

STI Diagnoses in Michigan, 2021

All data as of July 1, 2022

Surveillance & Epidemiology Section
Division of HIV & STI Programs
Bureau of Infectious Disease
Michigan Department of Health and Human Services



www.michigan.gov/hivsti

Overview

Michigan's STI Surveillance Program collects, interprets, and disseminates population level data regarding persons with sexually transmitted infections. Data is collected in the Michigan Disease Surveillance System (MDSS) where reports from laboratories, private providers, and local public health give information about diagnosis, demographics, and patient behaviors. The most commonly reported sexually transmitted infections are chlamydia, gonorrhea, and syphilis. For the purposes of this report, counts of early stage and symptomatic syphilis (primary and secondary syphilis) are separated from latent diagnoses.

Key Definitions

The Basics

New Diagnoses: The number of cases newly diagnosed over a given period of time, usually a year. The date assigned to an STI report is the onset date, or if that is missing the specimen collection date is used. If both dates are missing, the referral date, or the date the report was referred to MDHHS, is used.

Diagnosis Rate: For every 100,000 people in a population, the number who were newly diagnosed. This is used to compare groups.

Re-infection Rate: For the purposes of this report, re-infection is measured as being diagnosed with the same infection at least 30 days after a prior diagnosis but no more than 12 months after the prior diagnosis. Re-infections may be transmitted by partners who were not treated when the original patient was first diagnosed.

The following measures are displayed in this report:

Count: The number of persons newly diagnosed during the given year.

Pop: The total population (census) during the given year.

Rate: The new diagnosis rate per 100,000 persons in the specified population during the given year ($\text{count/pop} \times 100,000$ or $\text{count/est pop} \times 100,000$).

Risk Categories and Hierarchy

MSM: Men who have sex with men.

PWID: Persons who inject drugs.

Heterosexual: Males: men who are not MSM or PWID and reported sex with a female.

Females: females who are not a PWID and reported sex with a male

Note: for 2021 diagnoses report, 2020 census denominators were used as the most recently available complete estimates from the census bureau.

STI Diagnoses by Characteristics, 2021

