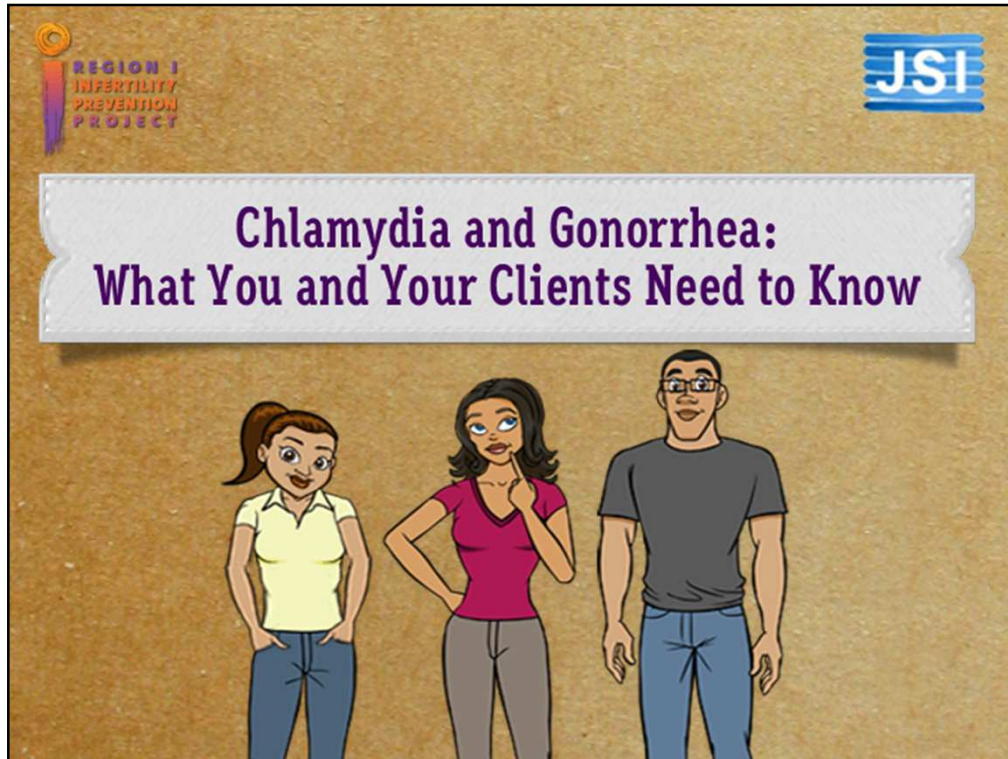
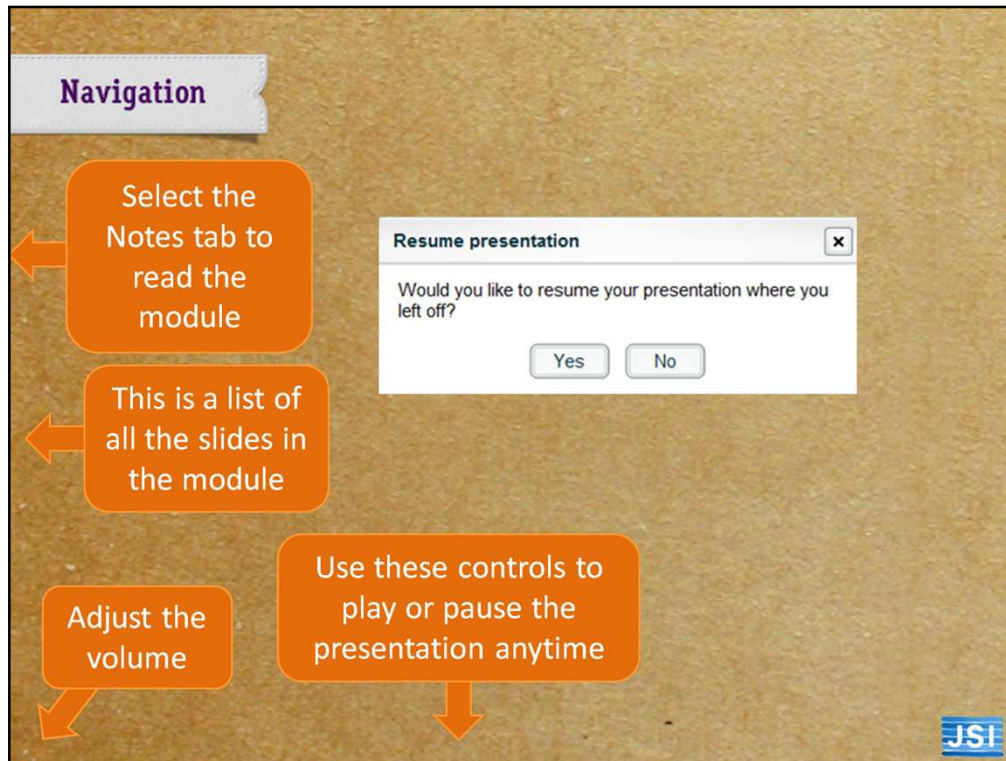




Slide 1: Chlamydia and Gonorrhea: What You and Your Clients Need to Know

Welcome to “Chlamydia and Gonorrhea: What You and Your Clients Need to Know”.

This is a presentation for healthcare providers about chlamydia and gonorrhea. We will cover the epidemiology, screening, diagnosis, treatment and prevention of the two most common reportable sexually transmitted diseases, or STDs, in the United States.



Slide 2: Navigation

Let's take a moment to review the features of this learning module.

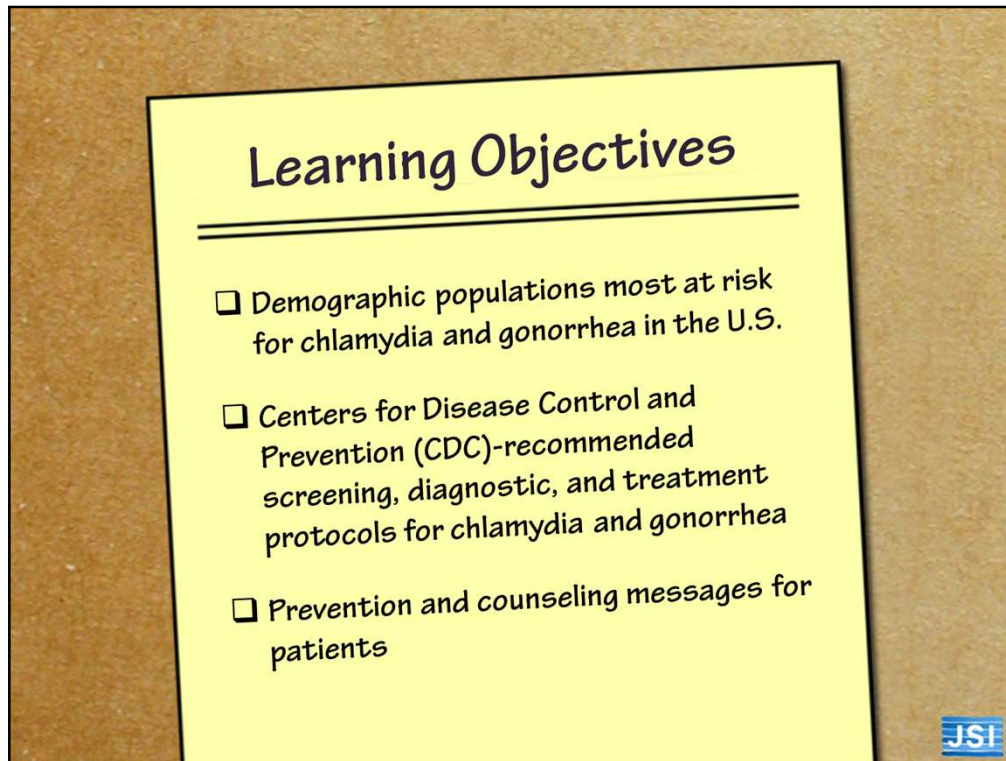
Use these controls to play or pause the presentation at any time (text box points down to controls at bottom of screen). When you come back to the presentation, you'll be asked if you want to continue where you left off, or start from the beginning.

You'll notice on the left is a list of all the slides in the module. You can use this list to move through the presentation, or go back to a slide to hear it again.

To adjust the volume, select the volume control and adjust accordingly.

This module is fully narrated. If you'd rather read the module, or if you'd like to read along with the narrator, select the "Notes" tab to the left.

Now, let's get started.



Slide 3: Learning Objectives

At the end of this module, you will be able to describe:

1. Demographic populations most at risk for chlamydia and gonorrhea infection in the United States,
2. Centers for Disease Control and Prevention or CDC-recommended screening, diagnostic, and treatment protocols for chlamydia and gonorrhea, and
3. Effective prevention and counseling messages for patients being tested for chlamydia and/or gonorrhea.



Slide 4: Your Clients: Tanya, Vanessa and Alex

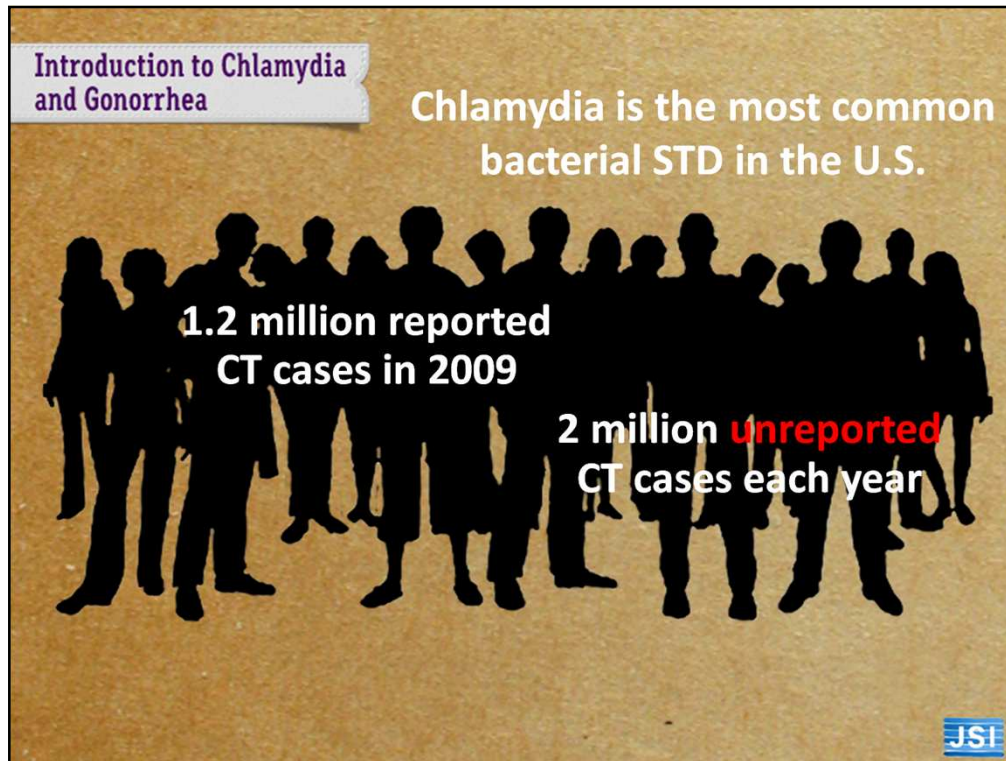
To help illustrate key information throughout this presentation, we are going to start by introducing three clients.

Tanya is a 19- year-old college student. During her visit to a family planning clinic today, she tells you that she has been dating her boyfriend for 4 months, and they've been sexually active for 2 months. They use condoms...most of the time. Tanya says she came to the clinic today to "get screened for 'everything' and get 'the pill.'"

Vanessa is a 28-year-old waitress in a rural area. She had an IUD inserted a year ago and she has come in for her annual exam. During her annual exam, she tells you that she had one partner for the past 2 years, but that they recently broke up.

Alex, a 21-year-old male college student, comes to see you because he has been having an unusual discharge and it hurts to urinate. His girlfriend urged him to come get tested. Alex says he's been with about 10 people in the past few months, and his last sexual contact was one week ago when he had sex with his girlfriend and 2 young men at a party.

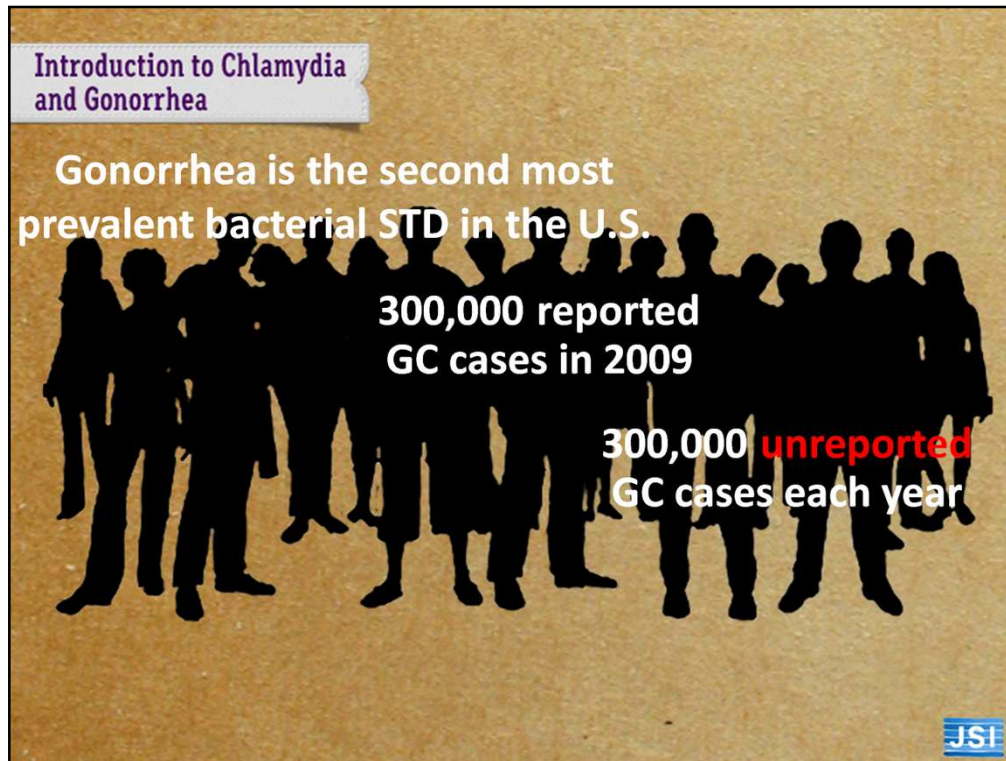
Tanya, Vanessa, and Alex may sound familiar to you – they may be similar to young people you see in your practice.



Slide 5: Introduction to Chlamydia and Gonorrhea

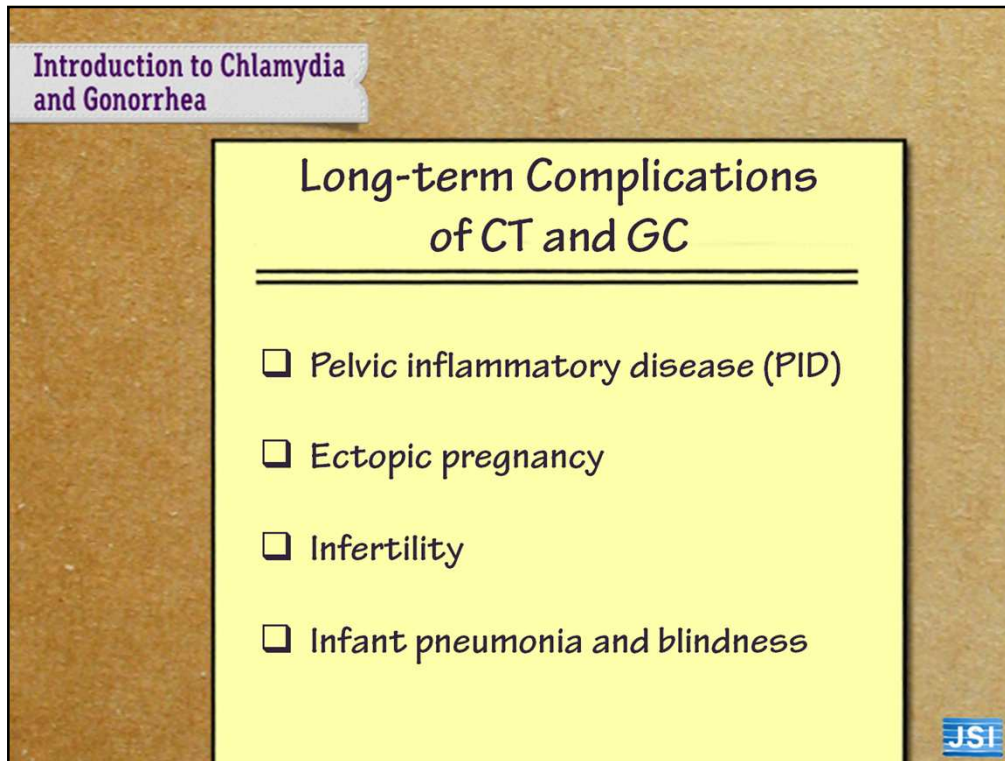
Now that we've introduced these clients, let's consider why chlamydia and gonorrhea are particularly important to you and patients like Tanya, Vanessa and Alex.

Chlamydia trachomatis, also known as chlamydia, or CT, is the most common sexually transmitted, bacterial infection in the US. More than 1.2 million cases were reported in 2009 to the CDC, and an estimated 2 million new cases go unreported each year.



Slide 6: Introduction to Chlamydia and Gonorrhea

Neisseria gonorrhoeae, also known as gonorrhea or GC, is the second most prevalent bacterial STD in the US. More than 300,000 cases were reported to the CDC in 2009, and an estimated 300,000 go unreported each year.

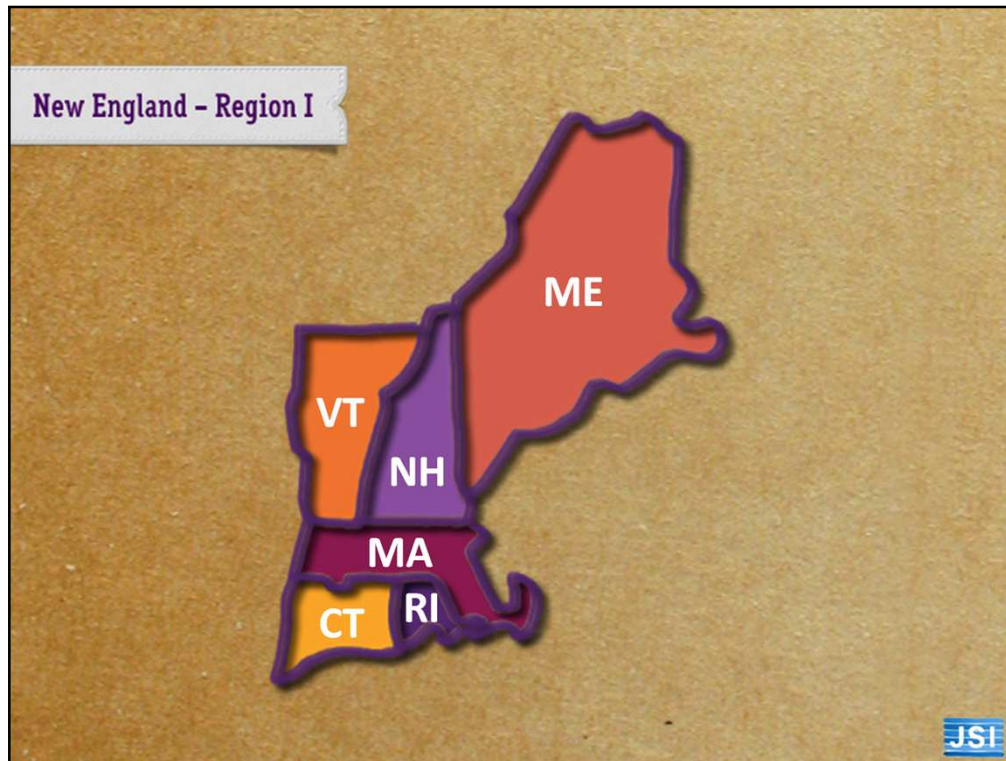


Slide 7: Introduction to Chlamydia and Gonorrhea

Long-term Complications of CT and GC: pelvic inflammatory disease (PID), ectopic pregnancy and infertility

Both infections may cause serious long-term complications if left undetected and untreated. Sequelae of chlamydia and gonorrhea can include pelvic inflammatory disease (PID), ectopic pregnancy and infertility. Infections can also lead to complications such as pneumonia and blindness in infants born to infected women. As you know, without treatment, these infections often continue to spread, affecting greater numbers of people.

But who is most at risk for contracting chlamydia and gonorrhea? And who should be targeted in screening programs?



Slide 8: New England - Region I

Map of New England shown.

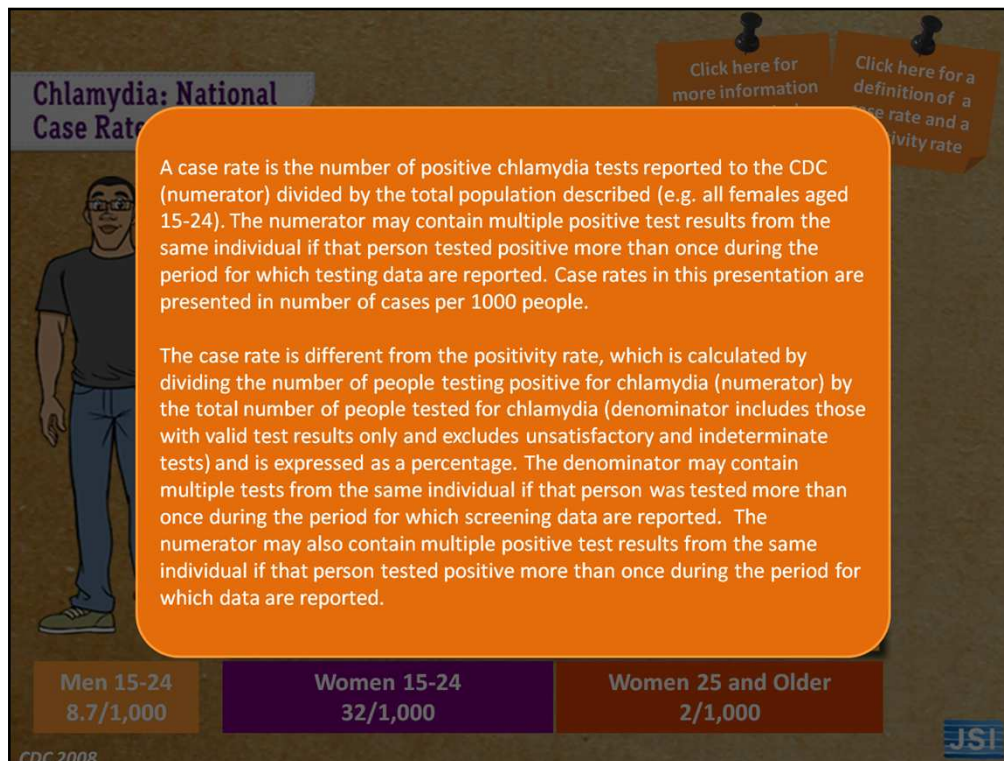
To answer this question, let's start by taking a closer look at the epidemiology of chlamydia and gonorrhea in the US and in New England, also called Region I. This includes Massachusetts, Connecticut, New Hampshire, Rhode Island, Vermont, and Maine.



Slide 9: Chlamydia: National Case Rates by Age

In the US, the chlamydia case rate is highest among women ages 15 to 24. This age group had a chlamydia rate of 32 per 1000, compared to just 2 per 1000 in women 25 and older. So, Tanya, who is 19, has a much higher risk of chlamydia than Vanessa, who is 28 just because Tanya is under 25. The chlamydia case rate among men, as with women, is also highest in 15- to 24-year-olds at 8.7 per 1000. Alex, who is 21, falls within the highest risk age group for men.

