MARYLAND DATA ANALYSIS CENTER

DEPARTMENT OF CRIMINOLOGY & CRIMINAL JUSTICE ◆ UNIVERSITY OF MARYLAND

AN ANALYSIS OF THE SCORING OF JUVENILE DELINQUENCY HISTORY UNDER THE MARYLAND SENTENCING GUIDELINES

*A Report to the Maryland State Commission
on Criminal Sentencing Policy
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Table of Contents

Introduction & Project Summary

At the December 11, 2012 Public Comments Hearing of the Maryland State Commission on Criminal Sentencing Policy (MSCCSP), it was requested that the MSCCSP reconsider the current use of juvenile court adjudications of delinquency and commitments in the calculation of sentences.

A 2013 study conducted by MSCCSP research staff on behalf of the Guidelines Subcommittee summarized various expert statements regarding the practice of juvenile commitment in Maryland. Collectively, the testimony strongly suggested that there is variation across the state in the use of juvenile commitment, in terms of both quantity and quality. (More recently, empirical support of this variation was documented in a January 2015 Department of Juvenile Services report, *Doors to Commitment*, which found that the rates of commitment across counties vary from 0.6 per 1,000 youth aged 10-17 (Caroline County) to 10.2 per 1,000 youth, in Wicomico County).

These variations by location, as well as other possible variations due to demographic characteristics, may lead to unwarranted disparities in outcomes due to discretionary sentencing, which the guidelines seek to diminish and prevent. In addition, the use of juvenile commitments as a measure of juvenile offending history, and the way these commitments are accounted for in the guidelines, can possibly lead to variations in sentencing, and the lengthening of sentences of offenders with previous commitments, relative to the rest of the sentenced population.

The Subcommittee recommended that the MSCCSP should conduct a statistical study of the predictive accuracy of the juvenile delinquency component of the Maryland Guidelines. The MSCCSP agreed that this issue warrants further review, since possible disparities in the juvenile commitment decision, and local variation in the types of commitment ordered, raise questions about the appropriateness of juvenile commitment as an indicator of the severity of juvenile offending. Accordingly, the MSCCSP sought the assistance of the recently established Maryland Data Analysis Center (MDAC) to study statewide disparities in the application of juvenile commitment, and the impact on sentencing produced from the use of commitment as a measure of juvenile offending history, before action could be taken to revise the Guidelines.

Under the current Maryland Sentencing Guidelines, an offender's guidelines sentence is determined by two components: a Seriousness Score, which accounts for the gravity of the

current offense, and an Offender Score, which accounts for past offending history. The maximum possible Offender Score is nine points. Up to two points of that score (valued at zero, one, or two) are assigned based on the Juvenile Delinquency component of the Offender Score.

A score of <u>zero</u> is assigned if the offender is 23 years or older by the date of the current offense; or, if younger than 23 years old, has been crime-free for 5 years since the last finding of a delinquent act or last adjudication, or has no more than one finding of a delinquent act. <u>One point</u> is given when the offender is younger than 23 years *and* has two or more findings of a delinquent act or one commitment. <u>Two points</u> are given when the offender is younger than 23 years *and* has been committed two or more times.

The use of juvenile commitment in calculating the Offender Score represents an attempt to capture the seriousness of a juvenile's history of adjudicated delinquency. The Guidelines currently do not assign greater or fewer points depending on the nature of the adjudicated delinquent acts. All adjudicated acts are scored equally. The consideration of commitments allows the Offender Score to reflect more serious delinquency, under the assumption that more serious delinquency results in commitment.

Since May 2016, the MDAC has presented a series of reports to the MSCCSP. The Phase 1 report (included here as Appendices A1 and A2) was based on analyses of only guidelines worksheet data. The Phase 1 report included a descriptive examination of the juvenile score and attempted to assess its impact on sentencing outcomes. The goal in Phase 1 was, despite being limited to having only the guidelines worksheet data available for analysis, to assess whether there were potential issues or problems with the juvenile score that would warrant additional study.

The analyses indicated that there were notable geographical and racial differences in sentencing outcomes based upon the disparate prevalence of the juvenile score across groups. However, because the juvenile score is a categorical and truncated summary of juvenile history, and additional details of juvenile history can be made available in the sentencing context, the results could only be considered preliminary.

In Phase 2, presented in December 2016, two parallel sets of analyses were presented: (a) to validate the performance of the juvenile score, MSCCSP data were linked to the Criminal Justice Information System's (CJIS) adult criminal history records (from the Department of Public Safety and Correctional Services), and the score's relationship to recidivism outcomes

was assessed; and (b) to audit the juvenile score itself, analyses described how the juvenile score recorded on the worksheets compared to the actual juvenile history recorded in the agency records of the Department of Juvenile Services (DJS). In addition, as part of this phase, the MSCCSP conducted a survey of those in the field who are involved in recording the juvenile score on sentencing worksheets. The Phase 2 report is included here as Appendix B.

The recidivism results presented in Phase 2 were preliminary, as only recidivism among those sentenced to probation was examined, and only two measures of recidivism were examined (any arrest or any reconviction at 1, 2, and 3 years after sentencing). The results suggested that the juvenile score was able to distinguish those with different juvenile scores, according to subsequent recidivism after Circuit Court sentencing. However, there was little recidivism difference between African-Americans who scored 1 and those who scored 2. (As discussed below, the Phase 2 recidivism results were later supplanted by the more comprehensive set of recidivism analyses presented in Phase 3.)

The more important findings from Phase 2 of this study involved auditing the recorded juvenile score, by comparing the worksheet scores to actual DJS adjudication and commitment records, and learning more about recording practices for the score through the MSCCSP's survey of probation agents and State's Attorneys who complete guidelines worksheets. In almost 20% of cases, we were unable to replicate the worksheet scores using DJS records. (A "mismatch" occurred, for example, when the worksheet score was 1, but the DJS records indicated the juvenile history should be scored as 2.) These errors were skewed 2-to-1 in the direction of the worksheet score being lower than the score replicated with DJS records.

We discovered that, by applying a 5-year decay factor – or limiting the look-back period to only five years when scoring juvenile history – we could reduce the mismatch problem by at least balancing the mismatches so that they were no longer skewed.

The results from MSCCSP's survey on recording practices in the field provided guidance for the process of designing and testing potential alternate scores. The survey highlighted the limitations to designing a new score, given the unavailability of information to those in the field. The survey indicated that none of the following details would be easily accessible for at least a majority of respondents: only counting adjudications for acts that are equivalent to those of certain Seriousness Categories; only counting commitments to a secure facility; or only counting commitments of at least 30 days. Accordingly, in designing alternate scores, it was assumed that

continuing with unqualified counts of adjudications and/or commitments was the only universally feasible way to score juvenile history.

In Phase 3, a variety of alternate juvenile scoring systems were designed and validated through recidivism outcomes, by using the DJS records linked directly with the adult criminal history records. (The Phase 3 presentation appears in Appendix C.) The current juvenile score (and two replicated versions of it – with and without the 5-year decay factor), along with several adjudications-only-scores and one commitment-only-score, were tested against five recidivism measures at the 1-, 2-, and 3-year periods after completion of a Circuit Court sentence. The five recidivism measures included any arrest, any conviction, re-incarceration in a state prison by the Department of Corrections, rearrest for a violent personal offense, and reconviction for a violent personal offense.

The current juvenile score was found to have two problems: (1) it did not distinguish those scored 1 from 2 well among African-Americans – a flattened outcome in recidivism was observed; and (2) recidivism rates for African-Americans scored as 2's were lower than those of whites scored as 2 – a false positive problem. To the extent that African-American juveniles are more likely to be committed than their white peers, and the current score counts only commitments in the 2-point category, this suggested a problematic racial disparity in the factoring of commitments that was not validated by recidivism outcomes.

All of the alternate scores, except one, suffered from one or more problems that rendered them unsuitable. The score that performed the best was the Adjudications Only #2 score. That score counts only adjudications, and maximized the difference in recidivism outcomes across the 0-1-2 categories by defining a new "true zero" category. This alternate score is discussed more fully in the "Review of Findings and Recommendations" section of this report.

Study Design & Data Sources

The population of interest for this study consists of all Maryland adult offenders sentenced under the Guidelines in Circuit Court during the period beginning January 1, 2008, and ending on December 31, 2012. The total number of individuals sentenced during this five year period was 54,133, of which 16,470 were aged 18-22 at the time of their offense. The analyses for this project focused on this 18-22 year old group. (The MSCCSP dataset also included 2,020 events (3.7%) for individuals younger than 18 years at the time of their offense. These juveniles were waived into adult court due to the seriousness of their offense, and these individuals possessed a significant history of juvenile delinquency. Given the unrepresentativeness of this group, juveniles were excluded from the present study).

Five years of data, extending from 2008 to 2012, are necessary to yield a sufficient number of individual cases for analysis across juvenile score categories and other variables of interest. In the period of 2008-2012, for these 16,470 individuals, only 818 of all sentencing events scored under the Guidelines were assigned a score of 2 for their juvenile score. Another 2,098 sentencing events involved a juvenile score of 1. The remaining 13,554 were assigned a juvenile score of zero.

This study also required agency records from the Department of Juvenile Services' (DJS) ASSIST database, and the Department of Public Safety and Correctional Services' (DPSCS), repository of Maryland adult criminal history records.

The entire dataset of MSCCSP variables was submitted to the DJS so that ASSIST records could be matched to study subjects, and then the linked, combined dataset was returned to MDAC de-identified. For the 16,470 subjects in the study, a total of 15,784 matched juvenile history records (not matched individuals) were returned. More than 70% of subjects 18-22 had no match in the ASSIST database, meaning those subjects had no official record of juvenile adjudications or commitments. In addition, a data system change at DJS in 2002 resulted in the loss of juvenile history data for those whose juvenile history began in 2002 or earlier. This resulted in the loss of some juvenile history data for the older members of our study group (sentenced in 2008 or 2009, who were 21 or 22 years old) whose juvenile delinquency began in their early teen years.

The table below shows the distribution of matched records by matching condition. The large majority of record matches were made on the basis of a complete exact name and date of birth match. Additional matches were made through matching key identifying information, but allowing one field to be missed (e.g., month of birth), while other key identifying variables were matched.

DJS Match Condition Frequency Table (Ages 18-22)

Match Condition	Frequency	Percent
Exact Name and DOB Match	12,150	76.98
Name Match- DOB day and DOB year Match	293	1.86
Name Match- DOB month and DOB day Match	491	3.11
Name Match- DOB month and DOB year Match	768	4.87
Last Name Match, Misspelled First Name (Soundex Match)- DOB Match	976	6.18
First Name Match, Misspelled Last Name (Soundex Match)- DOB Match	760	4.82
SID Match, DOB Match, Last Name Match	108	0.68
SID Match, DOB Match, First Name Match	67	0.42
SID Match, DOB Match	34	0.22
SID Match, First Name Match, Last Name Match	79	0.5
SID Match, Last Name Match	23	0.15
SID Match, First Name Match	18	0.11
SID Match Only	17	0.11
Total	15,784	100

These totals do not represent the number of matched individuals, but rather the number of discrete matched sentencing records.

(Note: The separate "mismatch" problem discussed previously regarding the replication of the MSCCSP worksheet score was at first thought to be related to the match conditions under which DJS data were linked to MSCCSP data. However, there were no systemic differences in the distribution or skewness of the mismatch replication problem based on the DJS match condition. In addition, there was also no geographic relationship or sentencing cohort relationship to the mismatch replication problem.)

The MDAC received data from DJS on the adjudication and commitment history of subjects in this study. All juvenile court dispositions that involved an adjudication for which the facts were found to be "sustained" (equivalent to "guilty" in the adult system), were counted as adjudications for this study. To identify commitment orders, the disposition category that

indicated the individual was ordered "DJJ committed" was used. Due to periodic reviews of commitment orders by the juvenile court, the data on commitments had to be filtered to isolate original commitment orders from the re-hearings or reviews of an original commitment order. In the DJS ASSIST database, commitment orders for treatment or services by DJS are not linked to any particular adjudication(s).

For the standard extract of adult criminal history records from DPSCS, the MDAC submitted two input files of identifiers from the MSCCSP worksheet datasest: (a) one consisting of subject name, sex, race, and date of birth (total = 36,585), that yielded 880,095 criminal history records; and (b) a second input file consisting of SID numbers only (total = 32,748), that yielded 812,339 criminal history records (the SID is the Maryland criminal history finger-print validated identification number; there were duplicates between the two input groups, as those with SIDs were submitted in both input files). The MSCCSP does not collect Social Security Numbers, one of the matching variables used by DPSCS. Approximately 4% of those submitted for matching via name, etc., and 7% for those submitted for matching via the SID only, were returned as having no criminal history matching records. These no-criminal-history match figures are relatively low, and are likely due to the mis-recording of identifying information, either on MSCCSP worksheets, or in CJIS. A cursory spot check of a couple dozen of those returned as missing (despite having a conviction in Circuit Court relatively recently) also suggested that additional reasons, such as legal name changes and expungement of prior criminal history records, contributed to the absence of a matching record in CJIS.

Adult criminal history records were used to calculate five recidivism measures for the validation of the current and alternate juvenile scores. (It should be noted that only Maryland criminal history data was obtained, so recidivism outcomes are conservative estimates of total recidivism that occurs across state boundaries.) Three recidivism measures (rearrested for any charge, reconvicted for any charge, and sentenced to incarceration in a state DOC facility) were taken directly from the standard CJIS criminal history extract for the subjects in this study. Two additional measures of recidivism (rearrest person charge and reconviction person charge) were created by recoding the freeform, "offense literal" field in the CJIS criminal history extract. A total of 20,775 unique offenses were included in the "offense literal" field of the criminal history extract for the subjects of this study, of which 2,675 were re-coded as indicating a violent, "person" offense. These person-recidivism measures should be understood to be more serious

than the "person" category used by the MSCCSP – specifically, these recidivism measures represent violent, person offenses, comparable to person offenses found in the UCR Part I category of offenses.

Recidivism was calculated for the 1-, 2-, and 3-year periods after completion of a Circuit Court sentence. The standard criminal history extract does not include actual release dates from incarceration or supervision, to complement sentencing information. Using MSCCSP's in-house estimates for average time served by offense category, we estimated a release date to start the recidivism clock for all incarceration (non-probation) sentences. The recidivism clock started immediately for those sentenced to probation. The recidivism rates were calculated to be cumulative, so that recidivism in year 1 also means the individual would be counted as having recidivated within 3 years of release. In the event an individual was released prior to the estimated release date, although that recidivism event occurred prior to the start of the recidivism window, the event was counted in the study.

The final data source used in this study was compiled through a survey, conducted by the MSCCSP to understand better how the juvenile history score is recorded, what records are examined when calculating the juvenile score, and to learn about possible sources of variation in calculating the juvenile score. The survey was emailed to individuals who routinely calculate the juvenile score under the sentencing guidelines, and was conducted during November 2016. The survey was emailed by the MSCCSP to one representative of each Circuit Court's State's Attorney's Office and Probation and Parole Field Office, and, in a couple of circuits, to judicial staff/law clerks. Completed surveys were returned by 14 State's Attorney's and 13 Probation and Parole agents by December 1, 2016. The results of the survey were incorporated in Phase 2 of the project, to guide the design of potential alternate scores, keeping in mind the limitations of the current environment regarding juvenile data availability and the application of current scoring rules.

Review of Findings & Recommendations

The third, and final, phase of the project studying the scoring of juvenile history under the Maryland sentencing guidelines was presented at the May 2017 MSCCSP meeting. (That presentation may be found at the end of this document in Appendix C.) Phase 3 involved the design and testing of several alternate tri-partite juvenile scoring systems. Subsequent to the May meeting, the MSCCSP requested recidivism results for binary versions of the tri-partite alternate scores. (Binary 0/1 scores assigned 0 points to the lower-risk group, and 1 point to the combined higher-risk group, eliminating the 2-point category. The supplemental binary score analyses are included in this report as Appendix D. The best-performing among the binary scores was Binary Score B.)

At the July 2017 MSCCSP meeting, the Commission agreed to four questions to guide the decision-making process about potential changes to the juvenile delinquency score. This section addresses each of the four questions, drawing together material presented in Phases 1-3 of the project, as well as additional information and analyses gathered to assist the Guidelines Subcommittee and the MSCCSP in their deliberations. (This particular section of this report was originally prepared for the Guidelines Subcommittee's August 31, 2017 meeting, at which the Subcommittee recommended the MSCCSP as a whole consider adoption of the Adjudications Only #2 score.)

Q1) Should the Maryland Sentencing Guidelines continue to account for a juvenile record when calculating the Offender Score?

Yes. Of the 18 states that have adopted sentencing guidelines, 17 include juvenile delinquency history in the calculation of overall criminal history scores (North Carolina is the only exception).[1] Seven of these jurisdictions treat juvenile adjudications in the same manner as previous adult convictions, meaning, for example, that an adjudication at age 13 is assigned the same weight as an adult conviction at age 23. The remaining ten jurisdictions limit the influence of juvenile delinquency history. These jurisdictions limit the impact of juvenile adjudications in three ways: by limiting which adjudications are counted based on offense type; by limiting which

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[1] Frase, Richard S., Roberts, Julian R., Hester, Rhys, & Mitchell, Kelly Lyn. (2015). Robina Institute of Criminal Law and Criminal Justice, *Criminal History Enhancements Sourcebook*.

adjudications are counted based on the offender's age or the elapsed time since the adjudication; and by limiting the points that juvenile history may contribute to overall criminal history scores. Maryland's current score may be described as lenient-to-average in punitiveness, compared to those of other states described by the Robina Institute in their *Criminal History Enhancements Sourcebook*. Maryland limits the contribution of juvenile delinquency to the overall offender score, allows for a crime-free period to eliminate the use of juvenile history, and restricts the consideration of juvenile history to those under the age of 23 at sentencing. The one aspect of Maryland's current scoring system that is not lenient is that all adjudications are counted – in 8 of the 17 jurisdictions that consider juvenile delinquency history, only adjudications for acts equivalent to (certain) felonies are counted.

The consideration of juvenile delinquency history, especially for young adults, is a nearly universal practice in sentencing guidelines, as it allows the contribution of juvenile history toward sentencing variation to be captured and measured. In the figure below depicting Maryland sentences during 2008-2012, we can see the accumulation of adult criminal history beginning at age 18 (dotted green line), and the decline of juvenile history (red line) during the age range of 18-22.

Average Guideline Scores by Age at Offense (N = 31,794) (Phase 1) [2]

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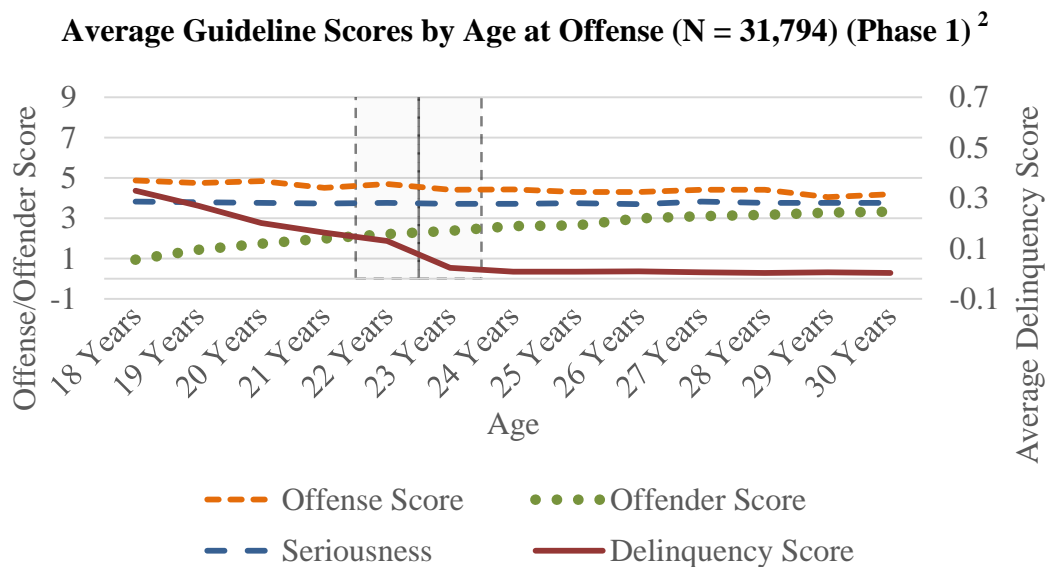
[2] A very small proportion of offenders 23 years or older had values of 1 or 2 for juvenile score, which is why the Delinquency Score is slightly elevated above "0" at age 23. This is due to an error, either for their date of birth, or for the date of their offense. This error was found for 154 observations, which corresponds to less than .3% of the total sample above 18 years.

13

While a large majority of young adults have either no juvenile history or a score of zero recorded on sentencing worksheets, for young adults with a scored juvenile history, analyses of sentencing outcomes during Phase 1 demonstrated that the juvenile delinquency history does contribute to sentence length in the expected direction.

If a guidelines system does not account for juvenile delinquency history, two potential negative impacts may result.