Includes confirmed and probable cases

Race/Ethnicity	Chlamydia			Gonorrhea			P&S Syphilis		Latent Syphilis		2020
	count	rate	Re-infected %	count	rate	Re-infected %	count	rate	count	rate	Population ²
Black	19,266	1,405.9	11%	12,448	908.4	11%	625	45.6	923	67.4	1,370,393
Hispanic	2,401	442.9	10%	784	144.6	9%	41	7.6	98	18.1	542,105
White	13,959	188.0	7%	5,029	67.7	7%	270	3.6	522	7.0	7,425,115
Asian/NH/PI	345	102.5	9%	97	28.8	10%	15	4.5	18	5.3	336,648
Am Indian/AN	230	405.2	6%	97	170.9	6%	5	8.8	4	7.0	56,766
Multi/Other	2,586	1,098.0	8%	983	417.4	6%	17	7.2	56	23.8	235,528
Unknown	7,476	-	-	2,727	-	-	7	-	40	-	
Race/Ethnicity by sex at birth											
Male	15,702	319.9	6%	11,377	231.8	10%	773	15.8	1,194	24.3	4,907,813
Black	7,245	1,116.6	8%	6,813	1,050.0	12%	499	76.9	668	102.9	648,865
Hispanic	644	233.8	6%	336	122.0	7%	37	13.4	75	27.2	275,468
White	3,853	104.9	4%	2,039	55.5	7%	200	5.4	355	9.7	3,672,496
Other	1,145	368.2	6%	660	212.2	6%	31	10.0	64	20.6	310,984
Unknown	2,815	-	5%	1,529	-	4%	6	-	32	-	
Female	30,560	604.1	10%	10,787	213.2	9%	207	4.1	467	9.2	5,058,742
Black	12,021	1,666.0	13%	5,635	781.0	10%	126	17.5	255	35.3	721,528
Hispanic	1,757	658.9	12%	448	168.0	10%	4	1.5	23	8.6	266,637
White	10,106	269.3	8%	2,990	79.7	7%	70	1.9	167	4.5	3,752,619
Other	2,016	634.0	10%	517	162.6	6%	6	1.9	14	4.4	317,958
Unknown	4,660	-	7%	1,197	-	5%	1	-	8	-	
Unknown Sex	3	-	-	2	-	-	-	-	-	-	-
Risk*											
MSM	675		9%	893		12%	376	132.1	522	183.4	284,653*
MSM/PWID	-			4		0%	9		12		-
PWID	40	Risk information is unreliable (missing in 74% of cases)	5%	29	Risk information is unreliable (missing in 70% of cases)	3%	12		24		-
Heterosexual	11,109		9%	5,833		9%	454		499		-
Males	2,909		5%	2,170		8%	277		174		-
Females	8,200		10%	3,663		9%	177		325		-
Undetermined	34,441		9%	15,407		9%	129		604		-
Age at diagnosis											
Unknown Age	-			-			-		-		
Less than 15 years	328	18.8	10%	121	6.9	10%	1	0.1	-	-	1,748,988
15-19 years	11,979	1,890.6	12%	3,665	578.4	10%	41	6.5	54	8.5	633,603
20-24 years	17,398	2,588.7	9%	6,123	911.0	10%	168	25.0	246	36.6	672,087
25-29 years	8,385	1,222.4	7%	4,785	697.6	9%	185	27.0	297	43.3	685,946
30-39 years	6,147	500.0	5%	5,008	407.3	9%	306	24.9	595	48.4	1,229,514
40-49 years	1,377	118.4	4%	1,588	136.5	7%	146	12.6	244	21.0	1,163,203
50-59 years	497	37.4	5%	643	48.4	7%	88	6.6	155	11.7	1,328,150
60+ years	154	6.1	5%	233	9.3	7%	45	1.8	70	2.8	2,505,064
Total	46,265	464.2	9%	22,166	222.4	9%	980	9.8	1,661	16.7	9,966,555

