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Chlamydia Trachomatis: A Common and Serious Infection

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Background and Epidemiology

Infection with *Chlamydia trachomatis* (“chlamydia”) is the most common bacterial sexually transmitted disease (STD) nationwide. It is especially common in adolescents and young adults. Chlamydia often has minimal or no symptoms, yet it can cause serious long-term effects. An estimated 3 - 4 million cases occur annually in the U.S.^{1,2}

The disease is underreported because 70 - 90% of both men and women are asymptomatic and may not be diagnosed. Therefore, reported cases are only a fraction of all infections. Population-based studies (testing all members of a group whether they have symptoms or not) show that true chlamydia prevalence is high. Figure 1 shows results of some of the many studies of chlamydia prevalence in different populations.

Figure 1. Chlamydia positivity for selected groups, by sex

	Female	Male
Military Recruits	9.92% ³	4.1% ⁴
Population-based, age 18-26	4.74% ⁵	3.67% ⁵
Jail inmates	14.6% ⁶	7.9% ⁶
Juvenile detainees	6.3-28.3% ^{1,6}	5.8% ⁶
Family planning clinic clients	3.2-12.1% ¹	n/a
Prenatal clinic clients	1.7-13.9% ¹	n/a

In 2002, chlamydia screening of 15 - 30 year old women in Indian Health Service (IHS) Areas showed that 7.5% of Native Americans screened were positive for chlamydia (Aberdeen Area, 9.4%; Albuquerque Area, 7.4%; Billings Area, 9.7%)¹. Of 15-19 year old females, 15% were infected. It is important to note that these were not population-based samples.

Both men and women can carry chlamydia infection for a long time — perhaps a year or more. If infection is not detected, they will continue to transmit the infection to others. People who don’t consider themselves particularly high-risk for STD – for example, those who have only 1 - 2 new sex partners per year – can easily acquire chlamydia because of its prolonged, asymptomatic infectivity and high prevalence.

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Chlamydia in women, even when clinically silent, often results in important medical sequelae including pelvic inflammatory disease (PID), ectopic pregnancy, chronic pelvic pain, and infertility (due to scarring of the Fallopian tubes). Transmission from pregnant women to infants can result in serious pneumonia or conjunctivitis.

Clinical Manifestations and Outcomes of Genital Chlamydia Infection

In women, the most common chlamydia presentations, for those who have any symptoms, are cervicitis and PID. These syndromes may not be recognized by the patient but may be found on physical examination. Again, even patients with no signs of disease may test positive.

Men with chlamydia may also be asymptomatic, but often have urethritis, that is, symptoms of dysuria or urethral discomfort, and penile discharge on examination. These findings may be mild and overlooked by the patient or the clinician. Untreated chlamydia infection in men can progress to epididymitis. Figure 2 lists common manifestations of chlamydia infection.

Figure 2. Clinical manifestations of Chlamydia

Population	Clinical Manifestation
Women	Cervicitis Urethritis Pelvic inflammatory disease (PID) Infertility (due to tubal scarring) Ectopic pregnancy (due to tubal scarring) Chronic pelvic pain Rarely: proctitis, reactive arthritis, bartholinitis
Men	Nongonococcal urethritis (NGU) Epididymitis Rarely: proctitis, reactive arthritis Possibly: prostatitis
Pregnant Women	Possibly: premature labor, premature rupture of membranes, low birth weight, postpartum endometritis
Infants of Infected Mothers	Conjunctivitis Pneumonia

Screening is the Best Tool to Fight Chlamydia

Because chlamydia is so often without symptoms, screening people at risk, whether or not they have symptoms, is the key to controlling this epidemic. A recent article comprehensively reviews clinical chlamydia disease and guidelines for screening.⁷

A study of women in a health maintenance organization demonstrated that screening and treatment of cervical infection reduced the likelihood of PID.⁸ Several other studies and models have suggested that screening according to national guidelines would be very cost-effective.

Routine screening of women could reduce their risk of infertility and other chronic health problems and, if they are pregnant, may improve the health of their infants. Although men have fewer long-term sequelae, screening asymptomatic men is now being studied for its effect in reducing chlamydia prevalence. An additional reason to screen is that chlamydia, like other STDs, may increase the risk of acquiring or transmitting human immunodeficiency virus (HIV).

Who Should Be Screened for Chlamydia?

Screening refers to testing patients who do not have symptoms. Any patient with the chlamydia symptoms described above should be tested. National guidelines (see Figure 3) are in agreement that chlamydia screening is important, but are not in complete agreement about how to do it. Optimal screening depends in part on local disease prevalence and population characteristics. IHS sites should follow U.S. Preventive Services Task Force (USPSTF) or Centers for Disease Control and Prevention (CDC) guidelines, but may wish to study the local extent of the chlamydia problem and modify these guidelines to detect more disease. Consultation with local public health offices or a pilot study of prevalence in a clinical population may be helpful.

Figure 3. Guidelines for recommended chlamydia screening

	USPSTF ⁹	CDC ¹⁰	ACOG ¹¹	HEDIS ¹²
WHO	All sexually active women ≤ 25 and women > 25 at risk (e.g., prior STD, new or multiple partners, inconsistent condom use)	All sexually active women ≤ 25 and sexually active women > 25 at risk (e.g., who use condoms inconsistently, have more than one partner or a new partner)	All sexually active women ≤ 20 and other women at high risk (e.g., multiple partners, history of STD, contacts of cases)	All sexually active women 15 - 25
HOW OFTEN	Uncertain; consider degree of risk and change of partners since last test	Once a year	None given	Once a year

USPSTF: 3rd U.S. Preventive Services Task Force; CDC: Centers for Disease Control and Prevention; ACOG: American College of Obstetrics and Gynecology; HEDIS: Health Plan Employer Data and Information Set. HEDIS is not a guideline, but a set of performance benchmarks used to evaluate health care sites, so it suggests criteria for good medical practice.

The USPSTF guidelines⁹ make no recommendation for or against screening women older than 25 who are not otherwise at risk. They conclude that the benefits of routine screening were likely to be small. It should be noted, however, that 12% of IHS chlamydia cases were detected in patients over 30 (those patients' risk factors and symptoms were not reported).¹

The USPSTF concluded that there is not yet enough evidence to recommend screening asymptomatic men. Studies are in progress to examine this question. However, given that men are involved in STD transmission, and given the availability of convenient urine testing (see below), consideration should be given to screening at least adolescent and young adult males with risk factors.

Diagnostic Testing¹³

In the past, chlamydia diagnosis was hampered by the expense and difficulty of the culture technique and the need for genital examination. More recently, many new diagnostic techniques have been developed. While the best ones are not cheap, their sensitivity is higher than that of culture. Nucleic acid amplification tests (NAATs) are now becoming the “gold standard.” They can be done on urine as well as genital swabs, and are being studied for use on patient-collected vaginal swabs.

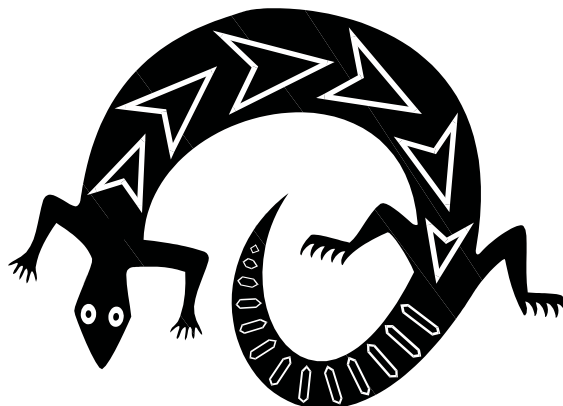


Figure 4. Chlamydia testing technology¹³

Test Type	Sensitivity	Specificity	Approved sites, collection	Advantages	Disadvantages	Relative cost
Culture	Medium, variable	Very high	Urethra, cervix, rectum, pharynx, conjunctiva. Cannot use wooden swab	Only approved test for legal cases (e.g., child abuse)	Not widely available. Time-consuming. Requires lab expertise, immediate specimen processing	High
Direct fluorescent Antibody (DFA)	Medium	High	Urethra, cervix, rectum, pharynx, conjunctiva	Can determine adequacy of specimen	Requires lab expertise. Labor-intensive	Medium
Enzyme-linked Immuno-Assay (EIA)	Medium	Medium-high	Urethra, cervix, conjunctiva		Slow. False positives due to cross-reactivity with other organisms	Medium
DNA Probe	Medium	Medium-high	Urethra, cervix	Technically easy. Some can test same specimen for gonorrhea		Medium
Nucleic Acid Amplification (PCR, TMA, LCR, etc.)	Highest	Very high	Urethra, cervix. First-void urine (lower sensitivity)	Some can test same specimen for gonorrhea	May detect dead organisms up to 4 weeks after treatment	High
Gram Stain*	High for NGU	Not applicable (diagnoses urethritis, not Chlamydia)	Male urethra	Rapid answer if lab on site. Diagnoses NGU caused by pathogens other than Chlamydia	Diagnoses NGU, not Chlamydia	Very Low
Rapid in-clinic tests	Although testing while patient is in clinic is attractive, these tests currently do not perform well enough to be generally recommended					
Serology	Not useful for case diagnosis or screening					

* Gram stain on male patients: Although not specific for chlamydia, this test is useful in settings where the result can be obtained while the patient waits. A swab is inserted 1 - 2 cm into the urethra, rolled on a slide, and Gram stained. The presence of Gram-negative diplococci inside white blood cells (WBC) diagnoses gonorrhea with high sensitivity and specificity. If there are > 5 WBC per oil-immersion field, but no gonococci are seen, a diagnosis of non-gonococcal urethritis (NGU) is made. This is caused by chlamydia in 1/3 to 2/3 of cases; the remainder of NGU is caused by other sexually transmitted pathogens that are not easily diagnosed, such as ureaplasma, mycoplasma, and trichomonas. These organisms, like chlamydia, are not visible on Gram stain.

