

# Chlamydia and Gonorrhea screening in a Memphis juvenile detention center pilot project: Preliminary prevalence and characteristics of at-risk adolescent detainees.

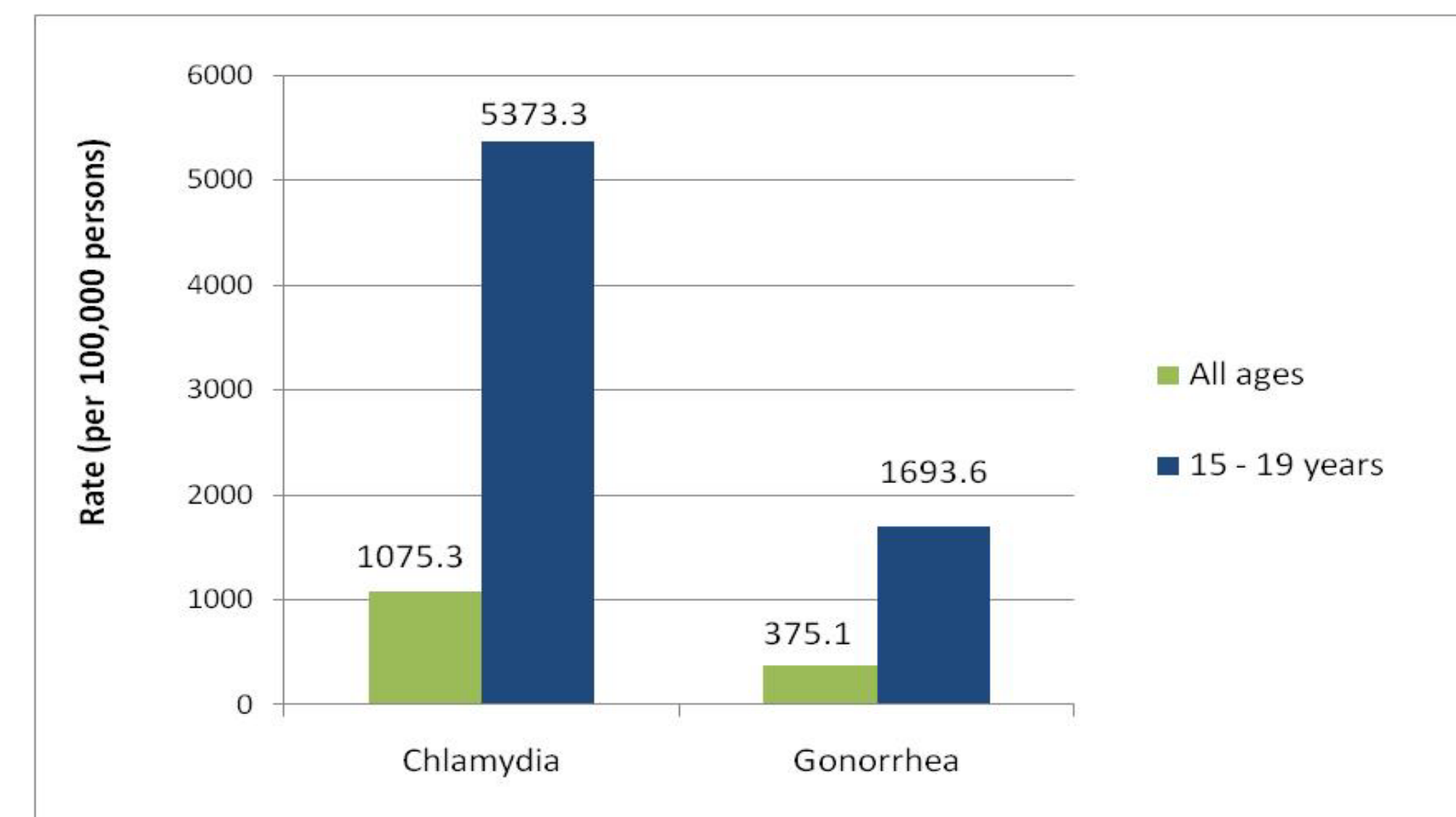
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## Background

- Rates of Chlamydia and Gonorrhea infections in Shelby County, TN are among the highest in the Nation.<sup>1</sup>
- As shown in Figure 1, Chlamydia and Gonorrhea rates among adolescents aged 15 to 19 years are approximately five times higher than rates reported among the general population in Shelby County.

Figure 1. Chlamydia and Gonorrhea rates among the general population and adolescents 15-19 years, Shelby County, 2010



- Incarcerated adolescents have reported higher rates of high risk sexual behaviors and sexually transmitted disease (STD) infections compared to non-incarcerated peers.<sup>2,3,4,5</sup>
- Juvenile detention centers (JDC) can provide a unique opportunity to screen, treat, and educate adolescents at high risk for STDs.
- A Memorandum of Understanding was created between Shelby County Health Department (SCHD) and the Juvenile Court Detention Center to implement a new protocol to test adolescents entering JDC for Chlamydia, Gonorrhea and HIV in October 2011.
- In addition to maximizing resources and improving services to youth entering JDC, this partnership strengthens juvenile court services by:
  - reducing the security risk of transporting detainees off-site; and
  - achieving American Correctional Association (ACA) standards through providing educational programming component.