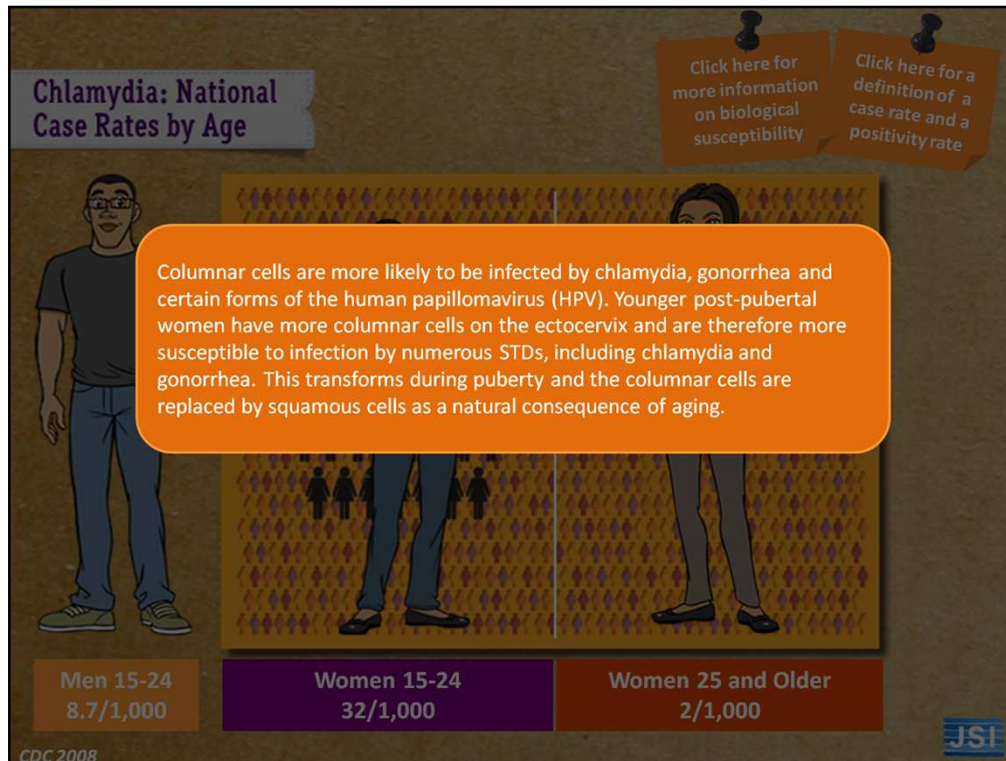
(CDC, 2008)



Slide 10: Definition of Case Rate and Positivity Rate

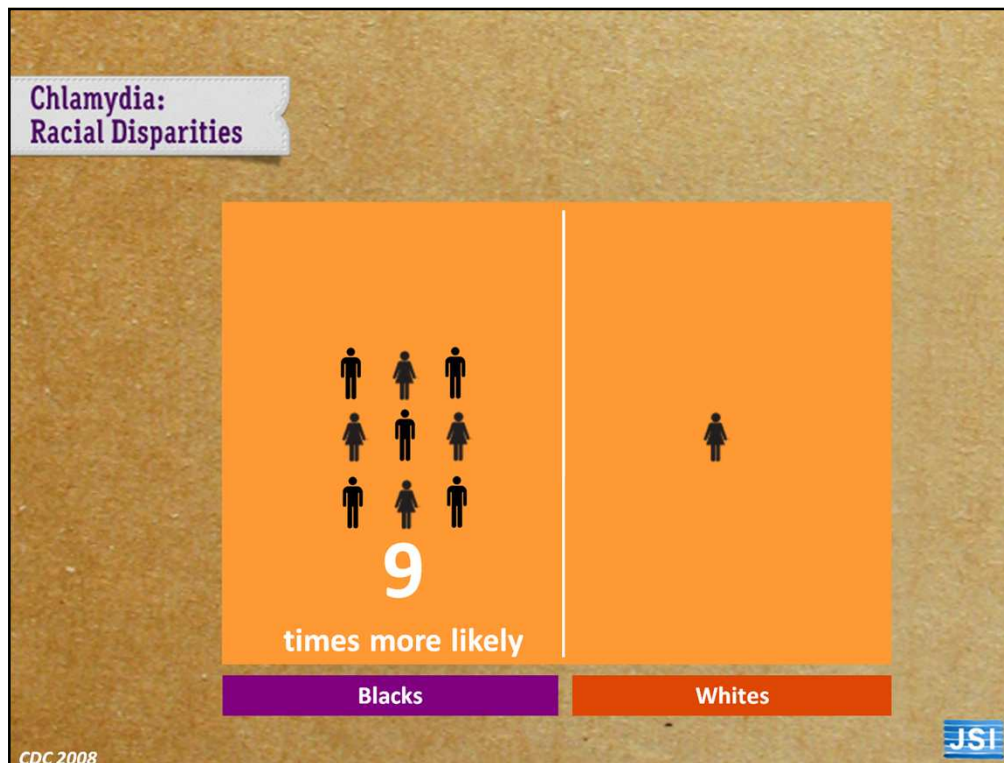
A case rate is the number of positive chlamydia tests reported to the CDC (numerator) divided by the total population described (e.g. all females aged 15-24). The numerator may contain multiple positive test results from the same individual if that person tested positive more than once during the period for which testing data are reported. Case rates in this presentation are presented in number of cases per 1000 people.

The case rate is different from the positivity rate, which is calculated by dividing the number of people testing positive for chlamydia (numerator) by the total number of people tested for chlamydia (denominator includes those with valid test results only and excludes unsatisfactory and indeterminate tests) and is expressed as a percentage. The denominator may contain multiple tests from the same individual if that person was tested more than once during the period for which screening data are reported. The numerator may also contain multiple positive test results from the same individual if that person tested positive more than once during the period for which data are reported.



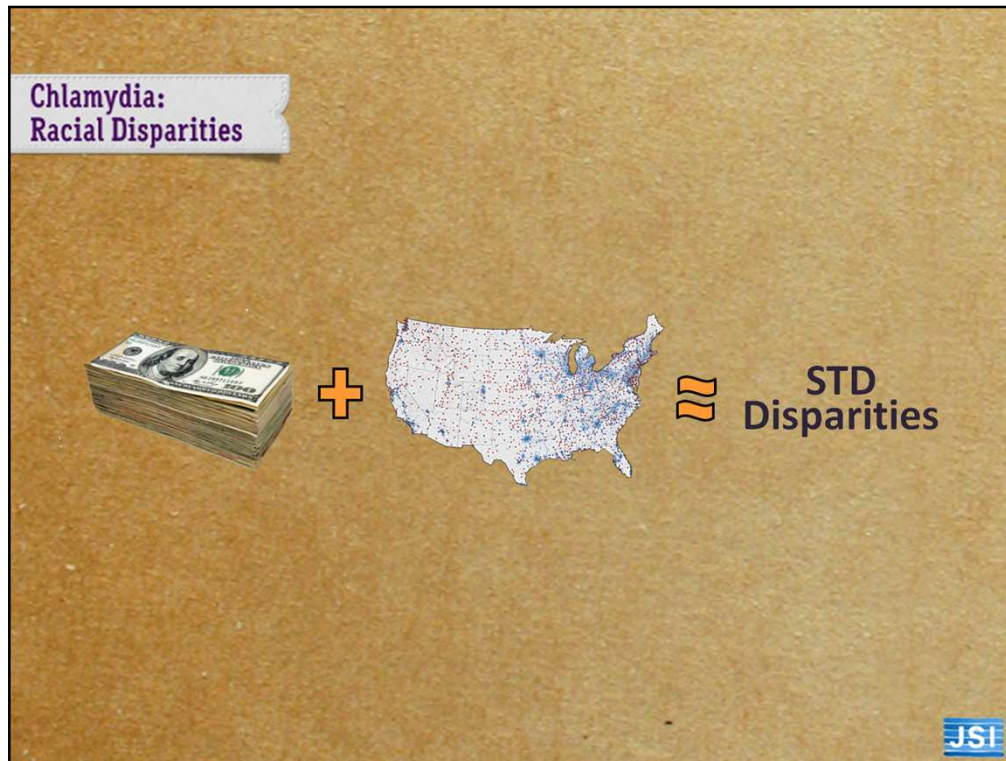
Slide 11: Information on Biological Susceptibility

Columnar cells are more likely to be infected by chlamydia, gonorrhea and certain forms of HPV. Younger post-pubertal women have more columnar cells on the ectocervix and are therefore more susceptible to infection by numerous STDs, including chlamydia and gonorrhea. This transforms during puberty and the columnar cells are replaced by squamous cells as a natural consequence of aging.



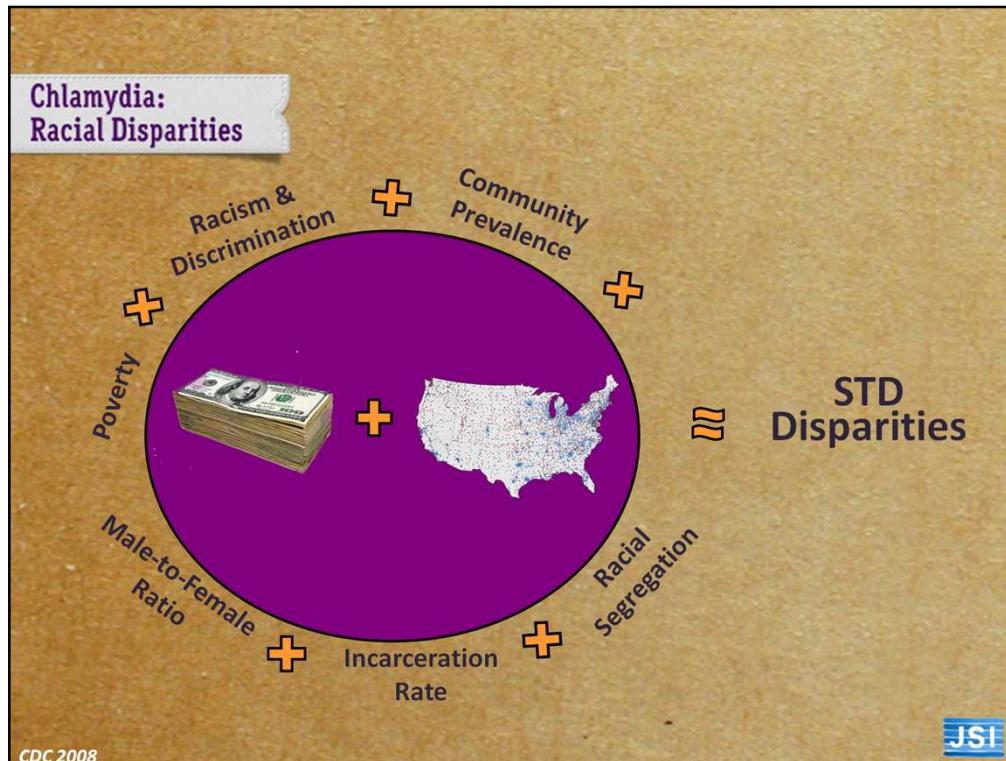
Slide 12: Chlamydia: Racial Disparities

National chlamydia rates vary by age and also by race. In the US, Blacks are 9 times more likely to get chlamydia than Whites. Research has consistently found higher prevalence rates among Black or African Americans than White Americans.



Slide 13: Chlamydia: Racial Disparities

The causes of racial/ethnic health disparities are complex. Socioeconomic cofactors are so entangled with issues of race and ethnicity—and in the case of STDs, sexual behavior—that the causal relationships are often hard to discern. But research has shown that socioeconomic status, and geography are associated with STD disparities—while risky sexual behavior does *not* explain the disparities.



Slide 14: Chlamydia: Racial Disparities

Many social and cultural factors may be involved in varying infection rates within communities, including poverty, racism and discrimination, community prevalence, male-to-female ratio, incarceration rate and racial segregation.



Slide 15: Chlamydia: Racial Disparities

The causes of racial/ethnic health disparities are complex. Socioeconomic cofactors are so entangled with issues of race and ethnicity—and in the case of STDs, sexual behavior—that the causal relationships are often hard to discern. But research has shown that socioeconomic status, and geography are associated with STD disparities—while risky sexual behavior does *not* explain the disparities.



Slide 16: National Chlamydia Case Rates by Race/Ethnicity

This slide presents 2008 national chlamydia case rates by race and ethnicity.

Males

American Indian/Alaska Native: 315.2/100,000

Asian/Pacific Islander: 69.4/100,000

Black: 920.5/100,000

Hispanic: 246.7/100,000

White: 72.0/100,000

Total: 262.9/100,000

Females

American Indian/Alaska Native: 1221/100,000

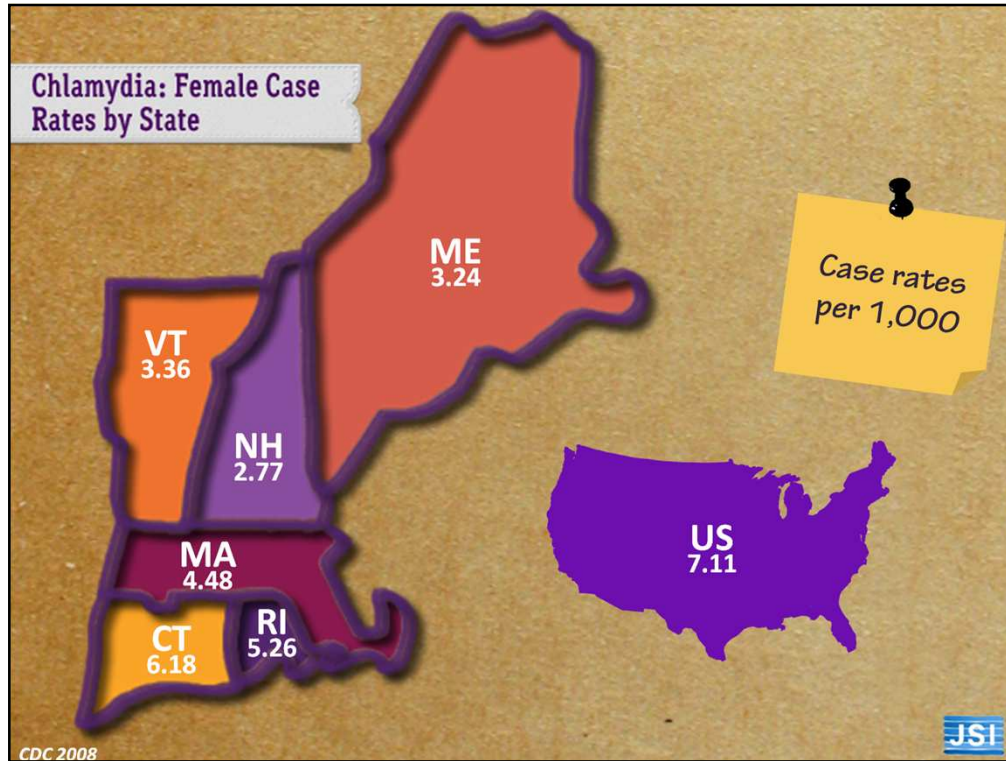
Asian/Pacific Islander: 203.4/100,000

Black: 1853.1/100,000

Hispanic: 808.9/100,000

White: 222.8/100,000

Total: 710.5/100,000



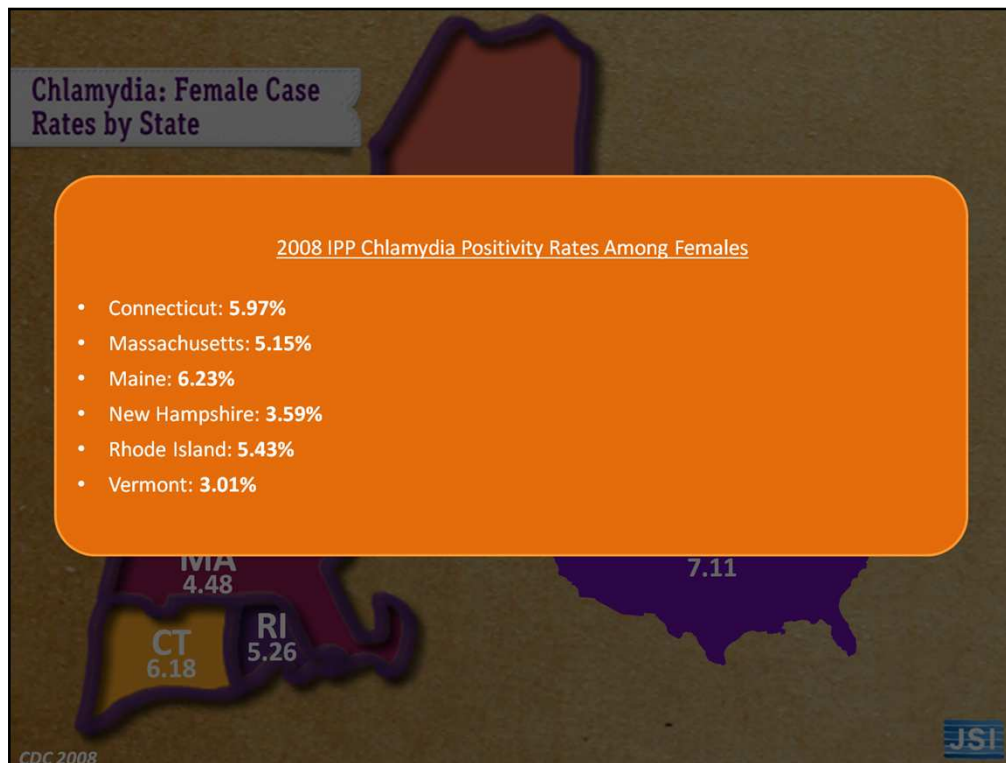
Slide 17: Chlamydia: Female Case rates by State

Map of New England shown.

Connecticut: 6.18 per 1000
Massachusetts: 4.48 per 1000
Maine: 3.24 per 1000
New Hampshire: 2.77 per 1000
Rhode Island: 5.26 per 1000
Vermont: 3.36 per 1000
United States: 7.11 per 1000

As mentioned, chlamydia rates also vary based on geography. Chlamydia case rates in Region I are lower than in the U.S. as a whole, although there is significant variation by – and *within* - individual states.

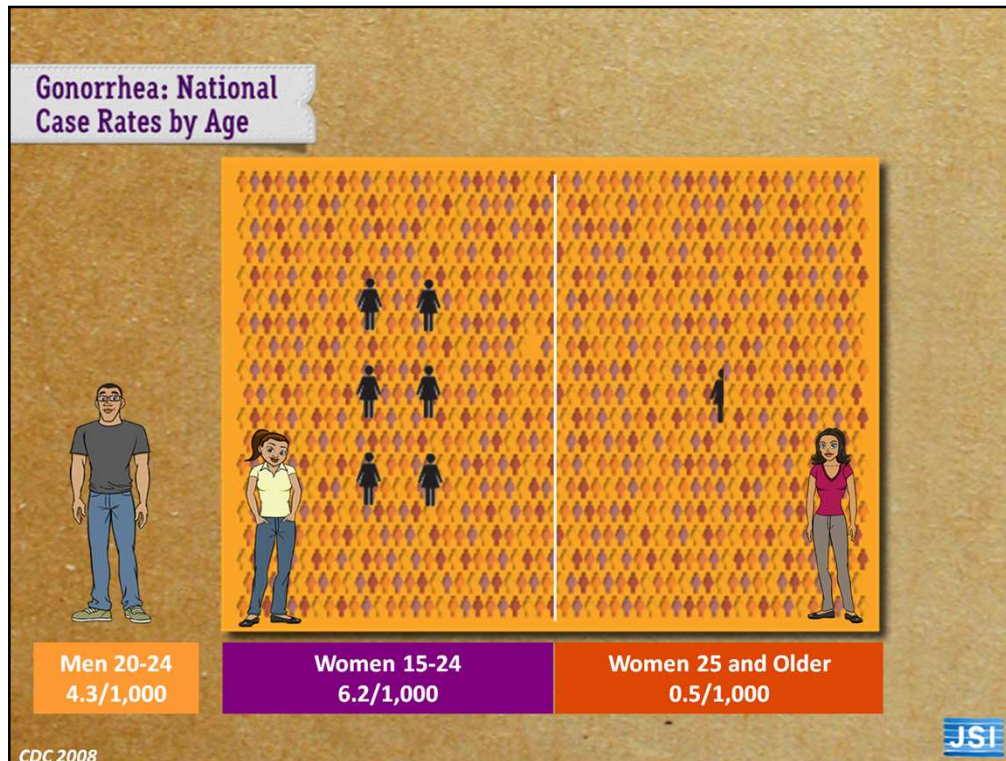
(CDC, 2008)



Slide 18: IPP Chlamydia Positivity Rates among Females

This slide presents 2008 IPP chlamydia positivity rates among females by state.

Connecticut: 5.97%
Massachusetts: 5.15%
Maine: 6.23%
New Hampshire: 3.59%
Rhode Island: 5.43%
Vermont: 3.01%



Slide 19: Gonorrhea: National Case Rates by Age

Gonorrhea is the second most common bacterial STD in the US. Although still a serious problem, gonorrhea is much less common than chlamydia. Females 15 to 24 years of age are at the highest risk of gonorrhea with a rate of approximately 6.2 per 1000 population in 2008. Among females 25 and older, the case rate of Gonorrhea was 0.5 per 1000. Among males, the rate was highest in those 20 to 24 or 4.3 per 1000.

(CDC, 2008)



Slide 20: Gonorrhea: Racial Disparities

Gonorrhea case rates vary even more dramatically by race than chlamydia. In recent years, Blacks had 20 times the reported gonorrhea rates of Whites in the US.



Slide 21: National Gonorrhea Case Rates by Race/Ethnicity

This slide presents 2008 national gonorrhea case rates by race and ethnicity.

Males

American Indian/Alaska Native: 76.2/100,000

Asian/Pacific Islander: 18.6/100,000

Black: 662.3/100,000

Hispanic: 66.7/100,000

White: 21.8/100,000

Total: 128.2/100,000

Females

American Indian/Alaska Native: 139.0/100,000

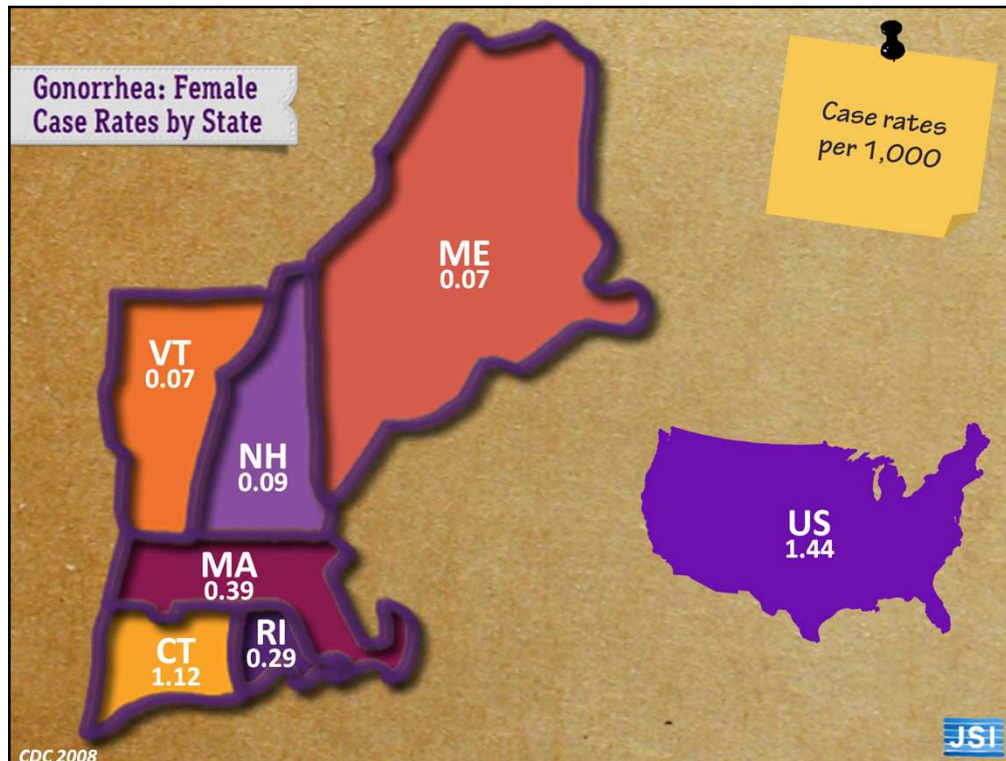
Asian/Pacific Islander: 19.1/100,000

Black: 605.4/100,000

Hispanic: 77.3/100,000

White: 35.5/100,000

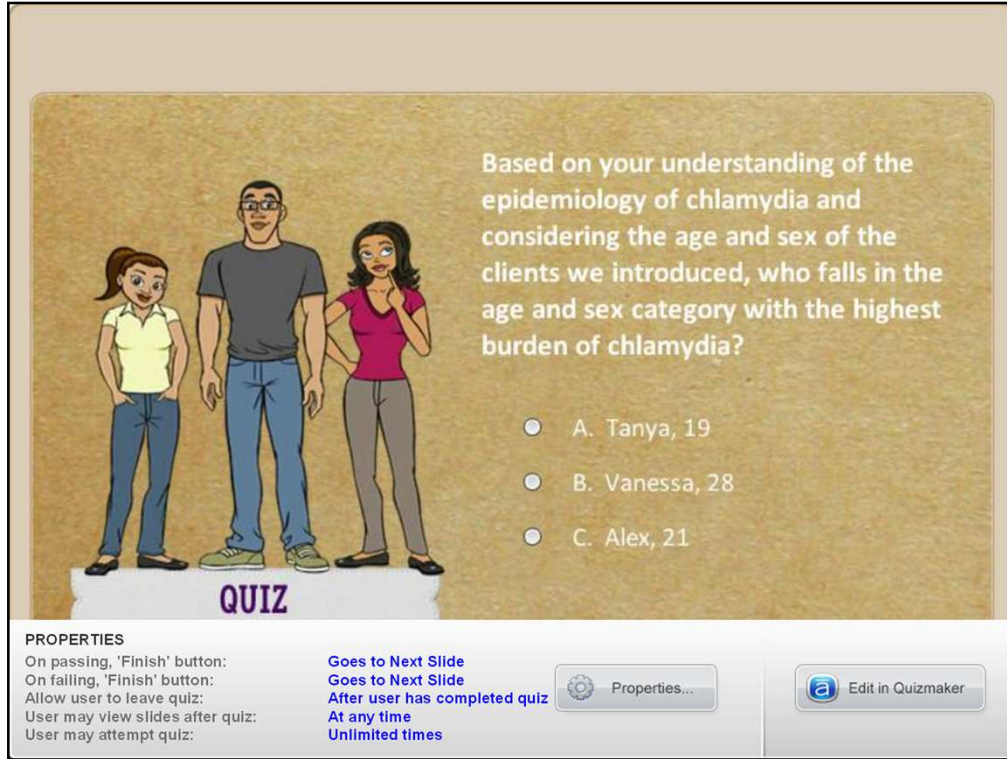
Total: 144.0/100,000



Slide 22: Gonorrhea: Female Case Rates by State

Connecticut: 1.12 per 1000
Massachusetts: 0.39 per 1000
Maine: 0.07 per 1000
New Hampshire: 0.09 per 1000
Rhode Island: 0.29 per 1000
Vermont: 0.07 per 1000
United States: 1.44 per 1000

State gonorrhea case rates in Region I are lower than the national gonorrhea case rate, however these rates vary at the local level *within* states.



