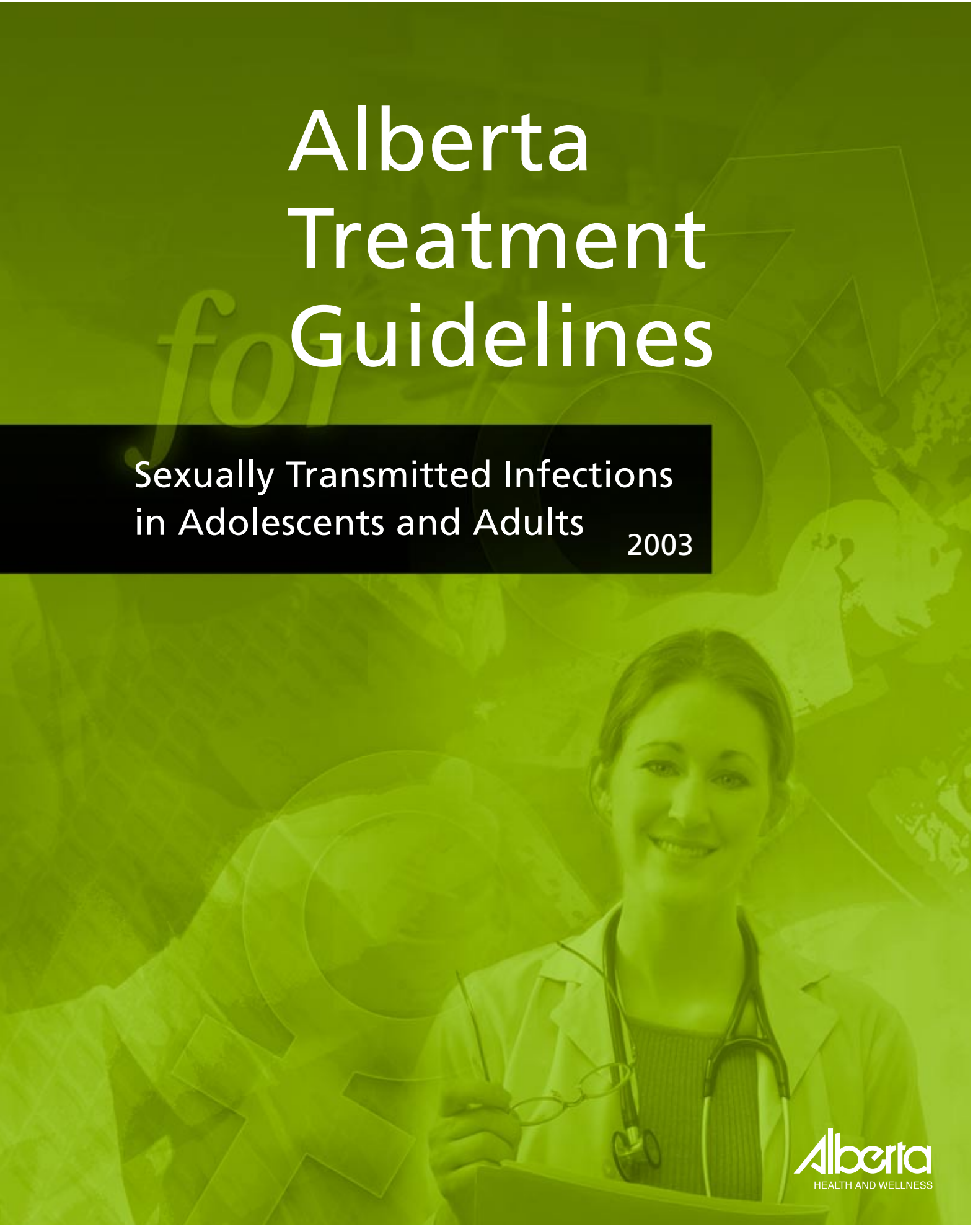
Alberta Treatment Guidelines

Sexually Transmitted Infections in Adolescents and Adults

2003



Alberta
HEALTH AND WELLNESS

A committee of provincial sexually transmitted disease (STD) representatives convened by Alberta Health and Wellness (AH&W), prepared these guidelines. The level of evidence and strength of recommendations are graded as outlined by the U.S. Department of Health and Human Services in 1992* and summarized below.

