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

**Summary for Essex County, Massachusetts, 2021**

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 2011, there has been an overall increase in chlamydia cases statewide and in Essex County, with the exception of 2020 due to COVID-19**§. In 2021, the county rate was 421.7 per 100,000, while the statewide rate was 382.8 per 100,000. These can be compared to the national rate of 495.5 per100,000.‡

**The county incidence rate among women remained higher compared to men.** In 2021, the incidence rate of chlamydia among women in Essex County was 545.9 per 100,000, nearly double that of men (280.3 per 100,000).

Since 2011, the county incidence rate of chlamydia among women in Essex County was consistently higher than the overall statewide incidence rate.

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

Graph above depicts chlamydia rates (per 100,000) in MA and Essex County by gender between 2011 and 2021. There are four lines: (1) MA rates begins at 345.2 and finishes at 382.8; (2) Essex County rates begins at 327.7 and finishes at 421.7; (3) Essex women rates begin at 453.2 and finishes at 545.9; (4) Essex men rates begin at 191.1 and finish at 282.7.**

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 number of cases and the incidence rate of chlamydia in Essex County was highest among 20 to 24-year-olds (2,589.1 per 100,000).

**Gonorrhea**

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

**Since 2011, the overall Massachusetts rate of Since 2011, there has been an overall increase in gonorrhea cases statewide and in Essex County.** In 2021, the county rate was 89.2 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 county incidence rate among men remained higher** compared to women. In 2021, men accounted for 61.8% of all gonorrhea cases in Essex County with a rate of 114.3 per 100,000 that was nearly double that of women (65.8 per 100,000).

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

Graph above depicts gonorrhea rates (per 100,000) in MA and Essex County by gender between 2011 and 2021. There are four lines: (1) MA rates begins at 35.4 and finishes at 115.2; (2) Essex County rates begins at 26.3 and finishes at 89.2; (3) Essex women rates begin at 24.8 and finishes at 65.8; (4) Essex men rates begin at 27.9 and finish at 114.3.
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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 county and statewide incidence rate is highest among young adults.** In 2021, the number of cases and incidence rate in Essex County was highest among 20 to 24-year-olds (368.2 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 rate of reported syphilis in Essex County has seen an overall increase, with peaks in 2016 and 2019**. In 2021, the county rate was 13.2 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.‡

**The county incidence rate of early syphilis among men was much higher** compared to the rate among women. In 2021, men accounted for 91.6% of all early syphilis cases in Essex county, with a rate of 25.1 per 100,000 that was ten times that of women (2.1 per 100,000).

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

Graph above depicts syphilis rates (per 100,000) in MA and Essex County by gender between 2011 and 2021. There are four lines: (1) MA rates begins at 7.6 and finishes at 19.2; (2) Essex County rates begins at 4.1 and finishes at 13.2; (3) Essex women rates begin at 1.0 and finishes at 2.1; (4) Essex men rates begin at 7.5 and finish at 25.1.


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 Essex County was reported among 25 to 29-year-olds** (37.6 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.