First, if juvenile delinquency history continues to be factored into the sentencing of young adults, but it is removed from consideration in the sentencing guidelines, then an important cause of sentencing variation will be not be measured. Any unaccounted-for factor that contributes to sentence increases will have the unintended effect of contributing to the potential expansion of guidelines ranges, as the ranges are intended to descriptively reflect sentencing practice. To the extent such expansion is driven by moderate-to-serious juvenile history affecting sentences, the result would be an inflation of the upper-limit of the guidelines range, which would affect all adults, not just those 18-22 years old. The table below shows the effect of juvenile history scored currently on sentence lengths, cross-tabulated with adult offender scores.

Average Sentence Length (Months) by Offender Score and MSCCSP Juvenile Score (ages 18 to 22; N = 16,470) (Phase 1)

Offender Score	Juvenile Score			All Sentences	Juvenile Score Average Effect[3]	Percent Effect
	0 Points	1 Point	2 Points			
0 Point	15.62			15.67		
1 Point	23.46	28.79		24.93	5.33	11.4%
2 Points	26.64	34.02	44.08	30.12	8.72	28.6%
3 Points	41.67	50.75	48.58	45.75	3.46	8.8%
4 Points	50.32	67.12	59.36	52.89	4.52	10.9%
5 Points	68.54	70.02	61.85	68.41	-3.34	-4.8%
6 Points	83.65	106.31	94.26	89.99	5.31	7.9%
7 Points	94.36	129.08	136.52	109.27	21.08	21.3%
Total	50.09	81.70	99.15	58.60	24.53	42.2%

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[3] The Juvenile Score Average Effect is the average change in sentence length between zero and one juvenile score point, and between one and two juvenile score points for each individual offender score. The values for "5 Points" are not in the expected direction due to the low number of cases and the effect of other sentencing-related variables.

The table above displays the effect on sentence length produced by considering juvenile delinquency history, in addition to the effect of adult criminal history. The guidelines matrices currently collapse offender scores at the upper range, such that those with a combined total offender score of 7-8-9 points are situated in the same column. Notwithstanding the collapsed column of points, we can see from the above table that, at the maximum of 7 adult offender points, the effect on sentencing of having 1 or 2 additional juvenile history points is clear. The degree to which negotiations and decisions about sentence length will be affected if juvenile history is not scored cannot be predicted. But, given the clear effect that juvenile history has currently, and that judges will still have juvenile history information at sentencing, capturing such information for describing guidelines compliance will continue to be important.

The second potential negative impact, given that Maryland's scoring of juvenile history is lenient-to-average in punitiveness compared to that of other jurisdictions, is that without a set of scoring rules to guide the consideration of juvenile history, its use in practice may become more punitive than it is currently.

For example, current scoring rules eliminate the use of juvenile history after a five-year crime free period, or once an individual turns 23. The other two states that limit the impact of a juvenile record on the basis of an offender's age, Kansas and Minnesota, both count juvenile history through age 25. Pennsylvania employs both a decay and crime-free gap, but juvenile history may be scored until age 28 if the individual did not remain crime-free since age 18. The majority of jurisdictions that score juvenile history do not permit either a crime-free decay or an age cut-off for scoring juvenile history. In light of these practices, there is reason for concern that repealing the limiting rules currently used in Maryland may inadvertently produce more punitive consideration of juvenile history.

Q2) If the MSCCSP chooses to maintain a juvenile component in the sentencing guidelines, should the instructions for the juvenile delinquency score be revised?

Yes. Contingent on the exact juvenile history scoring rule adopted, the instructions should be revised. Even absent a new rule being adopted, the current instructions for the current rule may be clarified in two ways, based on apparent textual differences and the results of the survey of those completing guidelines worksheets:

(a) Aligning the instructions on the worksheet to those in the guidelines manual, with regard to the five-year crime-free period. The manual suggests the crime-free period begins with the last adjudication, while the worksheet does not specify whether the crime-free period should be counted backwards from the time of the adult offense, or forwards from the time of the last juvenile adjudication.

(b) Clarifying the definition of "crime free" – whether that criterion may be met by remaining juvenile-adjudication-free or adult-conviction-free, or requires both depending on age. If "crime free" includes both adjudications and convictions, then, as an example, a 20-year-old would need to remain adjudication-free during ages 15-17, and then conviction-free during ages 18-20.

Q3) Should the five-year decay method be officially adopted?

Yes. The five-year decay question involves how far back juvenile history should be counted in scoring adjudications or commitments. If an individual has remained crime-free for five years, regardless of juvenile history, that individual is scored as having zero points. If the crime-free test is not met, then current instructions do not specify how far back juvenile history should be scored. The absence of instruction suggests all juvenile history should be scored. The five-year decay method was an accidental discovery made in the course of attempting to replicate MSCCSP worksheet scores with raw data received from the Department of Juvenile Services (DJS) on adjudications and commitments for the study sample. In particular, the frequency of matched replicated scores (e.g., worksheet=1 and DJS raw data=1) when a five-year decay was applied was superior to that when all juvenile history was scored. In the course of understanding the raw DJS data, we learned of multiple sources of "error" that could produce a "mismatch" between raw DJS data and recorded MSCCSP worksheet scores, and applying the five-year decay method resulted in the best match (i.e., mis-matches were minimized, and evenly distributed on the plus and minus sides – see table on the following page).

Cross-tabulation between MSCCSP Worksheet nd Estimated Delinquency Scores (5-year decay) (Ages 18 to 22; N = 16,470) (Phase 2)

entencing Guidelines Delinquency Score	Estimated Score w/ DJS Data			
	0 points	1 point	2 points	Total
0 points	12,421	903	230	13,554
1 point	938	942	218	2,098
2 points	231	244	343	818
Total	13,590	2,089	791	16,470

1,351 cases where Sentencing Commission data indicates *lower* juvenile score than DJS data
1,413 cases where Sentencing Commission data indicates *higher* juvenile score than DJS data

The five-year decay rule works as follows: once an individual does not qualify for the score of "0" under the current scoring system, then juvenile adjudications and commitments are counted only for the previous five years. Thus, a 20-year old who has not remained "crime free" only has juvenile history since the age of 15 counted. For the 20-year-old, adjudications and commitments at 14 or younger are excluded when scoring juvenile history.

The existing literature on the onset of juvenile delinquency, and resulting persistence of offending into adulthood, would suggest that information about the earliest acts of juvenile delinquency should be captured. However, given that the juvenile score is currently a capped, tri-partite score, it already excludes information beyond two adjudications or two commitments. Not capturing information about the first, or earliest, delinquency acts is already built into the structure the score.

This does not mean that the information produced with the five-year decay is not as useful as counting all adjudications and commitments. More recent history is generally a better predictor of future recidivism, and there is a leveling-off effect for those with multiple adjudications and commitments in terms of their future recidivism. Furthermore, multiple adjudications and commitments are related to the onset of delinquency itself, given the limited time period during which juvenile history may accumulate.

The table on the following page shows, for those with certain scores under various scoring systems for delinquency history, that the average age at which the first delinquency event occurred is younger for those with more serious scores (e.g., among those with a current MSCCSP worksheet score of 2, whites experienced their first commitment at 15.84 years old,

and African-Americans at 15.70 years old; values for commitments are provided unshaded for informational purposes, as the alternate scores do not include commitments.) This relationship is exhibited in the expected direction for all scores, and is nearly identical for whites and African-Americans. As demonstrated by the literature, more persistent delinquents begin exhibiting delinquency at an earlier age than less serious delinquents.

Comparing the MSCCSP Worksheet Score, Adjudications Only #2, and Binary Score B by Average Age at First Adjudication and Commitment, by Race (with 5 Year Decay) (Ages 18 to 22; N = 16,470) (New table)

Race	Type of Delinquency Event	MSCCSP Worksheet Score		Adjudications Only #2		Binary Score B
		1 Point	2 Points	1 Point	2 Points	1 Point
White	1st Adjudication	15.80	14.81	16.41	15.13	15.65
	1st Commitment	16.45	15.84	16.52	16.03	16.32
African-American	1st Adjudication	15.56	14.86	16.21	15.08	15.53
	1st Commitment	16.42	15.70	16.40	16.27	16.78
Total	1st Adjudication	15.61	14.85	16.26	15.09	15.56
	1st Commitment	16.42	15.73	16.43	16.22	16.37

Q4) Should an alternative scoring system be adopted?

Yes. The Phase 3 presentation at the May 2017 MSCCSP meeting, along with a supplementary set of analyses provided in July 2017, described and tested several alternate tripartite and binary juvenile history scoring systems. This section discusses the one tripartite score (0-1-2) and one binary score (0-1) that performed best according to recidivism tests.

The current scoring system should be replaced, if the MSCCSP is satisfied with an alternative score. The problem of differential rates of commitment, especially for juveniles of lower socioeconomic status, who are also disproportionately African-American, was a key motivator for the current project.

To test the original worksheet score, as well as alternative scoring systems, five measures of cumulative recidivism, at the 1-, 2-, and 3-year mark, were evaluated. (Note that only Maryland criminal history data was obtained, so recidivism outcomes here are underestimates of total recidivism that occurs across state boundaries.) Three recidivism measures (rearrested for any charge, reconvicted for any charge, and sentenced to incarceration in a state DOC facility) were taken directly from the standard CJIS criminal history extract for the subjects in this study. Two additional measures of recidivism (rearrest person charge and reconviction person charge) were created by recoding the freeform, "offense literal" field in the CJIS criminal history extract. A total of 20,775 unique offenses were included in the "offense literal field" for the subjects of this study, of which 2,675 were re-coded as "person" offenses. These person-recidivism measures should be understood to be more serious than the "person" category used by the MSCCSP – specifically, these recidivism measures represent violent, person offenses, comparable to person offenses found in the UCR Part I category of offenses.

Detailed tables of all scores were included in the Phase 3 presentation in May 2017. The table on the following page summarizes the two alternate scores – Adjudications Only #2 and Binary Score B – that performed best among the alternates, as well as the original worksheet score and its replicated versions for comparison. The Adjudications Only #3 score is also included, as the best-performing Binary Score B represents a collapsed version of this score.

All scores, to varying degrees, showed a smaller increase in recidivism from 1 point to 2 points, than between 0 points and 1 point. This is because the recidivism event measured to validate various scoring systems is the *second* (or subsequent) adult recidivism (all subjects in the study have at least one adult conviction in Circuit Court, so we validated juvenile history by their next adult recidivism event upon completing their Circuit Court sentence). In addition, those aged 18-22 are near the peak of their offending risk, according to the well-documented relationship between offending and age. In validating juvenile history with adult recidivism outcomes for this group of individuals, we are testing for the occurrence of a subsequent adult arrest, conviction, or incarceration, and the fact that each study subject already has one adult conviction drives the flattening effect seen between those with 1 and 2 points for recidivism.

Scoring Rule	Score Description (all apply to those 18-22 only; "crime free" = no adjudications or convictions in past 5 years)	Evaluation Criteria			
		0-1-2 not distinguishable by recidivism	Changes the # with a score vs. Worksheet	With same score, recidivism rates differ by race	Unequally changes the # with a score by race
Actual Worksheet	Score as recorded on worksheets 2008-2012		N/A	African Americans have slightly lower recidivism rates at 2 points than whites at 2 points	N/A
Five-year Decay	0 = Crime free for 5 years, or up to 1 adjudication 1 = 1 commitment or 2+ adjudications 2 = 2+ commitments	Recidivism doesn't distinguish 1 from 2 for African Americans			
Replicated Worksheet (Total Count)	0 = Crime free for 5 years, or up to 1 adjudication 1 = 1 commitment or 2+ adjudications 2 = 2+ commitments		More than doubles those with score=1, small increase in score=2	African Americans have lower recidivism rates at 2 points than 1 point on two measures	Larger increase for African Americans than for whites scored 1
Alternate Tripartite Score: Adjudications Only #2 (5 Year Decay)	0 = 0 adjudications/ crime free for 5 years 1 = 1-2 adjudications 2 = 3+ adjudications		True zero category = doubles those w/ score=1, score=2 unchanged		
Alternative Tripartite Score: Adjudications Only #3 (5 Year Decay)	0 = 0-1 adjudications/ crime free for 5 years 1 = 2 adjudications 2 = 3+ adjudications	For African Americans, 0/5 recidivism measures distinguish 1 from 2; for whites, only 2 distinguish	Reduces 1-point group by half, 2-point group by a quarter	African Americans have lower recidivism rates at 2 points than 1 point for two measures	
Binary Score B (5 Year Decay)	0 = 0-1 adjudications/crime free for 5 years 1= 2+ adjudications		Eliminates the 2-point category		

To illustrate this point regarding the "flattening" of recidivism outcomes, below is how the two best alternate scores look if fully defined, in terms of the overall offending history when being sentenced in Circuit Court for the first time:

Adjudications Only #2

0 = 0 adjudications (+ 1 adult conviction)

1= 1-2 adjudications (+ 1 adult conviction)

2= 3+ adjudications (+ 1 adult conviction)

Binary Score B

0 = 0-1 adjudications (+ 1 adult conviction)

1= 2+ adjudications (+ 1 adult conviction)

This illustrates why having a "true zero" category when scoring juvenile history helps to maximize the difference between those scored 0 and 1 or 2. Only those with a "true zero" juvenile history may be considered to be a first time (overall) offender at their first sentencing. The table below describes the role of adjudications in increasing sentences (by months), controlling for adult offender score, the nature of the offense (type and seriousness), jurisdictional variation, age, gender, and race. These regression coefficients show that sentences given are longer for those with any adjudications than for those with zero adjudications. Those with 1 or 2 adjudications are being comparably sentenced, all else being equal, for about six months longer than those with zero adjudications. Starting at 3 adjudications, the sentence enhancement increases by about 50%, ranging typically 9-11 months more than those with zero adjudications. (The estimates for 5 and 7 adjudications diverge significantly from the expected trend.)

Number of Adjudications	+ Months sentenced over true zero
1 Adjudication	6.96
2 Adjudications	6.09
3 Adjudications	9.43
4 Adjudications	11.40
5 Adjudications	4.36
6 Adjudications	9.59
7 Adjudications	87.65

Each of the two best alternate scores has a significant disadvantage the other does not. (To review the recidivism results for these two scores, please see page 132 of this report for Adjudications Only #2, and page 142 for Binary Score B.)

As a tripartite score, Adjudications Only #2 has categories which are internally more homogenous than the Binary Score B categories. To the extent that the recidivism results identified three distinct groups, of low, medium/high, and high recidivism risk, retaining three categories allows the signal of the score to be more informative and to better capture variation in sentencing outcomes. The table on the following page illustrates how the tripartite score allows for more homogenous groupings of individuals by score, than does the binary score.

Comparing the MSCCSP Worksheet Score, Adjudications Only #2, and Binary Score B by Average Number of Delinquency Events Per Point, by Race (5 Year Decay) (Ages 18 to 22; N = 16,470) (New Table)

Race	Finding	MSCCSP Worksheet Score			Adjudications Only #2			Binary Score B	
		0 Points	1 Point	2 Points	0 Points	1 Point	2 Points	0 Points	1 Point
White	Adjudications	0.36	1.67	2.72	0	1.29	3.48	0.16	2.60
	Commitments	0.10	0.50	1.68	0	0.37	1.61	0.04	1.05
African-American	Adjudications	0.50	1.80	2.73	0	1.34	3.52	0.21	2.61
	Commitments	0.15	0.65	1.87	0	0.47	1.63	0.07	1.12
Total	Adjudications	0.45	1.76	2.73	0	1.33	3.51	0.19	2.61
	Commitments	0.13	0.61	1.83	0	0.44	1.63	0.64	1.10

The homogeneity of the Binary Score B zero category is less than that of Adjudications Only #2 by definition, since its 0-points category includes those with 1 adjudication. But the homogeneity of Binary Score B's 1-point category is more noticeably problematic, in that the average number of delinquency events sits almost equally between the averages for those with 1

and 2 points under the Adjudication's Only #2 score. Based on current sentencing outcomes, whereby judges appear responsive to the number of adjudications regardless of the scoring system used, Binary Score B will likely lead to an increase in variation in sentences within each of the two point categories, and that variation will not be captured by the guidelines worksheet.

The disadvantage of the Adjudications Only #2 score is that, by creating a true zero category, those with only one adjudication are shifted into the 1-point category. Under the current worksheet score, only when an individual had an adjudication that resulted in a commitment, would s/he be assigned 1 point. This score equally doubles the number of African-Americans and whites with a score of 1 over the current worksheet score, while the number of 2's remains the same. The application of the five year decay rule would diminish the number of individuals with scored juvenile history, but only to the extent that the five-year decay is not already in practice. Our assumption from the worksheet score replication exercise is that it is already in practice to some extent. But, if the five year decay is not already in practice to some meaningful degree, then the number of those with scored juvenile history under Adjudications Only #2 score will decrease.

Two other means or factors may reduce the impact of the Adjudications Only #2 score in increasing scored juvenile history and sentence lengths.

The first is to alter the point values – while maintaining the three categories – assigned to the low (0 points), moderate/high (1 point), and high (2 points) risk groups. Rather than the groups being scored 0, 1, and 2, a different scale could be used to continue identifying the three different groups, while reducing the effect of the score on sentences. For example, the groups could be assigned points as follows: -1 (low), 1 (moderate/high), and 2 (high). This would not change the number of individuals with scored juvenile history, but for the majority of young adults who have no delinquency history, this scoring would better signal the statistically low risk they pose as "true zeros," and may even improve the descriptive accuracy of existing sentencing practices. Another possibility is to assign the points as follows to the three risk groups: -1 (low), 0 (moderate/high), and 1 (high). This point scale would result in a large decrease in the number of individuals with scored juvenile history, relative to the current worksheet score.

The other factor involves the combination of the on-going decline in juvenile cases handled by the Department of Juvenile Services, combined with the adoption of the five-year

decay rule. The number individuals with a scored juvenile history will likely decline if those sentenced under the guidelines exhibit a decrease in juvenile history, commensurate with the significant decline in juvenile cases occurring in Maryland. The decline in DJS case activity described in the Phase 3 report is occurring with regard to complaints received, formal cases opened, adjudications, and commitments. If this decline is proportionately represented in the juvenile history of those sentenced under the guidelines, the combination of the decline and the five-year decay rule will noticeably decrease the number of individuals with scored juvenile history under the Adjudications Only #2 score (or any other alternate score, for that matter). The analyses presented in the course of this project reflect data from a markedly different era of greater DJS activity caseloads, compared to the level of activity DJS experiences currently, and in the coming year(s) when any newly adopted score would be implemented (see full explanatory table on the following page.)

The Impact of the Decline of DJS Activity and the Five Year Decay Rule
on Scored Delinquency (Updated Table from Phase 3)

Year Sentenced	Age at Sentence		# DJS Formal Cases in Oldest Year To Be Counted if Five Year Decay NOT Applied	# DJS Formal Cases in Oldest Year To Be Counted if Five Year Decay Applied
	18	22		
2008	2003-2007	1999-2003	N/A for 1999	18,323 in 2003
2009	2004-2008	2000-2004	23,742 for 2000	18,299 in 2004
2010	2005-2009	2001-2005	21,562 for 2001	18,920 in 2005
2011	2006-2010	2002-2006	19,935 for 2002	18,550 in 2006
2012	2007-2011	2003-2007	18,323 for 2003	18,173 in 2007
2013				
2014				
2015				
2016				
2017	2012-2016	2008-2012	17,136 for 2008	15,817 for 2012
2018	2013-2017	2009-2013	20,262 for 2009	14,259 in 2013
2019	2014-2018	2010-2014	17,513 for 2010	13,417 in 2014
2020	2015-2019	2011-2015	16,058 for 2011	12,001 in 2015
2021	2016-2020	2012-2016	15,817 for 2012	10,846 in 2016

Interpretation: An 18-year-old sentenced in 2008 was 13 in 2003, and 17 in 2007. A 22-year-old sentenced in 2008 was 13 in 1999, and 17 in 2003. However, with a Five Year Decay, the only juvenile history that would be counted for a 22-year-old is that which occurred while 17, in 2003. Overall, a Five Year Decay allows reflection of the decline in DJS activity in any adopted juvenile score beginning in 2018. In 2018, with a Five Year Decay, all sentencees' active juvenile history occurred during 2013-2017.
Gray = study period data; Blue = implementation period.

MARYLAND DATA ANALYSIS CENTER

DEPARTMENT OF CRIMINOLOGY AND CRIMINAL JUSTICE ◆ UNIVERSITY OF MARYLAND, COLLEGE PARK

**A Report to the
Maryland State Commission on Criminal Sentencing Policy**

*A Preliminary Analysis of the Impact of the
Juvenile Delinquency Score under the Sentencing Guidelines*

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Abstract

A concern was raised during the December 2012 Public Comments Hearing of the Maryland State Commission on Criminal Sentencing Policy (MSCCSP) that variation in the practice of juvenile commitment across jurisdictions in Maryland may be causing a disparate impact in the calculation of the juvenile score component of the offender score used in the Maryland sentencing guidelines. The analyses presented herein should be considered preliminary due to the limitations posed by analyzing the MSCCSP's sentencing data in isolation. Nonetheless, statistical analysis of all Maryland adult sentencing events during the period 2008-2012 suggests that sentencing outcomes are being influenced by variation across key variables of interest. The findings suggest that variations in sentencing outcomes across jurisdictions, interrelated with variations in average sentences received by different racial groups, are cumulatively producing a racially disparate impact on sentencing outcomes. However, due to the limitations posed by analyzing the MSCCSP data is isolation, the potential that sources of measurement error are present cautions against definitive conclusions at this time. Future analyses, linking the MSCCSP data with data from the Department of Juvenile Services, as well as data from the Department of Public Safety and Correctional Services, will allow for more robust conclusions, and, if necessary, will guide the design of a remedy for the scoring of juvenile delinquency history under the Maryland sentencing guidelines.

