2002 STD Treatment Guidelines

Division of STD Prevention, CDC
2002 STD Treatment Guidelines

- Evidence-based systematic review
- Consultants Meeting in September 2000
- 65 invited consultants - STD treatment experts, professional organizations, HMOs
- Background manuscripts in *Clinical Infectious Diseases* (October 2002)
STD Prevention and Control

- Education and counseling to reduce risk of STD acquisition
- Detection of asymptomatic and/or symptomatic persons unlikely to seek evaluation
- Effective diagnosis and treatment
- Evaluation, treatment, and counseling of sexual partners
- Preexposure vaccination--hepatitis A, B
Prevention Messages

• Prevention messages tailored to the client’s personal risk; interactive counseling approaches are effective

• Despite adolescents greater risk of STDs, providers often fail to inquire about sexual behavior, assess risk, counsel about risk reduction, screen for asx infection

• Specific actions necessary to avoid acquisition or transmission of STDs

• Clients seeking evaluation or treatment for STDs should be informed which specific tests will be performed
Prevention Methods

Male Condoms

• Consistent/correct use of latex condoms are effective in preventing sexual transmission of HIV infection and can reduce risk of other STDs

• Likely to be more effective in prevention of infections transmitted by fluids from mucosal surfaces (GC, CT, trichomonas, HIV) than those transmitted by skin-skin contact (HSV, HPV, syphilis, chancroid)
Prevention Methods

Spermicidies

• N-9 vaginal spermicides are not effective in preventing CT, GC, or HIV infection
• Frequent use of spermicides/N-9 have been associated with genital lesions
• Spermicides alone are not recommended for STD/HIV prevention
• N-9 should not be used a microbicide or lubricant during anal intercourse
MSM

- STD/HIV sexual risk assessment and client-centered prevention counseling
- Annual STD screening for MSM at risk
  - HIV and syphilis serology
  - Urethral cx or NAAT, GC/CT
  - Pharyngeal cx, GC (oro-genital)
  - Rectal cx, GC/CT (receptive anal IC)
Early HIV Infection

Initial Evaluation

- Medical/sexual history, previous STD
- Pex, pelvic (pap, wet mount), GC, CT
- Syphilis serology
- CD4 count, HIV viral load
- CBC, blood chemistry
- PPD, urinalysis, CXR
- Hepatitis A, B, C serology
Genital Ulcer Evaluation

- Diagnosis based on medical history and physical examination often inaccurate
- Serologic test for syphilis
- Culture/antigen test for herpes simplex
- *Haemophilus ducreyi* culture in settings where chancroid is prevalent
- Biopsy may be useful
HSV Serologic Tests

Type-Specific

- HSV-specific glycoprotein G2 for HSV 2 infection and glycoprotein G1 for HSV 1
- Available gG type-specific assays- POCKit HSV-2, HerpeSelect HSV1/2 IgG ELISA and HerpeSelect 1/2 immunoblot IgG
- Sensitivity 80-98%, Specificity ≥ 96%
- Confirmatory testing may be indicated in some settings
Genital Herpes
First Clinical Episode

Acyclovir 400 mg tid
or
Famciclovir 250 mg tid
or
Valacyclovir 1000 mg bid

*Duration of Therapy 7-10 days*
Genital Herpes
Episodic Therapy

Acyclovir 400 mg three times daily x 5 days
or
Acyclovir 800 mg twice daily x 5 days
or
Famciclovir 125 mg twice daily x 5 days
or
Valacyclovir 500 mg twice daily x 3-5 days
or
Valacyclovir 1 gm orally daily x 5 days
Genital Herpes
Daily Suppression

Acyclovir 400 mg bid
or
Famciclovir 250 mg bid
or
Valacyclovir 500-1000 mg daily
Genital Herpes

HIV Infection

- May have prolonged or severe episodes with extensive genital or perianal disease
- Episodic or suppressive antiviral therapy often beneficial
- For severe cases, acyclovir 5-10 mg/kg IV q 8 hours may be necessary
Genital Herpes
HIV Infection/Episodic Therapy

Acyclovir 400 mg three times daily
or
Famciclovir 500 mg twice daily
or
Valacyclovir 1 gm twice daily

