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# CDC Estimate of New Infections: What is it and how does it help track the HIV epidemic?

#### How is the HIV epidemic tracked?

For more than 25 years, the Chicago Department of Public Health's STD/HIV/AIDS Division - Surveillance, Epidemiology and Research Section (SER) has monitored the epidemic through HIV/AIDS reporting activities. The HIV/AIDS reporting system tracks many aspects of the epidemic, including HIV and AIDS diagnoses, the number and characteristics of people living with HIV and AIDS, and deaths among persons with HIV and AIDS. Recently, the HIV reporting system was expanded to to be able to monitor new HIV infections as well. All of these components work together to provide the most complete profile of the epidemic that is possible. The newly enhanced reporting system collects data on people with HIV infection throughout the clinical spectrum of disease (see Figure 1), from seroconversion to death. Public health reporting programs receive this information from health care providers who diagnose HIV and AIDS and laboratories that perform HIV-related testing.

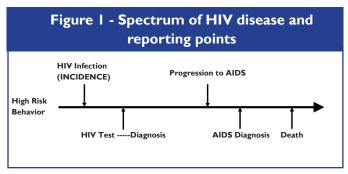
#### What is incidence?

HIV incidence is the number of new HIV infections in a specific population during a specific time period.

#### Why is it important to estimate HIV infection?

We need incidence estimates to evaluate prevention programs and target resources toward groups with recent infection rates. While the existing reporting system has allowed us to identify new HIV and AIDS diagnoses, until now we had not been able to determine the number of new infections. A new HIV diagnosis does not necessarily mean a new infection. Many people first learn they have HIV years after their initial infection, and many do not know they are infected until they have progressed to AIDS. In Chicago, 30% of new HIV diagnoses are "concurrent with" (made within a year of) an AIDS diagnosis. If everyone at risk in Chicago was tested once per year, we could measure HIV incidence using the HIV reporting system. But many people do not test regularly, and many are not tested until they develop symptoms.

New advances in testing technology have resulted in the development of tests that are able to distinguish recent infections (infections that occurred within the past 5-months) from more established infections. Using this technology, along with information collected through HIV case reports, we are able to track the epidemic at an earlier stage of disease than was previously possible, allowing us to understand how the epidemic is spreading and where prevention interventions are most urgently needed.



# How does the HIV incidence reporting system relate to routine HIV reporting?

HIV incidence reporting is an extension of the population-based HIV reporting system and is the first of its kind world-wide. It enables local and state health departments to use their existing reporting infrastructure to collect the information necessary to estimate HIV incidence from all newly diagnosed HIV cases that are reported. In addition to data currently collected through standard reporting, HIV incidence reporting requires retesting of the remnant blood from the initial diagnostic HIV test and information about individuals' HIV testing and treatment history. This is all made possible thanks to the continuous work of Chicago health care providers who report HIV/AIDS cases.

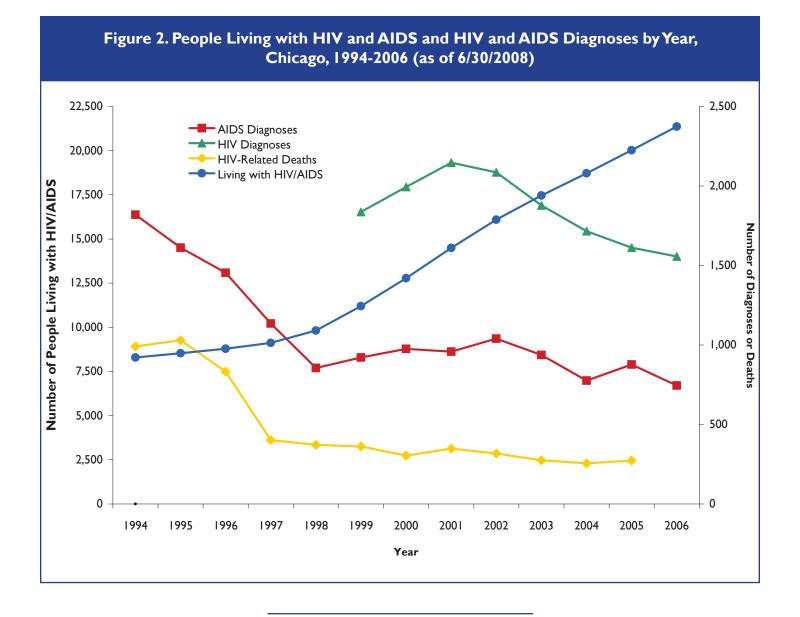
The combination of the standard EIA test and a test called the BED assay is known as the serologic testing algorithm for recent HIV seroconversion (STARHS). A person who is HIV positive on the standard EIA diagnostic test and determined recent on the BED test is classified as a recent infection.

#### How is the estimate calculated?

The components that are needed to estimate HIV incidence are STARHS results and information about HIV testing history for newly diagnosed HIV cases in Chicago. Statistical techniques are then used to extrapolate to the general population.

## When will Chicago have local estimates of recent HIV infections?

CDC will be providing detailed information and materials describing how to calculate the estimate of recent infections for Chicago and all other jurisdictions funded to conduct HIV incidence reporting nationwide. The Division's Surveillance, Epidemiology and Research Section will modify these materials for local use and will release local estimates late this summer.



### **HIV/AIDS Highlights**

#### **Overall Trends**

Since the beginning of the epidemic, 35,735 cases of HIV and AIDS have been reported in Chicago. There are currently 21,367 people living with HIV and AIDS that were diagnosed in Chicago. AIDS diagnoses have declined considerably since the peak in the mid-1990s. The number of diagnosed AIDS cases increased between 1998-2002, declined considerably from 2002-2004, and has remained relatively stable since through 2006 (see Figure 2). After increasing steadily since reporting began, the number of HIV diagnoses (which includes new HIV

diagnoses regardless of stage of the disease) peaked in 2001 and has been steadily declining through 2006. However, this varies for difefrent demographic populations and rrisk groups. Between 2000-2006, more than 2,000 HIV and AIDS cases were diagnosed each year. Data for 2006 are still provisional and are likely to increase. As the number of new diagnoses stays relatively constant, and with infected people living longer, the number of people living with HIV/AIDS continues to increase considerably each year. The following section presents Chicago data on HIV and AIDS through 2006 as of June 30, 2008.

Table I.AIDS Diagnosis Rates by Year of Diagnosis and Selected Characteristics, Chicago, 1985-2006 (as of 6/30/2008)

					Chica	ıgo*					Illino	is**	U.S.*	**
	198	35	199	0	199	5	200	0	200	6	200	)6	2006	5
Characteristic	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Sex														
Male	214	15.0	1,039	77.8	1,316	98.6	754	53.7	579	44.5	927	14.7	26,989	22.4
Female	8	0.5	104	7.2	296	20.4	222	14.9	166	11.8	285	4.4	9,801	7.8
Race/Ethnicity <sup>9</sup>														
NH Black	65	5.4	529	49.2	968	90.0	629	59.7	449	47.9		NA	17,960	47.6
NH White	131	10.0	444	42.0	407	38.5	179	19.7	145	17.7		NA	10,929	5.4
Hispanic	23	5.4	161	29.5	210	38.5	156	20.7	129	16.6		NA	6,907	15.6
NH Other/Unknown	<5	-	9	8.6	27	25.9	12	6.6	22	13.2		NA	674	NA
Total Cases	222	14.5	1,143	71.4	1,612	84.2	976	44.9	745	27.6	1,212	9.4	36,828	12.3

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5. §NH= Non-Hispanic

- The 2006 AIDS diagnosis rate for Chicago was 27.6 per 100,000 population, nearly triple the rate for the state of Illinois (9.4 per 100,000) and more than twice the US rate for 2006 (12.3 per 100,000). The AIDS rate for non-Hispanic (NH) Blacks in Chicago was more than twice the AIDS rate in NH Whites and Hispanics (47.9 vs. 17.7 per 100,000 and 16.6 per 100,000).
- While all race/ethnicity groups have experienced declines since 1995, differences in the AIDS rates between NH Blacks and NH Whites and Hispanics have persisted. The AIDS rate in NH Blacks was 2.3 times higher than NH Whites and Hispanics in 1995, and in 2006, the AIDS rate was more than 2.7 times higher in NH Blacks than in NH Whites and Hispanics. Since 1995, Hispanics and Whites have had similar AIDS rates.

<sup>\*</sup>Data for 2006 are provisional; rates per 100,000 population using 2005 population projections.

