



# City Health Information

Volume 32 (2013)

The New York City Department of Health and Mental Hygiene

No. 4; 19-27

Updated October 2014 for the PrEP & PEP Action Kit

## PREVENTING SEXUALLY TRANSMITTED INFECTIONS

- Routinely ask all adolescent and adult patients about their sexual behavior.
- Screen for and treat sexually transmitted infections (STIs) according to evidence-based clinical guidelines.
- Counsel patients about protecting themselves and their partners from STIs.
- Vaccinate against human papillomavirus, hepatitis A virus, and hepatitis B virus according to current guidelines.
- When an STI is diagnosed
  - test for HIV,
  - encourage partner notification,
  - notify the Health Department if the infection is reportable.

The term “sexually transmitted infections” (STIs) refers to a variety of infections that are often asymptomatic and are acquired primarily through sexual activity. Sexually transmitted infections are an important public health concern. Chlamydia is the most common reportable infectious disease in the United States (US) and in New York City (NYC).<sup>1-3</sup> In 2013, there were 58,098 cases of chlamydia, 13,500 cases of gonorrhea, and 1,740 cases of early syphilis in NYC.<sup>4</sup> In 2012, there were 3,141 newly diagnosed cases of HIV in NYC.<sup>5</sup> In 2008, approximately 100,000 people (1.2% of NYC residents) were chronically infected with hepatitis B (HBV).<sup>6</sup> In 2004, nearly 28% of NYC adults were infected with herpes simplex virus type 2 (HSV-2), and 88.4% were undiagnosed.<sup>7</sup>

Sexually transmitted infections are common, costly, and may have severe outcomes. HIV is among the top 10 causes of death in New Yorkers between 15 and 65 years of age,<sup>8</sup> and the risk of HIV infection is increased among people with other STIs.<sup>9</sup> Chlamydia and gonorrhea cause infertility in both women and men; in women, they can cause urethritis, cervicitis, pelvic inflammatory disease, chronic pelvic pain, and ectopic pregnancy.<sup>1,10,11</sup> Untreated syphilis can cause heart disease, brain damage, and possibly death. Perinatally transmitted syphilis and HBV can have devastating effects on the infant. Chronic HBV or hepatitis C virus (HCV) infection can lead to liver failure and liver cancer. Human papillomavirus (HPV) is the most common cause of cervical cancer and can cause oral and anogenital cancers in both men and women.<sup>1</sup>

Because most infections are asymptomatic, proper screening is critical.<sup>1</sup> Take a complete sexual history as part of the clinical interview and update the history routinely. The sexual history, along with pregnancy and HIV status, will determine the need for STI screening and vaccination. Treat infected patients according to evidence-based guidelines endorsed by the Centers for Disease Control and Prevention (CDC) (**Resources**). Counsel infected patients on measures they can take to prevent reinfection or further transmission and strongly encourage them to notify their sex partners.<sup>1</sup> Promptly report all cases of STIs to the Health Department (see page 24).

### REMEMBER THAT . . .

- Adolescents and adults of all ages have sex and may get STIs.
- Talking to adolescents about safer sex does not encourage sexual activity.
- Sex is not just vaginal intercourse, but also oral and anal intercourse.
- A person’s sexual behavior can’t be inferred from his or her appearance.
- Gay-identified men and women may also have heterosexual sex.
- Not all men who have sex with men (MSM) self-identify as gay.
- Heterosexual women may practice receptive anal intercourse.
- People may have extramarital sex with partners of any gender.

## TAKING A SEXUAL HISTORY

Take a sexual history<sup>12,13</sup> for all people aged 11 years and older (**Box 1**). Be aware that sexual behavior—not sexual orientation—puts patients at risk for STIs.<sup>14</sup> Counsel all patients in a nonjudgmental and empathetic manner, taking maturity, language, culture, gender, and sexual behavior into account. Approach the topic of sexuality with sensitivity and avoid making assumptions about your patients' sexual practices and risks, because those assumptions may affect your conversation with the patient, which could have an impact on screening and impede delivery of adequate care.<sup>12,14</sup>

Ask about substance use, including alcohol. Substance use places people at risk for STIs by interfering with judgment, leading to higher-risk sexual behaviors. In young adults aged 18 to 25 years, STIs are more common among those who have used alcohol and/or illicit drugs in the past month.<sup>15</sup> Some infections—HIV, HBV, and HCV—can also be transmitted through sharing needles and other injection paraphernalia.<sup>1</sup> Substance abuse can also interfere with medication adherence, which can worsen progression of HIV and its consequences.<sup>16</sup> Any alcohol use can cause liver damage in HBV- and HCV-infected people.<sup>1</sup>

Screen all patients for intimate partner violence and provide a full clinical assessment if abuse is disclosed or suspected (**Resources—City Health Information: Intimate Partner Violence**).

### Special Populations

Certain groups are at higher risk for STIs or complications.