1 - P&S: Primary and Secondary Syphilis

2 - Rate per 100,000 based on annual Census Bureau estimates from the American Community Survey (ACS)

*MSM Census estimate is 5.8% of the male population in Michigan (Lieb S, et al 2011. Statewide Estimation of Racial/Ethnic Populations of Men Who Have Sex with Men in the U.S.)

STI Diagnoses by Local Health Jurisdiction, 2021

Includes confirmed and probable cases

	Chlamydia			Gonorrhea			P&S Syphilis		Latent Syphilis		2020 Population ²
	count	rate	Re- infected %	count	rate	Re- infected %	count	rate	count	rate	
Allegan County	317	266.6	7%	106	89.1	3%	6	5.0	7	5.9	118,927
Barry-Eaton	505	293.2	5%	196	113.8	5%	8	4.6	15	8.7	172,209
Bay County	395	385.8	8%	136	132.8	8%	3	2.9	9	8.8	102,387
Benzie-Leelanau	68	171.7	6%	17	42.9	0%	-	0.0	2	5.1	39,595
Berrien County	913	596.6	12%	531	347.0	13%	4	2.6	8	5.2	153,025
Branch-Hillsdale-St. Joseph	431	287.5	7%	242	161.4	8%	5	3.3	1	0.7	149,930
Calhoun County	893	668.5	10%	537	402.0	9%	12	9.0	17	12.7	133,580
Central Michigan District	511	271.7	7%	116	61.7	5%	5	2.7	5	2.7	188,104
Chippewa County	79	213.8	9%	12	32.5	0%	1	2.7	2	5.4	36,958
Delta-Menominee	83	142.6	5%	4	6.9	0%	1	1.7	1	1.7	58,220
Dickinson-Iron	87	240.5	6%	6	16.6	0%	1	2.8	3	8.3	36,178
District 2	97	149.4	4%	11	16.9	0%	-	0.0	1	1.5	64,936
District 4	131	173.3	7%	14	18.5	0%	-	0.0	-	0.0	75,605
District 10	603	226.3	5%	167	62.7	7%	5	1.9	21	7.9	266,442
Genesee County	2,686	663.5	11%	1,721	425.2	11%	18	4.4	43	10.6	404,794
Grand Traverse County	231	246.8	4%	48	51.3	4%	1	1.1	3	3.2	93,592
Huron County	57	186.0	7%	8	26.1	25%	1	3.3	-	0.0	30,653
Ingham County	1,783	613.5	8%	977	336.2	11%	21	7.2	60	20.6	290,609
Ionia County	201	311.4	7%	90	139.4	11%	3	4.6	3	4.6	64,553
Jackson County	822	523.8	8%	426	271.5	8%	4	2.5	44	28.0	156,920
Kalamazoo County	1,895	712.4	10%	1,085	407.9	12%	67	25.2	67	25.2	265,988
Kent County	3,831	581.6	9%	1,826	277.2	10%	64	9.7	96	14.6	658,708
Lapeer County	169	192.8	7%	38	43.4	11%	1	1.1	1	1.1	87,635
Lenawee County	240	245.4	7%	74	75.7	9%	2	2.0	7	7.2	97,808
Livingston County	315	163.8	4%	49	25.5	8%	3	1.6	7	3.6	192,335
Luce-Mack-Alger-School	57	167.2	7%	6	17.6	33%	-	0.0	-	0.0	34,084
Macomb County	3,306	379.7	8%	1,401	160.9	8%	91	10.5	137	15.7	870,791
Marquette County	190	288.6	2%	17	25.8	6%	-	0.0	2	3.0	65,834
Midland County	152	182.2	8%	35	41.9	3%	-	0.0	2	2.4	83,441
Mid-Michigan District	527	287.2	7%	162	88.3	2%	3	1.6	11	6.0	183,512
Monroe County	333	221.2	4%	70	46.5	4%	3	2.0	9	6.0	150,568
Muskegon County	1,364	784.4	12%	775	445.7	10%	5	2.9	15	8.6	173,883
Northwest MI Com Hlth Agenc	207	192.3	3%	31	28.8	3%	2	1.9	4	3.7	107,661
Oakland County	3,956	315.6	7%	1,531	122.1	6%	120	9.6	196	15.6	1,253,459
Ottawa County	1,006	341.4	10%	258	87.6	6%	8	2.7	18	6.1	294,635
Saginaw County	1,249	657.8	10%	655	345.0	11%	8	4.2	10	5.3	189,868
Sanilac County	51	125.2	4%	20	49.1	0%	-	0.0	-	0.0	40,747
Shiawassee County	156	230.3	8%	68	100.4	9%	1	1.5	9	13.3	67,738
St Clair County	336	210.9	5%	158	99.2	6%	9	5.6	9	5.6	159,293
Tuscola County	98	187.4	6%	11	21.0	0%	-	0.0	1	1.9	52,289
Van Buren-Cass	396	311.7	5%	141	111.0	5%	3	2.4	7	5.5	127,058
Washtenaw County	1,452	396.2	8%	528	144.1	8%	35	9.6	39	10.6	366,473
Wayne LHD	3,956	367.9	8%	1,699	158.0	7%	99	9.2	168	15.6	1,075,254
Detroit LHD ³	10,005	1503.7	11%	6,152	924.6	10%	357	53.7	598	89.9	665,369
Western UP District	125	192.6	2%	11	16.9	0%	-	0.0	3	4.6	64,907
Total	46,265	464.2	9%	22,166	222.4	9%	980	9.8	1,661	16.7	9,966,555

1 - P&S: Primary and Secondary Syphilis

2 - Rate per 100,000 based on annual Census Bureau estimates from the American Community Survey (ACS)

3 - Detroit LHD refers to Detroit City and Hamtramck, Highland Park, the Grosse Points, and Harper Woods.