A man diagnosed with NGU by Gram stain can be treated presumptively for chlamydia. This is useful in cases where a patient might not be able to be contacted with test results, or might not return for treatment. The same swab should also be sent for chlamydia and gonorrhea testing, however, to confirm infection.

Individual health care facilities must decide which chlamydia test is most feasible and cost-effective based on their budget, community chlamydia prevalence, and lab capability. The recent CDC report on screening tests is helpful.¹³

Management

Treatment of infected patients prevents transmission to sex partners. Treatment of infected pregnant women can prevent transmission of chlamydia to infants during birth. Treatment of all recent sex partners (whether or not they have symptoms or positive tests) prevents reinfection of the index patient and infection of other partners. Patients with gonorrhea should be treated for chlamydia as well, because they have a high chance of simultaneous infection with chlamydia.

Figure 5. CDC recommended regimens for treatment of Chlamydia¹⁰

Recommended Treatment Regimens	Alternative Treatment Regimens	Pregnant Women – Recommended Regimens	Pregnant Women – Alternative Regimens
Azithromycin 1 gm PO single dose OR Doxycycline 100 mg PO BID x 7 days	Erythromycin base 500 mg PO QID x 7 days OR Erythromycin ethylsuccinate 800 mg PO QID x 7 days OR Ofloxacin 300 mg PO BID x 7 days OR Levofloxacin 500 mg PO QD x 7 days.	Erythromycin base 500 mg PO QID x 7 days OR Amoxicillin 500 mg PO TID x 7 days	Azithromycin 1 g PO, single dose OR Erythromycin base 250 mg PO QID x 14 days OR Erythromycin ethylsuccinate 800 mg PO QID x 7 days OR Erythromycin ethylsuccinate 400 mg PO QID x 14 days

Treatment of Patients Other Than Pregnant Women

Azithromycin and doxycycline are equally effective for treatment of all patients other than pregnant women. Azithromycin is more expensive, but in populations with poor compliance or barriers to follow-up, azithromycin may be cost-effective because it provides single-dose, directly observed therapy. Azithromycin should be available to treat at least those patients for whom compliance is in question.

Erythromycin is less effective than azithromycin or doxycycline, and gastrointestinal side effects frequently discourage patients from completing this regimen. Ofloxacin and levofloxacin are similar in efficacy to doxycycline and azithromycin, but are more expensive and offer no advantage for compliance. Other quinolones either are not reliably effective against chlamydia or have not been adequately evaluated.

Compliance is maximized if medications are dispensed on-site and the first dose is directly observed.

Treatment of Pregnant Women

Doxycycline, ofloxacin, levofloxacin and one type of erythromycin (erythromycin estolate) are contraindicated in pregnant women. Azithromycin is listed as an alternative treatment by CDC because data on its use in pregnancy are limited. However, those data and widespread clinical use suggest that it is safe and effective in pregnancy, and ACOG recommends azithromycin as a first choice for treatment of pregnant women.¹⁴ Azithromycin may cause less gastric upset than erythromycin.¹⁵ Single dose azithromycin occasionally results in vomiting, however. Women with morning sickness should be encouraged to take the dose with a light meal at a time when nausea is the least, and to return for retreatment if the dose is vomited less than one hour after ingestion.

In contrast to non-pregnant patients, test of cure should be routine in pregnant patients 3 - 4 weeks after therapy, because some of the regimens above may be less effective and because it is important to prevent transmission to the infant during birth. Patients at continued risk of infection during pregnancy should be retested in the third trimester.

Patient Instructions and Follow-up

Patients should be instructed to abstain from any sexual contact (including oral sex or sex using a condom) until they and their sex partners have completed treatment (i.e., 7 days after a single-dose regimen or until completion of a 7-day regimen). This allows time for organisms to die out after treatment.

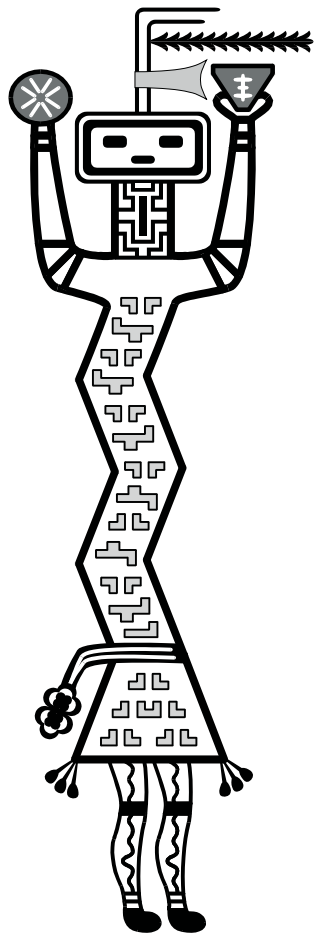
Timely treatment of sex partners is essential to decrease the chance of reinfection of the index patient (see below).

Patients often ask if they can take medication home for their partner. It is ideal if partners come in for evaluation, so that they can be tested for other STDs and counseled about risk reduction. However, often partners fail to come for evaluation and treatment. Studies suggest that giving the index patient medication for his/her partner can result in more partners being treated than asking patients to refer their partners for treatment.¹⁶ This raises concerns about legal liability, as the provider may not have a relationship with the partner. The State of California recently addressed this by passing a law specifically allowing patient-delivered partner treatment for chlamydia. In situations where the partner is unlikely to come in for timely treatment, consider providing medication for the patient to take to the partner, perhaps with a note or checklist to advise the partner about drug instructions, contraindications, etc.

A “test of cure” is no longer recommended for non-pregnant patients, because the above regimens are highly effective and non-culture chlamydia test methods may remain positive for 3 to 4 weeks after treatment. A test of cure may be advisable after erythromycin treatment because of its lower efficacy. As stated, all pregnant women should have a test of cure 3 - 4 weeks after treatment.

However, patients with chlamydia have a high rate of reinfection, either because their partners were not treated or because they continue to choose partners from a population with a high prevalence of chlamydia. Therefore, it may be valuable to retest chlamydia-infected patients several months after treatment. This also provides an opportunity to reinforce risk reduction counseling.

Patients who test positive for chlamydia should be evaluated for other STDs. They should be counseled about how to reduce their risk of disease.



Management of Sex Partners

All sex partners who have had sexual contact of any kind with the infected patient during the 60 days before the patient's symptoms or diagnosis should be evaluated and tested for chlamydia and other STDs. All partners should then be treated presumptively for chlamydia without waiting for test results, even if they have no symptoms. If the patient's last sexual contact was greater than 60 days before onset or diagnosis, the most recent partner should be treated. (Because exposure intervals have not been completely studied, the 60-day rule is somewhat arbitrary.)

If the patient is unable or unwilling to identify partners, or to inform them of possible infection, local public health personnel should be contacted. They may be able to assist in making sure that partners are found and managed.

Incorporating Screening into Primary Care and the Community

In a busy clinic setting, it can be difficult to remember or find time to screen for asymptomatic disease. One innovative model to improve clinical practices specifically for chlamydia screening includes a four step process to engage leadership and raise awareness, identify stakeholders and assemble an adolescent care team, redesign clinical practice, and sustain improvements through data collection and analysis.¹⁷

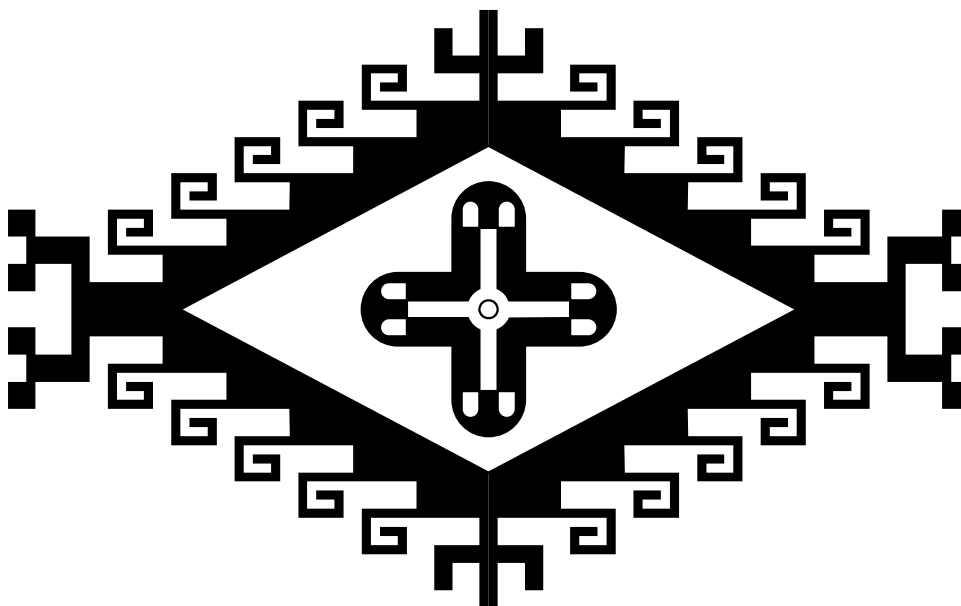
IHS sites should consider how to use improved understanding of chlamydia epidemiology and newer test methods to decrease chlamydia prevalence in their communities. Testing women who come in for routine Pap and pelvic exams is convenient but probably overscreens lower-risk older women while failing to reach the population most at risk. Urine testing could be put to good use in settings such as school clinics, health fairs, juvenile detention facilities, and community outreach efforts.

