

# Syphilis

## What is it?

Syphilis infections are caused by the bacterium *Treponema pallidum* and are classified in stages (primary, secondary, and latent). Syphilis is referred to as “the great imitator” because clinical manifestations can be easily mistaken for other medical conditions. Infections are transmitted through direct contact with chancres, or syphilis sores, which are present during the first two stages (primary and secondary syphilis).<sup>i</sup>

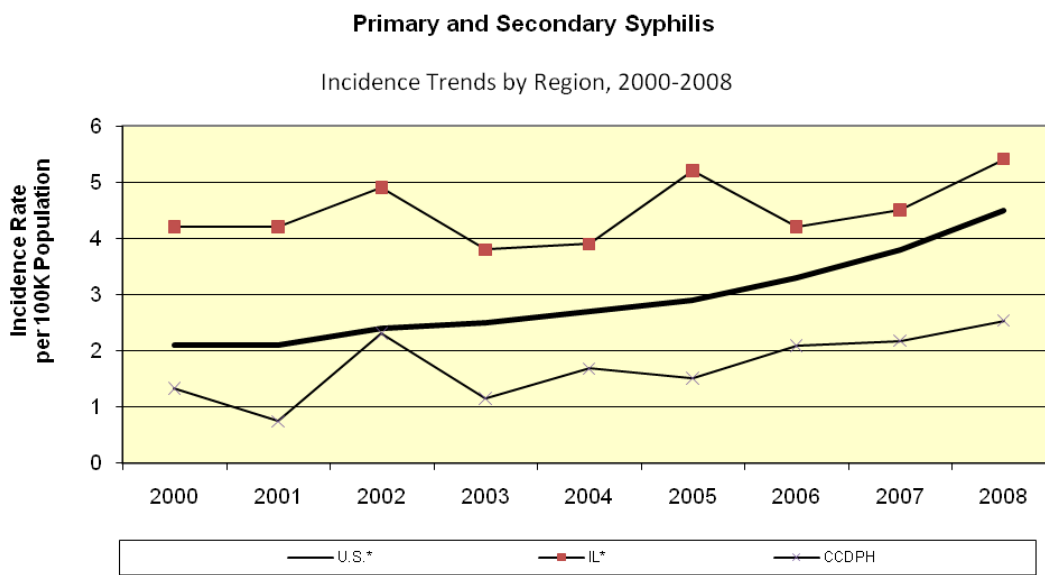
## Why is it important?

Syphilis can spread from a pregnant woman to her baby if she does not receive treatment. Babies with syphilis may have birth defects or may be stillborn. Syphilis infections can also facilitate the transmission and acquisition of HIV. Persons are 2 to 5 times more likely to acquire HIV when syphilis is also present.<sup>ii</sup> In 2009, Cook County (including the City of Chicago) ranked second in the US in the number of primary and secondary syphilis cases behind Los Angeles.<sup>iii</sup>

## 2000-2008

Though somewhat lower than rates in Illinois and the US, rates for Cook County Department of Public Health (CCDPH) primary and secondary (P & S) syphilis rose between 2000 and 2008. In the CCDPH jurisdiction, the 2008 rate of P & S syphilis was 2.5 per 100,000 population, 12.5 times the Healthy People (HP) 2010 goal of 0.2 per 100,000 population. Between 2005 and 2006, the rate of P & S syphilis in the CCDPH jurisdiction increased 40%, from 1.5 per 100,000 population to 2.1 per 100,000 population. Nationally, rates increased 18%, from 4.1 per 100,000 population in 2007 to 4.8 per 100,000 population in 2008.

