

STD Annual Report

St. Louis County, MO

2014

Key Findings

Chlamydia

In Saint Louis County, there were 5,337 cases of chlamydia reported in 2014, representing a 2% increase over the previous year.

Females account for over two-thirds of the cases and were reported with a 4% increase in cases (3,662 out of 5,337 cases), while males were reported with 1% less cases this year. This data would suggest males are not being screened at the same level as females.

Females aged 20 to 24 years had a 10% increase in case reports over 2014. 2014 was the second year this demographic was reported with more cases than the 15 to 19 year old females, which is historically the demographic that had the largest number of chlamydia case reports.

Chlamydia was reported above historical limits for females in age groups 20 to 24, 25 to 29, and 30 to 39; for males aged 30 to 39 years; and below historical limits for teen males, aged 15 to 19 years.

70% of all chlamydia cases were among youth between the ages of 15 and 24 years (3,736 out of 5,337 cases).

Gonorrhea

There were 1,723 cases of gonorrhea in St. Louis County in 2014, a 1% decrease from the previous year. Female cases declined by 8%, while the number of male cases increased by 7%.

Males between the ages of 20 and 24 were reported with the most cases for any demographic for the first time in nearly two decades. Historically, since 1995, females 15 to 24 had been reported the largest number of gonorrhea cases.

Gonorrhea was reported above historical limits for males in the 30 to 39 age group.

63% of all gonorrhea case reports were of youth between the ages of 15 and 24 years (1,094 out of 1,723).

St. Louis County remains a high morbidity area for gonorrhea. CDC defines high morbidity area as a jurisdiction reporting at, or more than 1,000 cases per year.

Early Syphilis

Early syphilis continues to increase slowly over each year. In 2014, St. Louis County reported 84 early syphilis cases, an 8% increase in cases compared to the previous year. Compared to 2013, female cases increased by 60% (8 cases, compared to 5 in 2013), while males were reported a 4% increase in 2014 (76 cases, compared to 73 in 2013).

Males continue to be the demographic most impacted by syphilis; in 2014 males comprised 90% of the infections (76 out of 84 cases). Males in their 20s continue to be reported as that most impacted age group

compared with any other demographic, with Men who Have Sex with Men (MSM) continue to be reported as the main risk factor.

The early syphilis case rate for the County remains low at 8.4 cases per 100,000 people. Linkage to treatment and Partner Services remain a priority for STD program staff.

Health Equity:

As seen in the case rate maps, there is a disproportionate burden of sexually transmitted infections (STIs) reported in north St. Louis County. Research has shown that there are higher rates of STIs among some racial or ethnic minority groups.¹ It is important to understand higher case counts and rates are not caused by racial determinates, such as color, but rather by social (or socioeconomic) conditions. Minorities are more likely to be impacted by factors that put them at higher risk for STIs such as poverty, difficulty accessing medical care due to affordability or distrust of the health care system, lower education levels, and fewer employment opportunities.^{2,3} Additionally, in communities with higher STI rates, sexually active individuals are more likely to become infected with an STI, like gonorrhea or chlamydia, as they have greater likelihood of choosing a partner who is already infected.³

Transgender populations: Data for this population are not uniformly collected or provided. However, this population faces a greater risk for STIs due to cultural, socioeconomic, and health-related factors. For more information, please visit the CDC's Lesbian, Gay, Bisexual, and Transgender Health website at <http://www.cdc.gov/lgbthealth/index.htm>. St. Louis County will begin reporting on what is known about this population so as to identify the need for services and assist our prevention partners in targeting health interventions for those populations in greatest need.

Datasource: MODHSS Websurv

1. Hogben M, Leichliter JS. Social determinants and sexually transmitted disease disparities. *Sex Transm Dis.* 2008;35(12 Suppl):S13-8.
2. 4 Gonzalez JS, Hendriksen ES, Collins EM, Duran RE, Safren SA. Latinos and HIV/AIDS: examining factors related to disparity and identifying opportunities for psychosocial intervention research. *AIDS Behav.* 2009;13:582-602.
3. Kwame Owusu-Edusei, Jr, Harrell W. Chesson, Jami S. Leichliter, Charlotte K. Kent, Sevgi O. Aral. The Association Between Racial Disparity in Income and Reported Sexually Transmitted Infections. *Am J Public Health.* 2013 May; 103(5): 910-916. Published online 2013 May.

Chlamydia

Table 1: Chlamydia by Gender, Age Group, 2009-2014

Chlamydia	Age Group	Diagnosis Year						% Change 2013-2014	5 Yr Mean 2009-2013	2014 Beyond Historical Limits?
		2009	2010	2011	2012	2013	2014			
Female	10 to 14	83	71	54	44	43	33	-23%	59	No
	15 to 19	1590	1602	1505	1432	1290	1180	-9%	1484	Below
	20 to 24	1232	1336	1434	1404	1394	1538	10%	1360	Above
	25 to 29	470	438	438	454	480	543	13%	456	Above
	30 to 39	220	228	247	267	252	298	18%	243	Above
	40 to 49	43	38	36	46	58	59	2%	44	No
	50 to 59	8	8	15	11	13	10	-23%	11	No
	60+	2	4	3	1	3	1	-67%	3	
	UNK	3	1	0	0	0	0	N/A	1	
Female Total		3651	3726	3732	3659	3533	3662	4%	3660	No
Male	10 to 14	7	11	13	7	14	12	-14%	10	No
	15 to 19	494	484	492	462	421	343	-19%	471	Below
	20 to 24	540	606	630	635	644	675	5%	611	No
	25 to 29	291	272	293	316	323	311	-4%	299	No
	30 to 39	197	176	178	197	212	245	16%	192	Above
	40 to 49	50	46	46	71	53	65	23%	53	No
	50 to 59	11	8	18	27	16	20	25%	16	No
	60+	2	1	3	5	7	3	-57%	4	
Male Total		1592	1604	1673	1720	1690	1674	-1%	1656	No
Female To Male	20 to 24	0	0	0	0	0	1	N/A	0	
Grand Total		5243	5330	5405	5379	5223	5337	2%	5316	No

Historical Limits: More than two standard deviations from 5 year mean, if 5 year mean \geq 10.

