The Sexually Transmitted Infection Epidemic in Douglas County: A Comparison of Opt-In and Opt-Out STI Testing Programs in the Local Jail

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Executive summary

The rates of Chlamydia (CT) and Gonorrhea (NG) in Douglas County are at epidemic levels. The analysis of two STI testing programs conducted within the incarcerated population of the Douglas County Department of Corrections (DCDC) reveal the prevalence rates of Chlamydia and Gonorrhea are remarkably higher in this population as compared to rates found in the general population of Douglas County. The exceptionally high prevalence rates of CT and NG among inmates affects the health of this population. Due to rapid turnover and quick return home this also affects people in the county community thus creating an even larger public health issue.

As with many local correctional facilities routine testing for STI's is not offered to the DCDC's jail population. A collaborative Service Leaning Academy (SLA) Opt-In STI Testing Program provides an effective process for the identification and treatment of Chlamydia and Gonorrhea among inmates at DCDC who choose to participate in the program. Restricted time-frames diminish the opportunity for voluntary participation and create limitations within this program. However, the Opt-In Program is sustainable, has little to no associated costs, and provides much needed education about all STIs to this underserved vulnerable population.

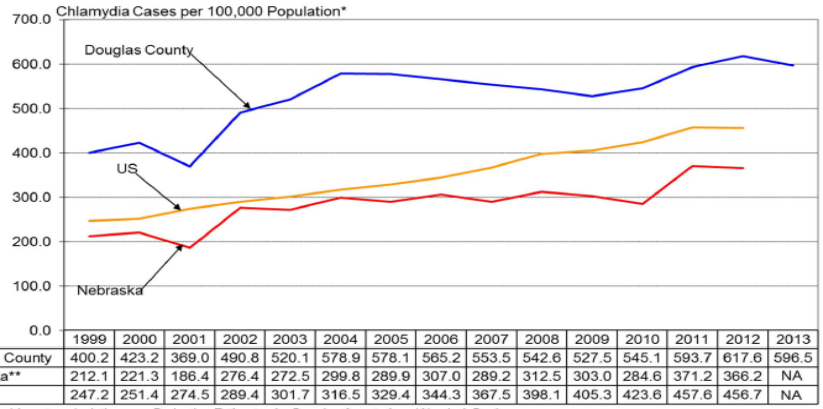
The Opt-Out Pilot Program provided routine testing at intake for all inmates entering the jail over a period of time. A grant supplied the money necessary to fund this short term program. A close comparison of the Opt-In program with the full time testing Opt-Out Pilot Program revealed the following key findings: CT prevalence rates are higher when all inmates were tested at intake; positive test results were higher for Chlamydia than Gonorrhea among all those tested in both programs; while the NG rates are lower overall (than CT) they are comparable between the two programs; NG rates also remain higher at DCDC than in those found in the general population; the majority of inmates tested in both programs had engaged in high risk behaviors; therefore, this population is considered at high risk for contracting STI's; and women within this population are more likely to have positive tests for both CT and GN.

This study and the current literature provide ample support to conduct routine CT and NG testing at DCDC. The short term average length of stay at DCDC is 21 days. Many inmates are not provided with an opportunity to participate in the opt-in testing due to the rotational nature of the program and short length of stay. This further supports the need to conduct routine testing upon admission to the facility. The author recommends the addition of a full time position to conduct full time testing at intake on an opt-out basis. Recommendations also include continuation of the SLA program to: conduct STI education for inmates; allow SLA participants to conduct treatment; and provide backup screening opportunities for inmates missed at intake. As funding is not currently provided for routine STI testing at this facility the author recommends continuation of the Opt-In SLA Program.

Introduction

In 2009, the Director of the Douglas County Health Department (DCHD) reported the rates of Sexually Transmitted Infections (STIs) to the Douglas County Board of Commissioners. The rates of Chlamydia Trachomatis (CT) and Neisseria Gonorrhea (NG) were at epidemic levels, with rates over 50% higher than the rest of the nation (DCHD, 2014). The charts below show the significance of the Douglas County rates in comparison to Nebraska and the United States as a whole. STI rates of chlamydia and gonorrhea were first and third highest in the nation, respectively. Douglas County Department of Corrections (DCDC) administrators, understanding the transient and high-risk nature of the local jail population, saw this as an opportunity to impact this public health crisis.

Chlamydia Rates
Douglas County, Nebraska, and US
1999-2013

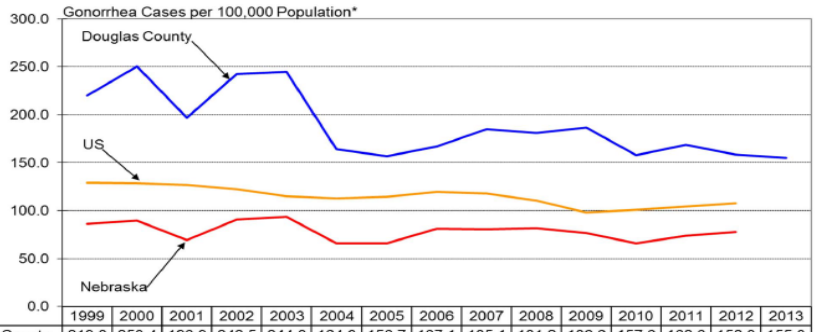


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Douglas County	400.2	423.2	369.0	490.8	520.1	578.9	578.1	565.2	553.5	542.6	527.5	545.1	593.7	617.6	596.5
Nebraska**	212.1	221.3	186.4	276.4	272.5	299.8	289.9	307.0	289.2	312.5	303.0	284.6	371.2	366.2	NA
US**	247.2	251.4	274.5	289.4	301.7	316.5	329.4	344.3	367.5	398.1	405.3	423.6	457.6	456.7	NA

* Populations used for rate calculations are Projection Estimates for Douglas County from Woods & Poole Economics except for 2000 and 2010 which use the US Decennial Census, and 2011-2013 which use the US Census Bureau's Intercensal Population Estimates Program.
** Source: CDC Sexually Transmitted Diseases Surveillance
NA - Data not available at this time.
Based on Date of Report

Douglas County Health Department 07/08/2014

Gonorrhea Rates
Douglas County, Nebraska, and US
1999-2013



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Douglas County	219.8	250.4	196.9	242.5	244.8	164.0	156.7	167.1	185.1	181.2	186.6	157.6	168.6	158.3	155.0
Nebraska**	86.3	89.5	69.1	90.5	93.3	65.7	65.8	81.0	80.8	81.9	76.6	66.1	74.0	77.6	NA
US**	129.3	128.7	126.8	122.0	115.2	112.4	114.6	119.7	118.0	110.7	98.1	100.8	104.2	107.5	NA

* Populations used for rate calculations are Projection Estimates for Douglas County from Woods & Poole Economics except for 2000 and 2010 which use the US Decennial Census, and 2011-2013 which use the US Census Bureau's Intercensal Population Estimates Program.
** Source: CDC Sexually Transmitted Diseases Surveillance
NA - Data not available at this time.
Based on Date of Report

Douglas County Health Department 07/08/2014

Approximately 18,000 individuals enter and leave DCDC each year. All who enter receive a medical intake screening within three hours of arrival. The screening identifies current health status, urgent/emergent and non-urgent medical, dental, or mental health conditions that require care. Self-reported prescription medications are verified and inmates are informed how to access health services. Within 14 days of intake a more comprehensive History and Physical (H&P) assessment is completed. This includes a health history, physical exam, mental health screening, and tuberculosis testing. Inmates with significant or chronic care needs are placed in a special clinic for timely follow-ups with a health care provider. Less than half of those incarcerated complete the H&P or attend chronic care clinics due to their short length of stay. No routine STI testing is done at intake or at the H&P. Funding is not provided for STI testing of all inmates at DCDC.

Individuals may be tested for HIV only when they self-identify high risk behaviors, known exposure, and/or complain of symptoms. Those screened may be tested promptly or deferred for six months, a practice based on guidelines by the National Commission on Correctional Health Care (NCCHC) regarding testing and the Center for Disease Control guidelines regarding testing for high risk behaviors. Screening for CT/NG is offered to DCDC inmates based on inmate complaints of symptom and/or clinical decision. Very little screening for CT/NG is conducted based on the presence of symptoms as CT and NG can progress with minimal to no symptoms. This is a curious testing protocol given the high STI rates among those incarcerated. Bick (2007, p. 1048) states, "Newly incarcerated inmates have an increased prevalence of human immunodeficiency virus infection, hepatitis B virus infection, hepatitis C virus infection, syphilis, gonorrhea, chlamydia, and Mycobacterium tuberculosis infection."

Wishing to make a positive impact on the identified STI epidemic in Douglas County through those incarcerated, DCDC initiated a collaborative partnership with the University of Nebraska Medical Center (UNMC) Service Learning Academy. Multiple other community partners became part of the collaboration and a sustainable Service Learning Academy (SLA) program, latter dubbed *do juSTIce (***Do**uglas County **J**ail **U**nited with **S**tudents **T**o Impact a **C**ity-Wide **E**pidemic), was established. Each week SLA medical profession students provide education regarding all STIs and testing and treatment for Chlamydia and Gonorrhea to the incarcerated population at the jail. The program is conducted on a rotating basis in each of the jail's general population housing units. Do juSTIce is an opt-in program and inmate participation is strictly voluntary. The program is ongoing but reaches only those who make the active choice to take part. Many inmates do not attend the education program nor do they participate in the testing and treatment.

The collaboration provided an additional opportunity to effectively test and treat inmates through a pilot program. DCDC and UNMC SLA submitted and received grant funding to test all inmates at intake (entrance to the jail) as part of an Opt-Out Pilot Program. DCDC developed a procedural process where newly incarcerated individuals were required to participate in STI testing for Chlamydia and Gonorrhea as part of the intake process. Inmates did have the opportunity to opt-out or refuse to take part. Just over 300 inmates participated in the Opt-Out Program over a specific timeframe. Testing all individuals at intake provided a snapshot or representative sample of the jail population and this information revealed even higher rates among those incarcerated at DCDC than in the overall population of Douglas County.

The purpose of this paper is to explore the benefits and/or challenges of providing STI testing in a correctional setting through the literature review. Through data analysis of two established programs at DCDC the positive rates of inmates tested in the Opt-In and Opt-Out programs will be compared. This includes relevant demographic information and questionnaire responses of those who participated in the two programs. Through this analysis the author hopes to discover whether the Opt-In Program offers ample opportunity to affect the STI rates among the inmate population of Douglas County. Examination of the Opt-In versus Opt-Out programs may also reveal what, if any, improvements can be made in the testing opportunities to reduce the STI rates among the inmate population.

Literature Review

Despite efforts at the jail and from many other community entities, this problem persists and is even growing in Douglas County. A headline article in the Omaha World Herald on February 18, 2015, reads, “Chlamydia rates in Douglas County at an all-time high.” Glissman (2015, para. 3) reported, “The county’s State of Public Health report said chlamydia rates in the county were at an all-time high in 2014, with 3,390 cases. That’s up 5.8 percent over the 2013 rate. The gonorrhea rate in the county also was up 15.4 percent, with 961 cases.” Today, it is even more critical to implement effective education, testing and treatment practices to impact this continuing public health epidemic in Douglas County. An examination of peer reviewed literature, written with consideration of incarcerated populations, will help in achieving this end. Various theories for venue reorganization, collaboration, networking, and policy development in the public administration arena will also demonstrate creative measures that can be utilized to organize public partnerships and thus impact this public health crisis.

Know Your Audience

Many studies have been conducted in order to identify the prevalence rates of STIs among various populations. Javanbakht et al. (2014, p. 103) found, “In some instances correctional facilities have noted higher prevalence of STIs and HIV than other situations (e.g., sexual health clinics) serving high risk clients.” Their research examines and shows prevalence rates primarily among individuals who engage in high risk behaviors as identified by the Center for Disease Control. Another study examined prevalence rates among the homeless population, with former inmates among them, and found jail and prison inmates have elevated rates of HIV infection, AIDS, STIs, hepatitis C, and tuberculosis in comparison with the general population (Courtenay-Quirk et al., 2008, p. 434). In examination of women who are incarcerated, Caviness et al. (2012, p. 129) stated, “Incarcerated women are among the sub-populations of women at highest risk for STIs. [Women] belonging to a racial or ethnic minority group was significantly related to STIs.” In 2008, Satterwhite et al. took a more global perspective and collected data from across the United States. They found chlamydia rates were highest in adult correctional facilities, with positivity rates among men entering correctional facilities consistently higher than prevalence rates for the general US population. Further, rates in excess

of 19% were found in women under 20 in adult correctional facilities (Satterwhite et al., 2008, p. S3-S6). This research further compels STI testing among all those who become incarcerated. As Satterwhite et al. (2008) concludes the data presented in their study supports routine chlamydia screening in correctional settings.

