Management of Patients with Sexually Transmitted Infections in the Emergency Department

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KEYWORDS

• Gonorrhea • Chlamydia • Syphilis • Public health • Pelvic inflammatory disease

KEY POINTS

- Sexually transmitted infections (STI) are very common infections in the United States.
- Most patients with STIs are evaluated and treated in primary care settings; however, many also present to the emergency department (ED) for initial care.
- Management of STIs in the ED includes appropriate testing and treatment per Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines.
- Although most patients with STIs are asymptomatic or may only exhibit mild symptoms, serious complications from untreated infection are possible.
- Pregnant women with STIs are particularly vulnerable to serious complications; therefore, empiric ED treatment combined with close follow-up care and referral to obstetrics are paramount.

INTRODUCTION

Epidemiology and National Trends

Sexually transmitted infections (STIs) are the most common infections in the United States and include human papilloma virus, *Neisseria gonorrhoeae* (GC), *Chlamydia trachomatis* (Ct), herpes simplex virus (HSV), syphilis, human immunodeficiency virus (HIV), and others. In recent years, STIs have been increasing at significant rates especially among adolescents, pregnant women, and high-risk groups such as men who have sex with men (MSM). Syphilis, once targeted for elimination, increased 17.6% from 2015 to 2016.[1] Congenital syphilis rates increased 38% from 2012 to 2014[2] followed by an additional 27.6% from 2015 to 2016.[1]

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STIs are largely ambulatory illnesses, but the care of patients with STIs can often fall on emergency departments (ED) when health care access is limited or complications occur. Although most STIs are cared for in the primary care setting, 7% to 16% are managed in the ED.[3,4] Surveillance data indicate that STI visits to EDs are increasing[5] during the same time that public health funding has decreased and traditional sexually transmitted diseases (STD) clinics have closed. Health care access for patients at highest risk for STIs (ie, the young and healthy) can be challenging. In addition, although women may have access to health care via family planning, men are more likely than women to present to an ED for STI care.[3]

Role of the Emergency Department in the Care of Patients with Sexually Transmitted Infections

STIs are largely asymptomatic, and screening for STIs in an ED can be challenging while managing acute medical problems. ED providers are less likely to screen patients for STIs than providers in other health care settings[6] likely because of concerns about cost and test result follow-up. Most patients are evaluated and treated for STIs in the ED based on their symptoms and/or chief complaint, such as dysuria or vaginal/penile discharge. Considering the high rate of asymptomatic infections, however, it is likely that many infections go undiagnosed and therefore untreated. This is the concern for under treated STIs underscores the importance of knowing local disease prevalence, having a high index of clinical suspicion, and maintaining a low threshold to treat patients for STIs.

ED providers are likely to encounter patients presenting with symptoms such as vaginal or penile discharge or dysuria for which STIs are included in the differential. Testing for STIs even when test results are not immediately available is advised over syndromic management without testing.[7] Nucleic acid amplification tests (NAATs) are highly specific and sensitive and can direct postvisit management and improve patient health in the following ways:

- Patients who know they have tested positive for an STI in the ED may be less likely to acquire an STI in the future. In a study of adolescent women, those who were aware of their test results had a lower rate of return to the ED for subsequent STI diagnoses.[8]
- Many symptomatic STIs self-resolve without treatment, giving patients a false sense of security. Undiagnosed and untreated infections can still lead to permanent sequalae over time (eg, pelvic inflammatory disease [PID], infertility).
- For patients who have recurrent symptoms, testing is especially important in directing appropriate management, including consideration of drug-resistant infections or other STIs.
- When testing yields a specific STI diagnosis, patients can more accurately direct their partners to care. Expedited partner therapy (EPT), available in some states, requires diagnosis of an STI and is a method of reducing reinfection rates.[9]
- A diagnosis of STI may be an indication for preexposure prophylaxis (PrEP) to prevent HIV infection. Empiric STI treatment without testing can hamper referral for PrEP.
- Public health efforts to address STIs on a population level are best guided by epidemiologic data. STI treatment without testing impairs accurate determination of STI prevalence and incidence.

A comprehensive approach to patients with STIs in any setting is to conduct a sexual history test based on symptoms and physical examination and then treat the patient as indicated. A sexual history can be as simple as asking, “Tell me about your sex