Recommendations regarding treatment of pediatric infection are excluded from these guidelines. In general, children diagnosed with a STD should be managed in conjunction with a specialist and be reported to Child Welfare Services for investigation of possible sexual abuse.

To keep the guidelines concise, references are not published with the guidelines. References are available from AH&W, STD Services.

*U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research. Acute Pain Management: operative or medical procedures and trauma. Rockville, MD: Agency for Health Care Policy and Research Publications, (AHCPR Pub 92-0032), 1992

LEVEL OF EVIDENCE

- **Ia** Meta-analysis of randomized controlled trials (RCT)
- **Ib** At least one RCT
- **IIa** At least one well designed controlled study without randomization
- **IIb** At least one other type of quasi-experimental study
- **III** Well designed non-experimental descriptive studies, correlation studies, and case control studies
- **IV** Expert committee reports or opinions and/or clinical experience of respected authorities

GRADING OF RECOMMENDATION

- **A** (Evidence levels Ia, Ib) At least one RCT as part of the body of literature of overall good quality and consistency addressing the specific recommendation
- **B** (Evidence levels IIa, IIb, III) Availability of well conducted clinical studies but no RCT
- **C** (Evidence level IV) Expert committee reports or opinions and/or clinical experience of respected authorities

Notifiable Sexually Transmitted Diseases (As Mandated by the Public Health Act)

AIDS
Chancroid
Chlamydia
Gonorrhea
HIV
Lymphogranuloma Venereum
Mucopurulent Cervicitis (MPC)
Nongonococcal Urethritis (NGU)
Syphilis

Look for this mark throughout the document to identify Notifiable Diseases.

Chlamydia

Uncomplicated Genital Infection

Recommended Regimens

azithromycin 1 gm po as a single dose (Ia, A)

Alternate

doxycycline 100 mg po BID for 7 days (Ia, A)

Pregnancy/Lactation

Recommended Regimen

amoxicillin 500 mg po TID for 7 days (Ia, A)

Alternate

azithromycin 1 gm po as a single dose (Ib, A)*

or

erythromycin 500 mg po QID for 7 days (Ib, A)

*Limited data is available on the long-term safety of azithromycin in pregnancy but the benefits of single dose treatment for selected patients may outweigh this risk.

Considerations

- All pregnant women should have a test of cure done 3 - 4 weeks after completion of treatment.
- Doxycycline is contraindicated in pregnant women.
- Estolate preparation of erythromycin is contraindicated as it may cause drug-related hepatoxicity.

Chlamydia Infection of the Eye

Recommended Regimen

doxycycline 100 mg po BID for 14 days (III, B)

Considerations

- All patients should be followed to ensure resolution of infection.
- A second course of treatment may be required.
- Patients should also have genitourinary specimens submitted for *C. trachomatis*.

Contacts

All contacts in last 3 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow up

Patients should return for re-evaluation if symptoms persist or recur, patient is pregnant and/or a non-genital site is involved.

Gonorrhea

NOTIFIABLE

Uncomplicated Infection

(Urogenital/rectal sites)

Recommended Regimens

ciprofloxacin 500 mg po as a single dose (Ib, A)
or
cefixime 400 mg po as a single dose (Ib, A)

Alternate

ceftriaxone 125 mg IM as a single dose (Ib, A)

Considerations

- If treatment is to be given empirically, it should be accompanied by therapy for presumed concomitant chlamydia infection. If the result from a molecular diagnostic test is negative for chlamydia, then treatment does not need to include regimens effective against chlamydia.
- Cefixime is the preferred treatment if infection was acquired outside of Canada.
- Cultures for *N. gonorrhoeae* should be performed in all cases with sexual contact outside of Canada, failure of treatment and sexual assault/abuse cases.
- Disseminated infections and infections involving the eye require expert consultation and systemic antibiotics.