According to Khan et al. (2011, p. 207), "History of incarceration is associated with STD infection, as well as with STD risk factors." Incarceration is not a simple matter and an overwhelming number of factors can lead to confinement. For the purpose of this paper the focus will be limited to the risk factor component. Engaging in high risk behaviors offers a higher risk of contracting STI's as well as a higher risk of incarceration. Berry et al. (2009, p. S22) stated, "Because of demographic and behavioral factors, adults entering jail are at increased risk for acquiring STDs compared with non-incarcerated adults. These adults entering jail are more likely to have multiple sex partners, to have a history of substance abuse, and to have been the victim of sexual assault." Arriola et al. (2001) identifies inmates as a concentration of people who engage in risky behavior such as injection drug use and commercial sex work.

Douglas County Department of Corrections processes about 18,000 individuals through the jail each year. This provides an exceptional opportunity to offer testing to those who pass through the doors of the county jail in Omaha. Satterwhite et al. found high Chlamydia prevalence rates in men entering correctional facilities suggesting that this high-risk population may be reasonable to target for screening efforts (2008, p. S6). As testing and treatment in jails is conducted Berry et al. (2009) found no substantial decline in Chlamydia positivity among those tested. These authors, "attribute this to the theory that persons in jail are at high risk for STDs and might represent core transmitters among whom each infection is likely to result in more than one subsequent infection" (2009, p. S26). This emphasizes the need for education as well as testing and treatment.

In examination of trends, in 2014 the average amount of time an individual spent in the Douglas County jail was 21 days. Basus et al. (2005, p. 11) state, "Most of the 600,000 detainees currently housed in jails stay for less than one month." This is further evidenced by Goldenson & Klausner (2009, p. S22) who found, "The majority of adults entering jail return to their home communities with days or weeks." Many individuals released from jail after a short stay are likely return home to their community. Berry et al. (2009) identifies the substantial number of individuals at high risk for STDs who are quickly released from jail also lack screening opportunities at other places. Because of these characteristics - screening and treating those entering jails might prevent subsequent transmission of STIs and may also reduce community rates of STIs among non-incarcerated persons (2009, p. S23). Since release occurs so quickly it would be beneficial to conduct testing and treatment as soon as practical after intake to the correctional setting is completed. Javanbakht et al. (2014) write about the number of inmates released from custody prior to arrival of test results who do not receive treatment. This highlights the importance of rapid testing and positive test follow-up from community health department partners.

Rosenberg (2001, p. 207) concludes the results of their study, “underscores the importance of correctional facility settings as priority venues for [STI] prevention interventions and highlight the urgent need for the development of community-based interventions for those affected by incarceration.” Hammett (2009) found expanded STI screening of particular importance in jails, with the rapid turnover of large numbers of people, and where chlamydia and gonorrhea are most prevalent. Hammett also explores setting priorities, according to relative background prevalence, in potential target subgroups, as having an even more significant impact to screening programs for Gonorrhea and Chlamydia in correctional facilities (2009, p. 78). Identification of groups by age, gender, race, drug and alcohol use, and other factors can help to clarify and/or provide these high risk subgroups.

Affecting the Community

The high prevalence rates among those incarcerated will eventually affect public health. Arriola et al. (2001) indicates correctional facilities offer an ideal opportunity for prevention and treatment of STIs because inmates are easy to reach and most will eventually return to their communities. Javanbakht et al. (2014) sees the importance of reducing the disease burden in correctional facilities. Additionally, the potential community-level benefits from jail based programs aimed at STI and HIV prevention, screening and treatment are substantial. Javanbakht et al. (2014 p. 103) stated, “The population-level impact of jail screening is also supported by modeling data, which suggests that the community prevalence of chlamydia can be reduced by up to 54% by using jail-based chlamydia screen-and-treat programs.”

Unfortunately, as found by Evans et al. (1999) although the prevalence of chlamydial and gonococcal infection is high among those incarcerated, most corrections facilities do not routinely screen for these infections but test only those who have symptoms or who request testing. This is a common thread among many jail facilities including Douglas County for both male and female inmates. The issue as identified by Berry et al. (2009, p. S23) states, “Chlamydia is primarily an asymptomatic infection that will not be detected without appropriate screening.” While a significant portion of incarcerated individuals would benefit from STI testing many will not be tested because they do not exhibit any symptoms.

When the Timing is Right

With inmates identified as a high risk group, providing timely opportunities for testing is essential to successful implementation of a STI testing program. Decisions regarding the best time to offer testing to the jail inmate population have also been evaluated by several authors. Testing conducted at intake is one viable option. Hammett (2009, p. 79) states, “Immediate presumptive treatment is particularly important for jail populations because of the rapid turnover of inmates and the likelihood of loss to follow-up once individuals return to the community. The relationship between screening and treatment programs is very important in correctional settings. As screening rates increase, treatment rates will also increase with attendant public health

benefit." Conducting STI screening during intake to DCDC would offer a significant number of testing opportunities. Testing in a considerable number of cases would be missed if offered even 24 hours after intake due to the large number of individuals quickly released from custody.

Problematic issues have also been identified with testing during intake. STI testing offered at intake does provide all inmates with the opportunity for testing. Beckwith et al. (2007, p. 46) state, "This may be a time of significant emotional stress when one does not want to be tested… and many persons may be acutely intoxicated or in withdrawal thus precluding the ability to provide informed consent." Each month about 50 inmates refuse to participate in regular medical intake screening (currently without STI testing) in Douglas County. Some of the refusals are due to high levels of intoxication or combative behavior at arrest. These refusals represent only about 3% of monthly intakes at DCDC but this portion of the population would indeed be affected by lack of access to testing. Basus et al. (2005) discuss elements of testing and treatment in jail settings challenged by the rapid turnover as well as the chaotic environment through which large numbers of prisoners cycle.

Confidentiality also plays a role for those tested. Inmates can be slow to trust and accept testing if they feel others will discover their status or if they believe the testing sample will be used for something other than STI testing. According to Lyons et al. (2009, p. 94), "Acceptance of voluntary testing varies widely, perhaps responding to the climate of confidentiality in a given facility." Basus et al. (2005, p. 5) "Providers of HIV and STD testing and care services in California's correctional facilities have reported success in integrating their activities into the daily operations of prisons, making such services a routine matter; this may preserve inmates' confidentiality and prevent HIV infected individuals from being stigmatized." Willingness to participate in testing may increase where confidentiality is assured.

Administrative Attitude

Administrative leadership in correctional facilities plays a key role in impacting STI prevalence rates. Basus et al (2005) found, "Implementation of appropriate testing policies are still matters that some correctional institution administrators regard as luxuries." Awareness of the public health implications is often the first step toward change. In discussion of those incarcerated, Caviness et al. (2012, p. 129) states, "Prevention, testing, and treatment efforts need to be cognizant of differential access and work harder to reach this important underserved population." Most correctional administrators do recognize inmates as an underserved and vulnerable population but often must limit services offered due to budgetary constraints. Riemeijer et al. (2008, p. S16) state, "Advocacy, especially in correctional settings, is necessary to enhance awareness among management and staff that STDs form an important public health problem in the venue population and that a proactive, venue-based screening approach among males will have a significant impact on the health of their female partners and thus the health in the community." Health care costs in correctional facilities typically hold a significant portion of the budget. Chronic health issues associated with the long term effects of STIs can also be costly.

Treating STIs can and will save future medical costs for secondary and tertiary health problems associated with STIs. Arriola et al. (2001, p. 523) has identified, "Screening for infectious diseases in an integral part of correctional health care because of the ease with which such diseases are spread and the high prevalence of infectious diseases in these settings." The buy in from correctional administrators regarding STI issues among those incarcerated is critical toward taking steps to implement testing and treatment and making it a necessary line item in the budget will solidify this as an important undertaking.

Jail mission statements frequently task public officials with maintaining public safety. Given the overwhelming STI epidemic in Douglas County it only makes sense to consider this a public safety issue. Mertz et al. (2002 p. 275) found, "The feasibility of screening depends on the willingness of corrections officials to conduct screening or to work with local health department staff members." Since DCDC began the collaboration in 2008 the willingness of this department is evident.

Sustainability and Effectiveness

Rietmeijer (2008) and Hammett (2009) discuss considerations in achieving cost-effective STD screening programs in correctional settings. One of the important factors is the ability and willingness of facility staff to implement the program. Relying on outside staff from public health departments or elsewhere would add additional expenses. Riemeijer et al. (2008) further discusses the cost effectiveness of screening as dependent in part on the prevalence of chlamydia in the screened population and the ease with which screening programs can be implemented. As jail populations typically show higher prevalence rates it would be beneficial to continue the established testing programs. The high prevalence rate in the general population of Douglas County also verifies the need to support additional screening opportunities.

With budgeting as a determining influence for many correctional facilities, Riemeijer et al. (2008, p. S9) do an exceptional job in breaking down program costs for the identification and treatment of chlamydia. The three major factors include: laboratory testing and treatment costs; prevalence in the target population; and staffing costs. Since Douglas County has determined the prevalence rates of chlamydia at epidemic levels in the community venue-based testing at the jail should be taken into consideration. The costs to implement testing on a full-time basis should be included as part of this deliberation. The collaboration initiated at DCDC takes a limited approach to address and impact a segment of the jail population through the do juSTIce program. However, UNMC is committed to the sustainability of the program. Further, collaborative partners have committed to continued funding of costs associated with testing kits, lab work, and medications necessary for treatment within the do juSTIce program. This unique program was developed to address and overcome the complex issue of high STI rates in Douglas County. The program also addresses the context of the problem – health disparities among a vulnerable population at high-risk for STIs who often have limited access to care in the community.

Methodology

The collaboration has engaged two programs to test and treat the DCDC inmate population for CT and NG: The long term do juSTIce Opt-In Program and a short term Opt-Out Pilot Program. The following questions will be analyzed through a side by side comparison utilizing descriptive statistical methodologies.

1. How do the STI test results from the Opt-In and the Opt-Out programs compare?
2. How do the variables of race, age, gender, drug/intoxicant usage, and previous incarceration affect test results and compare between the two programs?

The population of the Opt-In Program in this study includes inmates who have volunteered to submit a urine sample for CT and NG testing. The long term Opt-In Program began in November of 2009. For the purposes of this paper the opt-in data (n=3070) from June 26, 2010 through February 21, 2015 will be examined. Unfortunately, during the search for program data the author discovered the data files for the initial part of the program were corrupted. The corrupted files contained the raw data collected from November of 2009 through June 2010. This data set was analyzed by Brown et al (2014) and it is know that 394 inmates provided samples for testing with 22 positive tests for CT, NG or both. However, in order to maintain the integrity and validity of the data sets and/or variables analyzed herein this information will not be included.

The Opt-In do juSTIce program involves health professions students who go directly to inmate housing units to present the program. The program is offered to between one and three of the 27 inmate housing units each Saturday on a rotational basis. The restrictive housing unit is not included in the rotation for security/safety reasons. On rare occasions no programs are offered due to scheduling conflicts or low numbers of student volunteer participation during school breaks. Inmates volunteer or opt-in to participate in an educational session for all STIs. Testing for CT and NG is offered and completed after the education session through voluntary submission of a urine sample. Any inmate in the unit can opt-in for the testing portion of the program – even those who do not participate in the education session. It is important to note that participation is strictly voluntary and a matter of personal choice. A questionnaire is administered and completed through an interview process by a student volunteer. All inmates who opt to be tested complete the questionnaire (Attachment 1). Students prepare the samples which are analyzed at the Nebraska Public Health Lab. Test results are sent electronically to the DCDC medical. Each Thursday students return to the DCDC clinic to offer treatment and counseling/further education to any inmates who test positive. The treatment phase is conducted under faculty supervision.

The data for the analysis of the Opt-In Program is maintained in a database at DCDC. The database includes CT and NG screening results as well as questionnaire responses. For the purpose of this study all data was de-identified by the DCDC Health Services Administrator.