## References

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## Objectives

- To determine the preliminary prevalence of Chlamydia and Gonorrhea among adolescents tested in the JDC;
- To describe demographic characteristics of at-risk detainees.

## Methods

### Implementation Process

- Adolescents (ages 13-18) entering the JDC were offered routine, opt-out Chlamydia and Gonorrhea NAAT (nucleic acid amplification test) screening beginning October 2011.
- HIV testing (Oraquik ADVANCE Rapid HIV-1/2 Antibody test) was also included in the opt-out process.
- Adolescents presenting at intake during the morning shift were offered immediate testing, while those processed during afternoon shifts received an offer for testing the following day.
- Comprehensive STD/HIV and pregnancy prevention counseling was given to all clients accepting testing. When medical history indicated need, pregnancy testing was offered.
- All clients were given call back information to receive test results by phone from the county STD clinic.
- Clients with positive tests received treatment at the center if still detained; those released before positive test results were available received treatment from the county STD clinic.

### Analysis

- Data entered into the county Patient Tracking and Billing Management Information System (PTBMIS) was reviewed to evaluate test results and clients' demographic characteristics.
- The relative risk (RR) was calculated to compare the likelihood of positivity between males and females.
- T-test statistics were used to evaluate mean ages by gender among those adolescents testing positive.

## Results

- From October 10 - December 2011, 394 adolescents were screened for Chlamydia, Gonorrhea and HIV.
- Overall prevalence of Chlamydia and Gonorrhea was 20.7% and 4.1%, respectively. No reactive HIV tests were reported.
- As shown in Table 1, 36.9% of females tested positive for Chlamydia while 16.2% of males were positive; this difference was significant. There was a 2.3 times greater likelihood of positivity for females than males.
- As shown in Table 2, 10.7% of females tested positive for Gonorrhea while 2.3% of males were positive; this difference was significant. There was a 4.7 times greater likelihood of positivity for females than males.

Table 1. Chlamydia positivity by gender

	Positive	Negative	Total
Female	31 (36.9%)	53 (63.1%)	84 (100%)
Male	50 (16.2%)	258 (83.7%)	308 (100%)
Total	81 (20.7%)	311 (79.3%)	392 (100%)

RR= 2.2733 (95% CI 1.5585, 3.3161)

Table 2. Gonorrhea positivity by gender

	Positive	Negative	Total
Female	9 (10.7%)	75 (89.3%)	84 (100%)
Male	7 (2.3%)	302 (97.7%)	309 (100%)
Total	16 (4.1%)	377 (96.0%)	393 (100%)

RR= 4.7296 (95% CI 1.8149, 12.3255)

- As shown in Table 3, males testing positive for Gonorrhea reported a statistically significant higher age (17.4 years) than females (16.0 years). No significant difference in mean ages was detected among males and females testing positive for Chlamydia.

Table 3. Range and mean ages among males and females testing positive for Chlamydia and Gonorrhea

	Chlamydia		Gonorrhea	
	Male	Female	Male	Female
Mean	16.6	16.1	17.4	16.0
Minimum	13.1	13.8	16.1	14.3
Maximum	18.1	18.0	18.1	17.4
Pr >  t	0.0644		0.0107	

## Conclusions

- JDCs are optimal environments to conduct STD testing, yielding high positivity.
- Chlamydia positivity among females (36.9%) was found to be higher than JDC programs elsewhere; among females aged 12-18 years entering 73 Centers for Disease Control (CDC) JDC surveillance sites, overall Chlamydia positivity was 15.3%.<sup>6</sup>
- Although females were identified to have a significantly higher morbidity than males, a large percentage of males (16.2%) were found to be positive for Chlamydia, which has not been described in JDC programs elsewhere. Among males aged 12-18 years entering 128 JDC CDC surveillance sites, the overall Chlamydia positivity was 6.9%.<sup>6</sup>
- Morbidity for Gonorrhea was observed among older males and younger females; behavioral risks may account for this finding.

## Implications for Programs, Policy and Research

- Programs with limited resources and staff may benefit from partnering with JDCs to increase STD screening, education, treatment and expedited partner services.
- High positivity among JDC adolescents reflects the need to identify behavioral risks to tailor educational messages.
- Partner notification services are not currently conducted for Chlamydia and Gonorrhea cases in Shelby County; however, high positivity among JDC adolescents presents an opportunity for partner services directed towards a high-risk population.
- Collecting school of record on all individuals tested in JDC has assisted with expedited education and treatment.
- Detainees in the Shelby County JDC are routinely released before their test results are available; however, the high rate of recidivism among juveniles has provided an opportunity for treatment when juveniles return on new offenses and they have not been reached for treatment by the SCHD field team.

## Acknowledgements

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- Centers for Disease Control and Tennessee Department of Health provided input for MOU to begin partnership between SCHD and JDC.

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