Figure 1



**2000-2002 vs. 2006-2008**

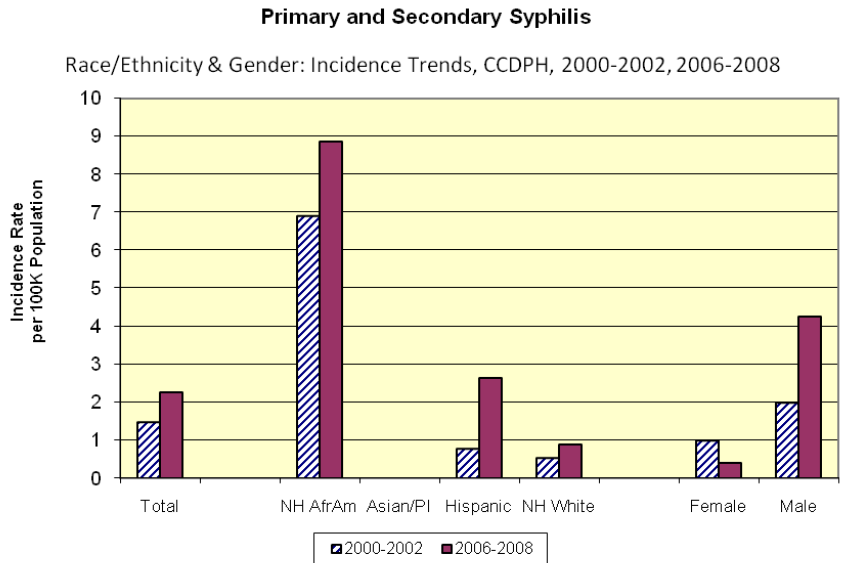
**By Race/Ethnicity and Gender**

P & S syphilis cases increased from a rate of 1.5 per 100,000 population between 2000-2002 to a rate of 2.3 per 100,000 population between 2006-2008.

African Americans in CCDPH had the highest rate of P & S syphilis between 2006-2008 (8.9 per 100,000 population), 45 times higher than the HP 2010 goal.

The P & S rate in males between 2006-2008 was 4.2 per 100,000 population, 10 times higher than the average rate in females over the same time (0.4 per 100,000 population).

Figure 2



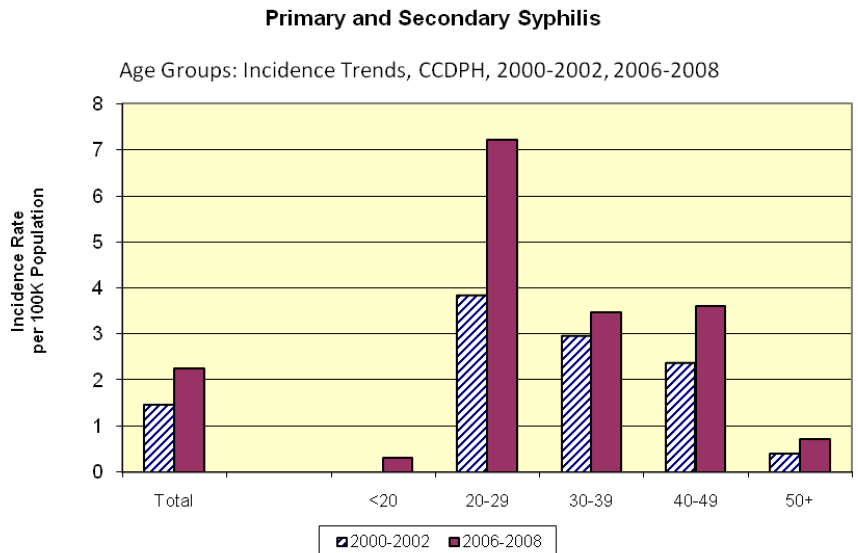
**2000-2002 vs. 2006-2008**

**By Age Groups**

Among those aged 20-29 years, the P & S syphilis rate nearly doubled, from 3.9 per 100,000 population between 2000-2002 to 7.2 per 100,000 population between 2006-2008.

Rates also increased in other age groups over the two time periods: in those aged 30-39 years, the rate increased 17% from 3.0 to 3.5 per 100,000 population. Among those aged 40-49 years, the P & S rate increased 50% from 2.4 per 100,000 population between 2000-2002 to 3.6 per 100,000 population between 2006-2008. Finally, in those aged 50 years and older, the rate increased 75% from 0.4 per 100,000 population between 2000-2002 to 0.7 per 100,000 population between 2006-2008.

