

1998 Guidelines for Treatment of Sexually Transmitted Diseases

Each year there are an estimated 12 million new STD infections in the United States; about 3 million of these cases occur in teens. By the time they reach adulthood, 1 in 4 teens will have had an STD, which may include herpes and/or human papilloma virus (HPV), two of the most common viral STDs for which there is no known cure.

In its 1997 report, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*, the Institute of Medicine (IOM) cited a lack of appropriate screening and treatment of STDs as a factor contributing to the STD epidemic in the United States. The IOM panel concluded that patients with diagnosed STDs often receive treatment not commensurate with current standards of care.

The Centers for Disease Control and Prevention (CDC)—in conjunction with a group of nationally recognized STD experts from public health, academia, medical research, and managed care organizations—reviewed scientific literature and clinical practice data to develop the *1998 Guidelines for Treatment of Sexually Transmitted Disease*. The CDC guidelines contain recommendations for quality of care and outcomes of STD therapy: cure, relief of signs and symptoms, prevention of complications, and prevention of further transmission. The 1998 version replaces the 1993 guidelines.

These guidelines are intended for use by health care providers, trainers, educators, researchers, and others in primary care, adolescent care, family medicine, family planning, internal medicine, obstetrics-gynecology, urology, dermatology, emergency care, nursing, and HIV care. Early, effective STD treatment can also substantially reduce HIV transmission. Effective STD detection and treatment provides the greatest health benefits for women, particularly adolescent and young adult women, and their babies. However, people of both sexes and all ages benefit, not only in terms of increased health/reduced risk, but also in terms of lower health care costs—for the individual as well as the society as a whole.

The CDC guidelines provide basic information for detecting and treating many “silent” STDs which can be difficult to diagnose because they frequently have no symptoms, or symptoms that are very vague or easy to confuse with other disorders. A “silent” STD such as chlamydia can unknowingly be transmitted to partners and can have major consequences in women when not diagnosed and treated. Complications associated with chlamydial infection include pelvic inflammatory disease (PID), potentially fatal tubal pregnancy, infertility, and poor birth outcomes. Chlamydia and certain other STDs can also put patients at greater risk for acquiring and transmitting HIV.

The guidelines include diagnosis and treatment information for all common STDs and are organized by syndrome: STDs characterized by genital ulcers, by urethritis and cervicitis, and by vaginal discharge. Also included are recommendations for STD prevention as well as special considerations for three high-risk populations: women, adolescents, and infants. Finally, the guidelines include sections on other problems that occur among patients with STDs: PID, epididymitis, patients with penicillin allergy, sexual assault issues, and cervical cancer screening.

Significant medical advances have been made since CDC released its 1993 guidelines. Among the most notable advances described in the 1998 guidelines are the following:

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Highly effective single-dose oral therapies have been developed for almost all common curable STDs.

Simplifying the treatment for common STDs, such as chlamydia, to one dose of medicine given at the time of examination can significantly increase the number of people who are treated and cured. Single-dose therapies help prevent the serious reproductive outcomes caused by these STDs and shorten the period of infectiousness.

Improved treatments are now available for herpes and HPV.

Advances in the treatment of the viral STDs are critical: over 45 million Americans (about 1 in 5) are now infected with herpes type 2, and human papilloma virus (HPV) is a very common STD associated with cervical cancer and genital warts. Patient-applied treatment for HPV makes it easier for patients to comply with prescribed therapy when symptoms occur. More effective treatments for genital herpes help to alleviate symptoms, reduce the emotional stress associated with viral STDs, and possibly reduce transmission.

The introduction of a simple urine test has made it much easier to diagnose and treat chlamydia and gonorrhea in clinical and nonclinical settings.

Recent research advances have led to extremely accurate urine tests that make testing of both women and men simple and comfortable. In addition, chlamydia and gonorrhea testing may be conducted in nonclinical settings for large groups of adolescents who are at greatest risk. In high school and other community screening programs, as many as 1 in 8 teenage girls test positive for chlamydia.

Vaccination is recommended as the most effective means of preventing hepatitis A and hepatitis B infections that are sexually transmitted.

