

Review Article

Sexually Transmitted Infections in Women: Are we doing Enough?

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***Corresponding author:** Stagg DL, College of Nursing and Allied Health, University of Louisiana at Lafayette, USA**Received:** October 23, 2018; **Accepted:** November 28, 2018; **Published:** December 05, 2018**Abstract**

Sexually Transmitted Infections (STI) are having a negative impact on society. Women are more impacted by the effects of STIs in terms of health complications. The STI's of high concern are those of bacterial etiology. These infections can be treated if caught early, and thus decrease the negative health impacts. Healthcare providers and in a prime position to increase knowledge, testing, and treatment of STI's. Knowledge of most common bacterial STI's is important for any healthcare provider. Chlamydia, gonorrhea, and syphilis education, assessment, and treatment of women can decrease negative health impact on women and unborn children. Common myths and beliefs held by women regarding STI's are important to be aware of for all healthcare providers. Healthcare providers can make a difference in health of women with an increased focus and awareness of STI's.

Keywords: STI's; Women; Women Health; STI Assessment; STI Treatment

Introduction

STI's in women: are we doing enough?

Sexually Transmitted Infections (STI) have been an issue for women's health for decades. The rate of infection in new incidences is on the rise nationally. The impact on women is greater than that of men in terms of health consequences. STI's of bacterial infections are of interest because they can be treated and cured, if caught early. Nurses are in a prime position to make a positive impact on decreasing the spread and impact of STI's.

STI rates

While there are many infections that can be transmitted via sexual activities, they are not all noted as STI's. STI's are specific to those which are commonly contracted via sexual activity. It is important to note that sexually activity is not constrained to intercourse alone. The term sexual activity encompasses any activity having contact with the genitals or secretions of the genitals of one partner or both. Viral infections can be treated and managed to decrease the negative impact on health. Bacterial infections can be treated and cured, thus negating a negative impact on health, if diagnosed early.

The high focus bacterial STI's of the CDC are:

- Syphilis (bacterial)
- Gonorrhea (bacterial)
- Chlamydia (bacterial)

According to the Center for Disease Control and Health Promotion (CDC) [1-4], the rate of STI's has increased nationally over the last three years. The most notable increases were in Gonorrhea 18.5% increase, Syphilis 17.6% increase, and chlamydia 4.7% increase since 2015 [4]. While the increase is alarming, it is not impacting all populations equally. Age, race, and gender are significant risk factors. The CDC [1] reports the age group of 15 to 24-year-old account for

more than half of all new STI infections. Women aged 40 and above have noted an increase in gonorrhea of 34% from 1996 to 2014 [2]. STI incidence is higher in African Americans, American Natives, and Hispanic Americans [5,6]. While syphilis is more prevalent in men than women, the CDC [5] reports and increase of 36% in primary and secondary syphilis in women from 2015 to 2016. These current statistics require prompt action on the part of all health care professionals. Women of all races endure more negative outcomes in their health and on their unborn children, as the risk for passing and STI to the fetus is high.

Impact on women

The effect of STI's on women has a more profound effect on health. Additionally, women often do not have clearly visible symptoms when trying to diagnose STI's. In the recent CDC Sexually Transmitted Disease Surveillance Report, the CDC [4] notes that that young women, age 15 to 24, have 46% of reported cases and face the most severe consequences of an undiagnosed infection. Undiagnosed STI's place women at increased risk for other health concerns such as pelvic pain, painful intercourse, infertility, and possible ectopic pregnancies, which have the potential to lead to death [5]. In addition to numerous negative health effects, once an individual is diagnosed with a STI, the risk for contraction of other STI's increases.

Among the alarming increase, the CDC [5] reports the rise in syphilis in women, has led to a rise in congenital syphilis. This rise can result in undue stress in the infant, severe health complications, and death. The CDC reported more than 600 cases of congenital syphilis in 2016 [5]. The CDC reports an increase a 27.6% increase in congenital syphilis from 2015 to 2016, with 41 fetal syphilitic deaths in 2016 [7]. Syphilis is preventable and treatable.