<sup>\*\*</sup>Rates per 100,000 population using 2006 US Census Bureau Population Estimates.

<sup>\*\*\*</sup>Rates per 100,000 population using 2006 US Census Bureau Population Estimates; rates by gender per 100,000 adults/adolscents.

Table 2. AIDS Cases by Year of Diagnosis and Selected Characteristics, Chicago, 2000-2006 (as of 6/30/2008)

	20	00	20	DI	20	02	20	03	20	04	20	05	200	)6*
Characteristic	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sex														
Male	754	77.3	740	77.2	781	75. I	704	75.I	593	76.4	699	79.6	585	77.6
Female	222	22.7	218	22.8	259	24.9	233	24.9	183	23.6	179	20.4	169	22.4
Race/Ethnicity§														
NH Black	629	64.4	620	64.7	638	61.3	610	65.I	468	60.3	504	57.4	452	59.9
NH White	179	18.3	162	16.9	195	18.8	156	16.6	159	20.5	197	22.4	149	19.8
Hispanic	156	16.0	159	16.6	187	18.0	149	15.9	137	17.7	154	17.5	131	17.4
NH Other	12	1.2	17	1.8	20	1.9	22	2.3	12	1.5	23	2.6	22	2.9
Transmission Group#	l													
Male Sex w/Male	410	42.0	421	43.9	476	45.8	448	47.8	411	53.0	472	53.8	386	51.2
Injection Drug Use	301	30.8	265	27.7	287	27.6	209	22.3	177	22.8	172	19.6	145	19.2
MSM and IDU <sup>¶</sup>	80	8.2	82	8.6	74	7.1	79	8.4	47	6.1	49	5.6	44	5.8
Heterosexual	173	17.7	176	18.4	191	18.4	193	20.6	131	16.9	176	20.0	164	21.8
Other##	13	1.3	14	1.5	- 11	1.1	7	0.7	- 11	1.4	Ш	1.3	13	1.7
Age Group	l													
<19	13	1.3	9	0.9	- 11	1.1	11	1.2	11	1.4	8	0.9	15	2.0
20-29	110	11.3	118	12.3	151	14.5	123	13.1	83	10.7	113	12.9	116	15.4
30-39	375	38.4	364	38.0	379	36.4	328	35.0	252	32.5	288	32.8	204	27.1
40-49	333	34.1	324	33.8	329	31.6	327	34.9	300	38.7	292	33.3	257	34.1
50+	145	14.9	143	14.9	170	16.3	148	15.8	130	16.8	177	20.2	162	21.5
Total	976	100.0	958	100.0	1,040	100.0	937	100.0	776	100.0	878	100.0	754	100.0

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5. Percentages may not add up tp 100% due to rounding.

§NH= Non-Hispanic

###Includes perinatal transmission, blood transfusion and hemophilia.

#### Table 2

- Since 2000, the number of AIDS cases has declined by 23%, from 976 AIDS diagnoses in 2000 to 745 diagnoses in 2006.
- The number of AIDS diagnoses declined in both males and females from 2000 to 2006 at a similar rate. AIDS diagnoses in males declined 22.4% and 23.8% in females.
- Men who have sex with men continue to represent the largest percentage of AIDS diagnoses, accounting for half (51.2%) of AIDS cases in 2006. The proportion of AIDS diagnoses attributable to male-to-male sexual contact has fluctuated over the past 7 years, but the greatest change is observed between 2005 and 2006 with an 18% decline. The most significant decline is observed in IDUs

who experienced more than a 51.8% decline between 2000 and 2006. In 2000, 30.8% of AIDS diagnoses were due to IDU and by 2006, 19.2% of AIDS diagnoses were due to IDU.

- People aged 40-49 account for the largest percentage of AIDS cases (34.1%), followed closely by those aged 30-39 (27.1%). Together, those aged 30-49 account for nearly two-thirds of all AIDS diagnoses in 2006.
- NH Blacks in Chicago continue to be disproportionately affected by AIDS. Of all AIDS diagnoses in 2006, NH Blacks accounted for 59.9%; representing three times as many AIDS cases as among NH White (19.8%) or Hispanic (17.4%).

<sup>\*</sup>Data for 2006 are not complete due to delays in reporting.

 $<sup>\#</sup> Cases \ with \ unknown \ risk \ have \ been \ re-distributed \ based \ on \ age/gender/race/ethnicity \ distribution \ of \ known \ cases.$ 

<sup>¶</sup>Men who have sex wtih men and inject drugs.

Table 3. HIV Diagnoses\* by Year of Diagnosis and Selected Characteristics, Chicago, 2000-2006 (as of 6/30/2008)

	20	00	20	100	20	002	20	003	20	04	20	05	200	06**
Characteristic	No.	%												
Sex														
Male	1,484	74.4	1,610	75.0	1,589	76.2	1,426	75.9	1,321	77.0	1,292	80.1	1,241	79.7
Female	510	25.6	537	25.0	497	23.8	452	24.1	395	23.0	320	19.9	316	20.3
Race/Ethnicity <sup>§</sup>														
NH Black	1,219	61.1	1,238	57.7	1,167	55.9	1,079	57.5	945	55.1	890	55.2	865	55.6
NH White	425	21.3	493	23.0	509	24.4	425	22.6	426	24.8	423	26.2	396	25.4
Hispanic	303	15.2	359	16.7	342	16.4	316	16.8	276	16.1	242	15.0	242	15.5
NH Other/Unknown	47	2.4	57	2.7	68	3.3	58	3.1	69	4.0	57	3.5	54	3.5
Transmission Group#														
Male Sex w/Male	870	43.6	1,048	48.8	1,123	53.8	1,058	56.3	975	56.8	952	59.1	968	62.2
Injection Drug Use	548	27.5	519	24.2	455	21.8	327	17.4	326	19.0	245	15.2	198	12.7
MSM and IDU <sup>¶</sup>	119	6.0	117	5.4	98	4.7	87	4.6	70	4.1	65	4.0	38	2.4
Heterosexual	415	20.8	425	19.8	383	18.4	379	20.2	320	18.6	332	20.6	337	21.6
Other <sup>##</sup>	45	2.3	37	1.7	26	1.2	27	1.4	24	1.4	17	1.1	18	1.2
Age Group														
<19	52	2.6	48	2.2	51	2.4	51	2.7	66	3.8	64	4.0	74	4.8
20-29	358	18.0	394	18.4	408	19.6	366	19.5	339	19.8	356	22.1	40 I	25.8
30-39	753	37.8	83 I	38.7	749	35.9	694	37.0	594	34.6	504	31.3	428	27.5
40-49	601	30.1	606	28.2	607	29.1	537	28.6	471	27.4	458	28.4	432	27.7
50+	230	11.5	268	12.5	271	13.0	230	12.2	246	14.3	230	14.3	222	14.3
Total	1,994	100.0	2,147	100.0	2,086	100.0	1,878	100.0	1,716	100.0	1,612	100.0	1,557	100.0

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

Percentages may not add up tp 100% due to rounding.

§NH= Non-Hispanic

#Cases with unknown risk have been re-distributed based on age/gender/race/ethnicity distribution of known cases.

##Includes perinatal transmission, blood transfusion and hemophilia.

- The number of women diagnosed with HIV has declined by 30.0% between 2000 and 2006. This decline is sharper than that among men who experienced a 16.4% decline during this time period.
- In 2006, NH Blacks comprised the majority of HIV diagnoses (55.6%), followed by NH Whites (25.4%), and Hispanics (15.5%).
- The new redistribution method used to assign unidentified modes of transmission into known transmission groups provides a more accurate picture of how HIV transmission has changed over time. In 2006, male-to-male sexual contact was the leading mode of transmis-
- sion (62.2%). Heterosexual contact is the second leading mode of transmission (21.6%), followed closely by IDU (12.7%). IDU has declined by more than 60% since 2000, from 548 in 2000 to 198 in 2006.
- 5 out of every 10 (55.2%) new HIV diagnoses are made in individuals aged 30-49; this distribution is similar to that for new AIDS diagnoses. While individuals under the age of 19 account for a small percentage (4.8%) of HIV diagnoses, they have experienced a considerable increase of nearly 30.0% since 2000.

<sup>\*</sup>HIV diagnoses are the number of people newly diagnosed with HIV in a given year, at any stage of disease.

<sup>\*\*</sup>Data for 2006 are not complete due to delays in reporting.

<sup>¶</sup>Men who have sex wtih men and inject drugs.