Based on your understanding of the epidemiology of chlamydia and considering the age and sex of the clients we introduced, who falls in the age and sex category with the highest burden of chlamydia?

- ☐ A. Tanya, 19
- ☐ B. Vanessa, 28
- ☐ C. Alex, 21

QUIZ

PROPERTIES
On passing, 'Finish' button:
On failing, 'Finish' button:
Allow user to leave quiz:
User may view slides after quiz:
User may attempt quiz:

[Goes to Next Slide](#)
[Goes to Next Slide](#)
[After user has completed quiz](#)
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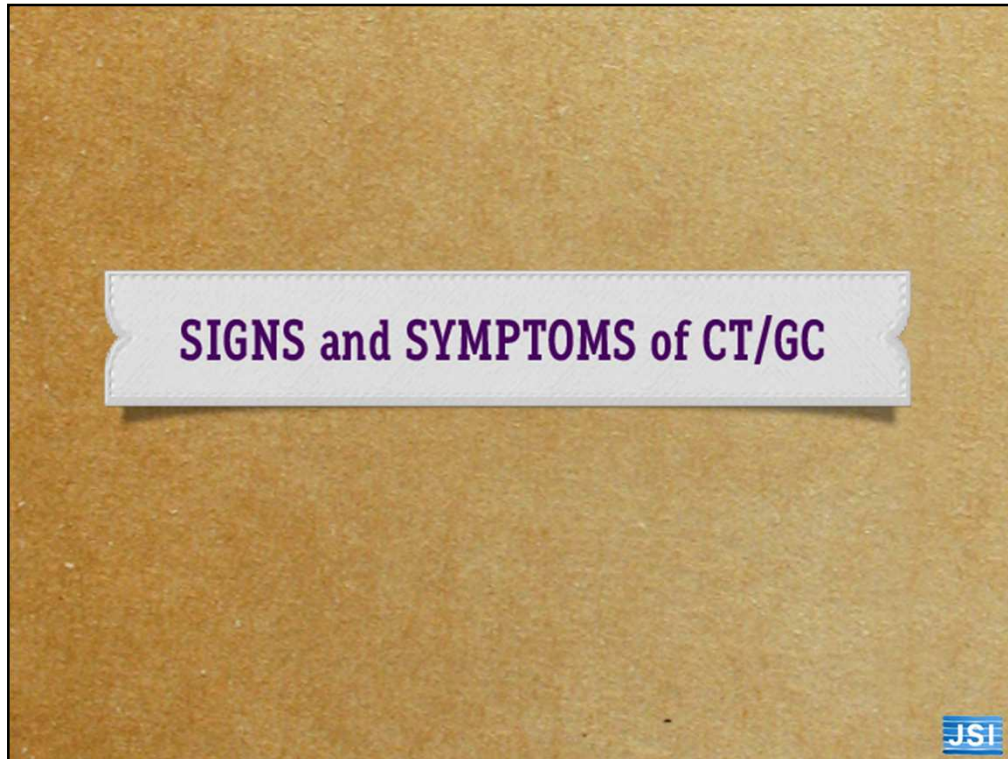
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Slide 23: Quiz

Based on your understanding of the epidemiology of chlamydia and considering the age and sex of the clients we introduced, who falls in the age and sex category with the highest burden of chlamydia?

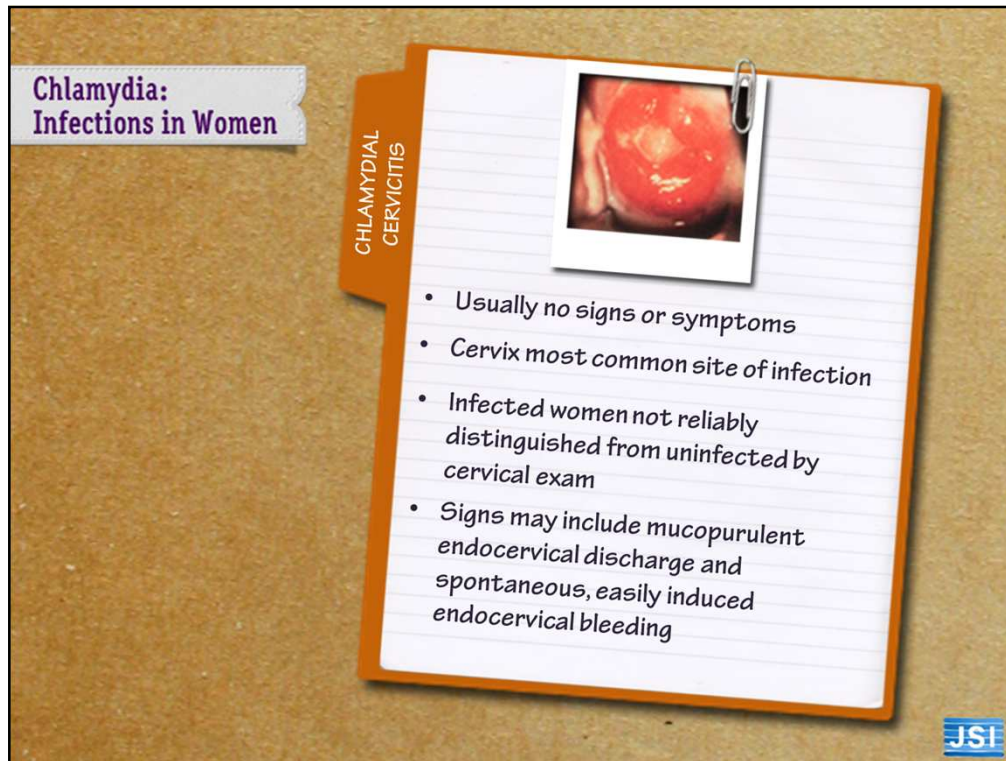
- A. Tanya, 19
- B. Vanessa, 28
- C. Alex, 31

The correct answer is Tanya, 19. Women ages 15-24 have the highest burden of chlamydia in the United States with a chlamydia rate of 32.1 cases per 1000 in 2008, compared to 2.1 per 1000 in women 25 and older and 2.7 in 1000 in men of all ages (CDC, 2008).



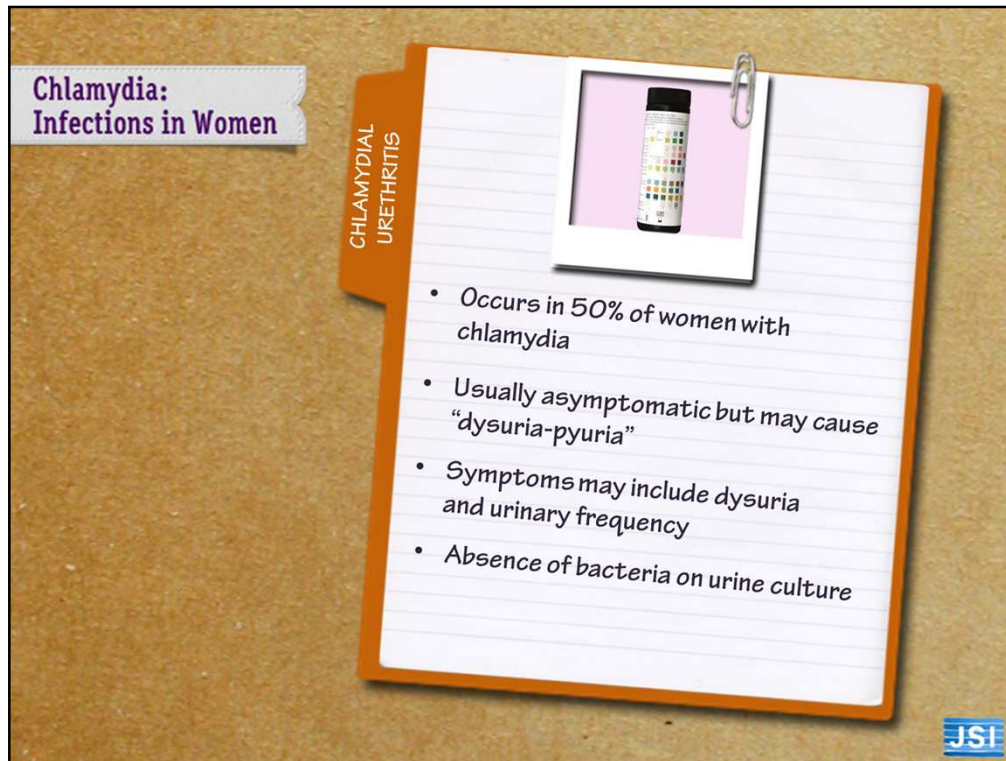
Slide 24: Signs and Symptoms of CT/GC

Now that we've looked at the general epidemiology of chlamydia and gonorrhea, let's discuss the symptoms of each infection. We'll start with women and then look at men.



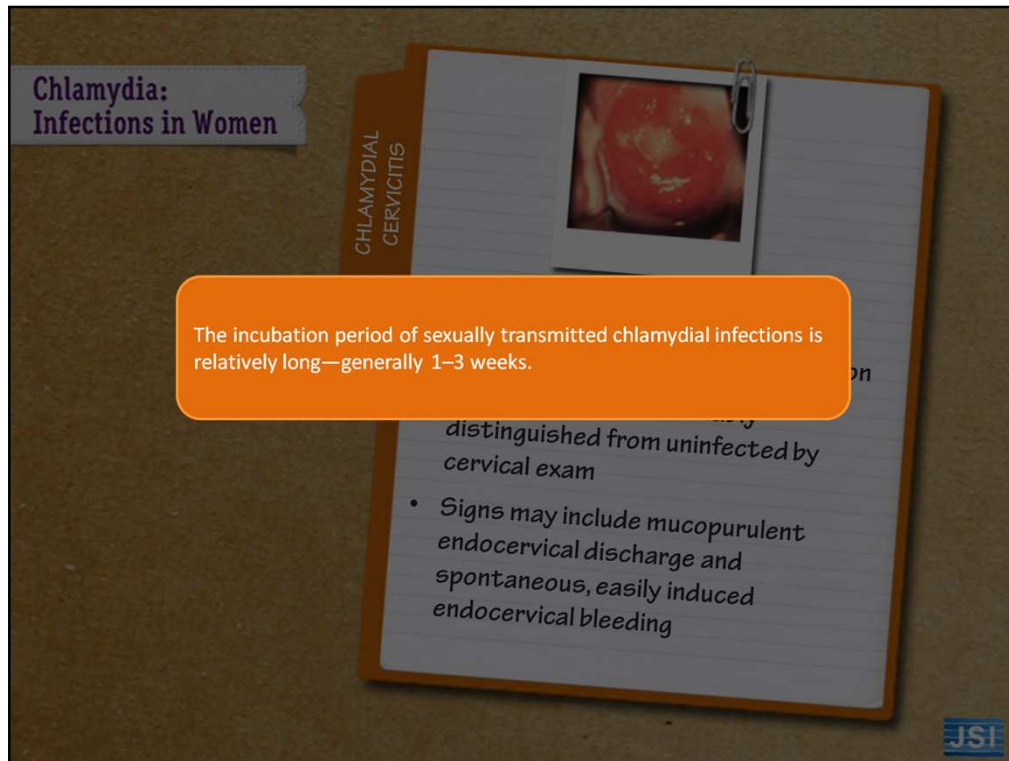
Slide 25: Chlamydia: Infections in Women

The majority of women with chlamydia infection have no signs or symptoms. The cervix is the most common site of infection affecting approximately 75-80% of women with chlamydia. Infected women, however, cannot be reliably distinguished from uninfected women by clinical examination of the cervix. Signs on speculum examination, when present, may include mucopurulent endocervical discharge and spontaneous or easily induced endocervical bleeding.



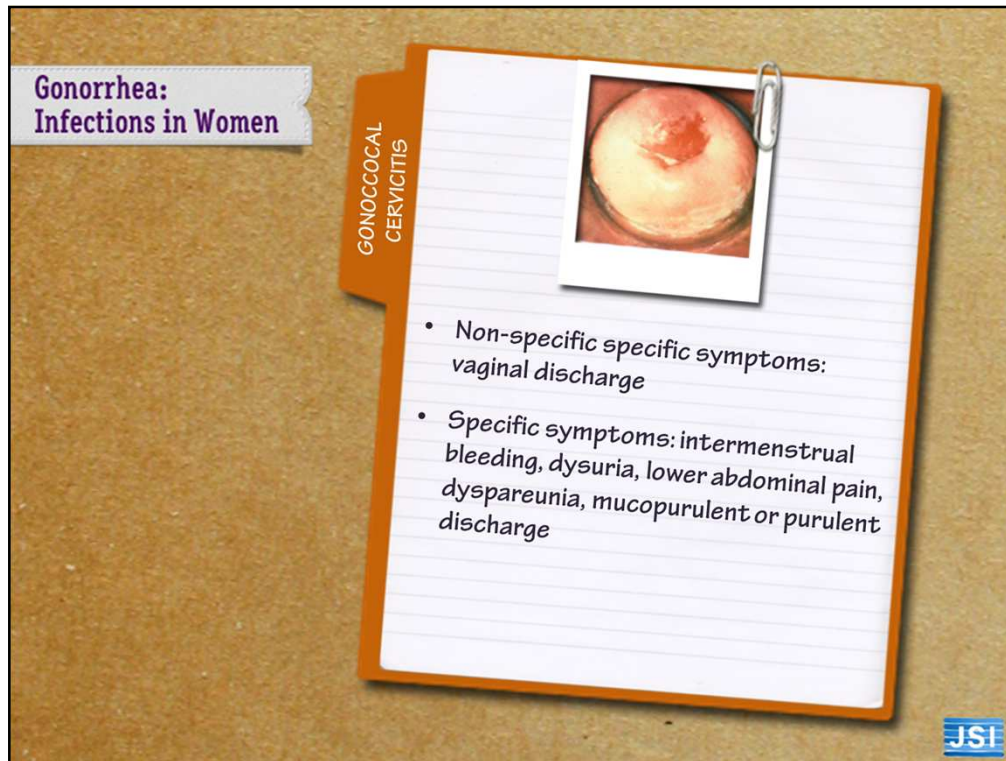
Slide 26: Chlamydia: Infections in Women

Urethritis occurs in 50% of women with chlamydia infection. This condition is usually asymptomatic, but it may cause dysuria-pyuria syndrome mimicking acute cystitis. Symptoms may include dysuria and urinary frequency. Unlike common urinary tract infections, with chlamydial urethritis there is an absence of bacteria on a urine culture.



Slide 27: Chlamydia Incubation Period

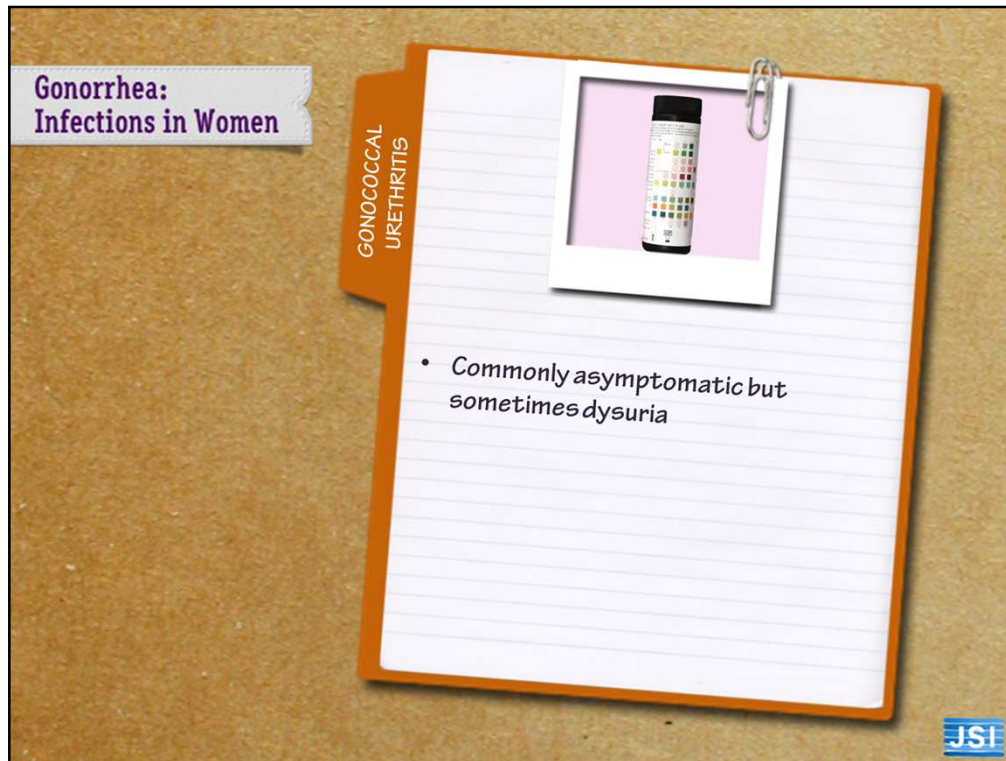
The incubation period of sexually transmitted chlamydial infections is relatively long—generally 1–3 weeks.



Slide 28: Gonorrhea: Infections in Women

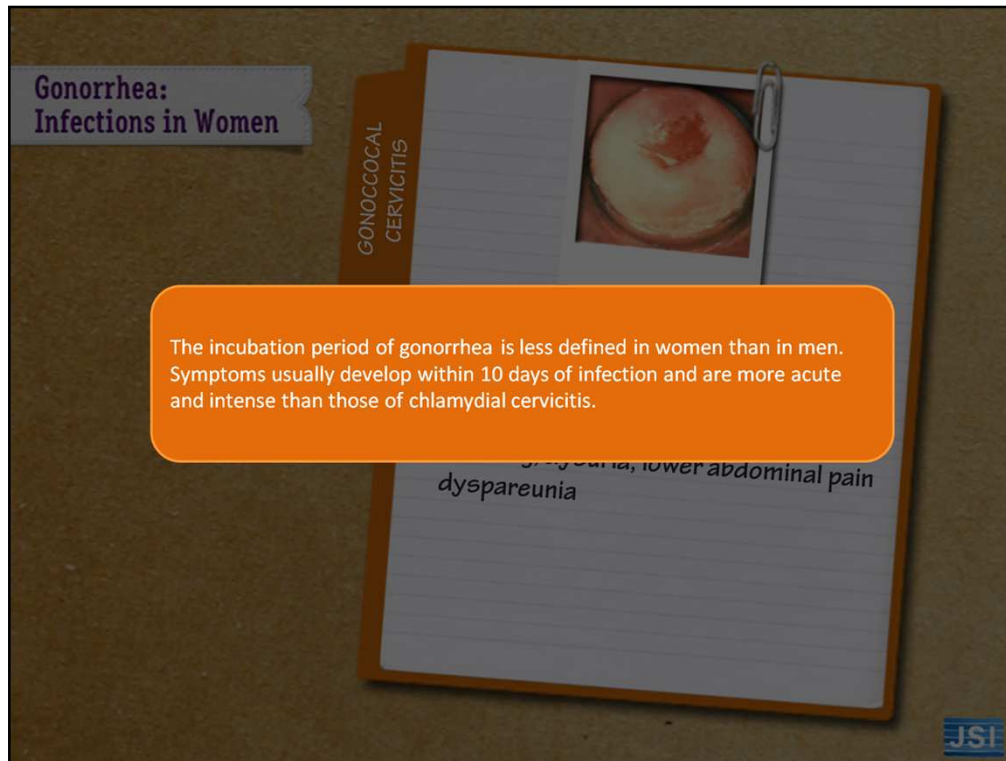
Approximately 50% of women with gonorrhea infection are asymptomatic. However, like chlamydia, gonococcal infection in women is often associated with cervicitis and urethritis.

Symptoms of cervicitis vary from a nonspecific vaginal discharge to more specific symptoms including intermenstrual bleeding, dysuria, lower abdominal pain and dyspareunia. Clinically, the cervix may show mucopurulent or purulent cervical discharge and easily-induced cervical bleeding.



Slide 29: Gonorrhea: Infections in Women

Forty to sixty percent of women with cervical gonococcal infection also have urethritis. Dysuria may be present, but women are more commonly asymptomatic.



Slide 30: Gonorrhea Incubation Period

The incubation period of gonorrhea is less defined in women than in men. Symptoms usually develop within 10 days of infection and are more acute and intense than those of chlamydial cervicitis.

Pelvic Inflammatory Disease (PID)

Facts about PID



- ☐ Delay in treatment increases risk of PID and sequelae
- ☐ PID includes inflammatory disorders: endometritis, salpingitis, tubo-ovarian abscess, pelvic peritonitis
- ☐ Inflammatory response → scarring of fallopian tubes → infertility, ectopic pregnancy or chronic pelvic pain
- ☐ PID often goes unrecognized



Slide 31: Pelvic Inflammatory Disease (PID)

It has been estimated that 2-5% of women with chlamydia infection in high risk settings and 10-20% of women with gonorrhea infection will develop PID. Delay in diagnosis and treatment increases the likelihood of PID and the long-term sequelae. PID comprises a spectrum of inflammatory disorders of the upper female genital tract, including any combination of endometritis, salpingitis, tubo-ovarian abscess, and pelvic peritonitis. The inflammatory response can lead to scarring of the fallopian tubes and subsequent long-term consequences including infertility, ectopic pregnancy and chronic pelvic pain.

Many episodes of PID go unrecognized. Because of the difficulty of diagnosis and the potential for damage to the reproductive health of women, health-care providers should maintain a low threshold for the diagnosis of PID.

Treatment for PID

Initiate treatment with sexually active young women and other women at risk for STDs if they experience pelvic or lower abdominal pain AND either cervical motion or uterine tenderness

Mild to moderate PID:

- ☐ Often outpatient treatment using one of the recommended antibiotic regimens

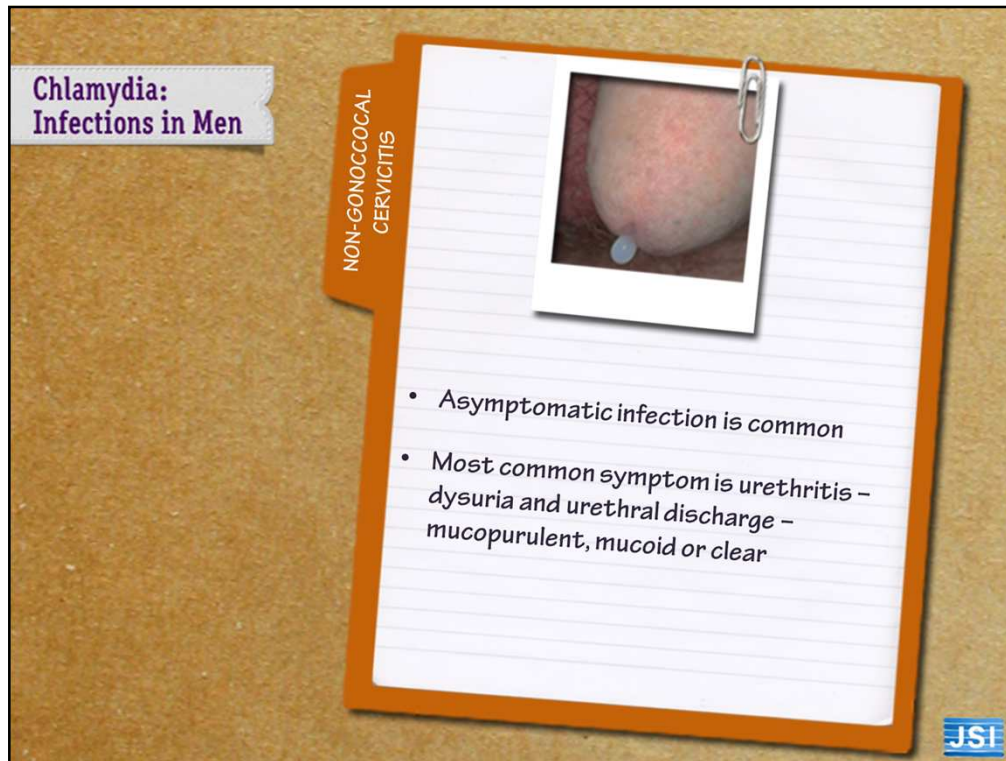
Moderate to severe PID:

- ☐ May require parenteral antibiotic therapy and hospitalization
- ☐ Expedite treatment to reduce risk of long-term complications

Slide 32: Treatment for PID

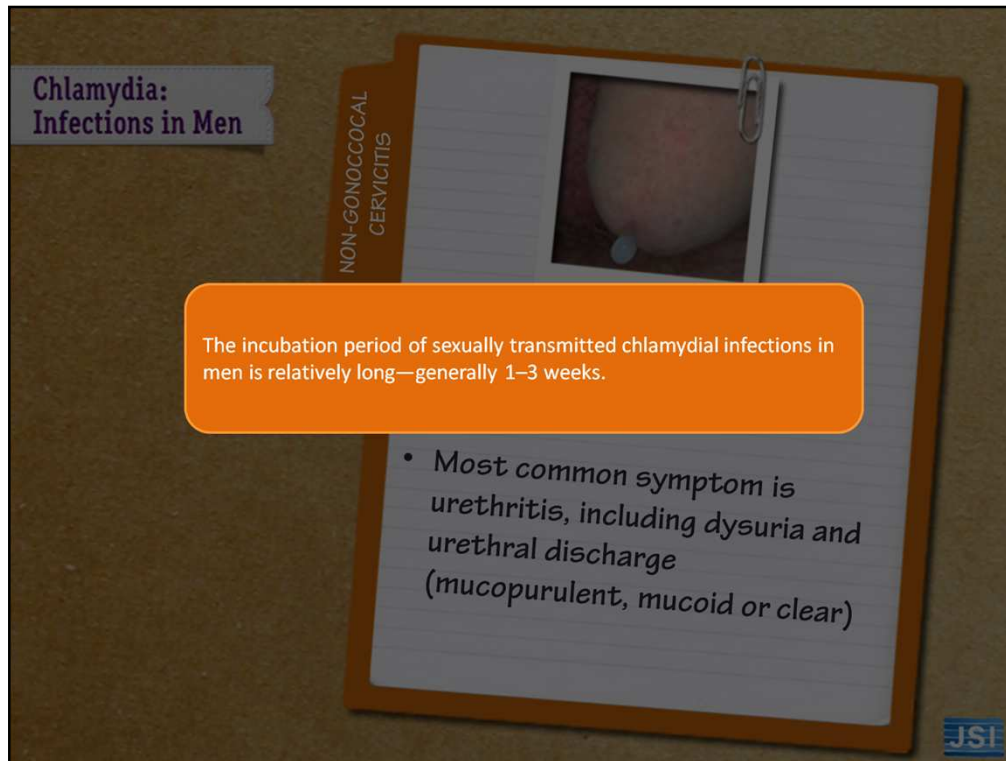
Treatment for PID should be initiated in sexually active young women and other women at risk for STDs if they are experiencing pelvic or lower abdominal pain and if cervical motion, or uterine tenderness is present on pelvic examination and no other cause is identified.

