Chlamydia and Gonorrhea: Shifting Age-Based Positivity Among Young Females, 2010-2017

Background
- Sexually transmitted infections of Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) are usually asymptomatic and, thus, underdiagnosed. Failure to treat these infections can lead to serious complications that affect fertility and pregnancy.¹
- Current recommendations for CT and NG infection screening in the United States are based on age and other risk factors for infection.²,³
- Sexual practices have changed in the last decade in the United States, with younger females reporting less sexual activity and women having their first birth at older ages.⁴,⁵

These evolving sexual practices may change risk of exposure to CT and NG.

Objective: Using data from a national reference laboratory, investigators examined changes in CT and NG positivity rates over an 8-year period (2010-2017) among females in different age groups in the United States.

Methods
- This retrospective study analyzed deidentified results for 17,794,680 specimens submitted to Quest Diagnostics for CT/NG co-testing. Specimens were from females aged 12 to 30 years and submitted from 2010 to 2017.
- CT and NG positivity rates were assessed over time and examined by age groups: 12 to 17, 18 to 24, and 25 to 30 years of age.
- Trends over time were analyzed.

Results
- From 2010 to 2017, annual positivity rates increased for both CT and NG in the overall study population (both P<0.0001 for trend).
  - CT positivity rates increased by 18% (4.9% to 5.8%).
  - NG positivity rates increased by 33% (0.7% to 0.9%).
- For both CT and NG, positivity decreased in the youngest age group and increased in the 2 older age groups from 2010 to 2017 (all P<0.0001).
  - CT
    ▫ 12 to 17 years: decreased 17% (8.9% to 7.4%)
    ▫ 18 to 24 years: increased 21% (6.1% to 7.4%)
    ▫ 25 to 30 years: increased 50% (2.2% to 3.3%)
  - NG
    ▫ 12 to 17 years: decreased 14% (1.3% to 1.2%)
    ▫ 18 to 24 years: increased 27% (0.8% to 1.0%)
    ▫ 25 to 30 years: increased 117% (0.3% to 0.6%)

Conclusions
- These data from a national US reference laboratory indicate that, from 2010 to 2017, annual CT/NG positivity rates increased among females 12 to 30 years of age.
- However, positivity shifted towards older ages, declining among females 12 to 17 years of age and increasing among women 18 to 30 years of age.
- These trends in CT/NG positivity may inform prevention and control strategies.

References