Table 4. HIV Diagnoses\* in 2006: Race/Ethnicity and Age by Sex and Mode of Transmission, Chicago, (as of 6/30/2008)

				Race/Et	thnicity	t,						A	ge at D	iagnosis					Tot	al
Gender and	NH E	Black	NH V	<b>V</b> hite	Hisp	anic	NH Otl	h/Unk	<i< th=""><th>9</th><th>20-</th><th>29</th><th>30-</th><th>39</th><th>40-</th><th>49</th><th>5(</th><th>)+</th><th></th><th></th></i<>	9	20-	29	30-	39	40-	49	5(	)+		
Transmission Grp.#	N	%	N	%	N	%	N	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Males																				
Male Sex w/ Male	403	65.5	341	90.9	163	81.9	44	91.7	49	89.1	307	91.6	278	83.0	257	73.4	60	37.0	951	76.9
Injection Drug Use	117	19.0	10	2.7	15	7.5	0	-	<5	-	<5	-	23	6.9	50	14.3	65	40.1	142	11.5
MSM and IDU <sup>9</sup>	19	3.1	11	2.9	<5	-	<5	-	0	-	<5	-	16	4.8	10	2.9	5	3.1	35	2.8
Heterosexual	70	11.4	13	3.5	15	7.5	<5	-	<5	-	20	6.0	18	5.4	32	9.1	30	18.5	101	8.2
Other <sup>11</sup>	6	1.0	0	-	<5	-	0	-	<5	-	<5	-	0	-	<5	-	<5	-	8	0.6
Total Males	615	100.0	375	100.0	199	100.0	48	100.0	55	100.0	335	100.0	335	100.0	350	100.0	162	100.0	1,237	100.0
Females																				
Heterosexual	197	79.1	13	76.5	24	57.1	5	83.3	15	83.3	59	89.4	81	88.0	46	57.5	38	65.5	239	76.1
Injection Drug Use	47	18.9	<5	-	14	33.3	<5	-	0	-	7	10.6	9	9.8	31	38.8	19	32.8	66	21.0
Other <sup>11</sup>	5	2.0	0	-	<5	-	0	-	<5	-	0	-	<5	-	<5	-	<5	-	9	2.9
Total Females	249	100.0	17	100.0	42	100.0	6	100.0	18	100.0	66	100.0	92	100.0	80	100.0	58	100.0	314	100.0
All																				
Male Sex w/ Male	403	46.6	341	86.1	163	67.4	44	83.0	49	66.2	307	77.5	278	65.0	257	59.5	60	27.0	951	61.1
Injection Drug Use	164	19.0	14	3.5	29	12.0	<5	-	<5	-	10	2.5	32	7.5	81	18.8	84	37.8	208	13.4
MSM and IDU§	19	2.2	- 11	2.8	<5	-	<5	-	0	-	<5	-	16	3.7	10	2.3	5	2.3	35	2.2
Heterosexual	267	30.9	26	6.6	39	16.1	8	15.1	16	21.6	79	19.9	99	23.1	78	18.1	68	30.6	340	21.8
Other <sup>11</sup>	11	1.3	0	-	6	2.5	0	-	7	9.5	<5	-	<5	-	<5	-	<5	-	17	1.1
Total Chicago Cases**	865	100.0	396	100.0	242	100.0	52	100.0	74	100.0	396	100.0	428	100.0	432	100.0	222	100.0	1,557	100.0

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

Data for 2006 are not complete due to delays in reporting.

#Cases with unknown risk have been re-distributed based on gender/race/ethnicity distribution of known cases &Men who have sex with men and inject drugs.

- Table 4 shows the number of newly diagnosed HIV cases in 2006 for race/ethnicity and age by gender and mode of transmission. Unidentified modes of transmission have been redistributed into known transmission categories, providing a more accurate profile of 2006 HIV diagnoses across multiple demographic groups.
- Male-to-male sexual contact is the leading mode of transmission for males diagnosed with HIV in 2006 across all race/ethnicity groups. Among NH White and Hispanic males, however, male-to-male sexual contact is the predominant mode of transmission (90.9% and 81.9% respectively). For NH Black males diagnosed with HIV, male-to-male sexual contact accounted for two thirds of diagnoses and injection drug use (IDU) accounted for 19.0% of diagnoses.
- Heterosexual contact accounts for more than half of HIV diagnoses among females diagnosed with HIV in 2006 for all race/ethnicity groups. This proportion is considerably higher among NH Black and NH White women (79.1% and 76.5% respectively). While heterosexual contact is the leading mode of transmission for Hispanic women (57.1%), injection drug use is responsible for 33.3% of HIV transmissions.
- Among adolescents and young adults up to 29 years of age, male-to-male sexual contact is the predominant mode of transmission for males and heterosexual contact for females. Injection drug use accounts for at least a third of HIV diagnoses for both men and women aged 50 and over.

<sup>\*</sup>HIV diagnoses are the number of people newly diagnosed with HIV in a given year, at any stage of disease.

<sup>\*\*</sup>The sum of "ALL" cases and percentages may not add up to those in "Total Chicago Cases" due to rounding resulting from risk re-distribution

<sup>†</sup>NH = Non-Hispanio

Table 5. People Living with HIV /AIDS\*: Mode of Transmission by Sex and Race/Ethnicity, Chicago, through 2006 (as of 6/30/2008)

				Race/Etl	nnicity <sup>†</sup>				Tot	al
	NH B	lack	NH W	/hite	Hispa	anic	NH Oth	er/Unk		
Gender/Transmission Grp.#	N	%	N	%	N	%	N	%	N	%
Males										
Male Sex w/ Male	4,440	54.8	4,852	89.6	1,960	70.8	336	71.6	11,697	69.8
Injection Drug Use	2,139	26.4	206	3.8	386	13.9	51	10.9	2,717	16.2
MSM and IDU <sup>9</sup>	784	9.7	256	4.7	195	7.0	39	8.3	1,256	7.5
Heterosexual	600	7.4	76	1.4	182	6.6	35	7.5	870	5.2
Other <sup>11</sup>	134	1.7	25	0.5	44	1.6	8	1.7	212	1.3
Total Males	8,097	100.0	5,416	100.0	2,769	100.0	469	100.0	16,751	100.0
Females										
Heterosexual	1,994	57.0	197	46.8	413	68.7	61	64.2	2,659	57.6
Injection Drug Use	1,301	37.2	209	49.6	150	25.0	28	29.5	1,690	36.6
Other <sup>11</sup>	203	5.8	15	3.6	39	6.5	7	7.4	267	5.8
Total Females	3,499	100.0	421	100.0	60 I	100.0	95	100.0	4,616	100.0
All										
Male Sex w/ Male	4,440	38.3	4,852	83.1	1,960	58.2	336	59.6	11,697	54.7
Injection Drug Use	3,440	29.7	415	7.1	536	15.9	79	14.0	4,407	20.6
MSM and IDU§	784	6.8	256	4.4	195	5.8	39	6.9	1,256	5.9
Heterosexual	2,594	22.4	273	4.7	595	17.7	96	17.0	3,529	16.5
Other <sup>11</sup>	337	2.9	40	0.7	83	2.5	15	2.7	479	2.2
Total Chicago Cases	11,596	100.0	5,837	100.0	3,370	100.0	564	100.0	21,367	100.0

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5. Percentages may not add up tp 100% due to rounding.

- Of the 21,367 people living with HIV or AIDS, 78.4% are men, 54.3% are NH Black, and 54.7% are MSM.
- Among NH Black men living with HIV/AIDS, 54.8% were infected as a result of male-to-male sexual contact, and 26.4% as a result of injection drug use. As observed with HIV diagnoses, the majority of NH White men were infected primarily through male-to-male sexual contact (89.6%).
- Overall, male-to-male sexual contact was the leading mode of transmission among males living with HIV/AIDS (69.8%), while heterosexual transmission was the leading mode of transmission among women (57.6%). In both males and females living with HIV and AIDS, IDU was the second leading mode of transmission (16.2% in males, 36.6% in females). In NH White females living with HIV/AIDS, however, IDU was the leading mode of transmission (49.6%, followed by heterosexual transmission, 46.8%).

<sup>\*</sup> Includes people with AIDS and people with HIV infection in whom AIDS has not developed.

<sup>†</sup>NH = Non-Hisbanic

<sup>#</sup>Cases with unknown risk have been re-distributed based on age/gender/race/ethnicity distribution of known cases.

<sup>§</sup>Men who have sex wtih men and inject drugs.

