

Update

Pelvic Inflammatory Disease (PID)

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PID is a leading cause of adverse reproductive health sequelae including tubal factor infertility, ectopic pregnancy, and chronic pelvic pain. PID is a general term that refers to infection of the uterus, fallopian tubes, ovaries and rarely, the peritoneal cavity.

Each year approximately 1 million women in the United States are diagnosed with pelvic inflammatory disease (PID). However, the clinical diagnosis of acute PID is difficult because of the wide variation in symptoms and signs, and many episodes of PID go unrecognized. Although some women are asymptomatic, others are not diagnosed because the patient or provider fails to recognize mild symptoms or nonspecific signs, such as abnormal bleeding, dyspareunia or vaginal discharge.

Family PACT clinicians should consistently utilize Centers for Disease Control and Prevention (CDC)-recommended diagnostic criteria and treatment regimens. Treatment regimens for PID are designed to cover *Chlamydia trachomatis* (Ct), gonorrhea (GC), anaerobes, and other organisms causing bacterial vaginosis (BV) as they are the most common organisms causing PID.

Risk Factors for PID

- Young age: PID is seen commonly in younger women, particularly adolescents
- Cervical infection especially with Ct or GC
- BV
- Vaginal douching

- Invasive surgical procedures
- Women who use intrauterine contraceptives (IUCs) have an increased risk of PID for 1 to 3 months after insertion. Afterwards, the risk of PID in IUC users is the same as in the general population.

PID may be less common in women who are older or who use barrier or hormonal contraceptives.

Strategies to Prevent PID

- **Early detection of lower-tract Ct and GC infection followed by prompt and effective treatment**

Preventing PID is a major reason Family PACT recommends annual screening for GC (if the GC prevalence in your client population is one percent or higher) and Ct in all sexually active females 25 years and younger. Sexually active teenagers are more likely to be diagnosed as having GC, Ct and PID than are 25- to 29-year-old women. Both biological and behavioral characteristics may account for these differences.

- **Prevention of lower-genital-tract infection with Ct and GC among both men and women**

Practitioners should counsel clients regarding sexual risk behaviors, regular sexually transmitted disease (STD) screening, use of condoms and the importance of complying with treatment and follow-up instructions.

- **Effective partner management**
 By ensuring timely and effective treatment of a patient's sex partners, practitioners can reduce risk of re-infection in their patients.

Clinical Manifestations and Diagnosis

Women with PID present with a range of clinical manifestations, from virtually none to severe and debilitating symptoms. Women may complain of lower abdominal pain or pelvic pain, cramping, pain during intercourse, intermittent or post-coital bleeding, or fever. In severe PID, women appear very ill with fever, chills, purulent vaginal discharge, nausea, or vomiting.

For women who present with pelvic or lower abdominal pain and if no other cause can be identified, the CDC specifies "minimum" diagnostic criteria for uncomplicated PID:

- Cervical motion tenderness, OR
- Uterine tenderness, OR
- Adnexal tenderness

CDC recommends treatment for PID if any of these minimum criteria is present.

At a minimum, temperature measurement, abdominal exam and bimanual pelvic exam, saline microscopy of vaginal fluid (i.e., wet mount exam) and testing for Ct and GC should be performed. The following additional criteria can be used to enhance the specificity of the minimum criteria and to support a diagnosis of PID:

- Oral temperature > 101F (>38.3 C)
- Abnormal cervical or vaginal mucopurulent discharge
- Elevated erythrocyte sedimentation rate (ESR)
- Laboratory documentation of cervical infection with Ct or GC
- Presence of abundant white blood cells on saline microscopy of vaginal fluid. Evaluation of vaginal fluid also allows for detection of concomitant infection, including bacterial vaginosis, which will influence treatment for PID.

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Patient Management/Treatment

The objective of early, aggressive treatment of PID is to avoid the need for hospitalization, prevent complications such as tubo-ovarian abscess, and reduce the long term sequelae of tubal infertility and ectopic pregnancy. All treatment regimens must be effective against Ct and GC; however, negative screening tests for these organisms do not rule out upper tract infection. The addition of metronidazole should be considered, as it will improve the antibiotic coverage of the anaerobic organisms that are present in the majority of PID cases. Metronidazole also will treat BV, which frequently is associated with PID.

Recommended Outpatient Regimens

- **Ceftriaxone 250 mg IM in a single dose**
OR
- **Cefoxitin 2 g IM in a single dose and Probenecid 1g orally administered concurrently in a single dose**
PLUS
- **Doxycycline 100 mg orally 2 times a day for 14 days**
With or Without
- **Metronidazole 500 mg orally 2 times a day for 14 days**

It is generally recommended to add metronidazole if the patient is also diagnosed with BV or if BV can not be ruled out because a saline microscopic exam of vaginal fluid is not available.

Alternate regimens in patients with a medical contraindication to cephalosporin therapy: (according the California Sexually Transmitted Diseases (STD) Treatment Guidelines)

CDC no longer recommends regimens that include a quinolone agent to treat PID because of the emergence of quinolone-resistant *Neisseria gonorrhoeae* (QRNG).