Inactivated hepatitis A vaccines, administered as a 2-dose series, are safe and highly immunogenic. Men who have sex with men are at highest risk for

sexually transmitted hepatitis A. Sexual transmission accounted for 30% to 60% of the estimated 240,000 new hepatitis B virus (HBV) infections per year in the United States. Multiple age groups must be targeted to effectively prevent HBV transmission and HBV-related chronic liver disease.

Significant advances have been made in STD treatment during pregnancy.

New treatments for chlamydia produce fewer side effects. Improved treatments for STDs in pregnancy may produce fewer side effects and reduce the number of infants born prematurely. Also, new recommendations that focus on screening for and treating bacterial vaginosis among women at high risk (those with a previous history of preterm birth) will likely reduce the number of premature births due to this STD.

To improve STD care in the United States, IOM has called for wider dissemination of the CDC treatment guidelines, and for all primary care providers (including managed care organizations and their health plans) to implement these recommendations. The *1998 Guidelines for the Treatment of Sexually Transmitted Diseases* are available at the CDC website: www.cdc.gov/nchstp/dstd/.

Health professionals can also obtain copies (free of charge) from the Texas Department of Health (TDH) by sending a written request for *stock number 6-110* to the TDH Warehouse, Literature and Forms, 1100 W. 49th Street, Austin, Texas 78756.

TDH staff are available to assist health professionals with reporting regulations and confidential sex partner referral, as well as provide consultation for the treatment of patients diagnosed with or exposed to an STD/HIV.

Call (512) 490-2500 for more information about STD diagnosis, treatment, reporting and prevention.

1998 Quick-Reference Treatment Guide: Selected Sexually Transmitted Diseases

The Texas Department of Health Bureau of HIV/STD Prevention prepared the following quick reference chart for sexually transmitted diseases commonly treated in an outpatient setting. These treatment guidelines are excerpted from the Centers for Disease Control and Prevention *1998 Guidelines for Treatment of Sexually Transmitted Diseases*. It is not an exhaustive list of effective treatments, nor are these recommendations to be construed as inflexible standards or rules.

Disease	Recommended Treatment	Alternative
Bacterial Vaginosis		
	<ul style="list-style-type: none"> • Metronidazole 500 mg PO BID for 7 days OR • Clindamycin cream 2% one full applicator (5g) intravaginally at bedtime for 7 days OR • Metronidazole gel 0.75% one full applicator (5g) intravaginally BID for 5 days 	<ul style="list-style-type: none"> • Metronidazole 2 g PO single dose OR • Clindamycin 300 mg PO BID for 7 days
High-Risk Pregnancy (Premature Delivery)	<ul style="list-style-type: none"> • Metronidazole 250 mg PO TID for 7 days 	<ul style="list-style-type: none"> • Metronidazole 2 g PO single dose OR • Clindamycin 300 mg PO BID for 7 days
Chancroid^{1,2}		
	<ul style="list-style-type: none"> • Azithromycin 1 g PO single dose OR • Ceftriaxone 250 mg IM single dose OR • Ciprofloxacin 500 mg PO BID for 3 days OR • Erythromycin base 500 mg PO QID for 7 days 	
Chlamydial Infections		
Adults ^{2,3}	<ul style="list-style-type: none"> • Azithromycin 1 g PO single dose OR • Doxycycline 100 mg PO BID for 7 days 	<ul style="list-style-type: none"> • Erythromycin base 500 mg PO QID for 7 days OR • Erythromycin ethylsuccinate 800 mg PO QID for 7 days OR • Ofloxacin 300 mg PO BID for 7 days
Children		
< 45 kg	<ul style="list-style-type: none"> • Erythromycin base 50 mg/kg/day PO divided into 4 doses daily for 10-14 days⁴ 	
≥ 45 kg and < 8 yrs old	<ul style="list-style-type: none"> • Azithromycin 1 g PO single dose 	
≥ 8 yrs old	<ul style="list-style-type: none"> • Azithromycin 1 g PO single dose OR • Doxycycline 100 mg PO BID for 7 days 	
Pregnancy	<ul style="list-style-type: none"> • Erythromycin base 500 mg PO QID for 7 days OR • Amoxicillin 500 mg PO TID for 7 days 	<ul style="list-style-type: none"> • Erythromycin 250 mg PO QID for 14 days OR • Erythromycin ethylsuccinate 800 mg PO QID for 7 days OR • Erythromycin ethylsuccinate 400 mg PO QID for 14 days
Epididymitis		
	<p><i>For epididymitis caused by GC or CT:</i></p> <ul style="list-style-type: none"> • Ceftriaxone 250 mg IM single dose PLUS • Doxycycline 100 mg PO BID for 10 days 	<p><i>For epididymitis caused by enteric organisms or for patients allergic to recommended treatment:</i></p> <ul style="list-style-type: none"> • Ofloxacin 300 mg PO BID for 10 days