Duration of Therapy 5-10 days
Genital Herpes
HIV Infection/Daily Suppression

Acyclovir 400-800 mg twice to three times daily
or
Famciclovir 500 mg twice daily
or
Valacyclovir 500 mg twice daily
Genital Herpes
Antiviral Resistance

- Persistent or recurrent lesions on antivirals
- Obtain viral isolate for viral susceptibility
- 5% immunocompromised patients
- Acyclovir resistant isolates-resistant to valacyclovir, most resistant to famciclovir
- Alternatives: Foscarnet 40 mg/kg IV q 8 or topical cidofovir gel 1% (daily x 5 days)
Genital Herpes
Treatment in Pregnancy

• Available data do not indicate an increased risk of major birth defects (first trimester)
• Limited experience on pregnancy outcomes with prenatal exposure to valacyclovir or famciclovir
• Acyclovir may be used with first episode or severe recurrent disease
• Risk of transmission to the neonate is 30-50% among women who acquire HSV near delivery
Genital Herpes

Counseling

- Natural history of infection, recurrences, asymptomatic shedding, transmission risk
- Individualize use of episodic or suppressive therapy
- Abstain from sexual activity when lesions or prodromal symptoms present
- Risk of neonatal infection
Syphilis
Primary, Secondary, Early Latent

**Recommended regimen**

Benzathine Penicillin G, 2.4 million units IM

*Penicillin Allergy* *

Doxycycline 100 mg twice daily x 14 days

or

Ceftriaxone 1 gm IM/IV daily x 8-10 days (limited studies)

or

Azithromycin 2 gm single oral dose (preliminary data)

*Use in HIV-infection has not been studied*
Primary/Secondary Syphilis

Response to Treatment

• No definitive criteria for cure or failure are established
• Re-examine clinically and serologically at 6 and 12 months
• Consider treatment failure if signs/symptoms persist or sustained 4x increase in nontreponemal test
• Treatment failure: HIV test, CSF analysis; administer benzathine pcn weekly x 3 wks
• Additional therapy not warranted in instances when titers don’t decline despite nl CSF and repeat therapy
Primary/Secondary Syphilis
Response to Therapy/HIV Infection

• Most respond appropriately to benzathine penicillin 2.4 million units IM

• Some experts recommend CSF exam before therapy and additional tx (wkly benz pen IM x 3)

• Clinical/serologic evaluation at 3, 6, 9, 12, 24 mo; some perform CSF exam at 6 mo

• Tx/serologic failure (6-12 mo after tx)- CSF exam, retreat with benz penicillin 2.4 mu wkly x 3


**Syphilis**  
**Latent Syphilis**

**Recommended regimen**

Benzathine penicillin G 2.4 million units IM at one week intervals x 3 doses

*Penicillin allergy*

Doxycycline 100 mg orally twice daily  
or  
Tetracycline 500 mg orally four times daily

*Duration of therapy 28 days; close clinical and serologic follow-up; data to support alternatives to pcn are limited*
Latent Syphilis
Management Considerations

- Clinical evaluation of tertiary disease (aortitis, gumma, iritis)
- CSF analysis: neurologic or ophthalmic signs/sx, active tertiary disease, tx failure, HIV infection
- Some experts recommend CSF exam in those with nontreponemal titer of ≥1:32
- Pharmacologic considerations suggest an interval of 10-14 days between benz pen doses may be acceptable before restarting treatment course in nonpregnant patients
Latent Syphilis
Response to Treatment

• Limited data available to guide evaluation

• Repeat quantitative nontreponemal tests at 6, 12, 24 months

• Perform CSF exam and re-treat for latent syphilis: 4x increase in titer, initial nontreponemal titer \( \geq 1:32 \) fails to decline 12-24 mo after tx, or signs/sx
Latent Syphilis
Response to Therapy/HIV Infection

- CSF exam before treatment
- Normal CSF exam-benzathine penicillin 2.4 million units IM wkly x 3 weeks
- Clinical/serologic evaluation at 6, 12, 18, 24 months
- Development of sx or 4x titer rise-repeat CSF exam and treat
- Repeat CSF exam and treatment if nontreponemal titer does not decline in 12-24 months
Syphilis
Management of Sex Partners

• At risk - 3 mo + sx for primary, 6 mo + sx for secondary, one yr for early latent

