

# Chlamydia (CT) Screening in Family Planning: Maximizing Screening Yield Using Existing Testing Resources

Goldenkranz S<sup>1</sup>, Rabins C<sup>2</sup>, Torrone E<sup>3</sup>.

<sup>1</sup>Cardea, Seattle, WA, <sup>2</sup>Health Care Education and Training Carmel, IN <sup>3</sup>Division of STD Prevention, Centers for Disease Control and Prevention, Atlanta, GA

## Background

Infertility Prevention Project (IPP) subsidizes chlamydia and gonorrhea screening and treatment in Family Planning, STD, and other women's health clinics.

- Targets low-income, sexually active women
- Patient demographic and test result data is collected for chlamydia and gonorrhea prevalence monitoring

The Title X program subsidizes reproductive health visits at Family Planning clinics.

**National Screening Recommendation**  
(based on CDC STD Treatment Guidelines) :  
*Screen all sexually-active women <26 years of age annually for CT*

Funding is not sufficient to screen all patients under age 26 annually

## Rational for this study:

Project areas are advised to use local data to set local screening criteria, but no guidance is provided for how to do this.

Effective screening criteria must consider *both* infection rates and resource constraints.

Programmatic data is available to examine potential screening criteria.

### Key Question:

How should we prioritize existing resources to maximize CT case detection?

## Hypothesis

Since positivity (% of all CT tests with a positive result) is highest among adolescents, reallocating existing resources to better target screening of adolescents will improve screening yield.

### Proposed Solution:

Prioritizing adolescent screening over screening of young adult women may increase the number of CT infections detected

## Objectives

- 1) Estimate the additional chlamydia cases that could potentially be detected by re-allocating existing testing resources to adolescents;
- 2) Identify opportunities to increase adolescent screening.

How many more CT cases could we detect by targeting adolescents?

How can we improve screening rates among adolescent patients?

## Data Sources



IPP extracts data from laboratory data systems on patient demographics and CT test results for program monitoring.



Title X extracts data from clinic health records. Data on patient demographics and CT testing patterns are part of program monitoring.

## Methods

### Similar client base

Many Title X clinics provide CT testing through IPP. For this study, analyses of IPP data were restricted to Title X clinics.

### Phases

#### 1. Region X IPP (Washington, Idaho, Oregon, and Alaska)

Piloted analysis using line-listed IPP and Title X data

#### 2. Region V IPP (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin)

Replicated analysis using line –listed IPP and aggregate Title X data (as published in the Federal OPA Family Planning Annual Report)

#### 3. National IPP

Replicated analysis using line –listed IPP and aggregate Title X data (as published in the Federal OPA Family Planning Annual Report)

## Analysis Method

**Step 1:** Determine the total number of CT tests performed through IPP during the last year in Title X Family Planning clinics. This is the amount of “available resources” for testing.  
Data source: IPP line-listed data

**Step 2:** Determine the total number of patients that visited Title X Family Planning clinics in the last year, stratified by age. This is also the number of tests that would be required to screen 100% of patients in each age group.  
Data Source: Title X (line-listed data or published FPAR report)

**Step 3:** Calculate the current screening coverage of female patients that visited Title X Family Planning clinics in the last year (% of females tested for CT), stratified by age.  
Data Source: Title X (line listed data or published FPAR report)

**Step 4:** Calculate the number of CT cases and CT positivity (% of all CT tests with a positive result), stratified by age. We used the positivity to estimate the number of positive CT cases in each age group in step 5.  
Data source: IPP line-listed data

**Step 5:** Model – redistribute tests to cover 100% of the age group with the highest positivity (teens). Allocate remaining tests to the next age group with the next highest positivity (20-24 year olds). Multiply the # of tests allocated to each age group by the positivity to determine the # of CT+ cases expected in each age group. Compare this number to the actual number of CT+ noted in step 4.

### Supplemental Analyses

Region X screening coverage data was further stratified by patients' 'reason for visit' to identify opportunities to improve screening of adolescent patients.

## Results

### Region X Analysis

Age Group	Title X screening coverage Clinic Visit Records, 2010		Actual test distribution IPP lab slips, 2010			Hypothetical reallocation of test resources	
	N Title X clients	N CT tests	N CT tests*	% CT+	N CT+	N CT tests	N CT+
10-19	59,097	25,630	22,123	8.2%	1819	59,097	4846
20-24	81,180	35,876	32,186	5.9%	1913	15,004	885
25+	110,381	26,155	19,792	3.7%	742	0	0
Total	250,658	87,661	74,101	6.0%	4474	74,101	5731

\*The number of IPP CT tests was somewhat less than Clinic Visit Records - tests may be paid for by other programs or not marked on Clinic Visit Record

### Actual test distribution and cases detected in 2010

22,123 tests given to teens x 8.2% CT+

+ 32,186 tests given to women 20-24 years x 5.9% CT+

19,792 tests given to women 25+ years x 3.7% CT+

= 74,101 Total tests used and 4,474 total cases detected (actual)

**Result: ~30%  
more CT cases  
detected**

### Hypothetical reallocation of tests

59,097 tests given to teens x 8.2% CT+

+ 15,004 tests given to women 20-24 years x 5.9% CT+

0 tests given to women 25+ years x 3.7% CT+

= 74,101 Total tests used and 5,731 total cases detected (hypothetical)

### Region V and National Replications

	Region X	Region V	National
Current adolescent screening coverage	40%	48%	33%
# additional cases hypothetically detected	1,257	4,068	43,032
% increase in cases detected	28%	35%	33%

## Supplemental Results: Increasing Teen Screening

Among adolescent patients visiting Region X Title X clinics during 2010, the majority (74%) came to the clinic for services such as a pregnancy test or a birth control pick-up and did not have a routine initial or annual medical exam at any point during the year.

However, the odds of CT screening were seven times higher for patients that had an initial or annual visit compared to other visit types (e.g. pregnancy test only or a birth control pick-up).

### Screening coverage and initial/annual visits, Female Clients age 10-19

Initial or Annual visit	Total clients N (%)	% Screened	Screening OR (95% CI)
Yes	15,188 (26%)	74%	<b>7.0 (6.7-7.3)*</b>
No	43,909 (74%)	<b>29%</b>	<b>Ref</b>
*p<.001			

## Conclusions

Theoretically, there are enough testing resources to cover 100% of adolescent females in IPP family planning clinics, and targeting adolescents could potentially detect 33% more infections nationally.

Additionally, ensuring that all non-initial/annual visits include chlamydia screening may increase adolescent screening coverage.

## Implications for Programs, Policy, and Research:

This exploratory analysis suggests chlamydia screening of adolescents should be prioritized when resources are limited. Screening of teens should be increased, *even if* it means taking *some* tests away from older women.

A pilot intervention targeting adolescents in family planning clinics is needed to determine actual screening yield.

For demonstration purposes, our reallocation model drastically limited testing of women age 20 and older. Real programs should consider how much they can reasonably reduce screening of older women.

Shifts in clinic protocols can help improve teen screening coverage (e.g. screen teen patients during their first visit of the year, regardless of visit type).

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