

Transcript Details

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The Rise of Sexually Transmitted Infections in the US – Why Diagnosis Methods Need to Change

Narrator Intro:

You're listening to ReachMD. Welcome to this medical industry feature sponsored by Cepheid, titled The Rise of Sexually Transmitted Infections in the US: Why Diagnosis Methods Need to Change. This program is intended for physicians.

Dr. Russell:

Sexually transmitted infections, in particular, chlamydia and gonorrhea, are on the rise in the U.S. presenting some challenges with how these diseases are managed. Patients may be either over-treated or under-treated resulting in a continuous spread of infection and development of a drug-resistant strain of gonorrhea which is also on the rise. Today we will explore how new diagnostics can aid healthcare providers in the promotion of evidence-based medicine.

I am your host, Dr. John Russell, and I would like to welcome my guest, Dr. Jeffrey Klausner, to the program. Dr. Klausner is Professor of Medicine and Public Health at UCLA's David Geffen School of Medicine. He joins me to share insights on the rise of sexually transmitted infections in the United States. Dr. Klausner, welcome to the program.

Dr. Klausner:

It is my pleasure to be here.

Dr. Russell:

So, how big a problem are sexually transmitted infections, or STIs, in the United States right now?

Dr. Klausner:

Sexually transmitted infections are a major health challenge facing the United States. The U.S. CDC estimates that nearly 20 million new STIs occur every year, accounting for almost \$16 billion dollars in healthcare costs annually. One of the problems is that many cases of chlamydia, gonorrhea and syphilis go undetected, undiagnosed and unreported. A recent CDC report released the 2016 data, documents that the three most common sexually transmitted infections are on the rise and grew for the third year in a row. The report highlighted that chlamydia is the most common reportable disease in the United States, and in 2016 the majority of new STIs were cases of chlamydia. The total of 1.6 million cases of chlamydial infections were reported to the CDC, an increase of 7% compared with the rate in 2015. Approximately 470 thousand cases of gonorrhea were reported, an increase of 18% from 2015. In fact, gonorrhea rates among both men and women have increased in every region of the United States. Lastly, syphilis is also on the rise. Syphilis rates increased by nearly 18% from 2015 to 2016, and very concerning, there was a 28% increase in syphilis among newborns.

Dr. Russell:

So, doctor, sometimes the acute presentation of some of these conditions is very obvious, but are there some long-term conditions I should be worrying about for quality of life for my patients?

Dr. Klausner:

Yes, and that is a particular concern, are the long-term adverse consequences. STIs can cause things such as chronic pelvic pain, pelvic inflammatory disease, also known as PID, and infertility both in males and females. STIs can complicate pregnancies and cause preterm birth, still birth, miscarriages and other severe consequences like blindness, respiratory and death in the newborn. And lastly,

STIs can increase both the risk of HIV acquisition and transmission.

Dr. Russell:

So, it's probably something I should be mindful of in all my patients who are sexually active, but is there a certain population that I should be thinking most about for STIs?

Dr. Klausner:

Yes, STIs affect different groups disproportionately. So, we know that chlamydia rates are highest among 15 to 24 year-olds, or adolescents and young adults; 15-24 year-olds account for nearly two-thirds of chlamydia cases diagnosed last year. And while chlamydia disproportionately affects women, the rate of reported cases among men grew more sharply last year than in previous periods. And for other STIs, most cases of new gonorrhea and syphilis were among gay men and other men who have sex with men, although rates are climbing for women as well. One major concern is that public health officials are worried that gonorrhea is becoming resistant and, in fact, perhaps untreatable, due to recent reports of untreatable gonorrhea from outside the United States, and multidrug resistant cases are also on the increase.

So, once a treatable disease, gonorrhea may not be treatable in the next coming years. In fact, now gonorrhea must be treated with combination antibiotic therapy the same way we treat HIV or tuberculosis with multiple medications. Gonorrhea treatment now requires two medications, one an injection.

Dr. Russell:

So, you started off with talking about some very sobering statistics about the rise of STIs. Why do you think this is happening?

Dr. Klausner:

Well, it's complicated, but public health officials point to some possible reasons. One has been the budget cuts that have occurred since the 2008 recession, and in recent years it's been documented that about 50% of state and local programs that provide testing and treatment for sexually transmitted infections have had budget cuts causing massive reduction in availability and public health services, awareness campaigns, clinic hours, and public health staff that make sure cases and partners get treated in a timely fashion. Also, there is some evidence that changing sexual behaviors including reduced condom use and increased use of social media to meet partners could also be having an impact.

Dr. Russell:

If you are just joining our discussion, I am your host, Dr. John Russell, and with me is Dr. Jeffrey Klausner from UCLA David Geffen School of Medicine, and we are talking about the rise of sexually transmitted infections in the United States.

So, we just talked about why that's happening, why don't we switch gears. Are there any new recommendations for diagnosing or treating STIs?