Myths

If STI's are preventable, and bacterial forms are treatable, why do the cases persist? This question may be answered by some

understanding of lay person's beliefs regarding STI's. Common myths held by the lay public:

- I will know if I have a STI
- All STI's have symptoms
- I don't have intercourse, so I can't get an STI
- My doctor checks me for STI's every time I go for a visit
- I only have one partner, so I can't get a STI
- Every time I get a pap smear, my doctor is checking for all STI's
- I douche after sex, so I won't catch a STI
- After menopause I can no longer contract the disease
- I only have intercourse with older men and this is a young person's disease

These communally heard statements indicate a need for further education by healthcare professionals (HCP). HCP's must work together to educate, assess, evaluate, and treat the client and the community members, with the goal of decreasing STI rates in the United States. When working with women clients, there are special considerations to undertake. Women often report the following:

- If it itches, I just have a yeast infection
- If it burns when I urinate, it is a bladder infection
- If there is an odor in my genitals, it means I need to wash better
- I have a heavier discharge because I am on birth control
- Sex is always a little painful

While these comments may hold some truth, each one needs to be carefully evaluated by a HCP. Women do not display open signs and symptoms that they can recognize on their own. Many STI's have very silent symptoms. This takes considerable effort on the part of the HCP to evaluate thoroughly. In many cases, if a visual symptom is present, it is inside the vagina, requiring a speculum exam and a swab culture for STI testing.

Assessment and Treatment

In order to better serve women clients, it is important for HCP's to understand the assessment, signs, symptoms, and treatment of each STI the best assessment first starts with the interview. It is important for HCP's to become comfortable discussing STI's with their clients. Viewing STI's as anything other than a common treatable infection, could lead to a breach in the nurse-patient relationship. Developing trust and non-judgment with a client with an STI is paramount throughout the entire interaction. The following chart demonstrates essential questions to ask during the interview.

- Frequency and last intercourse
- Number of sexual partners and gender of sexual partners
- Type of contraception or condom use
- Routes of penetration

- Notable symptoms by the client
 1. Pelvic and abdominal pain with or without intercourse
 2. Vaginal discharge
 3. Odor
 4. Burning/pain upon urination
 5. Presence of any sores or lesions in the mouth or the genitalia
- Menstrual history
 1. Regularity or irregularity
 2. Pain
 3. Absence

Chlamydia

Chlamydia rarely presents with any notable symptoms. It must be confirmed with laboratory testing through swabbing of the genitalia or the mouth. The CDC [8] reports that up to 5-30% of women who test positive for chlamydia will present with symptoms present. This is a very small amount. HCP's should be aware that the time of contraction of the infection and the time of symptom presentation, if symptom present at all, may be several weeks.

Symptoms a client may exhibit are:

- cervical discharge with cloudy appearance or mucopurulent discharge with or without odor
- cervicitis, with easily induced endocervical bleeding
- urethritis
- rectal pain, discharge or bleeding
- symptoms of conjunctivitis if secretions spread to eyes
- pharyngitis if spread via oral sex

Treatment of chlamydia: Treatment of chlamydia requires quick intervention. According to the CDC [7], the following treatment guidelines may be applied

- Chlamydial Infections in greater than 8 years old:
- azithromycin 1g orally in a single dose OR
- doxycycline 100mg orally 2x/day for 7 days OR
- alternative: erythromycin base 500mg orally 4x/day for 7 days

Gonorrhea

Much like chlamydia, gonorrhea seldom presents with notable symptoms. Many times when symptoms are present, they can be mistaken for a bladder infection. According the CDC [9] symptoms in women can include:

- Painful or burning sensation when urinating
- Increased vaginal discharge;
- Vaginal bleeding between periods.
- And all above mentioned symptoms of chlamydia

Treatment for Gonorrhea: Treatment of gonorrhea requires quick intervention. According to the CDC [9], the following treatment guidelines may be applied for adults, adolescents, and children

- ceftriaxone 250mg IM in a single dose PLUS
- azithromycin 1g orally in a single dose OR
- doxycycline 100mg orally 2x/day for 7 days

Syphilis

Syphilis is unlike the other of the aforementioned infections, in that it develops over stages. Detection of syphilis in the early stages is most beneficial for treatment. Individuals may exhibit a variation of signs and symptoms. During the initial assessment, HCP's must evaluate for the point of contraction (vaginal, anal, or oral) to aid in the recognition of syphilis. The following stages are presented below according to the CDC [10].

