

Drug Use, Sexually Transmitted Diseases, STD/HIV Risk Behavior Among Female and Male Arrested Youths*

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KEY SPECIFIC AIMS

- Assess STD/HIV Risk Profiles in high-risk juvenile offenders and compare them to low-risk offenders.
- Identify STD/HIV prevention needs among juvenile offenders and the organizational and individual barriers to delivering these services.
- Determine the percent of STD positive youths who receive medical treatment, and identify the factors associated with the receipt of treatment.



Study Objectives Relating to these Specific Aims

- Assessing STD risk behaviors and drug use
- Determining prior STD, exposure to STD testing, and prevention services
- Examining individual and community level factors associated with STDs, STD/HIV risk behavior, and getting treatment if infected
- GIS Analysis of STDs
- Community Organization Analysis




**THIS PRESENTATION ADDRESSES THE FIRST
SPECIFIC AIM AND ITS RELATED STUDY
OBJECTIVE**

Study Testing Phase: Tested for Chlamydia and Gonorrhea infections in 948 male and female arrested juveniles entering the Hillsborough County (FL), Juvenile Assessment Center (HJAC) (a centralized intake facility)

Females: n=442 tested cases between 6/19/06 and 12/31/06.

Males: n=506 tested cases between 6/19/06 and 9/30/06.



The Hillsborough County JAC was the first JAC in the U.S. to test newly arrested youths for STDs and provide access to treatment.



Project Details

- Youths entering the HJAC became eligible for a non-invasive, urine-based, VOLUNTARY STD test.

Inclusion Criteria:

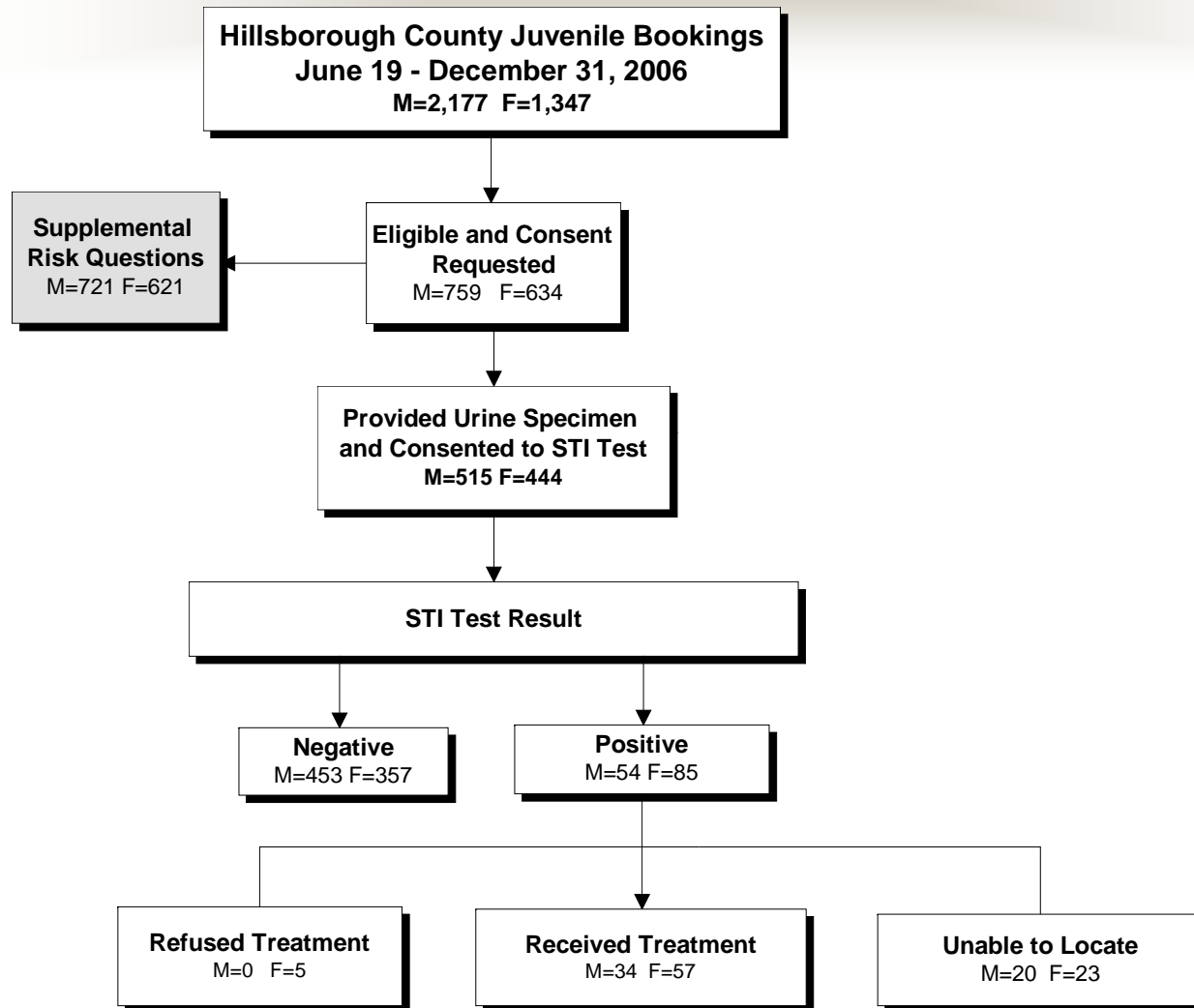
- Adolescent must be ≥ 12 years of age
- Adolescent consented to provide urine for drug analysis according to HJAC SOP
 - Additional consent to have urine also tested for Chlamydia and Gonorrhea
- A brief set of additional questions about STD risk behaviors and previous STD testing and prevention experience added to the existing HJAC assessment protocol.