Contents

Introduction & Background

At the December 11, 2012 Public Comments Hearing of the Maryland State Commission on Criminal Sentencing Policy (MSCCSP), it was requested that the MSCCSP reconsider the current use of juvenile court adjudications of delinquency and commitments in the calculation of sentences. A 2013 study conducted by MSCCSP research staff on behalf of the Guidelines Subcommittee summarized various expert statements regarding the practice of juvenile commitment in Maryland. Collectively, the testimony strongly suggested that there is variation across the state in the use of juvenile commitment, in terms of both quantity and quality. (More recently, empirical support of this variation was documented in a January 2015 Department of Juvenile Services report, *Doors to Commitment*, which found that the rates of commitment across counties vary from 0.6 per 1,000 youth aged 10-17 (Caroline County) to 10.2 per 1,000 youth (Wicomico County)).

These variations by location, as well as other possible variations due to demographic characteristics of the offender, may lead to unwarranted disparities in outcomes due to discretionary sentencing, which the guidelines seek to diminish and prevent. In addition, the use of juvenile commitments as a measure of juvenile offending history, and the way these commitments are accounted for in the guidelines, can possibly lead to variations in sentencing, and the lengthening of sentences of offenders with previous commitments, relative to the rest of the sentenced population.

The Subcommittee recommended that the MSCCSP should conduct a statistical study of the predictive accuracy of the juvenile delinquency component of the Maryland Guidelines. The MSCCSP agreed that this issue warrants further review, since possible disparities in the juvenile commitment decision, and local variation in the types of commitment ordered, raise questions about the appropriateness of juvenile commitment as an indicator of the severity of juvenile

offending. Accordingly, the MSCCSP has sought the assistance of the recently-established

Maryland Data Analysis Center (MDAC) to study statewide disparities in the application of

juvenile commitment, and the impact on sentencing produced from the use of commitment as a

measure of juvenile offending history, before action may be taken to revise the Guidelines.

Under the current Maryland Sentencing Guidelines, an offender's guideline's sentence is

determined by two components: a Seriousness Score, which accounts for the gravity of the

current offense, and an Offender Score, which accounts for past offending history.[4] The

maximum possible Offender Score is nine points. Up to two points of that score (valued at zero,

one, or two) is assigned based on the Juvenile Delinquency component of the Offender Score.

A score of zero is given if the offender is 23 years or older by the date of the current

offense; or, if younger than 23 years old, has been crime-free for 5 years since the last finding of

a delinquent act or last adjudication; or, has no more than one finding of a delinquent act. One

point is given when the offender is younger than 23 years *and* has two or more findings of a

delinquent act or one commitment. Two points are given when the offender is younger than 23

years *and* has been committed two or more times.

The use of juvenile commitment in calculating the Offender Score represents an attempt

to capture the seriousness of a juvenile's history of adjudicated delinquency. The Guidelines

currently do not assign greater or fewer points depending on the nature of the adjudicated

delinquent acts. All adjudicated acts are scored equally. The consideration of commitments

allows the Offender Score to reflect more serious delinquency, under the assumption that more

serious delinquency results in a commitment.

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[4] For crimes against persons, the Seriousness Score is supplemented with information about victim injury, weapon presence, and special victim vulnerability, to compose the Offense Score. This score has a maximum of 15 points, 10 of which are directly attributed to the Seriousness of the offense.

The incorporation of more recent juvenile commitments in the calculation of the Offender Score does make Maryland's Sentencing Guidelines comparable to that of the federal government. Under the U.S. Sentencing Guidelines, a "…juvenile sentence imposed for an offense committed prior to the defendant's eighteenth birthday is counted only if confinement resulting from such sentence extended into the five-year period preceding the defendant's commencement of the instant offense" (Section A1.2(d), November 2014 update). However, the U.S. Sentencing Guidelines varies the points assigned according to the length of confinement. Sentences of incarceration less than 60 days are scored differently than sentences of incarceration of 60 days or more. Maryland's Guidelines does not impose qualifying criteria regarding the nature or duration of commitments.

Regionally, the 2013 Guidelines Subcommittee study found that the District of Columbia and Pennsylvania only use previous adjudications and convictions (focusing on the nature of the offense, and not the punishment). Virginia's Guidelines allow juvenile commitments to factor into offender scores, but the quality of the commitment is defined in greater detail than is the case with Maryland's Guidelines. Prior instances of commitment count only if they result from a sentence of "active incarceration" in a juvenile institution.

This report presents a set of analyses using sentencing event data from the MSCCSP's guidelines worksheet database, to address two areas of inquiry: (1) the extent of the impact of the Juvenile Score component of the Offender Score on actual sentences given; and (2) the extent and nature of the contribution of the Juvenile Score towards potentially disparate sentencing outcomes across demographic categories.

Methodology & Variables

The data analyzed in this report only includes sentencing data from the MSCCSP. This section describes the dataset, the procedures used to clean the data, and the key variables used in the analysis. (In Appendices 1-4, Maryland's three sentencing matrices and its sentencing guideline worksheet are provided for the reader's reference.)

The population of interest for the study consists of all Maryland adult offenders sentenced under the Guidelines during the period beginning January 1, 2008 and ending on December 31, 2012—totaling 54,133 individuals. Table 1 below describes the age group breakdown for the sentencing events during the period of study.

Table 1. Total 2008-2012 Study Population by Age Group

Age Group	Frequency	Percent
23 or older	35,018	64.7%
18 to 22	16,679	30.8%
18 or younger	2,020	3.7%
Missing Age	416	0.8%
Total	54,133	100.0%

The MSCCSP dataset included 2,020 events (3.7%) for individuals younger than 18 years at the time of their offense. These individuals are waived into adult court due to the seriousness of their offense, and these individuals often possess a significant history of juvenile delinquency. For those reasons, juveniles are excluded from the present study, and all analyses include only those individuals who were at least 18 years old at the time of the offense.

Only individuals 22 years or younger are eligible to have a Juvenile Score. For that reason, most analyses herein only include those between 18 and 22 years of age, which totals

16,679 individuals. (Other analyses include all adults, or a subset of adults older than 22. Figures and tables note specifically which ages are included in each analysis.)

Five years of data, extending from 2008 to 2012, are necessary to yield a sufficient number of individual cases for analysis across Juvenile Score categories and other variables of interest. In the period of 2008-2012, only 818 of all sentencing events scored under the Guidelines were assigned a score of two for their Juvenile Score. Another 2,098 sentencing events involved a Juvenile Score of one (see Table 2 below).

Table 2. Juvenile Component Score Frequency (ages 18 to 22; N = 16,679)

Juvenile Score	Frequency	Percent
0 points	13,554	81.3%
1 point	2,098	12.6%
2 points	818	4.9%
Missing	209	1.3%
Total	16,679	100%

In addition to the Juvenile Score, the key variables examined in this study, which are either available in the MSCCSP dataset, or computed using existing MSCCSP variables, are described below.

Age: The age variable reflects the age of the individual at the time of the offense, and is the result of the subtraction of the date of birth from the date of the offense. As noted earlier, individuals only have their juvenile history accounted for if they were 22 years or younger at the time of their offense.

Offender Score: The offender score is one of the two variables that determine the guideline sentence. The offender score is a nine-point scale that measures an offender's past

contact with the Criminal and Juvenile Justice Systems. The Juvenile Score is one component of the Offender Score, contributing a maximum of two points towards it. Other components are the prior adult offending history, parole/probation violations, and the presence of current criminal justice supervision. Higher scores reflect more frequent offenders. Scores of seven, eight and nine are grouped together in a single column.

Seriousness Score: The Seriousness of Offense is the second determinant of the guideline sentence. It contributes to the calculation of guideline sentences for all crime types, namely crimes against person, property and drug offenses. Alongside the Offender Score, the Seriousness Score is the only other parameter used in dictating sentences for crimes against properties and drug offenses. It only considers the severity of the offense, captured in a seven-point scale. (In the original scale, lower scores corresponded to more serious offenses, but that scale was inverted for the purposes of analysis, so higher scores would correspond to more serious offenses.)

Offense Score: The Offense Score is only applicable to crimes against persons, and it is calculated by adding additional points to the Seriousness Score when the following factors are present in an offense: victim injury, the use of a weapon, or any special vulnerability on the part of the victim. The offense score is capped at 15 points, with greater scores corresponding to longer guideline sentences (10 of the 15 maximum possible points are directly attributed to the Seriousness of the offense).

Actual Sentence: The actual sentence is the sentence in months as registered on the Maryland Sentencing Guideline Worksheet. For statistical purposes, the MSCCSP computes life sentences as 720 months (60 years). A total of 126 sentences (0.23% of the sample) are registered as 720 months. Additionally, another 280 sentences were greater than 720 months,

some with extreme values that can severely influence averages (i.e. consecutive life sentences). For the purposes of this analysis, all sentences were capped at 720 months. Note that this report only analyzes incarcerative sentences (meaning that sentences to probation are not included).

Guideline Sentence (Middle): The Guideline Sentence is the sentence defined by the guideline, in accordance with the offender score, the seriousness, and the offense score. As shown in Appendix 1, the guideline sentence is always defined as a range. This variable reflects the middle point of that range, on a scale of months. Increasing Seriousness and Offender Scores always produce longer minimum and maximum guideline sentences, although there is not a systematic rate in the increase of guideline sentences. In general, longer sentences are also situated in cells containing a greater possible range of sentences in absolute terms. Crimes against persons, property crimes and drug offenses each have their own matrix. The two latter matrices only consider the offender score and the seriousness, while the crimes against persons matrix accounts for aggravating elements of the offense, as reflected in the offense score.

As an illustrative example, a defendant sentenced for a crime against a person, with an offender score of four, and an offense score of four, would have a guideline sentence between 36 and 84 months. The middle of this range is 60.

Departure: The departure is the difference between the guideline and the actual sentence assigned to the offender. Given the fact that guideline sentences in Maryland are stated as a range, departures were calculated both as the difference between the actual sentences and the middle point of the guideline sentences, and as the difference between the actual sentences and the boundaries of the guideline sentences. In the former, sentences within the boundaries were coded as zero for departure. (This definition of departure used in this report was exclusively developed for the purpose of analyzing the impacts of the juvenile score, and has no

correspondence to any other technical definition of departure, such as the one used by the MSCCSP in computing compliance rates.)

Continuing the illustrative example begun above, a defendant who is situated in a matrix cell with a guideline sentence between 36 and 84 months (middle is 60 months), but actually sentenced for 30 months, may be described as having a departure from the middle of negative 30 months, but a departure from the (lower) boundary of just negative 6 months.

Percent of Max Guideline: The Percent of Max Guideline is an alternative measure of departure, calculated as a ratio between the actual sentence and the upper boundary of the guideline sentence.[5] Since most sentences are much lower than this maximum value, and since most departures are negative, this proportion rarely exceeds 100%, but may do so. This variable addresses two problems with the raw measure of departure. First, it attempts to isolate the discretionary component of the sentence that is comparable for all values of seriousness and offender score in the guideline. Second, it places all sentencing decisions within a single proportional scale relative to the upper boundary of each guideline cell. One month represents very little in a ten-year sentence range, but a significant amount in a three-month sentence range (this relative difference reflects in greater values of raw departure for greater sentences, as a consequence of the magnitude of the sentence).

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[5] Analyses were also executed using the ratio between the actual sentence and the middle range of the guideline sentence. Although there were not substantial changes in model fitness, the difference in scale between the percentage in relationship to the middle, and the percentage in relationship to the maximum led to different results in some analyses. Please see Appendix 5, which includes a graph comparing the "Percent of Max Guidelines" variable to the alternative, "Percent of Median Guidelines." Given the concerns motivating the present study, including that the juvenile score component is producing longer sentences among subgroups subject to disparate treatment, using a variable that is directionally scaled toward the maximum of each guideline matrix cell is intuitively more understandable than the percent of the median for each cell.

Continuing the illustrative example begun above, a defendant situated in a matrix cell with a guideline sentence between 36 and 84 months, and is actually sentenced for 30 months, has a percent of max guideline sentence of 35.7%.

Descriptive Statistics for the Juvenile Score and Sentencing Variables

This section presents summary, descriptive statistics of the key variables, described previously, used in the later analysis and results section. (Differences in the number of observations are due to missing values for each variable.[6])

First, we return to the issue of using five years of aggregated data in this report. Figure 1 on the following page presents the trends in key sentencing variables over the five years of the study period (2008-2012). There is a remarkable stability in these key sentencing variables during this period of time. In addition to demonstrating stability in sentencing over time, this figure also supports the methodological choice of combined analysis of the data across the five years under study, in order to yield larger samples of juvenile score subjects.

Figure 1. Average Guideline Scores by Sentence Year (All ages; N = 54,133)

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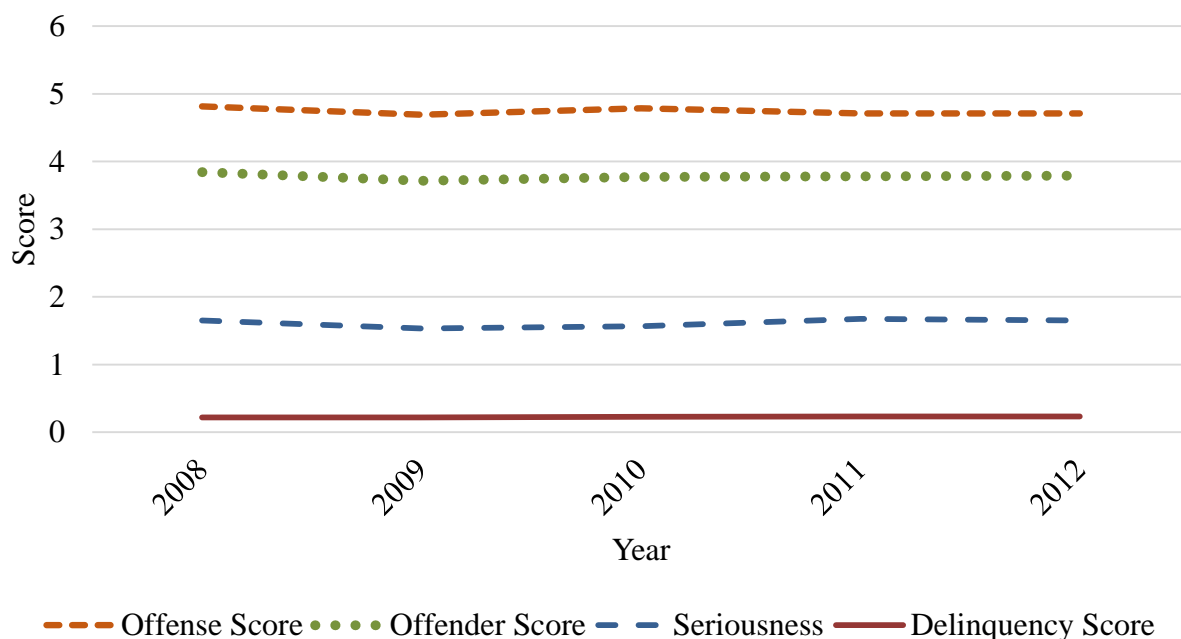
[6] Please see Appendix 6 for additional information regarding missing data, the procedures used to clean missing and incorrect data, and the results of those efforts.

Table 3 below provides, for each of the key sentencing variables, the number of valid observations, the minimum and maximum value for each, the mean value for each, and the standard deviation for each variable.

Table 3. Summary Statistics for Key Variables (18 years or older; N = 54,133)

Variable	Observations	Min Value	Max Value	Mean	Std. Dev.
Juvenile Score	51,416	0	2	0.08	0.32
Age at Offense	51,698	18	85.8	30.52	10.81
Offender Score	51,643	0	9	2.75	2.46
Offense Score[7]	20,530	1	15	4.35	2.98
Seriousness (Inverse)	52,091	1	7	3.76	1.42
Actual Sentence (Months)	52,093	0	720	37.39	88.66
Guideline Sentence (Middle)	51,888	0	720	62.48	94.07
Departure from Middle	51,873	-712.8	687	-25.14	61.28
Departure from Boundaries	52,113	-720	720	-14.66	61.53
Percent of Max Guideline	49,505	0	136	41.7%	0.84

The next several pages explore the presence of the juvenile score among various groups of individuals, as defined by age, race, gender, and circuit of sentencing. We explore trends in the juvenile score, and the overall offender score, by examining the presence of each across the sample as it transitions from 22 to 23 years of age. Recall that only offenders 22 years or younger at the time of their offenses may have their juvenile delinquency history accounted for in their sentences. The following Table 4 includes descriptive statistics comparing the subsample of individuals between 18 and 22 years by Juvenile Score, to averages for the entire sample aged 18 and older.

Table 4. Key Sentencing Variable Averages by Juvenile Score

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[7] Only applicable to crimes against persons.

Variable	18 to 22 years			All Ages
	Juvenile Score			-
	0 Points	1 Point	2 Points	-
Age at Offense	20.4	19.8	19.9	30.5
Offender Score	1.3	2.7	4.0	2.8
Offense Score	4.6	5.1	5.7	4.4
Seriousness	3.7	4.0	4.1	3.8
Actual Sentence (Months)	27.0	48.8	66.9	37.4
Guideline Sentence (Middle)	41.7	68.2	106.8	64.4
Departure from Middle	-13.7	-17.9	-35.4	-25.1
Departure from Boundaries	-6.3	-9.2	-21.0	-14.7
Percent of Max Guideline	41.5%	45.4%	45.7%	41.7%
N =	13,554	2,098	818	52,113

These results indicate that offenders with greater juvenile scores were, on average, sentenced for more serious offenses and have a greater previous offending history (even after subtracting out the Juvenile Score from the Offender Score). Offenders younger than 23 with a Juvenile Score of zero are very similar to the entire sample ("All Ages") average with respect to the seriousness of their offenses (as captured by the Offense Score and Seriousness variables), albeit while having a shorter offending history (by virtue of their younger age, and having less time at risk of having an offending history). In contrast, individuals with greater juvenile scores are participating in more serious offenses, corresponding with much longer sentences. On average, offenders with a Juvenile Score of two points receive actual sentences of approximately 5.5 years, much longer than the approximately 3 years average sentence for the entire sample.

In general, greater sentences are also associated with greater downward departures in absolute number of months (both from the middle, and from the boundaries, of the guidelines sentence). This, however, is an artifact of the size of the sentencing range appearing in each sentencing matrix cell. Simply put, there's more room within the guidelines cells where more

serious offenses meet more extensive offender histories, thus allowing larger departures in terms of months. Focusing on the Percent of Max Guideline presents an opposite picture: for offenders with a juvenile score of one or two, the percent of the maximum guideline sentence given is relatively longer than the sentences for the overall sample, or for juveniles with a juvenile delinquency score of zero.

Ideally, the transition of sentencing patterns across ages should be stable and consistent, which would indicate that the use of the juvenile component score is an adequate measure of prior offending history. As individuals age, their juvenile delinquency history is allowed to decay (through a rolling five-year, timing-out process) or is no longer considered under any circumstance at age 23. If sentencing patterns are markedly different before and after 23 years of age, such a finding would indicate a potential source of bias in the relationship and interaction between the juvenile and offender scores.

Results depictured in Figure 2 on the following page indicate a smooth and consistent transition across ages close to the cutoff-point of 23 years of age. (In Figure 2, the scale for the Average Delinquency Score by age appears on the right-hand side of the figure, while the scale for the other three variables in the figure appears on the left-hand side of the figure.) In general, the transition across ages results in progressively higher offender scores, which increase at a steady and consistent rate. Older offenders had more time to accumulate an offending history, which is reflected in higher offender scores. Results indicate that the increasing trend in the Offender Score by age is consistent despite the presence Juvenile Score Component, which can only inflate the offender scores for those younger than 22.