Figure 3

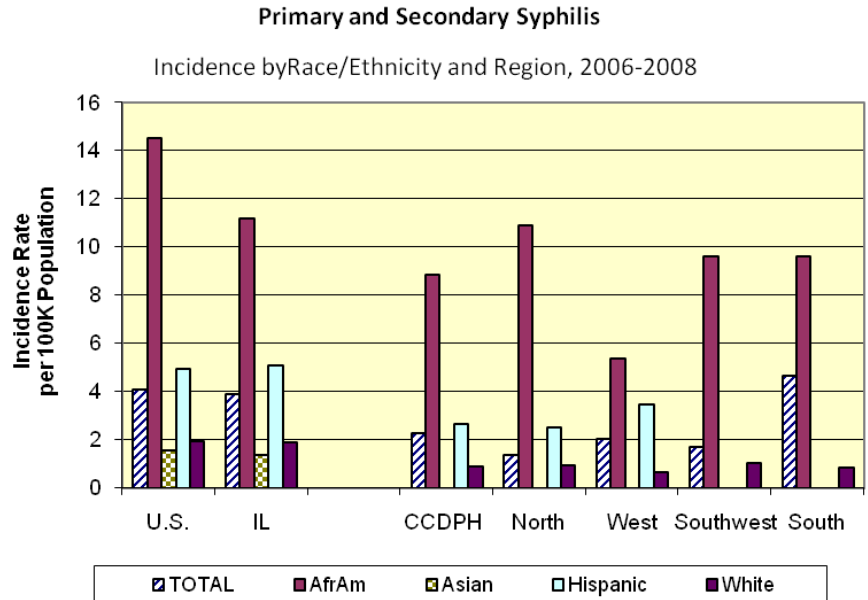


2006-2008

By Race/Ethnicity and Region

P & S syphilis rates were higher in African Americans locally, statewide and nationally. In CCDPH's jurisdiction, the P & S syphilis rate in African Americans (2006-2008) ranged from a low of 5.4 per 100,000 population in the West district to a high of 10.9 per 100,000 population in the North district.

Figure 4



By Gender and Region

The P & S rate in the CCDPH jurisdiction between 2006-2008 was 2.3 per 100,000 population, below the overall rate in the U.S (4.1/100,000).

The P & S syphilis rate (2006-2008) in males was substantially higher than the rate in females locally, statewide and nationally. In the South district during 2006-2008, the rate among males was 8.8 per 100,000 population, nearly 10 times higher than the rate among females in the South (0.9 per 100,000 population).

