Evaluation plan for the Region VIII Infertility Prevention Project:
Increasing Chlamydia screening among private providers

Prepared by:
Kelly A. Conroy
Student Intern, MPH Candidate
Office of Family Planning, Region VIII

This report was compiled with assistance and consultation from John Snow, Inc.

Funded by:
Title X Family Planning Program
OPHS
HHS
OS

Table of Contents

Background

Chlamydia trachomatis is the most common bacterial STD, resulting in an estimated 3 million new cases each year in the U.S. Those at greatest risk for chlamydia infection are sexually active females between the ages of 15-24. This age group is estimated to have the highest infection rates accounting for approximately 80% of the cases. In 2006, Region VIII had an infection rate among women that ranged from 281.2 (Utah) to 521.1 (Colorado) per 100,000 female population[1].

The current CDC screening recommendations for chlamydia strongly suggest testing all sexually active women 25 years and younger. In addition, the recommendations for selective screening for those at increased risk for infection include women over age 25 with one or more of the following conditions: new sexual partner or multiple sexual partners in past 60 days, cervicitis (including cervical friability or mucopurulent cervicitis (MPC)), pelvic inflammatory disease (PID), or having tested positive for chlamydia infection in the last 12 months[2],[3].

It is estimated that 70-90% [4]of cases in women never have any signs or symptoms of infection, which places them at risk for the devastating and costly consequences of chlamydia. These sequela include pelvic inflammatory disease (PID), ectopic pregnancy, and infertility. Other serious risks include an increased risk of acquiring HIV if exposed to the virus, and serious complications for infected pregnant women such as premature delivery, postpartum endometritis, and chlamydial conjunctivitis in newborns. The CDC estimates that up to 40% of females with untreated chlamydia infections will develop PID[5], with up to 20% of those women becoming infertile as a result. These statistics

illustrate the need for increased screening efforts in order to prevent the serious health consequences of undiagnosed chlamydia infection.

There are many different screening tests available for chlamydial infection. In recent years, testing has become even easier due to the use of Nucleic Acid Amplification (NAA) tests. These tests have become the test of choice due to a combination of high sensitivity and high specificity with the ability to use either urine or cervical swabs as specimens. NAA urine testing makes chlamydial screening less invasive for patients and easier for selective screening to be performed by providers.

The National Infertility Prevention Project (IPP) was established in 1988 to fund chlamydia screening and treatment services for low-income, sexually active women who attend family planning, STD, and other women's healthcare clinics. This program is supported by the CDC, in collaboration with the Office of Population Affairs (OPA) of the Department of Health and Human Services (HHS). In 2003, a Region VIII IPP Advisory Committee (known informally as the Chlamydia Project) was established to work on a strategic plan for reducing the prevalence of chlamydia infection in populations at risk in this six state region that includes Colorado, Wyoming, South Dakota, North Dakota, Utah, and Montana. This committee works to evaluate and update regional screening criteria, maintain a regional data collection system, and expand and improve services including screening, treatment, and follow-up[6]. One of the major goals established by the Region VIII Chlamydia Project has been to support health care professionals in preventing STD-related infertility by promoting best practices related to chlamydia screening.

The Region VIII IPP has increased efforts to screen those at high risk and thereby reduce the prevalence of chlamydia infections in the six state region. This collaborative effort has involved not only STD clinics, but also family planning providers and other community based provider programs and clinics.

The purpose of this communication tool is to assist providers in the private sector by helping them to determine those at highest risk for chlamydia infection and meeting the selective screening criteria as outlined by the Region VIII Chlamydia project.

Problem Statement

Several recent studies have confirmed the estimates of chlamydia screening being performed for this age group. In these studies, researchers estimate screening rates in the 16-25 year old female age group to be 42% at best in private health insurance[7],[8]. These results clearly show room for improvement needed for screening practices of females in this age group who visit private provider offices and clinics.

In addition to the potential costs related to a person's health, a recent study estimated that the financial costs of chlamydia account for $249 million among Americans between the ages of 15-24. The estimated savings from screening sexually active women would save $45 for each woman screened and prevent 140,000 potential cases of PID.[9] Most importantly, the devastating effects of infertility as a consequence of PID in affected women are immeasurable .