Disease	Recommended Treatment	Alternative
Gonococcal Infections^{2,3,5}		
Adults and Children ≥ 45 kg		
Cervix, Urethra, Rectum	<ul style="list-style-type: none"> • Cefixime 400 mg PO single dose OR • Ceftriaxone 125 mg IM single dose OR • Ciprofloxacin 500 PO single dose OR • Ofloxacin 400 mg PO single dose <p style="text-align: center;"><i>PLUS*</i></p> <ul style="list-style-type: none"> • Azithromycin 1 g PO single dose OR • Doxycycline 100 mg PO BID for 7 days 	<ul style="list-style-type: none"> • Spectinomycin 2 g IM single dose⁶
Pharynx	<ul style="list-style-type: none"> • Ceftriaxone 125 mg IM single dose OR • Ciprofloxacin 500 mg PO single dose OR • Ofloxacin 400 mg PO single dose <p style="text-align: center;"><i>PLUS*</i></p> <ul style="list-style-type: none"> • Azithromycin 1 g PO single dose OR • Doxycycline 100 mg PO BID for 7 days 	
Conjunctiva or Disseminated Gonococcal Infection (DGI) ⁶		
Children (< 45kg): Vagina, Urethra, Pharynx, Rectum	<ul style="list-style-type: none"> • Ceftriaxone 125 mg IM once 	<ul style="list-style-type: none"> • Spectinomycin 40mg/kg IM single dose (max 2g)
Neonates With Ophthalmia Neonatorum and Born to Infected Mothers	<ul style="list-style-type: none"> • Ceftriaxone 25-50 mg/kg IV or IM single dose (max 125 mg) 	
Pregnancy	<ul style="list-style-type: none"> • Ceftriaxone 125 mg IM single dose 	<ul style="list-style-type: none"> • Spectinomycin 2 g IM single dose
Herpes Simplex Virus		
First Clinical Episode of Genital Herpes	<ul style="list-style-type: none"> • Acyclovir 400 mg PO TID for 7-10 days OR • Acyclovir 200 mg PO 5 times a day for 7-10 days OR • Famciclovir 250 mg PO TID for 7-10 days • Valacyclovir 1 g PO BID for 7-10 days OR 	
Episodic Recurrent Infection	<ul style="list-style-type: none"> • Acyclovir 400 mg PO TID for 5 days OR • Acyclovir 200 mg PO 5 times a day for 5 days OR • Acyclovir 800 mg PO BID for 5 days OR • Famciclovir 125 mg PO BID for 5 days OR • Valacyclovir 500 mg PO BID for 5 days 	
Daily Suppressive Therapy	<ul style="list-style-type: none"> • Acyclovir 400 mg PO BID OR • Valacyclovir 250 mg PO BID OR • Valacyclovir 500 mg PO once a day OR • Valacyclovir 1000 mg PO once a day OR • Famciclovir 250 mg PO BID 	
HIV Infection	Immunocompromised patients may benefit from increased dosages of antiviral drugs. ⁶	

* Any one of the bulleted treatments listed above an italicized **PLUS** must be combined with any one listed below.