Project Details (cont'd)

- Urine samples sent to the Tampa Branch of ACTS (Florida Dept. of Health) lab.
- Youths consenting to STD test had urine sample split at the lab (Florida law states that adolescents ≥ 12 years of age do not need parental consent to receive STD test).
- Samples were tested for Chlamydia and Gonorrhea.
- All youth who tested positive are contacted and offered free and confidential treatment by the Hillsborough County Health Department. (62% of STD positive youths received treatment)

Enrollment and Assessment of Juveniles in STI Study Sample





Urine-based Nucleic Acid Amplified Test (GenProbe APTIMA Combo 2 Assay)

- Chlamydia and Gonorrhea specific DNA is multiplied to detectable levels using the polymerase chain reaction.
- Convenient, non-invasive, and painless (urethral swab was previous technique).
- Extremely sensitive and highly accurate – can detect Chlamydia or Gonorrhea from a single bacterium.

Chlamydia and Gonorrhea

- Highest rates among adolescents and young adults (approximately 2-3 M per year).
- Higher rates in youth involved juvenile justice system.
- 70% of infections do not have symptoms
- Major cause of reproductive health consequences in females (e.g. PID, epidymitis).
- Current STI = 3-5 times more likely to contract HIV

Consent to Drug and STD Testing by Gender

| | Male | Female | Total |
|-----------------|-------------|---------------|--------------|
| Number Assessed | 759 | 634 | 1,393 |
| Consented to | | | |
| Drug Test | 82.6% | 82.6% | 82.6% |
| Consented to | | | |
| STD Test | 70.5% | 72.7% | 71.5% |



Key Features of the Study

- Focus on arrested youths at the front end of the JJ system
- Use of biological data on drug use and STDs
- Inclusion of a large number of females
- Health Department collaboration to provide treatment to STD positive youths



Background

- **Juvenile offenders at high risk off STDs**
- **Strong association between drug use and crime among juvenile offenders**
- **Risky sexual practices and STDs among juvenile offenders**
- **Drug use and risky sexual behavior among juvenile offenders**
- **Gender differences across offending, drug use, risk behaviors and STD prevalence**



The Need for More Knowledge

- Knowledge of incidence & prevalence of STDs and associated risk behaviors still limited
- Most studies have involved youths in the jj system—e.g., detention centers—yet most arrested youths released back to the community
- Few studies include large samples of females
- Sexual risk behavior often measured by self-report data



Study Design

- **Female-male multi-group Latent Class Analysis performed (Mplus v 5.1) on Gen Probe STD test results, UA test results for marijuana and cocaine, and arrest on minor (diversion case) or more serious (felony) charges (DJJ case).**
- **Two latent classes identified for each gender group: (1) a high risk group (higher rates of STD positives, UA marijuana and cocaine positives, and arrest on more serious charges-DJJ case), (2) a lower risk group (lower rates of STD positives, marijuana and cocaine positives), and arrests on less serious charges (diversion case).**



Study and Results (Cont'd)