A physician office visit is an important opportunity to discuss a patient's sexual health, especially when the patient is asymptomatic. Patients are frequently unaware of

their risk for contracting sexually transmitted infections, and look to their health care providers as trusted and knowledgeable resources.

Evaluation Proposal:

Literature Review

An extensive review of current literature was conducted on chlamydia recommendations, screening practices, and barriers to screening. Recent published studies have attempted to analyze the reasons behind the lack of screening at risk females, and to assist in determining the particular groups of providers to target with interventions aimed at increasing screening rates.

Demographic factors, attitudes, and beliefs of the practitioners were identified as issues influencing the preventative practices of providers. Providers attributes that resulted in increased screening was being female, working in a clinic versus solo practice, and being located in a metropolitan area. A study from 2001 found that physicians were significantly less likely to screen if they believed the majority of their teenage patients were not sexually active or if they believed the prevalence of chlamydia infection was too low in their community to make screening useful[10].

There were several studies that discussed factors identified as barriers to screening by providers. Commonly expressed barriers included a lack of time, fear of embarrassing patients, and an inadequate training of health care providers with sexual history taking. In the study by Torrko, et al., providers were more likely to take a sexual history if they were comfortable talking to adolescents about sex[11].

Financial concerns are also a frequently cited barrier to screening. Providers are often concerned with the cost of testing, insurance reimbursement, and the potential financial burden placed on the patient that is not covered for this service.

Few studies are available on interventions intended to increase screening practices among providers. Of those that were located, suggested interventions included provider education through the use of visual aids such as a video and text[12], system level changes[13], guidance for providers to initiate discussions about STD prevention, and providing tools for reminding providers to include Chlamydia screening in routine examinations[14].

Several studies have shown reduced rates of PID in study populations when selective screening has been implemented. One randomized controlled trial in a managed care setting with selective Chlamydia screening suggested that the implementation of these programs can lead to a reduced incidence of PID by as much as 60%[15].

Key informant interviews

In order to gain valuable insight and knowledge for this report, key informant interviews were conducted with several members of the Region VIII Chlamydia Project Advisory Committee from each of the six member states, and consultations with ex officio committee members Jill Leslie, Steven Shapiro, and Yvonne Hamby.

These committee members had a range of expertise including state Nurse Consultants, STD program managers, epidemiologists, and microbiologists. Their areas of practice were in state departments of health, public health laboratories, and the Planned Parenthood Association.

Telephone interviews were conducted over a three week period. Interviewees were asked questions regarding the implementation of a communication tool for private providers to result in increased rates of chlamydia screening. Active committee members were familiar with this need as it is indicated as a key goal for the IPP project goals.

The interviewees were asked what they perceived to be the largest barriers to screening in the private sector. The most frequently stated obstacle to screening by the interviewees (83%) was funding and reimbursement issues. Monetary issues were seen as barriers to providers in offering the screening due to the patients being reimbursed for the screening by insurance companies, and having the resources available to perform preventative practices. Other obstacles named included lack of provider education/ knowledge on screening practices, provider time limitations, priorities in provider visits, and inconsistencies in reporting.

Interviewees were asked to suggest an intervention or tool to use to increase provider awareness and knowledge. The most frequent response was provider education; specifically instructor led education. Suggestions were for short educational videos, lunch time talks, and instructor led sessions at provider organizational meetings such as at American Medical Association meetings. Four of the six interviewed agreed a screening card to serve as a reminder to providers on the screening guidelines was a good idea to use as part of a pilot project.

When asked who the communication tool or intervention should target, responses varied. Four of the six respondents felt we needed to contact the individual providers in the region with the screening tool or education. It was also suggested that an analysis of the data would be needed to target the areas and providers that most needed the

intervention by looking at morbidity rates. Some suggested a pilot program in a specific geographic area(s) to predict the effectiveness of the intervention. One respondent felt that the insurance companies or managed care organizations in the region should be targeted in order to adopt a top down approach. One respondent felt we should target the professional medical organizations or scholarly journals with the communication tool to help disseminate the screening recommendations.