• Exposure to primary, secondary, or early latent within 90 days, tx presumptively

• Exposure to primary, secondary, or early latent > 90 days, tx presumptively if serology not available

• Exposure to latent syphilis who have high nontreponemal titers ≥ 1:32, consider presumptive tx for early syphilis
Neurosyphilis

**Recommended regimen**

Aqueous crystalline penicillin G, 18-24 million units administered 3-4 million units IV every 4 hours for 10-14 days

**Alternative regimen**

Procaine penicillin 2.4 million units IM daily plus probenecid 500 mg orally four times daily for 10-14 days

Some experts administer benzathine penicillin 2.4 million units IM wkly x 3 after completion of these regimens to provide comparable duration of treatment with latent syphilis.
Neurosyphilis
Penicillin Allergy

- Ceftriaxone 2 gm daily IM/IV for 10-14 days
- Consideration of cross-reactivity
- Pregnant patients should undergo penicillin desensitization
- Other regimens have not been evaluated
Neurosyphilis
Response to Treatment

• Initial CSF pleocytosis--repeat CSF exam every 6 months until cell count normal

• CSF VDRL and protein decline slowly

• Consider re-treatment if cell count has not decreased by 6 months or if CSF is not normal by 2 years
Syphilis
Treatment in Pregnancy

• Screen for syphilis at first prenatal visit; repeat RPR third trimester/delivery for those at high risk or high prevalence areas
• Treat for the appropriate stage of syphilis
• Some experts recommend additional benzathine penicillin 2.4 mu IM after the initial dose for primary, secondary, or early latent syphilis
• Management and counseling may be facilitated by sonographic fetal evaluation for congenital syphilis in the second half of pregnancy
Congenital Syphilis
Infants with Seroreactive Mothers

- Nontreponemal test on infant serum
- Examination (nonimmune hydrops, jaundice, HSM, rhinitis, rash)
- Pathologic exam of placenta or umbilical cord (fluorescent antitreponemal antibody)
- Darkfield or DFA of suspicious lesions or body fluids
Congenital Syphilis
Proven/highly probable disease

- Abnormal physical exam consistent with congenital syphilis
- Nontreponemal titer 4X ≥ maternal titer or + DFA or darkfield
- Evaluation: CSF exam, CBC; other tests as clinically indicated--long bone films, LFTs, cranial US, eye exam, auditory brain stem response
Congenital Syphilis
Proven/highly probable disease

Aqueous crystalline penicillin G 100,000-150,000 units/kg/day, administered as 50,000 units/kg/dose IV q 12 hours during the first 7 days and thereafter q 8 hours for 10 days

or

Procaine penicillin G 50,000 units/kg/dose IM in a single daily dose for 10 days
Congenital Syphilis

Normal exam/RPR ≤ 4X maternal titer

- Mother inadequately treated; treated with nonpenicillin regimen; received tx < 4 wks before delivery; or mother has early syphilis with serologic response

- Evaluation: CSF analysis, CBC/plt, long bone xray
Congenital Syphilis
Normal Exam/RPR $\leq 4X$ maternal titer

Aqueous penicillin G 100,000-150,000 units/kg/day as 50,000 units/kg/dose IV every 12 hours for first 7 d then q 8 hours for total of 10 d

or

Procaine penicillin G 50,000 units/kg/dose IM in single daily dose for 10 d

or

Benzathine penicillin G 50,000 units/kg/dose IM in single dose
Congenital Syphilis

Normal exam/RPR < 4X maternal titer

- Mother treated appropriately > 4 wks before delivery; maternal RPR titers decreased 4X; no relapse or reinfection
- No evaluation required
- Benzathine pen G 50,000 units/kg/dose IM
Congenital Syphilis

Normal exam/RPR ≤ 4X maternal titer

- Mother received adequate tx before pregnancy; maternal RPR remained low and stable during pregnancy and delivery
- No evaluation necessary
- No treatment required; some specialists would tx with single dose of benz pen G
Congenital Syphilis
Subsequent Evaluation

• Clinical/serologic evaluation q 2-3 mo
• RPR should decline by 3 mo, nonreactive at 6 mo
• Stable or increasing titers after 6-12 mo--CSF analysis/parenteral pcn X 10 d
• Reactive treponemal/RPR after 18 mo re-evaluate and treat for congenital syphilis
Congenital Syphilis
Older Infants and Children