Primary stage

- painless sore (chancre), one or more, at the point of entry (mouth, rectum, vagina)
- may last up to 6 weeks without treatment
- must still receive treatment when sore fades

Secondary stage

- rash on one or more areas of the body (palms of hands, soles of feet, front or back of torso)
- rash may appear red or brown, rough in texture, may be faint to see
- typically does not itch and is not painful, so often goes unnoticed
- stage 2 symptoms will resolve with or without treatment
- must still receive treatment

Latent stage

- no visible signs or symptom in this stage
- may endure for years
- still transmissible
- may progress to tertiary stage

Tertiary stage

- Can occur 10 to 30 years after initial infection
- body organs and systems are affected
- brain
- central nervous system
- heart
- vascular system
- can result in death

Treatment

Better outcomes and prevention of body system infection are increased when syphilis is detected early and treated.

The CDC [10] recommends the following treatment

- Primary, secondary, or early latent <1 year:
 - benzathine penicillin G 2.4 million units IM in a single dose
- OR
- doxycycline 100mg 2x/day for 14 days OR
 - tetracycline 500mg orally 4x/day for 14 days

What Can Health Care Providers Do?

HCP should become informed on the latest trends and treatments. Public health officials should consider forming partner ships with community health providers to increase awareness. AN excellent source of partner ships for public health officials would be schools of nursing and school nurses. Nursing students study communicable disease and community health. Many schools encourage student nurses to create community education programs and screening programs. This creates an excellent opportunity to bring more education in the school system. The CDC recommends yearly gonorrhea and chlamydia screening for all sexually active women under the age of 25, regardless of risk factors, and those with risk factors of all ages. All sexually active individuals should be screened. Awareness should be increased in early years of beginning sexual activity. Increasing awareness in all age groups is also of importance. There has been a rise in rates for individuals over the age of 40, so it is essential that HCP's inquire about sexual activity in all age groups. The risk factors include

- New partner or multiple partners
- Unprotected sex (no condom)
- Partner tests positive

Current evidence

There is existing research which may be beneficial for HCP's to consider for treating STI's. One approach is called Expedited Partner Therapy (EPT). This approach is state driven. According to CDC [3], EPT calls for partner notification and treatment for gonorrhea and chlamydia. In this approach, the infected partner, of the client, can also be given treatment for the infection without assessment or testing being performed. In some cases, the HCP may give the infected client the treatment for their partner as well, which the client will then give to their partner, upon leaving the clinic. This approach is dependent on state law. HCP's should review their state laws where this approach is concerned. This approach is not recommended for syphilis. HCP's must be clear to clients, that even though they are treated, they can still become re-infected if their partner is not also treated.

Another approach under investigation is known as "self-collected swabs". According to Page, Mounsey & Rowland [11], self-collected swabs were more sensitive than clinician collected endocervical swabs. In this approach, women are asked to perform a self vaginal swab and submit for testing. Due to this research, there are now several at home testing kits that can be obtained for self -testing in women. The efficacy of each type of self-testing kit should be reviewed by the HCP prior to recommendation. This may be an option for those who have issues with coming to a clinical or MD office for testing. It may also be a point of education for community health driven events.

Conclusion

HCP's are in a unique position to have a major positive impact on the education, detection, and treatment of STI's. It is important that all HCP's become informed on STI's in terms of statistics, rates, signs, symptoms, testing, and treatment. HCP' should then share this information with the clients they treat and encourage testing. Education performed in hospitals, health units, community health fairs, and local centers could increase awareness and potentially decrease contraction. Becoming comfortable with discussing STI's can increase the possibility of clients getting tested. HCP's can help in decreasing the stigma associated with STI's and encourage early and frequent testing, by treating it like all other communicable diseases. HCP's work with all populations, in all settings. Sharing knowledge with all individuals of contact, whether a client, family member, or friend, can assist in combatting this growing disease. Women are being impacted more severely, in terms of complications of STI's. Many HCP's are women and can assist in relating information on a sometimes difficult topic.

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