Re-enforcing Chlamydia Screenings for Most-at-Risk Females

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Introduction:

During undergraduate, I majored in Microbiology. I always had a special interest in bacteria and how they can affect humans. When I started at Wesley Health Center I was excited to take on chlamydia as my independent project. On June 13, 2014 Wesley pulled a chlamydia audit from patient’s records in the computer database. All patients were required to be: female, born between January 1, 1989 & December 31, 1999, and visitors to Wesley between January 1, 2014 & March 31, 2014. The total number of patients that fell into this category was 171. Out of 171 patients, only 34 were screened for chlamydia. Therefore, the screening rate was 20%. When chlamydia screening rates from the past are compared to the most recent screening rate, disturbing trends emerge. A chlamydia audit from 2009 showed a screening rate of 45%, while a 2010 audit showed a screening rate of 45.5%. The screening rates have decreased by more than 50%. In order to promote the overall health of a community, Wesley Health Center should conduct routine screenings more often.

Chlamydia infections are major causes of pelvic inflammatory disease in women in Arizona. The Arizona Department of Health Services (ADHS) Sexually Transmitted Disease Control Program (STDSCP) manages the Infertility Prevention Project (IPP), which is a component of the CDC Prevention Services Agreement grant. The goal of the IPP program is to assess and reduce the prevalence of chlamydia infections, target
screenings, effective treatment, and spread information to providers and policy makers in order to reduce among women. Although, the project mainly focuses on women, men are encouraged to prevent infections in women. Wesley Health Center is a participating IPP health center. Participating IPP program health centers provide chlamydia and/or gonorrhea testing as deemed appropriate by ADHS STDCP that targets all women 25 years and younger where chlamydia prevalence is expected to be 3% or greater.6

**Background:**

Chlamydia is the most common sexually transmitted infection in the United States. Chlamydia is caused by bacterium, *Chlamydia trachomatis*. It causes damage to the female reproductive system, often causing infertility or difficulty sustaining pregnancy. Lymphogranuloma venereum (LGV), another type of STD caused by different serovars of the same bacterium, occurs commonly in the developing world, and has more recently emerged as a cause of outbreaks of proctitis among men who have sex with men (MSM) worldwide.1,2

If a large portion of the younger generation contracts the infection unknowingly, without screenings or treatment, the population will not be as readily preserved. Overall, chlamydia has a negative effect on the younger population in communities.

The CDC recommends chlamydia screenings for females 14-25, older women with higher risk sexual behaviors, pregnant women with or without high risk behaviors, females with pelvic inflammatory disease, and newborns whose mother had a chlamydia infection during time of delivery. Most at risk females are between the ages 14-25
because this age group has the highest risk of contracting chlamydia. Male routine screenings are not recommended. Certain safe sex practices, like using a condom or having a monogamous sexual relationship will decrease the chance of becoming infected.

The infection is transmitted by sexual contact via the penis, vagina, mouth, and anus. Any sexual active person is at risk for chlamydia. Because the infection is often asymptomatic, screenings are necessary to diagnose most infections. Some young people don’t consistently use condoms. Others move from one relationship to the next relationship very quickly risking the spread of infection. The higher prevalence of chlamydia among young people also may reflect multiple barriers to accessing STD prevention services, such as lack of transportation, cost, and perceived stigma.11-13

Chlamydia is commonly called the silent infection because it is often asymptomatic. Estimates of the proportion of chlamydia-infected people who develop symptoms vary by setting and study methodology; two published studies that incorporated modeling techniques to address limitations of point prevalence surveys estimated that only about 10% of men and 5-30% of women with laboratory-confirmed chlamydial infection develop symptoms.14,15 In women, symptoms are unusual vaginal discharge, vaginal odor, painful urination, and vaginal itching/burning. In men, symptoms are penile discharge, painful urination, penile itching/burning, and testicular pain. Chlamydia can also infect the rectum in men and women. While most anal infections are asymptomatic, it may cause rectal pain or bleeding.

Chlamydia screenings test can be collected via a urine sample or, in females, a vaginal swab. At Wesley Health Center, they use urine collection for males and females. Chlamydia can be easily treated. Antibiotics like azithromycin or doxycycline treat
chlamydia. With treatment the infection should clear up within 2 weeks, but it is important to finish all the antibiotics. Men and women with chlamydia should be retested again in three months. For women, if left untreated the infection may cause pelvic inflammatory infection, which causes damage to the fallopian tubes or even infertility. Symptomatic PID occurs in about 10 to 15 percent of women with untreated chlamydia. Left untreated may also increase someone’s chance of acquiring or transmitting HIV.

If a person has been diagnosed and treated with chlamydia, they should tell all sex partners, within 60 days of diagnosis, so they can visit a health provider to be treated. This will reduce the risk of sexual partners from serious complications and also reduce the risk of re-infection. Someone with chlamydia and all of their sex partners must avoid having sex until their treatment is complete, which is usually seven days. In some states in order to get treated quickly, some providers give extra treatment for infected sexual partners. This is called expedited partner therapy. Many providers think expedited partner therapy is a strategy for partner management of persons with chlamydia infections. Partners should still seek medical attention, regardless of whether they receive expedited partner therapy.