Pregnancy/Lactation

Recommended Regimen

cefixime 400 mg po as a single dose (Ia, A)

Alternate

ceftriaxone 125 mg IM as a single dose (Ia, A)
or
spectinomycin 2 gm IM as a single dose (Ia, A)*

Considerations

- Test of cure is recommended for all pregnant women.
- *Spectinomycin is available with assistance from AH&W, STD Services.
- Ciprofloxacin is contraindicated during pregnancy.
- If treatment is to be given empirically, it should be accompanied by therapy for presumed concomitant chlamydial infection. If the result from a molecular diagnostic test is negative for chlamydia, then treatment does not need to include regimens effective against chlamydia.

Pharyngeal Gonococcal Infections

Recommended Regimen

ciprofloxacin 500 mg po as a single dose (Ib, A)
or
cefixime 400 mg po as a single dose (Ib, A)

Alternate

ceftriaxone 250 mg IM as a single dose (Ib, A)

Considerations

- Test of cure is recommended for all pharyngeal infections.

Contacts

All contacts in last 3 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow up

Patients should return for re-evaluation if symptoms persist or recur, if patient is pregnant, resistant gonorrhea is isolated and/or a non-genital site is involved.

Mucopurulent Cervicitis (MPC)

NOTIFIABLE

Recommended Regimen

azithromycin 1 gm po as a single dose (Ib, A)

Alternate

doxycycline 100 mg po BID for 7 days (Ia, A)

Considerations

- All patients should be tested for gonorrhea and chlamydia.
- Treat for gonorrhea if this has not been ruled out.
- Diagnosis of MPC should not be made in pregnancy due to poor positive predictive value of any criteria for defining MPC in pregnant women.

Contacts

All contacts in last 3 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow up

Patients should return for re-evaluation if symptoms persist or recur.

Vaginitis

Bacterial Vaginosis

Recommended Regimens

metronidazole 500 mg po BID for 7 days (Ia, A)
or
clindamycin 2% cream 5 gm intravaginally qhs for 7 days (Ib, A)
or
metronidazole 0.75% gel 5 gm intravaginally qhs for 5 days (Ib, A)

Alternate

metronidazole 2 gm po as a single dose (Ib, A)
or
clindamycin 300 mg po BID for 7 days (Ib, A)

Considerations

- Treatment of partners is not routinely recommended.
- Patients on metronidazole should be advised not to take alcohol for duration of treatment and for 48 hours after because of possible disulfiram-like (antabuse) reaction.
- Clindamycin cream is oil based and may weaken latex condoms.

Pregnancy/Lactation

Recommended Regimen

metronidazole 500 mg po BID for 7 days (Ib, A)

Alternate

metronidazole 2 gm po as a single dose (Ib, A) **or**

clindamycin 300 mg po BID for 7 days (Ia, B) **or**

metronidazole 0.75% gel 5 gm intravaginally QD for 5 days (Ib, A) **or**

clindamycin 2% cream 5 gm intravaginally QD for 7 days (Ib, A)

Considerations

- Indications for screening and treatment of bacterial vaginosis in pregnancy include:
  - presence of symptoms
  - asymptomatic women who are at high risk of pre-term delivery
  - prior to termination of pregnancy
- Although meta-analyses have concluded there is no evidence of teratogenicity with the use of metronidazole in the first trimester of pregnancy, some experts still recommend deferring treatment until the 2nd trimester.
- Clindamycin cream does not reduce risk of pre-term birth.
- Metronidazole enters breast milk and may affect taste; intravaginal preparation is preferred in lactating women.

Vulvovaginal Candidiasis

Recommended Regimens

Topical agents
intravaginal butoconazole, clotrimazole, miconazole, nystatin, tioconazole or terconazole preparations as available over the counter (Ia, A)

Oral agents
fluconazole 150 mg po as a single dose (Ia, A)

Considerations

- Many topical/intravaginal agents are oil based and might weaken latex condoms and diaphragms.
- Treatment of sexual partners is not routinely recommended unless male partner has candida balanitis.