<sup>¶</sup>Includes perinatal transmission, blood transfusion and hemophilia.

# Table 6. People Living with AIDS by Community Area, Chicago, 2006 (as of 6/30/2008)

Community	Prevalent	Prevalence	Community Area	Prevalent	Prevalence
Area	Cases <sup>†</sup>	Rate <sup>§</sup>		Cases <sup>†</sup>	Rate§
I Rogers Park	451	710.4	40 Washington Park	116	820.0
2 West Ridge	118	161.2	41 Hyde Park	97	324.2
3 Uptown	839	1.320.2	42 Woodlawn	161	594.4
4 Lincoln Square	142	318.6	43 South Shore	307	498.7
5 North Center	79	247.7	44 Chatham	125	335.4
6 Lake View	747	787.8	45 Avalon Park	37	331.9
7 Lincoln Park	149	231.7	46 South Chicago	137	355.0
8 Near North Side	247	339.2	47 Burnside	9	273.2
9 Edison Park	<5	-	48 Calumet Heights	42	262.9
10 Norwood Park	20	53.1	49 Roseland	152	288.3
II Jefferson Park	19	73.5	50 Pullman	28	313.9
12 Forest Glen	11	60.6	51 South Deering	31	182.5
13 North Park	22	118.8	52 East Side	12	50.7
14 Albany Park	108	187.3	53 West Pullman	121	330.2
15 Portage Park	53	81.1	54 Riverdale	15	152.9
16 Irving Park	115	196.1	55 Hegewisch	5	51.1
17 Dunning	30	71.2	56 Garfield Ridge	31	85.9
18 Montclare	9	71.2	57 Archer Heights	5	39.5
19 Belmont Cragin	90	115.2	58 Brighton Park	51	113.6
20 Hermosa	57	211.8	59 McKinley Park	13	81.4
21 Avondale	106	246.0	60 Bridgeport	40	118.7
22 Logan Square	279	337.3	61 New City	133	257.2
23 Humboldt Park	282	428.3	62 West Elsdon	15	94.2
24 West Town	339	387.7	63 Gage Park	50	127.6
25 Austin	496	422.0	64 Clearing	13	58.2
26 West Garfield Park	135	586.5	65 West Lawn	18	61.6
27 East Garfield Park	182	871.6	66 Chicago Lawn	135	219.8
28 Near West Side	265	570.9	67 West Englewood	221	488.1
29 North Lawndale	187	447.7	68 Englewood	190	472.4
30 South Lawndale	260	285.5	69 Gr. Grand Crossing	157	406.5
31 Lower West Side	91	206.7	70 Ashburn	41	103.6
32 Loop	73	445.5	71 Auburn Gresham	192	343.3
33 Near South Side	61	641.5	72 Beverley	17	77.3
34 Armour Square	16	133.0	73 Washington Heights	79	264.7
35 Douglas	110	415.6	74 Mount Greenwood	<5	-
36 Oakland	33	540.1	75 Morgan Park	46	182.4
37 Fuller Park	18	526.3	76 O'Hare	12	100.4
38 Grand Boulevard	177	632.0	77 Edgewater	629	1,011.3
39 Kenwood	67	364.86	Chicago Total <sup>¶</sup>	10,626	355.9
			U.S. Total**	436,621	145.8

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

†People living with AIDS through 2006.

§Rate per 100,000 population using 2005 population projections.

¶Includes all persons with unknown/undetermined community area.

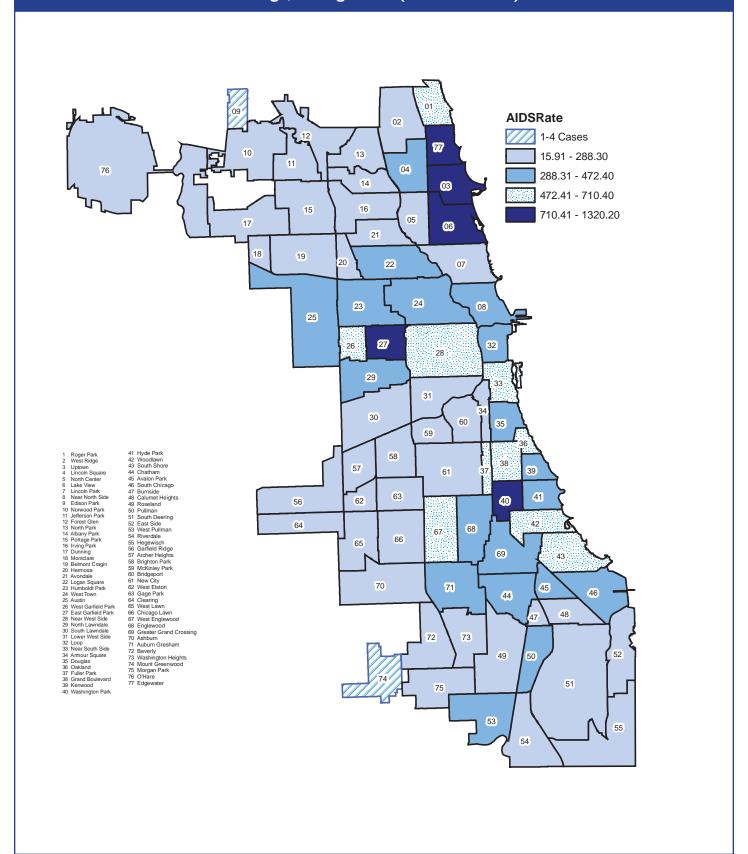
\*\*Rate per 100,000 population using 2006 US Census Bureau, Population Estimates Program.

#### Table 6 and Figure 3 (next page)

- Table 6 shows the number of people living with AIDS and the corresponding rate by community area.
- There has been at least one AIDS case in all of Chicago's 77 community areas. Four of the 10 highest prevalence rates in the city are found on the north side in the Uptown, Edgewater, Lakeview and Rogers Park community

area. Three of the 10 highest AIDS prevalence rates are found on the west side in the East Garfield Park, West Garfield Park and Near West Side community areas. The remaining three highest prevalence rates are located in the on the south side in the Washington Park, Woodlawn, Oakland, and Grand Boulevard community areas.

# Figure 3. AIDS Prevalence Rates by Community Area, Chicago, through 2006 (as of 6/30/2008)



### **STD Surveillance**

#### Sexually Transmitted Diseases among Adolescents in Chicago

Compared to adults, adolescents and young adults are disproportionately affected by sexually transmitted diseases (STDs). Common bacterial STDs like chlamydia and gonorrhea often do not present with symptoms in women and men. Since most infections are asymptomatic, the vast majority of persons with infection do not seek STD screening or testing services. Because women are more likely to not show symptoms for the most common STDs compared with men, they are less likely to be diagnosed and treated.

Infection with STDs can result in serious long-term health consequences, including pelvic inflammatory disease, tubal (ectopic) pregnancy, chronic pelvic pain, cancer, and infertility. Furthermore, inflammatory STDs like gonorrhea and chlamydia facilitate the transmission of HIV by increasing an individual's chances of acquiring human immunodeficiency virus (HIV) infection if exposed, and raising the possibility of passing HIV onto partners who are uninfected. Co-infection with STDs increases the likelihood of HIV transmission by three to five times, as STD-associated mucosal inflammation serves as a portal of entry and exit for HIV. The HIV epidemic in a community can be mitigated through the successful identification and treatment of the common STDs.

Adolescents face many obstacles in obtaining proper diagnosis and treatment even when they present with symptoms. Adolescents may be reluctant to seek care, and may experience barriers that make access to health care and screening services difficult to obtain. The high rates of STDs among adolescents in Chicago highlight the need for expanded STD screening and early treatment to prevent some of the most devastating effects of untreated infections.

#### New Study Shows One in Four Female Adolescents Infected with STDs in the United States

A new Centers for Disease Control and Prevention (CDC) study presented in March 2008 indicates that one in four (26%) female adolescents (aged 14-19) in the United States has at least one of the most common sexually transmitted

infections (STIs) including human papillomavirus (HPV), chlamydia, herpes simplex virus, and trichomoniasis. Based on the overall STI prevalence of 26 percent, the authors estimate that about 3.2 million adolescent females in the United States are infected with one of these STIs. Key findings of the study included the following:

- The most common STI was cancer- and genital wart associated HPV (18.3%), followed by chlamydia (3.9%), trichomoniasis (2.5%), and HSV-2 (1.9%). Among the teenage girls who had an STI, 15% had more than one infection.
- By race, African American teenage girls had the highest prevalence, with an overall STI prevalence of 48% compared to 20% among both Whites and Mexican Americans.
- Overall, approximately half of all the teens in the study reported ever having had sex. Among these girls, the STI prevalence was 40%.
- Even among girls reporting only one lifetime partner, one in five (20.4%) had at least one STI. Girls with three or more partners had a prevalence of over 50%.
   The predominant STI was HPV.

