EXECUTIVE SUMMARY

Presenting the Findings from:

Jail Population Forecast for Broward County

Cost-Benefit Analysis for Jail Alternatives and Jail

Validation of the COMPAS Risk Assessment Instrument

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EXECUTIVE SUMMARY

In 2009, the Broward Sheriff's Office (BSO) contracted with Florida State University's Center for Criminology and Public Policy Research to examine three aspects of Broward's jail system: (1) to develop a ten-year population forecast of BSO's jail population, (2) to develop a cost-benefit analysis for jail alternatives compared to jail, and (3) to validate the COMPAS Risk Assessment tool utilized to inform the pretrial release decision-making process. Three reports were produced at the conclusion of these tasks and this summary provides a brief overview of each activity highlighting the major findings for each. The information is presented by task:

- Forecast of Future Jail Populations
- Cost-Benefit Analyses for Jail Alternatives
- Validation of the COMPAS Risk and Needs Assessment Tool

Historically, attention directed at jail costs, jail populations, and overall trends in local jails has typically taken a backseat to the attention focused on this country's prison population and associated costs. While the growth in states' and national prison populations has leveled off during the past decade, what have local jails been experiencing? In 2000, the national jail population was 621,149 and, by 2008, the population had increased to 785,556. During this same time period, jails throughout the country were operating between 90 percent and 96.3 percent of capacity. Florida's jail population increased 19 percent between 2000 and 2009 (from 48,591 to 57,768). At $125 per day per inmate, a rudimentary calculation of the annual cost to house offenders in jails cost Florida taxpayers approximately $2.6 billion in 2009. This approximation does not include capital outlay expenses to construct jails. Compared to Florida's Department of Corrections' entire budget for FY 2008-09, $2.5 billion, the aggregate cost of constructing and operating jails in Florida is significant. Placing offenders in jails is an expensive strategy for local governments and taxpayers to support particularly when other factors are considered such as the impact on the environment (e.g., physical space, water usage, sewage, raw materials). Further, local jails are being relied upon for

purposes other than the obvious reasons of detaining offenders sentenced to less than one year, offenders awaiting trial, and offenders held in contempt of court. Jails are relied upon for the temporary holding of offenders waiting to be picked up by a federal prison or other federal government agencies (Immigration and Naturalization/Immigration and Customs Enforcement), mental health facilities, and neighboring county governments. Jail administrators must be flexible, responsive, and creative in order to meet the diverse set of needs that jails serve. These factors alone would make operating jails a challenging prospect; however, when placed in the larger context of the current economic crisis facing the nation and this state, it seems to be an insurmountable task to protect public safety, ensure the secure custody of offenders who require supervision, and divert appropriate offenders into alternative placements while simultaneously watching the bottom line of the cost to the taxpayer. In Broward County, twenty-five cents of every local tax dollar is dedicated to the operation and maintenance of jails.

Florida's economy has suffered greatly over the past two to three years, more than many other states. Consumer spending has been significantly reduced and tourism in the state has experienced significant declines because Floridians and people from other states are uncertain about the future, particularly job security, and have been holding on to disposable income rather engaging in normal spending practices. Florida's housing market is in dire straits. These economic stressors have led to severely depleted sources of state revenue and subsequent statewide budget reductions.

Therefore, it has become critical for counties to find responsible, effective, cost-efficient alternatives to jail. BSO has been successful in pursuing this goal. The findings from this research provide the BSO with a jail population forecast to plan for fluctuations across specific populations of offenders in the next decade; evidence indicating that their pretrial alternatives are cost efficient; and evidence that their risk assessment screening tool is highly predictive, particularly when predicting future recidivism. The remainder of this Executive Summary discusses the major findings from the three research projects conducted in late 2009 and 2010.