Disease	Recommended Treatment	Alternative
Human Papilloma Virus		
Clinical and Subclinical Genital Warts ⁶		
Nongonococcal Urethritis^{2,3}		
	<ul style="list-style-type: none"> • Azithromycin 1 g PO single dose OR • Doxycycline 100 mg PO BID for 7 days 	<ul style="list-style-type: none"> • Erythromycin base 500 mg PO QID for 7 days OR • Erythromycin ethylsuccinate 800 mg PO QID for 7 days OR • Ofloxacin 300 mg PO BID for 7 days OR • Erythromycin base 250 mg PO QID for 14 days OR • Erythromycin ethylsuccinate 400 mg PO QID for 14 days
Pediculosis Pubis		
	<ul style="list-style-type: none"> • Permethrin 1% cream rinse applied to affected area and washed off after 10 minutes OR • Lindane 1% shampoo applied for 4 minutes to the affected area then washed off⁷ OR • Pyrethrins with Piperonyl Butoxide applied to affected area and washed off after 10 minutes 	
Pelvic Inflammatory Disease (Outpatient Management)^{2,3}		
Regimen A:	<ul style="list-style-type: none"> • Ofloxacin 400 mg PO BID for 14 days PLUS • Metronidazole 500 mg PO BID for 14 days 	
Regimen B:	<ul style="list-style-type: none"> • Ceftriaxone 250 mg IM once OR • Cefoxitin 2 g IM PLUS Probenecid 1 g PO (concurrently) OR • Other third generation Cephalosporin PLUS* • Doxycycline 100 mg orally BID for 14 days 	
Pregnancy	<ul style="list-style-type: none"> • Patients should be hospitalized and treated with the appropriate recommended parenteral IV treatments.⁶ 	
HIV Infection	<ul style="list-style-type: none"> • Immunosuppressed HIV infected women should receive aggressive therapy using one of the parenteral antimicrobials recommended in the CDC guidelines. 	
Scabies		
	<ul style="list-style-type: none"> • Permethrin 5% cream applied to all areas of the body from the neck down and washed off after 8-14 hours 	<ul style="list-style-type: none"> • Lindane 1% 1 oz of lotion or 30 g of cream applied thinly to all areas from the neck down and washed off after 8 hours⁷ OR • Sulphur 6% precipitated in ointment applied thinly (neck down) nightly for 3 nights (Previous applications should be washed off before new ones are applied and last one washed off after 24 hours.)

* **Any one** of the bulleted treatments listed above an italicized **PLUS** must be **combined** with **any one** listed below.

Disease	Recommended Treatment	Alternative
Syphilis^{8,9}		
Primary, Secondary, or Early Latent (< 1 year)		
Adults	<ul style="list-style-type: none"> • Benzathine penicillin G 2.4 million units IM in a single dose 	<i>For penicillin allergy only (adults only):</i> <ul style="list-style-type: none"> • Doxycycline 100 mg PO BID for 14 days • Tetracycline 500 mg PO QID for 14 days
Children	<ul style="list-style-type: none"> • Benzathine penicillin G 50,000 units/kg IM, up to the adult dose of 2.4 million units in a single dose 	
Late Latent (> 1 year) or Latent of Unknown Duration		
Adults	<ul style="list-style-type: none"> • Benzathine penicillin G 2.4 million units IM for 3 doses, 1 week apart (total 7.2 million units) 	<i>For penicillin allergy only (adults only):</i> <ul style="list-style-type: none"> • Doxycycline 100 mg PO BID for 28 days • Tetracycline 500 mg PO QID for 28 days
Children	<ul style="list-style-type: none"> • Benzathine penicillin G 50,000 units/kg IM up to the adult dose of 2.4 million units, administered in 3 doses at 1 week intervals (total 150,000 units/kg up to 7.2 million units) 	
Neurosyphilis		
	<ul style="list-style-type: none"> • Aqueous crystalline penicillin G 18 - 24 million units a day, administered as 3-4 million units IV every 4 hours for 10-14 days 	<ul style="list-style-type: none"> • Procaine penicillin 2.4 million units IM a day PLUS probenecid 500 mg PO QID, both for 10-14 days (Compliance must be assured.)
HIV Infection		
	For all early syphilis treat as above. ⁶	
Pregnancy		
	<p>Penicillin is the only recommended treatment for syphilis during pregnancy. Women who are allergic should be desensitized and then treated with penicillin. Dosages are the same as in nonpregnant patients for each stage of syphilis. Erythromycin is NOT recommended.</p>	
Congenital Syphilis⁶		
	<ul style="list-style-type: none"> • Aqueous crystalline penicillin G 100,00-150,000 units/kg/day, administered as 50,000 units/kg/dose IV every 12 hours during the first 7 days of life, and every 8 hours thereafter for a total of 10 days OR • Procaine penicillin G 50,000 units/kg/dose IM a day single dose for 10 days 	

Trichomoniasis

- **Metronidazole** 2 g PO single dose⁶

Footnotes 

For more information, refer to the complete CDC document (MMWR Recommendations and Reports, January 23, 1998/47[RR-1]: 1-118) **or call TDH at (512) 490-2500.** STD/HIV program staff are also available to assist health care providers with confidential notification of sexual partners exposed to STD and HIV.