Pregnancy/Lactation

Recommended Regimen

topical azole for 7 days (Ia, A)

Considerations

- Some effective topical azole agents are: butoconazole, clotrimazole, miconazole and terconazole.
- Fluconazole is contraindicated in pregnancy but considered safe in breastfeeding.

Trichomoniasis

Recommended Regimen

metronidazole 2 gm po as a single dose (Ia, A)

Alternate

metronidazole 500 mg BID for 7 days (Ia, A)

Considerations

- Sexual partners should be treated simultaneously.
- Patients on metronidazole should be advised not to take alcohol for duration of treatment and for 48 hours after because of possible disulfiram-like (antabuse) reaction.

Pregnancy/Lactation

Recommended Regimen

metronidazole 2 gm as a single dose (Ib, A)

Considerations

- Although meta-analyses have concluded there is no evidence of teratogenicity with the use of metronidazole in the first trimester of pregnancy, some experts still recommend deferring treatment until the 2nd trimester.

Nongonococcal Urethritis (NGU)

NOTIFIABLE

Recommended Regimen

azithromycin 1 gm po as a single dose (Ib, A)

Alternate

doxycycline 100 mg po BID for 7 days (Ib, A)

Considerations

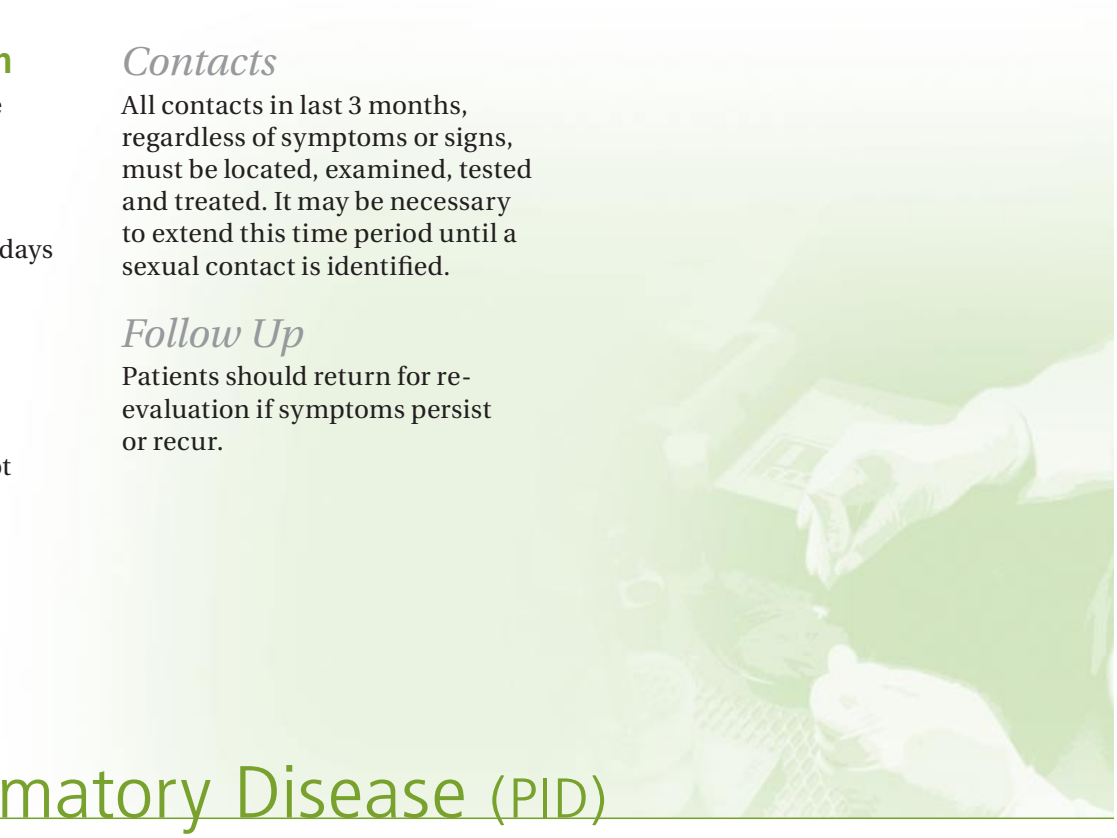
- All patients should be tested for gonorrhea and chlamydia.
- Treat as for gonorrhea if it has not been ruled out.