Figure 2. Average Guideline Scores by Age at Offense (N = 31,794) [8]
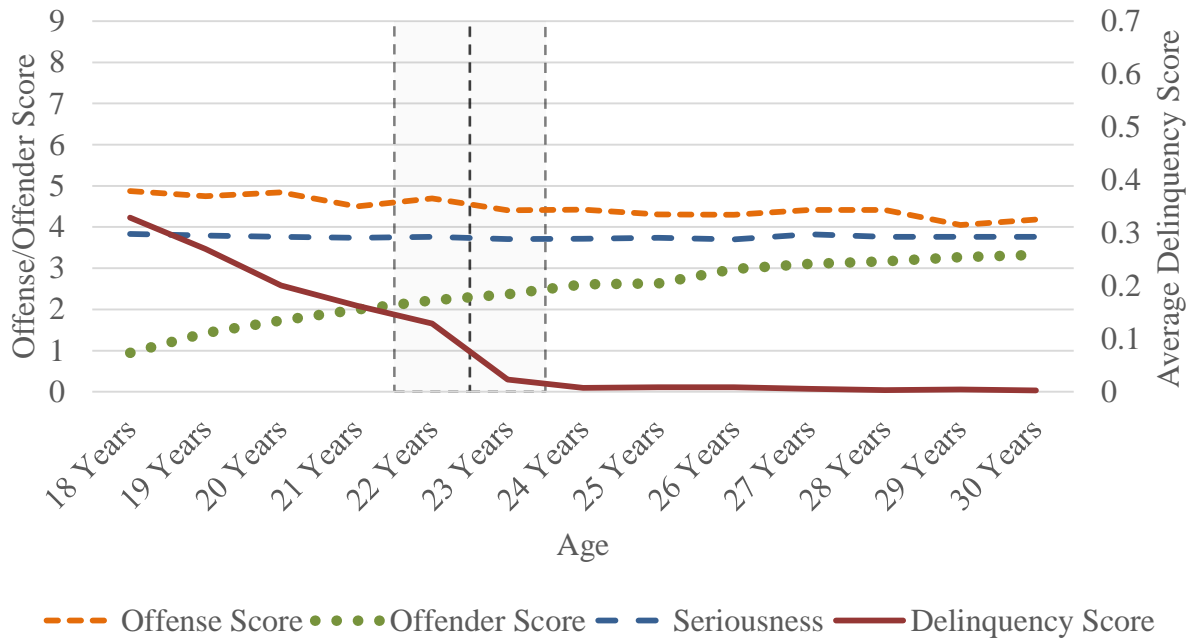
Figure 2 also indicates that the average seriousness of offenses is remarkably constant across ages, despite a decrease in offense scores—a result of a greater proportion of more similar crimes against persons for younger offenders. Juvenile scores decrease steadily as offenders age, and have had time to allow for their delinquency history to decay, in accordance with the 5 year crime-free/rolling-out provision in calculating the Juvenile Score. In contrast, offender scores progressively increase with age, despite decaying and disappearing juvenile scores. More importantly, the growth of the offender average score appears to occur at a relatively constant rate.

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[8] A very small proportion of offenders 23 years or older had values of 1 or 2 for juvenile score, which is why the Delinquency Score is slightly elevated above "0" at age 23. This is due to a mistake, either for their date of birth, or for the date of their offense. This error was found for 154 observations, which corresponds to less than .3% of the total sample above 18 years.

Offenders younger than 22 years of age do have their offender scores inflated by the Juvenile Score (by an average of .22 points, as noted in Figure 3 below), but with or without the Juvenile Score, the trends in the offender score remain rather similar in terms of steady progression in the growth of the Offender Score with increasing age.

Figure 3. Average Offender Score with or without the Juvenile Score (N = 31,794)
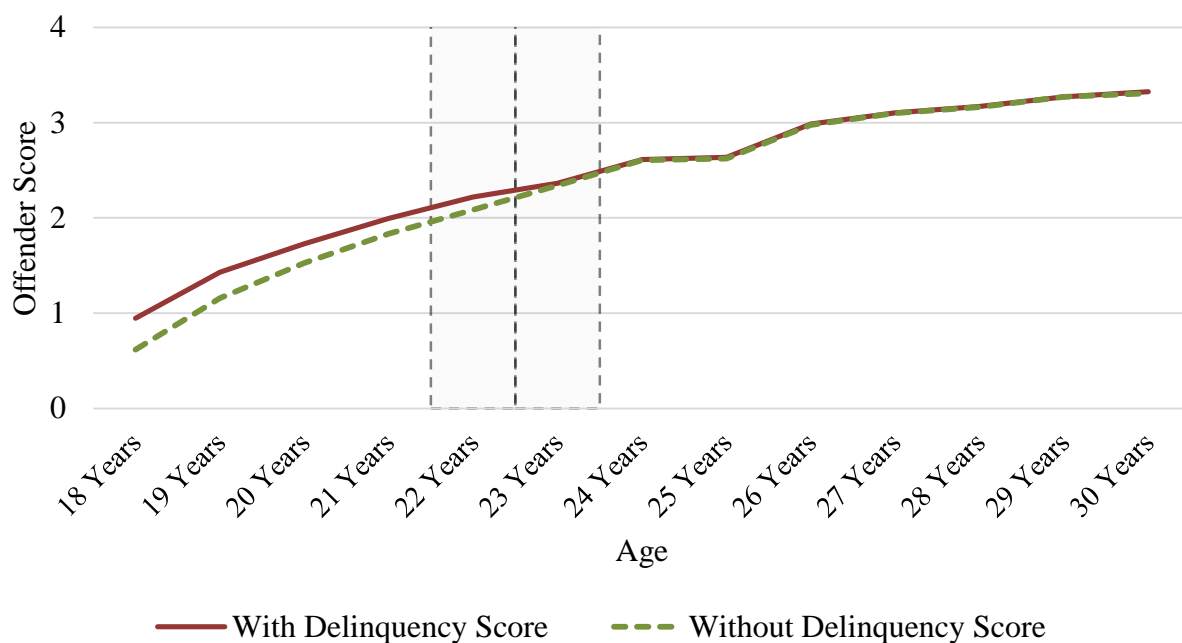
However, when focusing only on offenders with juvenile scores between the ages of 18 and 22 (Figure 4, next page), a greater impact of the juvenile score is revealed, averaging a steady contribution of an average of 1.24 points to the Offender Score. Since each additional point of the Offender Score places the individual being sentenced in a subsequent matrix cell with a heightened sentencing range, the juvenile score, as designed, does increase sentence length outcomes.

Figure 4. Average Offender Score with or without the Juvenile Score (If Juvenile Score is 1 or 2); N= 3,125)
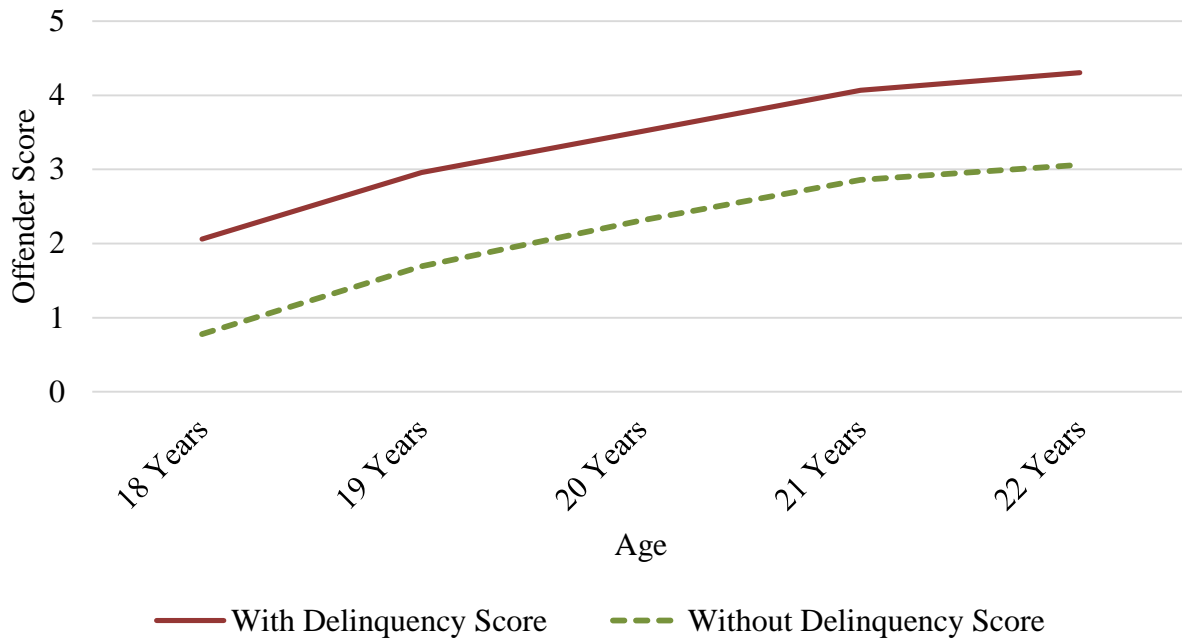
Variation in sentence length outcomes, as measured by actual sentence and departure from the guidelines, as a result of the presence of a juvenile score, is more difficult to distinguish by simply examining average sentences by age. This is because the actual sentence (and the guidelines sentence) given to offenders increases with age. Mostly, this trend is explained by an increase in the offender score due to longer criminal history records. As noted in Figure 5 on the following page, there does not seem to be a substantial shift in this trend between 22 and 23 years old, although these two ages have average sentences greater than those who are 24 or 25 years old. In general, actual sentences and guideline sentences follow consistent patterns, although there is a tendency for a greater percentage downward departure from the guidelines for older offenders.

Figure 5. Sentence and Departure (Inverse Scale) by Age (N = 31,794)
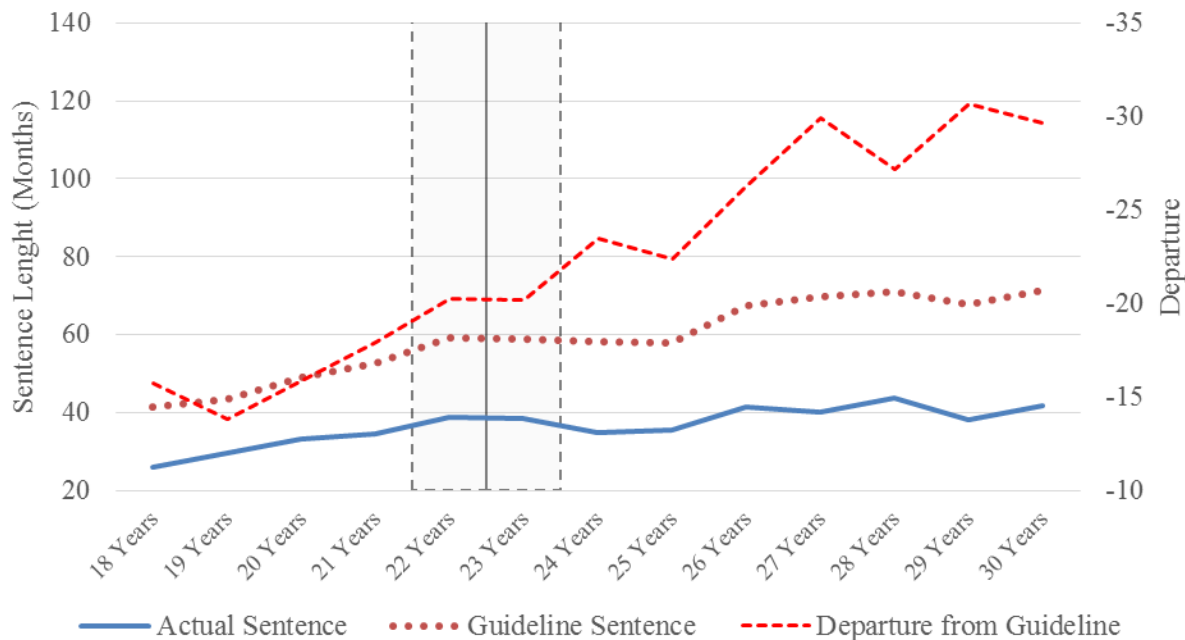
Notwithstanding the contribution of the juvenile score, the impact of age itself is inter-related with sentencing outcomes. Although in absolute months older offenders experience greater downward departures from the guidelines, when calculated relative to the maximum possible sentence these offenders could have received, the values for departure become much more consistent. Figure 6 on the following page indicates that, at each age, the average sentence given across all offenses and offense histories is near 40% of the maximum guideline sentence. Offenders at the ages of 22 and 23 years do receive the greatest percentage of the maximum guidelines, at 45.7% and 45.4% respectively. However, while all ages experience some degree of discounting from the maximum guidelines sentence, the discount increases with age. This suggests that the presence of the juvenile score co-exists with the smaller discount those who are younger experience, compared to those who are older. It is also important to note that, while departures seem greater with age, this difference is also attributable to the greater range of

potential guidelines sentences for those who are older, and who may have a longer offender history.

Figure 6. Percentage of Max Guideline and Departure (Inverse Scale) by Age (N = 31,794)
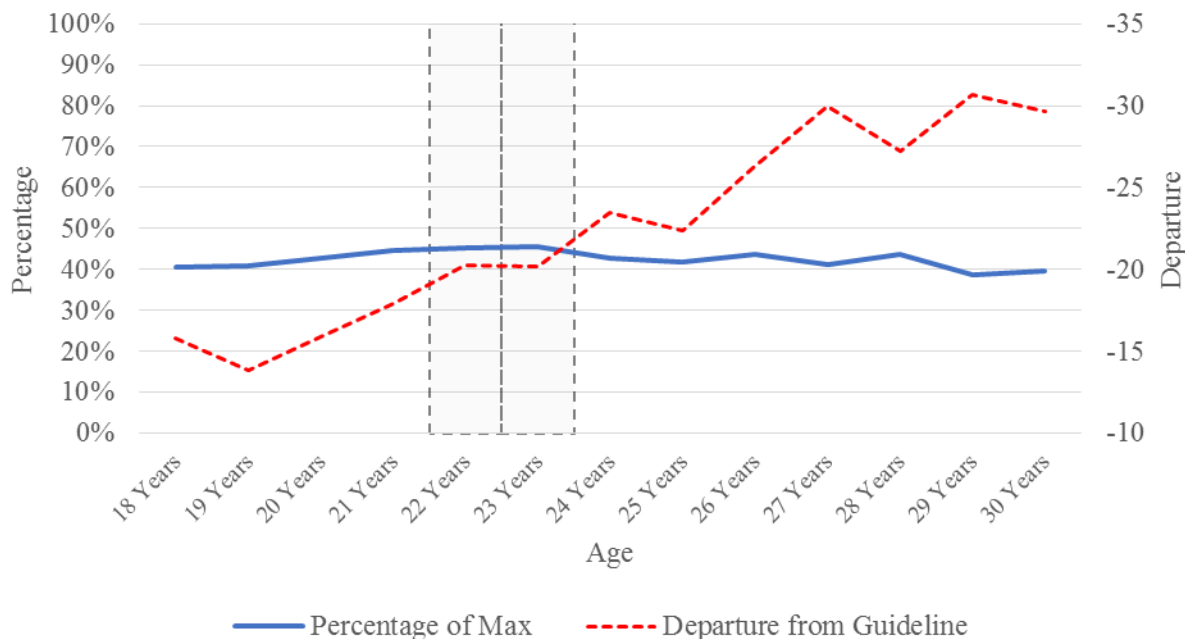
Disparities in the Distribution of the Juvenile Score

A key concern with respect to the application of the juvenile score involves possible disparities in the assignment of commitments for juveniles across the state of Maryland. This disparity is particularly relevant considering the less formal and structured nature of juvenile sentencing, which by definition allows for greater flexibility and discretion in disposing of juvenile cases.

Disparities were evaluated by gender, race/ethnicity, and jurisdiction. Any differences found may be a result of differential involvement of particular groups in criminal and delinquent activities, the differential detection of particular groups in criminal and delinquent activities, and/or the differential application of juvenile adjudication and/or commitment across groups by

46

the juvenile justice system. In addition, the following analyses should only be considered a preliminary evaluation of disparities, as such disparities are documented in the MSCCSP's database of sentencing guidelines worksheets. This caveat should command special attention because, without access to two additional, important pieces of information, there is a possibility that measurement errors are contributing to apparent disparities. The two missing pieces of information from the present analysis are the following: (1) access to the underlying administrative records database that is queried to calculate juvenile scores in the first instance; (2) an understanding of the variation in practices across jurisdictions in obtaining and recording juvenile history on guidelines worksheets.

Gender

On average, males (representing 90% of those sentenced) have greater juvenile scores than females, and it is very rare for sentenced females to have juvenile scores of 2 points. As described in Table 5 below, approximately 19% of males had juvenile scores of one or two, a proportion almost three times higher than the 6.6% of females with scores of one or two. These results can reflect either a greater involvement in delinquency by males than females in the sample, or greater application of commitment to male delinquents, or some combination of both.

Table 5. Juvenile Score by Gender (ages 18 to 22; N = 16,451)

Gender of Offender		Juvenile Score			
		0 Points	1 Point	2 Points	Total
Male	Freq	12,041	2,011	797	14,849
	Perc	81.1%	13.5%	5.4%	100%
Female	Freq	1,496	87	19	1,602
	Perc	93.4%	5.4%	1.2%	100%
Total	Freq	13,537	2,098	816	16,451
	Perc	82.3%	12.8%	5.0%	100%

Departure as measured by the percentage of the maximum guidelines sentence received is relatively consistent for males across all values of the juvenile score. Table 6, below, though, shows greater variability among females on this measure of sentence outcome. On this measure of sentencing, females with juvenile scores of 1 and 2 receive shorter sentences than males, while females with a score of one on average have greater sentences than males. Note though that the rarity of females sentenced with a juvenile score (over 5 years, only 87 females had a score of 0, and 19 had a score of 2) cautions against drawing any conclusions regarding the interaction of gender and juvenile score in influencing sentencing outcome.

Table 6. Percent of Max Guideline Sentence by Gender and Juvenile Score (ages 18 to 22; N = 16,451)

Juvenile Score	Gender		All Sentences
	Male	Female	
0 Points	43.0%	31.2%	41.4%
1 Point	45.0%	54.5%	44.8%
2 Points	45.9%	41.7%	45.8%
Total	43.4%	32.7%	41.6%

Race and Ethnicity

Between the ages of 18 and 22, 65% of all those sentenced are African-American, 28% are white, and the remaining 7% are Asian, Hispanic, or have a race/ethnicity categorized as "other". On average, African-Americans are slightly more likely to have juvenile scores of 1 and 2 compared to whites in the sample, and less likely than whites to have a juvenile score of 0. Hispanics, Asians, and those recorded as "other" have lower juvenile scores than either whites or African-Americans. However, over a five-year period, the small number of individuals with a race/ethnicity recorded as Hispanic, Asian, or "other" cautions against confidence in the reliability of their results. In addition, recording of Hispanic ethnicity on the worksheet yields a

high level of missing data (approximately 20%). Table 7 below provides the juvenile score

distribution for each racial and ethnic group.

Table 7. Juvenile Score by Race (ages 18 to 22; N = 16,472)

Race of Offender		Juvenile Score			
		0 Points	1 Point	2 Points	Total
White	Freq	3,860	513	170	4,543
	Perc	85.0%	11.3%	3.7%	100%
Black	Freq	8,658	1,496	614	10,768
	Perc	80.4%	13.9%	5.7%	100%
Hispanic	Freq	503	42	8	553
	Perc	91.0%	7.6%	1.4%	100%
Asian	Freq	62	3	3	68
	Perc	91.2%	4.4%	4.4%	100%
Other	Freq	470	46	24	540
	Perc	87.0%	8.5%	4.4%	100%
Total	Freq	13,553	2,100	819	16,472
	Perc	82.3%	12.7%	5.0%	100%

With regard to sentencing outcomes as measured by the percentage of the maximum

guideline sentence received, African-Americans with a juvenile score of two received sentences

approximately 5% closer to the maximum guideline sentence compared to whites, as described in

Table 8 below (47.1% vs 41.9%). The sentencing difference between African-Americans and

whites with juvenile scores of 0 and 1, on the other hand, are much smaller.

**Table 8. Percent of Max Guideline by Race and Juvenile Score
(ages 18 to 22; N = 16,472)**

Juvenile Score	Race of Offender		All Sentences
	White	Black	
0 Point	41.7%	41.3%	41.3%
1 Point	45.8%	45.2%	44.8%
2 Points	41.9%	47.1%	45.8%
Total	42.2%	42.2%	41.6%

While the overall distribution of juvenile scores, when comparing African-Americans to whites, does not appear to differ that greatly, factoring in the seriousness of the offense for which one is being sentenced indicates greater differences across racial and juvenile score groups. Figure 7a below displays, across offense seriousness categories, the average sentence length received, by race and the presence or absence of a juvenile score. *Solid lines* for each group indicate that group's sentence *with* a juvenile score of 1 or 2, while *dashed lines* for each group indicate the group's average sentence among those *without* a juvenile score, by offense seriousness (this includes person, property, and drug offenses).