**Adolescents:** Young people are disproportionately affected by STIs, especially chlamydia and gonorrhea, yet they may

face barriers to receiving care, such as fear that confidential information will be shared with parents, limited awareness of available health services, and financial barriers.<sup>17,18</sup> Young men who have sex with men (MSM) and intravenous drug users (IDUs) are also at higher risk than other adolescents.<sup>1</sup> Interview patients with no one else in the room to reinforce confidentiality, and incorporate the sexual history into a broader conversation that addresses home, school, and substance use.<sup>19</sup> In New York State (NYS), parental consent is not required for adolescents to receive contraceptive care or STI screening or treatment (except for HIV treatment), but insurance documents or lab bills sent to the main policyholder can compromise confidentiality. Screen sexually active adolescents for all common STIs (including chlamydia and gonorrhea) if you can do so confidentially.<sup>1</sup> If not, try to refer them to a primary care center where all services, including STI screening, contraceptive care, and pregnancy counseling, are both confidential and at no/low cost (**Resources**). You are required by law to offer HIV testing to all patients aged 13 and older.

**Men who have sex with men:** In the US, the number of new HIV infections among MSM increased 12% from 2008 to 2010, with a 22% increase among young (aged 13-24 years) MSM. The estimated number of new HIV infections was greatest among young black/African American MSM.<sup>20</sup>

In 2012, MSM represented 69% of new HIV diagnoses among NYC males. Among all HIV diagnoses, MSM represented 55% in 2012, compared with 28% in 2001.<sup>5</sup> Rates of gonorrhea and syphilis have also been increasing among MSM.<sup>2</sup> Screen MSM for STIs and HIV at least annually, and more frequently (every 3 to 6 months) if they have multiple or anonymous sex partners or engage in illicit drug use (either self or partner).<sup>1</sup>

## BOX 1. WHAT TO ASK PATIENTS ABOUT THEIR SEXUAL BEHAVIOR

*It's important that we discuss your sexual practices. I speak with all my patients about many different aspects of their lives.*

### Partners

- In the past 6 to 12 months, how many men have you had sex with? How many women?

### Practices

- In the past 6 to 12 months, have you had vaginal, oral, or anal sex?

### Protection Against STIs

- How do you keep yourself from getting an infection?
- Do you use condoms consistently? If not, with whom do you use condoms?
- Do you have any questions about any sexually transmitted infections?
- Have you ever been shown how to use condoms correctly?<sup>a</sup>

### Past History of STIs

- Have you ever been diagnosed with an STI, such as HIV, herpes, gonorrhea, chlamydia, syphilis, HPV, or trichomoniasis? When? How were you treated?

- Have you had any recurring symptoms or diagnoses?
- Has your current partner or any former partners ever been diagnosed or treated for an STI, including HIV?
- When was your last HIV test? Routine testing is recommended for everyone between 13 and 64 years of age.

### Prevention of Pregnancy

- Are you currently trying to conceive or father a child? Do you want to avoid pregnancy?
- Are you using contraception or practicing any form of birth control?
- Do you need any information on birth control or a referral?

### To assess HIV and viral hepatitis risk,<sup>b</sup> ask:

- Have you or any of your partners ever injected drugs?
- Have you or any of your partners exchanged money for sex?

Adapted from Centers for Disease Control and Prevention. *A Guide to Taking a Sexual History*. [www.cdc.gov/std/treatment/SexualHistory.pdf](http://www.cdc.gov/std/treatment/SexualHistory.pdf).

<sup>a</sup>Refer patients to [www.plannedparenthood.org/health-topics/birth-control/condom-10187.htm](http://www.plannedparenthood.org/health-topics/birth-control/condom-10187.htm) for information about correct condom use.

<sup>b</sup>For adolescents and young adults, check the Citywide Immunization Registry for history of vaccination against hepatitis A and B (**Box 4**).

**Pregnant women:** STIs can have severe effects on women, their partners, and their fetuses. Ask pregnant women about their sexual behavior throughout pregnancy; screen them for STIs, including HBV (**Table 1**); and counsel them about consequences of perinatal infections.<sup>1</sup> Syphilis screening for pregnant women is required by law.

**People with HIV:** Address STI prevention with HIV-positive patients<sup>1,21</sup>:

- Provide or refer for prompt HIV primary care and treatment, including mental health and substance use services if needed. Initiate antiretroviral therapy to lower viral load, regardless of the patient's CD4 count. Early antiretroviral therapy benefits the patient and reduces risk of HIV transmission, including perinatal transmission.
- Screen for other STIs, including HCV.
- Facilitate partner notification (see page 24) and refer partners for preexposure prophylaxis if they are at ongoing risk.
- Refer to a Designated AIDS Center for comprehensive care or to the Positive Life Workshop if engagement in care is an issue (**Resources**).
- At each routine visit, assess for new risk behaviors such as unprotected sex and needle-sharing practices and discuss a plan for reducing the behaviors.