• Review records and maternal serology- congenital vs acquired
• Evaluation- CSF analysis, CBC/pts; +/- long bone films, auditory brain stem response
• Treatment- Aqueous pcn G 50,000 units/kg q 4-6 hours for 10 days
Chancroid

Azithromycin 1 gm orally
    or
Ceftriaxone 250 mg IM in a single dose
    or
Ciprofloxacin 500 mg twice daily x 3 days
    or
Erythromycin base 500 mg tid x 7 days
Chancroid
Management Considerations

• Re-examination 3-7 days after treatment
• Time required for complete healing related to ulcer size
• Lack of improvement: incorrect diagnosis, co-infection, non-compliance, antimicrobial resistance
• Resolution of lymphadenopathy may require drainage
Chancroid
Management of Sex Partners

Examine and treat partner whether symptomatic or not if partner contact ≤ 10 days prior to onset.
Lymphogranuloma Venereum

**Recommended regimen**

Doxycycline 100 mg twice daily for 21 days

**Alternative regimen**

Erythromycin base 500 mg four times daily for 21 days
Granuloma Inguinale

Doxycycline 100 mg twice daily

or

Trimethoprim-sulfamethoxazole 800 mg/160 mg twice daily

Minimum treatment duration three weeks
Granuloma Inguinale

Alternative regimens

Ciprofloxacin 750 mg twice daily
or
Erythromycin base 500 mg four times daily
or
Azithromycin 1 gm orally weekly

Minimum treatment duration three weeks
Urethritis

- Mucopurulent or purulent discharge
- Gram stain of urethral secretions $\geq 5$ WBC per oil immersion field
- Positive leukocyte esterase on first void urine or $\geq 10$ WBC per high power field

*Empiric treatment in those with high risk who are unlikely to return*
Nongonococcal Urethritis

Azithromyciin 1 gm in a single dose
or
Doxycycline 100 mg bid x 7 days
Nongonococcal Urethritis
Alternative regimens

Erythromycin base 500 mg qid for 7 days
or
Erythromycin ethylsuccinate 800 mg qid for 7 days
or
Ofloxacin 300 mg twice daily for 7 days
or
Levofloxacin 500 mg daily for 7 days
Recurrent/Persistent Urethritis

- Objective signs of urethritis
- Re-treat with initial regimen if non-compliant or re-exposure occurs
- Intraurethral culture for trichomonas
- Effective regimens not identified in those with persistent symptoms without signs
Recurrent/Persistent Urethritis

Metronidazole 2 gm single dose

PLUS

Erythromycin base 500 mg qid x 7d

or

Erythromycin ethylsuccinate 800 mg qid x 7d
**Chlamydia trachomatis**

- Annual screening of sexually active women ≤ 25 yrs
- Annual screening of sexually active women > 25 yrs with risk factors
- Sexual risk assessment may indicate more frequent screening for some women
- Rescreen women 3-4 months after treatment due to high prevalence of repeat infection
Chlamydia trachomatis

Azithromycin 1 gm single dose
or
Doxycycline 100 mg bid x 7d
Chlamydia trachomatis
Alternative regimens

Erythromycin base 500 mg qid for 7 days
or
Erythromycin ethylsuccinate 800 mg qid for 7 days
or
Ofloxacin 300 mg twice daily for 7 days
or
Levofloxacin 500 mg for 7 days
Chlamydia trachomatis
Treatment in Pregnancy

**Recommended regimens**
Erythromycin base 500 mg qid for 7 days
or
Amoxicillin 500 mg three times daily for 7 days

**Alternative regimens**
Erythromycin base 250 mg qid for 14 days
or
Erythromycin ethylsuccinate 800 mg qid for 14 days
or
Erythromycin ethylsuccinate 400 mg qid for 14 days
or
Azithromycin 1 gm in a single dose
Neisseria gonorrhoeae

Cervix, Urethra, Rectum

Cefixime 400 mg

or

Ceftriaxone 125 IM

or

Ciprofloxacin 500 mg

or

Ofloxacin 400 mg/Levofloxacin 250 mg

PLUS Chlamydial therapy if infection not ruled out
Neisseria gonorrhoeae
Cervix, Urethra, Rectum