Figure 7a. Sentence Length by Seriousness (age 18-22; VII to I; N = 16,472)
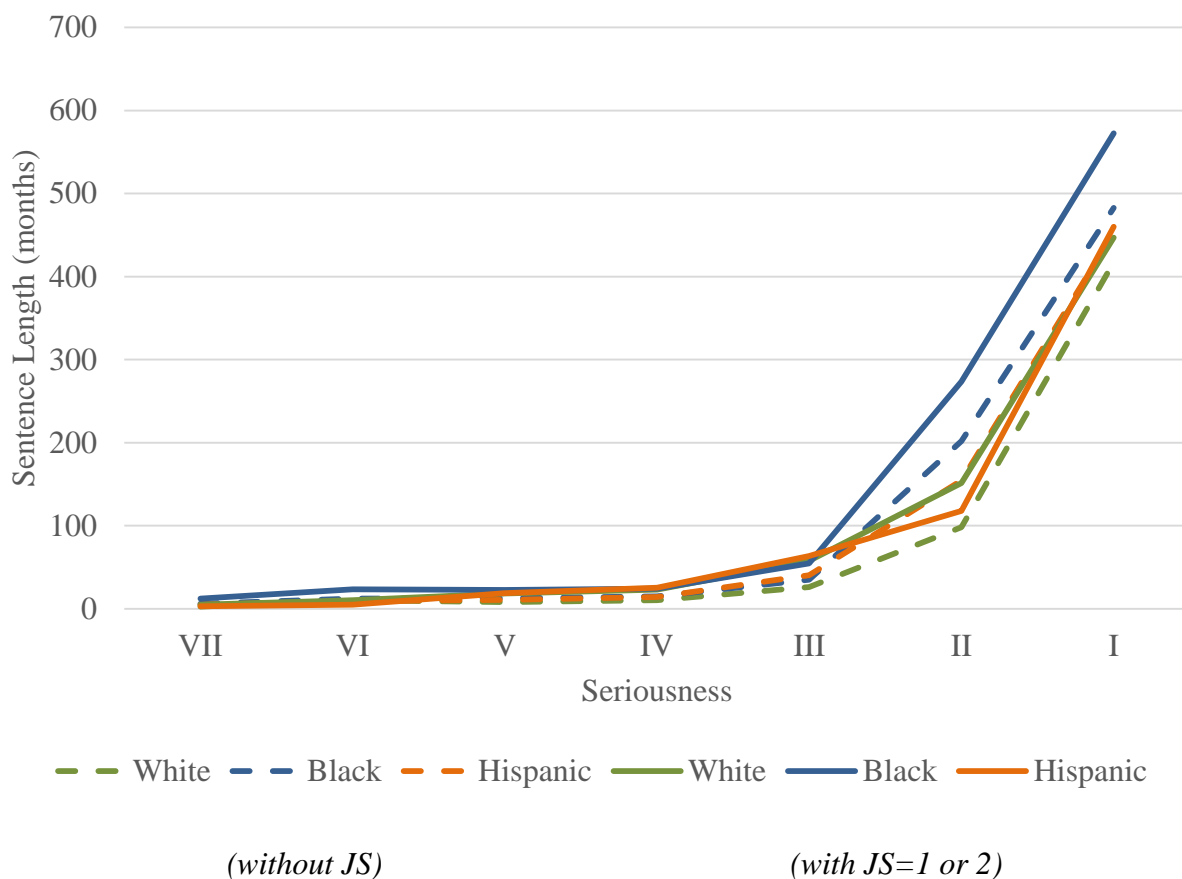
While the scale of the sentence length variable, extending from 0 to 700 months (720 being the maximum possible) visually diminishes differences across groups for the lower seriousness offenses, noticeable differences exist across racial and ethnic groups, with and without juvenile scores. Figure 7b below presents a more detailed picture of sentence length outcomes, by expanding Figure 7a, at seriousness scores VII-IV.

(Figure 7b. Expansion of Figure 7a for Differences for At Lower Seriousness Offenses Across Groups)

(without JS)   *(with JS=1 or 2)*
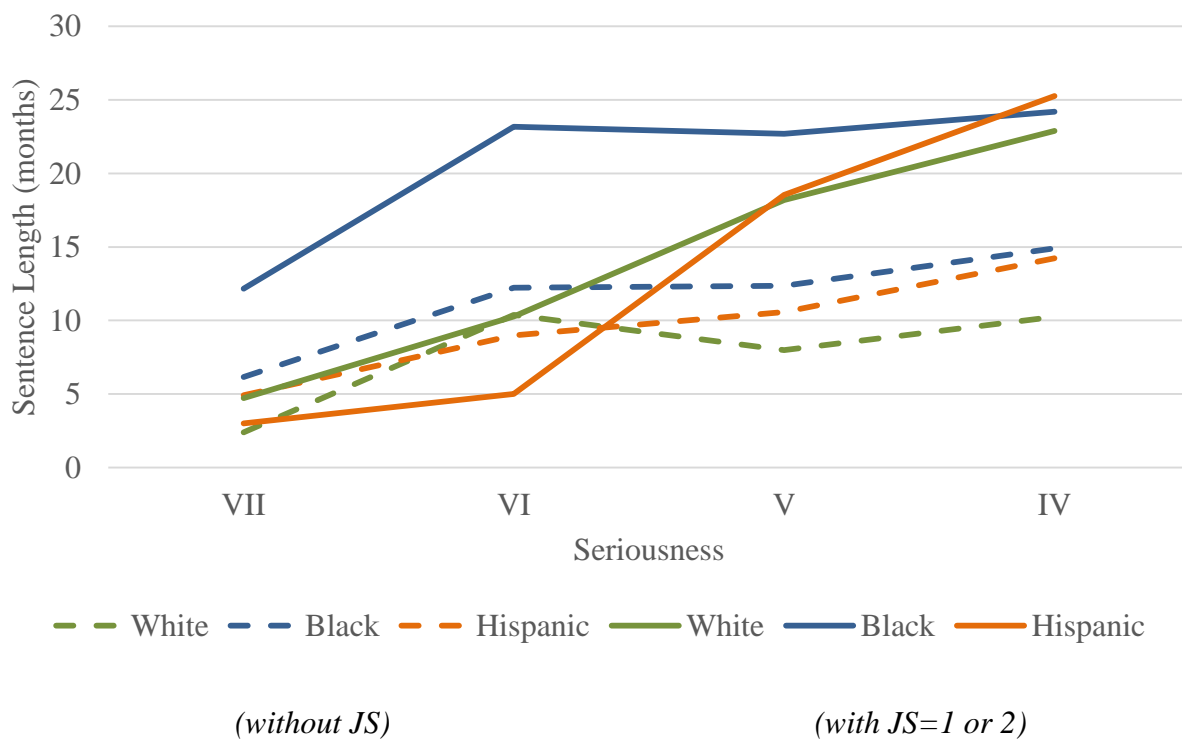
A shift in sentence length outcomes for groups with and without juvenile scores occurs between less and more serious offenses. For the least serious offenses (Figure 7b, VII and VI), African-Americans with a juvenile score receive noticeably longer sentences than the other groups, both with and without juvenile scores. Moving to more serious categories V and IV, the three racial and ethnic groups are more clustered, receiving less varying sentences, and the

presence of a juvenile score results in longer sentences for all groups compared to those without a juvenile score. At the levels of the most serious offenses (Figure 7a, III, II, and I) the sentence length differences appear to re-sort according to racial/ethnic group, and the influence of a juvenile score is less striking than one sees in categories V and IV. African-Americans, with and without a juvenile score, receive longer sentences in the order of several months and even years, compared to all other groups.

Jurisdiction of Sentencing

The map depicted in Figure 8 on the following page categorizes each court jurisdiction in Maryland according to the average juvenile score across all offenders between 18 and 22 years of age sentenced in each court. The illustration is composed of a three-color scale constructed to illustrate increasing average juvenile score across the jurisdictions. The ranges for that scale were based on the distribution of counties, with 6 counties in each of the lower and upper quartile groups, and 12 counties in the middle range group (Baltimore City, although not a county, is included among the 24 jurisdictions). This graph illustrates that, in general, despite some notable variations to be discussed later, counties are somewhat clustered with respect to the average juvenile score across all those appearing for sentencing in each jurisdiction.

It is important to note that an individual appearing at sentencing in one jurisdiction with a particular juvenile score may not have necessarily accumulated their juvenile history in that same jurisdiction. Therefore, these results should not be interpreted as indicating variation in juvenile adjudication and commitment across the state. Individuals may accumulate a juvenile history in one jurisdiction, but then commit an adult offense in another jurisdiction. No variables in the MSCCSP database allow for the identification of where juvenile adjudications and commitments originally occurred, but instead only where a subsequent adult sentencing event occurred.

Figure 8. Average Juvenile Score by Jurisdiction (ages 18 to 22; N = 16,470)
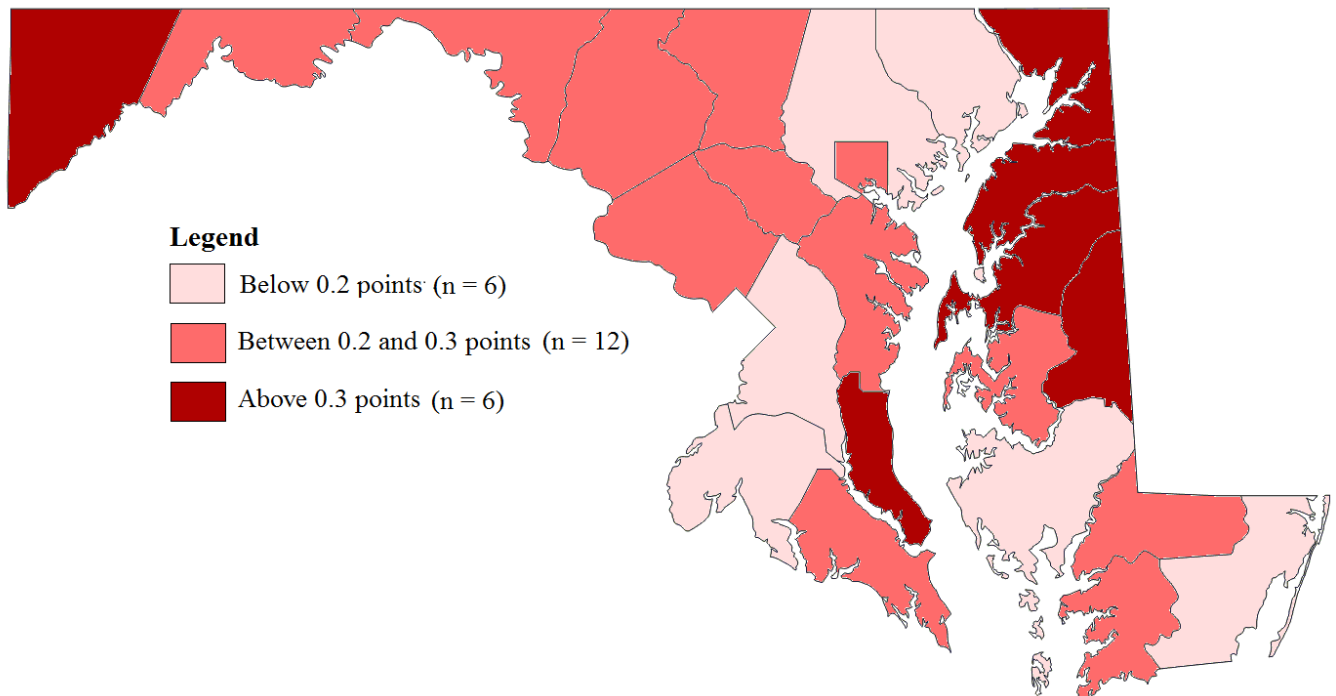
Table 9 on the following page provides the distribution of juvenile scores present in the sentencing events for each jurisdiction across the five years under study. Orange shading indicates the four counties that have the greatest proportion of sentenced offenders with juvenile scores (all above 25%). In contrast, the blue shading indicates the four counties with the lowest proportion of offenders with juvenile scores among those sentenced.

Table 9. Juvenile Score by Jurisdiction (ages 18 to 22; N = 16,470)

Jurisdiction		0 Points	1 Point	2 Points	Total
		Juvenile Score			
Allegany	Freq	122	19	10	151
	Perc	80.80%	12.60%	6.60%	100%
Anne Arundel	Freq	1,321	204	116	1,641
	Perc	80.50%	12.40%	7.10%	100%
Baltimore County	Freq	2,095	317	80	2,492
	Perc	84.10%	12.70%	3.20%	100%
Calvert	Freq	136	36	18	190
	Perc	71.60%	19.00%	9.50%	100%
Caroline	Freq	128	31	11	170
	Perc	75.30%	18.20%	6.50%	100%
Carroll	Freq	135	19	14	168
	Perc	80.40%	11.30%	8.30%	100%
Cecil	Freq	132	41	23	196
	Perc	67.40%	20.90%	11.70%	100%
Charles	Freq	660	93	30	783
	Perc	84.30%	11.90%	3.80%	100%
Dorchester	Freq	126	16	4	146
	Perc	86.30%	11.00%	2.70%	100%
Frederick	Freq	418	57	23	498
	Perc	83.90%	11.50%	4.60%	100%
Garrett	Freq	15	6	1	22
	Perc	68.20%	27.30%	4.60%	100%
Harford	Freq	66	14	1	81
	Perc	81.50%	17.30%	1.20%	100%
Howard	Freq	398	71	20	489
	Perc	81.40%	14.50%	4.10%	100%
Kent	Freq	72	19	7	98
	Perc	73.50%	19.40%	7.10%	100%
Montgomery	Freq	478	72	31	581
	Perc	82.30%	12.40%	5.30%	100%
Prince George's	Freq	1913	228	88	2229
	Perc	85.80%	10.20%	4.00%	100%
Queen Anne's	Freq	54	9	6	69
	Perc	78.30%	13.00%	8.70%	100%
St. Mary's	Freq	111	19	7	137
	Perc	81.00%	13.90%	5.10%	100%

Somerset	Freq	129	22	11	162
	Perc	79.60%	13.60%	6.80%	100%
Talbot	Freq	107	24	5	136
	Perc	78.70%	17.70%	3.70%	100%
Washington	Freq	562	93	28	683
	Perc	82.30%	13.60%	4.10%	100%
Wicomico	Freq	531	74	34	639
	Perc	83.10%	11.60%	5.30%	100%
Worcester	Freq	356	19	11	386
	Perc	92.20%	4.90%	2.90%	100%
Baltimore City	Freq	3489	595	239	4323
	Perc	80.70%	13.80%	5.50%	100%
Total	Freq	13,554	2,098	818	16,470
	Perc	82.30%	12.70%	5.00%	100%

Small sample sizes for many counties require caution in interpreting these results. In general, counties with a lower number of events appear to have a higher proportion of offenders with some juvenile score, which is illustrated by the 32% of offenders with juvenile scores in Garrett County (n=22), or the 26.5% for Kent County (n=98). In absolute numbers, Baltimore City alone contributes 26% of all cases with juvenile scores in the entire state, but the proportion of offenders with juvenile scores of 1 or 2 is comparable to that of Montgomery County, as well as to the state's total average distribution of juvenile scores.

However, there are substantial differences across jurisdictions and juvenile scores with respect to departure, when the sentence received is measured as the percentage of the maximum guideline sentence. Table 10 on the following page describes the average sentence received in each jurisdiction relative to the guidelines maximum, by juvenile scores of 0, 1, or 2. The rows of Table 10 should be read as explained by the following example: In Baltimore City, those with a juvenile score of 0 received average sentences that are 25.2% of the guideline maximum; those

with a score of 1 received 30.3% of the guideline maximum, and those with a score of 2 received 33.0% of the guideline maximum.

Table 10. Percent of Maximum Guideline Sentence by Jurisdiction and Juvenile Score (ages 18 to 22; N = 16,470)

Jurisdiction	Juvenile Score			
	0 Points	1 Point	2 Points	Total
Allegany	46.5%	66.8%	62.5%	47.6%
Anne Arundel	29.9%	29.9%	30.6%	30.0%
Baltimore County	34.4%	40.8%	37.8%	34.7%
Calvert	51.5%	42.1%	36.0%	50.3%
Caroline	53.1%	44.7%	85.5%	53.3%
Carroll	44.2%	31.1%	32.5%	43.3%
Cecil	43.6%	35.0%	45.9%	43.1%
Charles	50.7%	63.4%	48.8%	51.2%
Dorchester	74.5%	64.2%	141.7%	74.7%
Frederick	44.7%	53.1%	61.7%	45.4%
Garrett[9]	66.8%	56.6%	8.3%	65.5%
Harford	70.9%	119.4%	100.0%	73.9%
Howard	49.2%	45.6%	62.0%	49.2%
Kent	60.3%	46.5%	53.8%	59.3%
Montgomery	50.6%	46.0%	83.1%	51.1%
Prince George's	49.8%	56.8%	59.0%	50.2%
Queen Anne's	58.2%	63.5%	39.7%	57.9%
St. Mary's	69.0%	79.3%	50.7%	69.3%
Somerset	102.6%	108.2%	60.6%	101.8%
Talbot	48.2%	59.9%	36.2%	48.7%
Washington	73.4%	43.4%	74.4%	72.2%
Wicomico	81.9%	100.7%	66.7%	82.4%
Worcester	48.8%	68.8%	53.9%	49.3%
Baltimore City	25.2%	30.3%	33.0%	25.5%
Total	41.3%	44.8%	45.8%	41.6%

In general, when comparing the four jurisdictions the highest and lowest total average percent of guideline maximum sentence given, we find that jurisdictions with the lowest total averages (blue) have fairly flat percentages across the juvenile scores, and tend to be larger counties. Those with the highest (orange) sentences have high percentages of the maximum

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[9] Garrett County has one single observation with a juvenile score of two, out of a sample of 86 observations.

guidelines sentences even among those with a juvenile score of 0, but that that the low number of cases in those jurisdictions contributes to the large fluctuations in their percentages.

Counties with lower average juvenile scores also appear to exhibit smaller percent sentences, relative to guideline maximums. Locations such as Anne Arundel County, Baltimore County, and Baltimore City have total values of 34.7%, 30%, and 25.5%, respectively, for sentences given as a percent of the guideline maximum. In contrast, four counties (in orange) have proportions greater than 70%, with the highest being 101.8% for Somerset County (n = 162). Small sample sizes from smaller counties may be a source of instability, but the consistent and substantial variations by county does suggest the possible presence of disparity in sentencing across jurisdictions.

The Relative Impact of the Juvenile Score and Other Factors on Sentencing Outcomes

This final section describes the influence of the juvenile score, alongside other available variables, on sentencing outcomes. Offenders with different juvenile scores may differ in several other aspects that are meaningful in explaining sentences received. Furthermore, having a greater juvenile score coincides with more serious offenses, along with a longer offending history. Therefore, the possibility of confoundedness hinders isolating of the specific influence of the juvenile component from all these other potential sources of variation.

The following table compares the sentences of offenders by their offender scores and juvenile scores. The only means by which the juvenile score can impact sentences is through its contribution to the offender score. Therefore, any differences in sentencing outcomes between different juvenile scores, within one same offender score, are not necessarily a consequence of the increase in the score itself, but of other factors associated with the juvenile component score.

57

Table 11. Average Sentence Length (Months) by Offender Score and Juvenile Score (ages 18 to 22; N = 16,679)

Offender Score	Juvenile Score			All Sentences	Juvenile Score Average Effect[10]	Percent Effect
	0 Points	1 Point	2 Points			
0 Point	15.62			15.67		
1 Point	23.46	28.79		24.93	5.33	11.4%
2 Points	26.64	34.02	44.08	30.12	8.72	28.6%
3 Points	41.67	50.75	48.58	45.75	3.46	8.8%
4 Points	50.32	67.12	59.36	52.89	4.52	10.9%
5 Points	*68.54*	*70.02*	*61.85*	*68.41*	*-3.34*	*-4.8%*
6 Points	83.65	106.31	94.26	89.99	5.31	7.9%
7 Points	94.36	129.08	136.52	109.27	21.08	21.3%
Total	50.09	81.70	99.15	58.60	24.53	42.2%

Table 11 indicates that sentences are consistently higher as offender scores also increase. Additionally, juvenile scores carry an additional penalty for sentencing, ranging between averages of 3.46 to 21.1 extra months, depending on the offender score (the one exception is among those with an offender score of 5, for which the juvenile score effect is negative). The presence of this juvenile score "penalty" can be an indicative of either selection of certain types of offenders into higher juvenile scores (for instance due to greater severity of the offenses committed), or the influence of other variables that affect sentencing outcomes.

In a final analysis, we examine the results of multiple regression models, using all relevant variables captured in the MSCCSP guidelines worksheet, to assess as comprehensively

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[10] The Juvenile Score Average Effect is the average change in sentence length between zero and one juvenile score, and between one and two juvenile score for each individual offender score.

as possible within the limits of the MSCCSP data, the role of race and juvenile score in influencing sentencing outcomes.

To identify the differences in sentence length outcomes between African-Americans and whites, we attempt to control for juvenile history, adult offender history, the seriousness of the present offense, mode of conviction, type of legal counsel, specific age of the individual, gender, and jurisdiction of sentencing. We compare African-Americans and whites overall unmatched, and, through propensity score matching by juvenile score, create matched pairs of African-Americans and whites within each juvenile score category. Table 12, appearing across the following two pages, displays the results of the regression models.[11]

Overall, the results from the unmatched and matched analyses are comparable. The value of R^2 for the full, unmatched sample (0.60) is comparable to the performance of the models of the matched samples (ranging from 0.53 to 0.70 across delinquency score groups). What the R^2 values indicate is that, in light of the variation across cases, when controlling for available, relevant independent variables, between 53% and 70% of the total variation in sentence length is accounted for (depending on the particular model). This also means that, even controlling for all these key variables of interest, and even after matching individuals by race and juvenile score, there remains between 30% and 47% of sentence length variation that cannot be accounted for by the models.

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[11] Please see Appendix 7 for the propensity score results comparing the matched and unmatched samples across key control variables of interest. Propensity score analysis, through matching on a case-by-case basis, allows the comparison of groups by creating in essence an analytic "twin" for each individual, based on the similarity between two individuals in all respects, except for the distinguishing variables of interest (in this case, race and juvenile score). Due to small sample sizes for racial/ethnic groups besides African-Americans and whites, this analysis only includes these two groups in order to maximize optimal match results. The propensity score matching yielded 169 pairs with a juvenile score of 2; 508 pairs with a juvenile score of 1; and 3, 856 pairs with a juvenile score of 0.