Figure 5

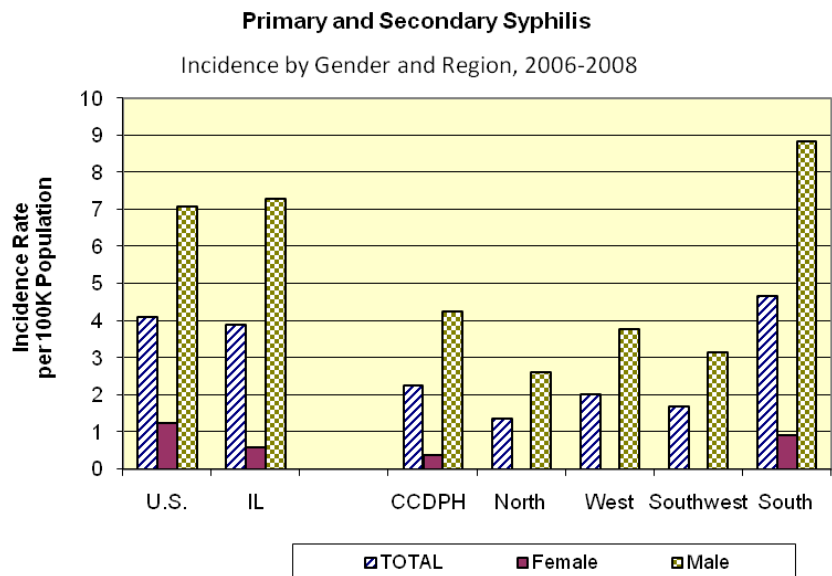


Table 1

**Primary and Secondary Syphilis  
Incidence by Region  
2000-2008**

	2000		2001		2002		2003		2004		2005		2006		2007		2008	
	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*
U.S.	5,979	2.1	6,103	2.1	6,862	2.4	7,177	2.5	7,980	2.7	8,724	2.9	9,756	3.3	11,466	3.8	13,500	4.5
IL	411	4.2	408	4.2	479	4.9	374	3.8	386	3.9	525	5.2	431	4.2	464	4.5	554	5.4
CCDPH	30	1.3	17	0.8	52	2.3	26	1.2	38	1.7	34	1.5	47	2.1	49	2.2	57	2.5
North	†	†	†	†	7	0.8	5	0.5	9	1.0	7	0.8	14	1.5	16	1.7	7	0.8
West	†	†	†	†	14	2.8	9	1.8	13	2.6	8	1.6	12	2.4	9	1.8	10	2.0
Swest	†	†	0	0.0	10	2.8	†	†	7	2.0	†	†	†	†	6	1.7	9	2.6
South	20	4.2	10	2.1	21	4.4	11	2.3	9	1.9	17	3.6	18	3.8	18	3.8	31	6.5

\* Rates based on 2000 Census population for CCDPH; for U.S. and Illinois, rates based on CDC Wonder online database.

† Unspecified estimate (N<5).

‡ Rate not calculated (N<5).

Table 2

**Primary and Secondary Syphilis**Incidence Trends, CCDPH By Race/Ethnicity, Gender, & Age Groups  
2000-2002, 2006-2008

	SCC			
	2000-2002		2006-2008	
	n	rate	n	rate
<b>Total</b>	99	1.5	153	2.3
<b>Race</b>				
<i>NH AfrAm</i>	64	6.9	82	8.9
<i>Asian/PI</i>	*	~	*	~
<i>Hispanic</i>	7	0.8	24	2.6
<i>NH White</i>	24	0.5	41	0.9
<b>Gender</b>				
<i>Female</i>	34	1.0	14	0.4
<i>Male</i>	65	2.0	139	4.2
<b>Age Groups (Years)</b>				
<20	*	~	6	0.3
20-29	32	3.9	60	7.2
30-39	30	3.0	35	3.5
40-49	25	2.4	38	3.6
≥50	8	0.4	14	0.7

Note: NH = Not Hispanic; PI = Pacific Islander.

\*Unspecified estimate (N&lt;5).

~Rate not calculated (N&lt;5).

Rates based on 2000 census population for CCDPH.

Table 3

**Primary and Secondary Syphilis Incidence by Race/Ethnicity & Gender by Region 2006-2008**

	U.S.		IL		CCDPH		North		West		Southwest		South	
	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*	n	rate*
<b>TOTAL</b>	34,722	3.9	1,449	3.9	153	2.3	37	1.3	31	2.0	18	1.7	67	4.7
<b>Race/Ethnicity**</b>														
<i>NH Asian</i>	15,362	17.9	634	14.7	82	8.9	6	10.9	10	5.4	7	9.6	59	9.6
<i>Asian/PI</i>	536	1.6	18	1.3	†	†	†	†	0	0.0	0	0.0	0	0.0
<i>Hispanic</i>	5,306	5.5	235	5.9	24	2.6	7	2.5	15	3.5	†	†	0	0.0
<i>NH White</i>	11,634	2.3	493	2.4	41	0.9	20	0.9	6	0.7	9	1.0	6	0.9
<b>Gender</b>														
<i>Female</i>	5,392	1.2	114	0.6	14	0.4	†	†	†	†	†	†	7	0.9
<i>Male</i>	29,317	6.6	1,335	7.3	139	4.2	35	2.6	28	3.8	16	3.1	60	8.8

Note: NH = non-Hispanic; PI = Pacific Islander

\* Rates based on 2000 census population for all regions except U.S.; U.S. rates from CDC Wonder online database

† Unspecified estimate (N<5)

‡ Rate not calculated (N<5)

\*\* Excludes person <15 years of age for U.S. and IL totals and rates

---

<sup>i</sup> CDC. STD Surveillance, 2009 – Syphilis. Available at <http://www.cdc.gov/std/Syphilis/STDFact-MSM-Syphilis.htm> (last accessed 3/30/2011).

<sup>ii</sup> CDC. STD Facts—Syphilis and MSM. Available at: <http://www.cdc.gov/std/Syphilis/STDFact-MSM-Syphilis.htm> (last accessed 3/18/2011).

<sup>iii</sup> CDC. STD Surveillance, 2009 – Table 31. Available at: <http://cdc.gov/std/statso9/tables/31.htm> (last accessed 3/30/2011).