**For more information on these topics, see Resources—NYC Health Department HIV/AIDS information; City Health Information archives; NYS PozKit; US Public Health Service Preexposure Prophylaxis for the Prevention of HIV Infection in the United States—2014 Clinical Practice Guideline; National Institutes of Health AIDSInfo.**

## SCREENING PATIENTS FOR STIs

Screen for STIs, according to the CDC Treatment Guidelines<sup>1</sup> and routes of exposure (oral, vaginal, or anal), in addition to screening required by law. See **Table 1** and **Box 2** for STI screening recommendations.

**HIV:** Infection with HIV can be diagnosed before symptoms develop, and early treatment can add years to patients' lives.<sup>22</sup> Routine HIV testing in primary care is important because risk-based assessments often miss patients with HIV infection.<sup>23</sup> With limited exceptions (eg, patient incapacity), NYS law requires health care professionals to offer a voluntary HIV test to all patients between the ages of 13 and 64 years who are receiving treatment for a non-life-threatening condition in a hospital or emergency department, and to anyone receiving primary care services in a setting such as a doctor's office or outpatient clinic. Except in correctional settings, documented oral consent is sufficient to administer a rapid HIV test, defined as a test that produces a result in 60 minutes or less. You are not required to certify that you have obtained informed consent.<sup>24</sup> See **Resources—New York State HIV Testing Public Health Law** for more information.

Be alert to signs of acute HIV infection such as flu-like symptoms of fever, malaise, lymphadenopathy, and skin rash. Patients in the acute phase of HIV infection have a high

concentration of virus in their blood and genital secretions, making them highly infectious. These patients may continue to engage in behaviors associated with HIV transmission because they are unaware of their infection.<sup>1</sup> Symptoms of acute HIV infection are nonspecific, so maintain a high index of suspicion, especially for patients who have had sex or shared drug paraphernalia with an HIV-positive person and patients in high-prevalence populations, particularly in seasons not typically associated with influenza. Patients in the acute phase of HIV infections do not produce enough antibodies to be detected on an antibody test. In these patients, an individual viral load or NAAT test is needed to reliably detect the virus.<sup>1</sup> Fourth-generation conventional HIV tests detect both HIV antigens and antibodies and can therefore identify acute HIV.

If a patient is diagnosed with any STI, test for HIV. Sexually transmitted infections increase both a person's susceptibility to HIV and the risk that an HIV-infected person transmits the virus to his or her sex partners.<sup>1</sup>

**Chlamydia:** Young women have higher rates of chlamydia and gonorrhea because the ectopic columnar cells on the adolescent cervix are particularly susceptible to those infections.<sup>25</sup> Routinely screen women aged 25 years and younger, MSM, and people in other high-risk groups (**Table 1**).

**Gonorrhea:** Screen all sexually active women, whether pregnant or not, if they are younger than 25 years old or have other risk factors (**Table 1**).<sup>1</sup> Also screen MSM and HIV-positive men.<sup>10</sup> See **Box 3** for information about antibiotic-resistant gonorrhea.

**Syphilis:** Screen pregnant women, MSM, people with HIV/AIDS, and other high-risk groups.<sup>1</sup> Screening pregnant women is required by law at the first prenatal visit and at delivery, for prevention of congenital syphilis.<sup>26</sup>

A presumptive diagnosis of syphilis can be made with a positive nontreponemal test (eg, rapid plasma reagin [RPR] or venereal disease research laboratory [VDRL]) and a positive treponemal test (eg, absorption [FTA-ABS], treponemal pallidum particle agglutination assay [TPPA], enzyme immunoassay [EIA], or chemiluminescence immunoassays [CIA]).<sup>1,27</sup> Nontreponemal tests are quantitative and nonspecific, and reactivity declines over time. Treponemal tests are qualitative and specific for syphilis; reactivity persists for life. Any person with a reactive nontreponemal test should have a treponemal test done to confirm the diagnosis and rule out a biologic false-positive nontreponemal result.<sup>28</sup> Some labs in NYC have adopted a reverse sequence, performing a treponemal test first. This strategy identifies any person who has had syphilis, whether adequately treated or untreated. In cases where the treponemal test is positive and the nontreponemal test is negative, a second, different, treponemal test should be performed.<sup>1</sup> All results need to be reviewed in the context of the patient's risk factors and serologic and treatment history, if available.<sup>1,28</sup> For information on cases and reactive serologies reported in NYC over the past several decades, or for consultation in interpreting serologies, contact the NYC Syphilis and Reactor Registry (**Resources—Provider Access Line**).