Treatment for mild to moderate PID can be on an outpatient basis using one of the recommended antibiotic regimens. Treatment for moderate to severe PID, however, may require parenteral antibiotic therapy and hospitalization. Treatment should be initiated right away to reduce the chances of long term complications.



Slide 33: Chlamydia: Infections in Men

Asymptomatic infection is common. But when symptoms are present, the most common symptom is urethritis – dysuria and urethral discharge – either mucopurulent, mucoid or clear.



Slide 34: Chlamydia Incubation Period in Men

The incubation period of sexually transmitted chlamydial infections in men is relatively long—generally 1–3 weeks.

**Gonorrhea:
Infections in Men**

GONOCOCCAL
URETHRITIS

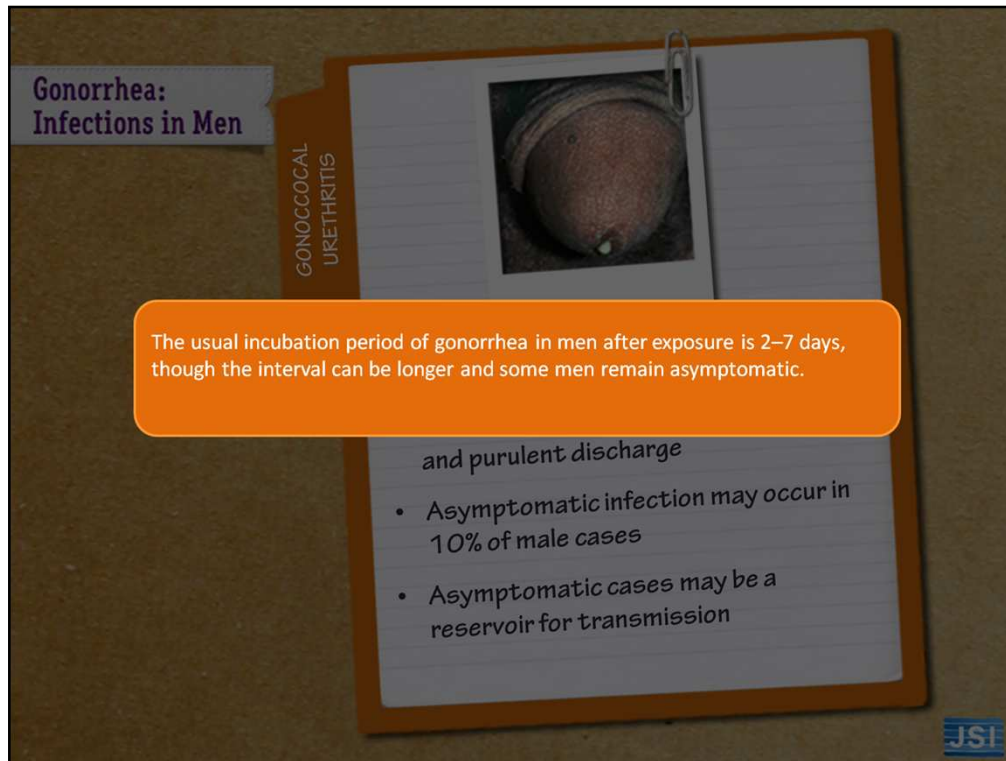


- GC more often symptomatic than CT
- Common symptom: urethritis, dysuria and purulent discharge
- Asymptomatic infection may occur in 10% of male cases
- Asymptomatic cases may be a reservoir for transmission

JSI

Slide 35: Gonorrhea: Infections in Men

Gonorrhea in men is more likely to be symptomatic than chlamydia. Urethritis, including dysuria and a purulent discharge, is a common indicator of gonorrhea in men. Many men develop overt, symptomatic urethritis; however, asymptomatic infection may occur in approximately 10% of male cases. Asymptomatic gonorrhea may act as a reservoir that perpetuates transmission from person to person.



Slide 36: Gonorrhea Incubation Period in Men

The usual incubation period of gonorrhea in men after exposure is 2–7 days, though the interval can be longer and some men remain asymptomatic.

Screening

- ☐ All patients with symptoms of CT or GC should be tested
- ☐ CT and GC are often asymptomatic, which is why screening is **so important**

JSI

Slide 37: Screening

Given the serious and sometimes long-term consequences of chlamydia and gonorrhea, all patients who present with symptoms of either infection should be tested. However, as we've noted, both infections are often asymptomatic, which is why screening is so important.

Screening

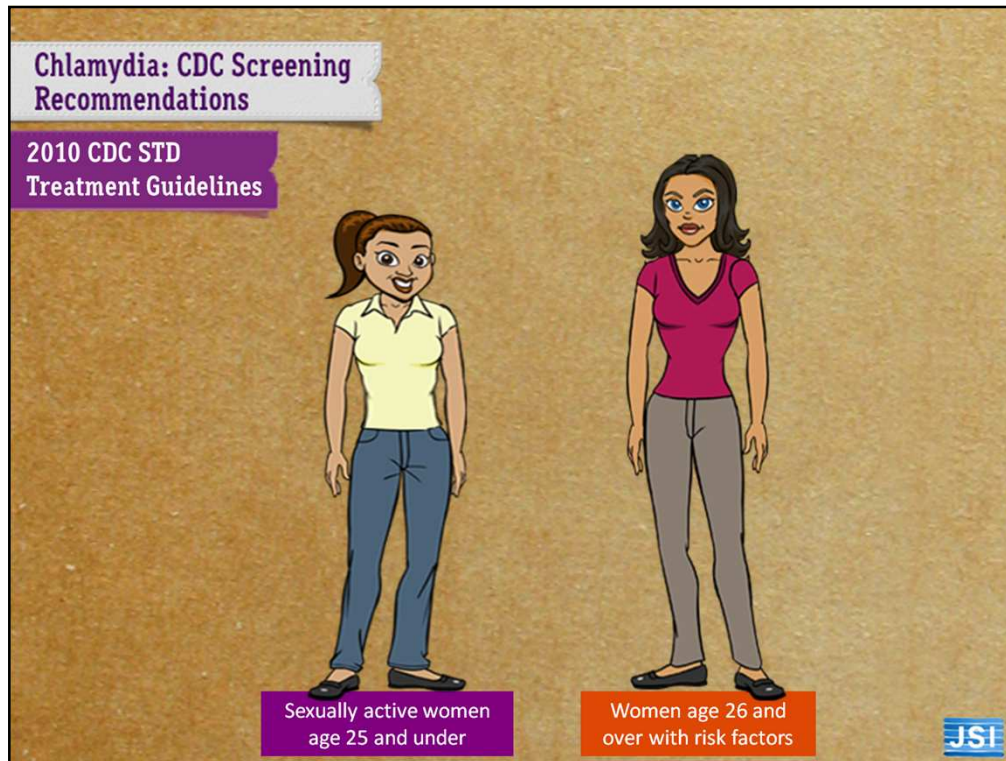
Screening means conducting a test for an infection or disease in an asymptomatic client.

- ❑ CT and GC are often asymptomatic, which is why screening is *so important*

JSI

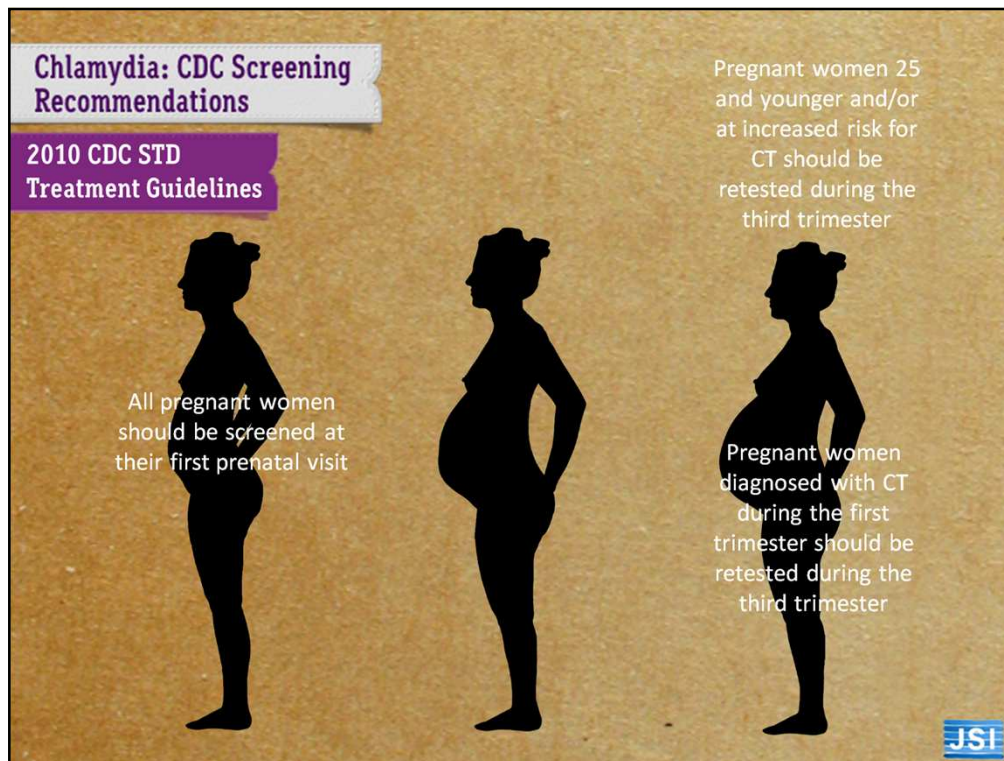
Slide 38: Screening Definition

Screening means conducting a test for an infection or disease in an asymptomatic client.



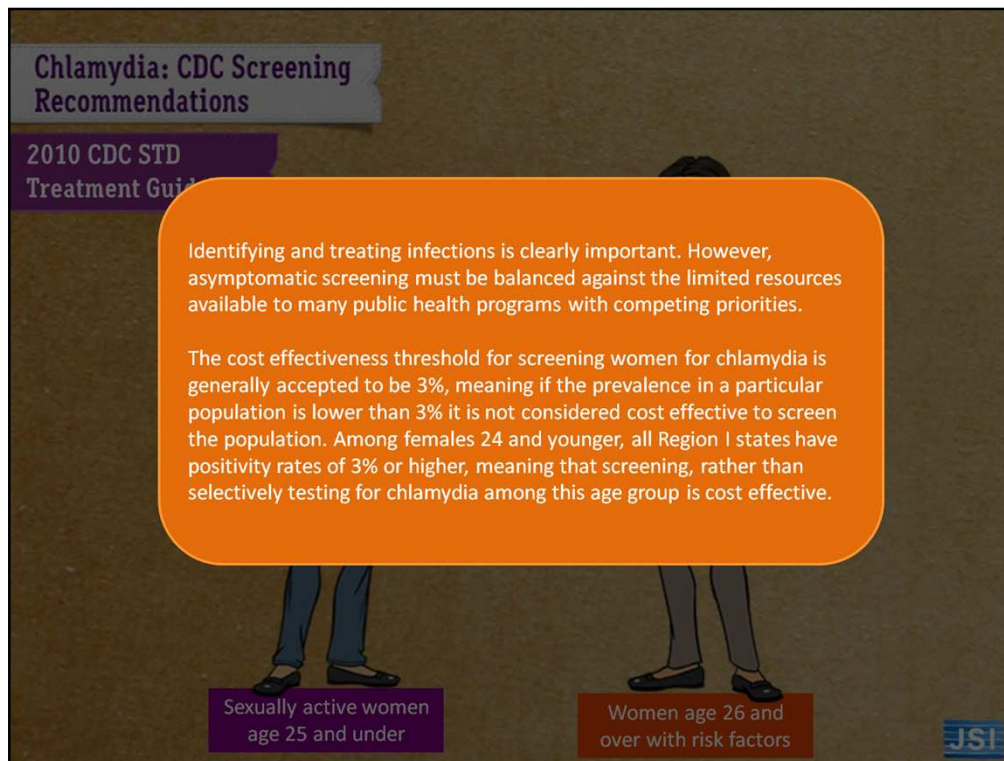
Slide 39: Chlamydia: CDC Screening Recommendations
2010 CDC STD Treatment Guidelines

CDC recommends annual screening for chlamydia in all sexually active females age 25 and under. CDC also recommends that women age 26 and over be screened if they present with risk factors, such as a new sex partner, multiple sex partners, or a recent STD.



Slide 40: Chlamydia: CDC Screening Recommendations
2010 CDC STD Treatment Guidelines

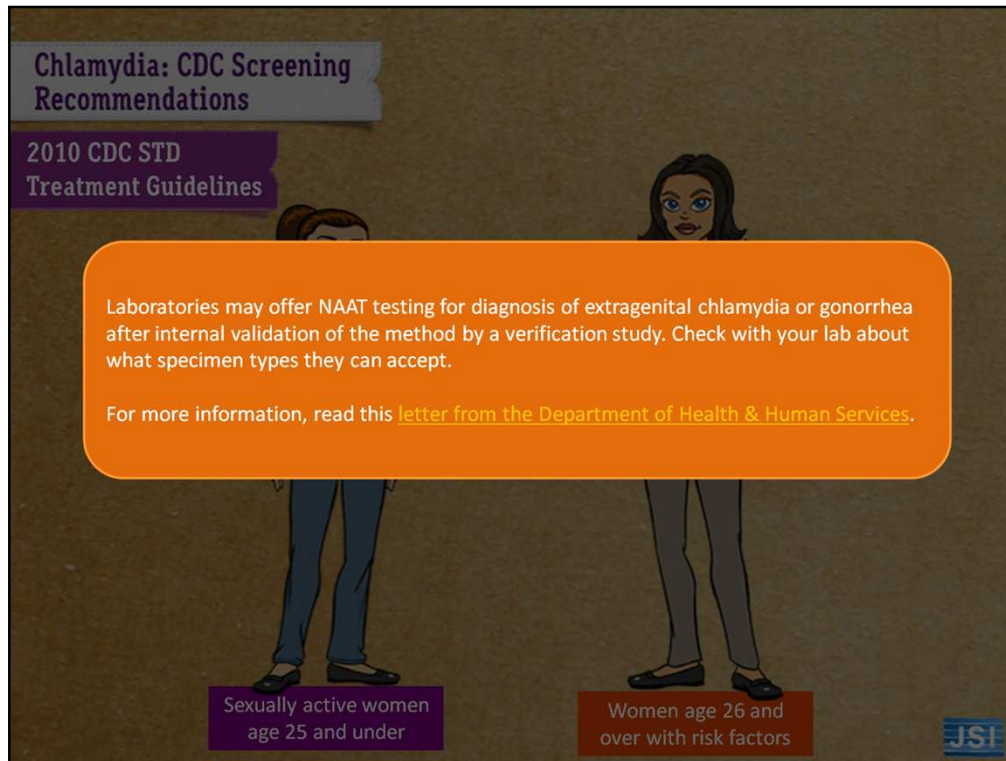
All pregnant women should be screened for chlamydia during their first prenatal visit. Women 25 and younger and those at increased risk for chlamydia should also be retested during the third trimester to prevent maternal postnatal complications and chlamydia infection in the infant. Women found to have chlamydia infection during the first trimester should be retested within approximately three to six months, preferably in the third trimester.



Slide 41: Cost Effectiveness of Chlamydia Screening

Identifying and treating infections is clearly important. However, asymptomatic screening must be balanced against the limited resources available to many public health programs with competing priorities.

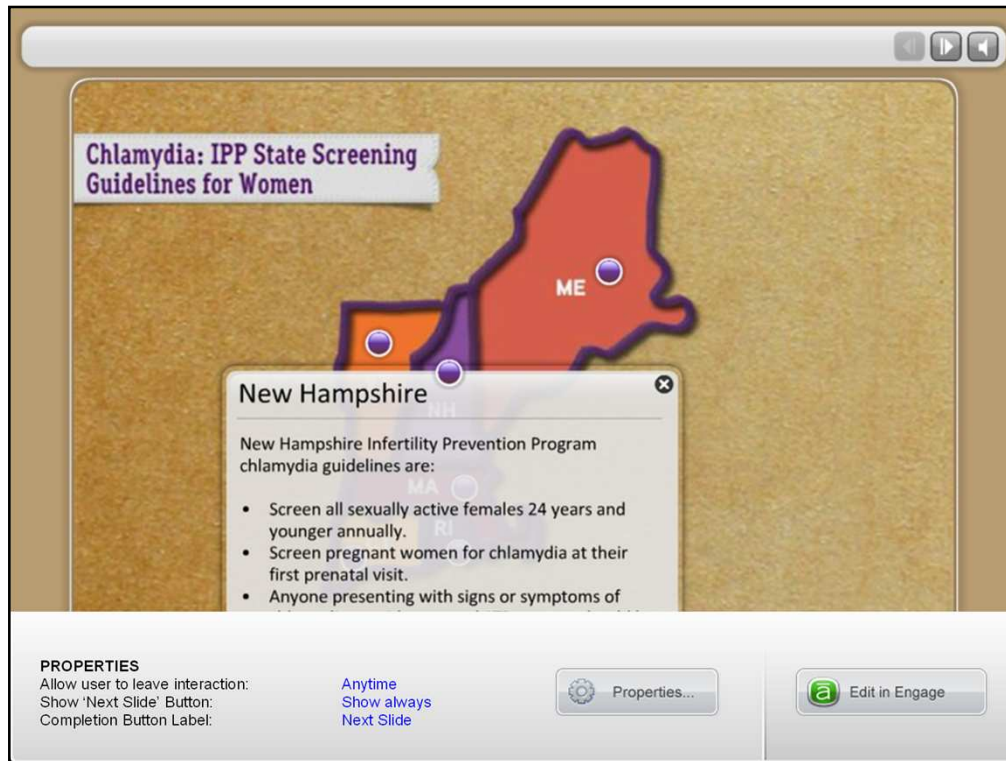
The cost effectiveness threshold for screening women for chlamydia is generally accepted to be 3%, meaning if the prevalence in a particular population is lower than 3% it is not considered cost effective to screen the population. Among females 24 and younger, all Region I states have positivity rates of 3% or higher, meaning that screening, rather than selectively testing for chlamydia among this age group is cost effective.



Slide 42: Testing for Extragenital Chlamydia or Gonorrhea

Laboratories may offer NAAT testing for diagnosis of extragenital chlamydia or gonorrhea after internal validation of the method by a verification study. Check with your lab about what specimen types they can accept.

For more information, read this letter from the Department of Health and Human Services. <http://www.cdc.gov/std/general/dcl-ng-ct-testing-7-13-2009.pdf>.



Slide 43: Chlamydia: IPP State Screening Guidelines for Women

Each state also has its own Infertility Prevention Project (IPP) chlamydia screening guidelines for women.

Connecticut

- Screen sexually active females 25 and younger annually.
- Screen pregnant women at the first prenatal visit.
- Anyone presenting with signs or symptoms of chlamydia should be tested.

Massachusetts

- Screen all sexually active females 25 years and younger annually.
- Screen sexually active women 26 years and older with new or multiple partners and/or who have had an STD diagnosis in the previous 12 months.
- Screen pregnant women for chlamydia at their first prenatal visit.
- Anyone presenting with signs or symptoms of chlamydia should be tested.

Maine

- Screen all sexually active females 24 years and younger annually.
- Screen sexually active women 25 years or older with new or multiple partners and/or who have been diagnosed with an STD in the previous 12 months.
- Screen pregnant women for chlamydia at their first prenatal visit.
- Anyone presenting with signs or symptoms of Chlamydia should be tested.

New Hampshire

- Screen all sexually active females 24 years and younger annually.
- Screen pregnant women for chlamydia at their first prenatal visit.
- Anyone presenting with signs or symptoms of chlamydia or with reported STD contact should be tested.

Rhode Island

- Screen sexually active females 25 years and younger annually.
- Screen sexually active women 26 years and older with new or multiple partners and/or who have had an STD diagnosis in the previous 12 months.
- Screen pregnant women for chlamydia at their first prenatal visit.
- Anyone presenting with signs or symptoms of chlamydia should be tested.

Vermont

- Screen all sexually active females 24 years and younger annually.
- Screen sexually active women 25 years or older with new or multiple partners, who have been diagnosed with an STD in the previous 12 months, had STD contact in the past 60 days and/or who has a partner with multiple partners.
- Screen pregnant women for chlamydia at their first prenatal visit.
- Anyone presenting with signs or symptoms of chlamydia should be tested.

Chlamydia: Risk Factors

- ☐ CDC recommends CT screening for women 26 and older *only if* there are other risk factors
- ☐ Risk factors may be defined differently by different organizations, the state you work in, or your clinic
- ☐ CT screening should be done according to your state guidelines/clinic policy

Slide 44: Chlamydia: Risk Factors 2010 CDC STD Treatment Guidelines

Because of the low rates of chlamydia in the over 25 year old age group, CDC recommends chlamydia screening for women 26 or older only if they have additional risk factors.

Risk factors may be defined differently by different organizations, the state you work in, or your clinic. Most importantly, chlamydia screening should be done according to your state guidelines and/or your clinic's policy.

2010 CDC STD
Treatment Guidelines

According to the US Preventative Services Task Force (USPSTF) risk factors associated with chlamydia infection include age and race, as we've discussed, as well as individual risk factors such as previous chlamydia infection or other sexually transmitted infections, new or multiple sexual partners, inconsistent condom use and/or sex work.

The American College of Obstetricians and Gynecologists (ACOG) lists the following individual risk factors for chlamydia:

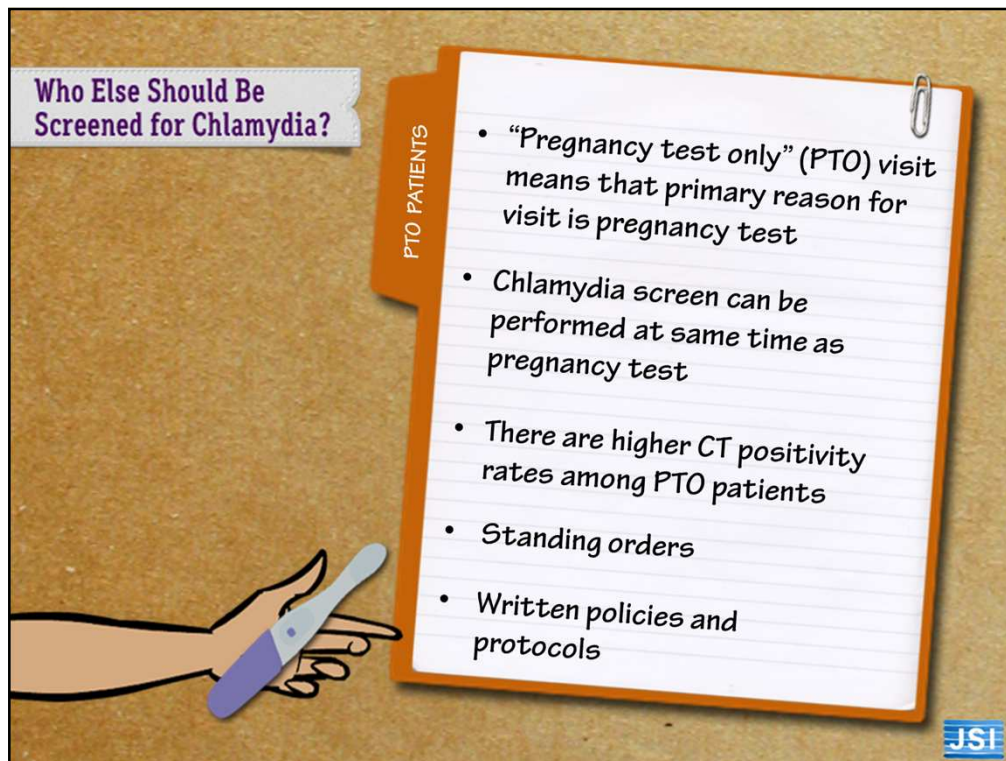
- Having or having had more than one sexual partner
- Having a partner who has or has had more than one sexual partner
- Having sex with someone who has an STD
- Having a history of STDs

Slide 45: USPSTF and ACOG Risk Definitions

According to the US Preventative Services Task Force (USPSTF) risk factors associated with chlamydia infection include age and race, as we've discussed, as well as individual risk factors such as previous chlamydia infection or other sexually transmitted infections, new or multiple sexual partners, inconsistent condom use and/or sex work.