Contacts

All contacts in last 3 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow Up

Patients should return for re-evaluation if symptoms persist or recur.



Pelvic Inflammatory Disease (PID)

Outpatients

Recommended Regimen

ofloxacin 400 mg po BID for 14 days

WITH or WITHOUT metronidazole 500 mg po BID for 14 days* (III, B)

Alternate

ceftriaxone 250 mg IM as a single dose

PLUS doxycycline 100 mg po BID for 14 days

WITH or WITHOUT metronidazole 500 mg po BID for 14 days* (III, B)

Considerations

- *Addition of metronidazole is recommended when concurrent anaerobic infection is a concern (i.e. bacterial vaginosis, presence of tubo-ovarian abscess and/or HIV co-infection).
- If an IUD is in place, consideration should be given to removal, once clinical improvement has occurred.

Contacts

All contacts in last 3 months, regardless of symptoms or signs, must be located, examined, tested and treated for uncomplicated gonococcal and chlamydial infections. It may be necessary to extend this time period until a sexual contact is identified.

Follow up

All women should be re-evaluated in 48 - 72 hours.

Referral to a Specialist

if individual is

- not responding to treatment
- unable to tolerate oral medication
- pregnant
- immunocompromised

and/or there is

- atypical presentation
- moderate to severe illness
- adnexal mass or tubo-ovarian abscess

and/or

- surgical emergency cannot be excluded

Epididymo-orchitis

Epididymo-orchitis

(Most likely due to gonorrhea and/or chlamydia infections)

Recommended Regimen

ciprofloxacin 500 mg po as a single dose

PLUS doxycycline 100 mg po BID for 14 days (III, B)

or

ceftriaxone 250 mg IM as a single dose

PLUS doxycycline 100 mg po BID for 14 days (III, B)

Epididymo-orchitis

(Most likely due to enteric organisms)

Recommended Regimen

ofloxacin 300 mg po BID for 10 days (IIb, B)

Considerations

- Patients with sexually transmitted epididymo-orchitis are more likely to be < 35 years. Non sexually transmitted orchitis occurs more frequently in men > 35 years, those who have recently undergone urinary tract instrumentation or surgery and those with abnormalities of the urinary tract.
- Bed rest, scrotal elevation and support and analgesics are also recommended.

Contacts

All contacts of patients with sexually transmitted epididymo-orchitis in last 3 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow Up

All patients who fail to improve after 48 - 72 hours should undergo re-evaluation and reassessment for alternate diagnoses.

Syphilis

NOTIFIABLE

Primary, Secondary, Early Latent (< 1 year duration)

Recommended Regimen

benzathine penicillin 2.4 mu IM as a single dose (III, B)*

Alternate

(penicillin allergic patients)

doxycycline 100 mg po BID for 14 days (III, B)

Latent

(> 1 year duration) and cardiovascular

Recommended Regimen

benzathine penicillin 2.4 mu IM weekly for 3 consecutive weeks (IV, C)*

Alternate

(penicillin allergic patients)

doxycycline 100 mg po BID for 28 days (IV, C)

Neurosyphilis

Recommended Regimen

crystalline penicillin G 4 mu IV q4h for 14 days (IV, C)

Considerations

- Past history of treatment for syphilis may be available from AH&W, STD Services and may help to guide current management.
- CSF examination for cells, protein and VDRL is recommended to establish a diagnosis of neurosyphilis and may be indicated in certain other cases, e.g. eye involvement.
- Patients with HIV co-infection should be managed with an HIV specialist.
- *Benzathine penicillin is available with assistance from AH&W, STD Services.