Finally, respondents were asked to suggest an evaluation plan for the project to measure the effectiveness of increasing screening rates in the private sector for the region. There were many and varied responses to this question. It was suggested that we could look at yearly HEDIS screening rates for the states in the region to evaluate this indicator. Several suggested we look at the IPP data for the region and look at the number of positive chlamydia tests before and after the implementation of the intervention. It was also suggested we start with small pilot groups or areas and evaluate their self reported screening rates or use a survey to evaluate current provider practices and beliefs in the region.

DATA

HEDIS (Healthcare Effectiveness Data and Information Set) is a tool that reports on important areas of healthcare and service used by more than 90 percent of America's health plans to measure performance. In 2000, chlamydia screening was added as a HEDIS indicator. This measure reports the proportion of sexually active females between the ages of 15 and 25 who were routinely screened for chlamydia infection. Commercial health plans have reported on the measure since 2000, and chlamydia screening rates

have consistently lagged behind Medicaid health plans on this important preventive screening service. Although screening trends have increased every year since its implementation, the performance rates remain disappointingly low. According to 2007 HEDIS measures, the chlamydia screening rate in women age 16-25 years in commercial health insurance plans was only 37.3%, compared to an estimated screening rate of 52.4% in women enrolled in Medicaid. This HEDIS reported data of chlamydia screening lags dismally behind other recommended preventative services such as breast cancer screening (72%) and cervical cancer screening (81.8%) in commercial health care plans.

There are several limitations to this data. First, it has been a cumbersome process to obtain the state level data on this measure. When the data was first requested, it was indicated there would be a fee estimated at no less than $1500. Fortunately, Yvonne Hamby at JSI has been able to make some headway with this request through contacts at the CDC. However, at this time we are still awaiting the data. Second, it seems that this data may not be a very accurate indicator for evaluation of the project at this time. Although data estimated that 90% of commercial insurance groups report to HEDIS on these measures, it will be difficult to ascertain if our intervention is affecting the desired group. We may see an increase in overall screening rates, but it will be difficult to conclude that a spike in screening rates is due to the intervention itself.

The Region VIII Chlamydia Project, in collaboration with state STD control and family planning programs, also collects and maintains chlamydia positivity data in a regional database. Data is reported from providers from across the region and include local/county health centers, community health centers, correctional facilities, Title X

family planning clinics, STD clinics, some private providers, and other public agencies. The data includes positivity rates by age group and client characteristics including clinical signs at the time of exam by the provider and self reported sexual risk history. Again, this data set also has several important limitations including the difficulty to generalize to the population as a whole, and that the data reported does not reflect all the screening and testing being performed across Region VIII.

Proposed Intervention:

In order to target the desired audience, a communication tool must be developed for private providers for everyday use in the practice setting. It was a general consensus in the interviews that a lengthy report or manual would neither be read by practitioners nor is it practical to use as a reference. A better choice would be something that is very convenient and concise; a tool that would actually be used in a busy clinical setting. The idea of a laminated card was popular among the participants. This card would have the Region VIII screening criteria and CDC recommendations listed on one side, and the flip side would have an appealing acronym to help the provider to remember the screening guidelines.

Using HEDIS as our baseline data, we will distribute the screening cards and communication tool to private providers in the six state region who are not working in publicly funded clinics or hospitals. The laminated screening cards would be mailed to each individual provider in the region as a reminder of the CDC's recommendations on chlamydia screening.

The effectiveness of the intervention will be measured using the HEDIS data. The 2008 HEDIS data will be the baseline data as a measure of screening practices before the intervention. HEDIS 2009 data will be used to measure the effectiveness of the intervention after one year of the intervention in Region VIII. We can also look at Region VIII IPP data to compare the number of positive chlamydia tests prior to the distribution of the screening tool, and the number of positive screening tests after the intervention in the region. Although this does not measure screening rates directly as do the HEDIS measures, this may show an increase in the number of positive chlamydia tests which could be attributed in part to improved screening practices.

Recommendations and Summary:

After evaluation of the information gathered on this project, I have several key recommendations. First, I would recommend beginning on a smaller scale with the distribution of the communication tool in this initial phase of the project. A pilot project using a convenience sample of IPP private providers in the region would be a great starting point. This sample could also give us additional primary information in order to help guide the direction of this project on a larger scale. Along with distribution of the laminated screening card, qualitative surveys could be conducted to help provide additional background information about barriers felt by the providers and opportunities to improve the project's implementation.