A quinolone regimen may only be considered if the patient is unable to receive an injectable cephalosporin regimen, if the risk of GC is low, a Nucleic Acid Amplification Test (NAAT) test for GC is performed, and follow-up of the patient is considered likely. If GC is documented, a test of cure preferably using bacterial culture (on which susceptibility testing can be performed) one week after treatment should be performed. If the culture is positive for QRNG or if the NAAT is positive and antimicrobial susceptibility cannot be assessed, the patient should be managed in consultation with an STD expert. Advice is available by calling your local STD controller or the California STD Control Branch at 510-620-3400 and asking for the clinician on call. Quinolone regimens include: levofloxacin 500 mg orally once daily for 14 days or ofloxacin 400 mg orally twice daily for 14 days, plus metronidazole 500 mg orally twice a day for 14 days.

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Upcoming Family PACT Training Events

April 13, 2010

Coding for Clinicians
Webcast

April 14-15, 2010

County Health Department Conference
Sacramento

April 22, 2010

Regional Provider Forum
Emeryville

April 27, 2010

IUC Insertion Training
Fresno

May 12, 2010

Ask the Experts: Training New Staff and Available Resources
Webcast

May 18, 2010

Provider Orientation
Bakersfield

May 20, 2010

Ask the Experts: Client Education Materials and Client Website Resources
Webcast

May 26, 2010

Gonorrhea and Chlamydia Update
Webcast

May 27, 2010

Regional Provider Forum
Fresno

Calendar of Events at Family PACT Website

<http://familypact.org/en/Providers/CalendarOfEvents.aspx>

Patients with IUC

There is insufficient evidence to suggest that IUCs should be removed in women diagnosed with acute PID. However, if the IUC remains in place, close clinical follow-up is mandatory. If the client does not respond promptly to antibiotic treatment, the IUC should be removed and antibiotics continued.

Referral for Hospitalization

If a client has any of the following she should be referred for hospitalization (which is not covered by Family PACT):

- Inability to exclude surgical emergencies (e.g., appendicitis, ectopic pregnancy)
- Pregnancy
- Severe illness, such as nausea and vomiting and/or high fever
- Tubo-ovarian abscess
- Unable to follow or tolerate outpatient treatment
- Non-response to outpatient therapy. This is defined as failure to respond clinically to outpatient antimicrobial therapy within 48-72 hours, or the inability to tolerate an outpatient oral regimen.

Follow-Up

A minimum of two follow-up visits are necessary to evaluate response to antibiotic therapy. Patients should be re-evaluated within 48 to 72 hours, at which time they should show substantial clinical improvement. Patients should be hospitalized for intravenous antibiotic therapy if their pelvic pain is the same or worse, if they are unable to take oral medication, or if a pelvic or adnexal mass has developed since the initial exam. The second follow-up visit should be scheduled 4 to 7 days after completion of treatment. Additional diagnostic tests or treatment should be considered if a pelvic or adnexal mass has developed or moderate or severe tenderness persists after adequate treatment. Patients with laboratory

confirmed Ct or GC PID should be retested 3 months following treatment to rule out re-infection.

Partner Treatment

The patient's male sex partners during the 60 days preceding the patient's onset of PID diagnosis should be treated empirically with regimens effective against both Ct and GC, regardless of the apparent etiology of PID or pathogens isolated from the infected woman. Partners should be encouraged to seek care at a Family PACT clinic and be treated with ceftriaxone 125 mg IM in a single dose and azithromycin 1 gm orally in a single dose or doxycycline 100 mg orally twice daily for 7 days. If the partner is unlikely to seek care, then patient delivered partner therapy should be offered (which is not covered by Family PACT).

Patient Counseling and Education

Patient counseling and education should cover treatment issues, the nature of the disease, transmission issues, and risk reduction.

- Treatment Issues – adverse effects of drugs to be prescribed; the importance of completing the entire course of medication; any potential medication compliance problems; purpose and importance of follow-up exam.
- Nature of the Disease – PID may or may not have symptoms; having PID once increases the risk of getting PID again; potential results of PID can be ectopic pregnancy, chronic pelvic pain, and infertility.
- Transmission Issues – GC and Ct are easily transmitted through vaginal intercourse; and patients and their sex partners should not have intercourse until they have both completed their medication and neither have symptoms.
- Risk Reduction – develop individualized risk-reduction plans such as abstinence, monogamy, use of condoms and limiting the number sex partners. □

— PID Resources —

CDC STD Treatment Guidelines

(current – release of new guidelines by 12/31/10)

<http://www.cdc.gov/std/treatment>

California STD Control Branch

<http://www.cdph.ca.gov/programs/std/Pages/default.aspx>

California STD/HIV Prevention Training Center

<http://www.stdhivtraining.org>

Family PACT Clinical Practice Alert - Pelvic Inflammatory Disease

<http://familypact.org/en/Providers/clinical-practice-alerts.aspx>

Family PACT Client Education Materials - PID

<http://familypact.org/en/Providers/ClientEducationMaterials2/SexuallyTransmittedInfections.aspx>

GENERAL FAMILY PACT Resources

Family PACT Website
<http://www.familypact.org>

Medi-Cal Website
<http://www.medi-cal.ca.gov>

Family PACT Email Address
fampact@cdph.ca.gov

Office of Family Planning Main Phone Number
916-650-0414

Office of Family Planning Provider Enrollment Number
916-324-0389

Toll Free Provider Resource Line
877- FAM-PACT

HP Provider Support Telephone Center
800-541-5555

3600 Wilshire Boulevard, Suite 600
Los Angeles, CA 90010