The population of the second program includes 311 inmates (n=311) who participated in the Opt-Out Pilot. In 2011 the collaboration was awarded a grant to implement an Opt-Out Pilot testing program for CT and NG. Opt-out testing, with a target sample of 300 inmates, was offered to all inmates entering the jail during the intake process. This numbered sample was estimated to provide a sufficient representation of the jail population in order to determine prevalence rates among this population over a period of time where all individuals were provided with the opportunity to be tested. In order to further examine the inmate population from within Douglas County only individuals who resided in Douglas County prior to arrest were tested. Analysis of this sample demonstrates a subset drawn from the larger average daily population. Statements or conclusions made about the overall jail population based on the pilot sample are probabilistic rather than absolute. Nonetheless, this data will provide an accurate portrayal or representative sample of the jail population during a specific period in time.

DCDC developed and implemented institutional policy to incorporate the opt-out testing as an additional step in the intake process. The pilot was staffed by health professions students who worked in shifts to ensure 24 hour coverage was provided. The pilot ran from July 12, 2011 through July 18, 2011, in order to collect the targeted sample of the population. Inmates being processed into the facility were brought to a private room where health professions students explained the project, clarified screening procedures, and then testing was offered. Interestingly, only one individual opted out and did not participate in the screening. Inmate participants provided demographic characteristics and a self-reported history of sexual and health behaviors. The same questions utilized in the opt-in questionnaire (Attachment 1) were completed through interview process with student volunteers. The same procedures developed for the weekly Opt-In Program were also utilized by students to prepare the Opt-Out samples for processing. Samples were analyzed at the Nebraska Public Health Lab and test results sent electronically to the DCDC medical clinic so treatment could occur. The jail's medical provider provided treatment as needed for those who tested positive.

The data for the analysis of the Opt-Out Program is maintained in a database at DCDC. The database includes CT and NG screening results as well as questionnaire responses. For the purpose of this study all data was de-identified by the DCDC Health Services Administrator.

Study Design

Prevalence rates for those who participated in both programs were compared. A quantitative statistical analysis of variables among the inmate population was performed using IBM SPSS 22 (Statistical Product and Service Solutions). Descriptive statistics and plots were used to summarize the variables of age, race, gender, test results, drug/intoxicant usage, and previous incarceration. The continuous nominal age variable was coded into categories as follows: 18 – 24 years; 25 – 31 years; 32 – 38 years; and $\geq$ 39 years. Studies in the literature review and Douglas County Health Department (2014) find the highest STD risk among the age category from 14 to 24 years old. Douglas County Corrections does not accept or incarcerate any

individual under 18 years of age. The race variable was coded as follows: White; Black; American Indian/Alaska Native; Asian; Pacific Islander/Native Hawaiian; and Unknown/Other. Ethnicity of White was further coded as Non-Hispanic and Hispanic. This is terminology utilized for existing DCDC software applications and was used for the STI programs to garner consistency in responses from participants. Gender was coded as Male, Female, Transgender Male to Female, and Transgender Female to Male. Period prevalence calculations (number of inmates positive for the disease divided by the total number of inmates tested) were used to identify the rates of CT and NG and/or both CT and NG during the intervals the data was collected. Period prevalence rates from both the Opt-Out (n=311) and Opt-In (n=3070) programs were also compared.

Descriptive Statistics with Crosstabs were utilized with Chi-Square and Correlations. The cell display was checked to include percentages by row, column, and total. Cochran's and Mantel-Haenszel statistics were also part of the symmetric measures utilized to provide a stratified statistical analysis of the relationship between the row and column variables after controlling for the strata variables in the multiway tables.

The level of measurement describes the relationship among the values of each attribute. A cross-tabulation comparison of the Chi-square and Correlation results was utilized to analyze the results in a side by side comparison. All statistical information gathered and compiled in SPSS is included in Attachment 2. Data charts have been simplified and information entered into tables and/or graphs. Many of the tables or graphs are included as part of the discussion in the findings portion of this paper. All simplified tables completed are included for review in Attachment 3.

Examination of the data will help to predict the best methods and/or courses of action for STI testing at the jail. Based on the finding of this study DCDC jail administrators will have competent knowledge from which to examine the effectiveness and/or impact of each program. Full consideration of adjusting assets and improving the efficiency and effectiveness of resources shall be given.

Advantage or Disadvantage

Within the Opt-In Program a large amount of data has been collected over a considerable period of five years. This data pool offers a substantial amount of information for study but it lacks depth as a sample. It is possible to examine correlations but nothing is manipulated or controlled for within the sample population. Both the Opt-In and Opt-Out programs have been completed in real-life and in real-time. There is no way to determine causal, or cause and effect, relationships. However, the two different program samples groups do provide an opportunity to conduct side by side comparisons. The Opt-In program (n=3070) offers a sample view of the incarcerated population over time and the Opt-Out program (n=310) offers a sample population or representative sample of all individuals incarcerated during a specific time frame of study.

There are threats to internal validity within the Opt-In Program as inmates volunteer or self-select for participation in the program. It is also possible that inmates who have participated in the Opt-In Program are recidivists who have been tested more than once over the course of the program. The multiple treatment interference factor is difficult to control for because the data has been de-identified and repeat subjects cannot be eliminated from the sampling. However, it is important to note that due to high risk factors associated with this population, individuals may test positive multiple times upon re-testing after release/return due to engaging in high risk behaviors. Because those who test positive more than once contribute to the overall high prevalence rates of STIs in the Douglas County community they should be considered as part of the problem and potentially as part of the solution though education and partner testing.

Findings

In the examination of data collected through the previously stated methodologies a number of interesting trends have been identified. Of the 3070 inmates who participated in the Opt-In Testing Program 177 individuals (5.8%) tested positive for Chlamydia and 31 individuals (1%) tested positive for Gonorrhea. Of the 310 inmates who participated in the Opt-Out Testing Program 30 individuals (9.7%) tested positive for Chlamydia and 5 individuals (1.6%) tested positive for Gonorrhea. The overall positive test results for Gonorrhea among inmates in both the Opt-In and Opt-Out programs are similar with only a 0.6% difference in positive rates. There is a much more significant difference in the overall positive rates of Chlamydia within the Opt-In and Opt-Out programs. When all inmates were tested at intake (Opt-Out Program) the positive rates of Chlamydia were 4.9% higher than when individuals opted to be tested in the ongoing Opt-In Program.

Also of significant interest is the comparison of positive rates at DCDC with the general population of Douglas County as a whole. In 2013 a total of 3,205 people in Douglas County tested positive for Chlamydia and 833 people tested positive for Gonorrhea (Douglas County Health Department, 2014). The United States Census Bureau (2015) estimated the population of Douglas County was 537,529 in 2013. With this data in mind the overall positive rate of Chlamydia (CT) among the general population in Douglas County was about 0.59% and about 0.15% tested positive for Gonorrhea (NG). Given what we know about the STI rates in the United States as compared to the Douglas County rates from the charts on page one - the positive rates within the jail are much higher than in Douglas County and overwhelmingly higher than those in the United States. Claiming an STI epidemic exists within the incarcerated population of Douglas County is an exaggerated understatement.

As the age range of individuals at DCDC is vast it is important to determine whether one age group is more or less likely to be at risk. Narrowing the likelihood of positive rates by age will be beneficial in identifying if one group should be tested over another. Among the age group categories in the Opt-In Program 68.3% of those who tested positive for CT were between 18 and 31. Just over 74% of those testing positive for NG were also between 18 and 31 years old.

Table 1: Opt-In Positive Rates of CT and NG by Age Group

Age Groups ~ OPT-IN		CT Positive		NG Positive		n = 3070
From 18 to 24	Count	62		11	Count	**943**
	% CT	35.0%		35.5%	% NG	
	% w/in age group	6.6%		1.2%	% w/in age group	
From 25 to 31	Count	59		12	Count	**878**
	% CT	33.3%		38.7%	% NG	
	% w/in age group	6.7%		1.4%	% w/in age group	
From 32 to 38	Count	31		5	Count	**548**
	% CT	17.5%		16.1%	% NG	
	% w/in age group	5.7%		0.9%	% w/in age group	
39 and over	Count	25		3	Count	**701**
	% CT	14.1%		9.7%	% NG	
	% w/in age group	3.6%		0.4%	% w/in age group	
	Total Positive CT	177		31	Total Positive NG	
	% of total tested	5.8%		1%	% of total tested	

Table 2: Opt-Out Positive Rates of CT and NG by Age Group

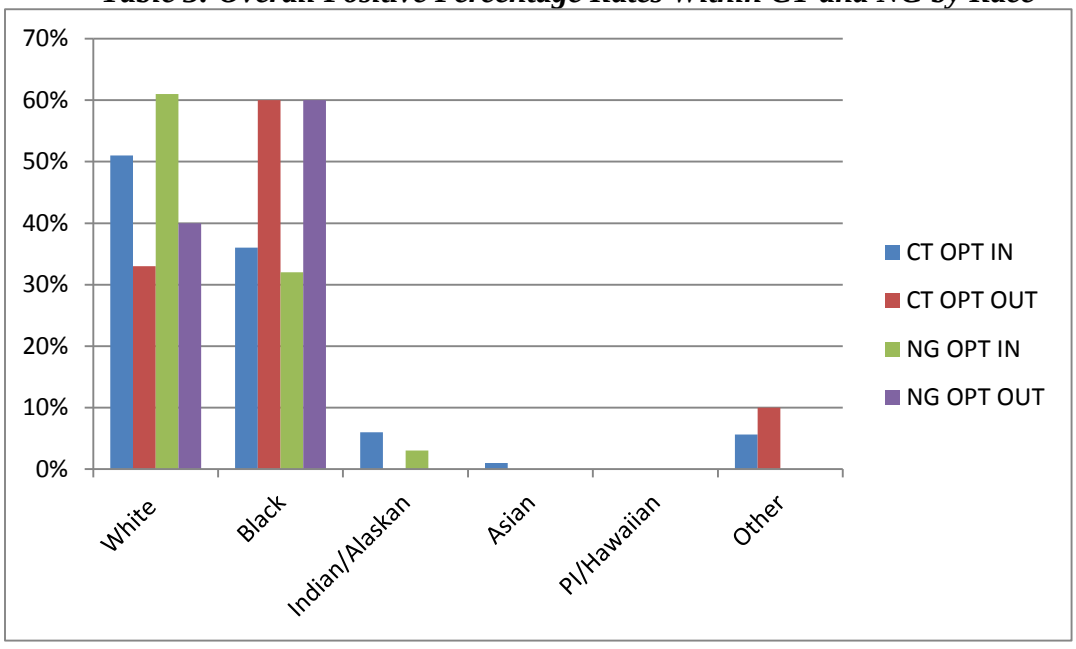
Age Groups ~ OPT-OUT		CT Positive		NG Positive		n = 310
From 18 to 24	Count	18		2	Count	95
	% CT	60.0%		40.0%	% NG	
	% w/in age group	18.9%		2.1%	% w/in age group	
From 25 to 31	Count	5		2	Count	86
	% CT	16.7%		40.0%	% NG	
	% w/in age group	5.8%		2.3%	% w/in age group	
From 32 to 38	Count	3		0	Count	43
	% CT	10.0%		0.0%	% NG	
	% w/in age group	7.0%		0.0%	% w/in age group	
39 and over	Count	4		1	Count	86
	% CT	13.3%		20.0%	% NG	
	% w/in age group	4.7%		1.2%	% w/in age group	
	Total Positive CT	30		5	Total Positive NG	
	% of total tested	9.7%		1.6%	% of total tested	

The Opt-Out program shows 60% of those testing positive for CT were between 18 and 24. Eighty percent of those positive for NG were between 18 and 31. The two tables on page 12 show the percentages of positive rates within the identified age groups for both the Opt-In and Opt-Out programs respectively. Tables are color coded to assist in identification of the program. The Opt-In Program (Table 1) is shaded red and the Opt-Out Program (Table 2) is shaded green in the variable and sample number sections. Positive test results for the Opt-In and Opt-Out Programs were compiled by each variable considered by the author in side by side comparison charts. All tables assembled are included in Attachment 3.

Within the variable of race in the Opt-In Program 6.9% of the 1321 white inmates tested were positive for CT while only 1.4% of white inmates were positive for NG. Of the 1358 black inmates who participated 4.7% were positive for CT and only 0.7% of black inmates tested were positive for NG. Black inmates opted to be tested with greater frequency than their white counterpart. However, white inmates tested positive at much higher rates than black inmates. In fact 51% to 61% of inmates who tested positive for CT and NG, respectively, in the Opt-In Program were white.

