cases include both laboratory-defined cases as well as HIV cases diagnosed by a physician without laboratory tests. AIDS represent a later stage in the HIV disease spectrum. 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 tested. 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.

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. Reporting delays are important when interpreting trends in case numbers and rates over time and especially, the most recent year of diagnosis. Almost 90% of cases residing in Chicago when diagnosed with HIV disease between 01/01/2012 through 12/31/2012 were reported within 6 months of diagnosis, assessed at 12 months after the end of the diagnosis period based on the capture-recapture log-linear models. For those diagnosed in 2013 (to date), 55% were reported within 30 days, 96% in less than 6 months and 100% within one year. In order to provide the most complete data as possible, we will be presenting trend data through 2013. 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.

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 MSM and also inject drugs, which has its own category. Persons whose transmission mode is classified as MSM include men who report sexual contact with other men and men who report sexual contact with both men and women. Persons whose 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, we use multiple imputation 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 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 the only CDC recommended treatment regimen for gonorrhea.

C. 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 PID, which is a major 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.

Accurately assessing trends in race/ethnicity for gonorrhea and chlamydia is complicated by the increases in “unknown” race/ethnicity (unknown race/ethnicity comprised approximately 30% of both gonorrhea and chlamydia cases in 2013).

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). P&S 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).

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.

References:

1. Centers for Disease Control and Prevention (2013). *Sexually Transmitted Disease Surveillance*. Retrieved from <http://www.cdc.gov/std/default.htm>.
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Appendix B: Geocoding Methodology and Limitations

INEDSS - Address Validation

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 INEDSS Morbidity File

Before the INEDSS data file is submitted to the City of Chicago GIS FTP site, 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 common 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 than those officially recorded by the government.
- C. Addresses may end at jurisdictional boundaries.

In 2013, 33,358 cases of Gonorrhea and Chlamydia were reported to the Chicago Department of Public Health. Of these, 2,012 (6.0%) were not geocoded. This represents a 15.1% (2,371/37,721) decline in the proportion of address that were not geocoded in the 2012 INEDSS data file.

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
MMP = Medical Monitoring Project
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
SSuN = STD Surveillance Network



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