The American College of Obstetricians and Gynecologists (ACOG) lists the following individual risk factors for chlamydia:

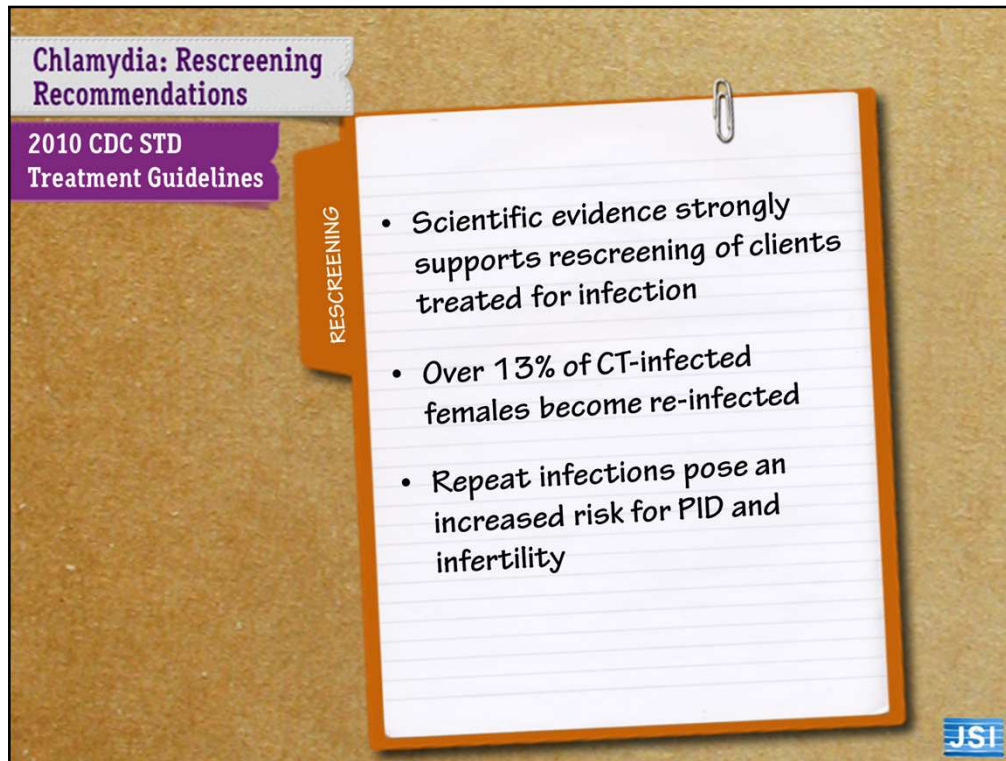
- Having or having had more than one sexual partner
- Having a partner who has or has had more than one sexual partner
- Having sex with someone who has an STD
- Having a history of STDs



Slide 46: Who Else Should Be Screened for Chlamydia?

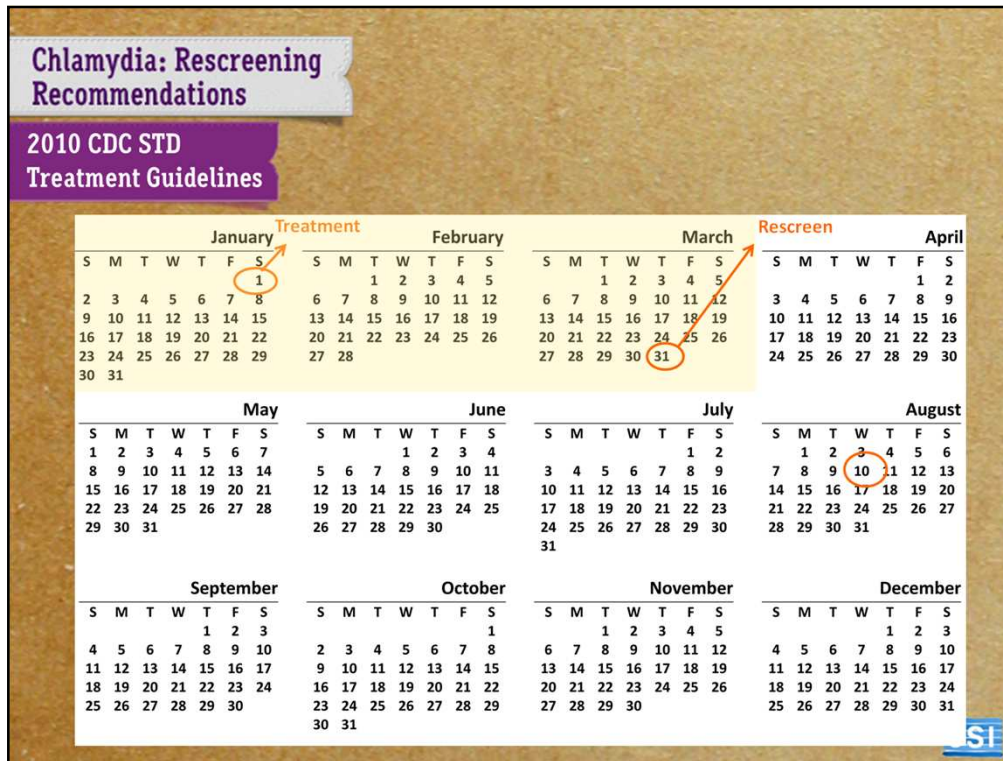
Another population identified for targeted screening is women whose primary reason for coming to the clinic is a pregnancy test, also called a “pregnancy test only” visit. Since chlamydia can be screened for with a first void urine sample, it can be performed at the same time as the pregnancy test. Several studies have shown higher positivity rates in this population.

To target this group, your clinic may want to establish standing orders and written policies and protocols that assume chlamydia, and gonorrhea screening where appropriate, for women 24 and younger during pregnancy test only visits.



Slide 47: Chlamydia: Rescreening Recommendations
2010 CDC STD Treatment Guidelines

Scientific evidence also strongly supports rescreening of clients treated for infection. Over 13% of chlamydia-infected females become re-infected at some point and repeat infections pose an increased risk for related complications, like PID and infertility.



Slide 48: Chlamydia: Rescreening Recommendations
2010 CDC STD Treatment Guidelines

CDC recommends that chlamydia-infected women and men should be rescreened approximately three months after treatment. If rescreening at three months is not possible, clinicians should rescreen whenever the person next presents for medical care in the 12 months following initial treatment.

Chlamydia: Rescreening Recommendations

2010 CDC STD Treatment Guidelines

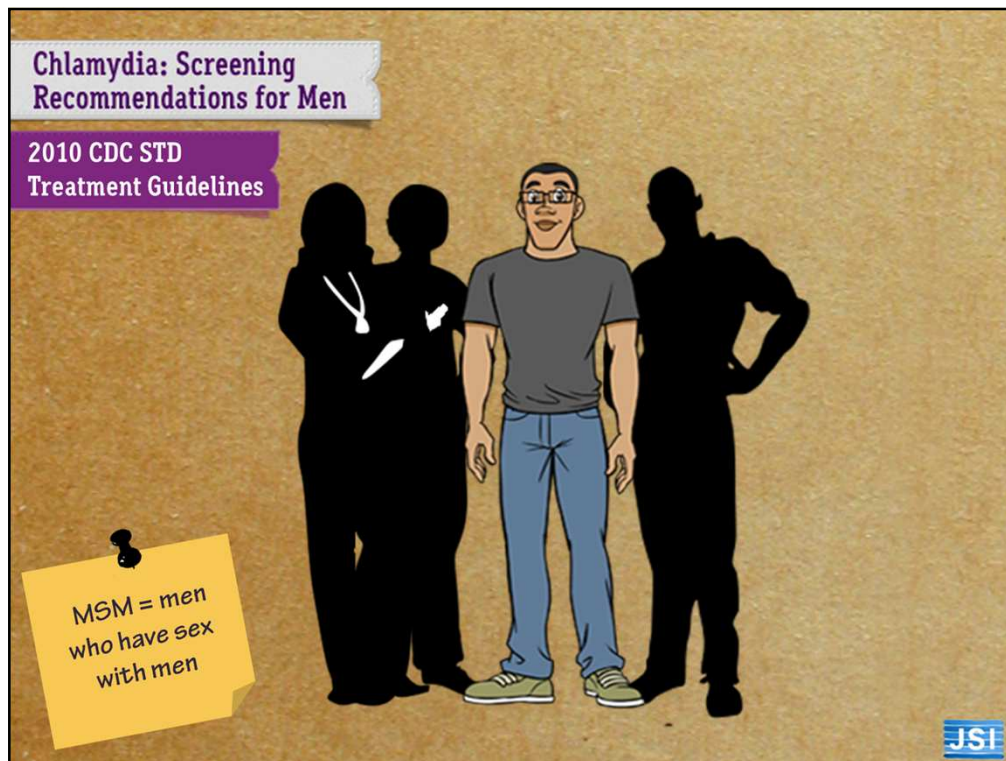
In a review of over 30 studies, the overall median proportion of females reinfected with chlamydia was 13.9%. As with chlamydia rates in general, younger age was associated with higher rates of chlamydia reinfection. However, a recent 2010 review of the literature in the *Journal of Infection Diseases* concluded that it was difficult to determine whether the risk for related complications, like PID and infertility, increased with each recurrent episode.

The emphasis on rescreening is an attempt to address repeat infections, which pose an increased risk for chlamydia-related complications like PID and infertility. There is also some evidence that the proportion of people with repeat infections may be increasing. To prevent the serious sequelae of undiagnosed chlamydia, it is important to re-screen all patients with a positive chlamydia result.

Slide 49: Chlamydia Reinfection Rate

In a review of over 30 studies, overall median proportion of females reinfected with chlamydia was 13.9%. As with chlamydia rates in general, younger age was associated with higher rates of chlamydia reinfection. However, a recent 2010 review of the literature in the *Journal of Infection Diseases* concluded that it was difficult to determine whether the risk for related complications, like PID and infertility, increased with each recurrent episode.

The emphasis on rescreening is an attempt to address repeat infections, which pose an increased risk for chlamydia-related complications like PID and infertility. There is also some evidence that the proportion of people with repeat infections may be increasing. To prevent the serious sequelae of undiagnosed chlamydia, it is important to re-screen all patients with a positive chlamydia result.

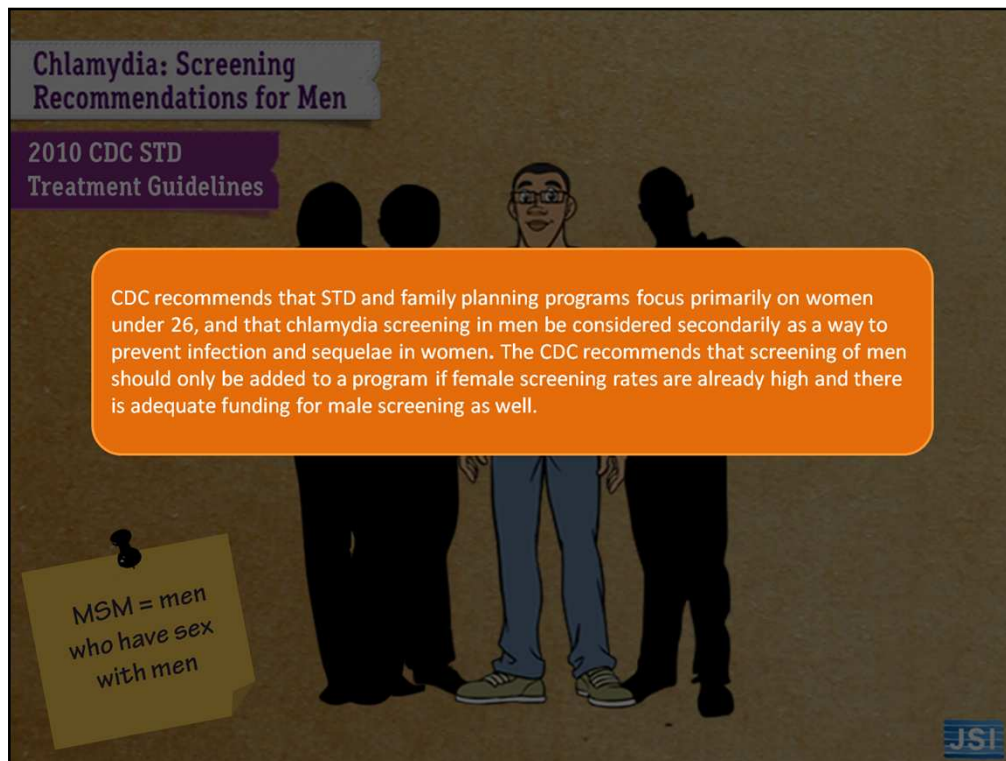


Slide 50: Chlamydia: Screening Recommendations for Men
2010 CDC STD Treatment Guidelines

CDC recommends that men who have MSM, or men who have sex with men, get screened annually for chlamydia.

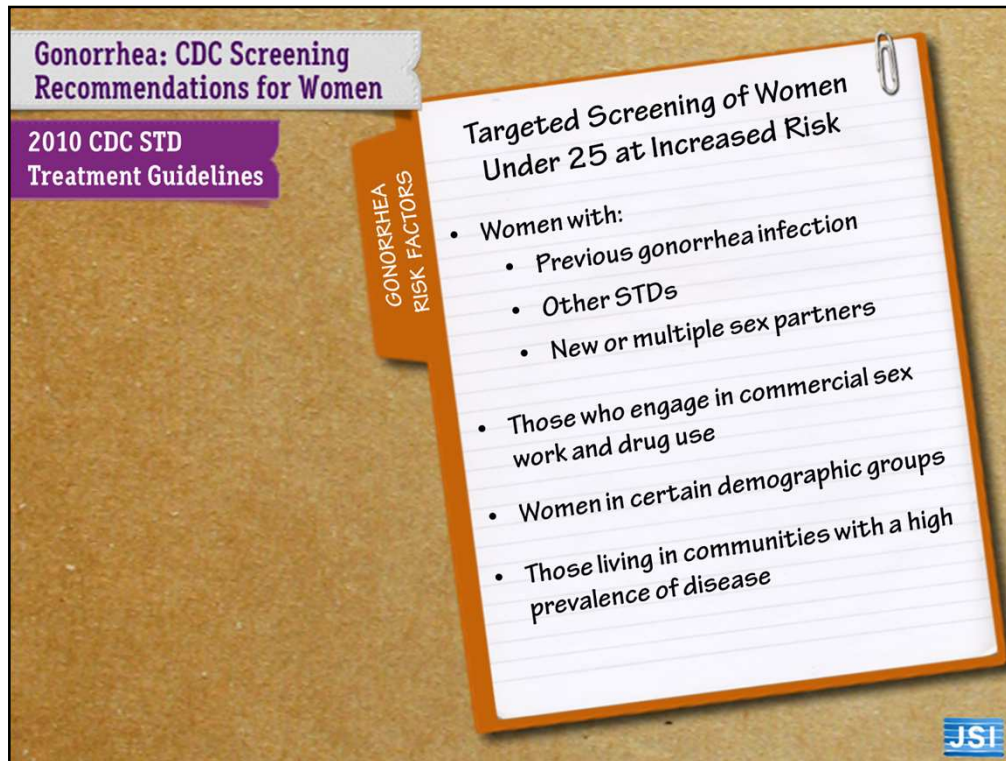
So you may be wondering about Alex, your 21-year-old client. Should he be tested for chlamydia? YES. He should be tested for both chlamydia and gonorrhea because, as you may recall, he is presenting with symptoms. Any client presenting with symptoms of a bacterial infection should be tested.

Alex also reports having sex with men, which places him in the screening recommendations for MSM (men who have sex with men). There are currently no national screening recommendations for men overall.



Slide 51: CDC Chlamydia Screening Recommendations for Men

CDC recommends that STD and family planning programs focus primarily on women under 26, and that chlamydia screening in men be considered secondarily as a way to prevent infection and sequelae in women. The CDC recommends that screening of men should only be added to a program if female screening rates are already high and there is adequate funding for male screening as well.



Slide 52: Gonorrhea: CDC Screening Recommendations for Women 2010 CDC STD Treatment Guidelines

Now let's look at screening recommendations for gonorrhea.

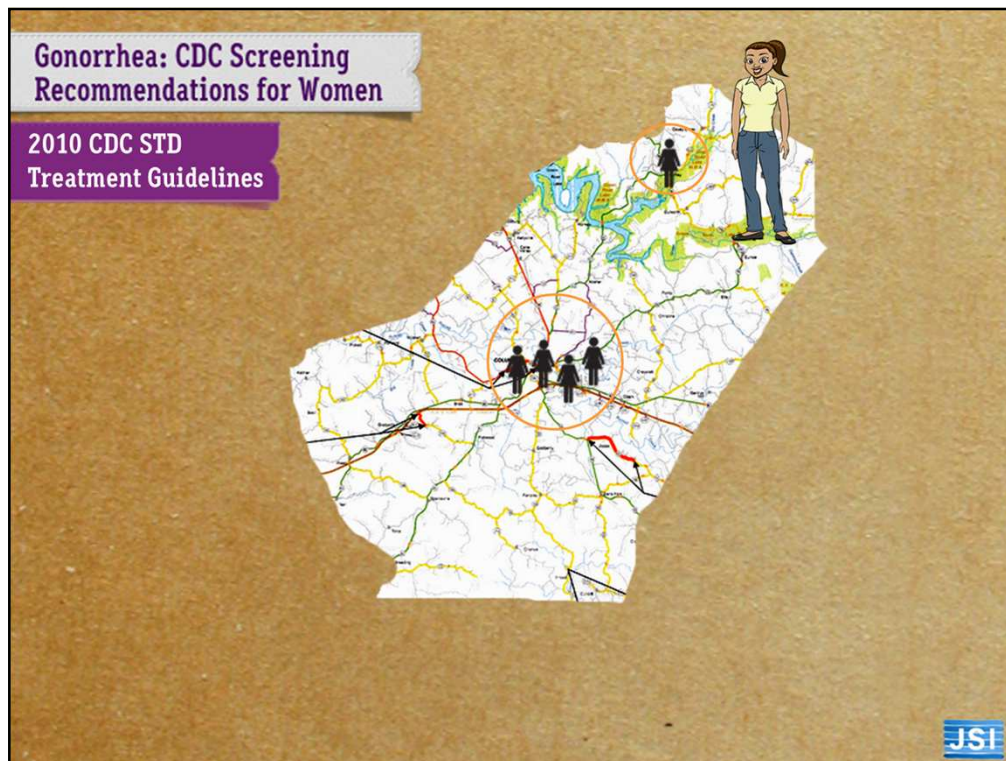
Because national prevalence for gonorrhea is so low, widespread screening is not recommended. Targeted screening of women under 25 *at increased risk* for infection is however recommended. This includes women with previous gonorrhea infection, other STDs, new or multiple sex partners; those who engage in commercial sex work and drug use; women in certain demographic groups with higher prevalence; and those living in communities with a high prevalence of disease.

CDC does not recommend screening for gonorrhea in men and women who are at low risk for infection.



**Slide 53: Gonorrhea: CDC Screening Recommendations for Women
2010 CDC STD Treatment Guidelines**

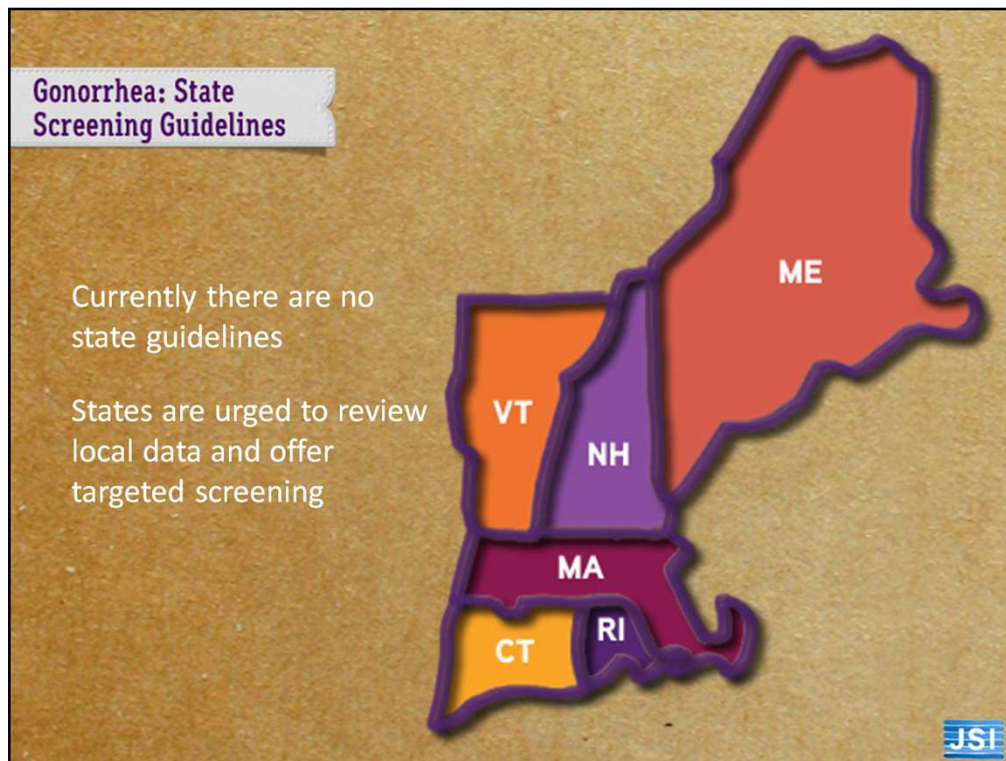
All pregnant women at increased risk for gonorrhea or living in a high prevalence area, should be screened at their first prenatal visit. Pregnant women who remain at high risk for or are found to have gonorrheal infection during the first trimester should be retested in 3-6 months, preferably during the third trimester.



**Slide 54: Gonorrhea: CDC Screening Recommendations for Women
2010 CDC STD Treatment Guidelines**

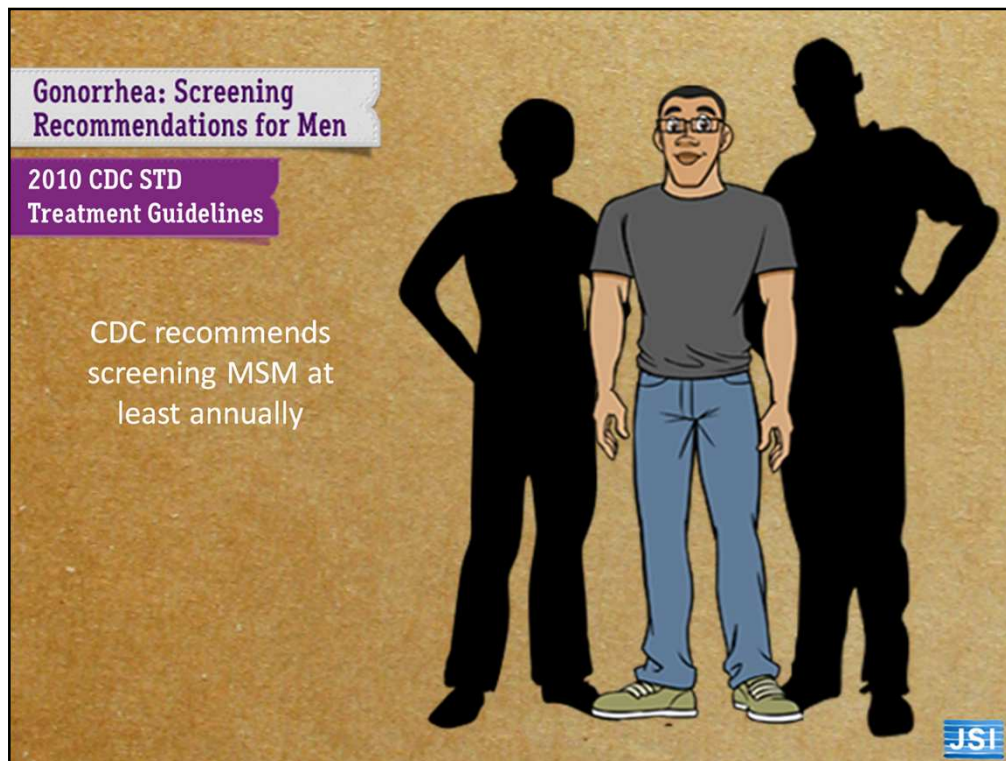
The prevalence of gonorrhea varies widely among communities and populations. Health-care providers should consider local gonorrhea epidemiology when making screening decisions as geographical prevalence has been shown to be an effective selective screening criterion.

As you can see, the screening recommendations for gonorrhea are not as clear-cut as they are for chlamydia. Consider Tanya. If she lived in an area of your state with very high gonorrhea prevalence, you might want to screen her given that she's 19 – within the 15 to 24 age group at highest risk for gonorrhea. However, for the purpose of this presentation, let's assume that she lives in an area with very low gonorrhea prevalence. In that case, her age alone may not be enough reason to screen her.