Pregnancy

Pregnant women should be screened for syphilis during pregnancy. With documentation of adequate treatment in the past, patients need not be retreated, unless there is clinical or serological evidence of re-infection.

If penicillin allergic, the woman may be treated with erythromycin. However, the neonate should automatically be treated with penicillin. Doxycycline is not recommended for use during pregnancy.

Contacts

All sexual contacts of early syphilis (primary, secondary and early latent) must be located, examined, tested and treated.

Follow Up

For early syphilis, repeat serology should be obtained at 1, 3, 6, 12 and 24 months following therapy.

For late latent syphilis, serology generally need not be repeated until 12 months post therapy.

Herpes Simplex (Genital)

Recommended Regimens

Primary/First Episode

acyclovir 400 mg po TID for 5 - 7 days (Ib, A)
or
famciclovir 250 mg po TID for 5 - 7 days (Ib, A)
or
valacyclovir 500 - 1000 mg po BID for 5 - 7 days (Ib, A)

Recurrent Disease

Episodic Therapy

acyclovir 400 mg po TID for 5 days (Ia, A)
or
famciclovir 125 mg po BID for 5 days (Ia, A)
or
valacyclovir 500 mg po BID for 3 - 5 days (Ia, A)

Suppressive Therapy

acyclovir 400 mg po BID (Ib, A)
or
famciclovir 250 mg po BID (Ib, A)
or
valacyclovir 500 mg po QD or BID (Ib, A)

Considerations

- Choice of treatment depends on drug dosing frequency and cost.
- There is no role for topical acyclovir.
- Treatment begun >72 hours after onset of lesions or once crusting has occurred may not have any clinical benefit.
- Antiviral therapy is not necessary in all cases, particularly when recurrences are both mild and infrequent.
- Episodic therapy may be an option for patients with infrequent (less than 6 outbreaks per year) but significant symptomatic outbreaks.
- Suppressive therapy may be an option for patients with more than 4 - 6 symptomatic outbreaks a year.
- Suppressive therapy reduces the frequency and severity of recurrences and reduces asymptomatic viral shedding.
- Counselling is an essential part of management.
- Expert consultation may be of value, particularly in the management of pregnant patients and discordant couples.

HIV / AIDS

NOTIFIABLE

(Human immunodeficiency virus / Acquired immune deficiency syndrome)

All individuals having unprotected sexual intercourse, injecting drugs, sharing needles and other injection drug use equipment, and/or infected with other sexually transmitted infections (STI) are at risk of HIV infection. The presence of a STI increases the risk of acquisition and transmission of HIV.

Testing

HIV antibody testing should be offered to all at risk individuals, including those diagnosed with another STI. Testing should only be done with the patient's consent after a full discussion of the implications and limitations of the test. Providing the patient with a copy of the pamphlet, *HIV Could you be Infected?* available from Alberta Health and Wellness is suggested. HIV results, both positive and negative, should be given in person. Individuals should be encouraged to modify their risk behaviour. Those who test negative should also be re-tested six months after their last potential exposure.

HIV Testing In Pregnancy

HIV testing in pregnancy is strongly recommended as part of routine prenatal care. Testing should be accompanied by informed consent. (Print resources on prenatal HIV screening are available from Alberta Health and Wellness – see STD Resource on back page).

Referral

- Newly diagnosed HIV positive individuals require medical, emotional and psychological support.
- Patients should be referred to an HIV specialist.
- Patients should be informed of local HIV/AIDS support groups (see STD Resource on back page).

Contacts

- Identification and contact tracing of all known sexual and needle sharing partners of HIV infected patients should be undertaken. It may be necessary to go back several years. Knowledge of a previous negative test can assist in determining the time frame for contact identification.
- Upon request, the medical officer of health or regional public health staff can assist in eliciting a list of contacts as well as locating and counselling these individuals.

