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

**Summary for Middlesex County, Massachusetts, 2022**

Middlesex County is a county in the Commonwealth of Massachusetts. In 2020, the population was 1,632,002, making it the most populous county in Massachusetts (U.S. Census Bureau, 2020\*).

**Chlamydia**

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

**Since 2012, there has been an overall increase in reported chlamydia cases statewide except for 2020 due to COVID-19†, ranging from 23,930 cases in 2012 to 28,384 cases in 2022**. Middlesex County also experienced an overall increase in reported chlamydia cases, ranging from 3,696 in 2012 to 4,975 in 2022. In 2022, the county incidence rate of chlamydia infection 304.8 per 100,000, while the statewide rate was 403.8 per 100,000.These can be compared to the national rate of 495.0 per 100,000.‡

Incidence rate of reported chlamydia cases per 100,000 population by sex, Middlesex County, MA, 2012–2022.

Graph above depicts chlamydia rates (per 100,000) in MA and Middlesex County by sex between 2012 and 2022. There are four lines: (1) MA rates begins at 358.5 and finishes at 403.8; (2) Middlesex County rates begins at 239.3 and finishes at 304.8; (3) Middlesex female rates begin at 321.8 and finishes at 341.1; (4) Middlesex male rates begin at 151.6 and finish at 264.5.

Data are current as of 12/15/2023 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2012 through 2020 report, Oct 2016.

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

**The county incidence rate among females remained higher** compared to males. In 2022, the incidence rate of chlamydia among females in Middlesex County was 341.1 per 100,000 while that of males was 264.5 per 100,000.

**The chlamydia statewide and county incidence rate is highest among young adults.** In 2022, the incidence rate of chlamydia was highest among 20 to 24-year-olds in Middlesex County (1,499.7 per 100,000).

**Gonorrhea**

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

**Since 2012, there has been an overall increase of reported gonorrhea cases statewide, ranging from 2,665 cases in 2012 to 9,129 cases in 2022**. Middlesex County also experienced an overall increase of reported gonorrhea cases, ranging from 377 in 2012 to 1,593 in 2022. In 2022, the county incidence rate of gonorrhea infection was 97.6 per 100,000, while the overall state rate was 129.9 per 100,000.These can be compared to the national rate of 194.4 per 100,000.‡

**The county incidence rate among males remained higher** compared to females. In 2022, males accounted for 78.4% of all gonorrhea cases in Middlesex County with a rate of 155.0 per 100,000 while females had a rate of 40.9 per 100,000.

Since 2014, the male Middlesex County incidence rate surpassed the overall statewide gonorrhea rate with the exception of 2017.

Incidence rate of reported gonorrhea cases per 100,000 population by sex, Middlesex County, MA, 2012–2022.

Graph above depicts gonorrhea rates (per 100,000) in MA and Middlesex County by sex between 2012 and 2022. There are four lines: (1) MA rates begins at 39.9 and finishes at 129.9; (2) Middlesex County rates begins at 24.4 and finishes at 97.6; (3) Middlesex female rates begin at 15.5 and finishes at 40.9; (4) Middlesex male rates begin at 33.7 and finish at 155.0.

Data are current as of 12/15/2023 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2012 through 2020 report, Oct 2016.

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

**In 2022, the gonorrhea incidence rate in Middlesex County is highest among 20-to-24-year-olds** (316.1 per 100,000).

Incidence rate of reported gonorrhea cases per 100,000 population by sex and age, Statewide, MA, 2012, 2022.

This graph shows the highest gonorrhea rate among males in 2012 was in the 20–24-year-old age group, which shifted to the 35–39-year-old age group by 2022. Among females, the age group with the highest gonorrhea rate was 20–24-year-olds during 2012 and 2022. 


Data are current as of 12/15/2023 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2012 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 2012, there has been an overall increase of reported early syphilis** **cases statewide, ranging from 561 cases in 2012 to 1,593 cases in 2022**. Middlesex County also experienced an overall increase of reported early syphilis cases, ranging from 87 in 2012 to 341 in 2022.

**Since 2012, the statewide and county rates of reported early syphilis have continued to increase in similar fashion.** In 2022, the county incidence rate of early syphilis infection was slightly lower than the statewide rate at 20.9 per 100,000 compared to 22.7 per 100,000, respectively. These can be compared to the national rate of 41.2 per100,000.‡

**The county rate of early syphilis among males was much higher** compared to the rate among females. In 2022, males accounted for 88.9% of all early syphilis cases with a rate of 37.9 per 100,000, more than eight times that of females (4.6 per 100,000).

Incidence rate of early syphilis cases per 100,000 population by sex, Middlesex County, MA, 2012–2022.

Graph above depicts syphilis rates (per 100,000) in MA and Middlesex County by sex between 2012 and 2022. There are four lines: (1) MA rates begins at 8.4 and finishes at 22.7; (2) Middlesex County rates begins at 5.6 and finishes at 20.9; (3) Middlesex female rates begin at 0.9 and finishes at 4.6; (4) Middlesex male rates begin at 10.6 and finish at 37.9.

Data are current as of 12/15/2023 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2012 through 2020 report, Oct 2016.

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

**In 2022, the highest incidence rate of early syphilis in Middlesex County was reported among 30-to-34-year-olds** (57.6 per 100,000).

Incidence rate of reported early syphilis per 100,000 population by sex and age, Statewide, MA, 2012, 2022.

This graph shows the highest early syphilis rate among males in 2012 and 2022 was in the 30–34-year-old age group. The highest early syphilis among females in 2012 was in the 25–29-year-old age group, which shifted to the 35–39-year-old age group by 2022. 

Data are current as of 12/15/2023 and are subject to change.

Population denominators: Strate S, et al. Small Area Population Estimates for 2012 through 2020 report, Oct 2016.

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

**2022 Statewide Massachusetts**

Chlamydia cases have increased by 32% from 2012 to 2019 and decreased by 22% in 2020. From 2020 to 2022, there was a 15% increase in cases. This is possibly due to factors such as increased service utilization after health care clinics reopened following the end of the COVID-19 public health emergency.

Gonorrhea cases have increased 243% from 2012 to 2022 and was reported primarily among males.

Early syphilis cases have increased 184% from 2012 to 2022. From 2017 to 2022, a range of 25% (in 2022) to 37% (in 2017) of early syphilis cases were co-infected with HIV. In 2020, 2021, and 2022 congenital syphilis cases numbered 10, 9, and 11, respectively, after remaining between 0 and 4 from 2011 to 2018.

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\*2020 population estimates were used to calculate 2022 disease rates throughout this report because 2022 population estimates had not been released at the time this report was published.

†Please note the impact of the COVID-19 pandemic on infectious disease screening, treatment, and surveillance in the interpretation of 2020 and 2022 data.

‡Source: CDC: Sexually Transmitted Disease Surveillance, 2022.

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