Data on 838 female adolescents (aged 14-19) who participated in the 2003-2004 National Health and Nutrition Examination Survey (NHANES), a continuous annual study that examines a nationally representative sample of the U.S. household population to assess a broad range of health issues, were analyzed.

# Adolescents and Young Adults Are Disproportionately Affected by Gonorrhea and Chlamydia in Chicago

The adolescent population of Chicago comprises 16.3% of the general population, yet accounts for more than 60% of new infections of gonorrhea and chlamydia. In 2007, 5,664 gonorrhea and 14,781 chlamydia cases were reported among adolescents aged 13-24 years in Chicago, accounting for 60.3% of all gonorrhea and 66.6% of all chlamydia cases reported in Chicago. The highest rates occur among the 20-24 year age group for both gonorrhea (1,220.9 per 100,000 population) and chlamydia (3,230.5 per 100,000 population), far exceeding national disease rates by nine to

For comparison, the national rate for gonorrhea was 120.9 cases per 100,000 population and 347.8 cases per 100,000 population for chlamydia in the general population of the United States in 2006. In Chicago, 23,096 chlamydia cases and 9,549 gonorrhea cases were reported in 2006, accounting for the most commonly reported communicable diseases in the city. The rate of chlamydia in Chicago (797.5 per 100,000 population) was more than double the U.S. national rate (347.8 per 100,000 population). The rate of gonorrhea in Chicago (329.7 per 100,000 population) was almost three times the U.S. national rate (120.9 per 100,000 population). Since the majority of chlamydia and gonorrhea infections are asymptomatic, a large proportion of disease morbidity goes unrecognized and therefore unreported. Estimates of the true community prevalence of gonorrhea and chlamydia can be expected to be 2-4 times the number of cases identified through passive surveillance reporting.

# Teens At-Risk for STDs: Sexual Behaviors, Biology, Risk Taking, and Education

Data from the Youth Risk Behavior Survey (YRBS) indicate that Chicago teenagers engage in early sexual activity and are at-risk for sexually transmitted diseases like gonorrhea and chlamydia, and unintended pregnancy. Since 1991, the CDC-sponsored Youth Risk Behavior Survey is conducted every two years in the Chicago Public Schools and is designed to monitor changes in the prevalence of behaviors that contribute to the leading causes of death, disease, and injury among youth. The survey is representative of teenagers enrolled in Chicago Public High schools, and data were collected from 968 students in 23 public high schools in Chicago during the fall of 2003.

Overall, more than half (55.1%) of CPS high school students had engaged in sexual intercourse during their lifetime. The prevalence of sexual intercourse increased with grade level: 39.3% of 9th graders, 48.6% of 10th graders, 72.2% of 11th graders, and 74.9% of 12th graders reported having ever had sexual intercourse. Overall, the prevalence of condom use was 63.0%, and of multiple sex partners was 14.2%.

#### Other Key Findings:

 Overall, the prevalence of having had sexual intercourse during their lifetime was significantly higher among non-Hispanic Black (70.0%) than

- Hispanic (45.2%) CPS high school students; and significantly high among 12th graders (74.9%) and 11th graders (72.2%) than among 9th graders (39.3%) and 10th graders (48.6%)
- In 2003, the percentage of CPS high school students who had intercourse for the first time before age 13 was significantly higher than that of high school students nationwide (13.2% vs. 7.4%)
- Among CPS high school students, 19.6% had engaged in sexual intercourse with four or more sexual partners during their lifetime.
- During the three months preceding the survey, 42.3% of CPS high school students had engaged in sexual intercourse with one or more people (currently sexually active).
- Among the 42.3% of currently sexually active CPS high school students, 20.7% had consumed alcohol or used drugs before the last sexual intercourse.
- Of those who were currently sexually active, 66.6% had used a condom during the last sexual intercourse.
- Among the 42.3% of currently sexually active CPS high school students, 8.6% reported either they or their partners had used birth control pills to prevent pregnancy before last intercourse.
- In 2003,8.9% of CPS high schools students reported that they had been pregnant or gotten someone pregnant.

Psychological factors such as the general sense of invulnerability, the desire to try new experiences, and the willingness to take risks, including the frequent changing of sexual partners or having a partner who has multiple partners, may place adolescents at increased risk for STDs. The lack of basic knowledge of STDs contributes to risk-taking behaviors among adolescents. Furthermore, many adolescents may find it difficult to use condoms consistently and correctly, due to poor communication and sexual negotiation skills. Biological factors such as cervical ectopy in the developing female cervix very likely make adolescents more susceptible to STDs than older women. Cervical ectopy occurs normally in the developing adolescent cervix when the cells that line the inner canal of the cervix occur on the outer surface, making infection with chlamydia and gonorrhea more likely. Prevention interventions that address the complex dynamics of adolescent risk behaviors, biological and psychological factors, and educational needs are warranted to prevent further STD transmission in this population.

Table 7. Trends in Gonorrhea Cases by Selected Characteristics, Chicago, 2001-2006 (as of 6/30/2007)

					Year of	Report						
	200	I	200	2	200	3	200	4	200	5	200	6
Characteristic	N	%	Ν	%	Ν	%	Ν	%	Ν	%	N	9
Sex												
Male	7,400	51.7	7,208	52.2	6,039	49.8	5,007	45.8	4,709	47.6	4,859	49.3
Female	6,824	47.6	6,604	47.8	6,082	50.2	5,928	54.2	5,179	52.4	4,994	50.7
Race/Ethnicity												
NH Black	10,309	72.0	9,470	68.6	8,651	71.4	7,904	72.3	7,315	74.0	7,582	77.0
NH White	343	2.4	390	2.8	391	3.2	393	3.6	372	3.8	354	3.6
NH Other	282	2.0	373	2.7	67	0.6	48	0.4	42	0.4	57	0.6
Hispanic	43	0.3	56	0.4	280	2.3	356	3.3	298	3.0	302	3.1
Unknown	3,349	23.4	3,525	25.5	2,732	22.5	2,234	20.4	1,862	18.8	1,558	15.8
Age Group												
Less than 13	51	0.4	31	0.2	35	0.3	30	0.3	14	0.1	14	0.1
13-19	3,689	25.8	3,506	25.4	3,222	26.6	2,826	25.8	2,763	27.9	2,608	26.5
20-29	7,179	50.1	6,871	49.7	5,930	48.9	5,448	49.8	4,898	49.5	4,920	49.9
20-24	4,842	33.8	4,618	33.4	3,888	32.1	3,501	32.0	3,240	32.8	3,074	31.2
25-29	2,337	16.3	2,253	16.3	2,042	16.8	1,947	17.8	1,658	16.8	1,846	18.7
30-39	2,209	15.4	2,174	15.7	1,848	15.2	1,687	15.4	1,446	14.6	1,456	14.8
40-49	921	6.4	940	6.8	839	6.9	707	6.5	565	5.7	610	6.2
50+	272	1.9	292	2.1	247	2.0	237	2.2	193	2.0	244	2.5
Total*	14,326	100.0	13,814	100.0	12,121	100.0	10,935	100.0	9,889	100.0	9,853	100.0

\*Includes cases with unknown sex or age.

Note: Groups may not total 100% due to rounding.

- Since 2001, there has been a 31% decline in the number of reported gonorrhea cases. The same pattern is observed nationally, though the declines in Chicago have been more extreme.
- Males and females are equally affected by gonorrhea.
   Nearly 77% of 2006 gonorrhea cases were NH Black.
   NH Whites and Hispanics comprised just 6% of cases in 2006. Approximately 16% of cases were reported with unknown race/ethnicity making interpretation difficult.
- In 2006, the total number of reported cases for those aged 20-24 was almost twice the number of reported cases for those 25-29 years of age. More than 58% of cases occurred among people younger than 25 years of age.