<u>Forecast of Broward's Jail Population: 2010 through 2020</u>

The purpose of the jail population forecast is to provide Broward County correctional administrators and officials with an additional resource to better understand the dynamic nature of their jail population and correctional system, and aid their policymaking process. A tool such as a jail population forecast can lead to more informed policies governing their correctional system. The forecast report presents a substantial amount of data, analyses, and narrative to facilitate administrators' understanding of the trends in the jail population including historical and future demographic shifts in the resident population. Empirical research in this field has demonstrated that shifts in at-risk gender, race, and age subpopulations have a significant impact on fluctuations in jail populations.

The jail population forecast was developed utilizing data reflecting jail bookings (admissions), jail releases, average daily jail populations, and demographic data (including demographic data on the prior decade for the jail population and the county as a whole). Three methodologies were utilized to develop the forecast: a regression model utilizing demographic data, an autoregressive integrated moving average model (ARIMA), and a model reflecting the average of the results of those two forecasts. These models included separate forecasts for males and females. The two primary methodologies produced relatively similar forecasts, resulting in a high level of confidence in the estimates.

Between 2002 and 2006, the Broward County jail population increased by 24 percent, a seemingly substantial increase (from 4,280 inmates to 5,661 inmates); however, since 2006, the county has experienced a declined to a level of 4,888 in 2009. During this recent decline, the most significant jail population decreases occurred between 2008 and 2009 (from 5,364 to 4,888).

- The total annual average daily jail population is projected to decline in 2010 to a level of 4,620 inmates compared to the actual population of 4,888 in 2009.

- This decline is expected to be followed by very modest increases on a year-to-year basis through 2020 when the average daily jail population is projected to be 4,745 inmates.

- It is projected that the annual average daily <u>male</u> jail population will decline from the actual figure of 4,328 in 2009 to 4,089 in 2010. This decline will be followed by very slight annual increases to a level of 4,188 in 2020.

- The forecast of the annual average daily <u>female</u> jail population indicates a decline will occur from the actual figure of 560 in 2009 to 531 in 2010, followed by modest increases to a level of 563 in 2015. Then, a minimal decline is projected to a level of 558 in 2020.

In addition to the jail forecasts, the report contains considerable information reflecting trends in jail bookings, releases, and total populations over the past several years as well as breakdowns of these trends for males, female, juveniles and by offense types. Trends in average time served and type of release are also displayed over time among arrestees released from jail. Finally, historical and projected changes in the total general population of Broward County as well as by categories of gender, race/ethnicity, and age are presented.

This forecast was prepared using data through December 2009, and 2010 marked the first year of this population forecast. A preliminary examination of actual daily population (ADP) data from the BSO for 2010 indicates that the ARIMA forecast results are extremely close to the actual numbers. The forecast report includes predicted populations on an annual basis; however the raw data from the ARIMA model can be examined at the "month" level. The ARIMA model projected the ADP to be 4,460 for the months January through August 2010 and the actual ADP (as calculated and provided by the BSO) is 4,489—a difference of 29 inmates or 0.63 percent. The demographic model did not generate monthly projections; therefore, a 2010 comparison using projects from that model would not be available until the end of the year. The projections derived from the third methodology (average of the two models) predicted a 2010 population of 4,620 and with the actual number through August being 4,489, it appears that the annual project is on track.

Conduct Cost Benefit Analyses of the Use of Jail Alternatives

The second component of this project was conducting a cost/benefit analysis (CBA). Across many social outcomes, researchers and policymakers have a keen interest in conducting a CBA as it stands to provide one barometer of the 'costs of doing business'. In other words, findings from a CBA provide information to decisionmakers regarding the extent to which the benefits (in terms of financial costs for example) of a particular decision (such as one particular program over another) outweigh its costs (in terms of financial costs with respect to other potential programmatic options). Much CBA is stated with respect to how much benefit is accrued or saved by choosing one option over another. For example, a CBA can be calculated for three different programs that a particular jurisdiction operates with respect to diverting juvenile offender from the justice system. CBA results would indicate, for example, that for every $1 spent in Program A, the social return is $4. Hence, the benefits outweigh the costs for this particular program. Then, CBA can be calculated for the other programs, and then the CBA's can be compared across programs in order to determine which program has the optimal CBA.

