

Women's Health

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Increasing Prevalence of Common Sexually Transmitted Infections (STIs)

The COVID-19 pandemic in early 2020 focused the world's attention towards developing diagnostics, treatments and infection prevention measures to contain the novel SARS-CoV-2 coronavirus.¹ However, prior to the emergence of this virus, the United States was in the midst of a precipitous rise of common STIs, including chlamydia and gonorrhea. Between 2014 and 2018, reported cases of chlamydia and gonorrhea rose 19% and 63%, respectively.¹

Increasing rates of CT/GC between 2014 and 2018, United States

Figure 1. Chlamydia—Rates per 100,000 reported cases by sex, United States, 2009–2018¹

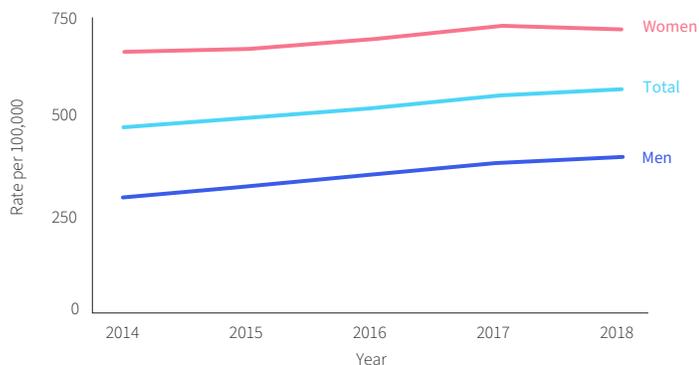
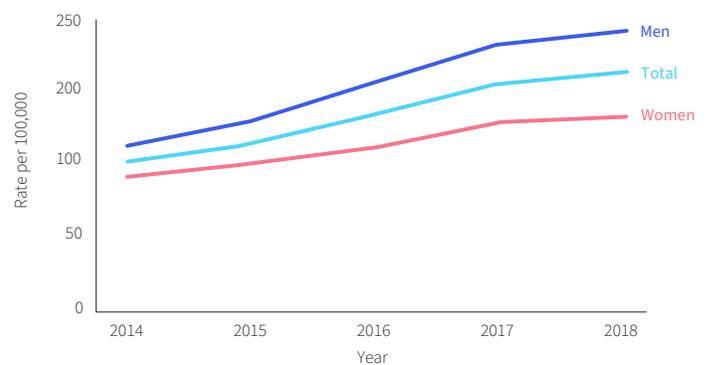


Figure 2. Gonorrhea—Rates per 100,000 reported cases by sex, United States, 2009–2018¹



In response to the rising incidence of these STIs, the Department of Health and Human Services released the STI National Strategic Plan: 2021-2025. The plan outlined five high level goals and several specific objectives to address the rising prevalence of STIs in the United States. Achieving each goal, listed in Table 1, requires integration and coordination between relevant stakeholders, including patients, clinicians, public health authorities, laboratories, and pharmaceutical and medical device developers.

Table 1. High Level Goals and Objectives of the STI National Strategic Plan¹

Goal Focus	
1	Prevent New STIs
2	Improve the Health of People by Reducing Adverse Outcomes of STIs
3	Accelerate Progress in STI Research, Technology and Innovation
4	Reduce STI-Related Health Disparities and Health Inequities
5	Achieve Integrated, Coordinated Efforts that Address the STI Epidemic

The array of current diagnostics and future developments in the medical device arena are key tenets required to fulfill the objectives of the STI National Strategic Plan: 2021-2025. Below, we summarize the current state of diagnostics for the STIs identified in the STI National Strategic Plan and outline future opportunities for their improvement.