Alternative regimens

- Spectinomycin 2 grams IM in a single dose
  or
- Single dose cephalosporin (cefotaxime 500 mg)
  or
- Single dose quinolone (gatifloxacin 400 mg, lomefloxacin 400 mg, norfloxacin 800 mg)

PLUS Chlamydial therapy if infection not ruled out
Neisseria gonorrhoeae

Pharynx

Ceftriaxone 125 IM in a single dose

or

Ciprofloxacin 500 mg in a single dose

PLUS Chlamydial therapy if infection not ruled out
Neisseria gonorrhoeae
Treatment in Pregnancy

• Cephalosporin regimen
• Women who can’t tolerate cephalosporin regimen may receive 2 g spectinomycin IM
• No quinolone or tetracycline regimen
• Erythromycin or amoxicillin for presumptive or diagnosed chlamydial infection
Disseminated Gonococcal Infection

**Recommended regimen**

Ceftriaxone 1 gm IM or IV q 24 hr

**Alternative regimens**

Cefotaxime or Ceftizoxime 1 gm IV q8 hr

or

Ciprofloxacin 400 mg IV q 12

or

Ofloxacin 400 mg IV q 12

or

Levofloxacin 250 mg IV daily
Neisseria gonorrhoeae

Antimicrobial Resistance

• Geographic variation in resistance to penicillin and tetracycline

• No significant resistance to ceftriaxone

• Fluoroquinolone resistance in SE Asia, Pacific, Hawaii, California

• Surveillance is crucial for guiding therapy recommendations
Candida Vaginitis
Classification

**Uncomplicated**
- Sporadic, infrequent
- Mild-to-moderate
- Likely *C. albicans*
- Non-immunocomprised

**Complicated**
- Recurrent
- Severe
- Non-albicans
- Diabetes, pregnancy, immunosuppression
Candida Vulvovaginitis

**Intravaginal regimens**
- Butoconazole, clotrimazole, miconazole, nystatin, tioconazole, terconazole

**Oral regimen**
- Fluconazole 150 mg in a single dose
Recurrent VVC

- Four or more symptomatic episodes/year
- Vaginal culture useful to confirm diagnosis and identify unusual species
- Initial regimen of 7-14 days topical therapy or fluconazole 150 mg (repeat 72 hr)
- Maintenance regimens- clotrimazole, ketoconazole, fluconazole, itraconazole
- Non-albicans VVC- longer duration of therapy with non-azole regimen
Vulvovaginal Candidiasis
Management of Sex Partners

- Treatment not recommended
- Treatment of male partners does not reduce frequency of recurrences in the female
- Male partners with balanitis may benefit from treatment
Vulvovaginal Candidiasis Treatment in Pregnancy

• Only topical intravaginal regimens recommended

• Most specialists recommend 7 days of therapy
Trichomoniasis

**Recommended regimen**
- Metronidazole 2 gm orally in a single dose

**Alternative regimen**
- Metronidazole 500 mg twice a day for 7 days

**Pregnancy**
- Metronidazole 2 gm orally in a single dose
Trichomoniasis
Treatment Failure

• Re-treat with metronidazole 500 mg twice daily for 7 days

• If repeated failure occurs, treat with metronidazole 2 gm single dose for 3-5 days

• If repeated failure, consider metronidazole susceptibility testing through the CDC
Trichomoniasis
Management of Sex Partners

- Sex partners should be treated
- Avoid intercourse until therapy is completed and patient and partner are asymptomatic
Bacterial Vaginosis

Metronidazole 500 mg twice daily for 7 days

or

Metronidazole gel 0.75%, 5 g intravaginally once daily for 5 days

or

Clindamycin cream 5%, 5 g intravaginally qhs for 7 days
Bacterial Vaginosis

Alternative regimens

Metronidazole 2 gm in a single dose

or

Clindamycin 300 mg twice daily for 7 days

or

Clindamycin ovules 100 g intravaginally qhs for 3 days
Bacterial Vaginosis
Treatment in Pregnancy

• Symptomatic pregnant women should be treated due to association with adverse pregnancy outcomes