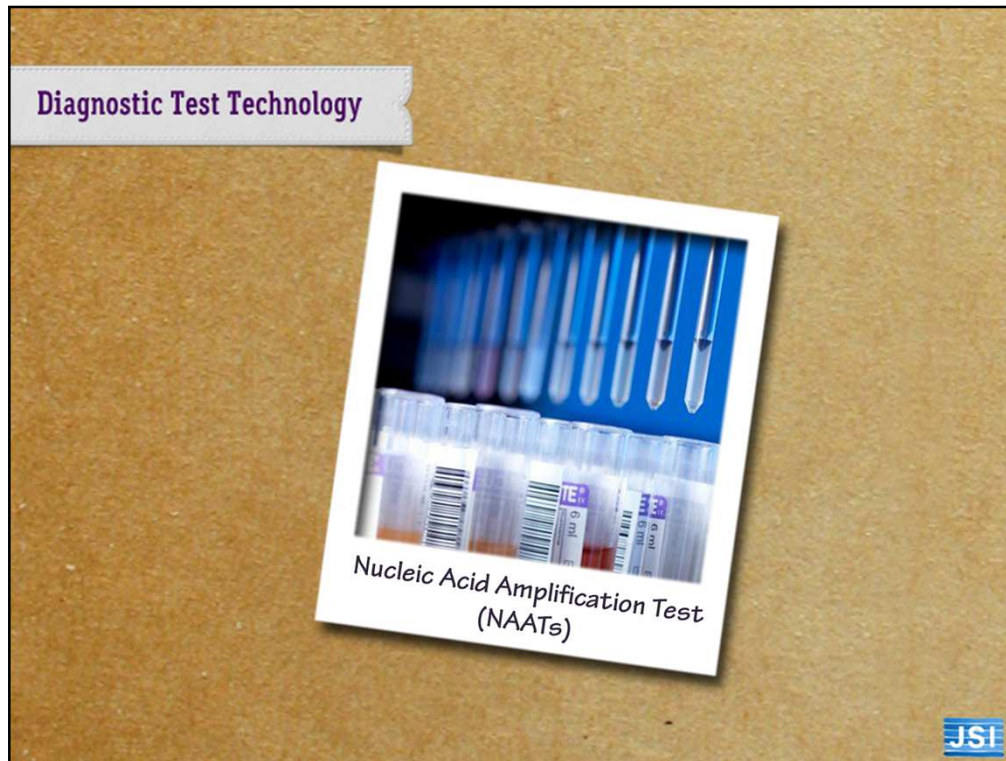
Slide 55: Gonorrhea: State Screening Guidelines

There are currently no state guidelines for gonorrhea screening in Region I. States are encouraged to review their local data and offer targeted screening in communities with high prevalence.



Slide 56: Gonorrhea: Screening Recommendations for Men
2010 CDC STD Treatment Guidelines

CDC recommends screening MSM at least annually for chlamydia and gonorrhea.

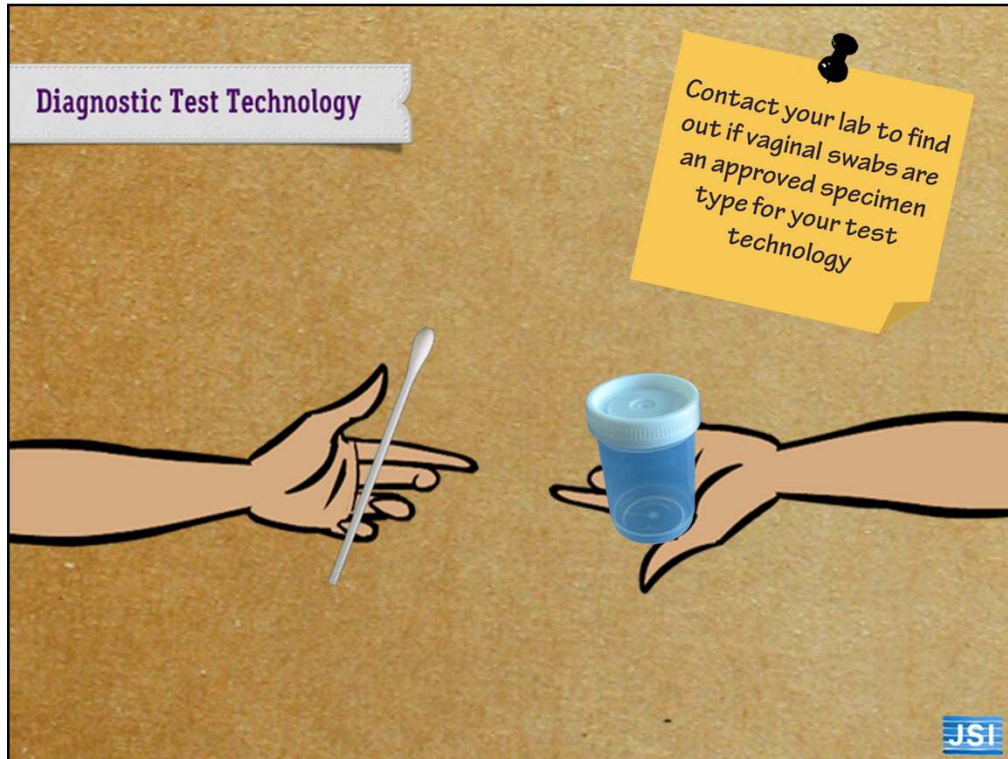


Slide 57: Diagnostic Test Technology

The gold standard for diagnostic testing of chlamydia and gonorrhea is the nucleic acid amplification test, or NAATs. Here are some important points about NAATs:

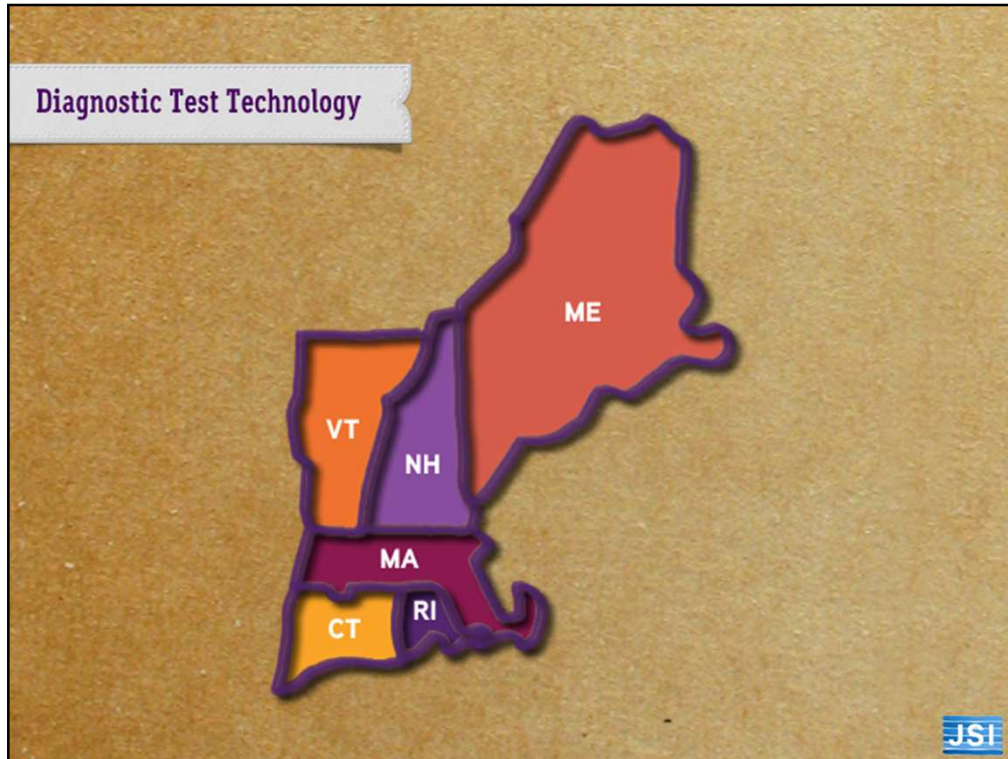
- For women, vaginal swabs or endocervical swabs are the first choice in specimen collection.
- Vaginal specimen collection may be performed by the patient herself, or by the provider during a pelvic exam.
- Urine is an acceptable specimen type for screening of both men and women.
- Although first void urine was the least sensitive sampling method, it is also the least invasive method.
- Urine is the preferred specimen type for testing males with NAATs.

Currently, all state public health labs in Region I use NAATs for chlamydia and gonorrhea diagnostic testing. Acceptable specimens for NAATs include: vaginal swabs, endocervical swab, and urine.



Slide 58: Diagnostic Test Technology

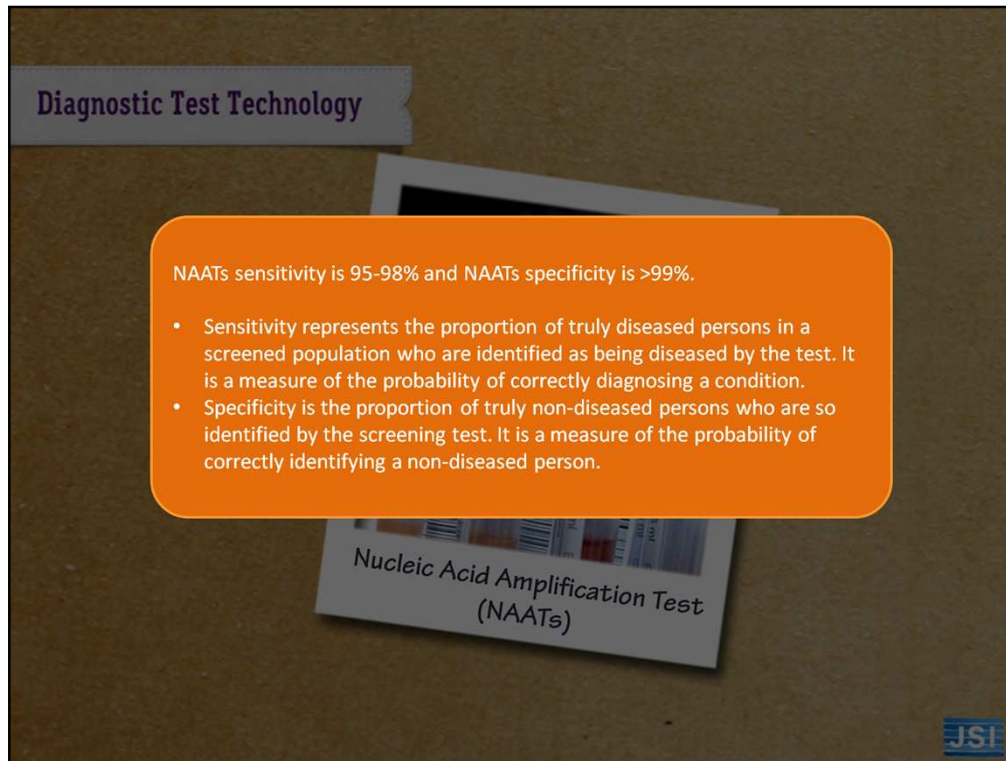
Contact your lab to find out if vaginal swabs are an approved specimen type for your test technology.



Slide 59: Diagnostic Test Technology

Map showing New England states.

Currently, all state public health labs in Region I use NAATs for chlamydia and gonorrhea diagnostic testing. Acceptable specimens for NAATs include: vaginal swabs, endocervical swabs, and urine. Contact your laboratory for approved specimen types.



Slide 60: NAATs Sensitivity and Specificity

NAATs sensitivity is 95-98% and NAATs specificity is >99%.

- Sensitivity represents the proportion of truly diseased persons in a screened population who are identified as being diseased by the test. It is a measure of the probability of correctly diagnosing a condition.
- Specificity is the proportion of truly non-diseased persons who are so identified by the screening test. It is a measure of the probability of correctly identifying a non-diseased person.

Di

- NAATs are not cleared for rectal specimens by the FDA, however NAATs can be used for rectal testing if local labs have completed validation studies.
- CDC funded an external specimen bank to facilitate an off-label establishment study for using NAATs for rectal specimens
- Protocol and guidelines developed by the APHL/CDC STD Steering Committee

For more information, read the [Example Verification Protocol for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* Nucleic Acid Amplification Testing of Rectal Swabs](#).

- NAATs have superior performance to culture for the detection of pharyngeal GC infections
- Some NAATs report cross-reaction and may require repeat testing by an alternative method
- NAATs are not cleared for pharyngeal specimens by the FDA
- CDC funded an external specimen bank to facilitate an off-label establishment study
- Protocol and guidelines developed by the APHL/CDC STD Steering Committee

For more information, read the [Example Verification Protocol for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* Nucleic Acid Amplification Testing of Pharyngeal \(Throat\) Swabs](#).

JSI

Slide 61: NAATs Use for Rectal and Pharyngeal Infections

- NAATs are not cleared for rectal specimens by the FDA, however NAATs can be used for rectal testing if local labs have completed validation studies.
- CDC funded an external specimen bank to facilitate an off-label establishment study for using NAATs for rectal specimens
- Protocol and guidelines developed by the APHL/CDC STD Steering Committee

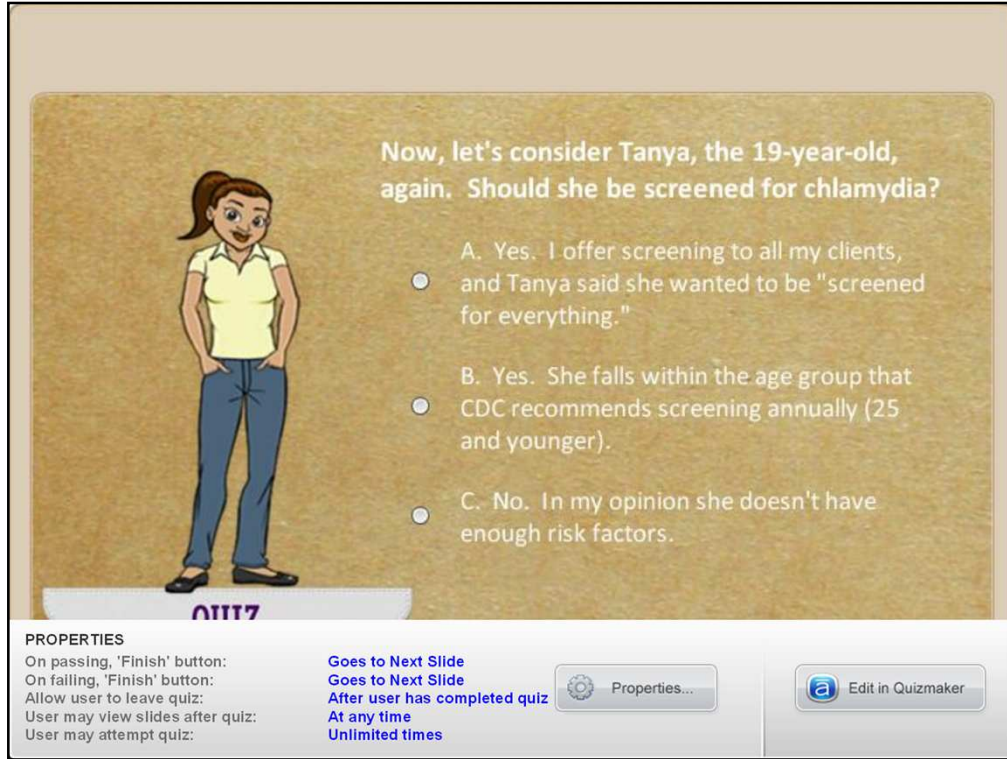
For more information, read the [Example Verification Protocol for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, Nucleic Acid Amplification Testing of Rectal Swabs](#).

<http://www.aphl.org/aphlprograms/infectious/std/Documents/NAATRectalSwabs.pdf>

- NAATs have superior performance to culture for the detection of pharyngeal GC infections
- Some NAATs report cross-reaction and may require repeat testing by an alternative method
- NAATs are not cleared for pharyngeal specimens by the FDA
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For more information, read the [Example Verification Protocol for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, Nucleic Acid Amplification Testing of Pharyngeal \(Throat\) Swabs](#).

<http://www.aphl.org/aphlprograms/infectious/std/Documents/NAATThroatSwabs.pdf>



Now, let's consider Tanya, the 19-year-old, again. Should she be screened for chlamydia?

- ☐ A. Yes. I offer screening to all my clients, and Tanya said she wanted to be "screened for everything."
- ☐ B. Yes. She falls within the age group that CDC recommends screening annually (25 and younger).
- ☐ C. No. In my opinion she doesn't have enough risk factors.

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Slide 62: Quiz 2

Now, let's consider Tanya, the 19-year-old, again. Should she be screened for chlamydia?

- A. Yes. I offer screening to all my clients and Tanya said she wanted to be "screened for everything."
- B. Yes. She falls within the age group that CDC recommends screening annually (25 and younger).
- C. No. In my opinion she doesn't have enough risk factors.

The correct answer is B.

What about Vanessa, the 28-year-old waitress who is no longer seeing her boyfriend of two years. Should she be screened for chlamydia?

- A. Yes. I offer screening to all my clients.
- B. Yes. She could be at risk if her boyfriend had sex with someone else.
- C. No. She doesn't fall within the age group the CDC recommends screening annually and she doesn't have any of the risk factors identified in the state screening guidelines.

The correct answer is C.

Chlamydia Treatment

2010 CDC STD Treatment Guidelines

Doxycycline is *not* recommended for use during pregnancy

Rx
Azithromycin 1 g orally in a single dose
Refills □ 1 □ 2 □ 4

OR

Rx
Doxycycline 100 mg orally twice a day for 7 days
Refills □ 1 □ 2 □ 4

JSI

Slide 63: Chlamydia Treatment

2010 CDC STD Treatment Guidelines

Now that we've discussed screening and diagnostic testing for these infections, let's review the latest treatment recommendations.

The 2010 STD Treatment guidelines from CDC state that the recommended treatment for chlamydia infection is:

Azithromycin, 1 gram orally in a single dose

OR

Doxycycline, 100 milligrams orally twice a day for 7 days

(Doxycycline is NOT recommended for us during pregnancy.)

Chlamydia treatment should be provided promptly for all persons testing positive for infection to avoid the complications of chlamydia, and possible transmission.

Gonorrhea Treatment

2010 CDC STD Treatment Guidelines



R_x PREFERRED

Ceftriaxone 250 mg
intramuscularly in a single dose

OR

Cefixime 400 mg
orally in a single dose

Refills □ 1 □ 2 □ 4

+

R_x

Azithromycin 1 g
orally in a single dose

OR

Doxycycline 100 mg
orally twice a day for 7 days

Refills □ 1 □ 2 □ 4



Slide 64: Gonorrhea Treatment **2010 CDC STD Treatment Guidelines**

The recommended treatment for gonorrhea is combination therapy:

Ceftriaxone 250 milligrams intramuscularly in a single dose

PLUS

Azithromycin 1gram orally in a single dose

OR

Doxycycline 100 milligrams orally twice a day for 7 days

Cetriacone is the preferred treatment for gonorrhea and is the only recommended regimen for pharyngeal infections. However, if it is not an option:

Cefixime 400 mg orally in a single dose

PLUS

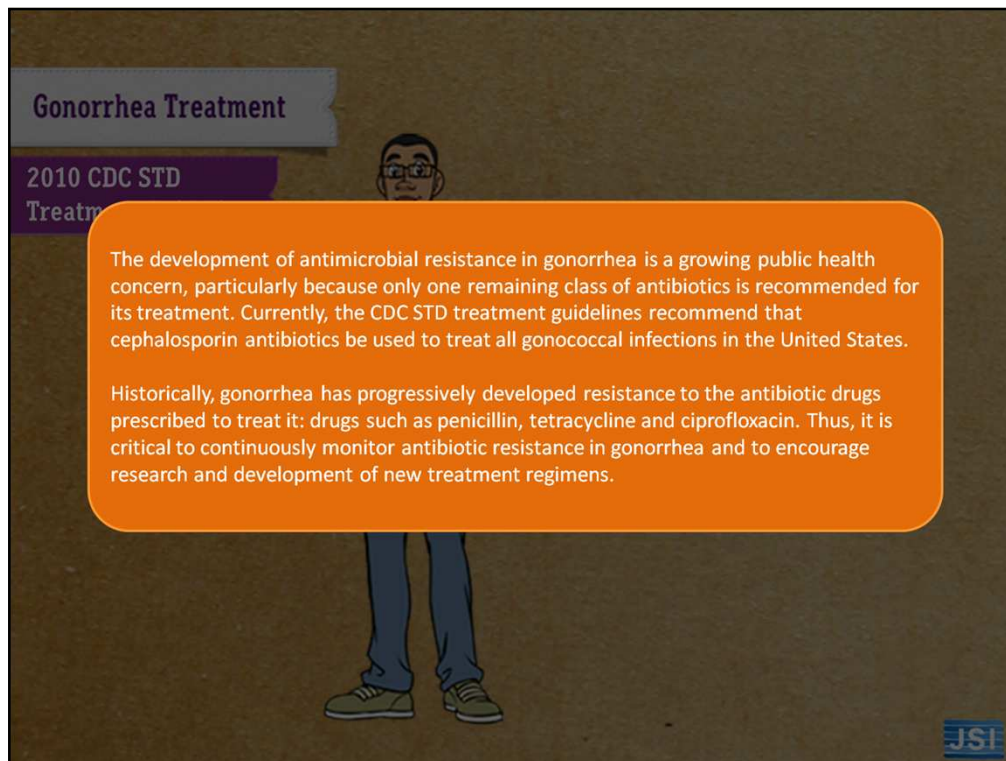
Azithromycin

OR

Doxycycline is also an option

This is a combination therapy, recommended by the CDC in 2010 to address issues with antibiotic resistance. To maximize compliance with recommended therapies, medications for gonococcal infections should be dispensed on site.

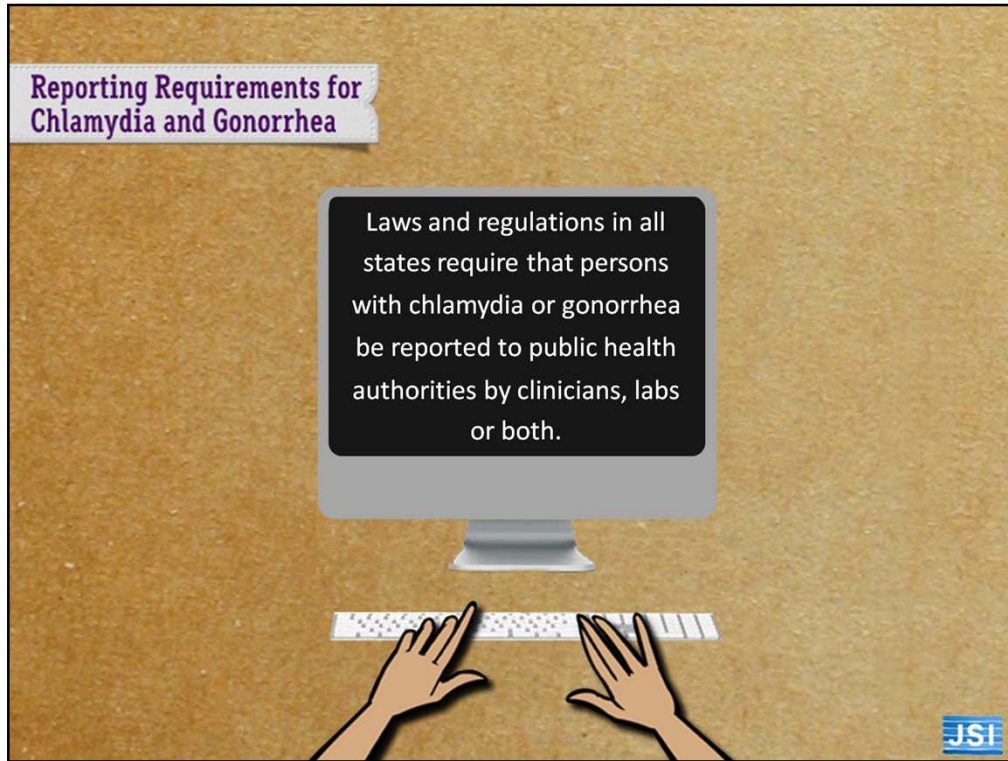
All persons being treated for gonorrhea should also be tested for other STDs, including chlamydia, syphilis and HIV.