Table 8. Reported Gonorrhea Cases by Community Area Community Area, Chicago, 2006 (as of 6/30/2007)

Community	Gonorrhea	8	C	Gonorrhea	8
Area	Cases <sup>†</sup>	Rate <sup>§</sup>	Community Area	Cases <sup>†</sup>	Rate§
I Rogers Park	124	195.3	40 Washington Park	167	1,180.5
2 West Ridge	51	69.7	41 Hyde Park	55	183.8
3 Uptown	136	214.0	42 Woodlawn	226	834.4
4 Lincoln Square	23	51.6	43 South Shore	487	791.1
5 North Center	15	47.0	44 Chatham	238	638.5
6 Lake View	143	150.8	45 Avalon Park	75	672.8
7 Lincoln Park	27	42.0	46 South Chicago	245	634.8
8 Near North Side	111	152.4	47 Burnside	26	789.3
9 Edison Park	<5	-	48 Calumet Heights	86	538.4
10 Norwood Park	6	15.9	49 Roseland	392	743.5
I I Jefferson Park	8	30.9	50 Pullman	54	605.3
12 Forest Glen	0	0.0	51 South Deering	79	465.0
13 North Park	<5	_	52 East Side	14	59.2
14 Albany Park	23	39.9	53 West Pullman	302	824.0
15 Portage Park	16	24.5	54 Riverdale	59	601.5
16 Irving Park	26	44.3	55 Hegewisch	5	51.1
17 Dunning	<5	-	56 Garfield Ridge	28	77.6
18 Montclare	7	55.4	57 Archer Heights	9	71.2
19 Belmont Cragin	43	55.0	58 Brighton Park	23	51.2
20 Hermosa	18	66.9	59 McKinley Park	6	37.6
21 Avondale	39	90.5	60 Bridgeport	8	23.7
22 Logan Square	77	93.1	61 New City	220	425.4
23 Humboldt Park	296	449.6	62 West Elsdon	6	37.7
24 West Town	100	114.4	63 Gage Park	31	79. I
25 Austin	907	771.7	64 Clearing	<5	_
26 West Garfield Park	231	1,003.5	65 West Lawn	12	41.0
27 East Garfield Park	245	1,173.3	66 Chicago Lawn	348	566.7
28 Near West Side	171	368.4	67 West Englewood	465	1,026.9
29 North Lawndale	361	864.3	68 Englewood	459	1,141.2
30 South Lawndale	74	81.3	69 Gr. Grand Crossing	380	984.0
31 Lower West Side	24	54.5	70 Ashburn	113	285.5
32 Loop	31	189.2	71 Auburn Gresham	405	724. I
33 Near South Side	48	504.8	72 Beverley	38	172.8
34 Armour Square	11	91.4	73 Washington Heights	190	636.7
35 Douglas	101	381.6	74 Mount Greenwood	6	31.9
36 Oakland	44	720. I	75 Morgan Park	114	451.9
37 Fuller Park	34	994.2	76 O'Hare	<5	-
38 Grand Boulevard	151	539.2	77 Edgewater	114	183.3
39 Kenwood	75	408.4	Chicago Total <sup>¶</sup>	9,853	330.0

Note: Use caution when interpreting data cased on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

#### Table 8 and Figure 4 (next page)

- Table 8 shows the number of gonorrhea cases and rate per 100,000 population by community area, as well as the cumulative number for Chicago and the United States.
- Figure 4 shows gonorrhea rates by community area. The highest rates are on the west side in the East and West Garfield Park, and on the south side in Englewood. and West Englewood.

<sup>¶</sup>Includes all persons with unknown/undetermined community area.

<sup>\*\*</sup>Rate per 100,000 population using 2006 US Census Bureau, Population Estimates Program.



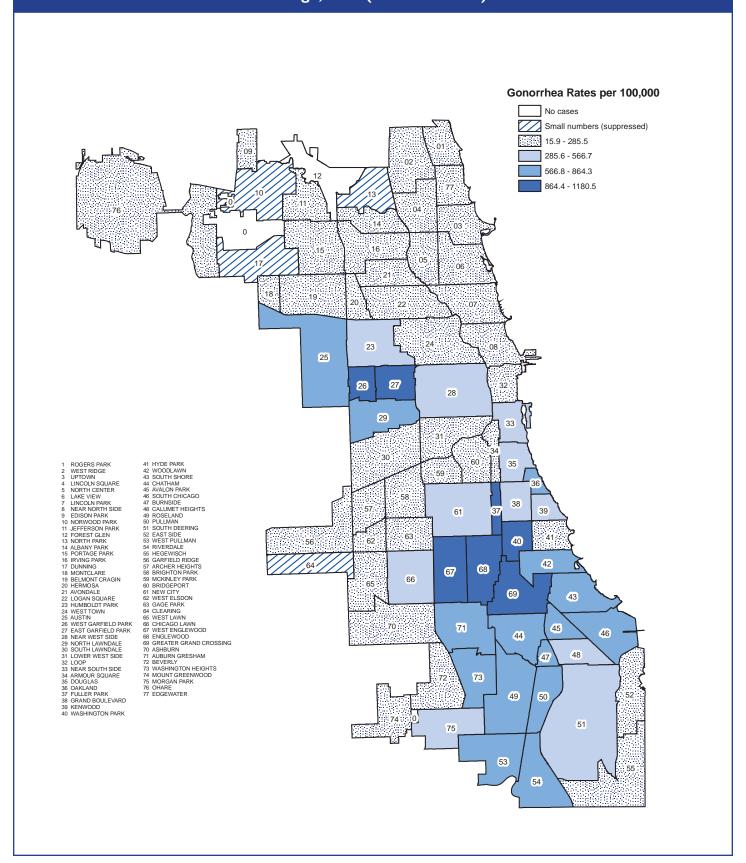


Table 9. Trends in Chlamydia Cases by Selected Characteristics, Chicago, 2001-2006 (as of 6/30/2007)

					Year of	Report						
	200	I	200	2	200	3	200	4	200	5	200	6
Characteristic	N	%	N	%	N	%	N	%	N	%	Ν	%
Sex												
Male	5,660	25.2	8,084	32.8	6,201	26.4	5,314	24.6	6,339	27.7	6,479	27.5
Female	16,756	74.7	16,590	67.2	17,264	73.6	16,288	75.4	16,514	72.3	17,057	72.5
Race/Ethnicity												
NH Black	14,038	62.6	14,028	56.9	14,409	61.4	14,004	64.8	14,704	64.3	15,859	67.4
NH White	619	2.8	729	3.0	731	3.1	832	3.9	926	4.1	881	3.7
NH Other	1,803	8.0	1,730	7.0	132	0.6	171	0.8	174	0.8	217	0.9
Hispanic	115	0.5	121	0.5	1,877	8.0	1,914	8.9	2,135	9.3	2,203	9.4
Unknown	5,845	26.1	8,066	32.7	6,317	26.9	4,682	21.7	4,915	21.5	4,376	18.6
Age Group												
Less than 13	88	0.4	64	0.3	70	0.3	68	0.3	39	0.2	64	0.3
13-19	7,222	32.2	7,355	29.8	7,179	30.6	6,524	30.2	7,220	31.6	7,454	31.7
20-29	11,846	52.8	13,245	53.7	12,527	53.4	11,607	53.7	12,279	53.7	12,462	52.9
20-24	8,249	36.8	9,038	36.6	8,560	36.5	7,771	36.0	8,182	35.8	8,222	34.9
25-29	3,597	16.0	4,207	17.1	3,967	16.9	3,836	17.8	4,097	17.9	4,240	18.0
30-39	2,461	11.0	2,966	12.0	2,754	11.7	2,590	12.0	2,524	11.0	2,715	11.5
40-49	614	2.7	834	3.4	763	3.3	646	3.0	626	2.7	656	2.8
50+	184	0.8	207	0.8	172	0.7	168	0.8	161	0.7	184	0.8
Total*	22,420	100.0	24,674	100.0	23,466	100.0	21,603	100.0	22,854	100.0	23,536	100.0

Note: Groups may not total 100% due to rounding.

- Three-quarters of Chlamydia reports are among females, both in Chicago and in the US overall. This sex disparity is likely a surveillance artifact resulting from the fact that screening guidelines target females almost exclusively, and reflecting differential patterns of health care utilization by women and men.
- Overall, 85% of chlamydia cases occurred in individuals under the age of 30. Approximately 67% of cases were among persons less than 25 years of age.
- As was the case with gonorrhea, most chlamydia cases were in NH Blacks (67%). NH Whites and Hispanics comprised just 13% of cases. Again, note that race/ethnicity is missing for approximately 19% of cases making data interpretation difficult.

<sup>\*</sup>Includes cases with unknown sex or age.