• Existing data do not support use of topical agents in pregnancy

• Some experts recommend screening and treatment of asymptomatic women at high risk for preterm delivery (previous preterm birth) at the first prenatal visit; optimal regimen not established
Bacterial Vaginosis
Treatment in Pregnancy

Metronidazole 250 mg three times daily for 7 days
or
Clindamycin 300 mg twice daily for 7 days
Bacterial Vaginosis
Management of Sex Partners

Woman’s response to therapy and the likelihood of relapse or recurrence not affected by treatment of sex partner.
Pelvic Inflammatory Disease

Minimum Diagnostic Criteria
Uterine/adnexal tenderness or cervical motion tenderness

Additional Diagnostic Criteria
Oral temperature >38.3 C  Elevated ESR
Cervical CT or GC  Elevated CRP
WBCs/saline microscopy  Cx discharge
Pelvic Inflammatory Disease
Definitive Diagnostic Criteria

- Endometrial biopsy with histopathologic evidence of endometritis
- Transvaginal sonography or MRI showing thick fluid-filled tubes
- Laparoscopic abnormalities consistent with PID
Pelvic Inflammatory Disease
Hospitalization

• Surgical emergencies not excluded
• Pregnancy
• Clinical failure of oral antimicrobials
• Inability to follow or tolerate oral regimen
• Severe illness, nausea/vomiting, high fever
• Tubo-ovarian abscess
Pelvic Inflammatory Disease

- No efficacy data compare parenteral with oral regimens
- Clinical experience should guide decisions regarding transition to oral therapy
- Until regimens that do not adequately cover anaerobes have been demonstrated to prevent sequelae as successfully as regimens active against these microbes, regimens should provide anaerobic coverage
Pelvic Inflammatory Disease

Parenteral Regimen A

Cefotetan 2 g IV q 12 hours

or

Cefoxitin 2 g IV q 6 hours

PLUS

Doxycycline 100 mg orally/IV q 12 hrs
Pelvic Inflammatory Disease

Parenteral Regimen B

Clindamycin 900 mg IV q 8 hours

PLUS

Gentamicin loading dose IV/IM (2 mg/kg) followed by maintenance dose (1.5 mg/kg) q 8 hours. Single daily dosing may be substituted.
Pelvic Inflammatory Disease

Alternative Parenteral Regimens

Ofloxacin 400 mg IV q 12 hours

or

Levofloxacin 500 mg IV once daily

WITH OR WITHOUT

Metronidazole 500 mg IV q 8 hours

or

Ampicillin/Sulbactam 3 g IV q 6 hrs

PLUS

Doxycycline 100 mg orally/IV q 12 hrs
Pelvic Inflammatory Disease

Oral Regimen A

Ofloxacin 400 mg twice daily for 14 days

or

Levofloxacin 500 mg once daily for 14 days

WITH OR WITHOUT

Metronidazole 500 mg twice daily for 14 days
Pelvic Inflammatory Disease

Oral Regimen B

Ceftriaxone 250 mg IM in a single dose
or
Cefoxitin 2 g IM in a single dose and
Probenecid 1 g administered concurrently
PLUS
Doxycycline 100 mg twice daily for 14 days
WITH or WITHOUT
Metronidazole 500 mg twice daily for 14 days
Pelvic Inflammatory Disease

Management of Sex Partners

• Male sex partners of women with PID should be examined and treated for sexual contact 60 days preceding pt’s onset of symptoms

• Sex partners should be treated empirically with regimens effective against CT and GC
Epididymitis

Diagnostic Considerations

- Gram stain smear of urethral exudate for diagnosis of urethritis
- Intraurethral culture or nucleic acid amplification test for GC and CT
- Examination of first void uncentrifuged urine for WBCs if urethral gram stain negative
Epididymitis

Infection likely due to GC or CT
  Ceftriaxone 250 mg IM in a single dose
  PLUS
  Doxycycline 100 mg twice daily for 10 days
Infection likely due to enteric organisms or age > 35
  Ofloxacin 300 mg twice daily for 10 days
  or
  Levofloxacin 500 mg once daily for 10 days
Papillomavirus Treatment

• Primary goal for treatment of visible warts is the removal of symptomatic warts

• Therapy may reduce but probably does not eradicate infectivity

• Difficult to determine if treatment reduces transmission
  – No laboratory marker of infectivity
  – Variable results utilizing viral DNA
Papillomavirus