**TABLE 1. STI SCREENING GUIDELINES FOR SEXUALLY ACTIVE PATIENTS<sup>1,26,27,29-31</sup>**

STI	Population					Comments
	Women <sup>a</sup>	Men	MSM <sup>b,c</sup>	People With HIV/AIDS <sup>d</sup>	Pregnant Women <sup>e</sup>	
<b>HIV</b>	Offer routine testing to all persons aged 13-64 years  Test persons at high risk at least every 6 months (see Comments)		If HIV negative  At least annually	NA	At first prenatal visit  Retest during the third trimester if patient lives in area of high HIV prevalence, had another STI during pregnancy, or has other risk factors (see Comments)	High risk: drug users and their sex partners, persons who exchange sex for money or drugs, persons with multiple or HIV-infected partners
<b>Chlamydia</b>	Vaginal or endocervical swab for all females aged ≤25 years or with new or multiple sex partners Urine NAATs acceptable At least annually	Urine NAAT (preferred) or urethral swab for men in high-risk settings (see Comments) At least annually	Urine NAAT (preferred) or urethral swab  Rectal swab if RAI At least annually	Urine NAAT (preferred) or urethral swab  Rectal swab if RAI  Baseline and at least annually	First prenatal visit  Rescreen at third trimester if ≤25 years or if new or multiple sex partners	High-risk settings: STI clinics, military, Job Corps, jail if age <30 years  Persons diagnosed with CT require retesting at 3 months posttreatment
<b>Gonorrhea</b>	Vaginal or endocervical swab for all females aged <25 years, or with new or multiple sex partners or other risk factors (see Comments) At least annually	No screening recommendations	Urine NAAT (preferred) or urethral swab if insertive intercourse Rectal swab if RAI Oropharyngeal swab if ROI Baseline and at least annually	Urine NAAT (preferred) or urethral swab Rectal swab if RAI Oral swab if ROI At least annually	First prenatal visit if age <25 years, or with new or multiple sex partners, or living in high-prevalence areas  Rescreen during third trimester if at risk (see Comments)	Risk factors: previous gonorrhea, other STIs, inconsistent condom use, commercial sex work, drug use  Persons diagnosed with GC require retesting at 3 months posttreatment
<b>Syphilis</b>	No screening recommendations. Consider in high-risk groups (see Comments)		Serology At least annually	Serology Baseline and at least annually	Serology: first prenatal visit and at delivery. <sup>e,f</sup> Rescreen during third trimester if there was a previous infection or if the woman is at risk, was previously untested, or lives in an area of high syphilis morbidity	High risk: commercial sex workers, persons who exchange sex for drugs, those in adult correctional facilities
<b>Herpes</b>	No screening recommendations		Consider type-specific serology for HSV-2	Consider type-specific serology for HSV-2	No screening recommendations	No specified frequency
<b>Trichomoniasis and BV</b>	Consider screening for <i>Trichomonas vaginalis</i> if there are risk factors (see Comments)	No screening recommendations	No screening recommendations	Women: wet mount exam of vaginal secretions for trichomoniasis. Men: urine NAAT Baseline	No screening recommendations	Risk factors: new or multiple sex partners, other STIs, inconsistent condom use, commercial sex work, douching, or IDU
<b>Human papillomavirus</b>	Pap smear every 3 years, beginning at age 21  Alternative for age 30-65 years: screening every 5 years with combination Pap smear and HPV test  After age 65, no screening needed if previous screens were normal	No screening recommendations	No screening recommendations	Cervical Pap: baseline and at 6 months, then annually if negative  Anal Pap: baseline and annually for MSM and other high-risk groups (see Comments)	No screening recommendations	High risk: women with a history of abnormal cervical or vulvar histology, people with a history of anogenital warts

SEE NOTES ON PAGE 23.

**Table 1 Notes**

BV, bacterial vaginosis; CT, *Chlamydia trachomatis*; GC, *Neisseria gonorrhoeae*; HIV, human immunodeficiency virus; HPV, human papillomavirus; HSV-2, herpes simplex virus 2; IDU, injection drug use/user; MSM, men who have sex with men; NA, not applicable; NAAT, nucleic acid amplification test; RAI, receptive anal intercourse; ROI, receptive oral intercourse; STI, sexually transmitted infection.

<sup>a</sup>All women, including women who have sex with women.

<sup>b</sup>Screening every 3 to 6 months is indicated for MSM with multiple or anonymous partners or illicit drug use, especially methamphetamine (self or partners).

<sup>c</sup>Also screen for hepatitis B. For MSM, see **Table 2**. For pregnant women, test for hepatitis B surface antigen only and rescreen at admission for delivery if woman had more than 1 sex partner in the previous 3 months, was recently evaluated or treated for an STI, is a recent or current user of intravenous drugs, has a sex partner with hepatitis B, or has clinical hepatitis. Screen pregnant women for hepatitis C if there is a history of IDU or of blood transfusion or organ transplantation before 1992.

<sup>d</sup>Also screen for hepatitis C.

<sup>e</sup>Required by New York State Public Health Law §2308.

<sup>f</sup>If woman lives in area where prenatal care is suboptimal, do a rapid plasma reagin test at time pregnancy is confirmed.