STI Diagnoses by County, 2021

Includes confirmed and probable cases

	Chlamydia			Gonorrhea			P&S Syphilis		Latent Syphilis		2020 Population ²
	count	rate	Re- infected %	count	rate	Re- infected %	count	rate	count	rate	
Alcona County	20	190.4	0%	1	9.5	0%	-	-	1	9.5	10,505
Alger County	13	144.2	8%	1	11.1	0%	-	-	-	0.0	9,015
Allegan County	317	266.6	7%	106	89.1	3%	6	5.0	7	5.9	118,927
Alpena County	68	240.8	10%	4	14.2	0%	-	-	-	0.0	28,238
Antrim County	51	217.5	4%	7	29.9	0%	1	4.3	1	4.3	23,449
Arenac County	36	240.8	6%	7	46.8	14%	-	-	1	6.7	14,953
Baraga County	22	269.5	0%	-	0.0		-	-	-	0.0	8,164
Barry County	157	253.0	8%	38	61.2	8%	3	4.8	5	8.1	62,061
Bay County	395	385.8	8%	136	132.8	8%	3	2.9	9	8.8	102,387
Benzie County	23	128.8	0%	8	44.8	0%	-	-	-	0.0	17,852
Berrien County	913	596.6	12%	531	347.0	13%	4	2.6	8	5.2	153,025
Branch County	126	290.2	11%	47	108.2	9%	3	-	-	0.0	43,424
Calhoun County	893	668.5	10%	537	402.0	9%	12	9.0	17	12.7	133,580
Cass County	164	317.9	4%	68	131.8	6%	-	-	1	1.9	51,584
Charlevoix County	39	149.4	3%	6	23.0	0%	1	-	-	0.0	26,105
Cheboygan County	43	169.5	5%	8	31.5	0%	-	0.0	-	0.0	25,365
Chippewa County	79	213.8	9%	12	32.5	0%	1	2.7	2	5.4	36,958
Clare County	61	198.2	5%	21	68.2	5%	1	3.2	1	3.2	30,771
Clinton County	223	279.6	7%	77	96.5	4%	1	1.3	5	6.3	79,753
Crawford County	19	135.9	0%	5	35.8	0%	-	-	-	0.0	13,981
Delta County	48	134.8	4%	2	5.6	0%	-	-	-	0.0	35,612
Dickinson County	61	242.9	7%	4	15.9	0%	1	-	2	8.0	25,112
Eaton County	348	315.9	4%	158	143.4	4%	5	4.5	10	9.1	110,148
Emmet County	58	174.0	5%	10	30.0	10%	-	-	1	3.0	33,342
Genesee County	2,686	663.5	11%	1,721	425.2	11%	18	4.4	43	10.6	404,794
Gladwin County	51	200.6	6%	9	35.4	0%	1	-	-	0.0	25,424
Gogebic County	34	245.6	3%	3	21.7	0%	-	-	1	7.2	13,842
Grand Traverse County	231	246.8	4%	48	51.3	4%	1	1.1	3	3.2	93,592
Gratiot County	89	220.9	7%	26	64.5	0%	1	-	4	9.9	40,283
Hillsdale County	107	234.4	7%	60	131.4	10%	1	-	-	0.0	45,658
Houghton County	59	168.0	3%	7	19.9	0%	-	-	1	2.8	35,126
Huron County	57	186.0	7%	8	26.1	25%	1	-	-	0.0	30,653
Ingham County	1,783	613.5	8%	977	336.2	11%	21	7.2	60	20.6	290,609
Ionia County	201	311.4	7%	90	139.4	11%	3	4.6	3	4.6	64,553
Iosco County	38	151.2	5%	6	23.9	0%	-	-	-	0.0	25,140
Iron County	26	235.0	4%	2	18.1	0%	-	-	1	9.0	11,066
Isabella County	275	395.7	8%	68	97.8	6%	1	1.4	3	4.3	69,504
Jackson County	822	523.8	8%	426	271.5	8%	4	2.5	44	28.0	156,920
Kalamazoo County	1,895	712.4	10%	1,085	407.9	12%	67	25.2	67	25.2	265,988
Kalkaska County	55	305.5	2%	4	22.2	25%	-	-	-	0.0	18,003
Kent County	3,831	581.6	9%	1,826	277.2	10%	64	9.7	96	14.6	658,708
Keweenaw County	2	94.4	0%	1	47.2	0%	-	-	-	0.0	2,119
Lake County	17	146.7	6%	10	86.3	0%	-	-	12	103.6	11,587
Lapeer County	169	192.8	7%	38	43.4	11%	1	1.1	1	1.1	87,635
Leelanau County	45	207.0	9%	9	41.4	0%	-	-	2	9.2	21,743
Lenawee County	240	245.4	7%	74	75.7	9%	2	2.0	7	7.2	97,808
Livingston County	315	163.8	4%	49	25.5	8%	3	1.6	7	3.6	192,335
Luce County	5	81.6	20%	1	16.3	0%	-	-	-	0.0	6,126