For additional information on the prevention and control of STDs in Indian Country, please contact Laura Shelby, Director of the IHS STD Program by telephone at (505) 248-4395; e-mail laura.shelby@ihs.gov.

References

1. CDC. *Sexually Transmitted Disease Surveillance, 2002 Supplement, Chlamydia Prevalence Monitoring Project*. Atlanta, GA: U.S. Department of Health and Human Services, CDC, October 2003. Available at: <http://www.cdc.gov/std/chlamydia2002/chlamydia2002.pdf>, Accessed 8/31/2004.
2. CDC. *Chlamydia trachomatis* Genital Infections—United States, 1995. *MMWR* 46(09):193-198, 1997. Available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00046636.htm>, Accessed 8/31/2004.

3. Gaydos CA, Howell R, Quinn TC, McKee KT, Gaydos JC. Sustained high prevalence of Chlamydia trachomatis infections in female army recruits. *Sex Transm Dis* 2003; 30(7):539-544.
4. Shafer MA, Boyer CB, Shaffer RA, Schachter J, Ito SI, Brodine SK. Correlates of sexually transmitted diseases in a young male deployed military population. *Mil Med* 2002;167(6):496-500.
5. Miller WC, Ford CA, Morris M, Handcock MS, Schmitz JL, Hobbs MM, Cohen MS, Harris KM, Udry JR. Prevalence of chlamydial and gonococcal infections among young adults in the United States. *JAMA* 2004; 291(18):2229.
6. Bauer HM, Chartier M, Kessel E, Packer L, Brammeier M, Little M, Bolan G; The Get Tested Chlamydia Screening Project Group. Chlamydia screening of youth and young adults in non-clinical settings throughout California. *Sex Transm Dis* 2004;31(7):409-414.
7. Peipert JF. Genital Chlamydial infections. *NEJM* 2003;349(25):2424-2430.
8. Scholes D, Stergachis A, Heidrich FE, Andrilla H, Holmes KK, Stamm WE. Prevention of pelvic inflammatory disease by screening for cervical Chlamydia infection. *NEJM* 1996;334(21):1362-1366.
9. Berg AO, USPSTF. Screening for Chlamydial infections: recommendations and rationale. *AJPM* 2001;20(3, Suppl. 1):90-94.
10. CDC. 2002 Guidelines for Treatment of Sexually Transmitted Disease. *MMWR* 2002;51(RR06). Available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5106a1.htm>. Accessed 8/31/2004.
11. ACOG. Primary and Preventive Care: Periodic Assessments. (Committee Opinion #246) *ObGyn* 2000;96(6):1-7.
12. National Committee for Quality Assurance. Chlamydia Screening in Women. Available at: http://www.ncqa.org/somc2001/chlamydia/somc_2001_chl.html. Accessed 8/31/2004.
13. CDC. Screening tests to detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* infections, 2002. *MMWR* 2002;51(RR15). Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5115a1.htm>, Accessed 8/31/2004.
14. ACOG. Antimicrobial Therapy for Obstetric Patients (Educational Bulletin #245). 1998
15. Adair CD, Gunter M, Stovall TG, McElroy G, Veille JC, Ernest JM. Chlamydia in pregnancy: a randomized trial of azithromycin and erythromycin. *ObGyn* 1998; 91(2):165-168.
16. Klausner JD, Chaw JK. Patient delivered therapy for Chlamydia: putting research into practice. *Sex Transm Dis* 2003;30(6):509-511.
17. Shafer MB, Tebb KP, Pantell RH, Wibbelsman CJ, Neuhaus JM, Tipton AC, Kunin SB, Ko TH, Schweppe DM, Bergman BA. Effect of a clinical practice improvement intervention on Chlamydial screening among adolescent girls. *JAMA* 2002;288(22):2846-2852.



Preventing the Spread of Chlamydia: What Can We Learn From Screening Male Firefighters?

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Overview

Sexually transmitted diseases (STDs) have a significant health and economic impact in the U.S., with an estimated 15.3 million new cases annually, costing over \$8 billion a year in direct medical costs.¹ Chlamydia is the most prevalent bacterial STD in the U.S., with reported cases among women exceeding those in men. This difference is primarily because chlamydia screening programs target women;² nonetheless, rates are very high among sexually active men who are screened.

Figure 1. Definitions for Screening and Testing

SCREENING: The examination of people with no symptoms to detect unsuspected disease.

TESTING: The application of a test as a means of analysis or diagnosis

Many Indian Health Service (IHS) and tribal health facilities universally screen women for chlamydia during annual well-woman visits. Men, however, regardless of race, do not usually seek or receive regular care and, as a result, are not screened regularly for chlamydia or other STDs. This is true in IHS and tribal health facilities where, as will be described, far fewer men than women are screened annually for chlamydia.

Men who do come to a clinic for chlamydia testing are usually symptomatic or have been named as the sex partner of someone who tested positive; they are more likely to be positive for chlamydia than are women screened at an annual visit. Not surprisingly, in 2002, chlamydia percent positivity among American Indian/Alaska Natives (AI/AN) men in three IHS Areas (Aberdeen, Albuquerque, and Billings) was higher than that of AI/AN women (15.8% vs. 6.5%, respectively).³

There are some “true” chlamydia screening programs for men in several service units and health facilities that occur as part of the physical examination required of seasonal firefighter applicants. This article presents data from an IHS service unit

and a tribal health facility that screen firefighter applicants for chlamydia. Chlamydia positivity trends for firefighters are compared to non-firefighters and women in the same facilities.

STDs Among AI/AN

Compared to most other racial and ethnic groups in the U.S., AI/AN have disproportionately high rates of many health problems, including STDs, and growing rates of human immunodeficiency virus (HIV).⁴⁻⁶ In 2002, STD rates for AI/AN compared to whites were four times as high for gonorrhea, twice as high for primary and secondary syphilis, and more than five times as high for chlamydia.⁵ Moreover, AI/AN in the 14 states with the greatest AI/AN population,* are up to 9.4 times as likely to test positive for chlamydia as non-AI/AN.³

Established screening programs have described the epidemiology of chlamydial infections in women and have shown that routine screening of women under 25 years of age is effective in reducing the prevalence of chlamydia over time.⁷ There have been few studies of men, and then only small populations were studied.

Despite multiple guidelines that recommend annual chlamydia screening for women under 25 years old, women continue to have very high rates of infection. There are several contributing factors to these persistently high rates, including women not attending annual well-woman visits, women not being screened appropriately at their annual visits, limited screening or testing of men, inconsistent treatment of men as sex partners to women, and no definitive recommendations to support screening of men.

Most IHS and tribal health facilities universally screen all female patients annually when they come in for health care services. However, not all women come in annually, especially not the higher risk women in the 15-19 age group. In addition, men — AI/AN or otherwise — do not routinely come in for health care. One result of this is that while women coming into the clinic are screened, diagnosed, treated, and counseled for chlamydia, their asymptomatic male partners do not normally receive the same services, and the women often become reinfected by the same or new partners. In some situations, the male partners might be treated, but not tested; in others, they may be treated, but not counseled; and in others the men may receive partner-delivered therapy from their female partners.

*Alaska, Arizona, Idaho, Minnesota, Montana, Nebraska, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wisconsin.

Seasonal Firefighting

Seasonal firefighting is a popular job option in isolated, rural settings where other employment opportunities are scarce. Every year, hundreds of young AI/AN men — and some women — apply through their tribes to become seasonal firefighters for the U.S. Forest Service. As part of the application process, an annual physical exam is required. To address the high rates of chlamydia and other STD on reservations, some IHS service units and tribally-operated health care facilities have added urine-based chlamydia screening to routine physical exams they conduct for firefighters.

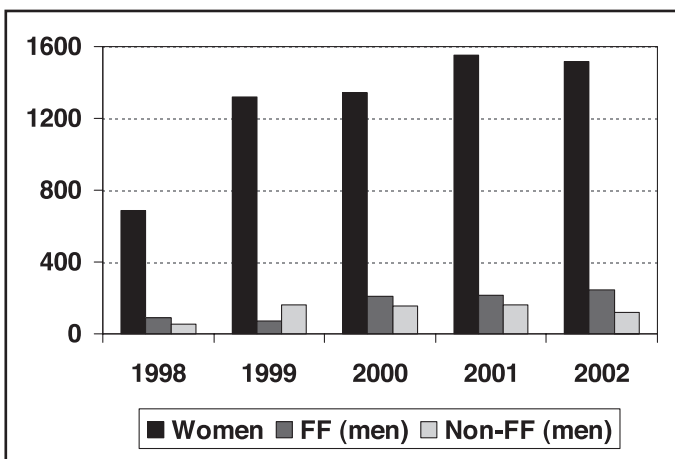
Methods

Data from two facilities (one IHS and one tribal) were included in this analysis. To ensure confidentiality, the facilities were not named nor distinguished by type (e.g., IHS or tribe). Both are located in the western U.S., where the majority of seasonal firefighting opportunities are. Data are from the Department of Health and Human Service's Region VIII Infertility Prevention Project (IPP). For this analysis, firefighters were identified when five or more men were tested for chlamydia on any single day at either facility. Chlamydia testing was by DNA-amplification. Males in the 10-14 age group were included in the non-firefighter category, as firefighters must be at least 18 years old. Data analysis was done in Microsoft Excel and Epi Info 2000.⁸

Findings

Site 1 began screening firefighter applicants for chlamydia in 1998. Although it had screened women for chlamydia before 1998, a problem with data transfer to the Region VIII IPP resulted in only three tests being recorded in the database for 1997, the year before firefighter screening began. In prior and subsequent years, many more tests were performed, including 1,880 for both sexes in 2002 (see Figure 2). For every year, many more women than men were screened.

