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

**Summary for Essex County, Massachusetts, 2022**

Essex County is a county in the Commonwealth of Massachusetts, established in 1685. In 2020, the population was 809,829 making it the third-largest county in terms of population 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.** Essex County also experienced an overall increase in reported chlamydia cases, ranging from 2,728 in 2012 to 3,462 in 2022**.** In 2022, the county incidence rate of chlamydia infection was 427.5 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, Essex County, MA, 2012–2022.

Graph above depicts chlamydia rates (per 100,000) in MA and Essex County by sex between 2012 and 2022. There are four lines: (1) MA rates begins at 358.5 and finishes at 403.8; (2) Essex County rates begins at 359.5 and finishes at 427.5; (3) Essex female rates begin at 508.9 and finishes at 566.9; (4) Essex male rates begin at 196.4 and finish at 275.5.


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 Essex County was 566.9 per 100,000, nearly double that of males (275.5 per 100,000).

Since 2012, the county incidence rate of chlamydia among females in Essex County was consistently higher than the overall statewide incidence rate.

**The chlamydia statewide and county incidence rate is highest among young adults.** In 2022, the number of cases and the incidence rate of chlamydia in Essex County was highest among 20-to-24-year-olds (2,502.3 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, ranging from 2,665 cases in 2012 to 9,129 cases in 2022**. Essex County also experienced an overall increase of reported gonorrhea cases, ranging from 175 in 2012 to 711 in 2022. In 2022, the county incidence rate of gonorrhea infection was 87.8 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 60.6% of all gonorrhea cases in Essex County with a rate of 110.2 per 100,000 that was nearly double that of females (66.7 per 100,000).

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

Graph above depicts gonorrhea rates (per 100,000) in MA and Essex County by sex between 2012 and 2022. There are four lines: (1) MA rates begins at 39.9 and finishes at 129.9; (2) Essex County rates begins at 23.1 and finishes at 87.8; (3) Essex female rates begin at 19.8 and finishes at 66.7; (4) Essex male rates begin at 26.6 and finish at 110.2.


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 gonorrhea county and statewide incidence rate is highest among young adults.** In 2022, the number of cases and incidence rate in Essex County was highest among 20-to-24-year-olds (320.0 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 male 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, the rate of reported syphilis in Essex County has seen an overall increase, with peaks in 2016, 2019, and 2022**. In 2022, the county incidence rate of reported early syphilis infection was 17.9 per 100,000, while the statewide rate was 22.7 per 100,000. These can be compared to the national rate of 41.2 per100,000.‡

**The county incidence rate of early syphilis among males was much higher** compared to the rate among females. In 2022, males accounted for 85.5% of all early syphilis cases in Essex County, with a rate of 31.8 per 100,000 that was six times that of females (5.0 per 100,000).

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

Graph above depicts syphilis rates (per 100,000) in MA and Essex County by sex between 2012 and 2022. There are four lines: (1) MA rates begins at 8.4
and finishes at 22.7; (2) Essex County rates begins at 5.4 and finishes at 17.9; (3) Essex female rates begin at 0.0 and finishes at 5.0; (4) Essex male rates begin at 11.2 and finish at 31.8.


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 Essex County was reported among 30-to-34-year-olds** (62.7 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 re-opened 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.