The occurrence of positive testing among the race variable in the Opt-Out Program shows the variance in ratios dissimilar to those found in the Opt-In Program. Among the 113 black inmates tested 15.9% were positive for CT while only 6.2% of the 162 white inmates tested were positive for CT. The other/unknown race category accounted for 6.7% of the positive rates of CT as well. The NG rates among race reflect three (2.7%) of the 113 black inmates tested were positives and two (1.2%) of the white inmates tested were positive. Table 3 below identifies the overall percentage rates within CT and NG positive test results among race categories in both the Opt-In and Opt-Out programs.

Table 3: Overall Positive Percentage Rates Within CT and NG by Race



White inmates are further categorized through language codes used within the DCDC as White Non-Hispanic and White Hispanic. The “ethnic” variable was used to identify and collect this data. In the Opt-In Program 71% to 74% of those who tested positive for CT and NG, respectively, were White Non-Hispanic. In the Opt-Out Program 80% of CT positive rates and 60% of NG positive rates were among the White Non-Hispanic group.

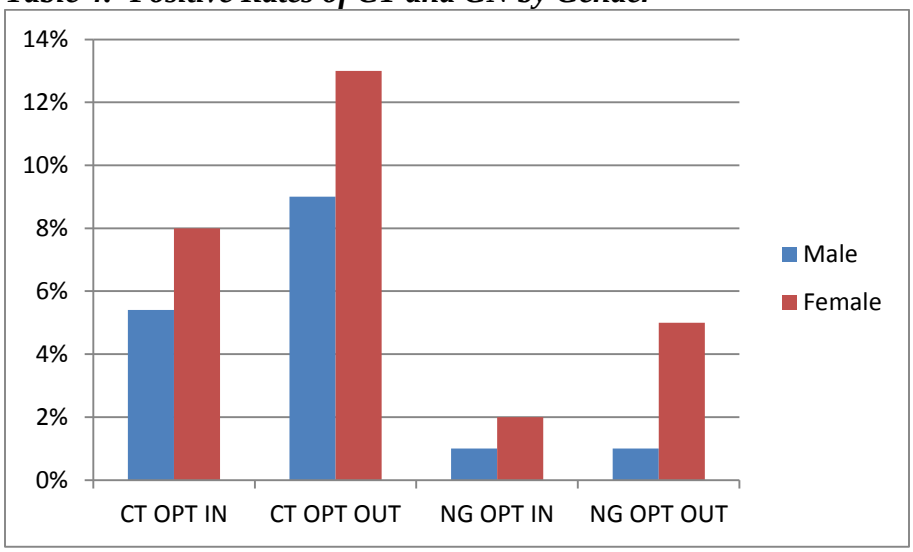
As can be observed in Table 3 (on page 13) the majority of positive test results are among white and black inmates. It is important to note the demographic breakdown of the DCDC population does show an overrepresentation or disproportionate percentage of black individuals confined as compared to the general population of Douglas County. Typically, the annual intake of individuals into the jail population is comprised of about 45 % white inmates and about 34% black inmates. The United States Census Bureau (2015) report Douglas County demographics reflect the overall population of the county is 81.6% white and only 11.6% black.

The Opt-Out Program at intake conducted over a seven day time period showed 52% of the new intakes tested were white and 36% of new intakes tested were black. This consistently reflects the overrepresentation of black inmates booked into DCDC. Conducting testing of all inmates, during intake, shows higher positive prevalence rates of both CT and NG among black individuals. Testing in the Opt-In Program reveals a higher number of black inmates voluntarily participating in testing but white inmates carried the higher burden of positive test results in the Opt-In program. The Opt-Out Program shows an opposing positive prevalence rate with black inmates testing positive at a higher frequency than white inmates.

There are noteworthy differences in the positive prevalence rates among the gender variable in both the Opt-In and Opt-Out Programs. Women typically compromise about ten percent of the inmate population at DCDC. Just over 15% of participants in the Opt-In Program were female. Female inmates appear to participate in testing with greater frequency than men incarcerated at DCDC when provided the opportunity to do so.

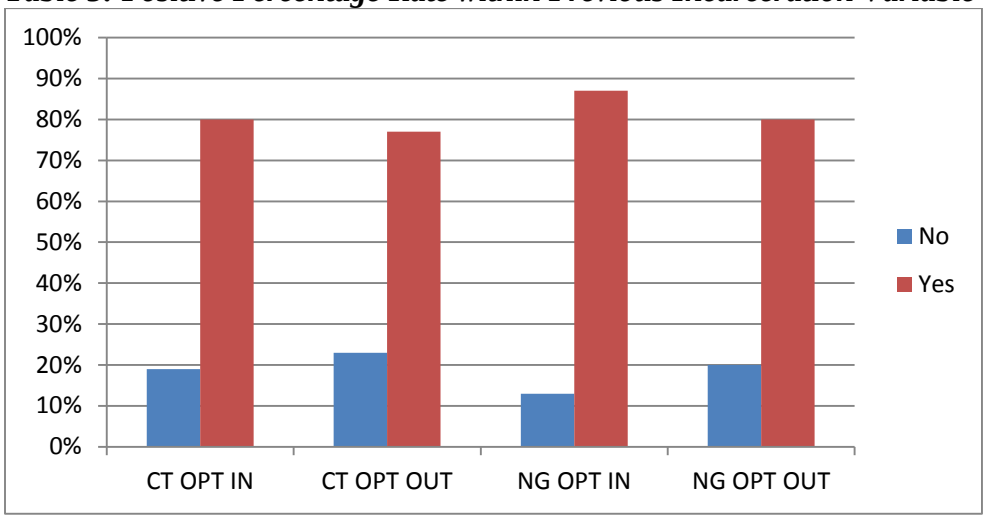
In the Opt-In Program 8.1% of women tested were CT positive while only 5.4% of men tested were CT positive. In the Opt-Out Program 12.7% of women tested were CT positive while only 8.9% of men tested positive for CT. Positive test results for GN reveal similar results as 1.9% of women tested were positive while only 0.8% of men tested were positive in the Opt-In Program. The Opt-Out Program shows 4.8% of women tested were positive for NG while only 0.8% of men who were tested were positive for NG. Table 4 (on page 15) shows the positive testing percentage rates among men and women who were tested in both programs. This leaves little doubt that rates of Chlamydia and Gonorrhea are higher among incarcerated women than incarcerated men at DCDC.

Table 4: Positive Rates of CT and GN by Gender



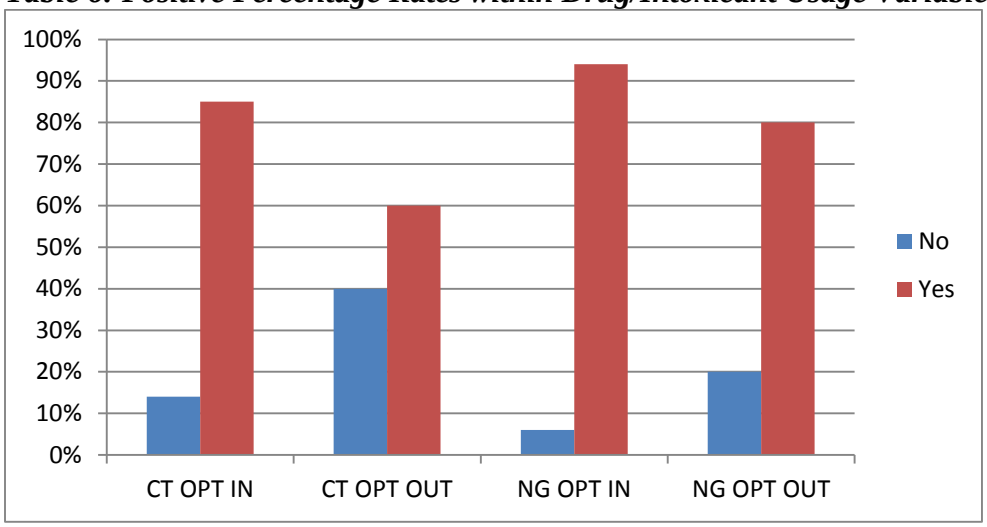
The last two variables examined in this study– previous incarceration and use of drugs and/or intoxicants uncover the most significant variances in results among individuals who tested positive in both programs. The "yes" response in Table 5 represents a significantly higher prevalence rate among those who were previously incarcerated. Those who tested positive for CT and NG had been previously incarcerated at rates between 76.7% and 87%, respectively.

Table 5: Positive Percentage Rate within Previous Incarceration Variable



Both programs required that each inmate tested was asked questions from a survey (Attachment 1). Participants responded "yes" or "no" to the following question, "Have you ever had sex while drunk or high?" A "yes" answer is indicative of a high risk behavior. As this behavior is self-reported there is no way to validate or verify the information. All the same, as seen in Table 6 on the next page, individuals willing to disclose an affirmative response to this question provide a rather weighty confirmation of high risk behavior among those who tested positive at rates between 60% and 90%.

Table 6: Positive Percentage Rates within Drug/Intoxicant Usage Variable



Conclusions

In the two testing programs offered DCDC boasts positive Chlamydia rates five to nine percentage points higher than in the general population of Douglas County. The positive Gonorrhea rates at DCDC range from 0.35% to 1.5% higher than among the citizens of Douglas County. This is in direct correlation with the previous research studies cited that reveal higher prevalence rates of STI among those housed in correctional facilities.

Targeting high risk populations is an essential aspect to consider in minimizing this epidemic. Historically, research has shown age to be a risk factor within the general population - with the highest STI rates among individuals between 14 and 24 years of age. The DCDC testing programs reveals this particular age group as an effective starting point for targeted testing. However, the majority of individuals testing positive for CT and NG, in both programs, were from the two age groups between 18 to 31 years of age. If testing were limited or targeted to higher risk age groups everyone under 31 years of age at DCDC should be tested.

Not much research has been conducted specifically regarding STI rates among incarcerated women but this group has been found to be at higher risk for contracting STI's, especially among women of color. This study shows significantly higher rates among women incarcerated at DCDC than their male counterpart. Women tested positive at rates up to four percent higher than men. The higher prevalence rates in women emphasize the need to continue education and testing of the incarcerated female population at DCDC.

The majority of inmate participants testing positive were from the white and black race categories. Several factors may explain this phenomenon. The typical composition or demographic of the DCDC population has a limited number of individuals from other race groups so this may be a contributing factor. Willingness of other race groups to participate and/or be tested may also impact this trend. Observed trending in this study shows higher categories of

risk other than by the race variable. Individuals should not be precluded from participation based on race. Public perception of this type of limitation would be less than acceptable. Individuals from each and every race should be included in any testing efforts at DCDC.

Additional research elements identified in the literature review included the aspect of engaging in high risk behaviors such as use of drugs and/or intoxicants. It also includes risk factors such as previous incarceration. This study specifically validates previous research findings in these two areas. Individuals at DCDC with prior incarcerations are 53% to 74% more likely to test positive for CT and NG respectively. Engaging in high risk behavior such as the use of drugs or alcohol before and/or during sex resulted in higher STI prevalence rates among the groups in both DCDC programs. The statistical significance within this variable shows positive prevalence rates up to 87% higher when answering in the affirmative to this behavior.

The Opt-Out testing program conducted at intake shows positive rates of CT were 4.9% higher than in the Opt-In program. Positive Gonorrhea prevalence rates are not substantially different between the two programs. The CT prevalence rates are considerably higher than NG prevalence rates within the jail population. The Opt-Out testing program at intake offers all inmates the opportunity to be tested and treated in less than seven days. This is of particular importance among individuals with short term stays who may not have an opportunity to participate in the Opt-In Program. Testing and treating this high risk population prior to release from custody will also serve to decrease the spread and prevalence rates of these STIs in the community of Douglas County.

Rapid STI testing at intake with timely follow-up treatment within the DCDC setting should be established as a high priority in order to reduce and impact this epidemic in both the jail and the community. A procedure to capture samples for those unwilling or unable to participate in the testing process at intake must also be established. This will offer full range access to testing within the entire jail population. Ensuring confidentially during testing and treatment is important to establish trust and credibility of the program – this is also indicated in the current literature.

Staffing will be the most expensive part of conducting Opt-Out testing at intake. One full time employee with backfill coverage dedicated to brief education, sample collection and data entry would provide the necessary element to conduct testing in this manner. The administrative awareness of this issue shows the potential for a cost effective screening process conducted at intake. This high risk population can be tested and treated fairly easily with the suggested staffing addition. This addition could ultimately offset future medical costs associated with long term STI infections. Addressing this as a public health issue also ensures public safety.