Figure 2. Number of chlamydia tests performed at Site 1, by sex and firefighter status, 1998-2002



Chlamydia positivity among women ranged between 6.2% and 13.7% during the analysis period, whereas male firefighter positivity was between 2.2% and 9.9%; that of male non-firefighters was between 17.6% and 28.2% (see Figure 3). In 2002, 45.9% of male non-firefighters between the ages of 20-24 tested positive for chlamydia (see Figure 4).

Figure 3. Chlamydia positivity at Site 1, by sex and firefighter status, and number of tests, 1998-2002

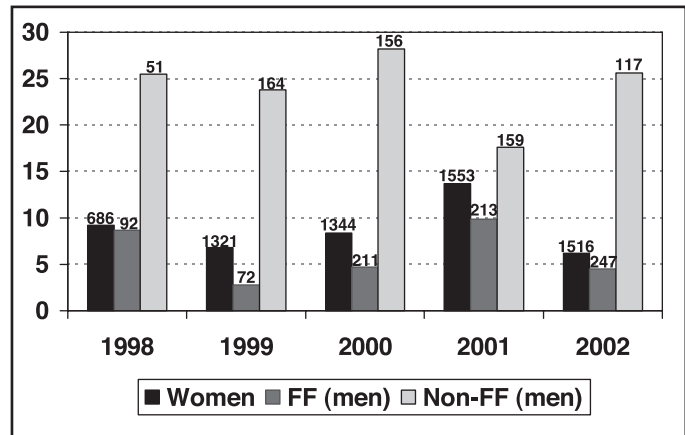
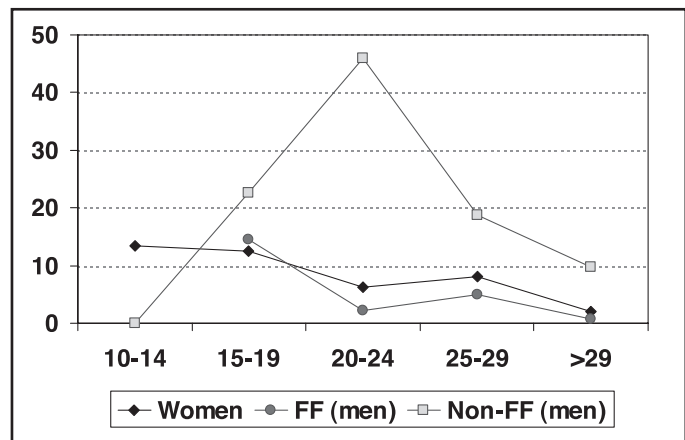


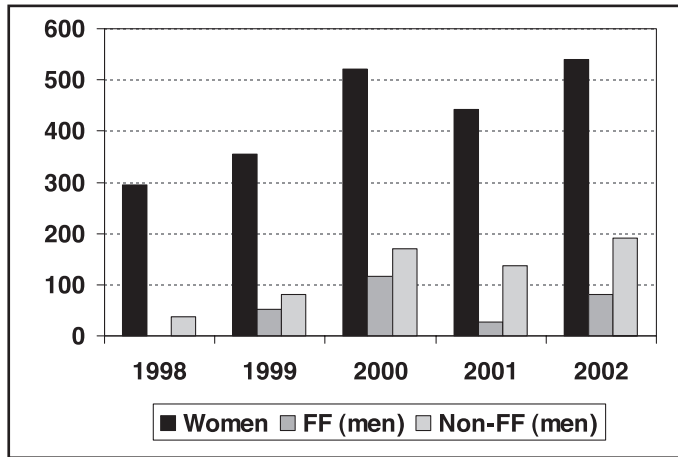
Figure 4. Chlamydia positivity at Site 1, by age, sex, and firefighter status, 2002



Although male firefighters had lower positivity than women for every year, they followed similar trends in increases and decreases in positivity from year to year and by age group in 2002. There was no statistical difference in positivity between women and male firefighters (data not shown).

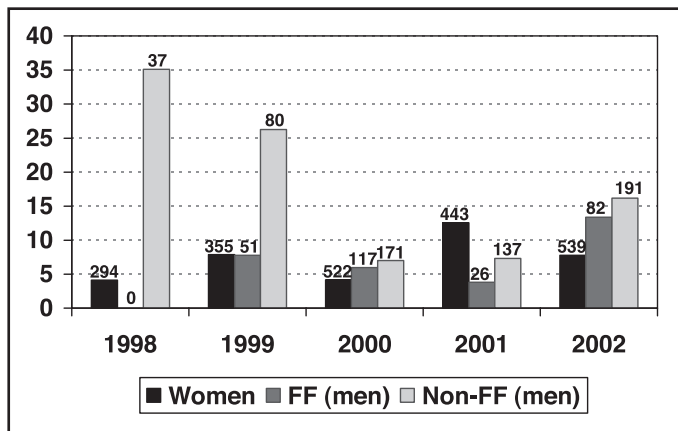
Site 2 began screening firefighters for chlamydia in 1999. Most recently, in 2002, 812 tests were performed (see Figure 5). For every year in the analysis period, more women than men were screened.

Figure 5. Number of chlamydia tests performed at Site 2, by sex and firefighter status, 1998-2002



Chlamydia positivity among women ranged between 4.1% and 12.6% during the analysis period, whereas male firefighter positivity was between 3.8% and 13.4%; that of male non-firefighters was between 7.0% and 35.1% (see Figure 6). In 2002, 31.8% of non-firefighters between the ages of 15-19 tested positive for chlamydia (see Figure 7).

Figure 6. Chlamydia positivity at Site 2, by sex and firefighter status, and number of tests, 1998-2002



The shared trends between women and firefighters seen in the Site 1 data were not repeated for Site 2. There was no statistical significance in the relationships between firefighters and either women or male non-firefighters (data not shown).

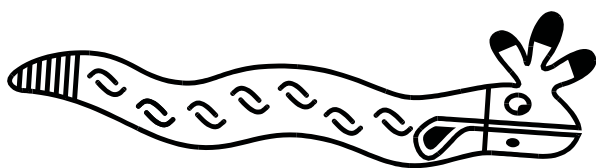
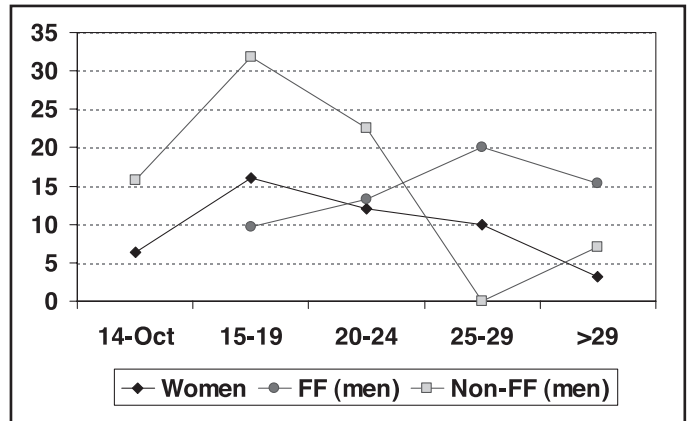


Figure 7. Chlamydia positivity at Site 2, by age, sex, and firefighter status, 2002



Discussion

These data show that chlamydia positivity was very high in the study population regardless of sex or reason for the test, that many AI/AN were presumably unaware that they were infected with chlamydia, and that AI/AN men have very high rates of chlamydia.

While the results varied widely between the two sites, the data from Site 1 were statistically significant and indicate that the firefighter and women's chlamydia rates were very similar and overall much lower than those of the non-firefighters. Again, this may be due in large part to the non-firefighters being tested for chlamydia because they were symptomatic or named as sex partners, as compared to the screening of the women and male firefighters.

Most service units and tribally-operated health facilities do not routinely screen men for chlamydia, firefighter or otherwise. Yet, as the data from these two sites indicate, there are very high rates of chlamydia among men (and women) in their communities. Screening men can be an inexpensive and informative surveillance activity that may result in additional positive cases identified that may otherwise have gone undetected.

The need for routine screening in such a high-risk population is evident, but little has been published on the economic feasibility of screening asymptomatic males in a high-risk population. In one recent study, the Male Chlamydia Demonstration Project, researchers concluded that screening men for chlamydia can lead to treatment of unsuspected infections in men, impact women by reducing the number of infectious men, and lead to treatment of asymptomatic women through partner notification activities.⁹

Most recently, adolescent men 14-18 years of age attending health maintenance organizations for pediatric visits were found to have 4% chlamydia positivity. The authors of that study contend that with 4% positivity among this low-risk group of adolescents, "it is time to increase research efforts to identify at-risk populations of males, as well as to implement

and evaluate screening programs of sexually active asymptomatic adolescent males as part of routine health care.”¹⁰

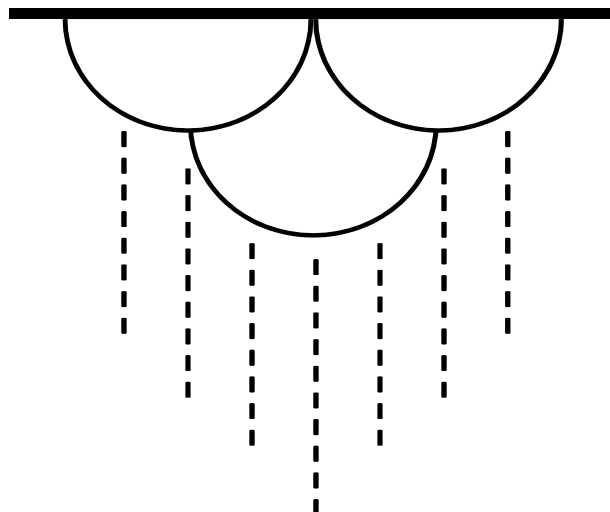
Because of the high rates of chlamydia found among men — both firefighters and non-firefighters — in this study, facilities may consider:

- Expanding screening venues to reach more men and other at-risk people who may not otherwise be screened (e.g., firefighter physicals, school physicals, emergency room visits, regular check ups, jails).
- Routinely testing men with signs of chlamydial infection or those who report sexual contact with a person with an STD, regardless of age. 11

For additional information on this analysis or general STD prevention, screening, and treatment, contact Lori de Ravello, IHS National STD Program, telephone (505) 248-4202; e-mail lori.deravello@ihs.gov.