Dr. Klausner:

Well, every 4 or 5 years the CDC updates its STD treatment guidelines, and in 2015, the CDC guidelines emphasized the following key points: 1) that all sexually active women age 25 years or less, should be screened for chlamydia and gonorrhea and older women should be also screened every year if they're of increased risk. The CDC emphasized that nucleic acid amplification tests or NAATs or PCR-type tests are the most sensitive tests for the detection of chlamydia and gonorrhea infection and are recommended. CDC emphasizes that any person who tests positive for chlamydia or gonorrhea should be rescreened again 3 months after treatment, not to measure treatment failure, but because people may be at a high risk sexual network and at risk for reinfection. Additionally, due to the rise of antimicrobial-resistant gonorrhea, another key change in the new guidelines is the recommendation of 2-drug combination therapy including one drug, ceftriaxone, that must be given by injection. Another important change is that treatment should be provided onsite, on the same day and preferably under direct observation. If medications are not available when treatment is indicated, the provider should assure linkage to an STD treatment facility, should be provided for same-day treatment. This new recommendation about same-day treatment is encouraging the utilization of better, faster diagnostics that can facilitate closer to patient or near patient testing to improve patient care and insure these treatment and management goals are achieved. Furthermore, in September 2017, the CDC published the most recent surveillance data and issued a statement calling for a multilevel approach and commitment from all players in the United States to turn back this rise in STDs. The CDC requested: 1) that state and local health departments should refocus efforts on STD investigation and clinical service infrastructure for the rapid detection and treatment for people living in areas hardest hit by the

STD epidemic; 2) that providers should make STD screening and timely treatment a standard part of medical care, especially for pregnant women and men who have sex with men. Providers should also try to seamlessly integrate STD screening and treatment into prenatal care and HIV prevention and care services. And 3) that everyone should talk openly about STDs, sexual health, get tested regularly and reduce risk by using condoms or practicing mutual monogamy, or having sex with the same partner over time if they are sexually active.

Dr. Russell:

So, doctor, you mentioned antibiotic resistance of gonorrhea and even, chillingly, untreatable gonorrhea. So, how did this all happen?

Dr. Klausner:

Well, the organism that causes gonorrhea and *Neisseria gonorrhea* has been able to invade antibiotic therapy for more than 70 years and we keep using new and different antibiotics. What has been contributing to the development of resistance in the organism is the empirical treatment of gonococcal infections or treatment without a specific laboratory diagnosis. If one treats symptoms without a diagnosis that can lead to over-treatment and over-treatment can accelerate the development of resistant gonorrhea. And then, secondly, there is some evidence that the continued and widespread use of antibiotics in the food industry, for example, the use of colistin has been used in the pig industry for many years, has contributed to more antibiotic resistant elements in different organisms and those organisms can pass on their resistant elements to other germs. So, there is multiple different factors. I don't think we know which is specifically, but we do know that *Neisseria gonorrhea* becomes increasingly more commonly resistant to the antibiotics that we have on hand.

Dr. Russell:

So, I am a primary care doctor, so what do I need to do? What do other frontline providers need to do to manage STIs effectively in 2017?

Dr. Klausner:

Well, the overall strategy for STI management is to screen, treat, treat, and screen. When I say that I mean screen the patients, so when sexually active young women, in particular, under the age of 25, make sure they get their annual screening test. Treat individuals who are positive as quickly as possible, preferably with same-day testing and treatment. Treat the partners and then rescreen positive cases again at 3 months. There are additional things that can be done, such as expedited partner treatment, or what the CDC calls EPT, which is providing patients with an extra prescription or actual extra medication to give to their recent partners to prevent reinfection and to disrupt further transmission. There has to be a paradigm shift in the way we diagnose and manage our current diagnostic practices. We need to move from centralized laboratory testing that's off site, to decentralized onsite testing that's closer to the patient. With new technology screening can now be performed in the doctor's office or in the STD clinic where results can be available in as little as 90 minutes. Same-day screening and treatment would allow better compliance with the new CDC STD guidelines which continues to emphasize same-day diagnosis and treatment. However, by sending laboratory specimens out to an outside laboratory, it makes it very difficult to comply with those CDC guidelines, that's why same-day screening and treatment is much more practical with onsite laboratory diagnostics. It is recommended that diagnosis and treatment occur in the same clinic visit or shortly thereafter and that can reduce the frequency of patients who do not receive their test results, and by having a diagnosis can improve partner notification. Many providers still manage patients based on syndromes or presenting with clinical symptoms or findings. Although syndromic management or management based on symptoms can allow for treatment without a follow-up visit, symptoms alone may miss most chlamydia and gonococcal infections since most cases are asymptomatic. Additionally, syndromic management can result in over-treatment of infections because without a laboratory diagnosis one does not know exactly what one is treating. So, we are really trying to emphasize the use of accurate and rapid testing that can facilitate same-day treatment and that can be a real shift in the way we approach and contribute to a much better control and prevention of sexually transmitted infections in the United States. And we're lucky we have new tools that have been recently FDA-cleared that can make same-day screening and treatment a reality.

Dr. Russell:

Well, with that I want to thank Dr. Klausner for joining me today to discuss the rise of sexually transmitted infections in the United States. Dr. Klausner it was great having you on the program today.

Dr. Klausner:

Thank you for having me. I really enjoyed my time today.

Narrator Close:

You've been listening to ReachMD. The preceding program was sponsored by Cepheid. The views expressed in this interview reflect the views of Dr. Klausner and not necessarily Cepheid. If you have missed any part of this discussion, or would like to download this or other podcasts in this series, visit ReachMD.com/STIDiagnosis. Thank you for listening.