Continued collaboration with the Service Leaning Academy and other stakeholders is a critical component of success. The inmate population would continue to reap benefits from the educational portion of the do juSTIce program if full time testing were implemented. SLA

students could also continue to provide treatment (under supervision) to inmates as part of the SLA experience. They could also provide the back-up testing for individuals who could not be tested during intake. If funding is not provided to support full time Opt-Out testing at intake the Opt-In do juSTIce Program should continue with increased efforts to garner additional participation in the program.

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ATTACHMENT 1 Housing Unit:_____Date (mm/dd/yyyy):_____ Volunteer Initials:_____

Do JuSTIce Project: Questionnaire for STD Screening Participants

Directions for student volunteer: Each inmate providing a urine sample for testing should be asked the questions on this form. Go through the form with the participant and circle choices or fill in answers for the questions.

SAMPLE #: _____ INMATE DATA #: _____

Name(last, first)_____ DOB(mm/dd/yyyy): _____ Age(years): _____

Race: White Asian
Black Pacific Islander / Native Hawaiian
American Indian / Alaska Native Unknown
Other: _____

Ethnicity: Non-Hispanic Hispanic
Gender: Male Female Transgender-MTF Transgender-FTM

What is the highest grade you COMPLETED? Middle Sch. High Sch. College Graduate/Prof. None

Have you ever had vaginal, anal or oral sex? No Yes

How many partners have you had in the last 90 days? _____ (Make sure to write down number)

Were any of them new partners? No Yes

How did you know your last partner? Spouse Boyfriend/Girlfriend Casual partner Didn't know them-- (including sex workers, one night stands, rape)

During your lifetime, have your sexual partners been male, female or both? Male Female Both

Has anyone ever done anything to you sexually that made you feel uncomfortable? No Yes

How many partners have you had in your lifetime? _____ (Make sure to write down number)

How often do you use a condom during sex? Sometimes Always Never

Do you think you have had recent sexual contact with someone with a STD? No Yes

Have you ever had symptoms of an STD? No Yes N/A or Never had symptoms

If yes, did you seek treatment? No Yes N/A

Do you have any symptoms right now? No Yes

If yes, which symptoms? Genital discharge Genital Sores Abdominal Pain
Burning/Itching/Redness Pain when peeing

Have you ever been tested for a sexually transmitted disease? No Yes Don't know

During the last year, have you been told you have a STD by a doctor? No Yes Don't know

Have you ever had sex while drunk or high? No Yes

Have you ever exchanged sex for drugs/money? No Yes

Are you concerned about getting a STD? No Yes

Are you concerned about getting HIV/AIDS? No Yes

How many times (including current) have you been in jail or prison: _____

ATTACHMENT 2 OPT-OUT (n=310)

```
CROSSTABS
  /TABLES=Age_Groups Race Ethnicity Gender Intoxicated Pre_incar BY NG CT
  /FORMAT=AVALUE TABLES
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  /CELLS=COUNT ROW COLUMN TOTAL
  /COUNT ROUND CELL.
```

Crosstabs

Notes

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Warnings

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Age_Groups * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Age_Groups * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Race * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Race * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age_Groups * NG	310	100.0%	0	0.0%	310	100.0%
Age_Groups * CT	310	100.0%	0	0.0%	310	100.0%
Race * NG	310	100.0%	0	0.0%	310	100.0%
Race * CT	310	100.0%	0	0.0%	310	100.0%
Ethnicity * NG	310	100.0%	0	0.0%	310	100.0%
Ethnicity * CT	310	100.0%	0	0.0%	310	100.0%
Gender * NG	310	100.0%	0	0.0%	310	100.0%
Gender * CT	310	100.0%	0	0.0%	310	100.0%
Intoxicated * NG	310	100.0%	0	0.0%	310	100.0%
Intoxicated * CT	310	100.0%	0	0.0%	310	100.0%
Pre_incar * NG	310	100.0%	0	0.0%	310	100.0%
Pre_incar * CT	310	100.0%	0	0.0%	310	100.0%

Age_Groups * NG

rosstab

			NG		
			Negative	Positive	Total
Age_Groups	From 18 to 24	Count	93	2	95
		% within Age_Groups	97.9%	2.1%	100.0%
		% within NG	30.5%	40.0%	30.6%
		% of Total	30.0%	0.6%	30.6%
	From 25 to 31	Count	84	2	86
		% within Age_Groups	97.7%	2.3%	100.0%
		% within NG	27.5%	40.0%	27.7%
		% of Total	27.1%	0.6%	27.7%
	From 32 to 38	Count	43	0	43
		% within Age_Groups	100.0%	0.0%	100.0%
		% within NG	14.1%	0.0%	13.9%
		% of Total	13.9%	0.0%	13.9%
	39 and over	Count	85	1	86
		% within Age_Groups	98.8%	1.2%	100.0%
		% within NG	27.9%	20.0%	27.7%
		% of Total	27.4%	0.3%	27.7%
Total		Count	305	5	310
		% within Age_Groups	98.4%	1.6%	100.0%
		% within NG	100.0%	100.0%	100.0%
		% of Total	98.4%	1.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.235[a]	3	.745
Likelihood Ratio	1.895	3	.595
Linear-by-Linear Association	.540	1	.462
N of Valid Cases	310		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .69.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.042	.053	-.734	.463[c]
Ordinal by Ordinal	Spearman Correlation	-.041	.054	-.716	.475[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Age_Groups * CT

Crosstab

			CT		
			Negative	Positive	Total
Age_Groups	From 18 to 24	Count	77	18	95
		% within Age_Groups	81.1%	18.9%	100.0%
		% within CT	27.5%	60.0%	30.6%
		% of Total	24.8%	5.8%	30.6%
	From 25 to 31	Count	81	5	86
		% within Age_Groups	94.2%	5.8%	100.0%
		% within CT	28.9%	16.7%	27.7%
		% of Total	26.1%	1.6%	27.7%
	From 32 to 38	Count	40	3	43
		% within Age_Groups	93.0%	7.0%	100.0%
		% within CT	14.3%	10.0%	13.9%
		% of Total	12.9%	1.0%	13.9%
	39 and over	Count	82	4	86
		% within Age_Groups	95.3%	4.7%	100.0%
		% within CT	29.3%	13.3%	27.7%
		% of Total	26.5%	1.3%	27.7%
Total		Count	280	30	310
		% within Age_Groups	90.3%	9.7%	100.0%
		% within CT	100.0%	100.0%	100.0%
		% of Total	90.3%	9.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.652[a]	3	.003
Likelihood Ratio	12.614	3	.006
Linear-by-Linear Association	9.071	1	.003
N of Valid Cases	310		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.16.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.171	.054	-3.052	.002[c]
Ordinal by Ordinal	Spearman Correlation	-.181	.055	-3.232	.001[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Race * NG

Crosstab

			NG		
			Negative	Positive	Total
Race	White	Count	160	2	162
		% within Race	98.8%	1.2%	100.0%
		% within NG	52.5%	40.0%	52.3%
		% of Total	51.6%	0.6%	52.3%
	Black	Count	110	3	113
		% within Race	97.3%	2.7%	100.0%
		% within NG	36.1%	60.0%	36.5%
		% of Total	35.5%	1.0%	36.5%
	American Indian/Alaska Native	Count	9	0	9
		% within Race	100.0%	0.0%	100.0%
		% within NG	3.0%	0.0%	2.9%
		% of Total	2.9%	0.0%	2.9%
	Asian	Count	5	0	5
		% within Race	100.0%	0.0%	100.0%
		% within NG	1.6%	0.0%	1.6%
		% of Total	1.6%	0.0%	1.6%
	Pacific Isander/Hawaiian	Count	1	0	1
		% within Race	100.0%	0.0%	100.0%
		% within NG	0.3%	0.0%	0.3%
		% of Total	0.3%	0.0%	0.3%
	Unknown/Other	Count	20	0	20
		% within Race	100.0%	0.0%	100.0%
		% within NG	6.6%	0.0%	6.5%
		% of Total	6.5%	0.0%	6.5%
Total		Count	305	5	310
		% within Race	98.4%	1.6%	100.0%
		% within NG	100.0%	100.0%	100.0%
		% of Total	98.4%	1.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.493[a]	5	.914
Likelihood Ratio	1.945	5	.857
Linear-by-Linear Association	.132	1	.717
N of Valid Cases	310		

a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is .02.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.021	.023	-.362	.717[c]
Ordinal by Ordinal	Spearman Correlation	.014	.048	.237	.813[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Race * CT

Crosstab

			CT		
			Negative	Positive	Total
Race	White	Count	152	10	162
		% within Race	93.8%	6.2%	100.0%
		% within CT	54.3%	33.3%	52.3%
		% of Total	49.0%	3.2%	52.3%
	Black	Count	95	18	113
		% within Race	84.1%	15.9%	100.0%
		% within CT	33.9%	60.0%	36.5%
		% of Total	30.6%	5.8%	36.5%
	American Indian/Alaska Native	Count	9	0	9
		% within Race	100.0%	0.0%	100.0%
		% within CT	3.2%	0.0%	2.9%
		% of Total	2.9%	0.0%	2.9%
	Asian	Count	5	0	5
		% within Race	100.0%	0.0%	100.0%
		% within CT	1.8%	0.0%	1.6%
		% of Total	1.6%	0.0%	1.6%
	Pacific Isander/Hawaiian	Count	1	0	1
		% within Race	100.0%	0.0%	100.0%
		% within CT	0.4%	0.0%	0.3%
		% of Total	0.3%	0.0%	0.3%
	Unknown/Other	Count	18	2	20
		% within Race	90.0%	10.0%	100.0%
		% within CT	6.4%	6.7%	6.5%
		% of Total	5.8%	0.6%	6.5%
Total		Count	280	30	310
		% within Race	90.3%	9.7%	100.0%
		% within CT	100.0%	100.0%	100.0%
		% of Total	90.3%	9.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.939[a]	5	.112
Likelihood Ratio	9.948	5	.077
Linear-by-Linear Association	.325	1	.569
N of Valid Cases	310		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .10.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.032	.053	.569	.569[c]
Ordinal by Ordinal	Spearman Correlation	.094	.052	1.656	.099[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Ethnicity * NG

Crosstab

			NG		
			Negative	Positive	Total
Ethnicity	Non-Hispanic	Count	242	3	245
		% within Ethnicity	98.8%	1.2%	100.0%
		% within NG	79.3%	60.0%	79.0%
		% of Total	78.1%	1.0%	79.0%
	Hispanic	Count	63	2	65
		% within Ethnicity	96.9%	3.1%	100.0%
		% within NG	20.7%	40.0%	21.0%
		% of Total	20.3%	0.6%	21.0%
Total		Count	305	5	310
		% within Ethnicity	98.4%	1.6%	100.0%
		% within NG	100.0%	100.0%	100.0%
		% of Total	98.4%	1.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.111[a]	1	.292		
Continuity Correction[b]	.250	1	.617		
Likelihood Ratio	.948	1	.330		
Fisher's Exact Test				.282	.282
Linear-by-Linear Association	1.107	1	.293		
N of Valid Cases	310				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.05.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.060	.069	1.052	.293[c]
Ordinal by Ordinal	Spearman Correlation	.060	.069	1.052	.293[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	1.111	1	.292
Mantel-Haenszel	.249	1	.618

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			2.561
ln(Estimate)			.940
Std. Error of ln(Estimate)			.924
Asymp. Sig. (2-sided)			.309
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.419
		Upper Bound	15.656
	ln(Common Odds Ratio)	Lower Bound	-.870
		Upper Bound	2.751

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Ethnicity * CT

Crosstab

			CT		
			Negative	Positive	Total
Ethnicity	Non-Hispanic	Count	221	24	245
		% within Ethnicity	90.2%	9.8%	100.0%
		% within CT	78.9%	80.0%	79.0%
		% of Total	71.3%	7.7%	79.0%
	Hispanic	Count	59	6	65
		% within Ethnicity	90.8%	9.2%	100.0%
		% within CT	21.1%	20.0%	21.0%
		% of Total	19.0%	1.9%	21.0%
Total		Count	280	30	310
		% within Ethnicity	90.3%	9.7%	100.0%
		% within CT	100.0%	100.0%	100.0%
		% of Total	90.3%	9.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.019[a]	1	.891		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.019	1	.890		
Fisher's Exact Test				1.000	.554
Linear-by-Linear Association	.019	1	.891		
N of Valid Cases	310				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.29.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.008	.056	-.137	.891[c]
Ordinal by Ordinal	Spearman Correlation	-.008	.056	-.137	.891[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	.019	1	.891
Mantel-Haenszel	.010	1	.921