Chart 1: Chlamydia by Sex, Year of Diagnosis

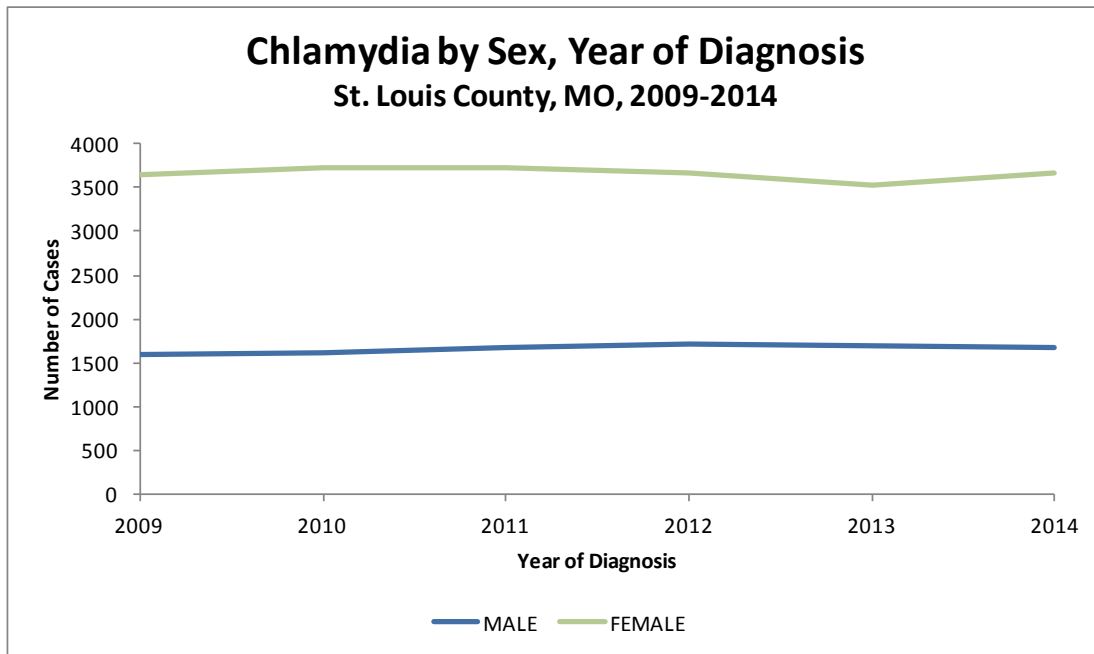


Chart 2: Chlamydia by Sex, Year of Diagnosis, Age Group, 10-39

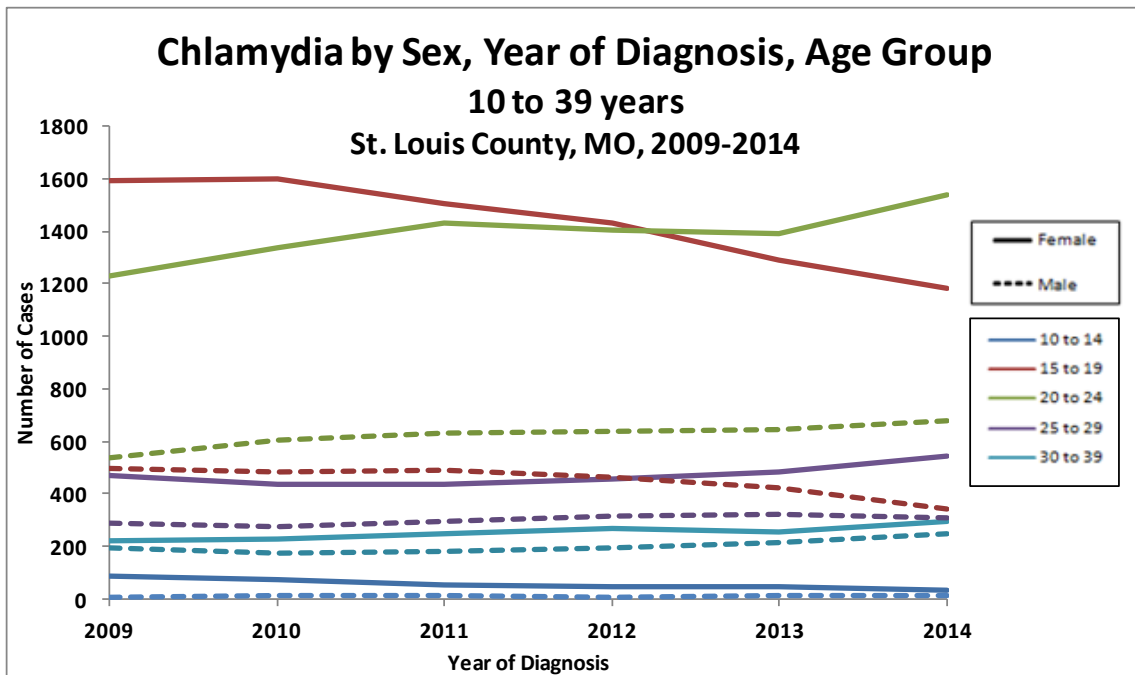


Chart 3: Chlamydia by Sex, Year of Diagnosis, Age Group, ≥40

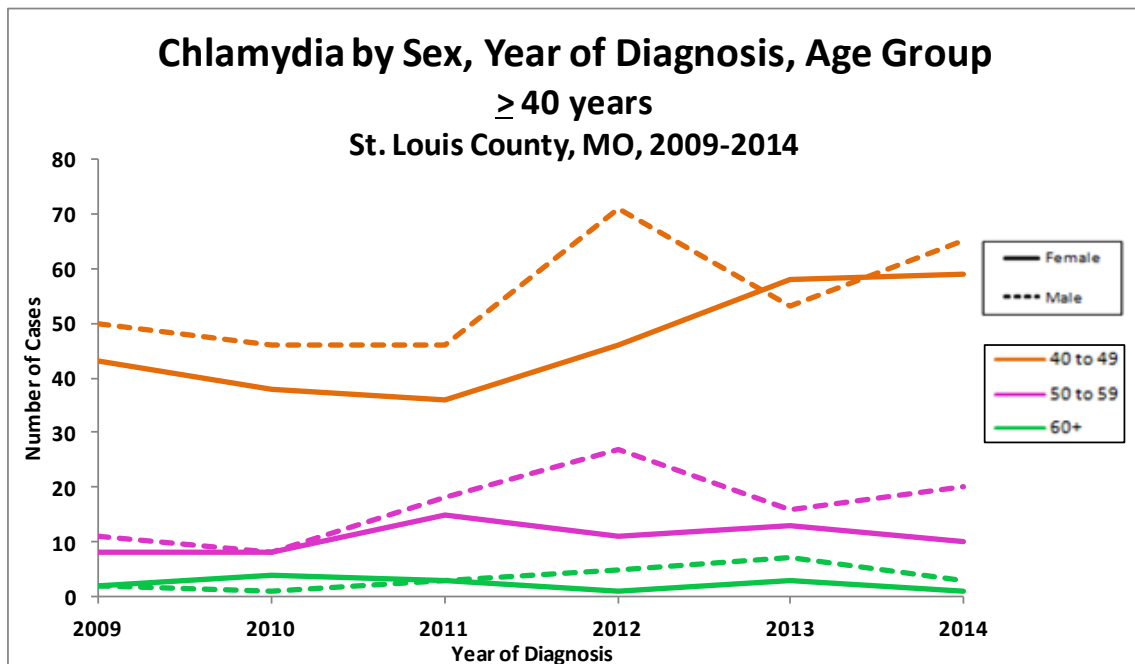


Table 2: Chlamydia Case Rates per 100,000 by Sex and Age Group, 2014

Age Group	Male Rate	Female Rate	Total Rate
10 to 14	34.5	99.6	66.3
15 to 19	945.0	3404.7	2146.5
20 to 24	2287.6	5007.7	3674.9
25 to 29	1006.7	1650.8	1338.9
30 to 39	443.0	485.3	465.3
40 to 49	98.2	79.3	88.2
50 to 59	28.5	12.6	20.1
60+	3.4	0.8	1.9
TOTAL	354.0	696.1	534.2