The CDC has estimated over 2.8 million infections yearly. A lot of cases are unreported because the infection is often asymptomatic. In 2012, 1,422,976 cases of chlamydia were reported to CDC from 50 states and the District of Columbia, but an estimated 2.86 million infections occur annually. This count corresponds to a rate of 456.7 cases per 100,000 population. This is a .7% compared to 2011. Over a 20-year period from 1992-2012, the reported chlamydia infection increased from 182.3 to 456.7
per 100,000 population. In 2012, Arizona was ranked at 17 with 30,444 reported cases, averaging 469.6 cases per 100,000. Specifically, the Phoenix region reported cases have increased from 2008 at 14,314 to 2012 at 20,358, averaging 477 per 100,000 population. Chlamydia prevalence among sexually-active young persons aged 14-24 years is nearly three times the prevalence among persons aged 25-39 years. It is estimated that 1 in 15 sexually active females aged 14-19 years has chlamydia. Chlamydia rates are steadily on the rise and it is very important for patients to be efficiently and effectively tested.

**Methodology:**

On June 13, 2014 a chlamydia audit was pulled at Wesley Health Center. It was female patients who were born between the dates of January 1, 1989 and December 31, 1999. These patients were visitors to Wesley between January 1, 2014 and March 31, 2014. The total numbers of patients were 171; only 34 were tested for chlamydia. Therefore, the screening rate for most at risk females was 20%. Dr. Brite and the staff at Wesley thought these rates were very usual. My first week, I went back into the patient’s chart history, which is called CPRS, and looked through the patient’s charts to see if they had been screened during another visit within that yearly period. During week two, I went back into CPRS to check for what type of visit the patients had. For example, they could have had a provider visit where they saw a provider, or a lab visit where they only went to the lab to receive immunizations or birth control, or a mental health visit with the social worker, Fran. During my third and fourth week I went back into CPRS to check for providers seen during visit and patient’s reason for visit. During my fifth week, I pulled an audit for prenatal visits from July 7, 2014 - August 1, 2014. These patients were all
ages ranging from 18-41. During my final week at Wesley, I pulled a completely new chlamydia audit. It was again most-at-risk females between the ages of 14-25. They were visitors to Wesley between July 7, 2014 & August 8, 2014. I pulled this audit because I wanted to see if the screening rates had increased from the past one in June.

Results:

Results from week one showed that out of the 171 patients, 113 patients were screened and 58 were not screened. The new screening rate had increased tremendously to 66%. Results from week two showed out of the 58 patients not screened, 44 were provider visits, 12 were lab visits, 1 mental health visit, and 1 patient refusal. Results from week three showed from the 40 provider visits: Chuang-9, Brite-9, Davila-8, Briney-7, Leu-5, Davis-1, Chu-1, Kennedy-1. Results from week four showed reasons for patient’s visit were: physical-10, GU-6, prenatal-1, CV-1, eyes-1, ENT-3, neuro-7, breast-2, skin-4, constit.-1. resp.-1, GI-1, other-2. Results from week five showed 22 patients with 2 patients not screened. The prenatal screening rate was 91%. Results from week six showed 74 patients with one patient refusal. 55 patients were screened and 18 patients were not screened. The new screening rate is up to 75%.

Discussion:

The Wesley staff was relieved to hear about the increase in screening rates from week one. Results from week three were pretty accurate because Dr. Chuang, Dr. Brite, and NP Claudia Davila are full-time and the rest of the employees are part-time. Results from week four were surprising because with most of the patient’s complaint chlamydia
screenings definitely should have been done. For example, physicals and GU complaints should have definitely been screened. Annual physicals are a source of reassurance that the patient is as healthy as they feel. Providers should be quizzing patients on important behaviors like smoking, drinking diet, exercise, and sexual health. GU complaints are usually urinary or vaginal concerns and STI screening should have come up. Dr. Brite found it very concerning that even one prenatal patient was not screened. All pregnant patients should be screened early during their prenatal care for STI’s, specifically during their first prenatal visit. Early detection and treatment of chlamydia is critical. Pregnant women with STI’s can lead to miscarriages or infect the baby before or during delivery. The baby may have serious health issues such as infection of the eye, joints, or blood; causing blindness and breathing problems. In published prospective studies, chlamydial conjunctivitis has been identified in 18-44% and chlamydial pneumonia in 3-16% of infants born to women with untreated chlamydial cervical infection at the time of delivery.7-10 The best approach for pregnant women with STI’s is to receive antibiotics to clear up the infection before the baby is delivered. Public health reports did a study on 1,000 pregnant women at a hospital prenatal clinic and 8% were diagnosed with chlamydia via fluorescent antibody test.9 Prenatal screening rates should definitely be at 100%; it is important for the mother and for the baby. For week six, the most recent screening rates increasing up to 75% is beyond exciting. It shows I have done a part in re-implementing the importance of chlamydia screening with most-at-risk females.
Recommendations:

During my six weeks at Wesley, I worked closely and observed the clinic and lab area. One concern is during lab only visits, where the lab dispenses birth control or patients only come in for vaccines. I have personally witnessed how busy the lab can get. Sometimes, the medical assistants do not efficiently check to make sure patient’s screenings are up to date. The laboratory not-screened rate was 12%, it is less than the provider visits, but there is still room for improvement. Another concern is communication between medical staff and providers during sample collection. The entire medical staff knows urine samples should be collected from patients between ages 14-25 for chlamydia check if it’s been a year since the last check. Some medical assistants do not collect samples, unless the provider puts the order in the note. A lot of times the providers do not put in specific orders for it because it already should be mandated. Or if providers put in orders for GC/C check, the lab has to split the sample into 2 different cups because it will be shipped to 2 different outside labs. The government pays for the chlamydia screenings so those go to a specific lab. Those are just some concerns I observed while at Wesley.

Some suggestions for the future should include re-enforcing that all individual who fall within the most-at-risk categories must be screened, regardless of their reasons for visitation, recommending regularly check up visits, regularly compiling audits and evaluating results. Also educating the public by classes, one-on-one talks with patients, readily available factual brochures, etc. I started a brochure that is it currently in the process of being approved and translated by Wesley. Wesley should continue to promote overall health of the community and continue participating in the IPP program.
Conclusion:

Overall, the chlamydia screening rates did increase. Not only was the initial screening rate inaccurate, but also the rates continued to rise. The newest screening rate is at 75% but this is still room for improvement. Screenings are important to reduce the spread of infection, again because the infection is often asymptomatic. To promote overall health of the community, WHC should continue to conduct routine chlamydia screenings.

References:


STD services for adolescents and young adults: focus group discussions. BMC public


15. Korenromp EL, Sudaryo MK, de Vlas SJ, et al. What proportion of episodes of
gonorrhoea and chlamydia becomes symptomatic? International journal of STD & AIDS

*Chlamydia trachomatis* to prevent pelvic inflammatory disease: the POPI (prevention of
Appendix 1: Patient Result Graphs

Week 1

**Original Chlamydia Audit**

- Screened: 66%
- Not Screened: 34%

Week 2

**Patients not screened**

- Provider: 77%
- Lab: 21%
- Mental Health: 2%


Week 5

**Prenatal Visits**
- Pts tested: 91%
- Pts not tested: 9%

Week 6

**Newest Chlamydia Audit**
- Screened: 75%
- Not screened: 25%
Appendix 2: Chlamydia Brochure

Importance of Treatment

Infection can travel to uterus or fallopian tubes and cause pelvic inflammatory disease (PID). PID can damage the fallopian tubes, which can lead to infertility or an ectopic pregnancy. If you have chlamydia, as a pregnant woman, you may pass it to the baby during birth. This may cause serious health concerns for the baby.

**For men**, chlamydia rarely causes long-term health issues.

A message for you

See a doctor if your partner is being treated for chlamydia. You may also have the infection and need treatment. See a doctor if you are having any usual symptoms, like discharge, odor, etc. Be sure to alert your recent sex partners so they can get tested also. Be honest with your partner about all sexually transmitted infections.

**For More Information:**

Talk to your doctor
Visit [www.cdc.gov/std/chlamydia](http://www.cdc.gov/std/chlamydia)

Wesley Health Center

1300 S. 10th St. Phoenix, AZ 85034
Office: 602-257-4323
[www.wesleycenterphx.org](http://www.wesleycenterphx.org)
Chlamydia is a sexual transmitted infection (STI). Males and females may be infected. It is most common in teenagers and young adults. Most at-risk females are between the ages of 14-25 and they should be tested yearly. Most people do not know they have chlamydia because often the infection has no symptoms. A lot of times the infection gets transmitted unknowingly. Chlamydia is curable and easy to treat. Left untreated, chlamydia may cause serious health concerns.

“Know yourself and know your safe”

Q & A

How can someone get chlamydia?
By having sex with someone who has the infection; sex meaning vaginal, anal, or oral.

What are chlamydia symptoms?
Most people don’t get symptoms. Common symptoms are unusual vaginal/penile discharge, burning during urination, and discomfort during sex.

How can I find out if I have chlamydia?
See a doctor and ask for a chlamydia test. The test is quick and painless.

When should I be tested?
For women, you should be tested yearly if you are:
- Between the ages of 14-25
- Pregnant
- Older than 25 with a new partner

How is chlamydia treated?
Chlamydia is treated with antibiotics. Finish all antibiotics to ensure you are cured. Do not share any medication. If you are still having symptoms after you finish your medication, please go back to doctor. You should be re-tested in 3 months to ensure the infection is gone.

Can I get chlamydia more than once?
Yes, you can get the infection multiple times.