(Continued from page 21)

**HPV:** New national guidelines issued in 2012 recommended routine cervical cytology screening for all women aged 21 through 65. Women between the ages of 21 and 65 should have a Pap test every 3 years. For women aged 30 to 65 years, an HPV test with a Pap test every 5 years is an option.<sup>29,30</sup>

**COUNSELING ON STI PREVENTION**

Talk to all patients about ways they can maintain their sexual health. Upon diagnosis, encourage infected patients to notify their partners that they may also be infected and should seek medical care, to both benefit the partner's health and prevent reinfection of the index patient.

*Abstinence* from oral, vaginal, and anal sex and mutually monogamous relationships are the most reliable ways to prevent STIs and unintended pregnancy.<sup>1</sup>

*Preexposure vaccination for hepatitis A (HAV), HBV, and HPV.* See pages 24, 25, and **Table 2**.

*Male condoms*, when used consistently and correctly, are highly effective in reducing sexual transmission of HIV and in protecting against pregnancy. Male latex condoms also reduce the risk of transmission of gonorrhea, chlamydia, and trichomoniasis.<sup>1</sup> The failure of condoms to protect against STI transmission or unintended pregnancy usually results from inconsistent or incorrect use rather than condom breakage. Water-based lubricant may be needed for adequate lubrication during anal and vaginal sex to help prevent condom breakage. Polyurethane condoms are an option for people with latex allergy.<sup>1</sup>

*Female condoms* (also called FC2 or insertive condoms) protect against both STIs and pregnancy. They have also been used for STI protection during receptive anal intercourse; although they might provide some protection in this setting, their efficacy remains unknown.<sup>1</sup>

**Contraceptive methods that do not protect against STIs**

*Hormonal contraception, cervical diaphragms, IUDs, surgical sterilization, and hysterectomy do not protect against STIs.*<sup>1</sup>

**BOX 2. TESTING FOR CHLAMYDIA AND GONORRHEA<sup>1</sup>****For women**

- Vaginal or endocervical swab for NAAT culture is preferred; urine NAAT is acceptable, especially in settings where pelvic examinations are not routinely conducted.

**For men**

- First-catch urine NAAT is preferred over urethral swab.
- For MSM, screening should include oropharyngeal samples for gonorrhea and anorectal samples for both chlamydia and gonorrhea.
- **Oropharyngeal and anorectal NAAT testing is an off-label use and can only be conducted at laboratories that have done the appropriate quality assurance validation testing.**

**BOX 3. ANTIBIOTIC-RESISTANT GONORRHEA**

*Neisseria gonorrhoeae* has a capacity for developing antibiotic resistance. National and local gonococcal sentinel surveillance isolates have demonstrated decreasing gonococcal susceptibility to cephalosporins, particularly the oral antibiotic cefixime.

Although there have been no documented clinical treatment failures in the United States, in August 2012, CDC revised its gonorrhea treatment guidelines and **cefixime is no longer recommended**. The only treatment currently recommended is the injectable cephalosporin ceftriaxone, 250 mg, with an additional oral antibiotic (either azithromycin 1 g x 1 day OR doxycycline 100 mg twice daily x 7 days). The additional antibiotics are synergistic with cephalosporin actions. While these agents are also used to treat chlamydia, they should be given even in the absence of chlamydia coinfection.<sup>1</sup>

If you continue to treat with oral cefixime, you should co-treat with either oral azithromycin OR doxycycline. When using this or any other non-first-line regimen, closely monitor patients for treatment failure, including a test of cure 1 week after treatment. Treatment failures should be reported immediately to the Health Department at 866-692-3641. (See **Box 4** for full STI reporting requirements.)

Work with patients to facilitate treatment of their recent (within the past 60 days) sex partners.<sup>1</sup>

Visit [www.cdc.gov/std/treatment](http://www.cdc.gov/std/treatment) for recommended treatment for gonococcal infections.

*Topical spermicides:* Spermicides containing nonoxynol-9 (N-9) do not increase effectiveness of barrier methods in preventing transmission of HIV or other STIs; they may even damage the cells lining the rectum, allowing entry of HIV and other sexually transmissible agents. Therefore, topical spermicides should not be used as a microbicide or lubricant during anal intercourse.<sup>1</sup>

*Topical microbicides* to prevent HIV and other STIs are under investigation and are not yet commercially available.<sup>1</sup>

## PARTNER MANAGEMENT

Treating partners reduces the risk of reinfection among index patients, benefits the health of the partner, and helps prevent further transmission.<sup>1</sup> Encourage patients with STIs to notify their sex partners that they may have been infected and should seek medical treatment.<sup>1</sup> In NYC, patients can refer their partners to the Health Department STD clinics for free testing and treatment. InSPOT (**Box 5**) enables people to anonymously notify sex partners that they have been exposed to HIV or other STIs.

Expedited partner therapy (EPT) allows you to give medication or a prescription to a patient you are treating for chlamydia to deliver to his/her partner(s), without medically evaluating the partner(s).<sup>32</sup> The recommended EPT treatment is azithromycin, 1 gram in a single oral dose.<sup>32</sup> Prescriptions must include<sup>32</sup>:

- name and address of the prescribing provider and date issued;
- the initials EPT in the body of the prescription form, above the name and dosage of the medication;
- directions for the use of the drug by the partner (ie, azithromycin, 1 gram taken in a single oral dose);
- name, address, and date of birth of the partner, if available. If the partner's name, address, and date of birth are not available, the designated areas may be left blank.