There are many methods available for calculating a CBA (Cohen, 2000; Cohen, Piquero, and Jennings, 2010). Upon consultation with Broward Sheriff's officials, the CBA compared the costs savings when shifting inmates away from jail and toward one of four alternatives: drug court, pretrial, probation, and day/reporting/reentry. In order to do so, data on the average daily population of number of individuals in jail and then within each of these programs was obtained from the BSO. In addition, the average daily cost over a period of time for each of the correctional strategies was provided and included in this analysis. The CBA calculated the amount of dollars that would be saved by having individuals who are in respective program stay/go into that program (vis-à-vis jail costs) compared to that respective program's costs. The final estimates represent the amount of dollars that would be saved if one took the number of clients (average daily population) in that program by the jail costs less the costs of that program. The total savings in jail bed costs per year were calculated by: ((# of individuals in that program in year y

multiplied by per-day jail costs in year y multiplied by 365 days) subtracting from that figure the expenditure costs for that program).

Main findings of the CBA indicate that: (1) while jail populations remained relatively stable throughout the observation period, average daily population estimates varied among the other programs; (2) while the cost per day per inmate is high in Broward County jails (~$200 million year), the other programs evince lower costs because they entail lower per-day/per-inmate costs—with pretrial having the highest total costs followed by drug court and probation; (3) while the cost savings of placing individuals in any of these four programs varies, Broward County would spend substantially less dollars to place individuals in these programs (for one year) than it would be to place these individuals in jail. For example, probation evinces the largest savings in jail bed costs per year ranging from $150 to $300 million over time, should all individuals be placed on probation in lieu of jail.

The cost savings of placing individuals in any of these four programs varies tremendously, but they all have in common the finding that Broward County would spend substantially less dollars to place individuals in these programs (for one year) than it would be to place these individuals in jail.

- The savings for drug court are in the upper $20 million to lower $30 million.

- The savings for probation are in the $150 to $300 million range.

- The savings for day reporting/reentry are in the $30-40 million range.

- The savings for pretrial ranged from $30 million in the earlier years to over $100 million in both 2009 and 2010.

In conclusion, the BSO has been proactive in developing and providing alternatives to jail that ensure public safety and cost efficiency. In addition to providing alternatives to jail, BSO has also initiated use of an effective screening tool to increase efficiency and accuracy when making placement recommendations.

Validation of the COMPAS Risk and Needs Assessment Tool

COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) was purchased and implemented by the BSO to achieve these purposes:

- To assist the First Appearance Judge with release decisions by conducting risk assessment screenings with recommendations;

- To guide determinations for appropriate supervision levels for the pretrial, probation, and day reporting and reentry divisions; and

- To determine or identify the needs of offenders for case management purposes in all divisions which can positively impact the likelihood of successful outcomes.

FSU conducted a validation of the COMPAS instrument only; the validation did not include an evaluation of the administration of the instrument or the selection of offenders screened by COMPAS.

The COMPAS instrument is a statistically-based client assessment, classification, and case management system developed by the Northpointe Institute for Public Management. It is designed to assess key risk and need factors in correctional populations by utilizing information obtained through official records, standardized interviews with clients, and self-report questionnaire information provided by clients. In addition, the COMPAS provides decision-making support for criminal justice practitioners when placing clients into the community.

The COMPAS instrument is composed of 22 different scales that empirical research has identified as predictive of future behavior. The 22 scales are grouped into five main categories: criminal involvement, relationships/lifestyles, personality/attitudes, family, and social exclusion. The BSO began administering COMPAS in May 2008 and is currently being utilized by three entities within BSO's Department of Community Control: (1) Pretrial Services Division (PSD), (2) the Day Reporting and Reentry

Division (DRRD), and (3) the Probation Division of the Broward County Sheriff's Office.