References

1. Chesson HW, Blandford JM, Gift TL, Tao G, Irwin KL. The estimated direct medical cost of sexually transmitted diseases among American youth, 2000. *Perspect Sex Reprod Health*, 2004;36(1):11-19.
2. ASHA. *Sexually Transmitted Diseases in America: How Many Cases and at What Cost?* December 1998. Available at: http://www.ashastd.org/pdfs/std_rep.pdf. Accessed 7/13/2004.
3. IHS and CDC. *Sexually Transmitted Disease 2002 Annual Report*. Albuquerque, NM: U.S. Department of Health and Human Services, IHS and CDC, 2003.
4. CDC. Health status of American Indians compared with other racial/ethnic minority populations—selected states, 2001-2002. *MMWR*, 52(47):1148-1152. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5247a3.htm>. Accessed on 7/13/2004.
5. CDC. *Sexually Transmitted Disease Surveillance, 2002*. Atlanta, GA: U.S. Department of Health and Human Services, CDC, September 2003. Available at: <http://www.cdc.gov/std/stats/default.htm>. Accessed on 7/13/2004.
6. CDC. *HIV/AIDS Surveillance Report 2002*. Available at: <http://www.cdc.gov/hiv/stats/hasr1402.htm> Accessed on 7/13/2004.
7. U.S. Preventive Services Task Force. Screening for Chlamydial Infection. 2001. Available at: <http://www.ahrq.gov/clinic/uspstf/uspstfchl.htm>. Accessed on 7/14/2004.
8. Dean AG, Arner TG, Sangam S, et al. Epi Info 2000, a data-base and statistics program for public health professionals for use on Windows 95, 98, NT, and 2000 computers. Atlanta, GA. Centers for Disease Control and Prevention, 2000.
9. Gift T, Dunne EF, Chapin J, et al. The Cost-Effectiveness of Screening Asymptomatic Men for Chlamydia to Prevent Pelvic Inflammatory Disease (PID) in Women. Oral Presentation at the 2004 National STD Conference. Available at: <http://www.cdc.gov/std/2004STDConf/Slides/B-sessions/B2/1>. Accessed 7/26/2004.
10. Tebb KP, Shafer M, Wibbelsman CJ, et al. To screen or not to screen: Prevalence of *C. trachomatis* among sexually active asymptomatic male adolescents attending health maintenance pediatric visits. *J Adol Health*. 2004;34:166-168.
11. LaMontagne S, Fine DN, Marrazzo JM. *Chlamydia trachomatis* infection in asymptomatic men. *Am J Prev Med*. 2003;24(1):36-42.



Sexually Transmitted Disease Resources on the Internet

Lori de Ravello, MPH and Laura Shelby, both CDC assignees to the IHS Division of Epidemiology, Albuquerque, New Mexico

Anyone who has searched the Internet for health-related information knows that it can be a frustrating and daunting task, and that it is difficult to separate quality from questionable information. A recent article in the *Clinical Infectious Disease Journal** (CID) reviewed sexually transmitted disease (STD) and sexually transmitted infections (STI) resources on the Internet from the point of three consumer groups: patients, clinicians and teachers, and teachers and researchers. The authors of that article recommend that health care professionals and others begin their Internet search for STD information at government-sponsored sites, as those sites generally had the most reliable information. Another advantage to government sites is that materials are all in the public domain and can be freely reproduced and distributed.

In this article, we summarize some of the STD Internet resources noted in the recent CID journal, as well as provide information on STD Internet resources that are available through the National Network of STD/HIV Prevention

Training Centers (NNPTC). The primary source for STD training and technical assistance in the country is the CDC-funded NNPTCs. These regional training centers work in partnership with state health departments and universities to increase the knowledge and skills of health professionals in the areas of sexual and reproductive health. The PTCs specialize in one or more of three types of training: behavioral, clinical, and partner services. The website for the NNPTC is www.stdhivpreventiontraining.org. Since 2001, the NNPTCs have participated in a workgroup with staff from the IHS National STD Program. The purpose of this workgroup is to identify and address IHS providers' STD training needs, and the idea for this article arose from workgroup discussions.

To find out more about this workgroup or STD training and technical assistance opportunities, contact Laura Shelby, Director, IHS National STD Program, telephone (505)248-4395; e-mail laura.shelby@mail.ihs.gov; or Sharon Adler, Clinical Instructor, California STD/HIV Prevention Training Center, e-mail SAdler@dhs.ca.gov.

*Tietz A, Davies SC, Moran JS. Guide to sexually transmitted disease resources on the Internet. *Clin Inf Dis J*. 2004;38:1304-10.

Table 1. Websites for Patients

TITLE	SOURCE/SPONSOR	TARGET GROUP	URL	COMMENTS
STD Facts and Information	Centers for Disease Control and Prevention (CDC)	General public	www.cdc.gov/nchstp/std/dstdp.html	Accurate, up-to-date information; fact sheets and reports; extensive links
An Introduction to STDs	National Institutes of Health (NIH)	General public	www.niaid.nih.gov/factsheets/stdinfo.html	Accurate, up-to-date; many links
STD Basics	Body Health Resources Corporation	General public	www.thebody.com/safesex/stdbasics.html	HIV/AIDS site; good clinical photographs; extensive links
STI: The Facts	Planned Parenthood Federation of America (PPFA)	Family	www.plannedparenthood.org/sti/stis_index.html	General info; also in Spanish
Teenwire Warehouse	PPFA	Teens	www.teenwire.com/index.asp	General information
Facts and Answers about STDs	American Social Health Assoc. (ASHA)	General public	www.ashtad.org/std/faqs/index.html	Extensive patient-oriented information
Iwannaknow	ASHA	Teens	www.iwannaknow.org/index.html	Extensive patient-oriented information
STDs	New Media Systems	General public	www.healthsquare.com/ftstd.htm	General information
STDs	New York City Department of Health and Mental Hygiene	General public	www.ci.nyc.ny.us/html/doh/html/std/std.html	Up-to-date information
Ask NOAH	New York Online Access to Health	General public, teens	www.noah-health.org/english/illness/stds/stds.html	Extensive links; also in Spanish

Table 2. Websites for Clinicians

TITLE	SOURCE/SPONSOR	URL	COMMENTS
STD Guidelines	CDC	www.cdc.gov/std/treatment/	Comprehensive, evidence-based guidelines; downloadable
Contraceptive Technology and Reproductive Health Series	Family Health International	www.fhi.org/training/en/modules/STD/default.htm	On-line course; teaching materials
STD 101 In-a-Box	CDC	www.2a.cdc.gov/std101	Ready-to-use STD presentations for clinical staff. Password protected
STD Training Materials	CDC	http://www.cdc.gov/std/training/	STD prevention courses, continuing education, other training resources
Surveillance and Statistics	CDC	www.cdc.gov/nchstp/dstd/Stats_Trends/Stats_and_Trends.htm	Comprehensive, accurate, current data
STDs	NIH	www.niaid.nih.gov/dmid/stds/	News releases and reports; funding announcements
On-line Chlamydia Course	California STD/HIV Prevention Training Center	http://www.stdhivtraining.org/educ/training_module/index.html	Web-based training course for practicing clinicians
On-line STD Case Series	NNPTC	http://www.stdhivtraining.org/nnptc/start.cfm	Web-based case series for practicing clinicians. Includes a guided, interactive process to evaluate, diagnose and recommend treatment
Prevention and Management of STDs in Persons Living with HIV/AIDS	STD/HIV PTC of New England	http://depts.washington.edu/nnptc/online_training/PrevMgmt-STDHIV_Sept03.pdf	Designed for clinicians who care for persons living with HIV/AIDS
Sexually Transmitted Chlamydial Infections	California STD/HIV Prevention Training Center	http://www.stdhivtraining.org/pdf/chlamydia_screen.pdf	A primary care clinician's guide to diagnosis, treatment and prevention
STD Clinical Intensive CME Module	STD/HIV Prevention Training Center of New England	http://www.bu.edu/cme/std/	
Examination of Vaginal Wet Mounts	PTC of Seattle	http://depts.washington.edu/nnptc/online_training/wet_preps_video.html	Free on-line video
STD/HIV Image Repository	Cincinnati STD/HIV Prevention Training Center	http://www.stdptc.uc.edu/Item8.cfm	On-line image repository of over 300 clinical images of STDs, downloadable for training. Password protected
STD E-courses	Cincinnati STD/HIV Prevention Training Center	http://www.stdptc.uc.edu/Item9.cfm	Independent study courses
STD Grand Rounds	Denver STD/HIV Prevention Training Center	http://www.stdcentral.org/	STD clinical updates
HIV Prevention Tool Box	Dallas (UT Southwestern) STD/HIV PTC	http://www3.utsouthwestern.edu/preventiontoolbox/	Website for health care workers on the "frontline" of preventing the spread of HIV, AIDS and other STDs
Prevention of Viral Hepatitis Through Immunization	Region II STD/HIV PTC	http://www.nyc.gov/html/doh/pdf/std/hepab.pdf	Brief guidance on immunization recommendations for viral hepatitis