You must provide a separate prescription for each partner; do not prescribe treatment for a partner by writing extra doses of medication on an index patient's prescription. To prevent inadvertent release of partners' health information, do not write the partners' names in the index patient's medical record. You may not use EPT if the index patient is coinfecting with gonorrhea or syphilis. Expedited partner therapy is not recommended for MSM. See **Resources—Expedited Partner Therapy Program** for details on correct use of EPT.

For HIV, the Health Department's Contact Notification Assistance Program (CNAP) (**Box 5**) provides information on partner notification to the general public, including medical and social service providers and HIV-positive individuals. CNAP also conducts anonymous notifications at the request of HIV-positive individuals and/or their service providers. CNAP staff will not reveal the name of the index patient.

## VACCINATION AGAINST STIs

Infection with HAV, HBV, and HPV can be prevented by preexposure vaccination. Vaccinate adults against these diseases according to their risk (**Table 2**), and routinely vaccinate children and adolescents according to ACIP recommendations (**Resources**).<sup>1,33</sup>

Hepatitis A is transmitted through fecal-oral contact. The infection is self-limited, usually resolving in 2 months; it generally does not result in chronic infection or chronic liver disease.<sup>1</sup> Typical symptoms in adults include abrupt onset of fever, malaise, anorexia, nausea, abdominal

## BOX 4. REPORTING SEXUALLY TRANSMITTED INFECTIONS AND IMMUNIZATIONS

**Report within 24 hours at NYC MED Reporting Central,<sup>a</sup> unless otherwise noted.**

### Infections

- Chancroid
- Chlamydia
- Gonorrhea
- Gonorrhea treatment failure  
*Report suspected or confirmed cases immediately by calling 1-866-692-3641.*
- Granuloma inguinale (donovanosis)
- Hepatitis A  
*Immediately report any case in a food handler or in a child care, day care/group babysit, health care, nursing home, correctional, or homeless facility by calling 1-866-692-3641.*
- Hepatitis B, C, D, E  
*For hepatitis B in a pregnant woman, you can fax an IMM5 form to 347-396-2558. Call 347-396-2403 for information.*
- Hepatitis, other suspected infectious
- HIV/AIDS  
*Use Provider Report Form. Call 518-474-4284 for forms or 212-442-3388 for information.*
  - Diagnosis of HIV infection
  - Diagnosis of HIV illness in a previously unreported individual (ie, HIV illness not meeting the AIDS case definition)
  - Diagnosis of AIDS-defining conditions
- Lymphogranuloma venereum
- Syphilis, including congenital syphilis

### Immunizations

You must report immunizations administered to persons <19 years of age and you are encouraged to report immunizations given to patients ≥19 years of age, with patients' verbal consent, to the Citywide Immunization Registry (CIR). You can also look up a patient's immunization history on the CIR. To register, visit the CIR Web site, [www.nyc.gov/health/cir](http://www.nyc.gov/health/cir), or call 347-396-2400 for more information.

<sup>a</sup> Use the paper Universal Reporting Form if you don't have a NYC MED account. See **Resources** for links to NYC MED Reporting Central, forms, and full reporting requirements.

discomfort, dark urine, and jaundice. Symptoms of acute HAV may be severe. Rarely, infection produces fulminant hepatitis A. Give 2 doses of a licensed monovalent hepatitis A vaccine 6 to 12 months apart.

Hepatitis B can have serious consequences, including cirrhosis, liver cancer, liver failure, and death.<sup>34</sup> Approximately 79% of newly acquired cases in the US result from high-risk sexual activity and IDU.<sup>34</sup> For HIV-positive people, administer the first of the 3 doses of a licensed monovalent vaccine at time of testing, after the blood draw.<sup>1,33,35</sup> See **Resources—City Health Information: Preventing and Managing Hepatitis B** for more information.

### BOX 5. PARTNER NOTIFICATION

#### For HIV

The Contact Notification Assistance Program (CNAP) provides information on HIV partner notification to medical and social service providers and HIV-positive individuals. CNAP will also notify partners at the request of HIV-positive individuals and/or their service providers.

You must report known partners of HIV-infected patients to the NYC Health Department by calling CNAP at 212-693-1419 or 311, or by filling out a Provider Report Form. If outside NYC, call the NYS Department of Health’s Partner Notification Assistance Program (PNAP) at 1-800-541-2437.

#### For all STIs, including HIV

Patients can anonymously or confidentially contact partners and find testing locations at InSPOT ([www.inspot.org](http://www.inspot.org)).