- Latent classes compared in regard to: demographic (age, race), and reported STD/HIV risk behavior at HJAC intake assessment
- Findings presented in Tables 1 to 7 & Appendix A



Conclusions

- **STD testing of youths at the front end of the juvenile justice system is feasible**
- **A strong connection exists between drug use and STDs among the youths we studied**
- **Female-male, multi-group latent class analysis found a similar classification distinguishing High Risk and Lower Risk youths. For each gender group, youths classified as High Risk had higher STD positive rates, higher rates of urine analysis positive results for marijuana and cocaine, and higher rates of being charged with a serious offense compared to youths classified as Lower Risk**



Conclusions-Cont'd

- **Comparison of the latent classifications with self-reported indicators of sexually risky behavior not included in the LCA analyses suggested the latent classifications do indeed reflect differences in risk (see Table 7). In our sample, overall tests of mean differences across the four classes revealed that female High Risk and Lower Risk youths were more likely than Lower Risk males to report having a sexually transmitted disease. High Risk and Lower Risk females were also more likely to report having been sexually assaulted ($p = 0.08$), than their male counterparts. Pair wise mean comparisons of the four latent classes also indicated some significant differences, with the High Risk and female classes being generally more likely to report risky sexual practices.**
- **Of particular concern, 7% of High Risk females, compared to 0.8% of High Risk males, self-reported ever having an STD.**



Conclusions-Cont'd

- **We believe the concept of relative deviance at least partially explains the male-female differences we identified across the gender-based latent construct of risk: Persons who are more deviant from the norms of their social and cultural setting tend to exhibit more serious behavior problems. Our findings are consistent with those of several studies that have revealed higher psychological deficits and troubled backgrounds among female, compared to male, juvenile offenders. Other studies have found that female juvenile offenders have higher rates of victimization from physical and sexual abuse, and substance-involved adolescent females suffer from post-traumatic stress disorder at much higher rates than substance-involved males. As Wilson and Herrnstein (1985) asserted, it is as if females have to reach a higher threshold before they become involved in the JJS.**



Conclusions-Cont'd

- **Because of the elevated health risks to females having STDs, STD positive females require priority attention. Early detection and treatment of STDs is crucial to the prevention of related, chronic, long-term health consequences. The high number of STD positive females found in our data coincides with the existing research that suggests female adolescent offenders are an extremely important risk group for STDs, and are in critical need of education, testing, and treatment.**



Conclusions-Cont'd

- **Given the increased HIV risk associated with STD infections, increasing detection and treatment can help to prevent future HIV infections as well . Early detection is vital in effectively addressing the STD and HIV/AIDS epidemics. Additional analyses indicated a strong linear trend by age for STD positive results—with younger aged youths having far lower rates than older aged youths. Involving younger aged, arrested juveniles in prevention or early intervention services holds considerable promise of reducing the incidence and spread of these diseases.**



Conclusions-Cont'd

- **A number of interventions have been developed to reduce HIV risk among juvenile offenders (McKernan McKay et al. 2004; Jemmott et al. 2000; St. Lawrence et al. 1999). They hold considerable promise of reducing this growing public health problem. Our results suggest that these interventions need to be sensitive to differences in risk levels as well as gender differences in risk related factors. We found High Risk male and female youths had higher prevalence rates for STDs and for marijuana and cocaine, than their Lower Risk counterparts; and High Risk males and females were more likely to be arrested on more serious charges, than Lower Risk males and females, respectively. Higher risk youths may require more intensive services. Our data also suggest female youths are at higher risk than male youths. Service providers need to be sensitive and prepared to respond to these potential gender group differences, particularly the high reported rates of being sexually assaulted among girls. Juvenile justice agencies should make the introduction of effective risk level and gender sensitive interventions in their programs a priority.**



Conclusions-Cont'd

- **It is important to replicate our study among front end, juvenile justice youths in other jurisdictions serving diverse cultural groups, to among other things, assess the generalizability of our results. This effort should include expanding the number of risk variables (i.e., substance use, delinquency, STD status, and sexual behaviour) used in the LCA analyses. Increasing the number of variables used in latent class analyses will permit a fuller understanding of subgroup heterogeneity that may exist among various samples. In addition, an increase in the number of variables will permit estimation of more latent class structures. Due to data limitations, we were unable to accomplish this in the current study.**



Conclusions-Cont'd

- **Our findings provide a powerful case for universal, voluntary STD testing for newly arrested youths and treatment for STD positive cases—with particular emphasis on youths released back to the community**