After this initial phase, a larger study could be considered based on analysis of the IPP collected data to determine geographical areas of increased chlamydia morbidity in each state. This would help to identify areas with the greatest need for the communication tool to aid in increased screening rates.

Finally, a full scale project that would target all private providers in the region would be appropriate using the lessons learned from the previous smaller scale projects. This regional project could be evaluated for effectiveness using the yearly HEDIS data that is available on chlamydia screening rates.

In summary, this report was completed as one of the strategic goals of the Region VIII Infertility Prevention Project. The proposal attempts to address the specific aim of reducing morbidity associated with the complications of chlamydia infection. This evaluation suggests a plan to address and communicate the chlamydia screening criteria to private providers in the PHS Region VIII in order to improve current screening rates.

References

[1]Centers for Disease Control and Prevention. (2008). Chlamydia Prevalence Monitoring Project, Annual Report 2006. Washington, DC: U.S. Government Printing Office.

[2] Centers for Disease Control and Prevention. (1993). Recommendations for the Prevention and Management of Chlamydia Trachomatis Infections. *MMWR, 42,* 1-32.

[3] Centers for Disease Control and Prevention. (2002). Sexually Transmitted Diseases Treatment Guidelines 2002. *MMWR, 51*.

[4] U.S. Preventative Services Task Force. (2001). Screening for Chlamydial Infection: Recommendations and Rationale. *American Journal of Preventative Medicine, 20,* 90-4.

[5] Centers for Disease Control and Prevention. *Take Action on HEDIS.* Retrieved August 4, 2008, from: http://www.cdc.gov/nchstp/dstd/HEDIS.htm.

[6] JSI Research and Training Institute, Inc. *Region 8 Infertility Prevention Project*. Retrieved July 25, 2008, from: http://www.region8ipp.com.

[7] Tao, G., Tian, L., & Peterman, T. (2007). Estimating Chlamydia screening rates by using reported sexually transmitted disease tests for sexually active women aged 16 to 25 years in the United States. *Sexually Transmitted Diseases: Journal of the American Sexually Transmitted Disease Association, 34,* 180-182.

[8] Mangione-Smith, R., McGlynn, E., & Hiatt, L. (2000). Screening for Chlamydia in adolescents and young women. *Achieves of Pediatric Adolescent Medicine, 154*, 1108-1113.

[9] Chesson, H.W., Blandford, J.M., Gift, T.L., Tao, G., & Irwin, K.L. (2004). The estimated direct medical cost of sexually transmitted diseases among American youth, 2000. *Perspectives in Sexual Reproductive Health, 36,* 11-19.

[10] Cook,R.L., Wiesenfeld, H.C., Ashton, M.R., Krohn, M., Zamborsky, T., & Scholle, S. (2001). Barriers to screening sexually active adolescent women for chlamydia: A survey of primary care physicians. *Journal of Adolescent Health, 28*, 204-210.

[11] Torkko, K., Gershman, K., Crane, L., Hamman, R., & Baron, A. (2000). Testing for chlamydia and sexual history taking in adolescent females: Results from a statewide survey of Colorado Primary Care Providers. *Pediatrics, 106,* 32-40.

[12] Ginige, S., Fairley, C., Hocking, J., Bowden, F., & Chen, M. (2007). Interventions for increasing chlamydia screening in primary care: a review. *BMC Public Health, 7*, 95-100.

[13] Burstein, G.R., Snyder, M.A., Conley, D., Newman, D.R., Walsh, C.M., Tao, G., & Irwin, K. (2005). Chlamydia Screening in a Health Plan Before and After a National Performance Measure Introduction. *Obstetrics & Gynecology, 106*, 327-334.

[14] Douglas, J., Berman, S., & Walsh, C. (2007). Improving chlamydia screening: strategies from top performing health plans. NCQA website, Retrieved: August 7, 2008 from: www.ncqa.org/LinkClick.aspx?fileticket=RouHq0Qy3II%3D&tabid=385&mid=1504&forcedownload=true

[15]Scholes, D., Stergachis, A., Heidrich, F., Andrilla, H., Holmes, K., & Stamm, W. (1996). Prevention of pelvic inflammatory disease by screening for cervical chlamydial infection. *The New England Journal Of Medicine, 334*, 1362-1366.