Chart 4: Chlamydia Case Rates per 100,000 by Sex and Age Group, 2014

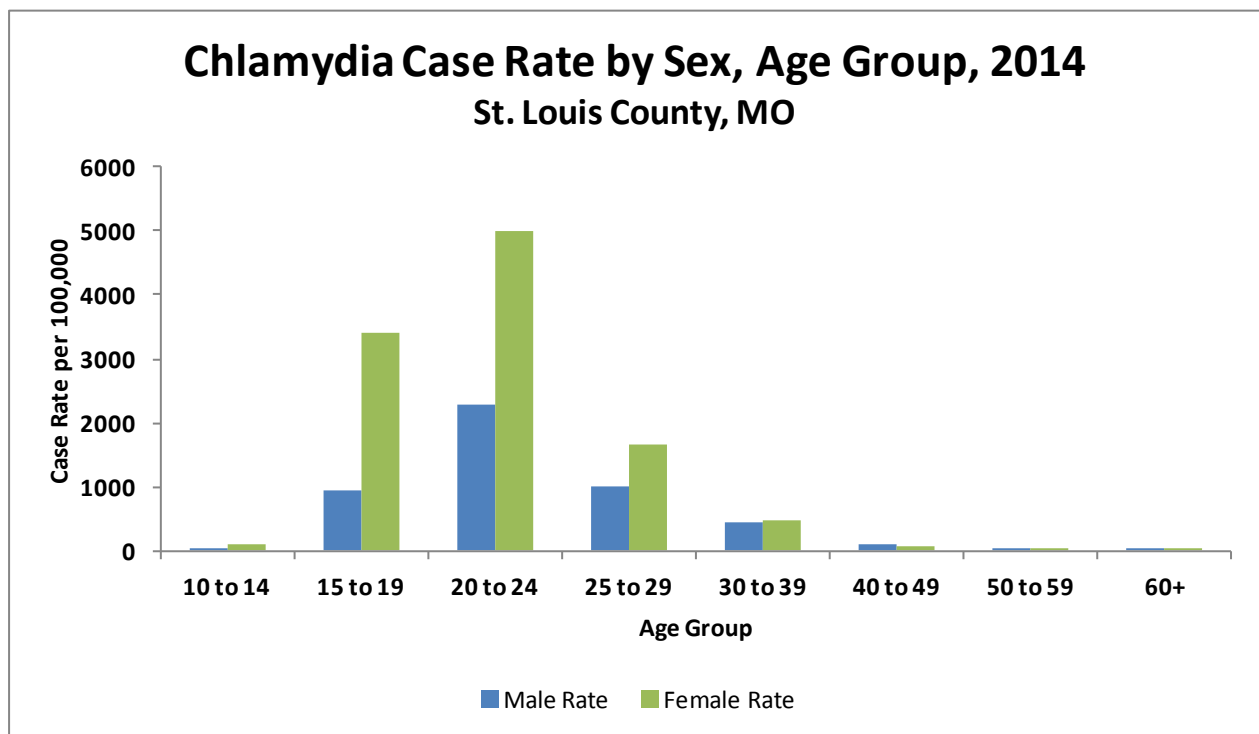


Chart 5: Male Chlamydia Case Counts and Rates, 2014

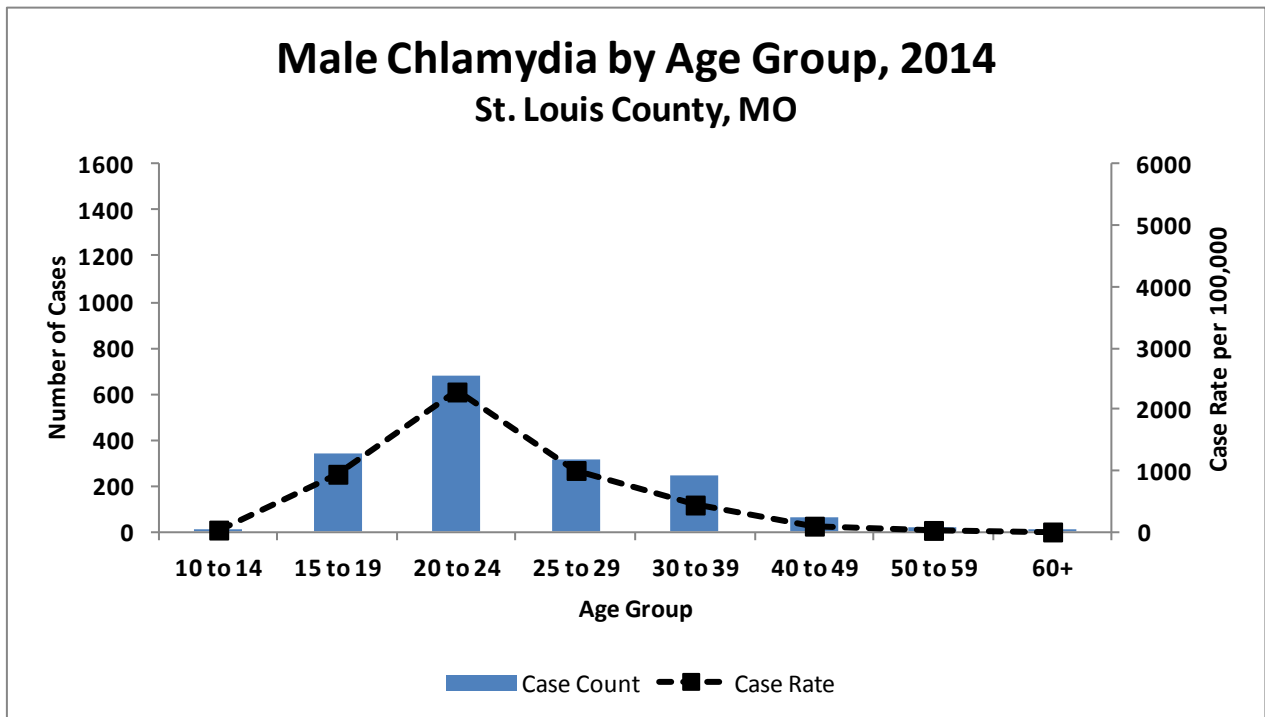
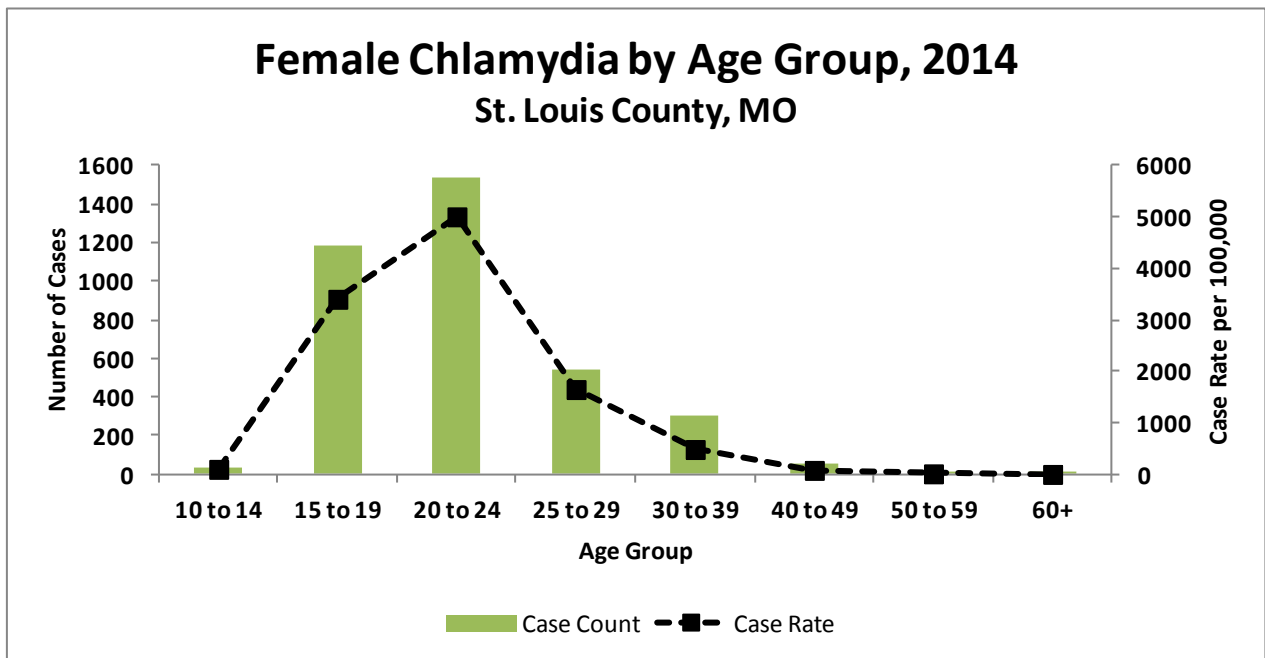
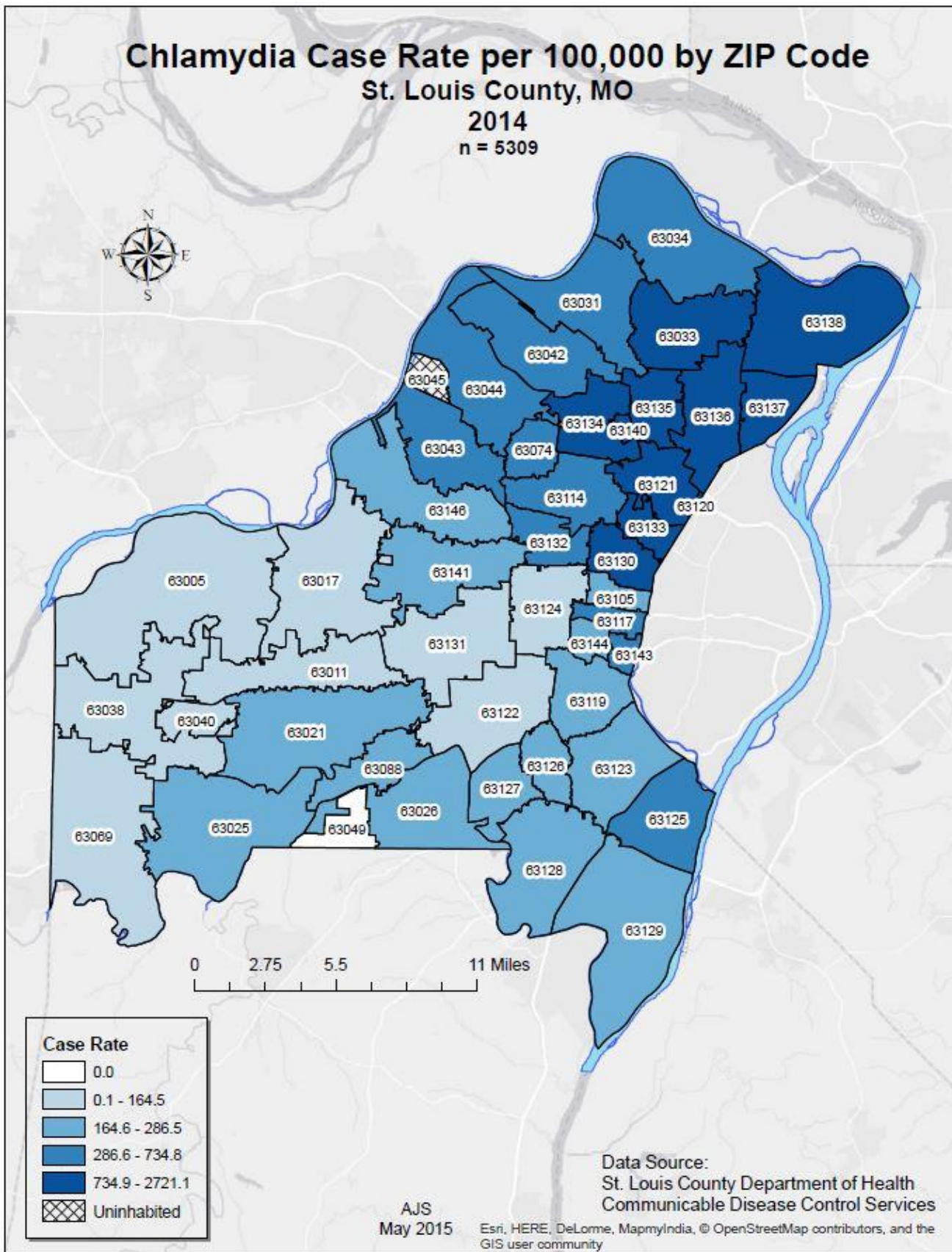


Chart 6: Female Chlamydia Case Counts and Rates, 2014



Map 1: Chlamydia Case Rate per 100,000 by Zip Code, St. Louis County, MO, 2014



Gonorrhea

Table 3: Gonorrhea by Sex, Age Group, 2009-2014

Gonorrhea	Age Group	Diagnosis Year						% Change 2013-2014	5 Yr Mean 2009-2013	2014 Beyond Historical Limits?
		2009	2010	2011	2012	2013	2014			
Female	10 to 14	16	12	10	16	14	7	-50%	14	
	15 to 19	254	284	363	341	264	270	2%	301	No
	20 to 24	200	274	330	365	331	304	-8%	300	No
	25 to 29	99	106	104	133	145	110	-24%	117	No
	30 to 39	56	55	87	78	70	64	-9%	69	No
	40 to 49	12	20	24	22	14	18	29%	18	No
	50 to 59	9	2	2	10	9	5	-44%	6	
	60+	0	0	0	0	3	1	-67%	1	
Female Total		646	753	920	965	850	779	-8%	827	No
Male	10 to 14	3	1	4	3	3	5	67%	3	
	15 to 19	166	160	205	194	169	159	-6%	179	No
	20 to 24	226	243	330	352	320	361	13%	294	No
	25 to 29	112	143	140	187	170	183	8%	150	No
	30 to 39	103	106	133	132	120	152	27%	119	Above
	40 to 49	42	41	36	63	61	53	-13%	49	No
	50 to 59	13	10	22	28	29	24	-17%	20	No
	60+	3	4	4	4	11	7	-36%	5	
Male Total		668	708	874	963	883	944	7%	819	No
Grand Total		1314	1461	1794	1928	1733	1723	-1%	1646	No

Historical Limits: More than two standard deviations from 5 year mean, if 5 year mean ≥ 10 .