Chlamydia

C. trachomatis is the most common bacterial STI in the United States with 1,758,668 cases reported in 2018, with rates increasing in all geographic regions of the United States. The majority of cases (80%) were reported from non-STD clinic settings and females between 15 and 24 accounted for nearly half (44%) of the reported infections. *C. trachomatis* infection disproportionately impacts females of reproductive age, adolescents and minorities. Infection is often asymptomatic and if not treated, can result in pelvic inflammatory disease, infertility, ectopic pregnancy and chronic pelvic pain. Screening for chlamydial infection is especially important to detect asymptomatic infection in those most at risk, including sexually active females under 25, females over 25 at increased risk for an STI and men who have sex with men (MSM).¹

The most effective way to screen for *C. trachomatis* is through the use of nucleic acid amplification tests (NAAT), which include transcription-mediated amplification (TMA) or polymerase chain reaction (PCR). These two forms of NAAT are equally sensitive for the detection of *C. trachomatis* and several have FDA clearance to be used for samples collected from a variety of anatomical sites, including urogenital and rectal and pharyngeal in both symptomatic and asymptomatic patients. Despite the widespread availability of accurate diagnostics, screening rates for chlamydia remain below desired targets.²

Gonorrhea

Gonorrhea is the second most common bacterial STI in the United States with 583,405 cases reported in 2018. A dramatic increase (137%) in incidence was observed in MSM between 2014 and 2018. The bacteria that is responsible for infection, *Neisseria gonorrhoeae*, infects mucous membranes in the genital tracts of males and females, as well as the oropharynx. Ocular and disseminated infections (blood, CSF and synovial fluid) are serious complications of this STI. Infections may be asymptomatic, especially in women, resulting in similar sequelae to chlamydial infections. Gonorrhea is typically treated with antibiotics, however, antimicrobial resistance in *N. gonorrhoeae* is an increasing problem that renders some treatment regimens ineffective. Rapid, accurate identification and treatment of gonorrheal infection is important in combating antimicrobial resistance.¹

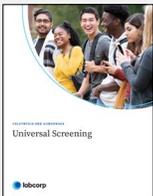
The screening recommendations for gonorrhea are aligned with chlamydia. NAATs are also widely available for the diagnosis of gonorrhea from a variety of sample types. Many NAATs are optimized to detect *C. trachomatis* and *N. gonorrhoeae* from a single sample.²

Laboratory Testing Challenges and Opportunities

The significant increases in reported cases of chlamydia and gonorrhea that have occurred within the last decade require bold initiatives to detect and treat STIs. Access to high quality testing supports each goal outlined in the STI National Strategic Plan: 2021-2025. Some NAATs for *C. trachomatis* and *N. gonorrhoeae* allow for patient self-collections within healthcare settings.¹ This collection modality reduces the barrier for acceptance of STI screenings. It is anticipated that home collection of samples for STI testing will become a reality in the future and create greater access to screening.

New diagnostic tests such as those that can detect antimicrobial resistance in *Neisseria gonorrhoeae* will be critical to support recommendations for appropriate antimicrobial use.¹ Near-patient or point of care direct detection assays that are highly sensitive, specific and cost-effective for various STIs are needed to rapidly detect STIs.

The newly released “Sexually Transmitted Infections Treatment Guidelines, 2021” from the CDC advocates for a new approach to screening for *C. trachomatis* and *N. gonorrhoeae* by introducing the concept of “opt-out testing”.² Per the updated CDC guidelines, “Providers might consider opt-out chlamydia and gonorrhea screening (i.e., the patient is notified that testing will be performed unless the patient declines, regardless of reported sexual activity) for adolescent and young adult females during clinical encounters.” Access to timely, accurate and convenient testing options supports this new recommendation.



Labcorp is proud to be at the forefront for offering a comprehensive suite of STI testing options. For more information on test options and how our STI portfolio can support the goals of the STI National Strategic Plan: 2021 – 2025, [click here](#).

October Health Awareness Calendar

- Breast Cancer Awareness Month
- National Mental Illness Awareness Week (Oct 3-9)
- Child Health Day (Oct 4)
- National Primary Care Week (Oct 4-8)
- World Mental Health Day (Oct 10)
- Pregnancy and Infant Loss Remembrance Day (Oct 15)
- National Health Education Week (Oct 18-22)
- Spina Bifida Awareness Month
- National Down Syndrome Awareness Month



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References

1. Sexually Transmitted Infections National Strategic Plan for the United States | 2021–2025. <https://www.hhs.gov/programs/topic-sites/sexually-transmitted-infections/plan-overview/toolkit/index.html>. Accessed August 18, 2021.
2. Sexually Transmitted Infections Treatment Guidelines, 2021. <https://www.cdc.gov/std/treatment-guidelines/default.htm>. Accessed July 29, 2021.