The COMPAS instrument assesses three categories of risk: recidivism, violence, and failure to appear (FTA) at a court hearing. For the purpose of this validation, recidivism was defined as rearrest for any offense post release from jail pretrial; violence was defined as rearrest for a violent offense post release from jail pretrial; and FTA was defined as failure to appear for a court hearing post release from jail pretrial. The data used to conduct the validation study of the COMPAS risk assessment instrument included booking data, release data, COMPAS data (results of the administration of the instrument on offenders), and FTA data. The validation compared predicted levels of risk with actual levels of violations for the recidivism, violence, and FTA across six different follow-up periods. The six follow-up periods included: one month, two months, three months, six months, nine months, and twelve months. Additionally, the validation examined the comparisons across subgroupings: sex, race/ethnicity, age, and offense type. Finally, the validation examined the reliability and validity of the individual scores (one through ten) and the thresholds established for each of the three risk categories. COMPAS employs a scale of one through ten which generate risk levels of low (1–4), medium (5–7), and high (8–10) for recidivism, violence, and FTA. The validation compared the increases in predicted risk scores against actual occurrences of failures or violations, and the reliability and validity of the thresholds (between low and medium, 4 to 5, and between medium and high, 7 to 8).

The findings confirmed the integrity and veracity of the instrument. The validation indicated that the COMPAS instrument has high levels of accuracy in

predicting general recidivism, violence, and failure to appear for court. The data indicated some departures when predicting future violence; however, violence is a more complex behavior to predict. When the validation examined data at sub-grouping levels (e.g., across sex, race/ethnicity, age, and offense type) and across the six follow-up periods, inferences were more difficult to be drawn because the number of cases in many of the cells decreased to such a level that generalizations would be cautioned against. Low cell sizes appeared more frequently in the analysis for females, Hispanics, and violent offenses, particularly when examining females who committed violent offenses or Hispanics who committed violent offenses. The validation makes note of a couple of instances where the calibrations for the COMPAS risk levels and individual scoring formulas may need to be examined for adjustments. The thresholds that the COMPAS instrument utilizes to distinguish between low risk and medium risk, and medium risk and high risk, are supported by the data. There are instances in which the pattern is slightly inconsistent when crossing levels; however, those instances are the exception.

The support for COMPAS's predictive accuracy is demonstrated on multiple levels and dimensions.

- There is support for predictive accuracy at the three risk levels when comparing actual occurrences of failure with predicted levels of failure across low, medium, and high levels for the three categories of recidivism, violence, and FTA and across varying follow-up periods.

- There is support for the appropriateness and accuracy of the individual scores that comprise the risk levels of low, medium, and high across varying follow-up periods.

- There is support for the appropriateness of the thresholds that distinguish low level risk from medium level risk, and medium level risk from high level risk for recidivism, violence, and FTA across varying periods of follow up.

While the strength of the support varies across the measures, sub-categories, and follow-up periods, when the analysis is considered in total, COMPAS performs well in predicting risk for offenders released from jail pretrial. The data demonstrates the strongest level of support in the category of recidivism—COMPAS is highly predictive of future recidivism. While this validation provided an empirical examination of the COMPAS instrument based on quantitative data from the BSO, it did not examine the process of administering the instrument, the selection of offenders for which it is or should be administered, or the utility of the recommendations for the judiciary and BSO divisions. A process evaluation utilizing qualitative data is recommended to provide a more comprehensive assessment of the COMPAS risk classification system. At a minimum, this would involve interviews with administrators, jail personnel, the First Appearance Judge, and others who are directly involved with COMPAS or rely upon its recommendations. A process evaluation would reveal the utility of the recommendations, the perspective of the judiciary and jail administrators, as well as identifying areas where improvements may occur.

References

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