- Source of therapy guided by preference of patient, experience of provider, resources
- No evidence that any regimen is superior
- Locally developed/monitored treatment algorithms associated with improved clinical outcomes
- Acceptable alternative may be to observe; possible regression/uncertain transmission
Papillomavirus

Patient-applied
Podofilox 0.5% solution or gel
or
Imiquimod 5% cream

Provider-administered
Cryotherapy
or
Podophyllin resin 10-25%
or
Trichloroacetic or Bichloroacetic acid 80-90%
or
Surgical removal
Papillomavirus

Vaginal warts
   Cryotherapy or TCA/BCA 80-90%

Urethral meatal warts
   Cryotherapy or podophyllin 10-25%

Anal warts
   Cryotherapy or TCA/BCA 80-90%
Papillomavirus
Treatment in Pregnancy

- Imiquimod, podophyllin, podofilox should not be used in pregnancy
- Many specialists advocate wart removal due to possible proliferation and friability
- HPV types 6 and 11 can cause respiratory papillomatosis in infants and children
- Preventative value of cesarean section is unknown; may be indicated for pelvic outlet obstruction
Cervical Cancer Screening

Women with History of STDs

- Women with STD hx may be at increased risk of cervical cancer
- Clinics that offer pap screening without colposcopic f/u should arrange for referral
- Management of abnormal pap provided per Interim Guidelines for Management of Abnormal Cervical Cytology (NCI Consensus Panel)
- Emerging data support HPV testing for the triage of women with ASCUS Pap tests
Vaccine Preventable STDs

Hepatitis A

- MSM
- Illegal drug users
- Chronic liver disease, hepatitis B and C infection
Vaccine Preventable STDs
Hepatitis B

- History of STD, multiple sex partners, sexually active MSM
- Illegal drug use
- Household members, sex partners of those with chronic hepatitis B
- Hemodialysis, occupational blood exposure
Proctitis

- Anoscopic examination for HSV, GC, CT, syphilis
- Painful perianal or mucosal ulceration on anoscopy - presumptive therapy for HSV

**Recommended regimen**

- Ceftriaxone 125 mg IM PLUS
- Doxycycline 100 mg twice daily
  for 10 days
Pediculosis Pubis

• Pruritus or lice or nits on pubic hair
• Decontaminate bedding and clothing
• Recommended regimens
  – Permethrin 1%
  – Lindane 1% shampoo
  – Pyrethrins with piperonyl butoxide
• Re-treatment may be necessary if sx persist
• Treatment of sex partners within the last month
Scabies

• Predominant symptom is pruritus
• **Recommended regimen**
  Permethrin cream 5%
• **Alternative regimen**
  Lindane 1% or Invermectin 200 ug/kg, repeat in 2 wks
• Sex partners and household contacts within the preceding month should be treated
Scabies

Persistent Symptoms

- Rash and pruritus may persist for 2 wks
- Persistence > 2 wks: tx failure, resistance, reinfection, drug allergy, cross reactivity with household mites
- Attention to fingernails of infected patients
- Treat close contacts empirically
- Wash linens, bedding, clothing
Norwegian Scabies

• Aggressive infestation in immunodeficient, debilitated, or malnourished

• Greater transmissibility

• Substantial treatment failure with topical scabicide or oral ivermectin; treatment recommendations--combination topical scabicide with ivermectin or repeated treatments with ivermectin
Sexual Assault Evaluation

- Cultures for GC and CT from sites of penetration; if NAAT used, positive test should be confirmed by a second FDA licensed NAAT utilizing a different primer sequence
- Wet mount and culture for trichomonias
- HIV, hepatitis, and syphilis serology
Sexual Assault

• Suggested preventative therapy
  - Postexposure hepatitis B vaccination
  - Empiric regimen for chlamydia, gonorrhea, trichomonas, and BV

• Efficacy of antimicrobial regimens in the prevention of genitourinary infections after sexual assault has not been evaluated
Ophthalmia Neonatorum
Prophylaxis

Silver nitrate 1% aqueous solution in a single application

or

Erythromycin 0.5% ophthalmic ointment in a single application

or

Tetracycline ophthalmic ointment 1% in a single application