Chart 7: Gonorrhea by Sex, Year of Diagnosis

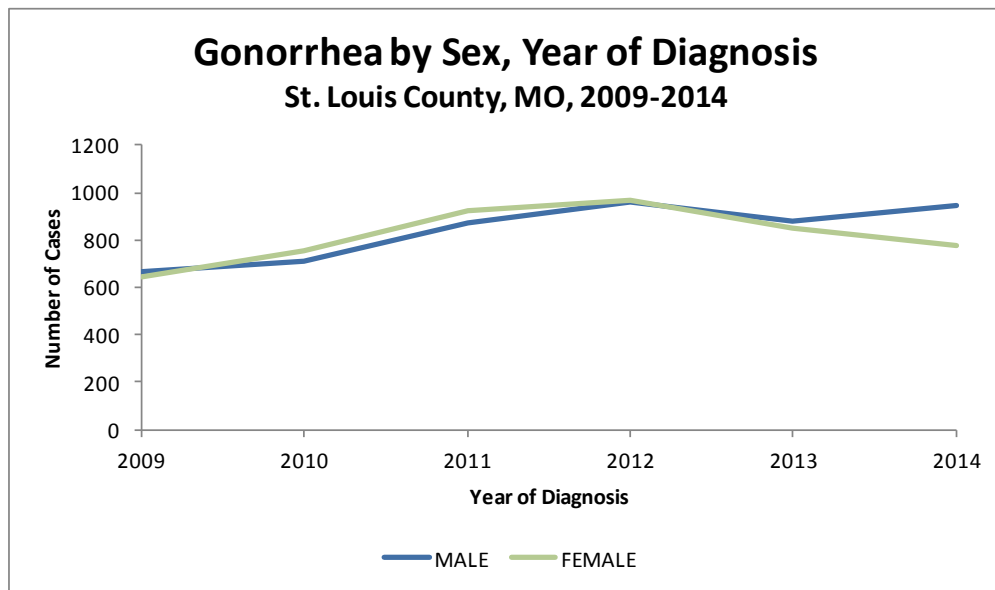


Chart 8: Gonorrhea by Sex, Year of Diagnosis, Age Group, 10-39

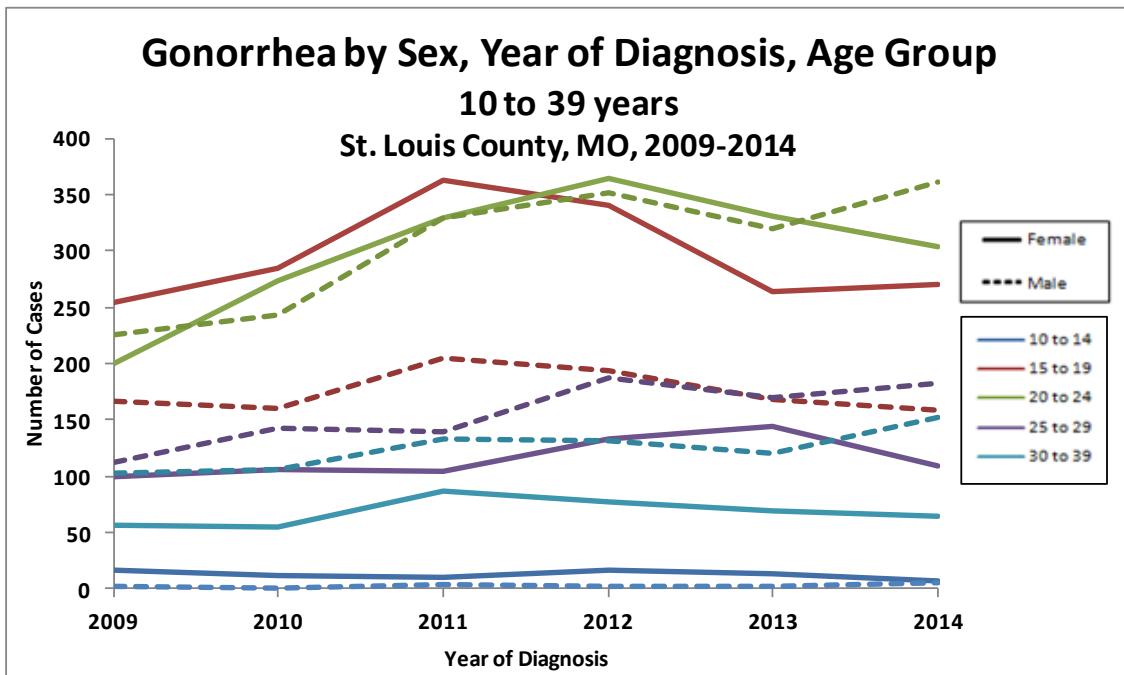


Chart 9: Gonorrhea by Sex, Year of Diagnosis, Age Group, ≥40

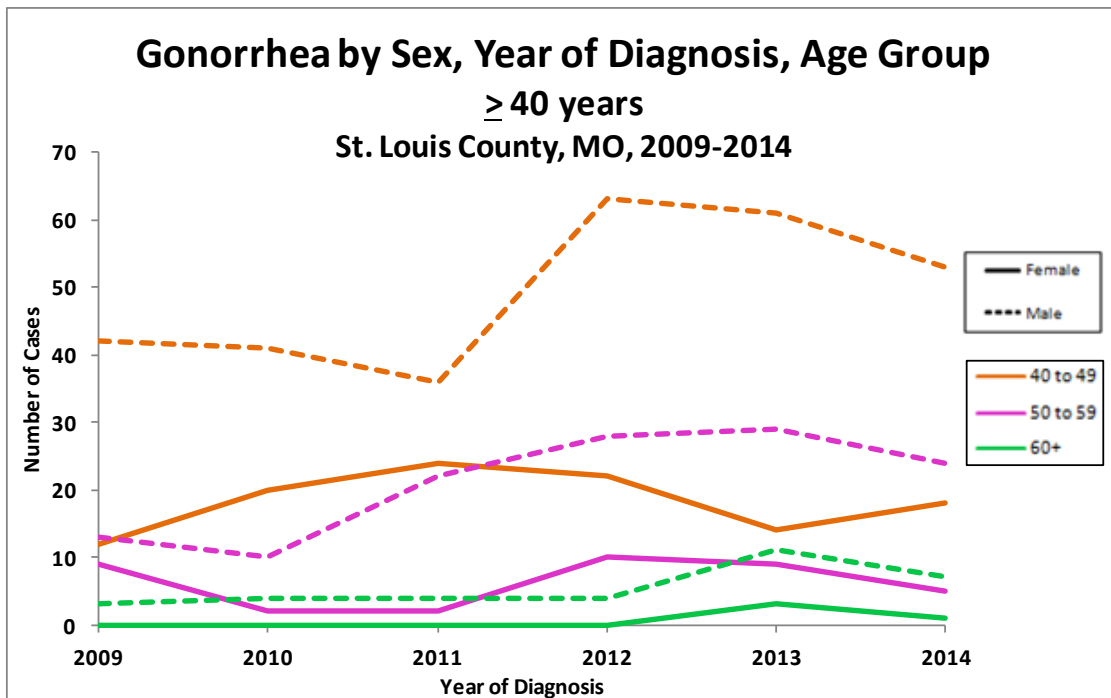


Table 4: Gonorrhea Case Rates per 100,000 by Sex and Age Group, 2014

Age Group	Male Rate	Female Rate	Total Rate
10 to 14	14.4	21.1	17.7
15 to 19	438.1	779.0	604.6
20 to 24	1223.4	989.8	1104.3
25 to 29	592.4	334.4	459.3
30 to 39	274.8	104.2	185.1
40 to 49	80.1	24.2	50.5
50 to 59	34.2	6.3	19.4
60+	8.0	0.8	3.8
TOTAL	199.6	148.1	172.5