Footnotes

1. All sex partners within 10 days preceding the onset of symptoms should be examined and prophylactically treated.
2. Quinolones are contraindicated in pregnant and lactating women and not approved for children <18 years old. (See CDC guidelines about safety profile for children.)
3. All sex partners within 60 days preceding onset of symptoms should be examined and prophylactically treated.
4. The effectiveness of treatment with erythromycin is approximately 80%; a second course of therapy may be required.
5. Patients with gonococcal infections should also receive an adequate treatment for *Chlamydia trachomatis* since coinfection can occur in up to 40% of cases.
6. See CDC guidelines.
7. Lindane is not recommended for pregnant or lactating women or for children aged <2 years.
8. All sex/needle sharing partners should be examined as follows: 3 months plus duration of symptoms for primary syphilis, 6.5 months plus duration of symptoms for secondary syphilis, and 1 year for early latent syphilis.
9. All sex/needle sharing partners with an exposure during the preceding 3 months should be prophylactically treated.

Mumps Outbreak in Gillespie County

A worker in a turkey processing plant in Fredricksburg experienced onset of parotitis on January 8, 1999. He was most likely the source of infection for 2 coworkers who became ill on January 28 and February 1. The three men, aged 30, 50, and 52 years, worked in close proximity to one another. All experienced orchitis as well as parotitis. The immunization status of the 3 men is not known. Other workers in the plant have been vaccinated since it is likely that many were susceptible to mumps.

Mumps is a viral illness with acute onset of uni- or bilateral tender, self-limited swelling of the parotid or other salivary glands, lasting 2 days or more and without other apparent cause. Parotitis, however, can also be caused by influenza, parainfluenza type 3, and cytomegaloviruses, as well as numerous other noninfectious diseases. Approximately 30% of sporadic parotitis are not caused by mumps virus, and 20% to 40% of mumps patients may not have parotid swelling. Orchitis may accompany chlamydia, gonorrhea, chickenpox,

brucellosis, tuberculosis, lymphocytic choriomeningitis, relapsing fever, leptospirosis, melioidosis, and pleurodynia. Although single cases of parotitis and orchitis are often of nonmumps etiology, epidemiologically linked cases are much more likely to be due to mumps.

As mumps incidence continues to decline due to increasing implementation of 2 doses of measles/mumps/rubella vaccine, laboratory confirmation is critical to documentation of progress toward eliminating indigenous mumps in the United States. Mumps can be confirmed only through mumps-specific laboratory testing (ie, mumps IgM antibody). (See next page for specimen submission guidelines.)

Normally, suspected mumps cases are reported on a weekly basis by phone: (800) 252-8239. Due to this recent outbreak, the Texas Department of Health (TDH) requests that suspected mumps cases be reported as soon as feasible. Contact the TDH Immunization Division at (800) 252-9152.



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Laboratory Confirmation of Mumps: Specimen Collection and Submission

- Collect a single 5 ml specimen of blood \geq 3 days following onset of symptoms and up to 30 days after parotid swelling.
- Collect this specimen in any collection tube without anticoagulant (eg, a red-top tube).
- Separate serum from blood and store serum in a sterile container at 2^o-3^oC.
- Freeze serum if there will be more than 3 days from collection to receipt in the laboratory. Whole blood may be sent if specimen is shipped on day of collection. Do not freeze whole blood.
- Label blood tubes or serum containers with the patient's name and date of birth or social security number. Make sure this information on the tube label matches exactly what is written on the laboratory submission form (G-1).
- Specify "Mumps IgM Test" on the label.
- Mail IgM specimens to Viral Diagnostics, Inc., 670 West Arapaho #9, Richardson, TX 75080.

The TDH Immunization Division will pay for mumps IgM testing submitted to Viral Diagnostics provided that the suspected case is reported to the division prior to submitting the specimen.