Table 12. Linear Regression Models for Sentence Length (ages 18-22)

Variables	Unmatched	Matched DS = 0	DS = 1	DS = 2
White	-19.4** (1.482)	-5.43** (1.119)	-4.49** (0.944)	-10.78** (3.467) / -12.13* (6.534)
Offense Type				
Drug		-11.27** (1.284)	-5.66** (1.215)	-13.4** (5.096) / -27.31** (9.76)
Person		18.59** (1.235)	13.99** (1.223)	18.43** (4.168) / 10.53 (7.854)
Adult Criminal History Score				
Adult Score = 1		5.9** (1.247)	4.51** (1.239)	7.2 (4.927) / -10.6 (10.346)
Adult Score = 2		10.46** (1.446)	7.23** (1.538)	8.29 (5.392) / 9.39 (10.178)
Adult Score = 3		19.95** (1.902)	14.89** (2.104)	35.24** (6.609) / 4.2 (13.881)
Adult Score = 4		30.85** (1.588)	26.47** (1.968)	30.19** (6.321) / 24.21** (10.872)
Adult Score = 5		38.91** (2.391)	36.1** (2.738)	67.88** (8.318) / 38.34** (14.484)
Adult Score = 6		44.39** (2.861)	45.41** (4.219)	64.14** (13.546) / 57.14** (17.43)
Adult Score = 7		64.8** (3.766)	78.63** (6.505)	48.04** (15.099) / 46.36** (18.99)
Offense Seriousness Score (VII=0)				
Seriousness Score = VI		-8.13** (2.728)	-7.53** (2.956)	-13.07 (9.827) / 11.06 (19.188)
Seriousness Score = V		-3.16** (1.59)	-1.97 (1.499)	-4.37 (6.083) / 14.75 (11.903)
Seriousness Score = IV		10.22** (1.521)	8.34** (1.42)	11.96** (6.001) / 24.51** (11.337)
Seriousness Score = III		33.65** (1.499)	26.45** (1.466)	45.38** (5.742) / 59.81** (11.45)
Seriousness Score = II		160.03** (3.015)	122.43** (3.703)	174.16** (11.407) / 193.73** (24.31)
Seriousness Score = I		444.01** (4.415)	446.58** (6.817)	501.67** (16.743) / 398.7** (43.08)
Mode of Conviction (Plea Agreement=0)				
Plea No Agreement		3.2* (1.719)	1.04 (1.649)	4.9 (6.043) / 8.03 (10.239)
Trial		90.72** (2.296)	40.14** (2.77)	95.69** (9.269) / 46.18** (13.905)
Missing		7.41** (1.28)	2.44* (1.256)	5.22 (4.382) / 3 (8.416)
Private Representation (0 or 1)		0.94 (0.906)	0.64 (0.938)	4.93 (3.678) / 12.58* (7.343)
Age (18 years=0)				
19 years		3.11** (1.296)	2.74* (1.417)	2.58 (4.745) / -2.43 (8.882)
20 years		3.94** (1.358)	2.55* (1.441)	7.44 (5.335) / 32.04** (10.525)
21 years		2.92** (1.414)	3.53** (1.475)	6.3 (5.837) / 15.63 (11.43)
22 years		3.73** (1.483)	4.68** (1.543)	9.73 (6.461) / -4.98 (11.948)
Male (0 or 1)		3.38** (1.491)	1.69 (1.335)	12.81* (7.125) / -6.93 (23.576)
Jurisdiction (Baltimore=0)				
Allegany		15.89** (4.648)	8.23* (4.28)	5.72 (16.5) / -8.37 (28.451)
Anne Arundel		4.93** (1.743)	0.01 (2.382)	-14.23 (10.8) / -42.52** (20.5)
Baltimore County		5.58** (1.553)	0.65 (2.298)	0.7 (10.5) / -31.81 (21.419)
Calvert		13.8** (4.136)	9.26** (4.056)	-10.66 (13.72) / -8.65 (24.183)
Caroline		11.22** (4.306)	3.79 (4.127)	12.1 (14.064) / 14.75 (26.824)
Carroll		2.01 (4.795)	-3.59 (4.332)	-11.75 (17.573) / -19.06 (27.067)
Cecil		-0.66 (4.196)	1.99 (4.202)	-8.85 (13.466) / -16.95 (24.528)
Charles		11.87** (2.243)	5.35* (2.763)	10.26 (12.053) / -27.98 (26.83)
Dorchester		45.43**	23.78**	13.29 / 14.3

Variables	Unmatched	Matched		
		DS = 0	DS = 1	DS = 2
	(4.709)	(4.368)	(19.78)	(35.065)
Frederick	19.82**	8.28**	20.64*	-8.74
	(2.737)	(2.912)	(12.162)	(23.118)
Garrett	9.9	23.34**	-34.46	- -
	(11.717)	(10.791)	(24.213)	-
Harford	31.74**	13.93**	102.71**	- -
	(6.267)	(5.524)	(18.384)	-
Howard	6.07**	-0.46	-13.84	-40.2
	(2.772)	(2.996)	(12.246)	(60.819)
Kent	10.97*	5.96	-4.69	- -
	(5.7)	(5.297)	(16.805)	-
Montgomery	14**	4.69	-40.29**	-5.35
	(2.829)	(3.117)	(16.42)	(27.81)
Prince George's	10.52**	4.28	10.37	-33.51
	(1.627)	(3.485)	(14.659)	(34.346)
Queen Anne's	20.82**	10.9*	14.94	6.02
	(6.666)	(5.929)	(20.447)	(31.178)
St. Mary's	18.43**	14.71**	15.08	-22.98
	(4.856)	(4.459)	(16.105)	(30.333)
Somerset	24.36**	13.22**	45.27**	-27.54
	(4.38)	(4.622)	(15.543)	(32.119)
Talbot	15.77**	4.71	32.67	-14.89
	(4.911)	(4.508)	(24.148)	(34.926)
Washington	17.01**	14.22**	-3.11	-15.29
	(2.685)	(2.983)	(12.358)	(23.251)
Wicomico	25.49**	18.35**	28.76**	-10.31
	(2.402)	(2.796)	(13.897)	(45.237)
Worcester	7.09**	5.54*	15.7	-40.73
	(3.029)	(3.024)	(21.591)	(26.696)
Constant	37.56**	-22.52**	-11.27**	-24.9*	24.9
	(0.808)	(2.372)	(2.902)	(13.405)	(32.301)
R²	0.01	0.60	0.53	0.70	0.57
Observations	15,288	15,270	7,712	1,016	338

*p ≤ 0.1; ** p ≤ 0.05

Distilling the results of the regression models in terms of actual variation in sentence lengths received by African-Americans and whites allows for a clearer picture of differences by race. The following summary figure (9) highlights the differences in sentences received by each racial group, within categories of juvenile scores, and controlling for all the independent variables used to create the matched pairs. When two individuals are matched by juvenile history, adult offender history, the seriousness of the present offense, mode of conviction, type of legal counsel, specific age of the individual, gender, and jurisdiction of sentencing, the impact of race on differences in average predicted sentence length may be isolated. Recall that variation in sentencing is not 100% predicted by the regression models, but a substantial portion of the variation (between 53% and 70%) is accounted for by the models.

All else being equal, then, Figure 9 suggests the average predicted sentence length received is consistently greater for African-Americans than whites, and it also indicates the additive contribution of each juvenile score point (as discussed previously in this section). While the number of matched pairs for the juvenile score group "2" is low (only 169 pairs, for a total of 338 cases), greater confidence may be had in the results for juvenile score groups 0 (3,856 matched pairs) and 1 (508 matched pairs).

Figure 9. Predicted Sentence Length by Juvenile Score and Race (ages 18-22, matched samples, N = 9,066)
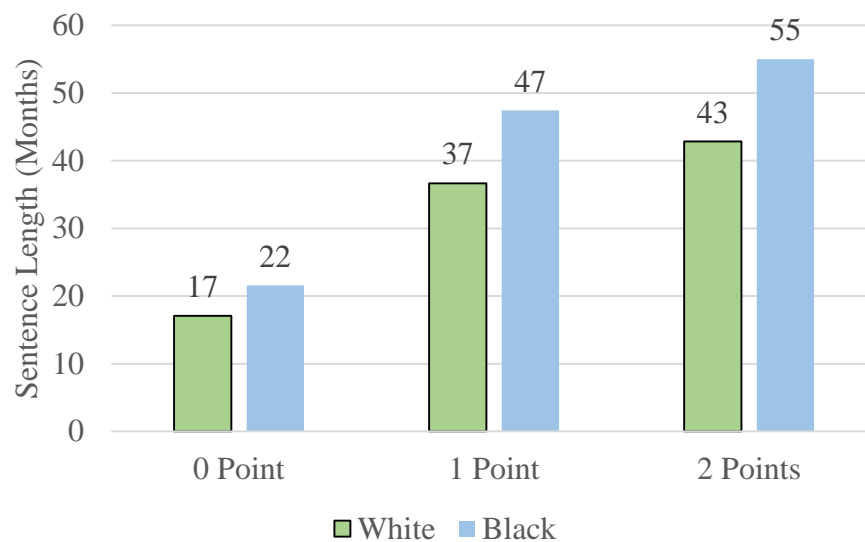
Preliminary Conclusions & Future Analyses

Had this report found that the current contribution of the juvenile component of the guidelines offender score had no effect on sentences, or that the effect of the juvenile score does not vary across demographic groups and jurisdictions, then no further analyses would be necessary. However, the results indicate that the juvenile score does contribute to sentencing outcomes, and that the impact of the juvenile score varies across racial groups and jurisdictions. As noted previously, the possibility of the presence of measurement errors, not detectable when examining the MSCCSP's sentencing data in isolation, cautions against definitive conclusions at this time. The results do suggest, though, that the juvenile score influences sentencing patterns across jurisdictions, and for African-Americans, the juvenile score does yield longer sentences, controlling for all other variables available in the MSCCSP dataset.

Ultimately, this study aims to test the adequacy of the use of juvenile adjudication and commitment, as measures of juvenile offending history, for the purpose of scoring overall offender history under the sentencing guidelines. A complete investigation requires the combination and matching of cases from the MSCCSP sentencing dataset with the same individual's administrative record history with the Department of Juvenile Services, and their adult criminal history records at the Department of Public Safety and Correctional Services.

In order to conduct a full validation of the Juvenile Component Score, the combined records from MSCCSP, DJS, and DPSCS will be analyzed to address three additional areas of inquiry:[12]

(1) By comparing juvenile scores on sentencing worksheets with the underlying administrative records of the Department of Juvenile Services, are juvenile scores being validly

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[12] Research applications were submitted to DJS and DPSCS in June and July 2015, respectively, requesting the data necessary to complete this study. A research MOU was executed with DPSCS in November 2015, and with DJS in February 2016. The transfer of requested data to the MDAC from DPSCS occurred on May 2, 2016, and DJS is currently matching its data to the MSCCSP data.

and reliably recorded across jurisdictions? This inquiry will help address the concern regarding possible measurement error in the recording of the juvenile score.

(2) Since we begin with a sentenced population, after controlling for time at risk in the community, does the juvenile score, as currently constructed (zero, one, or two), demonstrate a statistically significant relationship with adult offending and recidivism, that justifies its current composition, and its contribution toward the calculation of the overall offender score?

(3) In light of what is learned regarding topics (1) and (2), and, if deemed necessary by the MSCCSP, alternate scoring systems for the juvenile component score will be modeled and tested, examining the definition and scoring of adjudication and commitment, to determine which model(s) are likely to represent an improvement in the validity and reliability of the juvenile component score. These model specifications may arise from research findings and/or at the suggestion of MSCCSP staff and Commissioners.

The timeframe for completion of this study is estimated to last into 2017. The pace for completion of the study will depend on the receipt of requested data, the time necessary to link, clean and validate the combined datasets, and for the MDAC to prepare analyses for presentation. Should the study ultimately involve testing alternate models for recording juvenile delinquency history for guidelines purposes, the input and decisions of the MSCCSP will also play a role in determining the timeframe for completion.

Appendices

Appendix 1 – Sentencing Matrix for Offenses against Persons

Maryland State Commission on
Criminal Sentencing Policy

Sentencing Matrix for Offenses Against Persons
(Revised 7/2001)

Offense Score	Offender Score							
	0	1	2	3	4	5	6	7 or more
1	P	P	P-3M	3M-1Y	3M-18M	3M-2Y	6M-2Y	1Y-3Y
2	P-6M	P-1Y	P-18M	3M-2Y	6M-3Y	1Y-5Y	18M-5Y	3Y-8Y
3	P-2Y	P-2Y	6M-3Y	1Y-5Y	2Y-5Y	3Y-7Y	4Y-8Y	5Y-10Y
4	P-3Y	6M-4Y	1Y-5Y	2Y-5Y	3Y-7Y	4Y-8Y	5Y-10Y	5Y-12Y
5	3M-4Y	6M-5Y	1Y-6Y	2Y-7Y	3Y-8Y	4Y-10Y	6Y-12Y	8Y-15Y
6	1Y-6Y	2Y-7Y	3Y-8Y	4Y-9Y	5Y-10Y	7Y-12Y	8Y-13Y	10Y-20Y
7	3Y-8Y	4Y-9Y	5Y-10Y	6Y-12Y	7Y-13Y	9Y-14Y	10Y-15Y	12Y-20Y
8	4Y-9Y	5Y-10Y	5Y-12Y	7Y-13Y	8Y-15Y	10Y-18Y	12Y-20Y	15Y-25Y
9	5Y-10Y	7Y-13Y	8Y-15Y	10Y-15Y	12Y-18Y	15-25Y	18Y-30Y	20Y-30Y
10	10Y-18Y	10Y-21Y	12Y-25Y	15Y-25Y	15Y-30Y	18Y-30Y	20Y-35Y	20Y-L
11	12Y-20Y	15Y-25Y	18Y-25Y	20Y-30Y	20Y-30Y	25Y-35Y	25Y-40Y	25Y-L
12	15Y-25Y	18Y-25Y	18Y-30Y	20Y-35Y	20Y-35Y	25Y-40Y	25Y-L	25Y-L
13	20Y-30Y	25Y-35Y	25Y-40Y	25Y-L	25Y-L	30Y-L	L	L
14	20Y-L	25Y-L	28Y-L	30Y-L	L	L	L	L
15	25Y-L	30Y-L	35Y-L	L	L	L	L	L

P=Probation, M=Months, Y=Years, L=Life

Appendix 2 – Sentencing Matrix for Drug Offenses

Maryland State Commission on
Criminal Sentencing Policy

Sentencing Matrix for Drug Offenses
(Revised 10/2001)

	Offender Score							
Offense Seriousness Category	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7 or more**
VII	P	P	P	P-1M	P-3M	P-6M	3M-6M	6M-2Y
VI	Available for future use. There are currently no seriousness category VI drug offenses.							
V	P-6M	P-12M	3M-12M	6M-18M	1Y-2Y	1.5Y-2.5Y	2Y-3Y	3Y-4Y
IV	P-12M	P-18M	6M-18M	1Y-2Y	1.5Y-2.5Y	2Y-3Y	3Y-4Y	3.5Y-10Y
III-A Marijuana import 45 kilograms or more, and MDMA 750 grams or more	P-18M	P-2Y	6M-2Y	1Y-4Y	2Y-6Y	3Y-8Y	4Y-12Y	10Y-20Y
III-B Non-marijuana and non-MDMA, Except Import	6M-3Y	1Y-3Y	18M-4Y	3Y-7Y	4Y-8Y	5Y-10Y	7Y-14Y	12Y-20Y
III-C Non-marijuana and non-MDMA, Import	1Y-4Y	2Y-5Y	3Y-6Y	4Y-7Y	5Y-8Y	6Y-10Y	8Y-15Y	15Y-25Y
II	20Y-24Y	22Y-26Y	24Y-28Y	26Y-30Y	28Y-32Y	30Y-36Y	32Y-37Y	35Y-40Y

P=Probation, M=Months, Y=Years

Appendix 3 – Sentencing Matrix for Property Offenses

Maryland State Commission on
Criminal Sentencing Policy

Sentencing Matrix for Property Offenses
(Revised 7/2001)

Offense Seriousness Category	Offender Score							
	0	1	2	3	4	5	6	7 or more
VII	P-1M	P-3M	3M-9M	6M-1Y	9M-18M	1Y-2Y	1Y-3Y	3Y-5Y
VI	P-3M	P-6M	3M-1Y	6M-2Y	1Y-3Y	2Y-5Y	3Y-6Y	5Y-10Y
V	P-6M	P-1Y	3M-2Y	1Y-3Y	18M-5Y	3Y-7Y	4Y-8Y	8Y-15Y
IV	P-1Y	3M-2Y	6M-3Y	1Y-4Y	18M-7Y	3Y-8Y	5Y-12Y	10Y-20Y
III	P-2Y	6M-3Y	9M-5Y	1Y-5Y	2Y-8Y	3Y-10Y	7Y-15Y	15Y-30Y
II	2Y-5Y	3Y-7Y	5Y-8Y	5Y-10Y	8Y-15Y	10Y-18Y	12Y-20Y	15Y-40Y

P=Probation, M=Months, Y=Years

Appendix 4 – Maryland Sentencing Guideline Worksheet

MARYLAND SENTENCING GUIDELINES WORKSHEET	OFFENDER NAME - Last, First, Middle		SID#	SEX __ M __ F	BIRTHDATE		JURISDICTION

PSI __ Yes __ No	DATE OF OFFENSE	DATE OF SENTENCING	DISPOSITION TYPE	REPRESENTATION	ETHNICITY	RACE

DISPOSITION TYPE
__ ABA plea agreement __ Jury trial
__ Non-ABA plea agreement __ Reconsideration
__ Plea, no agreement __ Review
__ Court trial

AT THIS SENTENCING, NUMBER OF:
CONVICTED OFFENSES [ ] CRIMINAL EVENTS [ ]
WORKSHEET #_____ OF
CRIMINAL EVENT #_____.

REPRESENTATION
__ Private
__ Public Defender
__ Court Appointed
__ Self

ETHNICITY
Hispanic/Latino Origin __ Yes __ No
Victim Court Costs Imposed __ Yes __ No

RACE
__ Black __ Asian
__ White __ Other
__ Native Hawaiian/Pacific Islander
__ American Indian/Alaskan Native
__ Unidentifiable

CONVICTED OFFENSE TITLE	I-VII	CJIS CODE	MD CODE, ART, & SECTION	STAT. MAX	MAND. MIN	CASE #/DOCKET #
1st Convicted Offense		—				
2nd Convicted Offense		—				
3rd Convicted Offense		—				

OFFENSE SCORE(S) — Offense Against a Person Only

1st Off	2nd Off	3rd Off		A. Seriousness Category
1	1	1	=	V – VII
3	3	3	=	IV
5	5	5	=	III
8	8	8	=	II
10	10	10	=	I

1st Off	2nd Off	3rd Off		B. Victim Injury
0	0	0	=	No Injury
1	1	1	=	Injury, Non-Permanent
2	2	2	=	Permanent Injury or Death

1st Off	2nd Off	3rd Off		C. Weapon Presence
0	0	0	=	No Weapon
1	1	1	=	Weapon Other Than Firearm
2	2	2	=	Firearm or Explosive

1st Off	2nd Off	3rd Off		D. Special Victim Vulnerability
0	0	0	=	No
1	1	1	=	Yes

_____ _____ _____ **OFFENSE SCORE(S)**

OFFENDER SCORE

A. Relationship to CJS When Instant Offense Occurred
0 = None or Pending Cases
1 = Court or Other Criminal Justice Supervision

B. Juvenile Delinquency
0 = 23 years or older or crime-free for 5 years or no more than 1 finding of a delinquent act
1 = Under 23 years old and: 2 or more findings of a delinquent act or 1 commitment
2 = Under 23 years and committed 2 or more times

C. Prior Adult Criminal Record
0 = None 3 = Moderate
1 = Minor 5 = Major

D. Prior Adult Parole/Prob Violation
0 = No 1 = Yes

_____ **OFFENDER SCORE**

GUIDELINES RANGE

1st Con. Off.
_____
TO
_____

2nd Con. Off.
_____
TO
_____

3rd Con. Off.
_____
TO
_____

Overall Guidelines Range
Multiple Counts Only
_____
TO
_____

50% of Sentence Announced for COVs
__ Yes __ No

ACTUAL SENTENCE - Imposed, Suspended, Time Served, Probation, Restitution, Fine, Corrections Options Programs (Drug Treatment Court, Home Detention, Etc.)