Chart 10: Gonorrhea Case Rates per 100,000 by Gender and Age Group, 2014

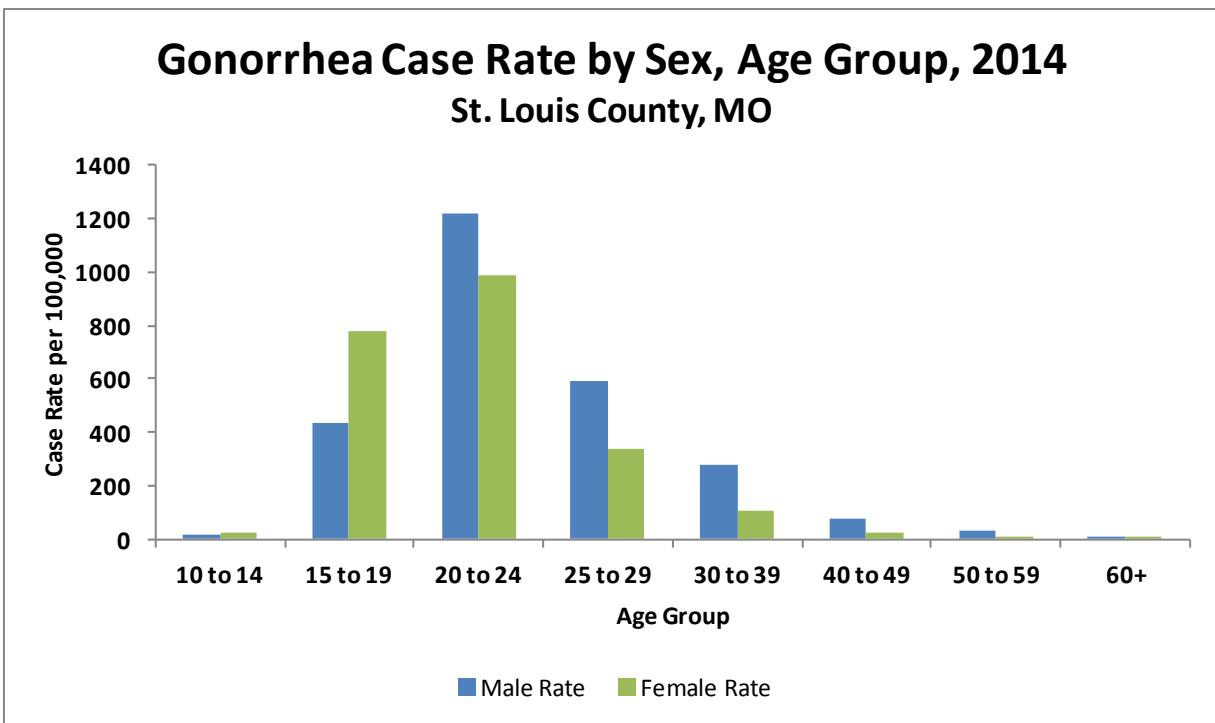


Chart 11: Male Gonorrhea Case Counts and Rates, 2014

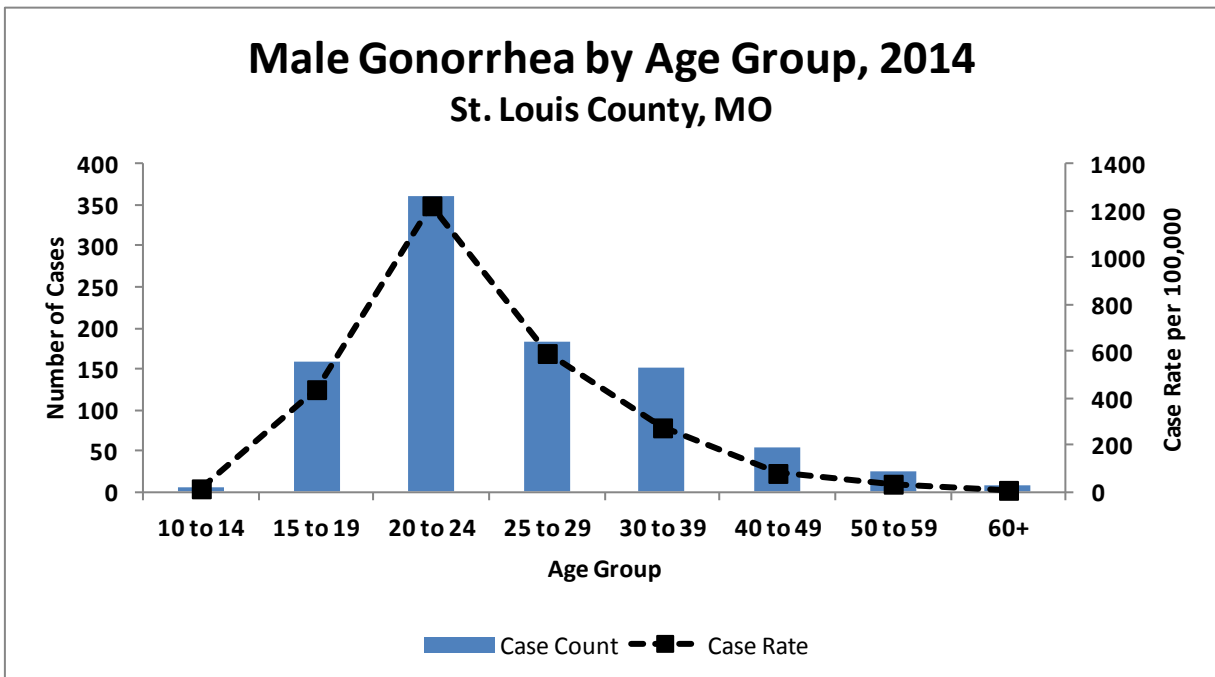
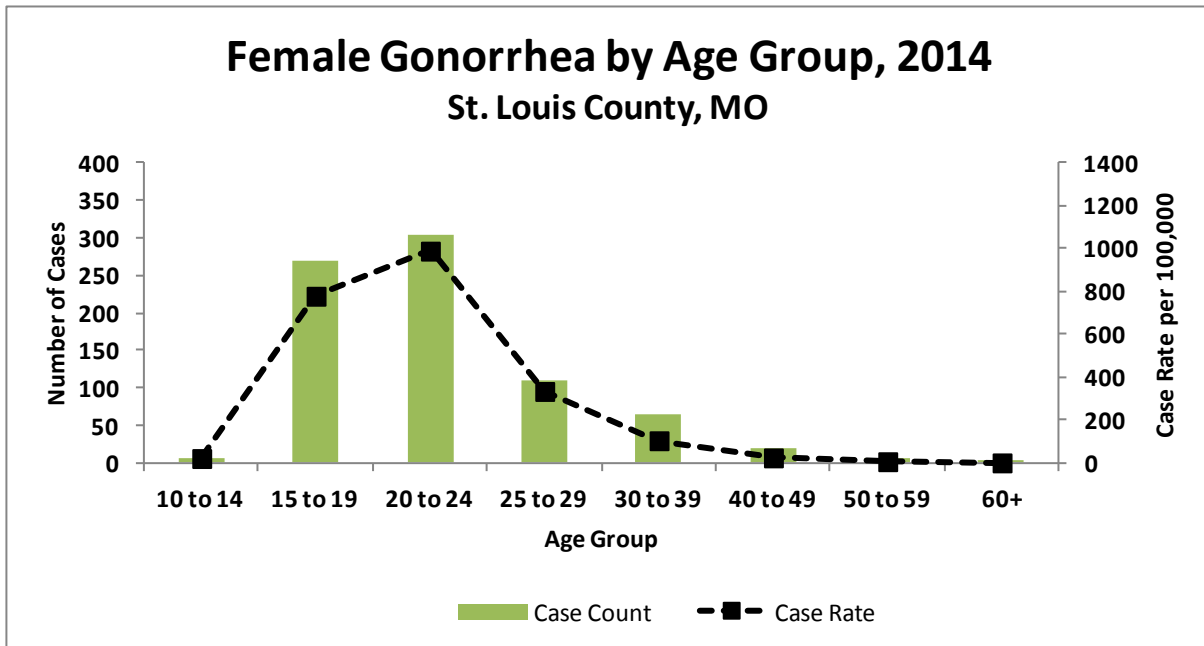
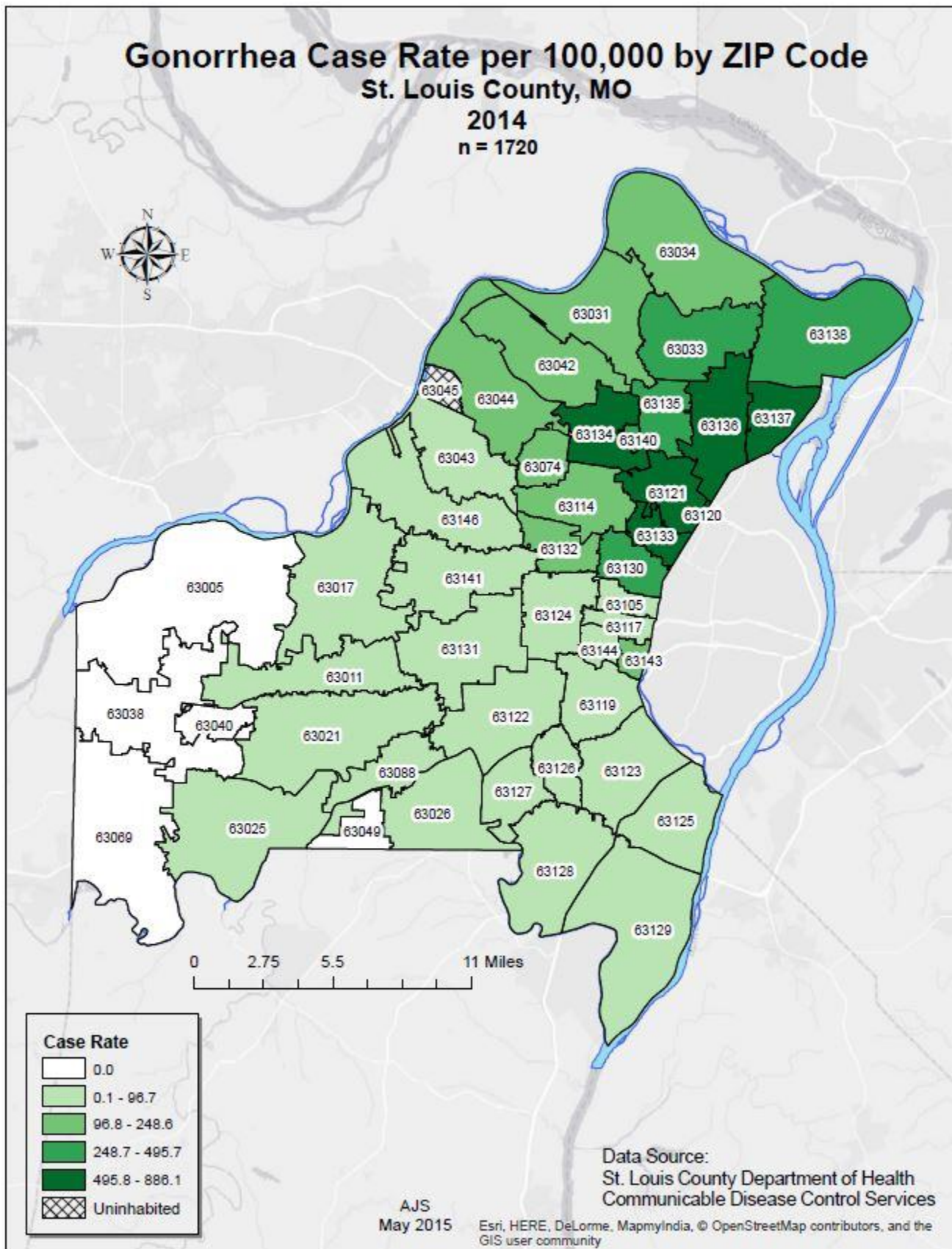