Slide 65: Resistance in Gonorrhea

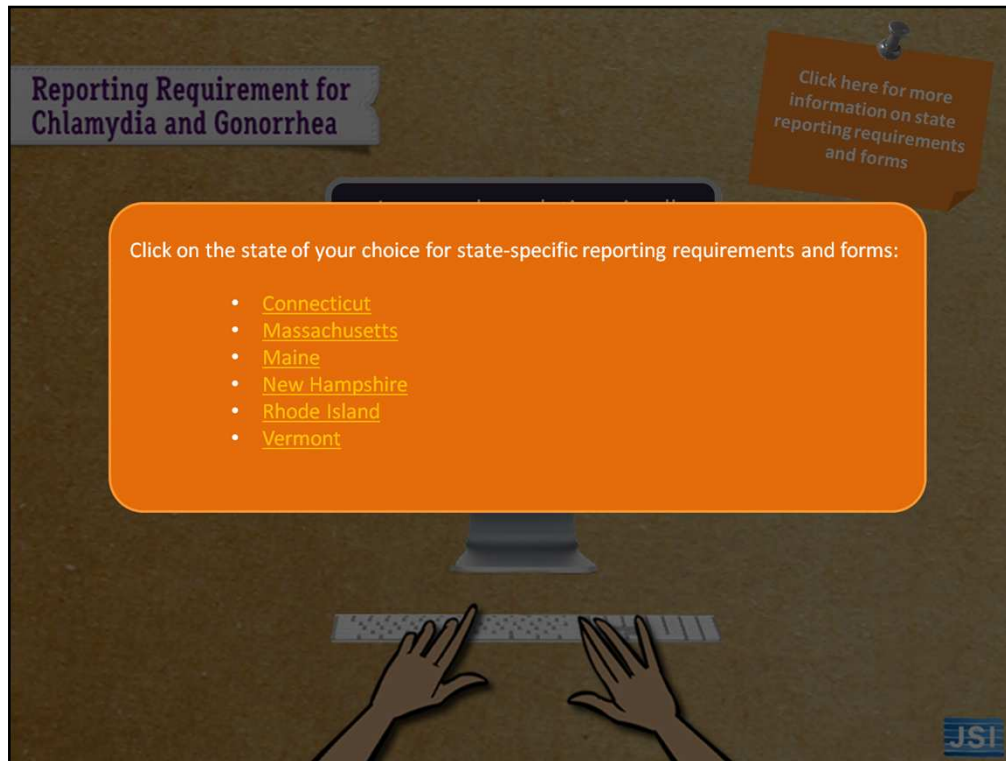
The development of antimicrobial resistance in gonorrhea is a growing public health concern, particularly because only one remaining class of antibiotics is recommended for its treatment. Currently, the CDC STD treatment guidelines recommend that cephalosporin antibiotics be used to treat all gonococcal infections in the United States.

Historically, gonorrhea has progressively developed resistance to the antibiotic drugs prescribed to treat it: drugs such as penicillin, tetracycline and ciprofloxacin. Thus, it is critical to continuously monitor antibiotic resistance in gonorrhea and to encourage research and development of new treatment regimens.



Slide 66: Reporting Requirements for Chlamydia and Gonorrhea

Laws and regulations in all states require that persons with chlamydia or gonorrhea be reported to public health authorities by clinicians, labs or both.



Slide 67: State-specific Reporting Requirements and Forms

Click on the state of your choice for state-specific reporting requirements and forms.

Connecticut: <http://www.ct.gov/dph/cwp/view.asp?a=3136&q=453876>

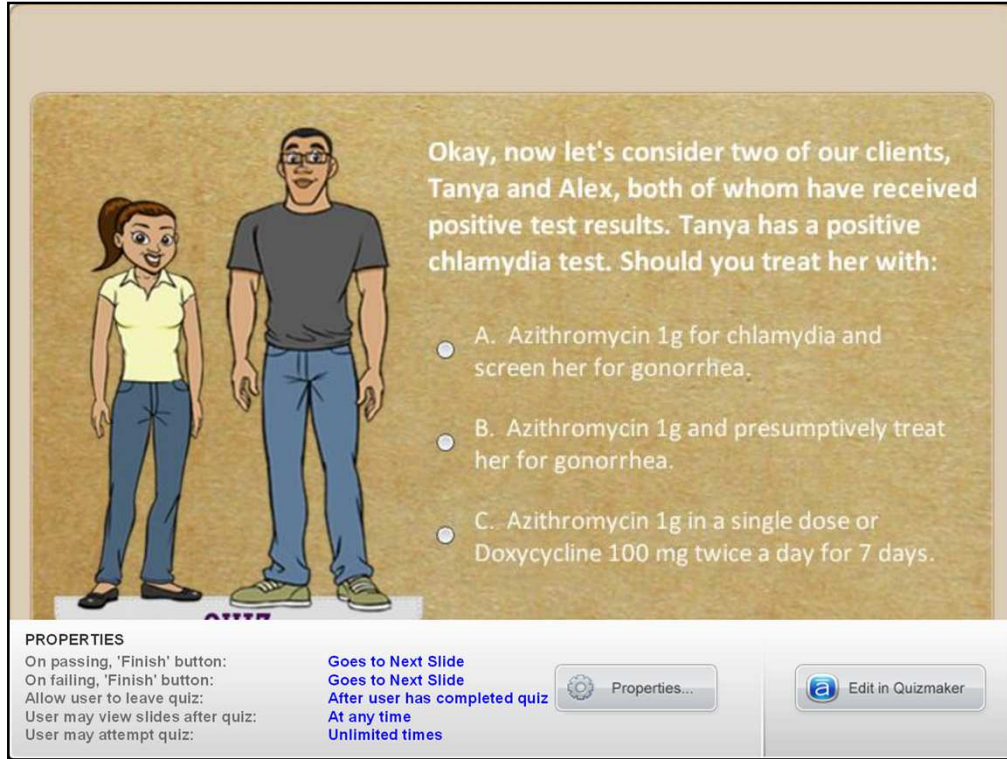
Massachusetts: <http://www.mass.gov/eohhs/docs/dph/cdc/reporting/rprtbldiseases-hcp.pdf>

Maine: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/disease-reporting/index.shtml>

New Hampshire: <http://www.dhhs.state.nh.us/dphs/cdcs/documents/diseasereport.pdf>

Rhode Island: <http://www.health.ri.gov/forms/reporting/cases/SexuallyTransmittedDiseases.pdf>

Vermont: http://www.healthvermont.gov/prevent/reporting/reportable_lab.pdf



Okay, now let's consider two of our clients, Tanya and Alex, both of whom have received positive test results. Tanya has a positive chlamydia test. Should you treat her with:

- ☐ A. Azithromycin 1g for chlamydia and screen her for gonorrhea.
- ☐ B. Azithromycin 1g and presumptively treat her for gonorrhea.
- ☐ C. Azithromycin 1g in a single dose or Doxycycline 100 mg twice a day for 7 days.

PROPERTIES
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Slide 68: Quiz 3

Okay, now let's consider two of our clients, Tanya and Alex, both of whom have received positive test results. Tanya has a positive chlamydia test. Should you treat her with:

- A. Azithromycin 1g for chlamydia and screen her for gonorrhea.
- B. Azithromycin 1g and presumptively treat her for gonorrhea.
- C. Azithromycin 1g in a single dose or Doxycycline 100 mg twice a day for 7 days.

The correct answer is C.

Alex has a positive gonorrhea result. You should treat him with:

- A. Ceftriaxone 250mg IM in a single dose and rescreen for chlamydia.
- B. Ceftriaxone 250mg IM in a single dose plus Azithromycin or Doxycycline.
- C. Cefixime 400mg in a single dose.

The correct answer is B.



Slide 69: Partner Management

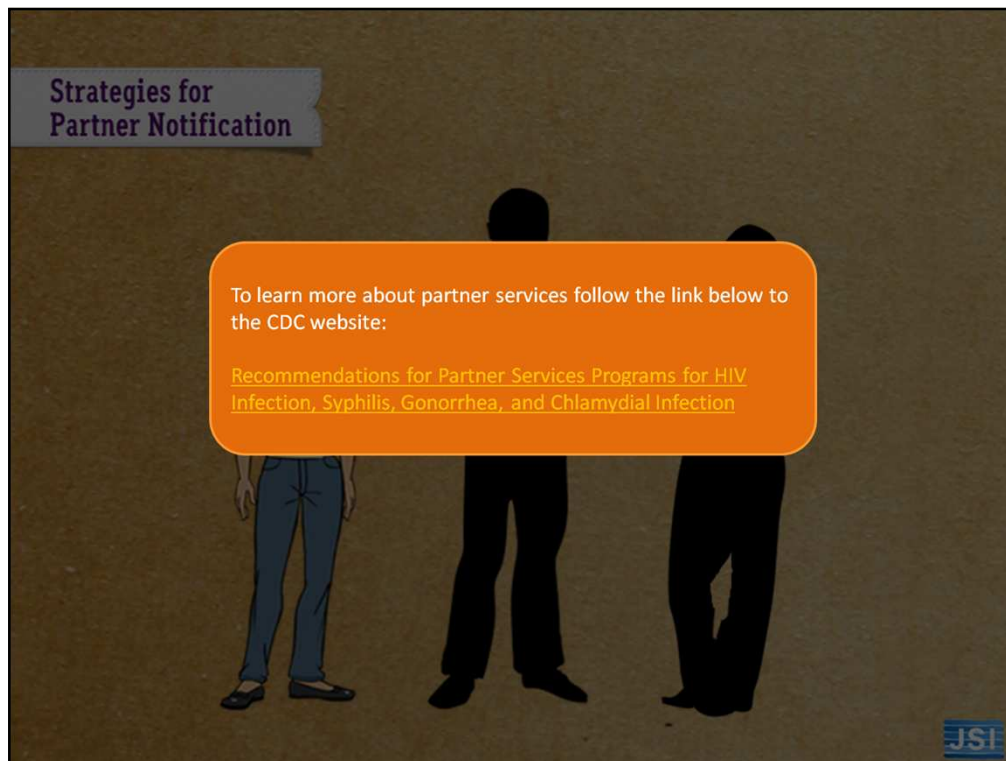
Treating partners of positive clients is critical in reducing transmission of chlamydia and gonorrhea. Patients who present as exposed partners of a positive patient should be tested, or treated presumptively – regardless of symptoms, age or gender.



Slide 70: Strategies for Partner Notification

There are two main strategies for notifying partners that they have been exposed to chlamydia or gonorrhea. “Patient referral” occurs when patients who’ve tested positive notify their sex partners that treatment is necessary. “Provider referral” occurs when a provider or health department Disease Intervention Specialists (or DIS) identifies and notifies the partners of infected individuals.

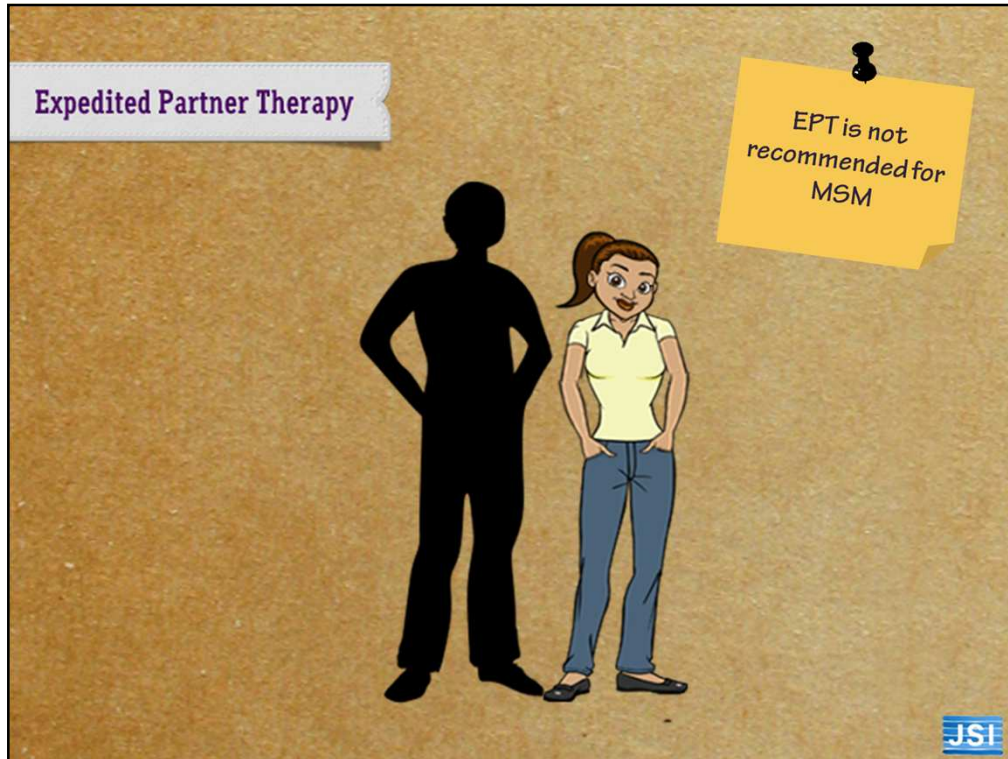
Examination of the partner by a clinician is the gold standard; however if there is concern that sex partners will not seek evaluation and treatment, or if other management strategies are impractical or unsuccessful, then partners may sometimes be treated without being tested. This is called expedited partner therapy or EPT.



Slide 71: CDC Recommendations for Partner Services

To learn more about partner services follow the link below to the CDC website:
The *Recommendations for Partner Services Programs for HIV Infection, Syphilis, Gonorrhea, and Chlamydial Infection*.

<http://www.cdc.gov/nchhstp/partners/Partner-Services.html>



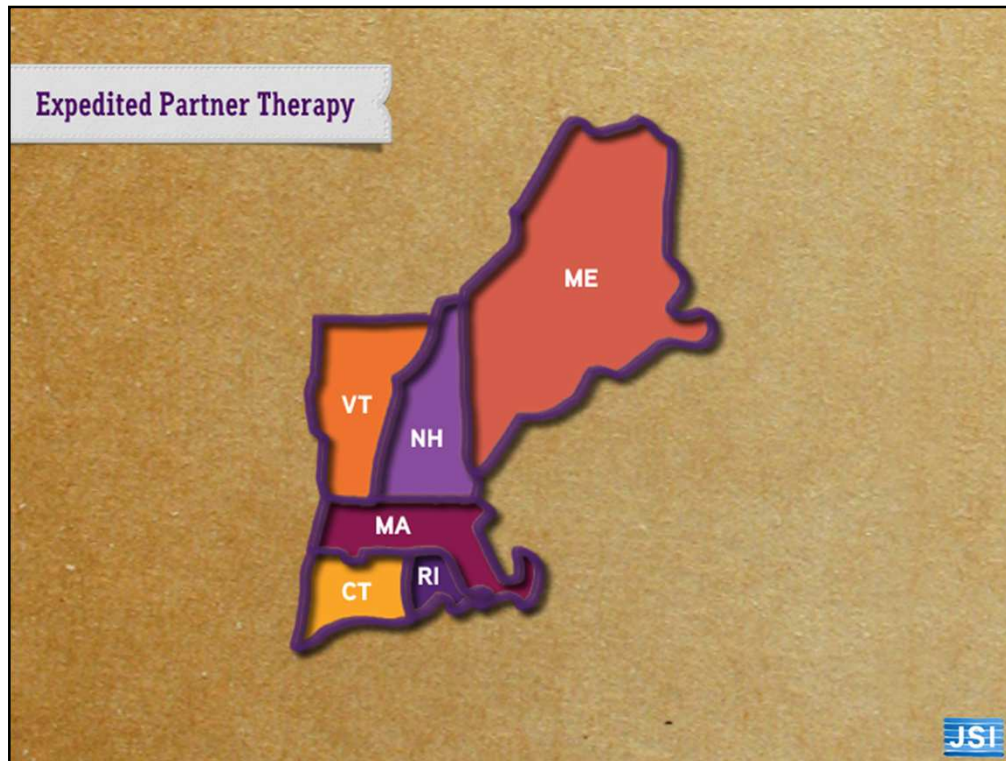
Slide 72: Expedited Partner Therapy

CDC has endorsed using EPT to treat the sex partners of patients diagnosed with chlamydia or gonorrhea. EPT is not recommended for MSM.



Slide 73: Expedited Partner Therapy

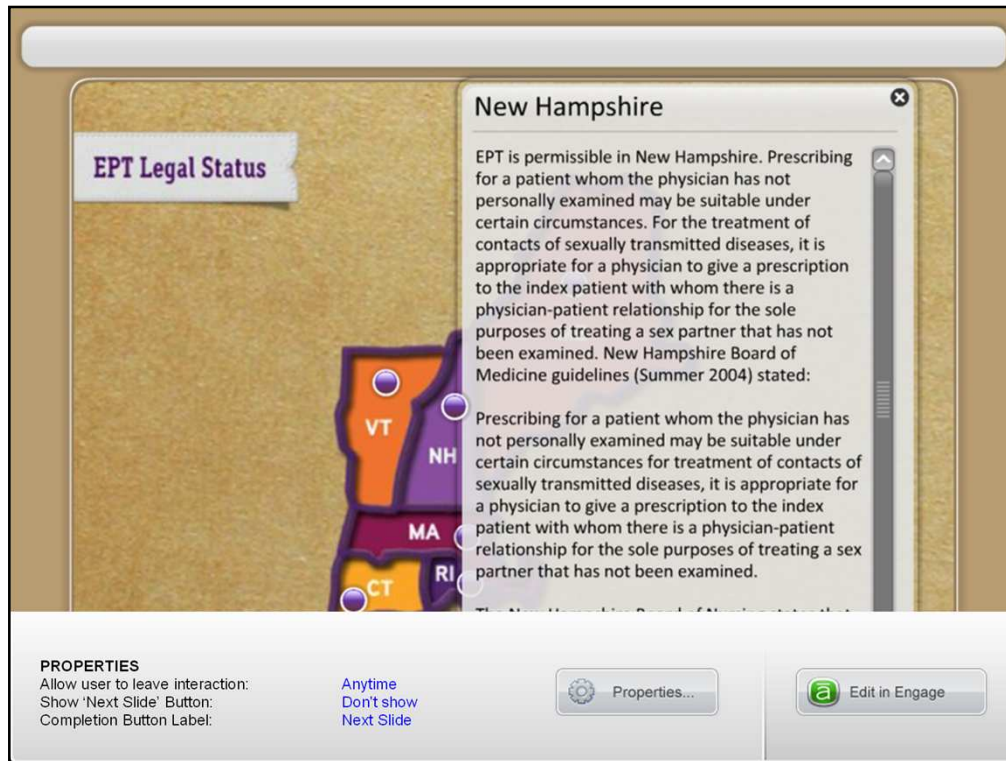
CDC has endorsed using EPT to treat the sex partners of patients diagnosed with chlamydia or gonorrhea. Without examining the partner, a provider can give the patient prescriptions or medications to deliver to the patient's partner or partners. Because EPT has been found to reduce barriers to partner treatment and decrease reinfection rates, CDC encourages this practice and it is now an option in many states.



Slide 74: Expedited Partner Therapy

Map of New England shown.

EPT is permissible in *all* Region I states. However, you should make sure that you are familiar with your state's regulations regarding partner notification and therapy, as well as your clinic's policy.



Slide 75: EPT Legal Status

Select your state to learn more about the legal status of EPT.

Connecticut

EPT is permissible in Connecticut. A prescribing practitioner who diagnoses a chlamydia or gonorrhea infection in a patient may prescribe and dispense oral antibiotic drugs to such patient and the patient's partners without a physical examination of such partner or partners. Conn. Gen. Stat. § 20-14e(e). (Effective October 1, 2011)

Maine

EPT is permissible in Maine. A health care professional who makes a clinical diagnosis of a sexually transmitted disease may provide expedited partner therapy for the treatment of the sexually transmitted disease if in the judgment of the health care professional the sexual partner is unlikely or unable to present for comprehensive health care, including evaluation, testing and treatment. The prescription must bear the name and address of the patient for whom the drugs are intended. (Maine Public Law, Chapter 533).

Massachusetts

EPT is permissible in Massachusetts. Certain healthcare providers are authorized to prescribe or dispense antibiotics to treat chlamydia infection in the sex partners of patients with chlamydia infection (Chapter 131, Section 62, of the Acts of 2010). The authorization for EPT applies only to chlamydia infection. The regulations governing EPT in Massachusetts are 105 CMR 700.003(J) and 105 CMR 721.000.

New Hampshire

EPT is permissible in New Hampshire. Prescribing for a patient whom the physician has not personally examined may be suitable under certain circumstances. For the treatment of contacts of sexually transmitted diseases, it is appropriate for a physician to give a prescription to the index patient with whom there is a physician-patient relationship for the sole purposes of treating a sex partner that has not been examined. New Hampshire Board of Medicine guidelines (Summer 2004) stated:

Prescribing for a patient whom the physician has not personally examined may be suitable under certain circumstances for treatment of contacts of sexually transmitted diseases, it is appropriate for a physician to give a prescription to the index patient with whom there is a physician-patient relationship for the sole purposes of treating a sex partner that has not been examined.

The New Hampshire Board of Nursing states that EPT is within the Scope of Practice for RN's and ARNP's with appropriate agency protocols in place. And the New Hampshire Board of Pharmacy agrees that EPT is an appropriate practice as long as appropriate providers provide medications and/or prescriptions.

<http://www.cdc.gov/std/ept/legal/newhampshire.htm>

Rhode Island

EPT is permissible in Rhode Island. Physicians, physician assistants, and nurse practitioners may prescribe antibiotic drugs for the treatment of chlamydia or gonorrhea to a patient's sexual partner or partners without an examination of the sexual partner or partners. However, the prescription must bear the name and address of the patient for whom the drugs are intended.

(Rhode Island Public Law No. 175).

Vermont

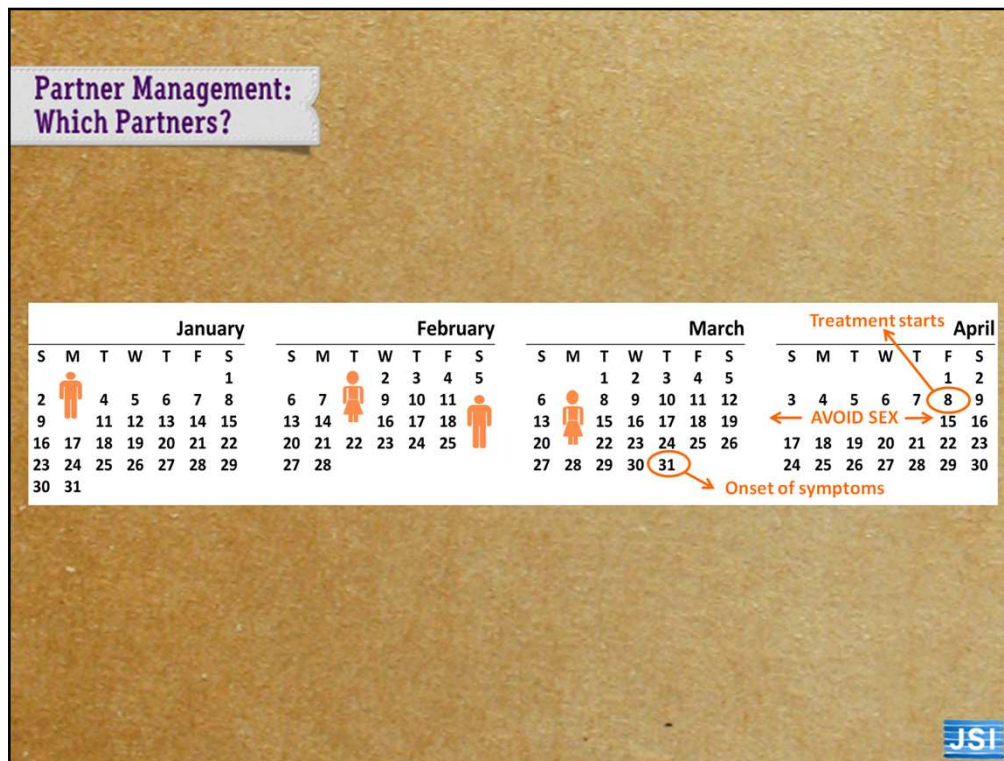
EPT is permissible in Vermont. EPT for the treatment of chlamydia is an acceptable practice by individuals licensed to practice medicine or licensed to practice nursing. However, the prescription must bear the name and address of the patient for whom the drugs are intended. (VT Stat. Ann., Title 26, Chapter 23, Section 1369).



Slide 76: Partner Management: Which Partners?

Partner management for chlamydia and gonorrhea is essential. Let's consider which partners, in particular, should be targeted.

All sex partners of patients who have gonorrhea should be evaluated and treated for gonorrhea and chlamydia infection if their last sexual contact with the patient was *within 60 days of the onset of symptoms or diagnosis of infection in the patient*.



Slide 77: Partner Management: Which Partners?

All sex partners of patients who have gonorrhea should be evaluated and treated for gonorrhea and chlamydia infection if their last sexual contact with the patient was *within 60 days of the onset of symptoms or diagnosis of infection in the patient*.

If a patient's last sexual intercourse was greater than 60 days before the onset of symptoms or diagnosis, the patient's most recent sex partner should be treated.

Patients should be instructed to avoid sexual contact until 7 days after the single dose therapy or after completion of treatment, and until they and their sex partners no longer have symptoms.

