

Background

- Rates of reported *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoea* (GC) infection among New York City (NYC) teens are higher than nationwide rates.
- The NYC Department of Health and Mental Hygiene (DOHMH) runs eight STD clinics around NYC. Minors can receive free STD testing and treatment at these clinics; parental consent is not required.
- To provide expanded access to free CT/GC testing and treatment among high risk youth, NYC DOHMH founded the STD Testing and Education Program for Urban Populations (STEP-UP) in 2006. STEP-UP provides STD education, screening, and treatment in NYC public high schools.
- Parents can opt out of STEP-UP. Students choose whether to accept the screening option.

Objectives

- Measure screening acceptance rate, and identify predictors of CT/GC screening acceptance by NYC high school students.
- Describe CT/GC infection prevalence by sex.

Methods

Population:

- The current analysis includes public high school students who received STD education through STEP-UP during the 2013-2014 school year. Students were excluded if they were outside the age range of 14-19 years or had missing data on one of the two STD knowledge questions.

Intervention and data collection:

- The education presentation included a general overview of STDs, with a focus on CT/GC risks, sequelae, and the importance of testing. Students were also informed that minors can get tested, and treated for STDs without parents' permission, and services are available for free from NYC public STD clinics.

- After the presentation, students received a brown paper bag with a urine cup, a student information card, and a card with information on test results. Confidentiality for screening acceptance is assured: all students entered the bathroom with the brown bag (regardless of whether they provided a urine sample) and handed the bag to STEP-UP staff upon exiting.

- The student information card included basic demographic information and two questions assessing knowledge of STD public health laws:

Before today's presentation-

1. "Did you know that in New York State you can get tested or treated for STDs without your parent's permission?"
2. "Did you know there are clinics where you can get tested and treated for STDs for free?"

- Students were categorized as accepting screening if they provided a urine sample.

Laboratory testing:

- Urine samples were analyzed for the presence of CT-specific DNA or GC-specific DNA using Nucleic Acid Amplification test (NAAT) (BD Probe Tec™ ET).

Data analysis:

- CT/GC prevalence was summarized by pathogen and compared between males and females.
- An adjusted logistic regression model predicted screening acceptance using the two STD knowledge questions, sex, race/ethnicity, and age in years (assessed continuously).

Results

- 6,144 students in 44 schools were educated. 2,020 students were excluded from analysis (outside of the age range or missing data on one of the two STD knowledge questions).
 - 44% (1543/3478) of students who did not accept screening and 7% (161/2342) of students who accepted screening had missing data on one of the two STD knowledge questions.
- A total of 4,124 students were included in the analysis.
- Fifty-three percent (2,181) of analyzed students accepted screening.
- Among the screened students, 5.0% were infected with CT alone, 0.3% were infected with GC alone, and 0.2% had CT/GC co-infection. The overall CT/GC prevalence was 5.5% (120/2181).
- The CT/GC prevalence was significantly higher among female than male students (7.6% vs. 3.4%, $\chi^2=18.6$, $p<0.001$) (Figure 1).
- The results of an adjusted logistic regression model predicting screening acceptance are presented in Table 1. Students had lower odds of accepting screening if they:
 - knew parental consent was not required for STD services (referent = did not know)
 - knew free STD services were available in NYC (referent = did not know)
 - were female (referent = male)
 - were white (referent = black)
 - were younger

Figure 1: *Chlamydia Trachomatis* (CT)/*Neisseria Gonorrhoea* (GC) infection prevalence among NYC high school students by sex (n=2,181) 2013-2014 school year

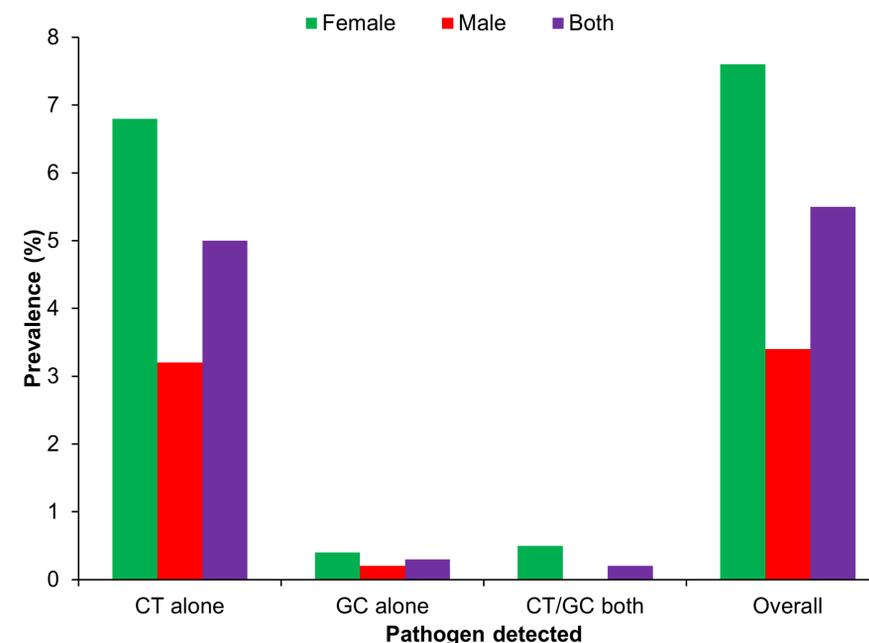


Table 1: Predictors of CT/GC screening acceptance among NYC high school students (n=4,124), STEP-UP*, 2013-2014 school year

Knowledge/Characteristics	Accepted screening n (%) [‡]	Adjusted OR (95% CI)	P-value
Did you know that in NY State you can get tested or treated for STDs without your parents' permission?	No: 1,060 (49) Yes: 1,121 (51)	Referent 0.3 (0.3-0.4)	<0.001
Did you know there are clinics where you can get tested and treated for STDs for free?	No: 958 (44) Yes: 1,223 (56)	Referent 0.6 (0.5-0.7)	<0.001
Sex			
Female	1,091 (50)	Referent	
Male	1,090 (50)	1.4 (1.2-1.6)	<0.001
Race/Ethnicity			
Black	1,004 (46)	Referent	
White	27 (1)	0.5 (0.3-0.9)	0.03
Hispanic	810 (37)	1.0 (0.8-1.1)	0.58
Unknown	135 (6)	2.2 (1.5-3.2)	<0.001
Other	205 (10)	0.8 (0.6-1.1)	0.14
Age in years (continuous)	17** (14-19)	1.8 (1.7-1.9)	<0.001

*STD Testing and Education Program for Urban Populations; ‡Column %

**Median (minimum-maximum)

Limitations

- High levels of missing data on the knowledge questions, especially among students who did not accept screening, may have impacted findings.
- We were unable to adjust for sexual activity in the regression model because this information was not collected.

Conclusions and Implications

- Some students may not have accepted screening because they knew they could be screened outside school.
- Other explanations for not accepting screening (e.g., discomfort with screening at school) were not assessed. A categorical variable assessing reasons for declining screening will be added for the 2016-2017 school year.
- Sexually active students, especially females, should be encouraged to screen with the school-based program despite availability of screening elsewhere.