Table 10. Reported Chlamydia Cases by Community Area, Chicago, 2006 (as of 6/30/2007)

Community Area	Chlamydia Cases <sup>†</sup>	Rate <sup>§</sup>	Community Area	Chlamydia Cases <sup>†</sup>	Rate <sup>§</sup>
I Rogers Park	289	455.2	40 Washington Park	355	2,509.5
2 West Ridge	181	247.3	41 Hyde Park	109	364.3
3 Uptown	229	360.3	42 Woodlawn	497	1,834.9
4 Lincoln Square	56	125.6	43 South Shore	861	1,398.7
5 North Center	51	159.9	44 Chatham	504	1,352.1
6 Lake View	245	258.4	45 Avalon Park	134	1,202.1
7 Lincoln Park	129	200.6	46 South Chicago	475	1,230.7
8 Near North Side	250	343.4	47 Burnside	51	1,548.3
9 Edison Park	<5	_	48 Calumet Heights	180	1,126.8
10 Norwood Park	25	66.4	49 Roseland	758	1,437.7
II Jefferson Park	29	112.1	50 Pullman	91	1,020.1
12 Forest Glen	15	82.6	51 South Deering	152	894.6
13 North Park	20	108.0	52 East Side	57	241.0
14 Albany Park	117	202.9	53 West Pullman	600	1,637.2
15 Portage Park	129	197.4	54 Riverdale	133	1,355.9
16 Irving Park	136	231.9	55 Hegewisch	10	102.2
17 Dunning	43	102.0	56 Garfield Ridge	118	326.9
18 Montclare	28	221.4	57 Archer Heights	39	308.4
19 Belmont Cragin	344	440.2	58 Brighton Park	187	416.4
20 Hermosa	106	393.9	59 McKinley Park	58	363.4
21 Avondale	153	355.1	60 Bridgeport	72	213.7
22 Logan Square	357	431.6	61 New City	495	957. I
23 Humboldt Park	807	1,225.8	62 West Elsdon	51	320.3
24 West Town	393	449.5	63 Gage Park	200	510.3
25 Austin	2,137	1,818.3	64 Clearing	44	197.0
26 West Garfield	496	2,154.7	65 West Lawn	104	355.7
27 East Garfield Park	537	2,571.7	66 Chicago Lawn	751	1,222.9
28 Near West Side	482	1,038.4	67 West Englewood	870	1,921.3
29 North Lawndale	965	2,310.4	68 Englewood	881	2,190.3
30 South Lawndale	475	521.6	69 Gr. Grand Crossing	687	1,778.9
31 Lower West Side	171	388.4	70 Ashburn	308	778. I
32 Loop	53	323.4	71 Auburn Gresham	864	1,544.8
33 Near South Side	106	1,114.7	72 Beverley	77	350.I
34 Armour Square	28	232.7	73 Washington Heights	366	1,226.4
35 Douglas	234	884.0	74 Mount Greenwood	25	132.8
36 Oakland	75	1,227.5	75 Morgan Park	230	911.8
37 Fuller Park	59	1,725.1	76 O'Hare	17	139.7
38 Grand Boulevard	381	1,360.4	77 Edgewater	173	278. I
39 Kenwood	154	838.6	Chicago Total <sup>¶</sup>	23,535	788.2

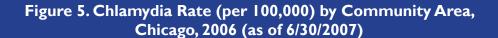
Note: Use caution when interpreting data cased on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

#### Table 10 and Figure 5 (next page)

- Table 10 shows chlamydia cases and the rate per 100,000 population by community area, as well as the cumulative number for Chicago and the United States.
- The highest rates of chlamydia are on the west side, in North Lawndale and on the south side in Englewood.
   The geographic distribution of chlamydia cases is nearly identical to that of gonorrhea.

<sup>¶</sup>Includes all persons with unknown/undetermined community area.

<sup>\*\*</sup>Rate per 100,000 population using 2006 US Census Bureau, Population Estimates Program.



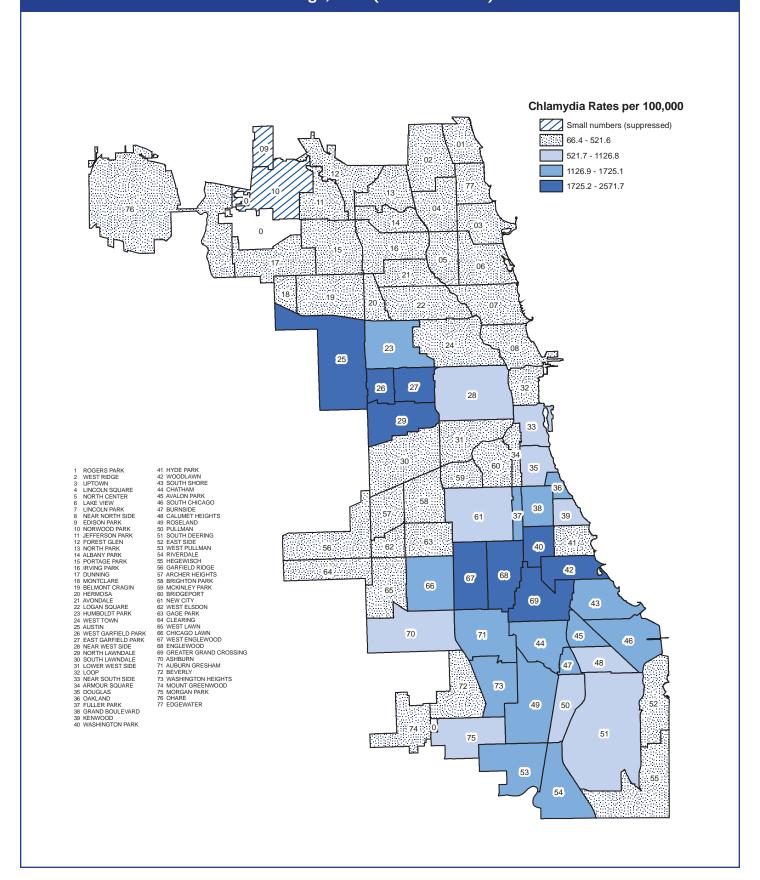


Table 11. Trends in Primary and Secondary Syphilis Cases by Selected Characteristics, Chicago, 2001-2006 (as of 6/30/2007)

					Year of	Report						
	200	1	200	2	200	3	200	4	200	5	200	6
Characteristic	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	N	%
Sex												
Male	256	80.8	310	87.8	237	88.8	250	84.2	380	90.9	266	90.2
Female	61	19.2	43	12.2	30	11.2	47	15.8	38	9.1	29	9.8
Race/Ethnicity												
NH Black	152	47.9	142	40.2	126	47.2	158	53.2	165	39.5	146	49.5
NH White	98	30.9	120	34.0	97	36.3	93	31.3	177	42.3	99	33.6
NH Other	27	8.5	43	12.2	6	2.2	5	1.7	8	1.9	<5	-
Hispanic	<5	-	5	1.4	26	9.7	32	10.8	49	11.7	33	11.2
Unknown	36	11.4	43	12.2	12	4.5	9	3.0	19	4.5	16	5.4
Transmission Group												
Male sex w/Male	178	56.2	211	59.8	170	63.7	162	54.5	304	72.7	193	65.4
Heterosexual Males	64	20.2	53	15.0	42	15.7	65	21.9	33	7.9	40	13.6
Females	61	19.2	43	12.2	30	11.2	47	15.8	38	9.1	29	9.8
Male unknown	14	4.4	46	13.0	25	9.4	23	7.7	43	10.3	33	11.2
Age Group												
Less than 13	0	-	0	-	0	-	0	-	0	-	0	-
13-19	13	4.1	8	2.3	<5	-	12	4.0	12	2.9	17	5.8
20-29	89	28.1	82	23.2	65	24.3	93	31.3	104	24.9	97	32.9
20-24	28	8.8	31	8.8	22	8.2	40	13.5	43	10.3	45	15.3
25-29	61	19.2	51	14.4	43	16.1	53	17.8	61	14.6	52	17.6
30-39	129	40.7	156	44.2	104	39.0	92	31.0	155	37.1	76	25.8
40-49	68	21.5	85	24.1	80	30.0	72	24.2	119	28.5	81	27.5
50+	18	5.7	22	6.2	14	5.2	28	9.4	28	6.7	24	8.1
Total*	317	100.0	353	100.0	267	100.0	297	100.0	418	100.0	295	100.0

Note: Use caution when interpreting data based on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

Percentages may not add up tp 100% due to rounding.