Chart 12: Female Gonorrhea Case Counts and Rates, 2014



Map 2: Gonorrhea Case Rate per 100,000 by Zip Code, St. Louis County, MO, 2014



Early Syphilis

Table 5: Early Syphilis by Sex, Age Group, 2009-2014

Early Syphilis	Age Group	Diagnosis Year						% Change 2013-2014	5 Yr Mean 2009-2013	2014 Beyond Historical Limits?
		2009	2010	2011	2012	2013	2014			
Female	10 to 14	0	0	0	0	0	0	N/A	0	
	15 to 19	0	0	1	1	0	0	N/A	0	
	20 to 24	1	1	1	7	1	2	100%	2	
	25 to 29	1	0	1	2	3	5	67%	1	
	30 to 39	2	0	1	2	0	1	N/A	1	
	40 to 49	0	0	0	0	1	0	-100%	0	
	50 to 59	0	0	0	0	0	0	N/A	0	
	60+	0	0	0	0	0	0	N/A	0	
Female Total		4	1	4	12	5	8	60%	5	
Male	10 to 14	0	0	0	0	0	0	N/A	0	
	15 to 19	7	4	7	3	6	3	-50%	5	
	20 to 24	9	21	18	20	29	20	-31%	19	No
	25 to 29	5	9	8	13	14	14	0%	10	No
	30 to 39	10	15	10	12	17	20	18%	13	Above
	40 to 49	6	15	8	7	5	12	140%	8	No
	50 to 59	1	3	2	4	2	6	200%	2	
	60+	0	2	0	0	0	1	N/A	0	
Male Total		38	69	53	59	73	76	4%	58	No
Grand Total		42	70	57	71	78	84	8%	63.6	No

Historical Limits: More than two standard deviations from 5 year mean, if 5 year mean ≥ 10 .

Chart 13: Early Syphilis by Gender, Year of Diagnosis

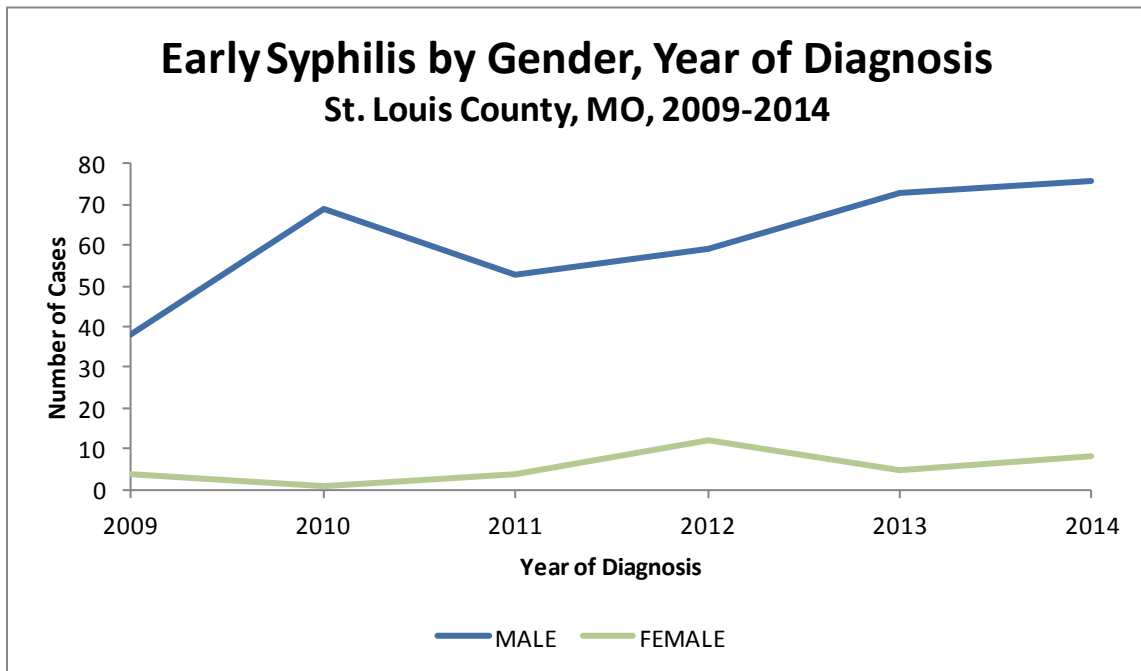


Chart 14: Early Syphilis by Sex, Year of Diagnosis, Age Group, 10-39

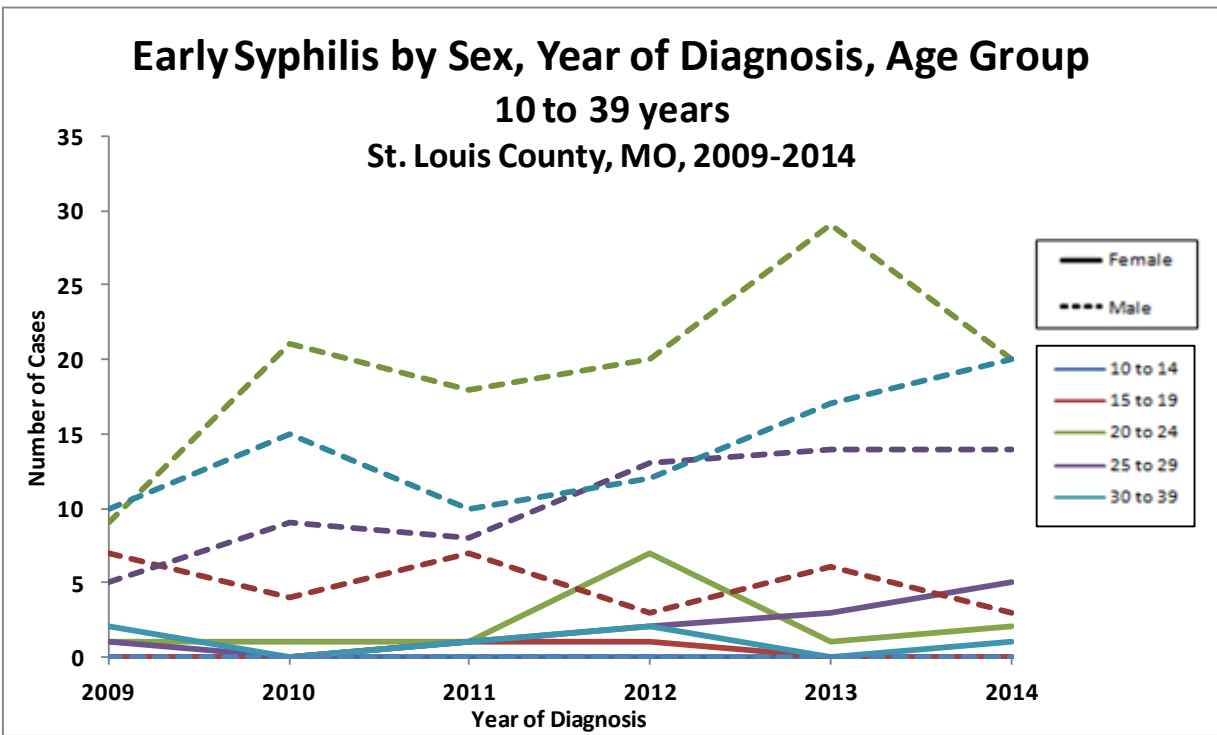


Chart 15: Early Syphilis by Sex, Year of Diagnosis, Age Group, ≥40

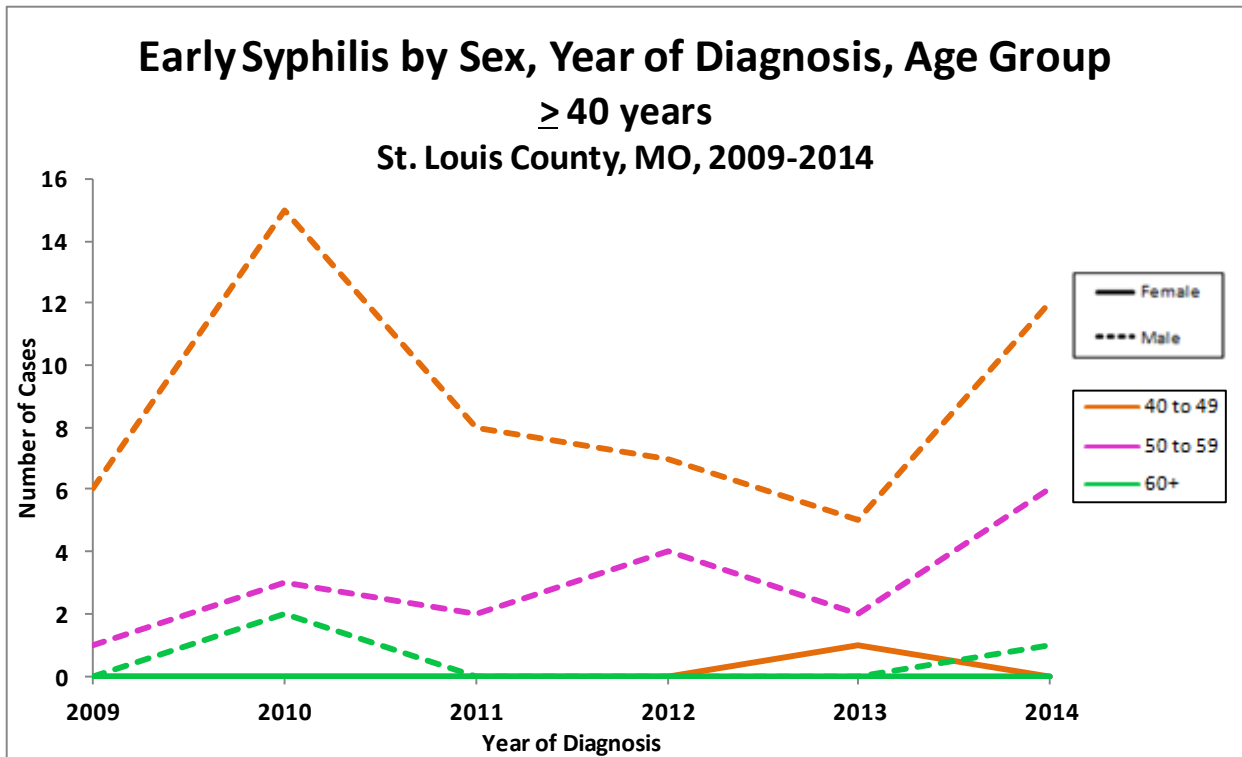


Table 6: Early Syphilis Case Rates per 100,000 by Sex and Age Group, 2014

Age Group	Male Rate	Female Rate	Total Rate
10 to 14	0.0	0.0	0.0
15 to 19	8.3	0.0	4.2
20 to 24	67.8	6.5	36.5
25 to 29	45.3	15.2	29.8
30 to 39	36.2	1.6	18.0
40 to 49	18.1	0.0	8.5
50 to 59	8.5	0.0	4.0
60+	1.1	0.0	0.5
TOTAL	16.1	1.5	8.4