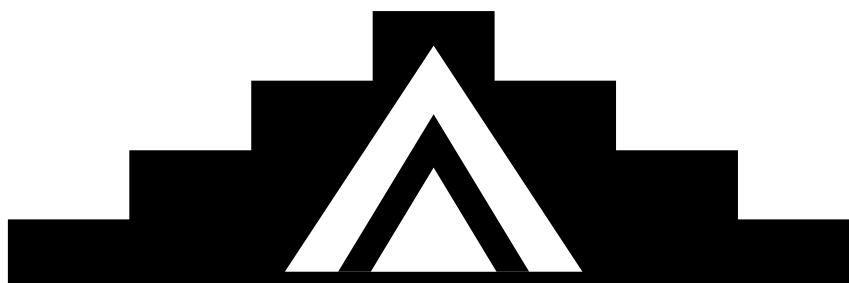


Table 3. Downloadable Clinical Practice Resources

TITLE	SOURCE/SPONSOR	URL	COMMENTS
Practitioner's Handbook for the Management of STDs	Seattle STD/HIV Prevention Training Center	http://depts.washington.edu/nnpct/online_training/std_handbook/index.html	Online customizable handbook designed for primary health care, family medicine, and emergency medicine practitioners
STD Clinical Practices Manual, 2003-2004	St. Louis STD/HIV PTC	http://depts.washington.edu/nnpct/online_training/clin_prac_04_03.pdf	Useful reference text for health care providers
Quick Reference Guide to CDC 2002 STD Treatment Guidelines	Region II STD/HIV PTC	http://www.nyc.gov/html/doh/pdf/std/2002card.pdf	Quick reference guide to CDC STD treatment guidelines
Primary and Secondary Syphilis Algorithms	California STD/HIV Prevention Training Center	http://www.stdhivtraining.org/cfm/resources_posters.cfm	Diagnostic and treatment algorithms with photos to assist in evaluating patients for primary and secondary syphilis
Guidelines for the Use of Herpes Simplex Virus (HSV) Type 2 Serologies	California STD/HIV Prevention Training Center	http://www.stdhivtraining.org/pdf/HSV_guidelines.pdf ; http://www.stdhivtraining.org/pdf/HSV_guidelines_summary.pdf	Full document and summary of guidelines for HSV serologies
Sexual History Taking	STD/HIV PTC of New England	http://www.mass.gov/dph/cdc/stdtcmai/section1.pdf ; http://www.mass.gov/dph/cdc/stdtcmai/sectom2p.pdf	Guidance on sexual history taking and selecting the appropriate test

Table 4 PTC websites

Note: The PTC websites provide information about STD/HIV Prevention Training courses in their region as well as links to a variety of STD and HIV related materials. See list of states in DHHS Regions below.

STD/HIV PTC and Website	Clinical Training	Behavioral and Social Interventions Training	Partner Services and Program Support Training
California STD/HIV PTC http://www.stdhivtraining.org/	DHHS Region IX	DHHS Regions IX & X	DHHS Regions IX & X
Cincinnati STD/HIV PTC http://www.stdptc.uc.edu/	DHHS Region V		
Dallas STD/HIV PTC http://www.dallascounty.org/html/citizen-serv/hh-services/services/preventivetraining.html	DHHS Region VI		
Denver STD/HIV PTC http://www.denverptc.org/	DHHS Region VIII	DHHS Regions V, VII & VIII	DHHS Regions V, VII & VIII
Dallas (UT Southwestern) STD/HIV PTC http://www8.utsouthwestern.edu/utsw/home/educ/prevtraincenter/		DHHS Regions IV & VI	
Florida STD/HIV PTC http://www.flstdhivptc.com/	DHHS Region IV		
PTC of New England http://www.mass.gov/dph/cdc/stdtcmai/stdtcmai.htm	DHHS Region I		
New York State STD/HIV PTC http://depts.washington.edu/nnpct/regional_centers/nysptc/		DHHS Regions I, II & III	DHHS Regions I, II & III
Region II NYC STD/HIV PTC http://www.ci.nyc.ny.us/html/doh/html/std/ptc.html	DHHS Region II		
Region III (Baltimore) STD/HIV PTC http://www.stdpreventiontraining.org/	DHHS Region III		
Seattle STD/HIV PTC http://depts.washington.edu/seaptc/	DHHS Region X		
St. Louis STD/HIV PTC http://std.wustl.edu/stdhome.html	DHHS Region VII		
Texas (Austin) STD/HIV PTC http://www.dshs.state.tx.us/orgchart/dpi.shtm			DHHS Regions IV & VI

DHHS Region I (CT, ME, MA, NH, RI, VT), Region II (NJ, NY, PR, US Virgin Islands), Region III (DE, DC, MD, PA, VA, WV), Region IV (AL, FL, GA, KY, MS, NC, SC, TN), Region V (IL, IN, MI, MN, OH, WI), Region VI (AR, LA, NM, OK, TX), Region VII (IA, NE, KS, MO), Region VIII (CO, MT, ND, SD, UT, WY), Region IX (CA, AZ, NV, HI, Pacific Islands: American Samoa, FSM, Guam, Northern Mariana Islands, Marshall Islands, and Palau) and Region X (AK, ID, OR, WA)

NCME VIDEOTAPES AVAILABLE □

Health care professionals employed by Indian health programs may borrow videotapes produced by the Network for Continuing Medical Education (NCME) by contacting the IHS Clinical Support Center, Two Renaissance Square, Suite 780, 40 North Central Avenue, Phoenix, Arizona 85004.

These tapes offer Category 1 or Category 2 credit towards the AMA Physician's Recognition Award. These CME credits can be earned by viewing the tape(s) and submitting the appropriate documentation directly to the NCME.

To increase awareness of this service, new tapes are listed in The IHS Provider on a regular basis.

NCME #831

Obesity Epidemic, Part II (60 minutes) This video is the second of a two-part series on the evaluation and management of adult obesity, which has become a major epidemic in the United States. Dr. Kathryn Kolasa and her colleagues discuss the appropriate use of over-the-counter and prescription medications to control obesity; the relationship between obesity in childhood and in adulthood; screening of patient-candidates for gastric bypass surgery based on body mass index and the presence of comorbidities; follow-up primary care for bariatric surgery patients; and community education strategies to help control obesity. Teaching points are presented within the context of actual physician-patient interactions. Special emphasis is given to the role of the family physician as role model and community educator in the nationwide effort to control the current obesity epidemic. The video concludes with a series of brief interviews between Dr. Kolasa and her family physician colleagues on the management of adult obesity.

This video completes an NCME curriculum on obesity that includes the videos *Food as Medicine: Using Functional Foods in the Treatment of Patients*; *Childhood Obesity I: Clinical Evaluation and Treatment*; *Childhood Obesity II: Prevention and Community Intervention*; and *Obesity Epidemic, Part I*.

NCME #832

Controlling Medical Costs (60 minutes) The cost of medical care in the United States is spiraling out of control. While increased awareness is an important step toward resolving the problem, the issue is complex and the solutions are not simple. Do we as a society even know what we need from healthcare reform? Should we go toward a system to socialized medicine – a “single-payer” system designed along

the lines of one of the many models that exist in Canada and virtually every other developed nation? Or is the answer a return to private funding? What do we need to do to address the needs of the uninsured – a population that continues to grow? Dr. Lawrence Brown invites Dr. Duane Cady and Dr. Oliver Fein to present their models for a solution to the problem; he then leads them in a lively – and provocative – debate of medical cost-containment issues.

NCME #833

Management of Bipolar Disorder From Acute Mania to Maintenance: A Case-Based Approach (70 minutes) Bipolar disorder is a common but multifaceted clinical problem that is part of a spectrum of mood disorders ranging from simple to complex. Diagnosis and treatment of bipolar disorder can be challenging, as patients with bipolar disorder may present in a variety of treatment settings, from a school health clinic to an emergency department. They also may present with a variety of symptoms characteristic of bipolar disorder or of other psychiatric or physical illnesses. Available options for acute and maintenance treatment of bipolar disorder are expanding. New clinical data support the use of atypical antipsychotics, as adjunctive, combination, or even first-line therapy, in the treatment for mania and depression.

The program *Management of Bipolar Disorder From Acute Mania to Maintenance: A Case-Based Approach* uses actual case examples to illustrate effective strategies for identifying and managing acute manic episodes of bipolar disorder and for maintenance treatment of bipolar disorder. It explains when psychiatric consultation or referral by primary care physicians is warranted and discusses the role of primary care physicians in the management of patients with bipolar disorder when access to psychiatric services is limited or lacking.



NCME #834

Anesthesia in a Nutshell (60 minutes)

Anesthesiologists play a critical role in the management of the surgical patient. They are responsible for providing sedation and pain control, as well as resuscitation and airway and hemodynamic management. From the initial preoperative assessment, to patient monitoring for intraoperative effects of anesthesia, through the postoperative setting, the practice of anesthesia entails providing patient comfort, safety and critical care, and anticipating and preventing any potential untoward events. This video provides a succinct, practical review of preanesthesia evaluation and perioperative management. It discusses initial patient evaluation and preparation for anesthesia, the risks of anesthesia, the anesthetic plan (general versus regional anesthesia), appropriate use of sedation and analgesia, patient monitoring for intraoperative effects of anesthesia, handling unexpected problems intraoperatively and postoperatively, and postoperative pain management. The importance of skill in cardiopulmonary resuscitation and advanced cardiac life support is emphasized.