Partner Notification

The main benefits of partner notification (contact tracing) are that early identification of infection in individuals can reduce spread of disease and prevent late complications (e.g. PID and sterility).

It is expected the physician/case manager will discuss partner identification and notification with each client when a sexually transmitted infection (STI) diagnosis is made. Contact names and locating information for Notifiable STD should be provided on the STD Notification form and forwarded to STD Services, Disease Control and Prevention Branch, Alberta Health and Wellness.

Options for contact tracing:

- Physician/case manager provide contact names and locating information on the STD notification form. STD Services will co-ordinate the contact tracing process with the regional partner notification nurse.
- Physician/case manager provide contact names and locating information on the STD notification form. However, the physician/case manager has the option of indicating on the form that they will undertake the testing and/or treatment of the sex partners(s). If the testing and/or treatment of the contact is not confirmed, STD Services will co-ordinate follow up with the regional partner notification nurse.
- Index case is asked to notify and refer their own sex partner(s) for testing and treatment. If contact testing and/or treatment is not confirmed, further follow up by physician/case manager is necessary.
- STD Services, AH&W will co-ordinate/redirect out of province referrals.

STD Resources

Medical and case consultation for STD/HIV are available through **STD Services, Disease Control and Prevention Branch, Alberta Health and Wellness** by calling **(780) 427-2830.**

STD/HIV toll-free, province-wide, 24-hour information line for general public, **1-800-772-2437.**

The Alberta Community Council on HIV (ACCH) for information on community-based HIV organizations, telephone: **(403) 314-0892.**

Alberta Health and Wellness, STD/HIV related publications available at:

- **www.gov.ab.ca**
- **www.health.gov.ab.ca**
- **Supply and Form Services, Alberta Health and Wellness** by faxing (403) 272-7774

Canadian National STD Treatment Guidelines available at:

- **www.hc-sc.gc.ca/pphb-dgspsp/publicat/std-mts98**

Alberta
HEALTH AND WELLNESS

STD Services

Disease Control and Prevention Branch
Alberta Health and Wellness
23rd FLOOR, 10025 Jasper Avenue
Edmonton, Alberta T5J 2N3
Tel: (780) 427-2830
Fax: (780) 422-5149

STD Clinics

Calgary Health Region STD Clinic
#404, 906 - 8th Avenue SW
Calgary, Alberta T2P 1H9
Tel: (403) 297-6562
Fax: (403) 297-2946

Capital Health STD Centre
Edmonton General Hospital Site
11111 Jasper Avenue, Rm 3B20
Edmonton, Alberta T5K 0L4
Tel: (780) 413-5156
Fax: (780) 425-2194

Northern Lights Fort McMurray STD Clinic
Northern Lights Regional Health Authority
Main Floor, 7 Hospital Street
Fort McMurray, Alberta T9H 1P2
Tel: (780) 791-6263
Fax: (780) 791-6282

Replacement Drugs

The following drugs are supplied and replaced following submission of a STD Notification Form:

Amoxicillin 500 mg TID for 7 days

Azithromycin 1 gm po as a single dose

Azithromycin 1 gm plus **Cefixime** 400 mg

Azithromycin 1 gm plus **Ciprofloxacin** 500 mg

*__Benzathine Penicillin__ (Bicillin) 2.4 mu injection

Cefixime 400 mg po as a single dose

Cefixime 400 mg plus **Amoxicillin** 500 mg TID for 7 days

Cefixime 800 mg plus **Doxycycline** 100 mg BID for 14 days

Cefixime 400 mg plus **Erythromycin** 500 mg QID for 7 days

Ceftriaxone 250 mg injection

Ciprofloxacin 500 mg po as a single dose

Doxycycline 100 mg BID for 7 days

Erythromycin 500 mg QID for 7 days

Ofloxacin 300 mg and 400 mg

Metronidazole 500 mg (for treatment of PID only)

*__Spectinomycin__

* These drugs are available with assistance through STD Services, Alberta Health and Wellness.