STI Diagnoses by County, 2021

Includes confirmed and probable cases

	Chlamydia			Gonorrhea			P&S Syphilis		Latent Syphilis		2020 Population ²
	count	rate	Re- infected %	count	rate	Re- infected %	count	rate	count	rate	
Mackinac County	27	249.1	4%	3	27.7	67%	-	-	-	0.0	10,839
Macomb County	3,306	379.7	8%	1,401	160.9	8%	91	10.5	137	15.7	870,791
Manistee County	49	198.1	6%	8	32.3	0%	-	-	-	0.0	24,738
Marquette County	190	288.6	2%	17	25.8	6%	-	0.0	2	3.0	65,834
Mason County	39	133.7	5%	7	24.0	0%	-	-	-	0.0	29,164
Mecosta County	144	328.0	4%	41	93.4	5%	4	9.1	5	11.4	43,907
Menominee County	35	154.8	6%	2	8.8	0%	1	-	1	4.4	22,608
Midland County	152	182.2	8%	35	41.9	3%	-	0.0	2	2.4	83,441
Missaukee County	25	165.0	8%	13	85.8	15%	-	-	1	6.6	15,152
Monroe County	333	221.2	4%	70	46.5	4%	3	2.0	9	6.0	150,568
Montcalm County	215	338.7	6%	59	92.9	0%	1	-	2	3.2	63,476
Montmorency County	9	96.4	0%	1	10.7	0%	-	0.0	-	0.0	9,337
Muskegon County	1,364	784.4	12%	775	445.7	10%	5	2.9	15	8.6	173,883
Newaygo County	118	239.1	7%	40	81.1	8%	1	-	2	4.1	49,348
Oakland County	3,956	315.6	7%	1,531	122.1	6%	120	9.6	196	15.6	1,253,459
Oceana County	76	283.4	7%	14	52.2	0%	-	-	-	0.0	26,819
Ogemaw County	33	157.7	3%	3	14.3	0%	-	-	-	0.0	20,923
Ontonagon County	8	141.4	0%	-	0.0		-	-	1	17.7	5,656
Osceola County	59	251.4	10%	8	34.1	0%	2	8.5	-	0.0	23,466
Oscoda County	6	71.7	17%	1	12.0	0%	-	-	-	0.0	8,368
Otsego County	59	238.2	2%	8	32.3	0%	-	0.0	2	8.1	24,765
Ottawa County	1,006	341.4	10%	258	87.6	6%	8	2.7	18	6.1	294,635
Presque Isle County	11	86.9	0%	1	7.9	0%	-	-	-	0.0	12,665
Roscommon County	29	120.9	7%	3	12.5	0%	-	-	-	0.0	23,986
Saginaw County	1,249	657.8	10%	655	345.0	11%	8	4.2	10	5.3	189,868
Sanilac County	51	125.2	4%	20	49.1	0%	-	0.0	-	0.0	40,747
Schoolcraft County	12	148.1	8%	1	12.3	0%	-	-	-	0.0	8,104
Shiawassee County	156	230.3	8%	68	100.4	9%	1	-	9	13.3	67,738
St. Clair County	336	210.9	5%	158	99.2	6%	9	5.6	9	5.6	159,293
St. Joseph County	198	325.4	6%	135	221.9	7%	1	1.6	1	1.6	60,848
Tuscola County	98	187.4	6%	11	21.0	0%	-	-	1	1.9	52,289
Van Buren County	232	307.4	5%	73	96.7	4%	3	4.0	6	7.9	75,474
Washtenaw County	1,452	396.2	8%	528	144.1	8%	35	9.6	39	10.6	366,473
Wayne County	4,585	426.4	8%	2,017	187.6	8%	125	11.6	219	20.4	1,075,254
Detroit City	9,376	1409.1	11%	5,834	876.8	10%	331	49.7	547	82.2	665,369
Wexford County	61	180.8	5%	25	74.1	12%	-	-	1	3.0	33,743
Total	46,265	464.2	9%	22,166	222.4	9%	980	9.8	1,661	16.7	9,966,555

