***Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences***

**Summary for Worcester County, Massachusetts, 2021**

Worcester County is a county in the Commonwealth of Massachusetts, established in 1731. In 2020, the population was 862,111, making it the second-largest county in Massachusetts in terms of population (U.S. Census Bureau, 2020\*).

**Chlamydia**

Chlamydia is the most frequently reported sexually transmitted infection (STI) both in the Commonwealth and nationally.

**Since 2011, there has been an overall increase in chlamydia cases statewide and in Worcester County, with the exception of 2020 due to COVID-19**§. In 2021, the county rate was 311.0 per 100,000, while the statewide rate was 382.8 per 100,000. These can be compared to the national rate of 495.5 per 100,000.‡

**The county incidence rate among women remained higher** compared to men. In 2021, the incidence rate of chlamydia among women in Worcester County (413.0 per 100,000) was double that of men (205.0 per 100,000).

Incidence rate of reported chlamydia cases per 100,000 population by gender, Worcester County, MA, 2011-2021.

Graph above depicts chlamydia rates (per 100,000) in MA and Worcester County by gender between 2011 and 2021. There are four lines: (1) MA rates begins at 345.2 and finishes at 382.8; (2) Worcester County rates begins at 288.5 and finishes at 311.0; (3) Worcester women rates begin at 409.6 and finishes at 413.0; (4) Worcester men rates begin at 163.3 and finish at 205.0.


Data are current as of 10/24/2022 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2011 through 2020 report, Oct 2016.

Data source: Massachusetts Department of Public Health/Bureau of Infectious Disease and Laboratory Sciences/Division of STD Prevention.

**The chlamydia statewide and county incidence rate is highest among young adults**. In 2021, the incidence rate of chlamydia was highest among 20 to 24-year-olds in Worcester County (1,757.9 per 100,000).

**Gonorrhea**

Gonorrhea is the second most frequently reported STI both in the Commonwealth and nationally.

**Since 2011, there has been an overall increase in gonorrhea cases statewide and in Worcester County.** In 2021, the county rate was 82.8 per 100,000, while the overall state rate was 115.2 per 100,000. These can be compared to the national rate of 214.0 per 100,000.‡

**The incidence rate among men remained higher** compared to women in Worcester County. In 2021, men accounted for 61.2% of all gonorrhea cases in 2021 with a rate of 102.9 per 100,000 while women had a rate of 63.4 per 100,000.

Incidence rate of reported gonorrhea cases per 100,000 population by gender, Worcester County, MA, 2011-2021.

Graph above depicts gonorrhea rates (per 100,000) in MA and Worcester County by gender between 2011 and 2021. There are four lines: (1) MA rates begins at 35.4 and finishes at 115.2; (2) Worcester County rates begins at 28.8 and finishes at 82.8; (3) Worcester women rates begin at 26.9 and finishes at 63.4; (4) Worcester men rates begin at 30.8 and finish at 102.9.


Data are current as of 10/24/2022 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2011 through 2020 report, Oct 2016.

Data source: Massachusetts Department of Public Health/Bureau of Infectious Disease and Laboratory Sciences/Division of STD Prevention.

**The gonorrhea statewide and county incidence rate is highest among young adults.** In 2021, the number of cases and the incidence rate of gonorrhea in Worcester County was highest among 25 to 29-year-olds (278.7 per 100,000).

Incidence rate of reported gonorrhea cases per 100,000 population by gender and age, Statewide, MA, 2011, 2021.

This graph shows the highest gonorrhea rate among men in 2011 was in the 20-24 year-old age group, which shifted to the 25-29-year-old age group by 2021. Among women, the age group with the highest gonorrhea rate was 20-24-year-olds during 2011 and 2021. 


Data are current as of 10/24/2022 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2011 through 2020 report, Oct 2016.

Data source: Massachusetts Department of Public Health/Bureau of Infectious Disease and Laboratory Sciences/Division of STD Prevention

**Early Syphilis◊**

Early syphilis has been on the rise in the Commonwealth and nationally since the early 2000s.‡

**Since 2011, the statewide and county rate of reported early syphilis has increased** In 2021, the county rate was 13.9 per 100,000, while the statewide rate was 19.2 per 100,000. These can be compared to the national rate of 31.8 per100,000.‡

**In 2021, the county rate of reported early syphilis among men was much higher** compared to that among women. Men accounted for 90.0% of all early syphilis cases in Worcester County with a rate of 25.4 per 100,000, nearly tenfold that of women with a rate of 2.7 per 100,000.

Incidence rate of early syphilis cases per 100,000 population by gender, Worcester County, MA, 2011-2021.

Graph above depicts syphilis rates (per 100,000) in MA and Worcester County by gender between 2011 and 2021. There are four lines: (1) MA rates begins at 7.6 and finishes at 19.2; (2) Worcester County rates begins at 5.0 and finishes at 13.9; (3) Worcester women rates begin at 1.2 and finishes at 2.7; (4) Worcester men rates begin at 8.8 and finish at 25.4.


Data are current as of 10/24/2022 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2011 through 2020 report, Oct 2016.

Data source: Massachusetts Department of Public Health/Bureau of Infectious Disease and Laboratory Sciences/Division of STD Prevention.

**In 2021, the highest incidence rate of early syphilis in Worcester County was reported among 30 to 34-year-olds** (46.8 per 100,000).

Incidence rate of reported early syphilis per 100,000 population by gender and age, Statewide, MA, 2011, 2021.

This graph shows the highest early syphilis rate among men in 2011 and 2021 was in the 30-34-year-old age group. Among women, the age group with the highest early syphilis rate was the 25-29-year-olds in 2011 and 2021.


Data are current as of 10/24/2022 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2011 through 2020 report, Oct 2016.

Data source: Massachusetts Department of Public Health/Bureau of Infectious Disease and Laboratory Sciences/Division of STD Prevention

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\* 2020 population estimates were used to calculate 2021 disease rates throughout this report because 2021 population estimates had not been released at the time this report was published.

‡ Source: CDC: Sexually Transmitted Disease Surveillance, 2021.

◊ Early syphilis is defined as primary, secondary and early syphilis not diagnosed in the primary or secondary stages within one year of infection.

§ Please note the impact of the COVID-19 pandemic on infectious disease screening, treatment, and surveillance in the interpretation of 2020 and 2021 data.

**2021 Statewide Massachusetts**

Chlamydia cases have increased by 38% from 2011 to 2019 and decreased by 22% in 2020 before increasing by 9% in 2021. This is possibly due to factors such as increased service utilization after health care clinics re-opened following the end of the COVID-19 public health emergency.

Gonorrhea cases have increased 245% from 2011 to 2021 and was reported primarily among men.

Early syphilis cases have increased 170% from 2011 to 2021. From 2016 to 2021, a range of 31% to 39% of early syphilis cases were co-infected with HIV. In 2019, 2020, and 2021 congenital syphilis cases numbered 9, 10, and 9, respectively, after remaining between 0 and 4 from 2011 to 2018.