NCME #835

CVD: Prevention to Intervention (60 minutes)

Although cardiovascular disease (CVD) is still the leading cause of death and disability in the United States, major advances have been made in the diagnosis, treatment, and prevention of CVD. In this video, Dr. Sharma reviews current strategies for preventing and diagnosing coronary artery disease. He discusses the use of risk stratification to determine whether a patient should receive medical therapy or be referred for revascularization or cardiac catheterization. In addition, he reviews current medical treatment and postintervention management of patients with acute coronary syndromes based on the results of current studies.

NCME #836

Immunization Update: What you Need to Know (60 minutes)

Despite the availability of safe and effective vaccines, and the knowledge that vaccine-preventable diseases, such as influenza, chickenpox, polio, and hepatitis A and B infections, can cause profound complications and even death, many patients are not immunized. Dr. Zimmerman provides insight into this significant problem by presenting a comprehensive and up-to-date overview of immunization practices. He reviews the latest immunization recommendations from the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Physicians, and explains how these recommendations can be applied in

clinical practice. In addition, he describes the safety and efficacy of vaccines currently used in children and adults and discusses vaccine use in high-risk populations, among other important issues.

NCME #837

Minimal Access Surgery (60 minutes) In the first part of the video, Dr. Fowler discusses issues that pertain to the use of a tension pneumoperitoneum to make space in the abdomen for laparoscopy; in particular, potential alterations in ventilation, hemodynamics, and renal blood flow. He reviews the various benefits of laparoscopy; for example, less impairment of pulmonary function, less suppression of the immune system, fewer adhesions, and less pain; and he discusses anesthetic considerations in minimal access surgery. Setting up a room for minimal access surgery in the office or clinic also is addressed.

In the second part of the video, Dr. Fowler discusses the role of diagnostic laparoscopy in key areas of interest to general surgeons: the forward gut, the lower gut, and the hind gut, as well as diagnostic laparoscopy for hernias and solid organ damage. The use of laparoscopy to examine ischemia of the bowel and to assess and treat stab wounds is addressed. Special attention is given to the appropriate use of laparoscopy for cholecystectomy, appendectomy, splenectomy, hernia repair, Nissen fundoplication (for gastroesophageal reflux disease), intestinal surgery, and colon surgery.

NCME #838

Breast Cancer Update, 2004 (60 minutes) Breast cancer is the most common cancer in women in the United States. Based on lifetime probability estimates from the National Cancer Institute, the risk is one in seven that a woman living in the United States will develop breast cancer. Although breast cancer typically affects women, men are at risk too. Techniques of early detection allow physicians to manage patients when survival rates are highest. In this program, Dr. Rosenberg discusses identification of patients at risk for developing breast cancer, reviews the most effective methods and appropriate timing for screening patients, and describes the symptoms of breast cancer. She also discusses current efforts in breast cancer prevention, the various stages of the disease, local and systemic therapies, and prognosis of patients with breast cancer.



Editor's Note: The following is a digest of the monthly Obstetrics and Gynecology Chief Clinical Consultant's Newsletter (Volume 2, No. 10, October 2004) available on the Internet at <http://www.ihs.gov/MedicalPrograms/MCH/M/OBGYN01.cfm>. We wanted to make our readers aware of this resource, and encourage those who are interested to use it on a regular basis. You may also subscribe to a listserv to receive reminders about this service. If you have any questions, please contact Dr. Neil Murphy, Chief Clinical Consultant in Obstetrics and Gynecology, at nmurphy@anmc.org.

OB/GYN Chief Clinical Consultant's Corner Digest

News Flash

The IHS/ACOG Postgraduate Course: Obstetric, Neonatal, and Gynecologic Care will be held June 19 - 23, 2005 in Denver, Colorado (see the 'Save the Dates' section below for details).

Abstract of the Month

Premenstrual syndrome, premenstrual dysphoric disorder, and beyond: a clinical primer for practitioners. The management of adverse premenstrual symptoms has presented a difficult challenge for clinicians. However, based on numerous well-designed research studies over the last decade, we now have diagnostic criteria for the severe form of the syndrome, premenstrual dysphoric disorder, and a variety of evidence-based therapeutic strategies.

This review presents a comprehensive, practical description of what the clinician needs to know to diagnose and treat adverse premenstrual symptoms at all levels of severity. Diagnostic criteria are described in detail, including a discussion of the distinction between premenstrual dysphoric disorder and premenstrual syndrome (PMS).

The rationale for including prospective symptom calendars as a routine part of the diagnostic evaluation of severe symptoms is presented. The differential diagnosis of cyclic symptoms, including depression and anxiety disorders, menstrual migraine, and mastalgia, and an approach for the management of each of these problems are presented.

A treatment approach is recommended that matches the treatment to the degree of problems the woman is experiencing. Serotonin reuptake inhibitors are the treatment of choice for severe symptoms, and most women with PMS/premenstrual dysphoric disorder will respond to intermittent, luteal phase-only therapy. Ovulation suppression should be reserved for women who do not respond to other forms of therapy. The role of oophorectomy is limited, and guidelines for its use are presented.

Johnson SR. Premenstrual syndrome, premenstrual dysphoric disorder, and beyond: a clinical primer for practitioners. *Obstet Gynecol.* 2004 Oct;104(4):845-59.

OB/GYN CCC Editorial comment

The 14-page document offers the primary care provider a best practices benchmark for the treatment of premenstrual symptoms. As many of these same symptoms can be associated with other disorders, one should document the temporal aspects with a menstrual calendar before other conditions can be ruled out.

From Your Colleagues

From Rosemary Bolza, Ft. Defiance

Most commonly asked question this month: Where is the OB package for the new EHR? Fort Defiance has adopted the EHR (electronic health record) from the VA system. There are no OB applications, so we are making our own templates. They have not found a way to use a prenatal flow record, so they are going to continue to use a paper flow chart for now. Do you have any information that would be helpful for electronic prenatal records?

OB/GYN CCC Editorial Comment

I went to the two best IHS contacts for this, Howard Hays and Terry Cullen; please see the comments below. The EHR has only been released for preliminary testing/early implementation at this time, i.e., before all the individual specialty packages are ready. The obstetrics and pediatrics packages are being worked on and will be released when ready. We have looked extensively at an obstetrics package from Tripler Medical Center (DOD) and are very excited, but there are many technical and financial issues to be resolved.

Howard Hays, PIMC

The IHS EHR is based very heavily on the VA's Computerized Patient Record System (CPRS). The reasons for this are multiple and straightforward, including the following: our legacy patient information system (RPMS) is very closely related to the VA's VistA system; there is an economy in adopting a system that is already in the public domain and therefore virtually free; we have access to a development environment at the VA that dwarfs our own; and the experience and impact of CPRS at the VA has been very positive.

Having made that decision, we of course have known all along that the VA does not provide prenatal or pediatric care, so it was a given that the first iteration of IHS-EHR would be deficient in these areas. We have tried to be very up front and unapologetic about this. It certainly would not have made sense to delay the release of EHR until all of the potential specialty aspects had been addressed. It is encouraging that users are asking for more from EHR — it means to me that they are using it, recognize its value, and are imagining additional possibilities.

We are actively looking at ways to make the EHR more useful for pediatric and prenatal care providers, among others. We have a subject matter expert group looking at essential functionality for child health components of EHR, with special emphasis on compatibility with the national Bright Futures initiative.

With respect to prenatal care, we are considering a number of possible solutions. Among these are looking at commercial electronic prenatal packages for incorporation into or interface with EHR, and exploring an application for prenatal and obstetrical care developed for the Department of Defense. The time frame for having a fully functional prenatal component for EHR is still quite unclear. In the meantime, facilities using EHR are continuing to use paper forms for documentation of prenatal care, but are also taking advantage of the capabilities of EHR for medication and lab ordering, results retrieval, problem list management, note authoring, and (in some cases) remote access to information. It may be a hybrid for now, but it works and will continue to get better.

From Katy Ciacco Palatianos, HQE

“Informed Refusal” — document all counseling when patients decline a procedure.

Absence of documentation often burns the health care provider. I can think offhand of many tort claims in which providers probably counseled and referred, but medical record documentation did not adequately support the fact that full counseling of risks/benefits was conducted. Examples:

- biopsy
- colonoscopy
- definitive thyroidectomy following diagnosis of cancer on subtotal thyroidectomy
- other surgical diagnostic or therapeutic procedures with suspicious findings (thyroid nodule, cervical dysplasia)
- orthopedic surgery (ORIF where patient is not CHS-eligible)
- other surgical procedures (e.g., cesarean delivery; root canal, or completion of 2-step dental procedure)
- vaccinations (OSHA BBP regulation requires documentation when HBV vaccine is declined)
- MRI for headache workup
- Prescription adherence
- Prescription not available on formulary

From Jean Howe, Chinle

Do you have any solutions that can help the ongoing ‘Meth’ crisis in your area? A really “active” issue is the ongoing methamphetamine crisis and the issues about toxicology screening in pregnancy. We are trying to work out an Area-wide position on this. If you have any ideas that would help, please contact *Jean.Howe@ihs.gov*.