A combination hepatitis A and hepatitis B vaccine is available for patients aged 18 and older; give 3 doses at 0, 1, and 6 months.<sup>33</sup>

High-risk HPV types (eg, 16 and 18) are the cause of most cervical cancers and are also associated with other anogenital cancers in men and women, as well as a subset of oropharyngeal cancers.<sup>1,36</sup> Low-risk HPV types (eg, 6 and 11) are the cause of most genital warts. Two HPV vaccines are licensed in the US: one bivalent (Cervarix®) and one quadrivalent (Gardasil®). The bivalent vaccine is recommended for protection against HPV types 16 and 18 and associated cervical cancers and precancers in women. The quadrivalent vaccine is recommended for protection against HPV types 16, 18, 6, and 11 and associated cervical cancers and precancers, genital warts, and vulvar, vaginal, and anal cancer.<sup>33</sup> The quadrivalent HPV vaccine is also recommended for males to prevent genital warts and anal cancer.<sup>33</sup>

For both bivalent and quadrivalent HPV vaccines, give a second dose 1 to 2 months after the first and a third dose at least 6 months after the first.<sup>33</sup>

**TABLE 2. RECOMMENDATIONS FOR VACCINATING ADULTS AGAINST STIs<sup>1,33-35,a</sup>**

Population	Recommended Vaccine
MSM	HAV; HBV; HPV (through age 26)
IDUs	HAV <sup>b</sup> ; HBV
Men or women with HIV/AIDS	HBV (test first); HPV (through age 26)
Men or women with multiple sex partners in previous 6 months	HBV; HPV (women through age 26 and men through age 21)
People seeking evaluation or treatment for STIs	HBV; HPV (women through age 26 and men through age 21)

HAV, hepatitis A virus; HBV, hepatitis B virus; HPV, human papillomavirus; IDUs, intravenous drug users; MSM, men who have sex with men.

<sup>a</sup>See [www.cdc.gov/vaccines/schedules/index.html](http://www.cdc.gov/vaccines/schedules/index.html) for full adult immunization recommendations and dosing schedules.

<sup>b</sup>Also vaccinate users of illicit noninjection drugs.

**Note: For adolescents and young adults, check the Citywide Immunization Registry at [www.nyc.gov/health/cir](http://www.nyc.gov/health/cir) for vaccination records.**

### SUMMARY

STIs may have serious health consequences, including infertility, poor birth outcomes, neurologic disease from syphilis, and cancers or death caused by HBV, HCV, or HPV. Counsel patients on measures they can take to prevent infection, reinfection, and transmission. Offer HIV testing to all patients aged 13 through 64 years. For other STIs, determine risk by taking a complete sexual history as part of the clinical interview, and update the history routinely. Provide vaccination and testing according to each patient’s risk of exposure and public health law. Treat infected patients according to evidence-based guidelines and encourage infected patients to notify their sex partners that they may have been infected and should see a health care provider. ♦



## Bill de Blasio

Mayor

## Mary T. Bassett, MD, MPH

Commissioner of Health and Mental Hygiene

### Division of Disease Control

Jay K. Varma, MD, Deputy Commissioner

### Bureau of STD Prevention and Control

Susan Blank, MD, MPH, Assistant Commissioner

### Division of Epidemiology

Ram Koppaka, MD, PhD, Acting Deputy Commissioner

### Provider Education Program

Ram Koppaka, MD, PhD, Director

Peggy Millstone, Director, Scientific Communications Unit

Peter Ephross, Medical Editor

Rhoda Schlamm, Medical Editor

Laura Korin, MD, MPH, Public Health/Preventive Medicine Resident

Phillip G. Blanc, MD, MPH, Public Health/Preventive Medicine Resident

Copyright ©2013 The New York City Department of Health and Mental Hygiene

E-mail *City Health Information* at: [nycdohrp@health.nyc.gov](mailto:nycdohrp@health.nyc.gov)

Suggested citation: Chun E, Blank S. Preventing sexually transmitted infections.

*City Health Information*. 2013;32(4):19-27.

## RESOURCES

### Centers for Disease Control and Prevention

- Sexually Transmitted Diseases Treatment Guidelines, 2010: [www.cdc.gov/STD/treatment/2010/default.htm](http://www.cdc.gov/STD/treatment/2010/default.htm)
- ACIP Child and Adult Recommendations: [www.cdc.gov/vaccines/schedules/index.html](http://www.cdc.gov/vaccines/schedules/index.html)
- US Public Health Service. Preexposure Prophylaxis for the Prevention of HIV Infection in the United States—2014. A Clinical Practice Guideline: [www.cdc.gov/hiv/pdf/PrEPguidelines2014.pdf](http://www.cdc.gov/hiv/pdf/PrEPguidelines2014.pdf)
- National Institutes of Health AIDSInfo: clinical guidelines portal: [www.aidsinfo.nih.gov/guidelines](http://www.aidsinfo.nih.gov/guidelines)