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			.936
ln(Estimate)			-.066
Std. Error of ln(Estimate)			.479
Asymp. Sig. (2-sided)			.891
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.366
		Upper Bound	2.396
	ln(Common Odds Ratio)	Lower Bound	-1.005
		Upper Bound	.874

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Gender * NG

Crosstab

			NG		
			Negative	Positive	Total
Gender	Male	Count	245	2	247
		% within Gender	99.2%	0.8%	100.0%
		% within NG	80.3%	40.0%	79.7%
		% of Total	79.0%	0.6%	79.7%
	Female	Count	60	3	63
		% within Gender	95.2%	4.8%	100.0%
		% within NG	19.7%	60.0%	20.3%
		% of Total	19.4%	1.0%	20.3%
Total		Count	305	5	310
		% within Gender	98.4%	1.6%	100.0%
		% within NG	100.0%	100.0%	100.0%
		% of Total	98.4%	1.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.941[a]	1	.026		
Continuity Correction[b]	2.764	1	.096		
Likelihood Ratio	3.820	1	.051		
Fisher's Exact Test				.059	.059
Linear-by-Linear Association	4.925	1	.026		
N of Valid Cases	310				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.02.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.126	.074	2.233	.026[c]
Ordinal by Ordinal	Spearman Correlation	.126	.074	2.233	.026[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

ests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	4.941	1	.026
Mantel-Haenszel	2.755	1	.097

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			6.125
ln(Estimate)			1.812
Std. Error of ln(Estimate)			.924
Asymp. Sig. (2-sided)			.050
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	1.001
		Upper Bound	37.476
	ln(Common Odds Ratio)	Lower Bound	.001
		Upper Bound	3.624

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Gender * CT

Crosstab

			CT		
			Negative	Positive	Total
Gender	Male	Count	225	22	247
		% within Gender	91.1%	8.9%	100.0%
		% within CT	80.4%	73.3%	79.7%
		% of Total	72.6%	7.1%	79.7%
	Female	Count	55	8	63
		% within Gender	87.3%	12.7%	100.0%
		% within CT	19.6%	26.7%	20.3%
		% of Total	17.7%	2.6%	20.3%
Total		Count	280	30	310
		% within Gender	90.3%	9.7%	100.0%
		% within CT	100.0%	100.0%	100.0%
		% of Total	90.3%	9.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.826[a]	1	.364		
Continuity Correction[b]	.449	1	.503		
Likelihood Ratio	.777	1	.378		
Fisher's Exact Test				.347	.245
Linear-by-Linear Association	.823	1	.364		
N of Valid Cases	310				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.10.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.052	.062	.907	.365[c]
Ordinal by Ordinal	Spearman Correlation	.052	.062	.907	.365[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	.826	1	.364
Mantel-Haenszel	.447	1	.504

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			1.488
ln(Estimate)			.397
Std. Error of ln(Estimate)			.439
Asymp. Sig. (2-sided)			.366
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.629
		Upper Bound	3.520
	ln(Common Odds Ratio)	Lower Bound	-.464
		Upper Bound	1.258

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Intoxicated * NG

Crosstab

			NG		
			Negative	Positive	Total
Intoxicated	No	Count	97	1	98
		% within Intoxicated	99.0%	1.0%	100.0%
		% within NG	31.8%	20.0%	31.6%
		% of Total	31.3%	0.3%	31.6%
	Yes	Count	208	4	212
		% within Intoxicated	98.1%	1.9%	100.0%
		% within NG	68.2%	80.0%	68.4%
		% of Total	67.1%	1.3%	68.4%
Total		Count	305	5	310
		% within Intoxicated	98.4%	1.6%	100.0%
		% within NG	100.0%	100.0%	100.0%
		% of Total	98.4%	1.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.317[a]	1	.573		
Continuity Correction[b]	.006	1	.938		
Likelihood Ratio	.344	1	.557		
Fisher's Exact Test				1.000	.494
Linear-by-Linear Association	.316	1	.574		
N of Valid Cases	310				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.58.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.032	.049	.562	.575[c]
Ordinal by Ordinal	Spearman Correlation	.032	.049	.562	.575[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	.317	1	.573
Mantel-Haenszel	.006	1	.938

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			1.865
ln(Estimate)			.623
Std. Error of ln(Estimate)			1.125
Asymp. Sig. (2-sided)			.579
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.206
		Upper Bound	16.911
	ln(Common Odds Ratio)	Lower Bound	-1.581
		Upper Bound	2.828

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Intoxicated * CT

Crosstab

			CT		
			Negative	Positive	Total
Intoxicated	No	Count	86	12	98
		% within Intoxicated	87.8%	12.2%	100.0%
		% within CT	30.7%	40.0%	31.6%
		% of Total	27.7%	3.9%	31.6%
	Yes	Count	194	18	212
		% within Intoxicated	91.5%	8.5%	100.0%
		% within CT	69.3%	60.0%	68.4%
		% of Total	62.6%	5.8%	68.4%
Total		Count	280	30	310
		% within Intoxicated	90.3%	9.7%	100.0%
		% within CT	100.0%	100.0%	100.0%
		% of Total	90.3%	9.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.081[a]	1	.299		
Continuity Correction[b]	.694	1	.405		
Likelihood Ratio	1.042	1	.307		
Fisher's Exact Test				.307	.201
Linear-by-Linear Association	1.077	1	.299		
N of Valid Cases	310				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.48.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.059	.060	-1.038	.300[c]
Ordinal by Ordinal	Spearman Correlation	-.059	.060	-1.038	.300[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	1.081	1	.299
Mantel-Haenszel	.692	1	.406

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			.665
ln(Estimate)			-.408
Std. Error of ln(Estimate)			.395
Asymp. Sig. (2-sided)			.301
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.307
		Upper Bound	1.441
	ln(Common Odds Ratio)	Lower Bound	-1.181
		Upper Bound	.365

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Pre_incar * NG

Crosstab

			NG		
			Negative	Positive	Total
Pre_incar	No	Count	70	1	71
		% within Pre_incar	98.6%	1.4%	100.0%
		% within NG	23.0%	20.0%	22.9%
		% of Total	22.6%	0.3%	22.9%
	Yes	Count	235	4	239
		% within Pre_incar	98.3%	1.7%	100.0%
		% within NG	77.0%	80.0%	77.1%
		% of Total	75.8%	1.3%	77.1%
Total		Count	305	5	310
		% within Pre_incar	98.4%	1.6%	100.0%
		% within NG	100.0%	100.0%	100.0%
		% of Total	98.4%	1.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.024[a]	1	.876		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.025	1	.874		
Fisher's Exact Test				1.000	.677
Linear-by-Linear Association	.024	1	.876		
N of Valid Cases	310				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.15.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.009	.054	.155	.877[c]
Ordinal by Ordinal	Spearman Correlation	.009	.054	.155	.877[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	.024	1	.876
Mantel-Haenszel	.144	1	.704

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			1.191
ln(Estimate)			.175
Std. Error of ln(Estimate)			1.126
Asymp. Sig. (2-sided)			.876
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.131
		Upper Bound	10.834
	ln(Common Odds Ratio)	Lower Bound	-2.032
		Upper Bound	2.383

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Pre_incar * CT

Crosstab

			CT		
			Negative	Positive	Total
Pre_incar	No	Count	64	7	71
		% within Pre_incar	90.1%	9.9%	100.0%
		% within CT	22.9%	23.3%	22.9%
		% of Total	20.6%	2.3%	22.9%
	Yes	Count	216	23	239
		% within Pre_incar	90.4%	9.6%	100.0%
		% within CT	77.1%	76.7%	77.1%
		% of Total	69.7%	7.4%	77.1%
Total		Count	280	30	310
		% within Pre_incar	90.3%	9.7%	100.0%
		% within CT	100.0%	100.0%	100.0%
		% of Total	90.3%	9.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.003[a]	1	.953		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.003	1	.953		
Fisher's Exact Test				1.000	.554
Linear-by-Linear Association	.003	1	.953		
N of Valid Cases	310				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.87.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.003	.057	-.059	.953[c]
Ordinal by Ordinal	Spearman Correlation	-.003	.057	-.059	.953[c]
N of Valid Cases		310			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tests of Homogeneity of the Odds Ratio

	Chi-Squared	df	Asymp. Sig. (2-sided)
Breslow-Day	.000	0	.
Tarone's	.000	0	.

Tests of Conditional Independence

	Chi-Squared	df	Asymp. Sig. (2-sided)
Cochran's	.003	1	.953
Mantel-Haenszel	.029	1	.866

Under the conditional independence assumption, Cochran's statistic is asymptotically distributed as a 1 df chi-squared distribution, only if the number of strata is fixed, while the Mantel-Haenszel statistic is always asymptotically distributed as a 1 df chi-squared distribution. Note that the continuity correction is removed from the Mantel-Haenszel statistic when the sum of the differences between the observed and the expected is 0.

Mantel-Haenszel Common Odds Ratio Estimate

Estimate			.974
ln(Estimate)			-.027
Std. Error of ln(Estimate)			.455
Asymp. Sig. (2-sided)			.953
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	.399
		Upper Bound	2.373
	ln(Common Odds Ratio)	Lower Bound	-.918
		Upper Bound	.864

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

ATTACHMENT 2 OPT-IN (n=3070)

```
CROSSTABS
  /TABLES=Age_Groups Race Ethnicity Gender Intoxicated prev_incar BY NG CT
  /FORMAT=AVALUE TABLES
  /STATISTICS=CHISQ CORR CMH(1)
  /CELLS=COUNT ROW COLUMN TOTAL
  /COUNT ROUND CELL.
```

Crosstabs

Notes

Output Created		04-APR-2015 20:06:23
Comments		
Input	Data	C:\Users\murly_000\Desktop\Opt -In capstone.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	3070
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax		CROSSTABS /TABLES=Age_Groups Race Ethnicity Gender Intoxicated prev_incar BY NG CT /FORMAT=AVALUE TABLES /STATISTICS=CHISQ CORR CMH(1) /CELLS=COUNT ROW COLUMN TOTAL /COUNT ROUND CELL.
Resources	Processor Time	00:00:00.08
	Elapsed Time	00:00:00.08
	Dimensions Requested	2
	Cells Available	174734

Warnings

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Age_Groups * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Age_Groups * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Race * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Race * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Ethnicity * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Ethnicity * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Gender * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Gender * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.
The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Intoxicated * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for Intoxicated * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for prev_incar * NG, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

The Tests for Homogeneity of the Odds Ratio table and the Mantel-Haenszel Common Odds Ratio Estimate table are not computed for prev_incar * CT, because either (1) the group variable does not have exactly two distinct non-missing values or/and (2) the response variable does not have exactly two distinct non-missing values.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age_Groups * NG	3070	100.0%	0	0.0%	3070	100.0%
Age_Groups * CT	3070	100.0%	0	0.0%	3070	100.0%
Race * NG	3070	100.0%	0	0.0%	3070	100.0%
Race * CT	3070	100.0%	0	0.0%	3070	100.0%
Ethnicity * NG	3070	100.0%	0	0.0%	3070	100.0%
Ethnicity * CT	3070	100.0%	0	0.0%	3070	100.0%
Gender * NG	3070	100.0%	0	0.0%	3070	100.0%
Gender * CT	3070	100.0%	0	0.0%	3070	100.0%
Intoxicated * NG	3070	100.0%	0	0.0%	3070	100.0%
Intoxicated * CT	3070	100.0%	0	0.0%	3070	100.0%
prev_incar * NG	3070	100.0%	0	0.0%	3070	100.0%
prev_incar * CT	3070	100.0%	0	0.0%	3070	100.0%