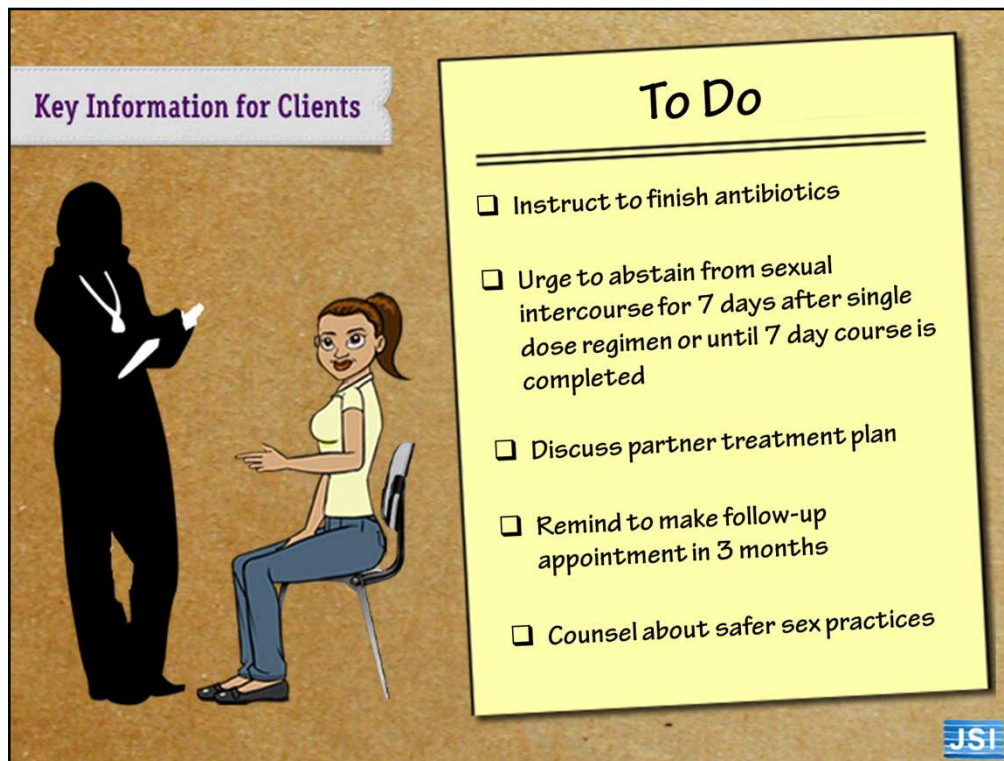
If sex partners will not seek evaluation and treatment, or if other management strategies are impractical or unsuccessful, then EPT should be considered.



Slide 78: Partner Management and Your Clients

There is no one size fits all approach to partner management. Tanya, for instance, tells you that her boyfriend doesn't like going to the doctor, and he works all the time. But she is confident she will be able to get him to take the medication. If EPT is allowed in your state, this may be a good option for Tanya and her boyfriend.

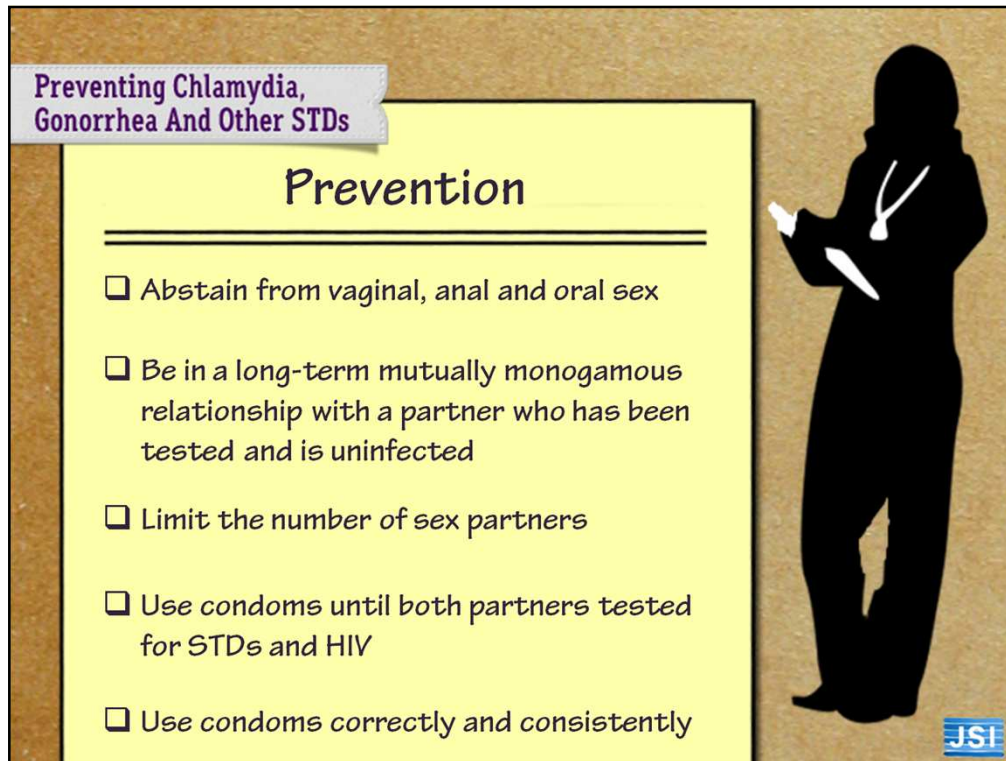
Alex has fewer options than Tanya. He says he will bring in his girlfriend for testing but that he'll need help notifying his other sex partners. Either his health care provider or the Health Department or DIS may help him contact his other partners.



Slide 79: Key Information for Clients

If your client has been treated for chlamydia or gonorrhea, here are a few things to consider doing during the visit:

- Instruct him/her to finish the course of antibiotics and to abstain from sexual intercourse for 7 days after single dose treatment or until 7 day course is completed
- Discuss a plan to get partners treated
- Remind your client to make a follow-up appointment before he/she leaves the clinic to return in 3 months for rescreening
- Counsel your client about safer sex practices

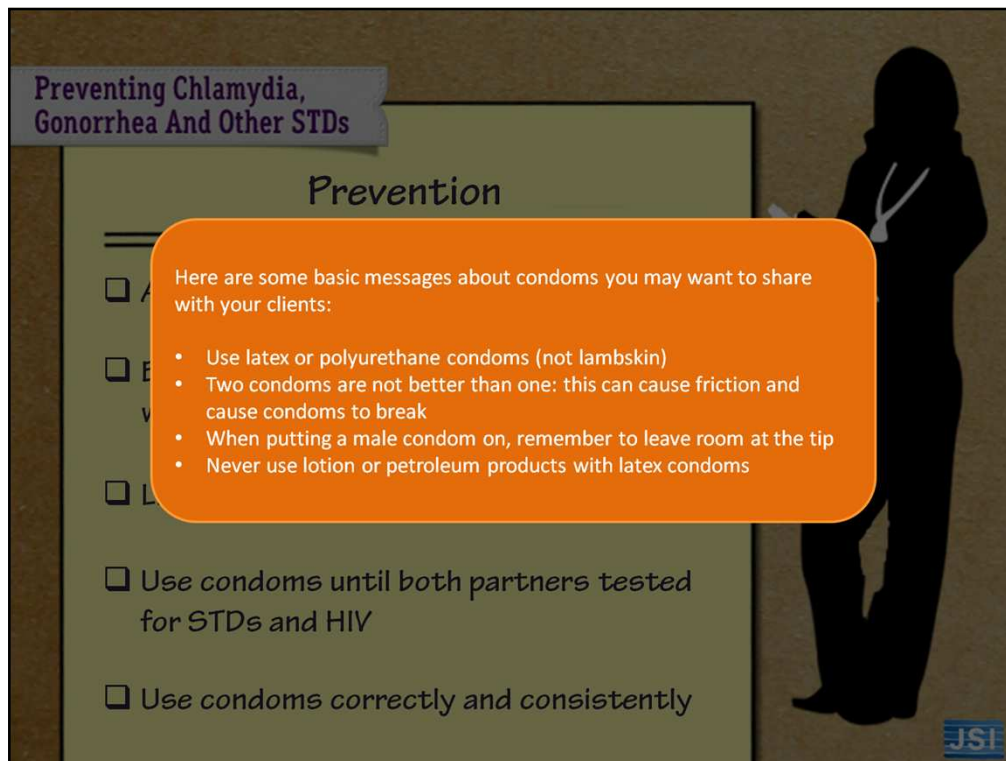


Slide 80: Preventing Chlamydia, Gonorrhea And Other STDs

Indeed, whether or not your client tests positive for an STD like chlamydia or gonorrhea, CDC recommends these basic prevention messages. Choose the messages that are appropriate to your individual client's circumstances. Lower risk of contracting and/or transmitting STDs by:

- Abstaining from vaginal, anal and oral sex
- Being in a long-term mutually monogamous sexual relationship with a sex partner who has been tested and is uninfected
- Limiting the number of sex partners to reduce your exposure
- Using condoms until both partners have been tested for STDs and HIV
- Using condoms correctly. When used correctly, latex and polyurethane condoms can reduce the risk of chlamydia and gonorrhea transmission and other STDs, including HIV

Remember, you are influential. When it comes to health messages, your patients are more likely to listen to their medical provider than anyone else.



Slide 81: Basic Messages about Condoms

Here are some basic messages about condoms you may want to share with your clients:

- Use latex or polyurethane condoms (not lambskin)
- Two condoms are not better than one: this can cause friction and cause condoms to break
- When putting a male condom on, remember to leave room at the tip
- Never use lotion or petroleum products with latex condoms



You are talking to Tanya about how to reduce her risk of contracting chlamydia again. What key information do you include in your discussion with her?

- ☐ A. Finish antibiotics, and abstain from sex for seven days after she and her partner have been treated.
- ☐ B. In addition to the pill, which she has opted to take, use condoms consistently until she and her boyfriend have established a mutually monogamous sexual relationship and both have been tested for STDs and HIV.
- ☐ C. Both she and her boyfriend should come in for rescreening in three months.
- ☐ D. All of the above.

PROPERTIES
On passing, 'Finish' button:
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Allow user to leave quiz:
User may view slides after quiz:
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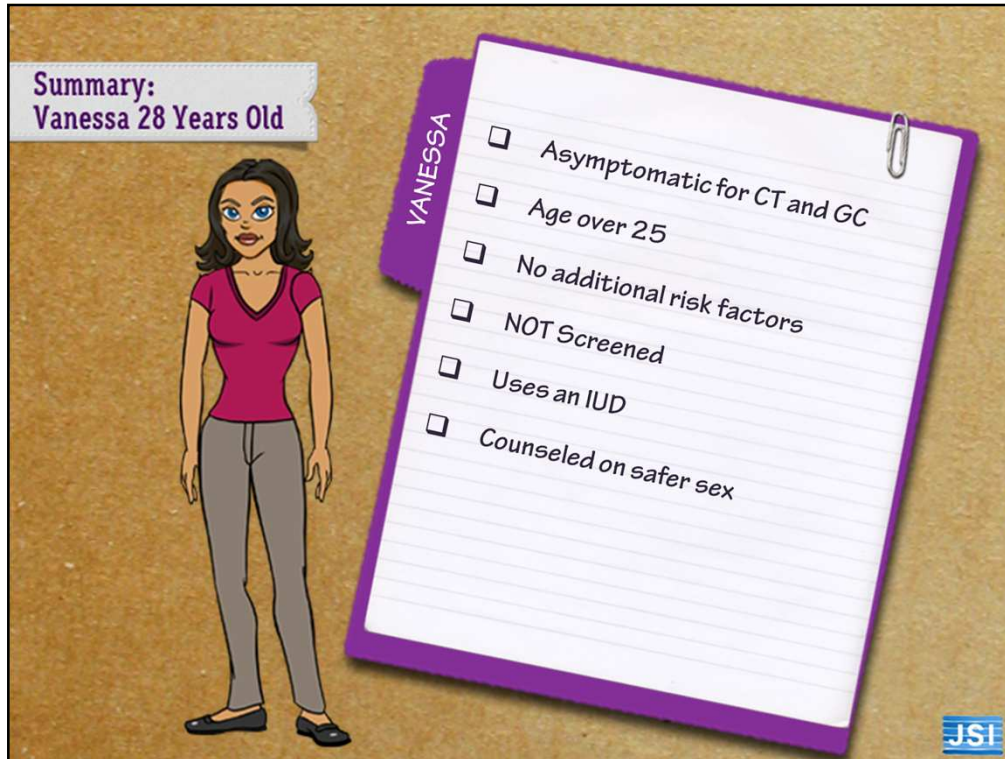
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Slide 82: Quiz 4

You are talking to Tanya about how to reduce her risk of contracting chlamydia again. What key information do you include in your discussion with her?

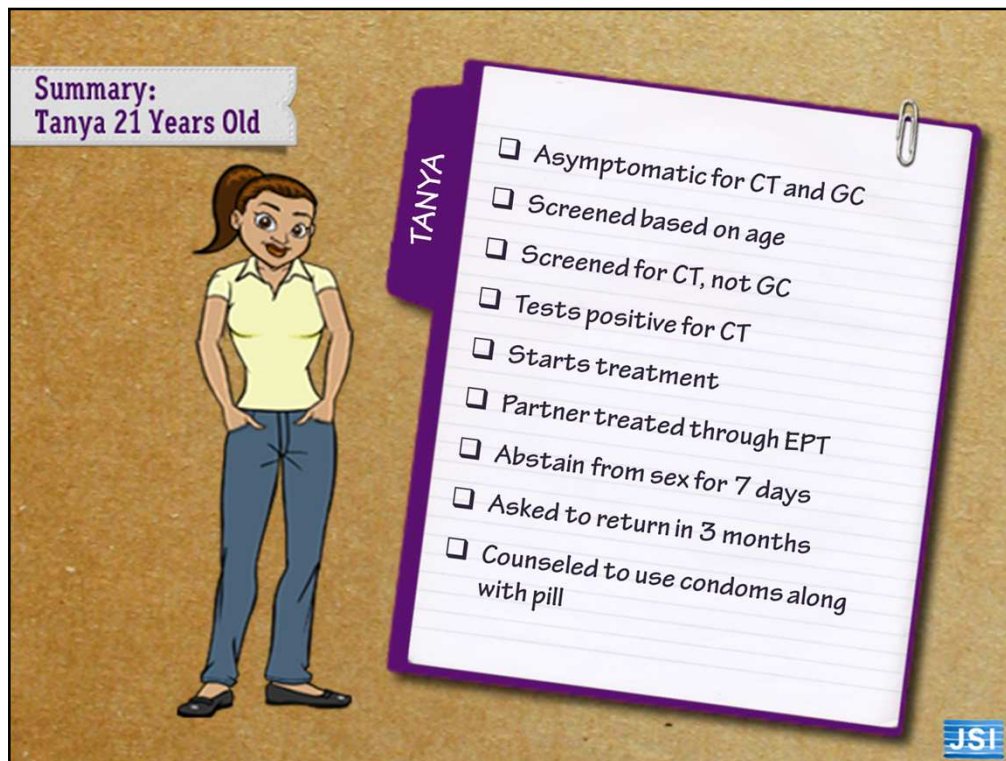
- A. Finish antibiotics, and abstain from sex for seven days after she and her partner have been treated.
- B. In addition to the pill, which she has opted to take, use condoms consistently until she and her boyfriend have established a mutually monogamous sexual relationship and both have been tested for STDs and HIV.
- C. Both she and her boyfriend should come in for rescreening in three months.
- D. All of the above.

The correct answer is D.



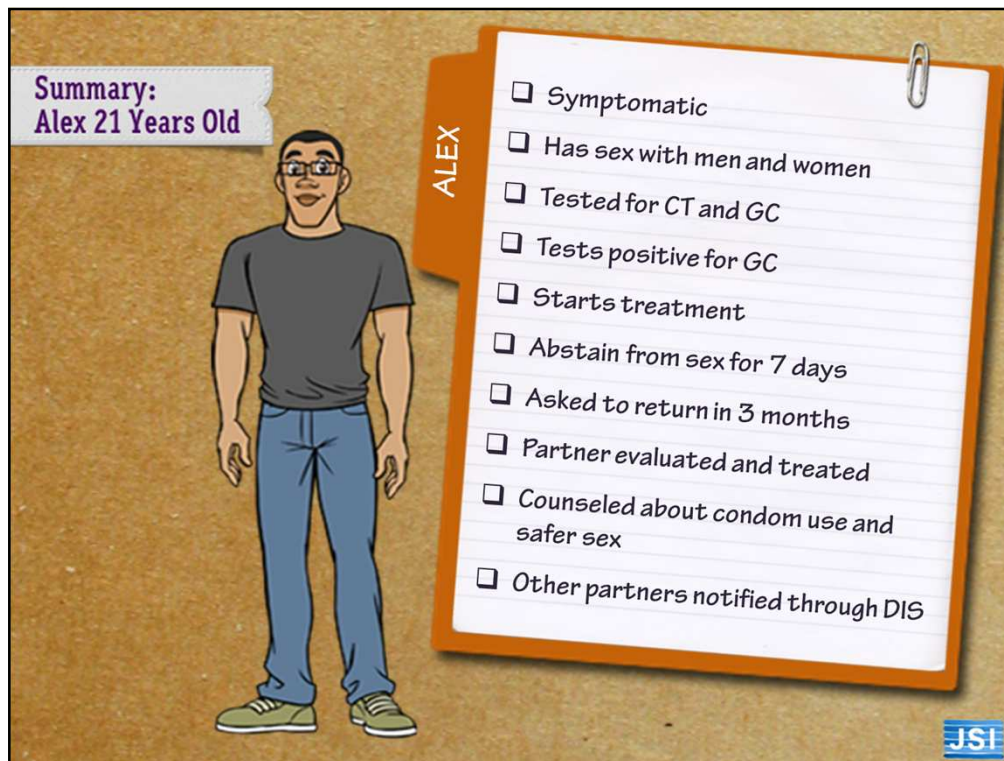
Slide 83: Summary: Vanessa 28 Years Old

In this presentation, we've covered a lot of important information. Hopefully you now have a better understanding of chlamydia and gonorrhea and their epidemiology, symptoms, screening, treatment and prevention. Before we finish up, let's review what an appropriate course of action for each of your clients might look like. Remember, Vanessa is a 28-year-old who is asymptomatic for chlamydia and gonorrhea. Because she has no symptoms and does not fall in any high-risk categories, she is not screened for either infection. She is reminded of the importance of using condoms and she is encouraged to come in to be tested for HIV with a new partner before having sex without a condom.



Slide 84: Summary: Tanya 21 Years Old

Then there is Tanya, who came to the clinic as a 19-year-old seeking birth control. She is asymptomatic and lives in an area with low gonorrhea rates. Because of her age, however, she is at increased risk for contracting chlamydia and she is screened for chlamydia. She tests positive and is started on treatment, and her partner is treated through EPT. She is encouraged to abstain from sex for seven days after treatment, and she's reminded that both of them should come back in three months for rescreening. Since she plans to use the pill for birth control, she is encouraged to also use condoms for protection against infections, including HIV.



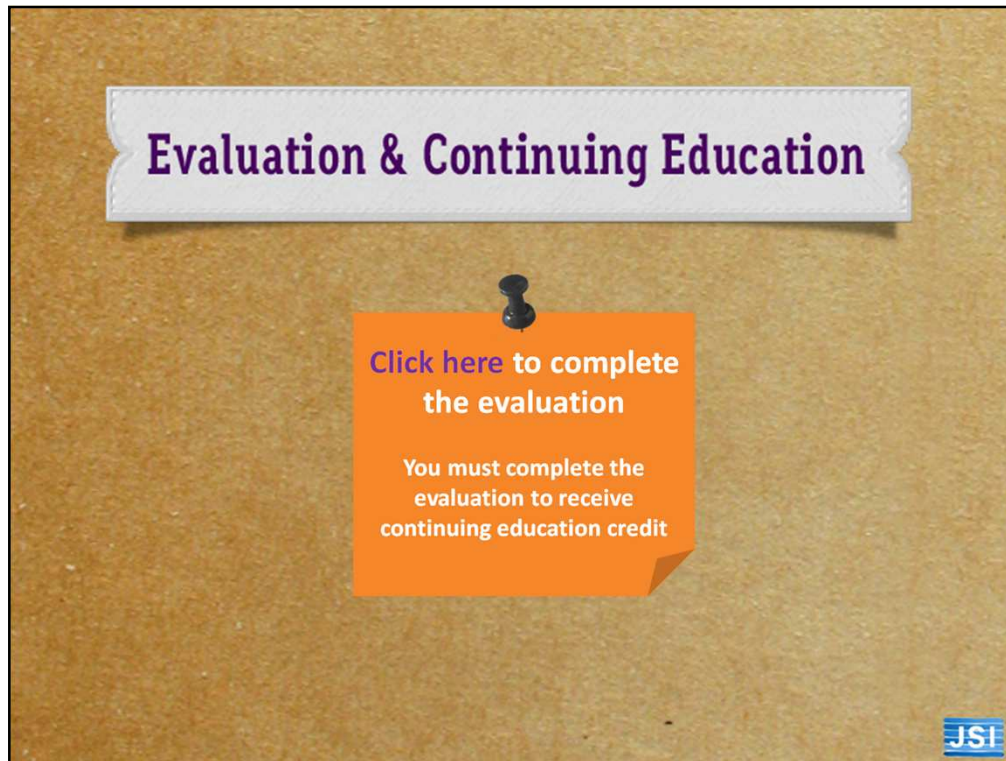
Slide 85: Summary: Alex 21 Years Old

Twenty-one-year-old Alex comes to the clinic with non-specific symptoms of dysuria and a discharge. Since he has sex with men, he falls under the MSM screening recommendations. Regardless, because he has symptoms, he is tested. When he tests positive for gonorrhea, he is started on treatment. He is urged to abstain from sex for at least seven days after he and his girlfriend are treated. He is told that in three months he needs to be rescreened for chlamydia and gonorrhea – and for HIV - since he has engaged in high-risk behavior within the seroconversion period. When he is asked how he will protect himself in the future, he says he'll try to always use condoms given his concern about STDs, including HIV. After leaving the exam room, he talks with DIS and they work out a plan to contact his other partners.



Slide 86: Summary

Note that each client, Vanessa, Tanya, and Alex is assessed according to the CDC screening recommendations and screened according to the recommendations based on their population-based risk profile. The two who test positive and their partners are treated and given follow-up instructions. All three, regardless of risk and screening are offered potentially life-changing safer sex counseling.



Slide 87: Evaluation and Continuing Education

Complete the evaluation at

<https://www.surveymonkey.com/s/ChlamydiaAndGonorrheaModule>. You must complete the evaluation to receive continuing education credit.

We hope that this presentation has been helpful and that you will be able to apply the information provided as you treat patients like Vanessa, Tanya and Alex. We thank you for your time.

Please help us improve our presentation by taking just two to three minutes to complete a short evaluation. If you are taking this module for CEUs, please complete the information to obtain your certificate.

Nursing Continuing Education Accreditation

JSI Research & Training Institute, Inc. is an approved provider of continuing nursing education by The New Hampshire Nurses Association Commission on Continuing Education, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

Physician Continuing Education Accreditation

Continuing medical education credits are available only to physicians practicing in Region I (CT, MA, ME, NH, RI, and VT). The Bureau of Infectious Disease Prevention, Response and Services, Massachusetts Department of Public Health, designates this educational activity for a maximum of 1 AMA PRA Category 1 Credit(s).™ Physicians should only claim credit commensurate with the extent of their participation in the activity.

The Bureau of Infectious Disease Prevention, Response and Services, Massachusetts Department of Public Health is accredited by the Massachusetts Medical Society to provide continuing medical education for physicians.

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Massachusetts Medical Society for Continuing Medical Education through the Joint Sponsorship of the Bureau of Infectious Disease Prevention, Response and Services, MA Department of Public Health and JSI.

JSI

Slide 88: Nursing Contact Hours and Continuing Medical Education Information

Nursing Continuing Education Accreditation

JSI Research & Training Institute, Inc. is an approved provider of continuing nursing education by The New Hampshire Nurses Association Commission on Continuing Education, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

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“Chlamydia and Gonorrhea: What You and Your Clients Need to Know” was developed by JSI Research & Training Institute, Inc. and made possible by special project funding from the Infertility Prevention Project (IPP), a collaboration between [Centers for Disease Control and Prevention \(CDC\)](#) and [Office of Population Affairs \(OPA\)](#). The goal of IPP is to implement effective prevention strategies designed to reduce the debilitating complications, including infertility, that are caused by chlamydial and gonococcal infections among women and their partners. IPP supports chlamydia and gonorrhea screening and treatment services for low-income, sexually active women and their partners attending family planning, sexually transmitted disease (STD), and other public health clinics.

JSI has no financial interests or relationships to disclose.

The developers of this course have been asked to disclose any significant relationships with commercial entities that are either providing financial support for this program or whose products or services are mentioned during their presentations. The following relationships were disclosed:

Katherine Hsu, MD MPH	None
Jennifer Kawatu, RN MPH	None
Andee Krasner, MPH	None

For more information, see the “About Us” tab in the upper right-hand corner of your screen.



Slide 89: Disclosures

“Chlamydia and Gonorrhea: What You and Your Clients Need to Know” was developed by JSI Research & Training Institute, Inc. and made possible by special project funding from the Infertility Prevention Project (IPP), a collaboration between Centers for Disease Control and Prevention (CDC) and Office of Population Affairs (OPA). The goal of IPP is to implement effective prevention strategies designed to reduce the debilitating complications, including infertility, that are caused by chlamydial and gonococcal infections among women and their partners. IPP supports chlamydia and gonorrhea screening and treatment services for low-income, sexually active women and their partners attending family planning, sexually transmitted disease (STD), and other public health clinics.

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For more information, see “About Us”, slide 90.

About Us

Slide 90: About Us

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Questions about this course or the Region I IPP may be directed to the Project Director Jennifer Kawatu, RN, MPH at jkawatu@jsi.com or Project Manager Andee Krasner, MPH at akrasner@jsi.com.

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Who We Are

JSI Research & Training Institute, Inc. is a non-profit public health research and consulting firm dedicated to improving the health of individuals and communities throughout the world. JSI builds local capacity to address critical health problems, collaborating with partners to develop their skills and identify solutions that meet their public health needs. You can visit us at www.jsi.com for more information.

Special Thanks

Special thanks to the Region I Family Planning Training Center and Sylvie Ratelle STD/HIV Prevention Training Center of New England for their collaboration on the project.

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Gonorrhea Images

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Other Clinical Images

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