Improve Antibiotic Stewardship with Point of Care STI testing

The Problem: Over-treatment

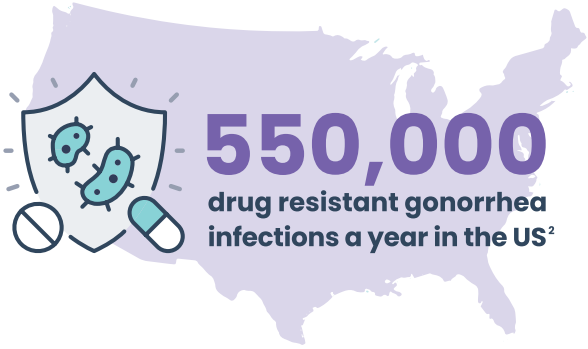
One of the major clinical dilemmas regarding the treatment of STIs is that most have similar symptoms but different treatment guidelines. When diagnostic results are not rapidly available, clinicians must rely on their medical experience to guess the correct diagnosis and treatment while they wait for lab results. Incorrect treatment may cause negative side effects to patients and promote antibiotic resistance negatively impacting public health.

Patient impact

Antibiotic use disrupts the natural microbiome thus making patients susceptible to opportunistic infections, such as **diarrhea, Candidiasis and Clostridium difficile infections**. Antibiotics can also have toxic side effects that in some patients may be severe or even fatal.

Public health impact

The CDC states that there are an estimated 550,000 drug resistant gonorrhea infections a year in the US, costing $133M. Gonorrhea develops resistance to new drugs quickly and therefore there is only one remaining class of antibiotics recommended to treat this infection. Untreated gonorrhea may lead to PID, ectopic pregnancy and infertility.[1]



Call to action

More action is needed to address antibiotic resistance.

The CDC encourages health care providers to improve antibiotic prescribing and stopping the spread of resistance to protect American lives now and in the future.[1,2]

The Solution: Rapid STI diagnosis

In a recent study[3], an urgent care clinic compared the standard of care (SOC) send-out STI testing method with rapid point of care test from Visby Medical.

The SOC laboratory test took an average of **six days** to return test results to the clinic. The Visby Medical Sexual Health Click test took about **45 minutes** in a single visit.

Accurate STI results available during the patient visit enables clinicians to utilize the correct antibiotics for these infections, reducing the circulation of unnecessary drugs that contribute to growing antibiotic resistance.

Treatment based on the rapid POC Visby STI panel results could have prevented 100% of cases of overtreatment and 87% of cases of undertreatment.

True PCR results in

28 Minutes

Lab-based PCR tests

6 Days

1) Centers for Disease Control and Prevention. (2021, September 8). *Core elements of outpatient antibiotic stewardship*. Centers for Disease Control and Prevention. Retrieved January 27, 2022, from https://www.cdc.gov/antibiotic-use/core-elements/outpatient.html

2) Centers for Disease Control and Prevention. (2021, November). *Drug-Resistant Neisseria Gonorrhoeae. Centers for Disease Control and Prevention*. Retrieved January 27, 2022, from https://www.cdc.gov/drugresistance/pdf/threats-report/gonorrhea-508.pdf. Full report: https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf

3) Dawkins, Megan PA1; Bishop, Lisa DNP1; Walker, Paula MV (DVM)2; Otmaskin, Danielle BS2; Ying, Julia MS2; Schmidt, Ryan MBA2; Harnett, Glenn MD3; Abraham, Teresa PhD2; Gaydos, Charlotte A. MS, MPH, DrPH4; Schoolnik, Gary MD2; DiBenedetto, Kevin MD1 Clinical Integration of a Highly Accurate PCR Point-of-care Test Can Inform Immediate Treatment Decisions for Chlamydia, Gonorrhea and Trichomonas, Sexually Transmitted Diseases: November 22, 2021 - Volume - Issue - doi: 10.1097/OLQ.0000000000001586 Full PDF: https://journals.lww.com/stdjournal/Abstract/9000/Clinical_Integration_of_a_Highly_Accurate_PCR.97546.aspx

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