From Bob Laliberte, Phoenix

Locum tenens availability. Dr. Robert Laliberte is a board certified obstetrician/gynecologist currently stationed at Phoenix Indian Medical Center (PIMC). He will be retiring from the Commissioned Corps of the Public Health Service and from PIMC on January 1, 2005 after more than 20 years service. He plans to do locum tenens work and plans to work six months a year. His history with the IHS began at Crow Agency, Montana and is concluding at PIMC; he would like to continue working in IHS facilities with AI/AN patients. Should any facilities want or need a locum tenens Ob/Gyn physician for a one time assignment or for a recurring assignment, Dr. Laliberte would like to speak with you. He can be reached by telephone at (602) 263-1550 (work) or (480) 987-0938 (home); e-mail *lbalib@aol.com*.

Features

ACOG

Inappropriate Use of the Terms Fetal Distress and Birth Asphyxia: Committee Opinion 303. *Abstract:* The Committee on Obstetric Practice is concerned about the continued use of the term “fetal distress” as an antepartum or intrapartum diagnosis and the term “birth asphyxia” as a neonatal diagnosis. The Committee reaffirms that the term fetal distress is imprecise and nonspecific. The communication between clinicians caring for the woman and those caring for her neonate is best served by replacing the term fetal distress with “nonreassuring fetal status,” followed by a further description of findings (e.g., repetitive variable decelerations, fetal tachycardia or bradycardia, late decelerations, or low biophysical profile). Also, the term birth asphyxia is a nonspecific diagnosis and should not be used.

Inappropriate use of the terms fetal distress and birth asphyxia. ACOG Committee Opinion No. 303. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2004;104:903-4.

Cervical Cancer Screening in Adolescents: Committee Opinion No. 300. *Abstract:* The American Cancer Society recently published a recommendation that cervical cancer screening should begin approximately three years after the onset of vaginal intercourse or no later than age 21 years. Once initiated, screening should occur annually for young women. The decision about the initiation of cervical cytology screening in an adolescent patient should be based on the clinician’s

assessment of risks, including 1) age of first sexual intercourse, 2) behaviors that may place the adolescent patient at greater risk for human papillomavirus infection, and 3) risk of noncompliance with follow-up visits. Patients and parents need to be provided with information about this new recommendation so they understand that there is still a need for preventive health care other than Pap testing. Additional research is needed to facilitate the provision of the best care for adolescent patients and avoid overtreatment of abnormal cervical cytology.

Cervical cancer screening in adolescents. ACOG Committee Opinion No. 300. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2004;104:885-9.

Sexually Transmitted Diseases in Adolescents: Committee Opinion No. 301. *Abstract:* Sexually transmitted diseases are common among adolescents in the United States. Female adolescents face numerous obstacles to care and experience a disproportionate burden related to the sequelae of sexually transmitted diseases. These diseases are a primary cause of short and long-term morbidity in adolescents that can result in infertility, chronic pelvic pain, ectopic pregnancy, vertical transmission to newborns, malignancy, chronic illness, and even death. Clinicians treating female adolescents should be prepared to offer confidential and comprehensive counseling, screening, and treatment according to established guidelines. They should also work within their communities and at the state and national levels to assure access to medical care for all adolescents. Adolescence is a period during which life-long health behaviors are established. It is, therefore, a critical time for promoting responsible behaviors and reducing risks through health promotion and prevention strategies.

Sexually transmitted diseases in adolescents. ACOG Committee Opinion No. 301. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2004;104:891-8.

Hormone Replacement Update

The ACOG has issued a State-of-the-Art Guide to Hormone Therapy, in which experts expand prior post-WHI advice on estrogen, argue that herbal remedies don't relieve hot flashes, and state that it is too soon to know if testosterone enhances libido. Find this 129 page monograph covering the gamut of issues at <https://www.acog.com/>.

ACOG Frequently Asked Questions about Hormone Therapy for Patients

New recommendations based on ACOG's Task Force Report on Hormone Therapy can be found at https://www.acog.com/from_home/publications/press_releases/nr10-01-04.cfm.

Primary Care Discussion Forum

February 1, 2005: Surgery for obesity? Moderator: Hope Baluh. This discussion will include:

- Is it time for obesity surgery in the IHS?
- How are primary care providers addressing the obesity epidemic now?
- Would non-surgical programs to address this issue be safer? Easier? More effective?
- Cost effectiveness: what's cheaper? What about results?

How to subscribe/unsubscribe to the Primary Care Discussion Forum? If you have questions about how to subscribe, contact nmurphy@anmc.org directly.

Save the dates

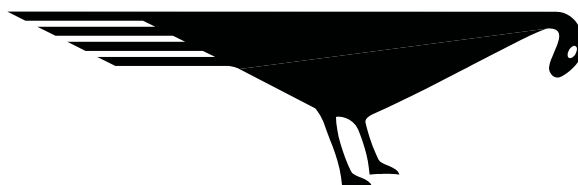
- 20th Annual Midwinter Conference
- For providers caring for Native American women and children
- February 25 - 27, 2005
- Telluride, Colorado
- Contact Alan Waxman at awaxman@salud.unm.edu

17th Annual IHS Research Conference: International Meeting on Inuit and Native American Child Health: Innovations in Clinical Care and Research

- April 29 - May 1, 2005, Seattle, Washington
- Go to <http://www.aap.org/nach/InternationalMeeting.htm>

IHS/ACOG Postgraduate Course: Obstetric, Neonatal, and Gynecologic Care

- June 19 - 23, 2005
- Denver, Colorado
- Contact Yvonne Malloy at (202) 863-2580
- On June 19 at 8:00 am there is a Neonatal Resuscitation Program Course
- NRP Class size limited. Sign up now



This is a page for sharing “what works” as seen in the published literature as well as what is being done at sites that care for American Indian/Alaskan Native children. If you have any suggestions, comments or questions please contact Steve Holve, MD, Chief Clinical Consultant in Pediatrics at sholve@tcimc.ihs.gov.

IHS Child Health Notes

Quote of the month

“Sentiment without action is the ruin of the soul.”

Edward Abbey

Articles of Interest

Effect of dextromethorphan, diphenhydramine, and placebo on nocturnal cough and sleep quality for coughing children and their parents. *Pediatrics*. 2004 Jul;114(1):e85-90. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=pubmed>

Use of codeine- and dextromethorphan-containing cough remedies in children. *Pediatrics*. 1997; 99: 918-920. <http://pediatrics.aappublications.org/cgi/reprint/99/6/918>

- Dextromethorphan and diphenhydramine were no better than placebo at improving cough symptoms in children with URI.
- Even more importantly, dextromethorphan and diphenhydramine were no better than placebo in improving the quality of parents' sleep.
- Side effects were minimal with some insomnia with dextromethorphan and some drowsiness with diphenhydramine.
- Everyone got better over two or three nights

Editorial Comment

When the British Medical Journal reviewed this paper they decided to see the cup as “half full” rather than “half empty.” They announced that the study showed that the placebo worked very well. Everyone’s cough scores decreased over two to three nights no matter what they took. Parents want their children to sleep, and more importantly, the parents themselves want to sleep. Clinicians need to consider the evidence, the potential for side effects of these drugs, and their cost when discussing cough medications with families.

Recent literature on American Indian/Alaskan Native Health

Pathways: lessons learned and future directions for school-based interventions among American Indians. *Prev Med*. 2003 Dec;37(6 Pt 2):S107-12 <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=Pager&DB=pubmed>

The effects of the Pathways Obesity Prevention Program on physical activity in American Indian children. *Prev Med*.

2003 Dec;37(6 Pt 2):S62-9. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=Pager&DB=pubmed>

Pathways: a school-based, randomized controlled trial for the prevention of obesity in American Indian schoolchildren. *Am J Clin Nutr*. 2003 Nov;78(5):1030-8. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=Pager&DB=pubmed>

- The three references above are results of a large, three-year, school-based trial to reduce percentage body fat in American Indian children in grades three through five. Knowledge and attitudes showed a positive change but unfortunately no significant reduction in body fat or increase in physical activity could be measured. The authors and reviewers speculate that more intense or longer interventions may be needed to reduce adiposity.
- This study is very sobering and disheartening. The research group had a 1.5 million dollar grant and three years and could not show a difference in weight, percentage body fat, or physical activity. Most of us in IHS and tribal clinics don’t have anything approaching that level of resources. We are looking for what will make that bridge from knowledge to action so that we can achieve meaningful and long term weight reduction and improved fitness in our patients. Any suggestions?

Meetings of Interest for Child Health

Join the American Academy of Pediatrics and the Canadian Paediatric Society, in cooperation with the Indian Health Service, for the first International Meeting on Inuit and Native American Child Health. Pediatricians, family physicians, residents, other health care professionals, clinical researchers, state and federal public health employees, child advocates, and other professionals and family representatives dedicated to working with First Nations, Inuit, and American Indian/Alaska Native (AI/AN) children should attend. Participants will have the opportunity to share ideas on culturally effective health care delivery models, present research findings, and dialogue about strategies to improve the health of First Nations, Inuit, and AI/AN children and communities. For more information, go to <http://www.aap.org/nach/InternationalMeeting.htm>.

This is the first international meeting on Indian/Inuit health with sponsorship by both countries’ pediatric societies. It should be an excellent forum for education and sharing of ideas.



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THE IHS PRIMARY CARE PROVIDER



A journal for health professionals working with American Indians and Alaska Natives

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Publication of articles: Manuscripts, comments, and letters to the editor are welcome. Items submitted for publication should be no longer than 3000 words in length, typed, double-spaced, and conform to manuscript standards. PC-compatible word processor files are preferred. Manuscripts may be received via e-mail.

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