1st Convicted Offense

For Theft, Fraud, and Related Crimes, please indicate: ☐ Economic loss $_____ ; ☐ Unknown Amount
Subsequent Offender Filed __ Yes __ No Restitution Requested __ Yes __ No
Subsequent Offender Proven __ Yes __ No Restitution Proven __ Yes __ No

2nd Convicted Offense

For Theft, Fraud, and Related Crimes, please indicate: ☐ Economic loss $_____ ; ☐ Unknown Amount
Subsequent Offender Filed __ Yes __ No Restitution Requested __ Yes __ No
Subsequent Offender Proven __ Yes __ No Restitution Proven __ Yes __ No

3rd Convicted Offense

For Theft, Fraud, and Related Crimes, please indicate: ☐ Economic loss $_____ ; ☐ Unknown Amount
Subsequent Offender Filed __ Yes __ No Restitution Requested __ Yes __ No
Subsequent Offender Proven __ Yes __ No Restitution Proven __ Yes __ No

Was the offender sentenced to a Corrections Options program under Commission criteria?
Drug Court __ Yes __ No Other __ Yes __ No

Additional Information or Institutional/Parole Recommendation

Worksheet Completed By
_____

Title
_____

Sentencing Judge (Please Print)
_____

Sentencing Judge's Signature
_____

VICTIM INFORMATION

Victim	__ Yes	__ No
Victim Non-participation	__ Yes	__ No
Victim Notification Form	__ Yes	__ No
Victim Notified Plea	__ Yes	__ No
Victim Notified Date	__ Yes	__ No
Victim Present	__ Yes	__ No
Written VIS	__ Yes	__ No
Oral VIS	__ Yes	__ No
No Contact Requested	__ Yes	__ No
No Contact Ordered	__ Yes	__ No

SENTENCE DEPARTURE INFORMATION

If the actual sentence departs from the guidelines range, please indicate the Court's reason(s) using the numerical code(s) on the list of common departure factors in the manual, if applicable.

[ ] [ ] [ ]

Departure Code 9 or 18 (Please Explain):

Parole Notification __ Yes __ No

COPIES: White – Judge; Blue – Sentencing Commission; Green – Attach to Commitment or Probation Order; Yellow – File; Pink – Prosecution; Gold – Defense

4/2013 (1.8)

Appendix 5 – Percentage of Max and Median Guideline by Age
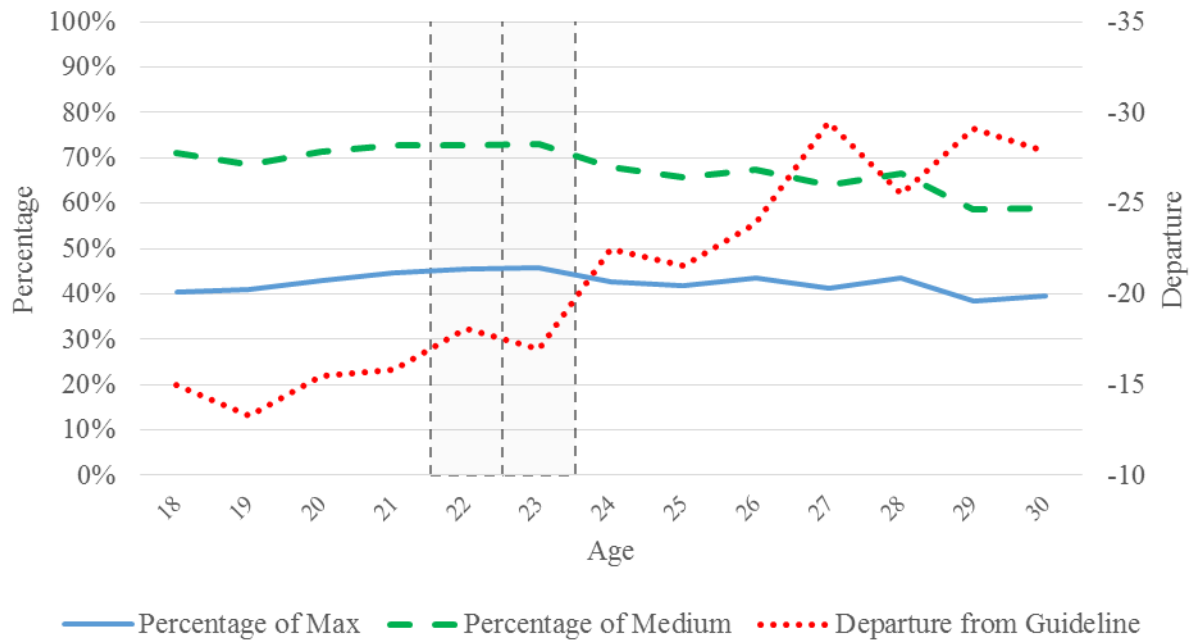
Appendix 6 – Missing Data

The MSCCSP dataset consists of data entered on the Maryland Sentencing Guideline Worksheet (Appendix 4), which, during the period under study, was typically completed manually by court professionals in most of the state. Partially due to the manual method of the data entry, the data contains some inconsistencies and nonsensical values for some key variables. For instance, 416 observations were missing gender, and 204 were missing the date of birth. This represents a relatively small proportion of the total sample, but these cases were nevertheless verified to improve the quality of the analysis and maximize the matching potential with other data sources for future parts of the project.

Summary Statistics of Cleaned Variables (18 years or older; N = 54,133)

Variable	Added Obs	Final Obs
Gender	242	52,063
Male	224	45,722
Female	18	6,341
Race	28	49,615
White	14	16,191
American Indian	0	23
Black	14	33,179
Asian	0	2,497
Other	0	222
Age at Offense	38	51,697

Most of the cleaning work consisted in the validation of observations with inconsistent values by individually checking those observations using the Maryland Judiciary Case Search website (http://casesearch.courts.state.md.us/). This work allowed the verification and correction of many mistakes and inconsistencies in individual identifying and demographic information, such as the gender, race, and date of birth of the defendant. However, not all observations were

found in the MJCS website. In addition, details about the criminal case itself, particularly the

date of the offense, often could not be validated due to the difficulty in finding data on specific

criminal cases in the Judiciary Case Search database.

Appendix 7 – Propensity Score (Race and Juvenile Score Matching) Results

Variables	Unmatched Sample					Matched Sample (DS=0)					Matched Sample (DS=1)					Matched Sample (DS=2)				
	Whites (n = 4,536)		Blacks (n = 10,752)			Whites (n = 3,856)		Blacks (n = 3,856)			Whites (n = 508)		Blacks (n = 508)			Whites (n = 169)		Blacks (n = 169)		
	Mean/%	SD	Mean/%	SD	p	Mean/%	SD	Mean/%	SD	p	Mean/%	SD	Mean/%	SD	p	Mean/%	SD	Mean/%	SD	p
Dependent																				
Sentence Length	18.16	51.36	37.56	94.11**		14.57	44.99	24.09	66.91**		36.27	76.35	47.79	110.17	*	45.89	71.37	51.92	86.10	
Percent of Guideline Max	0.42	1.11	0.42	0.77		0.42	1.16	0.46	0.97	*	0.46	0.82	0.50	0.67		0.42	0.48	0.49	0.56	
Offense Type																				
Property	0.34	0.47	0.16	0.37	**	0.32	0.47	0.24	0.43	**	0.43	0.49	0.32	0.47	**	0.49	0.50	0.37	0.48	**
Drug	0.33	0.47	0.38	0.49	**	0.35	0.48	0.35	0.48		0.18	0.38	0.21	0.41		0.17	0.38	0.21	0.41	
Person	0.33	0.47	0.46	0.50	**	0.32	0.47	0.41	0.49	**	0.40	0.49	0.47	0.50	**	0.34	0.47	0.42	0.50	
Adult Criminal History Score																				
Adult Score = 0	0.53	0.50	0.45	0.50	**	0.57	0.50	0.52	0.50	**	0.38	0.48	0.39	0.49		0.31	0.47	0.34	0.47	
Adult Score = 1	0.19	0.39	0.16	0.37	**	0.19	0.39	0.19	0.39		0.19	0.39	0.18	0.38		0.15	0.36	0.14	0.34	
Adult Score = 2	0.11	0.31	0.12	0.33		0.11	0.31	0.11	0.32		0.15	0.35	0.16	0.36		0.14	0.35	0.19	0.39	
Adult Score = 3	0.06	0.23	0.06	0.24	*	0.05	0.21	0.06	0.23	**	0.11	0.31	0.07	0.26	*	0.08	0.27	0.06	0.24	
Adult Score = 4	0.06	0.23	0.11	0.32	**	0.05	0.22	0.08	0.26	**	0.09	0.29	0.12	0.33		0.15	0.36	0.14	0.34	
Adult Score = 5	0.03	0.18	0.04	0.19	**	0.03	0.16	0.03	0.18		0.05	0.22	0.05	0.22		0.07	0.26	0.07	0.26	
Adult Score = 6	0.01	0.11	0.03	0.17	**	0.01	0.10	0.01	0.12		0.02	0.13	0.02	0.13		0.05	0.23	0.04	0.19	
Adult Score = 7	0.01	0.08	0.02	0.13	**	0.00	0.06	0.01	0.08		0.02	0.12	0.01	0.12		0.04	0.20	0.04	0.19	
Offense Seriousness Score																				
Seriousness Score = VII	0.19	0.39	0.11	0.31	**	0.19	0.40	0.16	0.36	**	0.15	0.36	0.13	0.33		0.12	0.33	0.13	0.34	
Seriousness Score = VI	0.03	0.16	0.04	0.18	**	0.02	0.16	0.03	0.18	**	0.04	0.20	0.04	0.20		0.04	0.19	0.04	0.20	
Seriousness Score = V	0.23	0.42	0.18	0.38	**	0.23	0.42	0.24	0.43		0.23	0.42	0.25	0.43		0.21	0.41	0.22	0.42	
Seriousness Score = IV	0.30	0.46	0.22	0.41	**	0.31	0.46	0.27	0.45	**	0.23	0.42	0.22	0.42		0.27	0.44	0.25	0.43	
Seriousness Score = III	0.24	0.42	0.41	0.49	**	0.22	0.42	0.27	0.45	**	0.31	0.46	0.32	0.47		0.33	0.47	0.33	0.47	
Seriousness Score = II	0.02	0.13	0.03	0.17	**	0.02	0.12	0.02	0.14	*	0.03	0.17	0.03	0.17		0.02	0.15	0.02	0.15	
Seriousness Score = I	0.00	0.07	0.01	0.12	**	0.00	0.06	0.01	0.08		0.01	0.11	0.01	0.11		0.01	0.08	0.01	0.08	
Mode of Conviction																				
Plea Agreement	0.61	0.49	0.72	0.45	**	0.63	0.48	0.67	0.47	**	0.52	0.50	0.56	0.50		0.47	0.50	0.55	0.50	
Plea No Agreement	0.15	0.36	0.08	0.26	**	0.15	0.36	0.11	0.31	**	0.15	0.36	0.14	0.35		0.18	0.39	0.12	0.32	*
Trial	0.03	0.18	0.04	0.21	**	0.03	0.16	0.03	0.18		0.05	0.21	0.04	0.20		0.07	0.26	0.07	0.25	
Missing	0.21	0.40	0.16	0.36	**	0.19	0.40	0.19	0.39		0.28	0.45	0.26	0.44		0.28	0.45	0.27	0.44	
Private Representation (0 or 1)	0.51	0.50	0.37	0.48	**	0.53	0.50	0.44	0.50	**	0.41	0.49	0.38	0.48		0.37	0.48	0.28	0.45	*
Age																				
18 years	0.20	0.40	0.24	0.43	**	0.19	0.39	0.21	0.41		0.27	0.44	0.30	0.46		0.27	0.45	0.33	0.47	
19 years	0.22	0.41	0.23	0.42	**	0.21	0.41	0.21	0.41		0.26	0.44	0.25	0.43		0.25	0.44	0.28	0.45	
20 years	0.21	0.41	0.20	0.40		0.21	0.41	0.21	0.41		0.19	0.40	0.19	0.39		0.17	0.38	0.15	0.36	
21 years	0.20	0.40	0.18	0.38	**	0.20	0.40	0.20	0.40		0.16	0.37	0.16	0.36		0.14	0.34	0.12	0.33	
22 years	0.17	0.38	0.16	0.36	**	0.18	0.39	0.17	0.38		0.11	0.31	0.10	0.31		0.17	0.37	0.11	0.31	
Male (0 or 1)	0.85	0.35	0.92	0.27	**	0.84	0.37	0.88	0.32	**	0.93	0.26	0.95	0.22		0.98	0.13	0.98	0.15	
Jurisdiction																				
Allegany	0.02	0.14	0.00	0.07	**	0.02	0.14	0.01	0.09	**	0.02	0.13	0.02	0.12		0.02	0.13	0.03	0.17	
Anne Arundel	0.17	0.37	0.07	0.26	**	0.17	0.37	0.15	0.36		0.14	0.35	0.16	0.36		0.27	0.45	0.31	0.46	
Baltimore County	0.20	0.40	0.13	0.33	**	0.20	0.40	0.27	0.45	**	0.23	0.42	0.28	0.45	*	0.12	0.32	0.18	0.39	*
Calvert	0.03	0.16	0.01	0.08	**	0.02	0.15	0.01	0.10	**	0.04	0.19	0.03	0.16		0.05	0.23	0.05	0.21	
Caroline	0.02	0.15	0.01	0.08	**	0.02	0.15	0.01	0.10	**	0.03	0.17	0.03	0.17		0.03	0.17	0.04	0.19	
Carroll	0.03	0.16	0.00	0.04	**	0.02	0.16	0.00	0.06	**	0.03	0.16	0.00	0.04	**	0.05	0.23	0.01	0.08	**
Cecil	0.03	0.18	0.00	0.06	**	0.03	0.16	0.01	0.08	**	0.07	0.25	0.01	0.10	**	0.12	0.32	0.01	0.11	**
Charles	0.05	0.21	0.05	0.21		0.05	0.21	0.08	0.28	**	0.05	0.21	0.07	0.26	**	0.02	0.15	0.04	0.20	
Dorchester	0.01	0.11	0.01	0.09	**	0.01	0.11	0.02	0.13	*	0.01	0.09	0.01	0.11		0.01	0.11	0.01	0.11	
Frederick	0.07	0.25	0.01	0.12	**	0.07	0.26	0.03	0.17	**	0.06	0.23	0.05	0.22		0.05	0.23	0.07	0.26	
Garrett	0.00	0.06	0.00	0.02	**	0.00	0.05	0.00	0.03	**	0.01	0.10	0.00	0.04		0.00	0.00	0.00	0.00	
Harford	0.01	0.09	0.00	0.06	**	0.01	0.09	0.01	0.08		0.02	0.12	0.01	0.10		0.00	0.00	0.00	0.00	
Howard	0.04	0.20	0.02	0.15	**	0.04	0.20	0.05	0.21		0.05	0.21	0.06	0.25		0.01	0.08	0.00	0.00	
Kent	0.01	0.10	0.00	0.07	**	0.01	0.10	0.01	0.09		0.02	0.12	0.02	0.13		0.00	0.00	0.00	0.00	
Montgomery	0.03	0.16	0.03	0.16		0.03	0.17	0.05	0.21	**	0.02	0.12	0.02	0.13		0.02	0.15	0.03	0.17	
Prince George's	0.03	0.16	0.18	0.38	**	0.03	0.16	0.03	0.16		0.02	0.15	0.03	0.16		0.01	0.11	0.02	0.13	
Queen Anne's	0.01	0.09	0.00	0.05	**	0.01	0.09	0.00	0.07	**	0.01	0.09	0.01	0.10		0.02	0.15	0.01	0.11	
St. Mary's	0.01	0.12	0.01	0.08	**	0.01	0.11	0.01	0.12		0.03	0.16	0.01	0.10	*	0.01	0.11	0.03	0.17	

Variables	Unmatched Sample					Matched Sample (DS=0)					Matched Sample (DS=1)					Matched Sample (DS=2)				
	Whites (n = 4,536)		Blacks (n = 10,752)			Whites (n = 3,856)		Blacks (n = 3,856)			Whites (n = 508)		Blacks (n = 508)			Whites (n = 169)		Blacks (n = 169)		
	Mean/%	SD	Mean/%	SD	p	Mean/%	SD	Mean/%	SD	p	Mean/%	SD	Mean/%	SD	p	Mean/%	SD	Mean/%	SD	p
Somerset	0.01	0.10	0.01	0.10		0.01	0.09	0.02	0.12	**	0.02	0.13	0.02	0.15		0.01	0.11	0.02	0.13	
Talbot	0.01	0.11	0.01	0.08	**	0.01	0.11	0.01	0.11		0.01	0.08	0.01	0.08		0.01	0.08	0.02	0.13	
Washington	0.08	0.27	0.03	0.16	**	0.08	0.27	0.06	0.23	**	0.09	0.28	0.08	0.27	**	0.09	0.29	0.07	0.25	
Wicomico	0.04	0.20	0.04	0.19	*	0.05	0.21	0.07	0.26	**	0.03	0.16	0.03	0.17	**	0.01	0.08	0.01	0.08	
Worcester	0.04	0.20	0.02	0.12	**	0.05	0.22	0.04	0.19	**	0.01	0.09	0.01	0.09	**	0.03	0.17	0.03	0.17	
Baltimore City	0.04	0.20	0.37	0.48	**	0.05	0.21	0.05	0.22		0.03	0.17	0.03	0.17		0.02	0.15	0.03	0.17	

*p ≤ 0.1; ** p ≤ 0.05

MARYLAND DATA ANALYSIS CENTER

DEPARTMENT OF CRIMINOLOGY AND CRIMINAL JUSTICE ◆ UNIVERSITY OF MARYLAND, COLLEGE PARK

A Report to the
Maryland State Commission on Criminal Sentencing Policy

*A Preliminary Analysis of the Impact of the
Juvenile Delinquency Score under the Sentencing Guidelines*

MAY 10, 2016
PRESENTATION HANDOUT

Mateus Rennó Santos
Doctoral Student & Research Assistant

Jinney Smith, Ph.D.
Associate Director

Juvenile Score Point Assignment

Zero
- 23 years or older on the date of the current offense
- If younger than 23 years old
  - ➢ has been crime-free for 5 years since the last finding of a delinquent act or last adjudication, or
  - ➢ has no more than one finding of a delinquent act

One
- If younger than 23 years old
  - ➢ has two or more findings of a delinquent act, and/or
  - ➢ one commitment