### New York State Department of Health

- HIV Testing Public Health Law: [www.health.ny.gov/diseases/aids/testing](http://www.health.ny.gov/diseases/aids/testing)
- STD Web page: [www.health.ny.gov/diseases/communicable/std](http://www.health.ny.gov/diseases/communicable/std)
- PozKit: A Prevention with Positives Toolkit for Clinicians: [www.hivguidelines.org/resource-materials/pozkit-a-prevention-with-positives-toolkit-for-clinicians](http://www.hivguidelines.org/resource-materials/pozkit-a-prevention-with-positives-toolkit-for-clinicians)
- HIV Clinical Resources: [www.hivguidelines.org/clinical-guidelines](http://www.hivguidelines.org/clinical-guidelines)

### New York City Department of Health and Mental Hygiene

- Provider Access Line (PAL): 1-866-692-3641
- The New York City STD/HIV Prevention Training Center (PTC): [www.nycptc.org](http://www.nycptc.org)
- Sexual and Reproductive Health Care Information: [www.nyc.gov/html/doh/html/living/sexual-provider.shtml](http://www.nyc.gov/html/doh/html/living/sexual-provider.shtml)
- Reporting Diseases and Conditions: [www.nyc.gov/health/diseasereporting](http://www.nyc.gov/health/diseasereporting)
- HIV/AIDS Reporting Information: [www.nyc.gov/html/doh/html/living/hiv-aids-reporting.shtml](http://www.nyc.gov/html/doh/html/living/hiv-aids-reporting.shtml)
- HIV Care, Treatment, and Housing Information (including HIV services directory and provider resources): [www.nyc.gov/html/doh/html/living/hiv-care.shtml](http://www.nyc.gov/html/doh/html/living/hiv-care.shtml)
- Designated AIDS Centers in New York City: [www.nyc.gov/html/doh/downloads/pdf/csi/hivtestkit-hcp-aidscenters-guide.pdf](http://www.nyc.gov/html/doh/downloads/pdf/csi/hivtestkit-hcp-aidscenters-guide.pdf)
- Citywide Immunization Registry: [www.nyc.gov/health/chi](http://www.nyc.gov/health/chi)
- City Health Information: [www.nyc.gov/health/chi](http://www.nyc.gov/health/chi)
- HIV Prevention and Care*

*Preventing and Managing Hepatitis B*  
*Diagnosing and Managing Hepatitis C*  
*Improving the Health of People Who Use Drugs*  
*Promoting Healthy Behaviors in Adolescents*  
*Intimate Partner Violence: Encouraging Disclosure and Referral in the Primary Care Setting*

- Expedited Partner Therapy Program: [www.nyc.gov/health/ept](http://www.nyc.gov/health/ept)
- NYC Free and Confidential STD Clinics: [www.nyc.gov/html/doh/html/living/std-clinics.shtml](http://www.nyc.gov/html/doh/html/living/std-clinics.shtml)
- Partner Notification:
  - [www.inspot.org](http://www.inspot.org)
  - Contact Notification Assistance Program (CNAP): 212-693-1419
  - How to Tell Others That You Have Chronic Hepatitis B: [www.nyc.gov/html/doh/downloads/pdf/cd/cd-hepb-chronic-telling-others.pdf](http://www.nyc.gov/html/doh/downloads/pdf/cd/cd-hepb-chronic-telling-others.pdf)
- Positive Life Workshop: 347-396-7596
- Teen Health: Sexually Transmitted Infections: [www.nyc.gov/html/doh/html/teen/html/sexual-health-pregnancy/sti-facts.shtml](http://www.nyc.gov/html/doh/html/teen/html/sexual-health-pregnancy/sti-facts.shtml)
- New York City Health Department YouTube Channel (information on STIs, HIV/AIDS, condom availability): [www.youtube.com/user/nychealth](http://www.youtube.com/user/nychealth)
- Syringe Exchange Programs (SEPs) in New York City: [www.nyc.gov/html/doh/downloads/pdf/basas/syringe\\_exchange.pdf](http://www.nyc.gov/html/doh/downloads/pdf/basas/syringe_exchange.pdf)
- NYC Condom Availability: [www.nyc.gov/html/doh/html/living/condoms-where.shtml](http://www.nyc.gov/html/doh/html/living/condoms-where.shtml)
- Hepatitis A, B, & C resources: [www.nyc.gov/html/doh/html/living/cd-hepatitisabc.shtml](http://www.nyc.gov/html/doh/html/living/cd-hepatitisabc.shtml)

### Reporting Forms

- New York State Provider Reporting Form (for HIV): 1-518-474-4284
- NYCMED Electronic Reporting. Set up an account at: [www.nyc.gov/health/nycmed](http://www.nyc.gov/health/nycmed)
- Paper Universal Reporting Form: [www.nyc.gov/html/doh/html/hcp/hcp-urf.shtml](http://www.nyc.gov/html/doh/html/hcp/hcp-urf.shtml)
- Perinatal Hepatitis B Reporting Form (IMM5): [www.nyc.gov/html/doh/downloads/pdf/imm/perinatal-hepb.pdf](http://www.nyc.gov/html/doh/downloads/pdf/imm/perinatal-hepb.pdf)