1 - P&S: Primary and Secondary Syphilis

2 - Rate per 100,000 based on annual Census Bureau estimates from the American Community Survey (ACS)

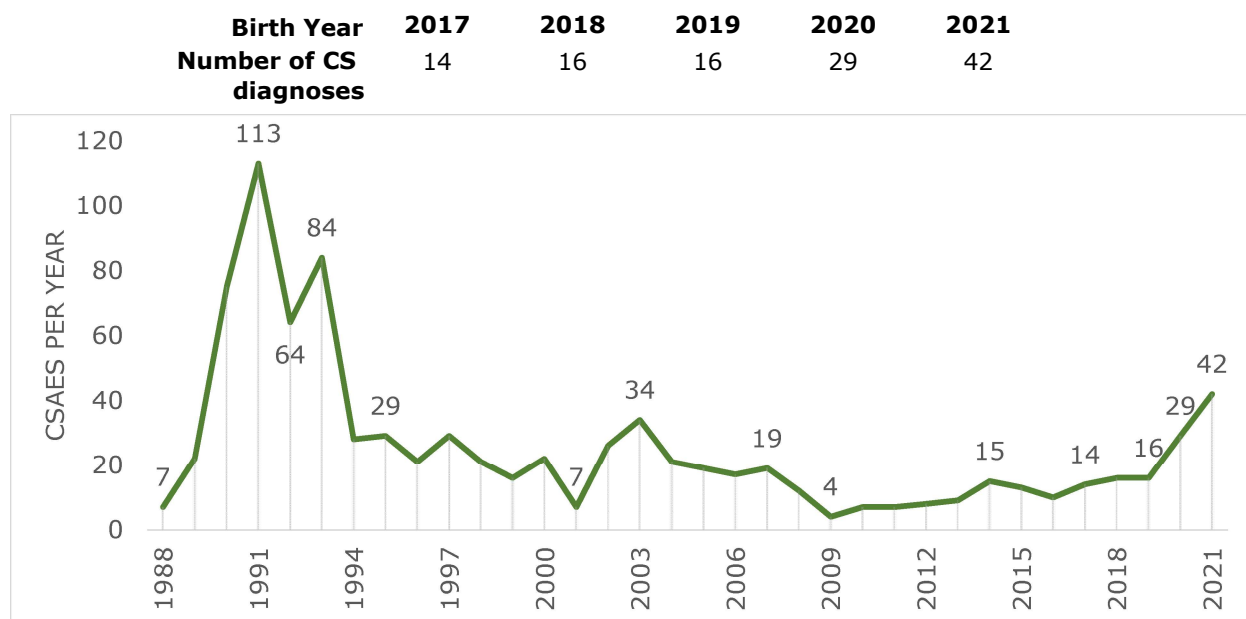
Congenital Syphilis Diagnoses, 2021

All pregnant women should be screened for syphilis in the first and third trimester, but of congenital syphilis cases in 2021, only 48% had any prenatal care. Among those in care, 10 missed having a 3rd trimester test.

Common barriers to adequate prenatal care include housing insecurity, transportation issues, drug use, mental health barriers, and a history of transactional sex.

Of moms of reported congenital cases in 2021, 43% had Hep C or other STI co-infections.

Congenital Syphilis Cases Over Time, 2016 - 2020



Congenital Syphilis Reports by Local Health Jurisdiction

	count	rate per 100,000	2020 Births*
Detroit City	22	249.7	8,811
Genesee County	1	23.3	4,297
Jackson County	1	59.1	1,692
Kalamazoo County	3	108.3	2,771
Kent County	1	12.2	8,166
Macomb County	2	22.6	8,853
Muskegon County	1	53.0	1,886
Oakland County	6	48.8	12,298
Ottawa County	1	32.4	3,086
Wayne County	4	31.0	12,916

*births data from MDHHS vital records: <https://www.mdch.state.mi.us/osr/natality/BirthsTrends.asp>