- Between 2005 and 2006, syphilis cases of all stages decreased by 15%. Over this period, primary and secondary (P&S) syphilis cases decreased by 29% (44% among NH Whites, 11% among NH Blacks and 32% in Hispanics.
- In 2006, the overwhelming majority of P&S syphilis cases in Chicago were in men (90%), reflecting the continuing syphilis epidemic among men who have sex with men.
- In 2006, the highest proportion of P&S syphilis cases occurred in NH Blacks (49%) and in those aged 20-29.

- Between 2005 and 2006 the number of PS syphilis cases in MSM decreased by 36%.
- Since MSM sexual contact is the leading mode of HIV transmission in Chicago, syphilis and HIV share similar routes of transmission. Infection with either increases the likelihood of transmitting or acquiring the other from an infected partner.
- The number of syphilis cases increased 41% between 2004 and 2005. Over this period, primary and secondary syphilis cases increased 90% among NH Whites and 58% in Hispanics.

<sup>\*</sup>Includes cases with unknown sex or age.

Table 12. Reported Primary and Secondary Syphilis Cases by Community Area, Chicago, 2006 (as of 6/30/2007)

Community Area	P & S Syphilis Cases <sup>†</sup>	<b>R</b> ate <sup>§</sup>	Community Area	P & S Syphilis Cases <sup>†</sup>	<b>R</b> ate <sup>§</sup>
I Rogers Park	13	20.5	40 Washington Park	<5	_
2 West Ridge	<5	-	41 Hyde Park	5	16.7
3 Uptown	32	50.4	42 Woodlawn	<5	-
4 Lincoln Square	<5	-	43 South Shore	10	16.2
5 North Center	<5	-	44 Chatham	6	16.1
6 Lake View	34	35.9	45 Avalon Park	<5	-
7 Lincoln Park	5	7.8	46 South Chicago	7	18.1
8 Near North Side	6	8.2	47 Burnside	0	0.0
9 Edison Park	0	0.0	48 Calumet Heights	<5	-
10 Norwood Park	0	0.0	49 Roseland	8	15.2
II Jefferson Park	0	0.0	50 Pullman	0	0.0
12 Forest Glen	0	0.0	51 South Deering	0	0.0
13 North Park	0	0.0	52 East Side	0	0.0
14 Albany Park	6	10.4	53 West Pullman	<5	-
15 Portage Park	0	0.0	54 Riverdale	0	0.0
16 Irving Park	<5	-	55 Hegewisch	0	0.0
17 Dunning	0	0.0	56 Garfield Ridge	0	0.0
18 Montclare	0	0.0	57 Archer Heights	0	0.0
19 Belmont Cragin	<5	-	58 Brighton Park	<5	-
20 Hermosa	0	0.0	59 McKinley Park	0	0.0
21 Avondale	<5	-	60 Bridgeport	<5	-
22 Logan Square	6	7.3	61 New City	<5	-
23 Humboldt Park	5	7.6	62 West Elsdon	<5	-
24 West Town	6	6.9	63 Gage Park	0	0.0
25 Austin	11	9.4	64 Clearing	0	0.0
26 West Garfield Park	<5	-	65 West Lawn	0	0.0
27 East Garfield Park	<5	-	66 Chicago Lawn	6	9.8
28 Near West Side	<5	-	67 West Englewood	10	22.1
29 North Lawndale	<5	-	68 Englewood	7	17.4
30 South Lawndale	<5	-	69 Gr. Grand Crossing	6	15.5
31 Lower West Side	0	0.0	70 Ashburn	0	0.0
32 Loop	<5	-	71 Auburn Gresham	7	12.5
33 Near South Side	<5	-	72 Beverley	<5	-
34 Armour Square	0	0.0	73 Washington Heights	5	16.8
35 Douglas	<5	-	74 Mount Greenwood	0	0.0
36 Oakland	0	0.0	75 Morgan Park	<5	-
37 Fuller Park	0	0.0	76 O'Hare	<5	-
38 Grand Boulevard	7	25.0	77 Edgewater	28	45.0
39 Kenwood	<5	-	Chicago Total <sup>¶</sup>	235	7.9

Note: Use caution when interpreting data cased on 20 or fewer events, the rate/percent is unreliable. Number and rate are suppressed if count is <5.

#### Table 12 and Figure 6 (next page)

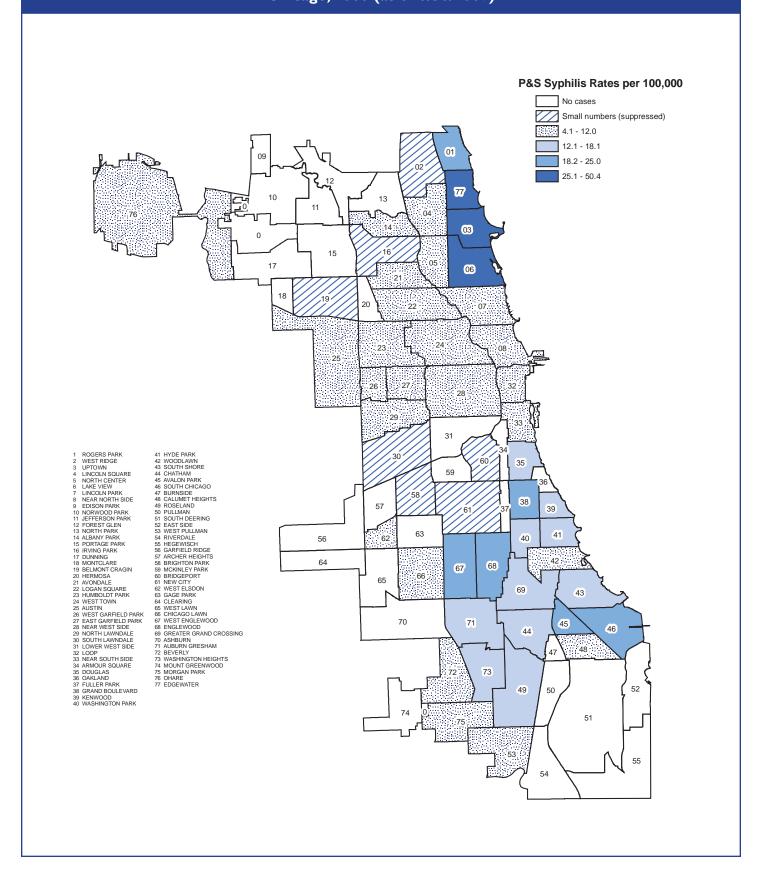
- Table 12 shows primary and secondary syphilis cases and the rate per 100,000 population by community area, as well as the cumulative number of Chicago and the most recent national data.
- The highest rates of PS syphilis are on the north side, in Uptown and Lakeview, and also on the south side, in Englewood.

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<sup>¶</sup>Includes all persons with unknown/undetermined community area.

<sup>\*\*</sup>Rate per 100,000 population using 2006 US Census Bureau, Population Estimates Program.

Figure 6. Reported Primary and Secondary Syphilis Case Rate by Community Area, Chicago, 2006 (as of 6/30/2007)



### **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 STD/HIV/AIDS Chicago. A description of the changes and other technical notes follow.

- I) The data presented in this issue reflect all cases in the HIV/AIDS Reporting System (HARS) reported to the Office of HIV/AIDS Surveillance (OHAS) as of June 30, 2008. When interpreting data in this report, keep in mind that the HARS database is updated continuously to reflect the most current and complete information on people infected and newly diagnosed with HIV/AIDS.
- 2) The "HIV Diagnoses" data presented in this issue include 3 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.
- 3) 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 5 cases are suppressed.
- 4) 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, 2006, the most recent year of diagnosis. Almost 50% of HIV/AIDS cases were actually reported within the same calendar year in which they were diagnosed, and more than 85% of all cases are reported within two calendar years of diagnosis. Additional cases continue to be reported in subsequent years and new cases are identified through laboratory reporting and registry matches. Thus, the number of cases diagnosed for each year--even for remote years--are subject to change as new information is received from any of the reporting sources.
- 5) 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 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). Undetermined risk represents persons for whom an expanded investigation either was or is still being followed up by the health department and included cases in persons whose transmission history is incomplete.

This and subsequent issues present data on mode of transmission where "undetermined" risk has been reclassified. For this issue, cases with undetermined risk were re-classified into known risk categories assuming that they follow the same distribution of cases with known risk. This redistribution is done for every sex/race/ethnicity/age category to use as much information as possible on cases with known risk. This type of redistribution method is commonly used by those presenting HIV reporting data and has been found to be quite accurate.

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