Chart 16: Early Syphilis Case Rates per 100,000 Population by Gender and Age Group

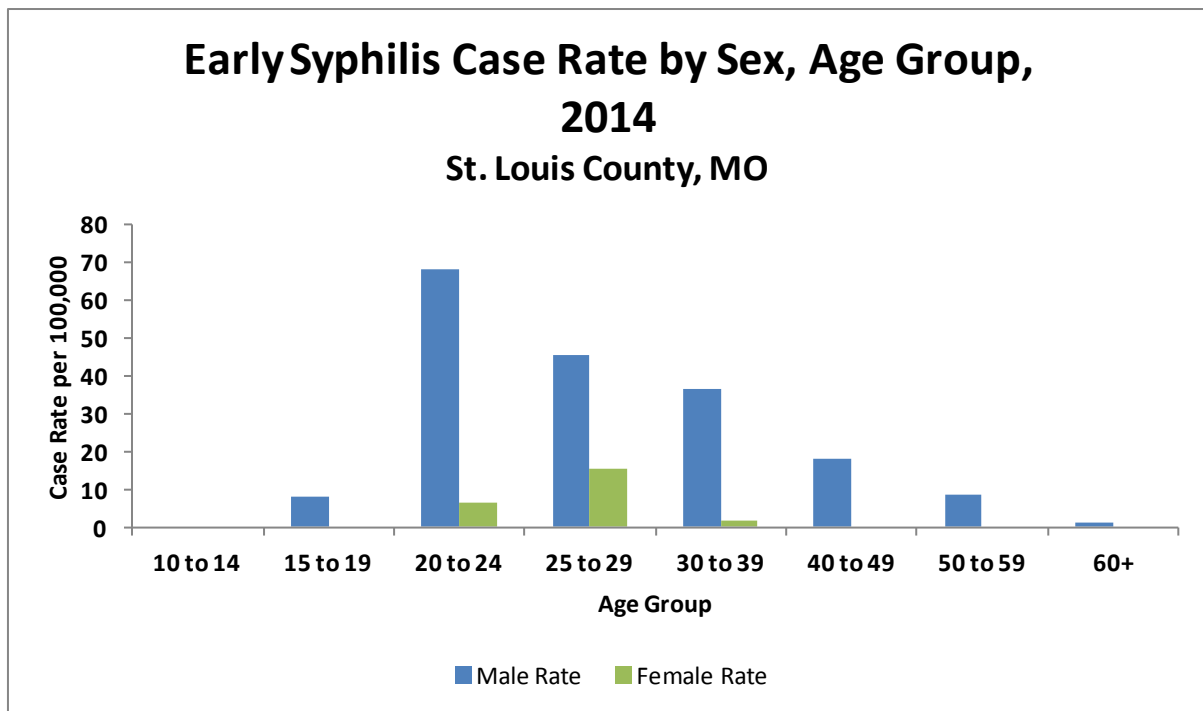


Chart 17: Male Early Syphilis Case Counts and Rates, 2014

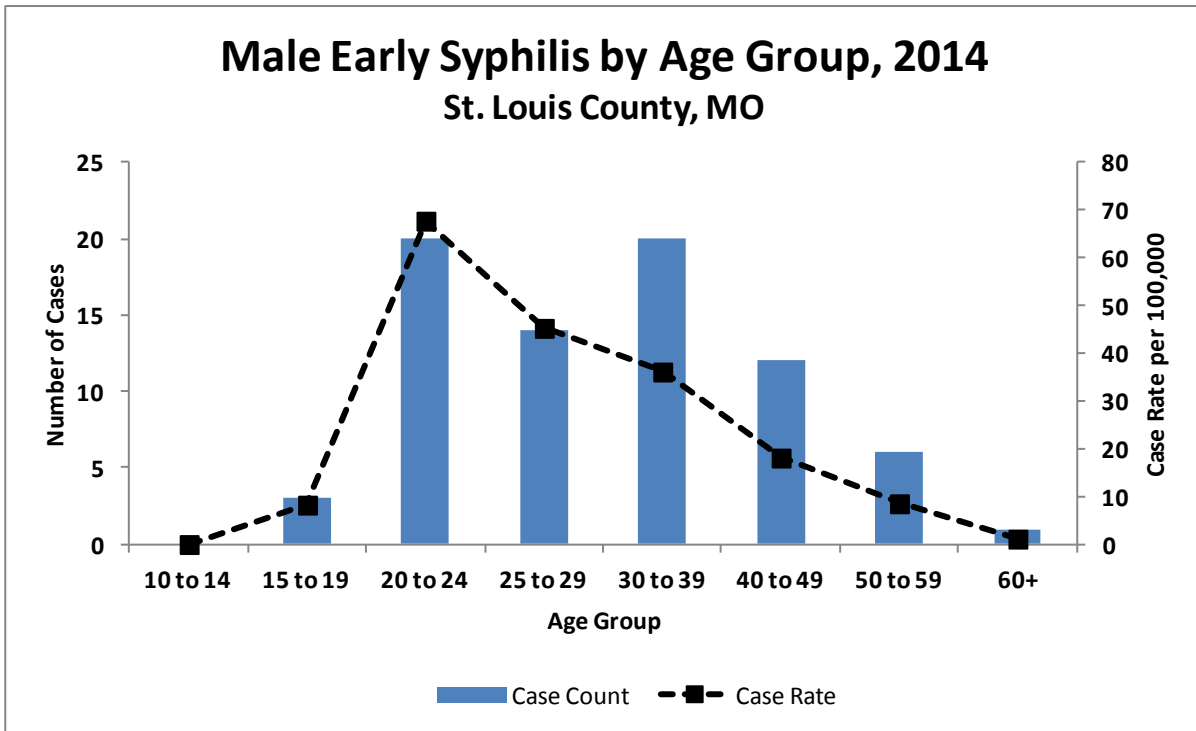
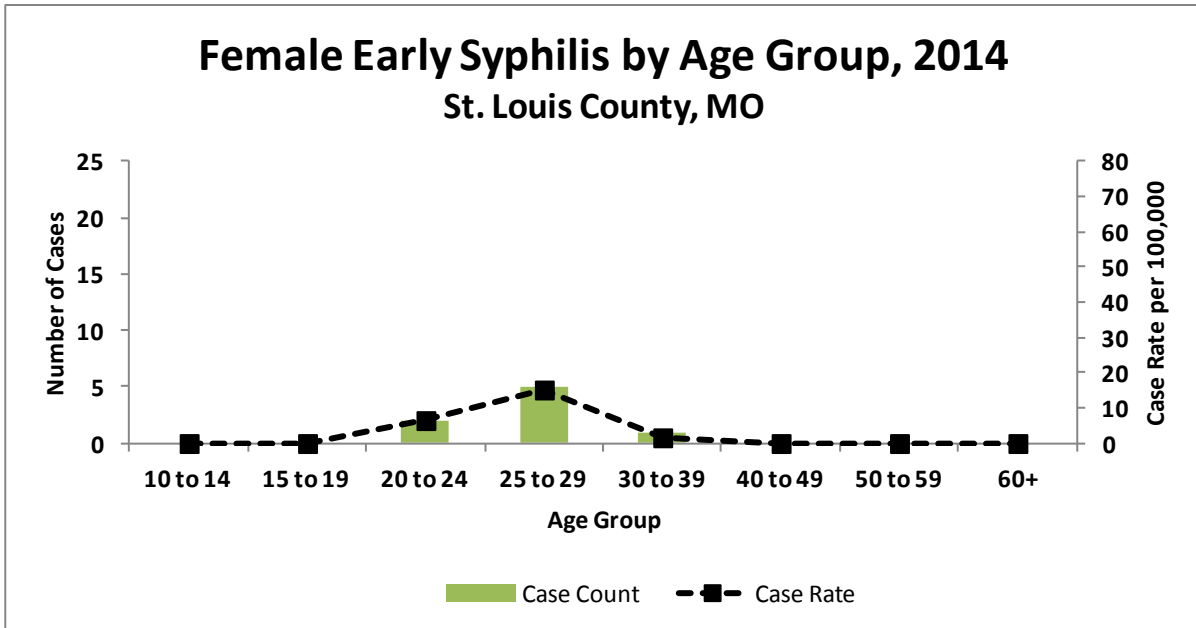


Chart 18: Female Early Syphilis Case Counts and Rates, 2014



Map 3: Early Syphilis Case Rate per 100,000 by Zip Code, St. Louis County, MO, 2014