Age_Groups * NG

Crosstab

			NG			
			Negative	Positive	No Sample	Total
Age_Groups	From 18 to 24	Count	926	11	6	943
		% within Age_Groups	98.2%	1.2%	0.6%	100.0%
		% within NG	30.6%	35.5%	40.0%	30.7%
		% of Total	30.2%	0.4%	0.2%	30.7%
	From 25 to 31	Count	863	12	3	878
		% within Age_Groups	98.3%	1.4%	0.3%	100.0%
		% within NG	28.5%	38.7%	20.0%	28.6%
		% of Total	28.1%	0.4%	0.1%	28.6%
	From 32 to 38	Count	541	5	2	548
		% within Age_Groups	98.7%	0.9%	0.4%	100.0%
		% within NG	17.9%	16.1%	13.3%	17.9%
		% of Total	17.6%	0.2%	0.1%	17.9%
	39 and over	Count	694	3	4	701
		% within Age_Groups	99.0%	0.4%	0.6%	100.0%
		% within NG	22.9%	9.7%	26.7%	22.8%
		% of Total	22.6%	0.1%	0.1%	22.8%
Total		Count	3024	31	15	3070
		% within Age_Groups	98.5%	1.0%	0.5%	100.0%
		% within NG	100.0%	100.0%	100.0%	100.0%
		% of Total	98.5%	1.0%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.849[a]	6	.563
Likelihood Ratio	5.405	6	.493
Linear-by-Linear Association	1.243	1	.265
N of Valid Cases	3070		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 2.68.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.020	.018	-1.115	.265[c]
Ordinal by Ordinal	Spearman Correlation	-.026	.017	-1.414	.157[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Age_Groups * CT

Crosstab

			CT			
			Negative	Positive	No Sample	Total
Age_Groups	From 18 to 24	Count	873	62	8	943
		% within Age_Groups	92.6%	6.6%	0.8%	100.0%
		% within CT	30.4%	35.0%	30.8%	30.7%
		% of Total	28.4%	2.0%	0.3%	30.7%
	From 25 to 31	Count	810	59	9	878
		% within Age_Groups	92.3%	6.7%	1.0%	100.0%
		% within CT	28.3%	33.3%	34.6%	28.6%
		% of Total	26.4%	1.9%	0.3%	28.6%
	From 32 to 38	Count	514	31	3	548
		% within Age_Groups	93.8%	5.7%	0.5%	100.0%
		% within CT	17.9%	17.5%	11.5%	17.9%
		% of Total	16.7%	1.0%	0.1%	17.9%
	39 and over	Count	670	25	6	701
		% within Age_Groups	95.6%	3.6%	0.9%	100.0%
		% within CT	23.4%	14.1%	23.1%	22.8%
		% of Total	21.8%	0.8%	0.2%	22.8%
Total		Count	2867	177	26	3070
		% within Age_Groups	93.4%	5.8%	0.8%	100.0%
		% within CT	100.0%	100.0%	100.0%	100.0%
		% of Total	93.4%	5.8%	0.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.816[a]	6	.133
Likelihood Ratio	10.694	6	.098
Linear-by-Linear Association	5.202	1	.023
N of Valid Cases	3070		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 4.64.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.041	.017	-2.282	.023[c]
Ordinal by Ordinal	Spearman Correlation	-.044	.017	-2.458	.014[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Race * NG

Crosstab

			NG			
			Negative	Positive	No Sample	Total
Race	White	Count	1295	19	7	1321
		% within Race	98.0%	1.4%	0.5%	100.0%
		% within NG	42.8%	61.3%	46.7%	43.0%
		% of Total	42.2%	0.6%	0.2%	43.0%
	Black	Count	1340	10	8	1358
		% within Race	98.7%	0.7%	0.6%	100.0%
		% within NG	44.3%	32.3%	53.3%	44.2%
		% of Total	43.6%	0.3%	0.3%	44.2%
	American Indian/Alaska Native	Count	167	1	0	168
		% within Race	99.4%	0.6%	0.0%	100.0%
		% within NG	5.5%	3.2%	0.0%	5.5%
		% of Total	5.4%	0.0%	0.0%	5.5%
	Asian	Count	12	0	0	12
		% within Race	100.0%	0.0%	0.0%	100.0%
		% within NG	0.4%	0.0%	0.0%	0.4%
		% of Total	0.4%	0.0%	0.0%	0.4%
	Pacific Islander/Hawaiian	Count	5	0	0	5
		% within Race	100.0%	0.0%	0.0%	100.0%
		% within NG	0.2%	0.0%	0.0%	0.2%
		% of Total	0.2%	0.0%	0.0%	0.2%
	Unknown/Other	Count	205	1	0	206
		% within Race	99.5%	0.5%	0.0%	100.0%
		% within NG	6.8%	3.2%	0.0%	6.7%
		% of Total	6.7%	0.0%	0.0%	6.7%
Total		Count	3024	31	15	3070
		% within Race	98.5%	1.0%	0.5%	100.0%
		% within NG	100.0%	100.0%	100.0%	100.0%
		% of Total	98.5%	1.0%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.736[a]	10	.750
Likelihood Ratio	8.807	10	.550
Linear-by-Linear Association	3.485	1	.062
N of Valid Cases	3070		

a. 9 cells (50.0%) have expected count less than 5. The minimum expected count is .02.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.034	.010	-1.867	.062[c]
Ordinal by Ordinal	Spearman Correlation	-.039	.016	-2.147	.032[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Race * CT

Crosstab

			CT			
			Negative	Positive	No Sample	Total
Race	White	Count	1214	91	16	1321
		% within Race	91.9%	6.9%	1.2%	100.0%
		% within CT	42.3%	51.4%	61.5%	43.0%
		% of Total	39.5%	3.0%	0.5%	43.0%
	Black	Count	1284	64	10	1358
		% within Race	94.6%	4.7%	0.7%	100.0%
		% within CT	44.8%	36.2%	38.5%	44.2%
		% of Total	41.8%	2.1%	0.3%	44.2%
	American Indian/Alaska Native	Count	157	11	0	168
		% within Race	93.5%	6.5%	0.0%	100.0%
		% within CT	5.5%	6.2%	0.0%	5.5%
		% of Total	5.1%	0.4%	0.0%	5.5%
	Asian	Count	11	1	0	12
		% within Race	91.7%	8.3%	0.0%	100.0%
		% within CT	0.4%	0.6%	0.0%	0.4%
		% of Total	0.4%	0.0%	0.0%	0.4%
	Pacific Islander/Hawaiian	Count	5	0	0	5
		% within Race	100.0%	0.0%	0.0%	100.0%
		% within CT	0.2%	0.0%	0.0%	0.2%
		% of Total	0.2%	0.0%	0.0%	0.2%
	Unknown/Other	Count	196	10	0	206
		% within Race	95.1%	4.9%	0.0%	100.0%
		% within CT	6.8%	5.6%	0.0%	6.7%
		% of Total	6.4%	0.3%	0.0%	6.7%
Total		Count	2867	177	26	3070
		% within Race	93.4%	5.8%	0.8%	100.0%
		% within CT	100.0%	100.0%	100.0%	100.0%
		% of Total	93.4%	5.8%	0.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.584[a]	10	.248
Likelihood Ratio	15.943	10	.101
Linear-by-Linear Association	5.609	1	.018
N of Valid Cases	3070		

a. 7 cells (38.9%) have expected count less than 5. The minimum expected count is .04.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.043	.015	-2.370	.018[c]
Ordinal by Ordinal	Spearman Correlation	-.049	.018	-2.729	.006[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Ethnicity * NG

Crosstab

			NG			
			Negative	Positive	No Sample	Total
Ethnicity	Non-Hispanic	Count	2227	23	9	2259
		% within Ethnicity	98.6%	1.0%	0.4%	100.0%
		% within NG	73.6%	74.2%	60.0%	73.6%
		% of Total	72.5%	0.7%	0.3%	73.6%
	Hispanic	Count	797	8	6	811
		% within Ethnicity	98.3%	1.0%	0.7%	100.0%
		% within NG	26.4%	25.8%	40.0%	26.4%
		% of Total	26.0%	0.3%	0.2%	26.4%
Total		Count	3024	31	15	3070
		% within Ethnicity	98.5%	1.0%	0.5%	100.0%
		% within NG	100.0%	100.0%	100.0%	100.0%
		% of Total	98.5%	1.0%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.435[a]	2	.488
Likelihood Ratio	1.317	2	.518
Linear-by-Linear Association	.865	1	.352
N of Valid Cases	3070		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.96.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.017	.020	.930	.352[c]
Ordinal by Ordinal	Spearman Correlation	.011	.019	.630	.529[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Ethnicity * CT

Crosstab

			CT			
			Negative	Positive	No Sample	Total
Ethnicity	Non-Hispanic	Count	2117	126	16	2259
		% within Ethnicity	93.7%	5.6%	0.7%	100.0%
		% within CT	73.8%	71.2%	61.5%	73.6%
		% of Total	69.0%	4.1%	0.5%	73.6%
	Hispanic	Count	750	51	10	811
		% within Ethnicity	92.5%	6.3%	1.2%	100.0%
		% within CT	26.2%	28.8%	38.5%	26.4%
		% of Total	24.4%	1.7%	0.3%	26.4%
Total		Count	2867	177	26	3070
		% within Ethnicity	93.4%	5.8%	0.8%	100.0%
		% within CT	100.0%	100.0%	100.0%	100.0%
		% of Total	93.4%	5.8%	0.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.561[a]	2	.278
Likelihood Ratio	2.404	2	.301
Linear-by-Linear Association	2.150	1	.143
N of Valid Cases	3070		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.87.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.026	.019	1.467	.143[c]
Ordinal by Ordinal	Spearman Correlation	.022	.019	1.238	.216[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Gender * NG

Crosstab

			NG			
			Negative	Positive	No Sample	Total
Gender	Male	Count	2561	22	14	2597
		% within Gender	98.6%	0.8%	0.5%	100.0%
		% within NG	84.7%	71.0%	93.3%	84.6%
		% of Total	83.4%	0.7%	0.5%	84.6%
	Female	Count	462	9	1	472
		% within Gender	97.9%	1.9%	0.2%	100.0%
		% within NG	15.3%	29.0%	6.7%	15.4%
		% of Total	15.0%	0.3%	0.0%	15.4%
	MtoF	Count	1	0	0	1
		% within Gender	100.0%	0.0%	0.0%	100.0%
		% within NG	0.0%	0.0%	0.0%	0.0%
		% of Total	0.0%	0.0%	0.0%	0.0%
Total		Count	3024	31	15	3070
		% within Gender	98.5%	1.0%	0.5%	100.0%
		% within NG	100.0%	100.0%	100.0%	100.0%
		% of Total	98.5%	1.0%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.354[a]	4	.253
Likelihood Ratio	4.819	4	.306
Linear-by-Linear Association	.212	1	.645
N of Valid Cases	3070		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is .00.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.008	.018	.461	.645[c]
Ordinal by Ordinal	Spearman Correlation	.021	.021	1.183	.237[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Gender * CT

Crosstab

			CT			
			Negative	Positive	No Sample	Total
Gender	Male	Count	2433	139	25	2597
		% within Gender	93.7%	5.4%	1.0%	100.0%
		% within CT	84.9%	78.5%	96.2%	84.6%
		% of Total	79.3%	4.5%	0.8%	84.6%
	Female	Count	433	38	1	472
		% within Gender	91.7%	8.1%	0.2%	100.0%
		% within CT	15.1%	21.5%	3.8%	15.4%
		% of Total	14.1%	1.2%	0.0%	15.4%
	MtoF	Count	1	0	0	1
		% within Gender	100.0%	0.0%	0.0%	100.0%
		% within CT	0.0%	0.0%	0.0%	0.0%
		% of Total	0.0%	0.0%	0.0%	0.0%
Total		Count	2867	177	26	3070
		% within Gender	93.4%	5.8%	0.8%	100.0%
		% within CT	100.0%	100.0%	100.0%	100.0%
		% of Total	93.4%	5.8%	0.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.936[a]	4	.094
Likelihood Ratio	8.506	4	.075
Linear-by-Linear Association	.622	1	.430
N of Valid Cases	3070		

a. 4 cells (44.4%) have expected count less than 5. The minimum expected count is .01.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.014	.018	.789	.430[c]
Ordinal by Ordinal	Spearman Correlation	.027	.019	1.498	.134[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Intoxicated * NG