Appendix I.
Key Informant Interview contact information

(1) Kelly O'Keefe Voorhees, MSPH
STD/HIV Research & Evaluation
Colorado Department of Public Health & Environment
4300 Cherry Creek Drive South A3
Denver, CO 80246
Phone: 303-692-2658
Fax: 303-782-0904
E-mail: kelly.voorhees@state.co.us

(2) Liz Johnson, RNCNP
Nurse Consultant
Montana Department Public Health & Human Services
PO Box 202951
1400 Broadway, Rm C-314
Helena, MT 59620-2951
Phone: 406-444-7331
Fax: 406-444-0239
E-mail: lizj@mt.gov

(3) Julie Goplin
Epidemiologist
STD/Hepatitis Program Manager
Division of Disease Control
North Dakota Department of Health
600 E Boulevard Ave, Dept. 301
Bismarck, ND 58505-0200
Phone: 701-328-2375
Fax: 701-328-2499
E-mail: jgoplin@nd.gov

(4) Dave Morgan
STD Program Manager
South Dakota Department of Health
615 E 4th Street
Pierre, SD 57501
Phone: 605-773-4794
Fax: 605-773-5509
E-mail: dave.morgan@state.sd.us

(5) Penny Davies
Director, Clinical Programs
Planned Parenthood Association of Utah

654 S 900 E
Salt Lake City, UT 84102
Phone: 801-532-1586
Fax: 801-532-5748
E-mail: penny.davies@ppau.org

(6) Claudia Rogers
Microbiologist
Public Health Laboratory
Wyoming Department of Health
517 Hathaway Building
Cheyenne, WY 82002
Phone: 307-777-7431
Fax: 307-777-6422
E-mail: claudia.rogers@health.wyo.gov

(7) Steven J. Shapiro
National Infertility Prevention Project Coordinator
CDC/NCHSTP/PDSB
1600 Clifton Road, NE
MS E-27
Atlanta, GA 30333
Phone: 404-639-8868
Fax: 404-639-8340
E-mail: sjs4@cdc.gov

(8) Jill K. Leslie
Regional Program Consultant
USPHS/DHHS
Region VIII OPA/OFP
Federal Office Building
1961 Stout St. Room 498
Denver, CO 80294
Phone: 303-844-7856
Fax: 303-844-2019
E-mail: jill.leslie@hhs.gov

(9) Yvonne Hamby
Region VIII Chlamydia Project Director
JSI Research & Training Institute, Inc.
1860 Blake Street, Suite 320
Denver, CO 80202
Phone: 303-262-4304
Fax: 303-262-4395
E-mail: yhamby@jsi.com

Appendix II:
Key Informant Interview Questionnaire

1. What do you see as the biggest obstacles to private providers in providing Chlamydia screening to asymptomatic women?

2. Do you have any ideas on how it would be most effective to target providers? If there is a tangible "tool", what would it look like?

3. Are there any tool/techniques or policies that are being used successfully in family planning and publicly funded clinics that you think may be able to be employed by private providers?

4. How do we make Chlamydia screening a priority in these high risk groups?

5. What do you see as issues that may be unique to your state or region concerning how to frame messages to the private sector or targeting private providers?

6. Are private providers the most effective to target with this communication tool, or might it be more effective to target the executives of managed care organizations, the AMA, or scholarly journals?

7. Who else should I speak to regarding this topic?

8. How do you think we should evaluate this project if we are able to implement this communication tool for providers? Do you have any suggestions on the length of an evaluation period?

Appendix III: Screening reminder card

(side 1)

CDC recommended selective screening criteria for chlamydia:

1. Routinely screen all sexually active females under age 25

2. Selective screening of females 25 years old and older with one or more of the following:

- New sex partner in last 60 days
- Multiple sex partners in last 60 days
- Pelvic Inflammatory Disease (PID)
- Mucopurulent cervicitis (MPC)
- Cervical friability
- Positive for chlamydia in last 12 months

(side 2)

Help keep your patients on the right PATH:

P artners: new sexual partner or multiple sexual partners in last 60 days

A ge: All Sexually active females under 25 years should be routinely screened; selective screening of females 25 and meeting additional criteria

T reated for chlamydia infection in last 12 months

H ave clinical symptoms including PID, MPC, or cervical friability