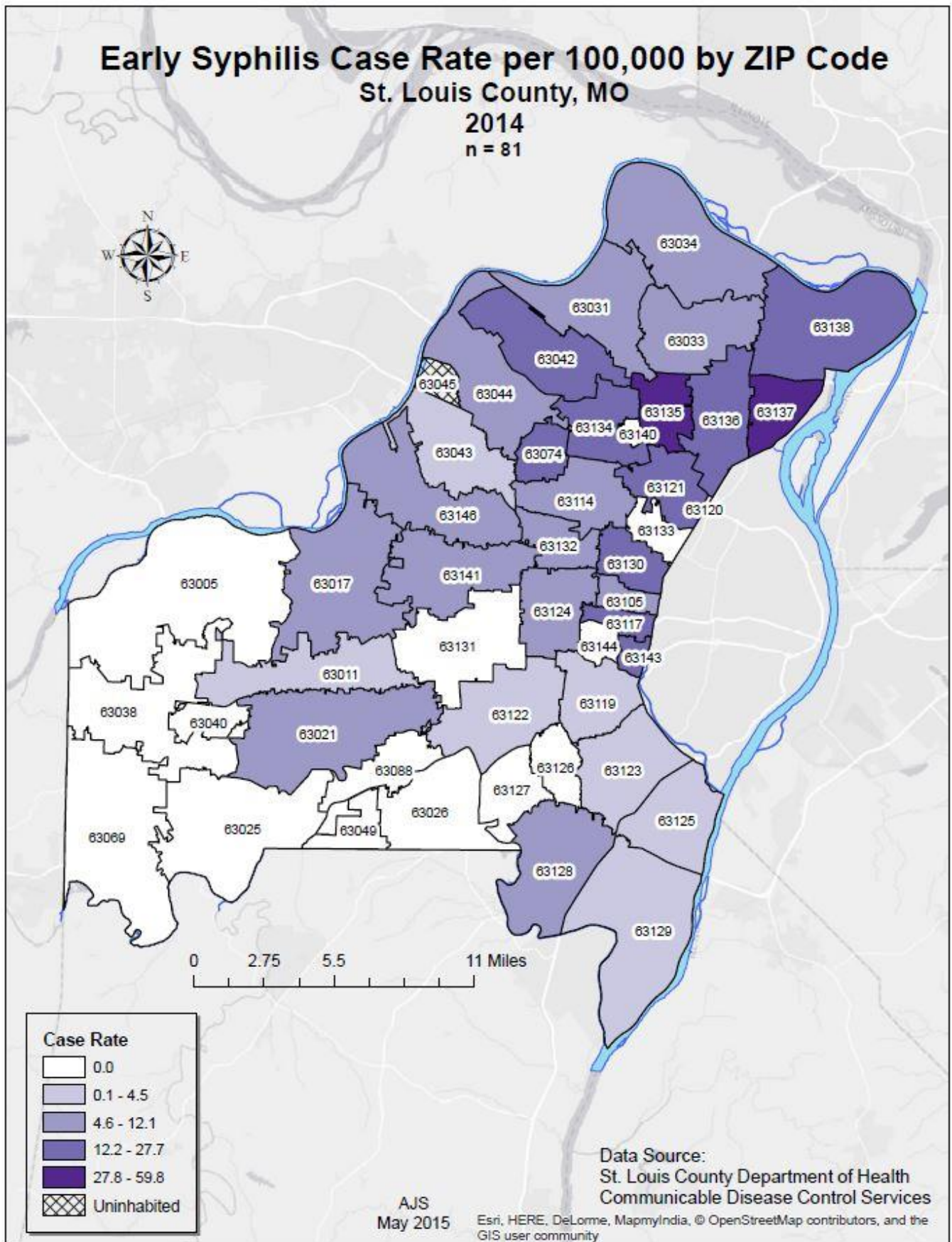


Chart 19: Total Case Count by Condition, Age Group, 2014

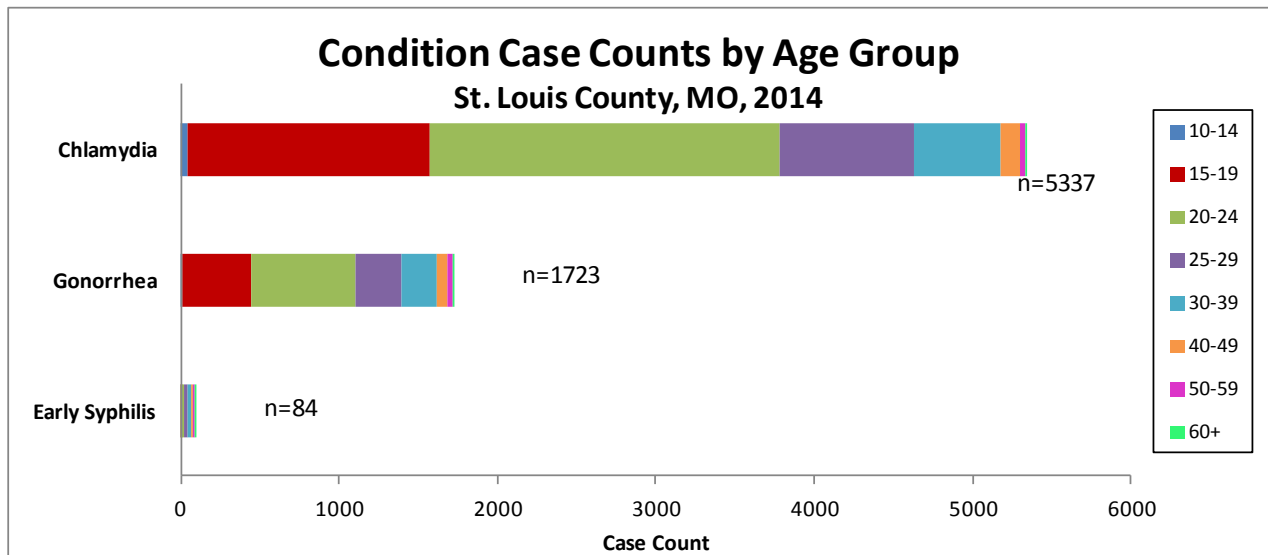


Chart 20: Percent of Total Cases by Condition, Age Group, 2014

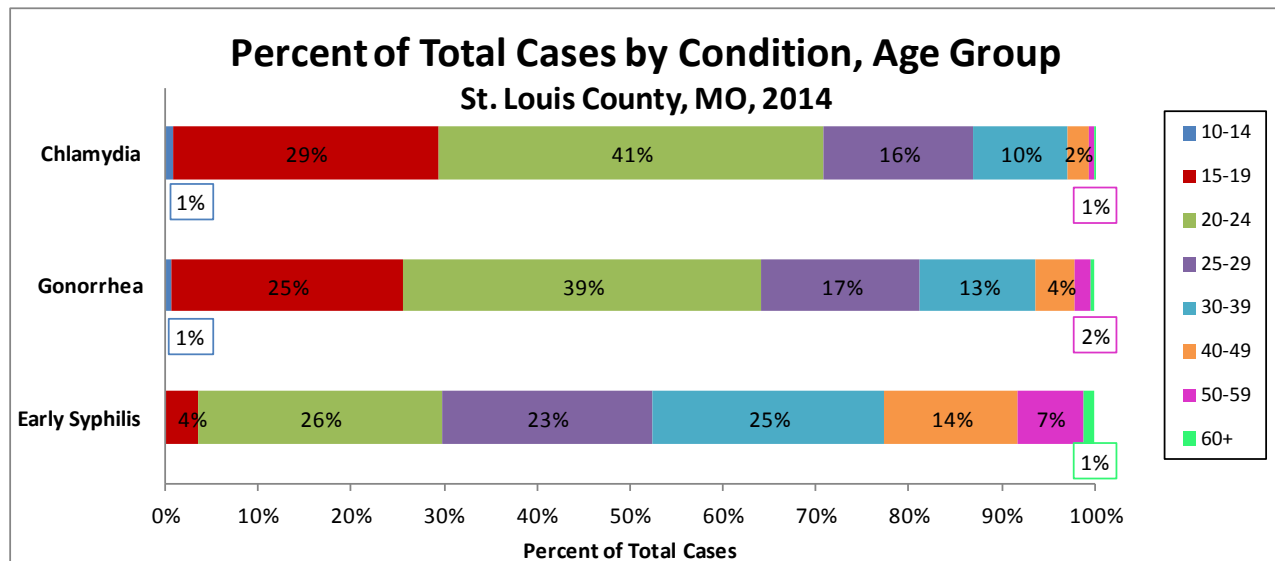


Chart 19 illustrates the profound differences between case totals for various STDs. Chlamydia accounted for 73% of STD case totals reported among County residents during 2012, while gonorrhea accounted for 26%, and early syphilis only about 1%. About 35% of chlamydia cases and 28% of the gonorrhea cases were reported among 15 to 19 year olds (Chart 20), even though they account for only 3.5% of St. Louis County’s population.

Among 15 to 19 year olds, females are much more likely to be reported with an STD than males. While we may expect that to be true for chlamydia because more females are screened, the same holds true for gonorrhea, where females accounted for 334 of the 539 cases (62%) reported among 15 to 19 year olds during 2012. Clearly, prevention efforts need to be focused on adolescent females.

Chlamydia reported among 15 to 19 year olds has remained fairly constant since 2000 for both males and females. This probably represents the capacity of the local health care system to screen for chlamydia.

Adolescents

Table 7: Chlamydia Among 15 to 19 Year Olds by Sex, 2009-2014

	2009	2010	2011	2012	2013	2014
Female	1590	1602	1505	1432	1290	1180
Male	494	484	492	462	421	343
Total	2084	2086	1997	1894	1711	1523

Gonorrhea has declined among both males and female adolescents since 2007. The STD Program has offered many STD prevention presentations at area high schools and middle schools since that time.

Table 8: Gonorrhea Among 15 to 19 Year Olds by Sex, 2007-2012

	2009	2010	2011	2012	2013	2014
Female	254	284	363	341	264	270
Male	166	160	205	194	169	159
Total	420	444	568	535	433	429