Crosstab

			NG			
			Negative	Positive	No Sample	Total
Intoxicated	No	Count	499	2	3	504
		% within Intoxicated	99.0%	0.4%	0.6%	100.0%
		% within NG	16.5%	6.5%	20.0%	16.4%
		% of Total	16.3%	0.1%	0.1%	16.4%
	Yes	Count	2525	29	12	2566
		% within Intoxicated	98.4%	1.1%	0.5%	100.0%
		% within NG	83.5%	93.5%	80.0%	83.6%
		% of Total	82.2%	0.9%	0.4%	83.6%
Total		Count	3024	31	15	3070
		% within Intoxicated	98.5%	1.0%	0.5%	100.0%
		% within NG	100.0%	100.0%	100.0%	100.0%
		% of Total	98.5%	1.0%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.400[a]	2	.301
Likelihood Ratio	2.946	2	.229
Linear-by-Linear Association	.329	1	.566
N of Valid Cases	3070		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.46.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.010	.018	.574	.566[c]
Ordinal by Ordinal	Spearman Correlation	.018	.015	1.015	.310[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Intoxicated * CT

Crosstab

			CT			
			Negative	Positive	No Sample	Total
Intoxicated	No	Count	475	25	4	504
		% within Intoxicated	94.2%	5.0%	0.8%	100.0%
		% within CT	16.6%	14.1%	15.4%	16.4%
		% of Total	15.5%	0.8%	0.1%	16.4%
	Yes	Count	2392	152	22	2566
		% within Intoxicated	93.2%	5.9%	0.9%	100.0%
		% within CT	83.4%	85.9%	84.6%	83.6%
		% of Total	77.9%	5.0%	0.7%	83.6%
Total		Count	2867	177	26	3070
		% within Intoxicated	93.4%	5.8%	0.8%	100.0%
		% within CT	100.0%	100.0%	100.0%	100.0%
		% of Total	93.4%	5.8%	0.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.746[a]	2	.689
Likelihood Ratio	.773	2	.679
Linear-by-Linear Association	.583	1	.445
N of Valid Cases	3070		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.27.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.014	.017	.763	.445[c]
Ordinal by Ordinal	Spearman Correlation	.015	.017	.844	.399[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

prev_incar * NG

Crosstab

			NG			
			Negative	Positive	No Sample	Total
prev_incar	No	Count	587	4	3	594
		% within prev_incar	98.8%	0.7%	0.5%	100.0%
		% within NG	19.4%	12.9%	20.0%	19.3%
		% of Total	19.1%	0.1%	0.1%	19.3%
	Yes	Count	2437	27	12	2476
		% within prev_incar	98.4%	1.1%	0.5%	100.0%
		% within NG	80.6%	87.1%	80.0%	80.7%
		% of Total	79.4%	0.9%	0.4%	80.7%
Total		Count	3024	31	15	3070
		% within prev_incar	98.5%	1.0%	0.5%	100.0%
		% within NG	100.0%	100.0%	100.0%	100.0%
		% of Total	98.5%	1.0%	0.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.837[a]	2	.658
Likelihood Ratio	.922	2	.631
Linear-by-Linear Association	.232	1	.630
N of Valid Cases	3070		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.90.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.009	.017	.481	.630[c]
Ordinal by Ordinal	Spearman Correlation	.013	.016	.710	.477[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

prev_incar * CT

Crosstab

			CT			
			Negative	Positive	No Sample	Total
prev_incar	No	Count	553	35	6	594
		% within prev_incar	93.1%	5.9%	1.0%	100.0%
		% within CT	19.3%	19.8%	23.1%	19.3%
		% of Total	18.0%	1.1%	0.2%	19.3%
	Yes	Count	2314	142	20	2476
		% within prev_incar	93.5%	5.7%	0.8%	100.0%
		% within CT	80.7%	80.2%	76.9%	80.7%
		% of Total	75.4%	4.6%	0.7%	80.7%
Total		Count	2867	177	26	3070
		% within prev_incar	93.4%	5.8%	0.8%	100.0%
		% within CT	100.0%	100.0%	100.0%	100.0%
		% of Total	93.4%	5.8%	0.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.259[a]	2	.879
Likelihood Ratio	.248	2	.883
Linear-by-Linear Association	.176	1	.675
N of Valid Cases	3070		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.03.

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.008	.019	-.419	.675[c]
Ordinal by Ordinal	Spearman Correlation	-.006	.018	-.326	.745[c]
N of Valid Cases		3070			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

ATTACHMENT 3:

SIDE BY SIDE COMPARISON TABLES SHOWING ONLY POSITIVE RATES.

Age Groups ~ OPT-IN		CT Positive		NG Positive		n = 3070
From 18 to 24	Count	62		11	Count	**943**
	% CT	35.0%		35.5%	% NG	
	% w/in age group	6.6%		1.2%	% w/in age group	
From 25 to 31	Count	59		12	Count	**878**
	% CT	33.3%		38.7%	% NG	
	% w/in age group	6.7%		1.4%	% w/in age group	
From 32 to 38	Count	31		5	Count	**548**
	% CT	17.5%		16.1%	% NG	
	% w/in age group	5.7%		0.9%	% w/in age group	
39 and over	Count	25		3	Count	**701**
	% CT	14.1%		9.7%	% NG	
	% w/in age group	3.6%		0.4%	% w/in age group	
	Total Positive CT	177		31	Total Positive NG	
	% of total tested	5.8%		1%	% of total tested	

Age Groups ~ OPT-OUT		CT Positive		NG Positive		n = 310
From 18 to 24	Count	18		2	Count	95
	% CT	60.0%		40.0%	% NG	
	% w/in age group	18.9%		2.1%	% w/in age group	
From 25 to 31	Count	5		2	Count	86
	% CT	16.7%		40.0%	% NG	
	% w/in age group	5.8%		2.3%	% w/in age group	
From 32 to 38	Count	3		0	Count	43
	% CT	10.0%		0.0%	% NG	
	% w/in age group	7.0%		0.0%	% w/in age group	
39 and over	Count	4		1	Count	86
	% CT	13.3%		20.0%	% NG	
	% w/in age group	4.7%		1.2%	% w/in age group	
	Total Positive CT	30		5	Total Positive NG	
	% of total tested	9.7%		1.6%	% of total tested	

Race ~ OPT-IN		CT Positive		NG Positive		n = 3070
White	Count	91		19	Count	**1321**
	% CT	51.4%		61.3%	% NG	
	%w/in race	6.9%		1.4%	%w/in race	
Black	Count	64		10	Count	**1358**
	% CT	36.2%		32.3%	% NG	
	%w/in race	4.7%		0.7%	%w/in race	
American Indian/ Alaska Native	Count	11		1	Count	**168**
	% CT	6.2%		3.2%	% NG	
	%w/in race	6.5%		0.6%	%w/in race	
Asian	Count	1		0	Count	**12**
	% CT	0.6%		0.0%	% NG	
	%w/in race	8.3%		0.0%	%w/in race	
Pacific Islander/ Hawaiian	Count	0		0	Count	**5**
	% CT	0.0%		0.0%	% NG	
	%w/in race	0.0%		0.0%	%w/in race	
Unknown/ Other	Count	10		1	Count	**206**
	% CT	5.6%		3.2%	% NG	
	%w/in race	4.9%		0.5%	%w/in race	
	Total Positive CT	177		31	Total Positive NG	
	% of total tested	5.8%		1%	% of total tested	

Race ~ OPT-OUT		CT Positive		NG Positive		n = 310
White	Count	10		2	Count	**162**
	% CT	33.3%		40.0%	% NG	
	% w/in race	6.2%		1.2%	% w/in race	
Black	Count	18		3	Count	**113**
	% CT	60.0%		60.0%	% NG	
	% w/in race	15.9%		2.7%	% w/in race	
American Indian/ Alaska Native	Count	0		0	Count	**9**
	% CT	0.0%		0.0%	% NG	
	% w/in race	0.0%		0.0%	% w/in race	
Asian	Count	0		0	Count	**5**
	% CT	0.0%		0.0%	% NG	
	% w/in race	0.0%		0.0%	% w/in race	
Pacific Islander/ Hawaiian	Count	0.0%		0	Count	**1**
	% CT	0.0%		0.0%	% NG	
	% w/in race	0		0.0%	% w/in race	
Unknown/ Other	Count	2		0	Count	**20**
	% CT	10.0%		0.0%	% NG	
	% w/in race	6.7%		0.0%	% w/in race	
	Total Positive CT	30		5	Total Positive NG	
	% of total tested	9.7%		1.6%	% of total tested	

Ethnicity ~ OPT-IN		CT Positive		NG Positive		n = 3070
Non-Hispanic	Count	126		23	Count	2259
	% CT	71.2%		74.2%	% NG	
	% w/in ethnicity	5.6%		1.0%	% w/in ethnicity	
Hispanic	Count	51		8	Count	811
	% CT	28.8%		25.8%	% NG	
	% w/in ethnicity	6.3%		1.0%	% w/in ethnicity	
	Total Positives CT	177		31	Total Positives NG	
	% of total tested	5.8%		1%	% of total tested	

Ethnicity ~ OPT-OUT		CT Positive		NG Positive		n = 310
Non-Hispanic	Count	24		3	Count	245
	% CT	80.0%		60.0%	% NG	
	% w/in ethnicity	9.8%		1.2%	% w/in ethnicity	
Hispanic	Count	6		2	Count	65
	% CT	20.0%		40.0%	% NG	
	% w/in ethnicity	9.2%		3.1%	% w/in ethnicity	
	Total Positives CT	30		5	Total Positives NG	
	% of total tested	9.7%		1.6%	% of total tested	

Gender ~ OPT-IN		CT Positive		NG Positive		n = 3070
Male	Count	139		22	Count	**2597**
	% CT	78.5%		71.0%	% NG	
	% w/in gender	5.4%		0.8%	% w/in gender	
Female	Count	38		9	Count	**472**
	% CT	21.5%		29.0%	% NG	
	% w/in gender	8.1%		1.9%	% w/in gender	
Male to Female	Count	0		0	Count	**1**
	% CT	0.0%		0.0%	% NG	
	% w/in gender	0.0%		0.0%	% w/in gender	
	Total Positives CT	177		31	Total Positives NG	
	% of total tested	5.8%		1%	% of total tested	

Gender ~ OPT-OUT		CT Positive		NG Positive		n = 310
Male	Count	22		2	Count	**247**
	% CT	73.3%		40.0%	% NG	
	% w/in gender	8.9%		0.8%	% w/in gender	
Female	Count	8		3	Count	**63**
	% CT	26.7%		60.0%	% NG	
	% w/in gender	12.7%		4.8%	% w/in gender	
	Total Positives CT	30		5	Total Positives NG	
	% of total tested	9.7%		1.6%	% of total tested	

Previous Incarceration ~ OPT-IN		CT Positive		NG Positive		n = 3070
No	Count	35		4	Count	594
	% CT	19.8%		12.9%	% NG	
	% w/in prev_incar	5.9%		0.7%	% w/in prev_incar	
Yes	Count	142		27	Count	2476
	% CT	80.2%		87.1%	% NG	
	% w/in prev_incar	5.7%		1.1%	% w/in prev_incar	
	Total Positives CT	177		31	Total Positives NG	
	% of total tested	5.8%		1%	% of total tested	

Previous Incarceration ~ OPT-OUT		CT Positive		NG Positive		n = 310
No	Count	7		1	Count	71
	% CT	23.3%		20.0%	% NG	
	% w/in prev_incar	9.9%		1.4%	% w/in prev_incar	
Yes	Count	23		4	Count	239
	% CT	76.7%		80.0%	% NG	
	% w/in prev_incar	9.6%		1.7%	% w/in prev_incar	
	Total Positives CT	30		5	Total Positives NG	
	% of total tested	9.7%		1.6%	% of total tested	

Drug/Intoxicamt Usage ~ OPT-IN		CT Positive		NG Positive		n = 3070
No	Count	25		2	Count	504
	% CT	14.1%		6.5%	% NG	
	% w/in intoxication	5.0%		0.4%	% w/in intoxication	
Yes	Count	152		29	Count	2566
	% CT	85.9%		93.5%	% NG	
	% w/in intoxication	5.9%		1.1%	% w/in intoxication	
	Total Positives CT	177		31	Total Positives NG	
	% of total tested	5.8%		1%	% of total tested	

Drug/Intoxicant Usage ~ OPT-OUT		CT Positive		NG Positive		n = 310
No	Count	12		1	Count	98
	% CT	40.0%		20.0%	% NG	
	% w/in intoxication	12.2%		1.0%	% w/in intoxication	
Yes	Count	18		4	Count	212
	% CT	60.0%		80.0%	% NG	
	% w/in intoxication	8.5%		1.9%	% w/in intoxication	
	Total Positives CT	30		5	Total Positives NG	
	% of total tested	9.7%		1.6%	% of total tested	