Two
- If younger than 23 years old
  - ➢ two or more commitments

Average Guideline Scores by Age at Offense (N = 31,794) [13] **[Figure 2, p. 16]**
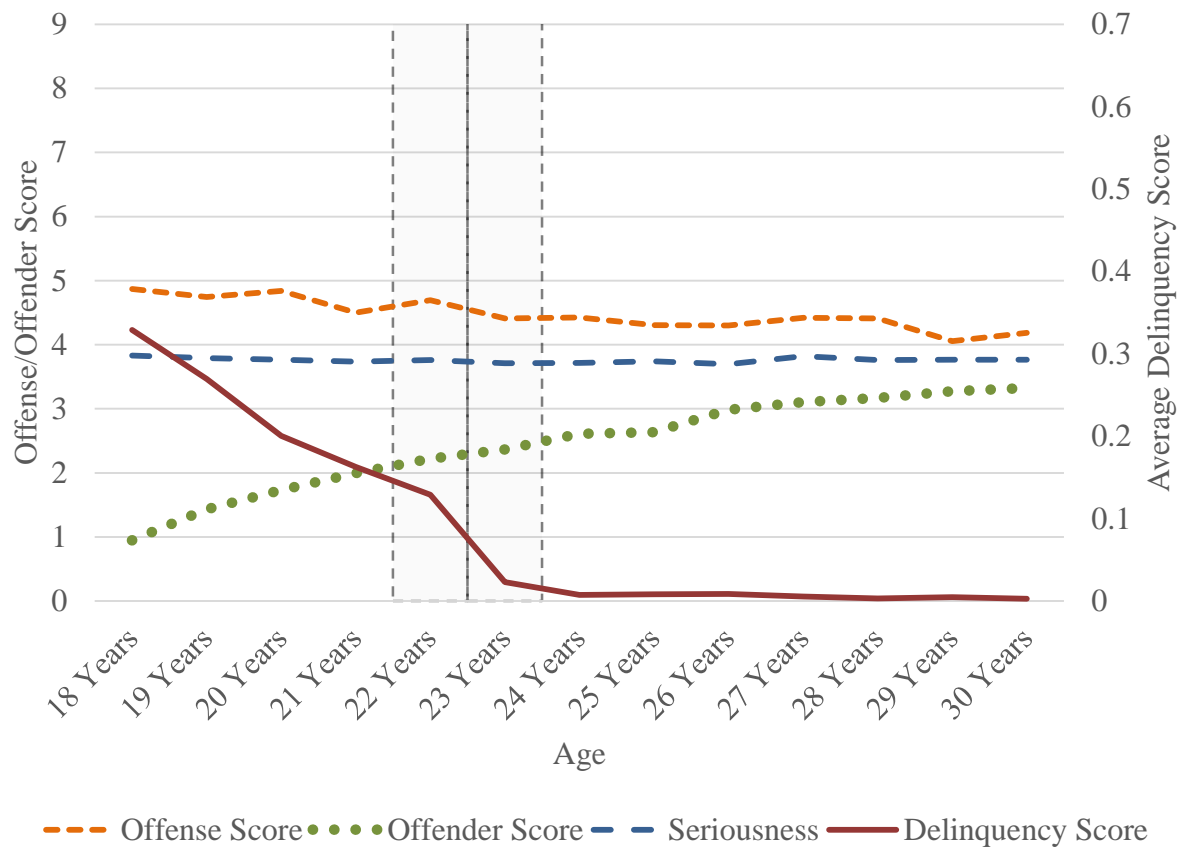
Average Offender Score with or without the Juvenile Score (N = 31,794) [Figure 3, p. 17]
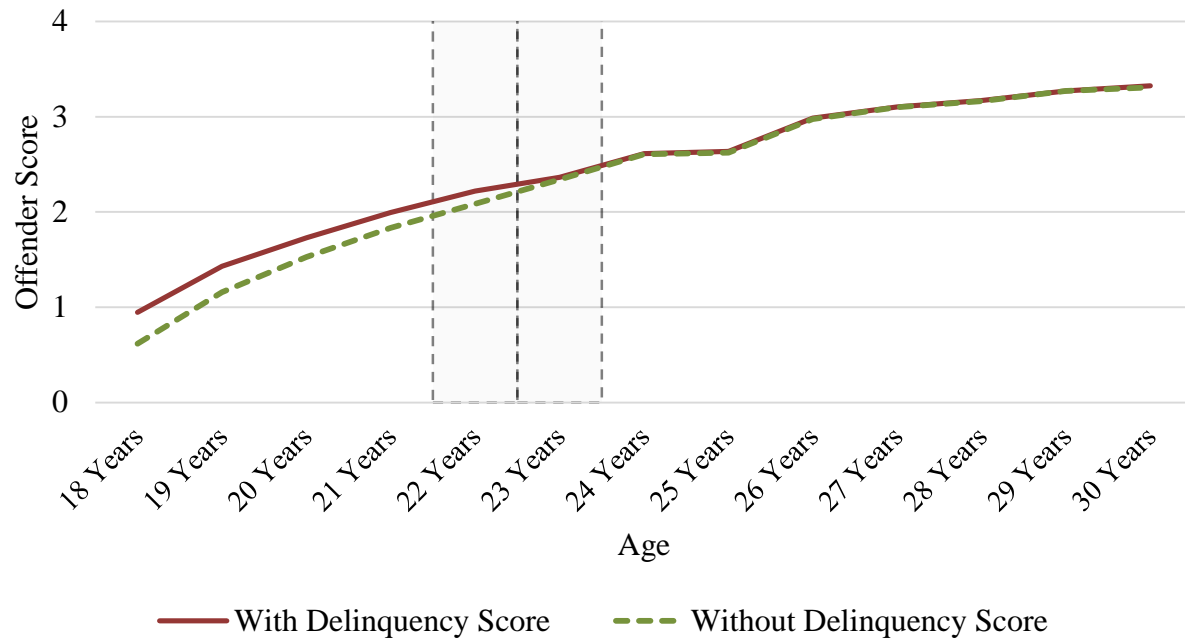
Average Offender Score with or without the Juvenile Score (if Juvenile Score is 1 or 2); N= 3,125) [Figure 4, p. 18][14]
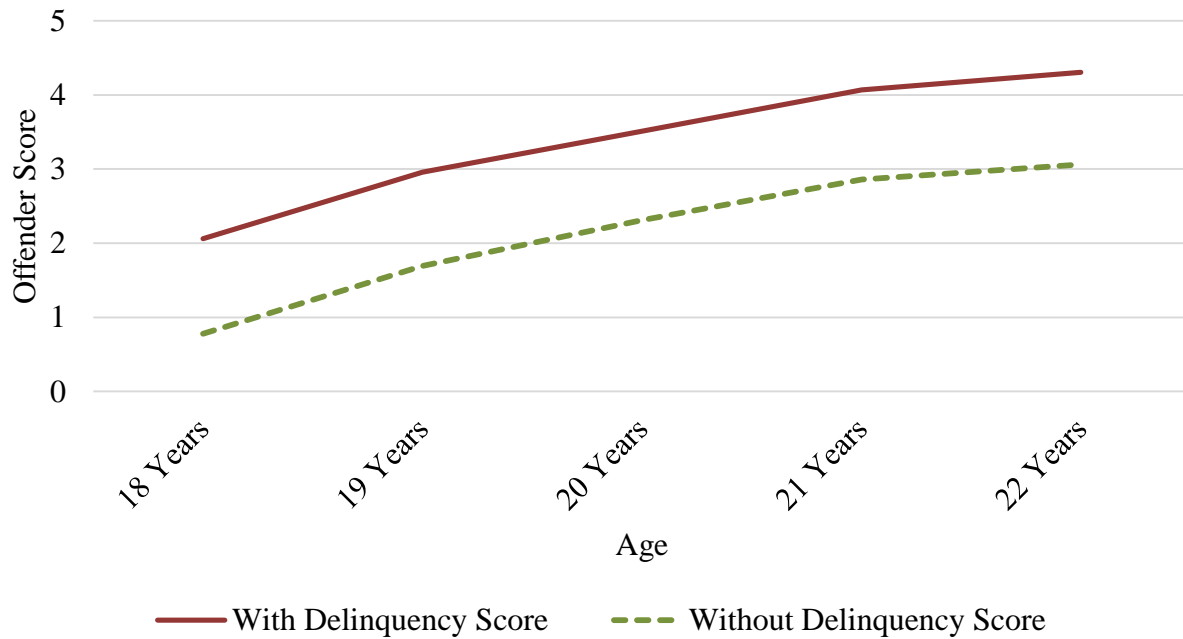
[14]In a separate regression (not presented in the draft preliminary report), which included the juvenile score as an independent/predictor variable (as opposed to a filtering/matching variable) the following average contributions toward sentence length resulted: A juvenile score of 1 yields approximately 10 months, and of juvenile score of 2 yields approximately 18 months in additional sentence length. The effect of the juvenile score on sentence length is comparable to that of the adult/offender score. Each additional point in a subject's adult criminal history yields, on average, an additional 9 months of sentenced time (regression model N = 16,444; $R^2 = 0.60$; including all independent variables included in the page 5 regression here). Each point of the offender score, whether attributable to a juvenile or adult record, contributes comparably toward sentence length.

Average Juvenile Score by Jurisdiction (ages 18 to 22; N = 16,470) [Figure 8, p. 27]

Legend

- Below 0.2 points (n = 6)
- Between 0.2 and 0.3 points (n = 12)
- Above 0.3 points (n = 6)
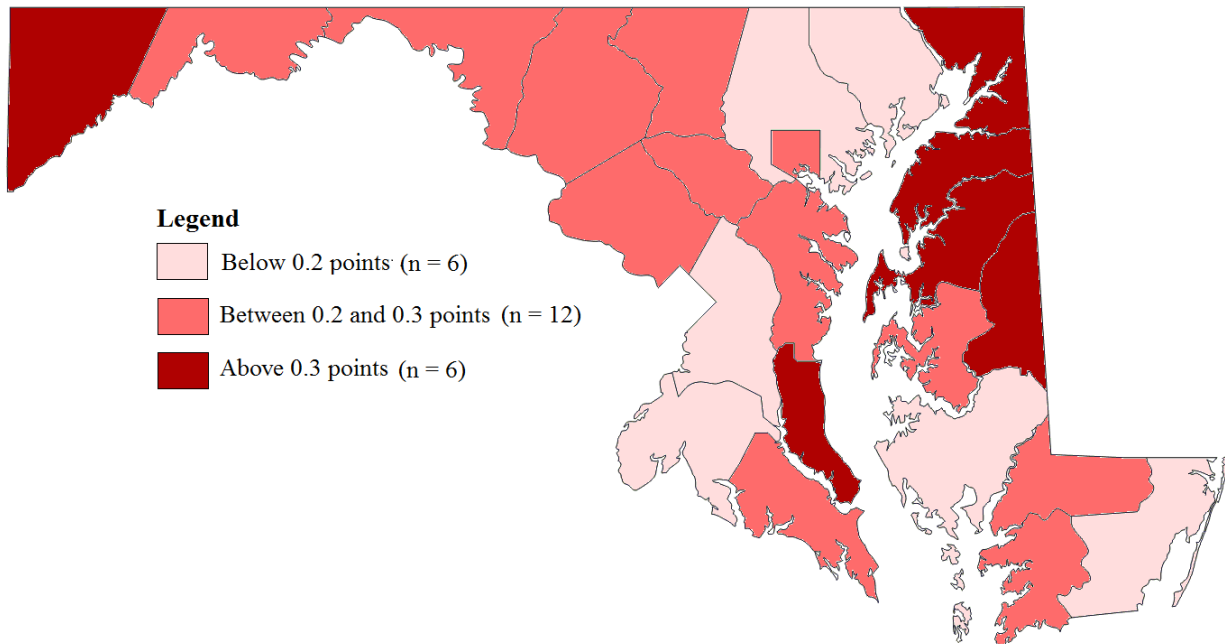
Scatter Plot of Jurisdictions by Juvenile Score and Deviation from Guideline Max (N = 16,679) [new figure based on Tables 9 & 10, pp. 28-30]
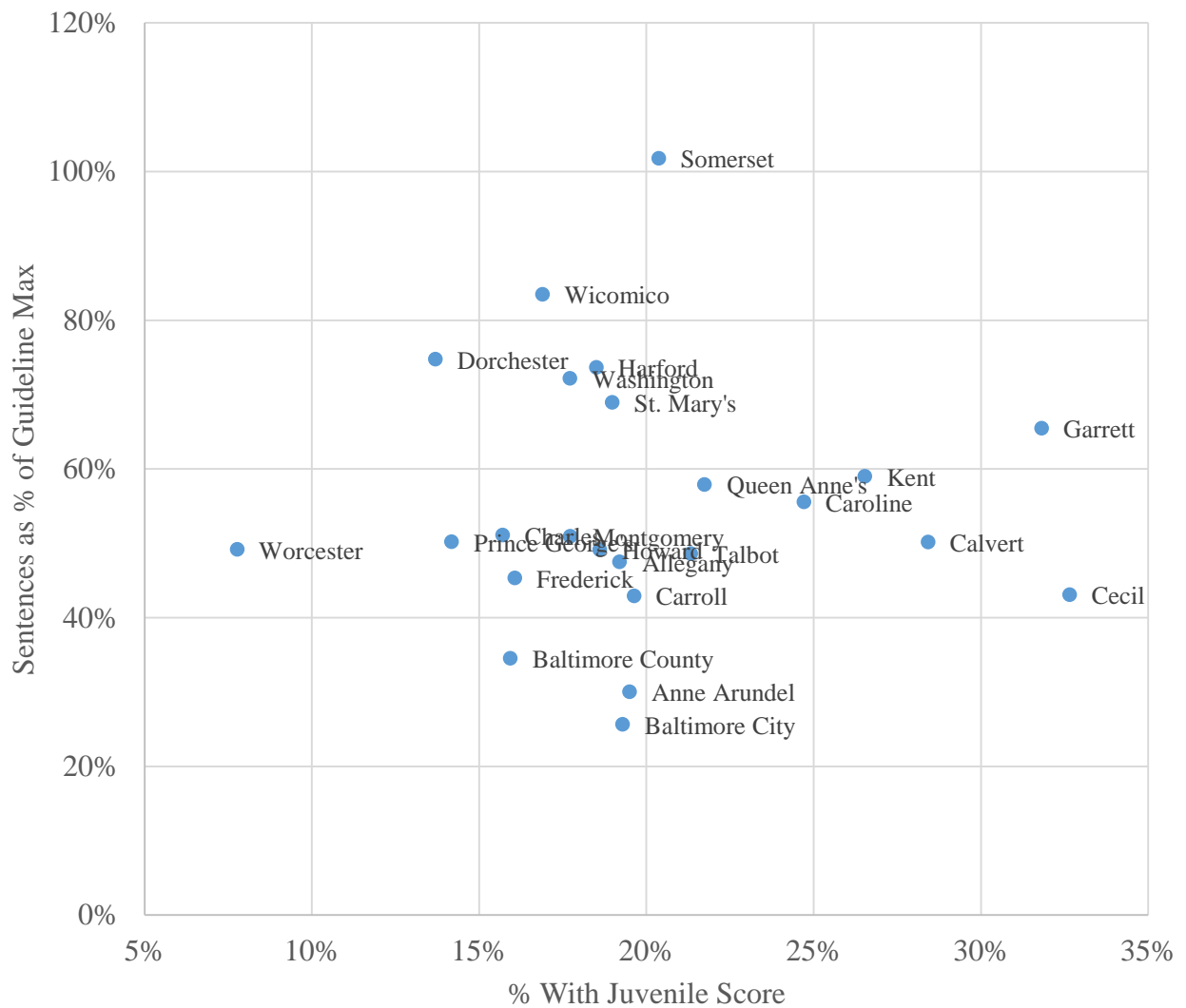
Sentence Length by Seriousness (age 18-22; VII to I; N = 16,472) [Figure 7a, p. 24]
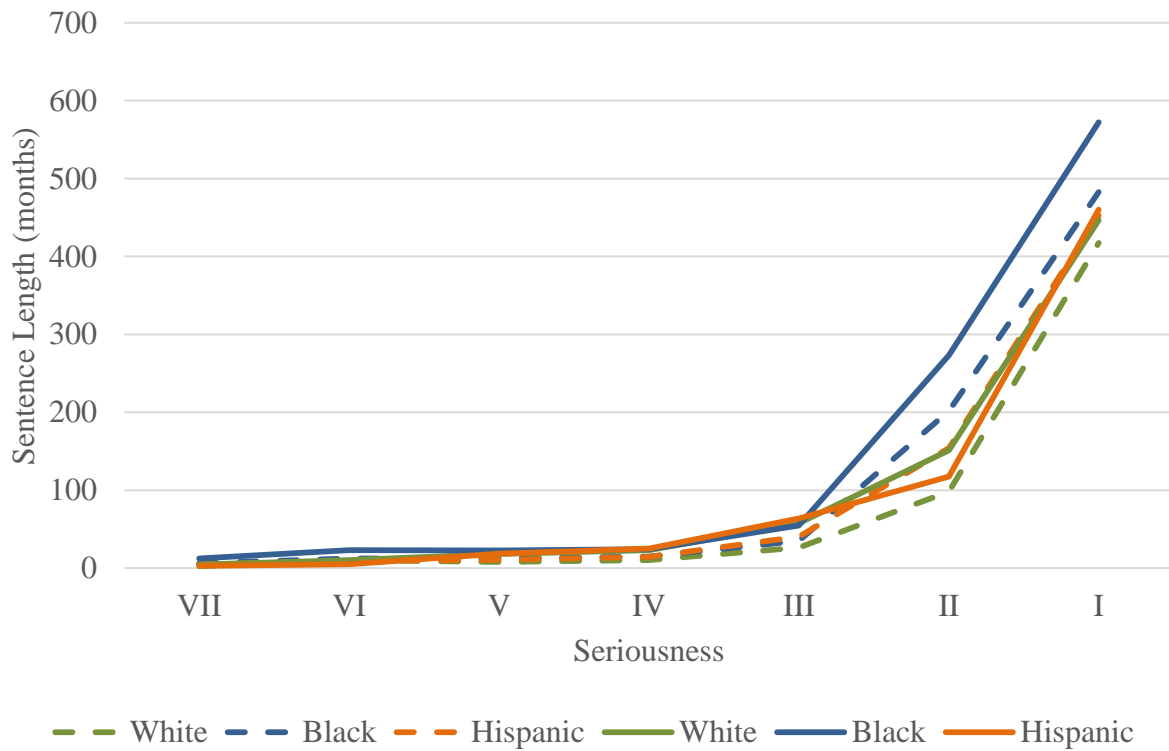
Expansion of Figure 7a for Differences for At Lower Seriousness Offenses Across Groups [Figure 7b, p. 25]
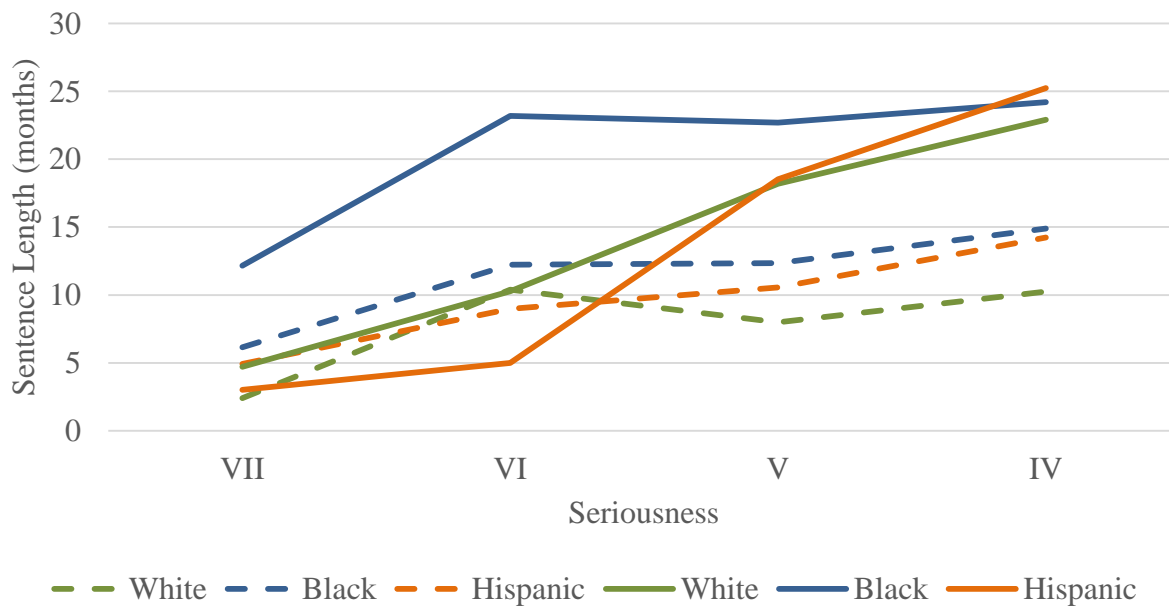
Linear Regression Models for Sentence Length (ages 18-22)
[Table 12, pp. 34-35]

Variables	Unmatched	Matched		
		DS = 0	DS = 1	DS = 2
White (Race)	-19.4**	-5.43**	-4.49**	-10.78**	-12.13*
Offense Type					
Drug		-11.27**	-5.66**	-13.4**	-27.31**
Person		18.59**	13.99**	18.43**	10.53
Adult Criminal History Score					
Adult Score = 1		5.9**	4.51**	7.2	-10.6
Adult Score = 2		10.46**	7.23**	8.29	9.39
Adult Score = 3		19.95**	14.89**	35.24**	4.2
Adult Score = 4		30.85**	26.47**	30.19**	24.21**
Adult Score = 5		38.91**	36.1**	67.88**	38.34**
Adult Score = 6		44.39**	45.41**	64.14**	57.14**
Adult Score = 7		64.8**	78.63**	48.04**	46.36**
Offense Seriousness Score (VII=0)					
Seriousness Score = VI		-8.13**	-7.53**	-13.07	11.06
Seriousness Score = V		-3.16**	-1.97	-4.37	14.75
Seriousness Score = IV		10.22**	8.34**	11.96**	24.51**
Seriousness Score = III		33.65**	26.45**	45.38**	59.81**
Seriousness Score = II		160.03**	122.43**	174.16**	193.73**
Seriousness Score = I		444.01**	446.58**	501.67**	398.7**
Mode of Conviction (Plea Agreement=0)					
Plea No Agreement		3.2*	1.04	4.9	8.03
Trial		90.72**	40.14**	95.69**	46.18**
Missing		7.41**	2.44*	5.22	3
Private Representation (0 or 1)		0.94	0.64	4.93	12.58*
Age (18 years=0)					
19 years		3.11**	2.74*	2.58	-2.43
20 years		3.94**	2.55*	7.44	32.04**
21 years		2.92**	3.53**	6.3	15.63
22 years		3.73**	4.68**	9.73	-4.98
Male (0 or 1)		3.38**	1.69	12.81*	-6.93
Jurisdiction (Baltimore=0)					
Allegany		15.89**	8.23*	5.72	-8.37
Anne Arundel		4.93**	0.01	-14.23	-42.52**
Baltimore County		5.58**	0.65	0.7	-31.81
Calvert		13.8**	9.26**	-10.66	-8.65
Caroline		11.22**	3.79	12.1	14.75
Carroll		2.01	-3.59	-11.75	-19.06

82

Variables	Unmatched	Matched		
		DS = 0	DS = 1	DS = 2
Cecil	-0.66	1.99	-8.85	-16.95
Charles	11.87**	5.35*	10.26	-27.98
Dorchester	45.43**	23.78**	13.29	14.3
Frederick	19.82**	8.28**	20.64*	-8.74
Garrett	9.9	23.34**	-34.46	- -
Harford	31.74**	13.93**	102.71**	- -
Howard	6.07**	-0.46	-13.84	-40.2
Kent	10.97*	5.96	-4.69	- -
Montgomery	14**	4.69	-40.29**	-5.35
Prince George's	10.52**	4.28	10.37	-33.51
Queen Anne's	20.82**	10.9*	14.94	6.02
St. Mary's	18.43**	14.71**	15.08	-22.98
Somerset	24.36**	13.22**	45.27**	-27.54
Talbot	15.77**	4.71	32.67	-14.89
Washington	17.01**	14.22**	-3.11	-15.29
Wicomico	25.49**	18.35**	28.76**	-10.31
Worcester	7.09**	5.54*	15.7	-40.73
Constant	37.56**	-22.52**	-11.27**	-24.9*	24.9
	-0.808	-2.372	-2.902	-13.405	-32.301
R²	**0.01**	**0.60**	**0.53**	**0.70**	**0.57**
Observations	15,288	15,270	7,712	1,016	338

*p ≤ 0.1; ** p ≤ 0.05

Predicted Sentence Length by Juvenile Score and Race (ages 18-22, matched samples, N = 9,066) [Figure 9, p. 36]
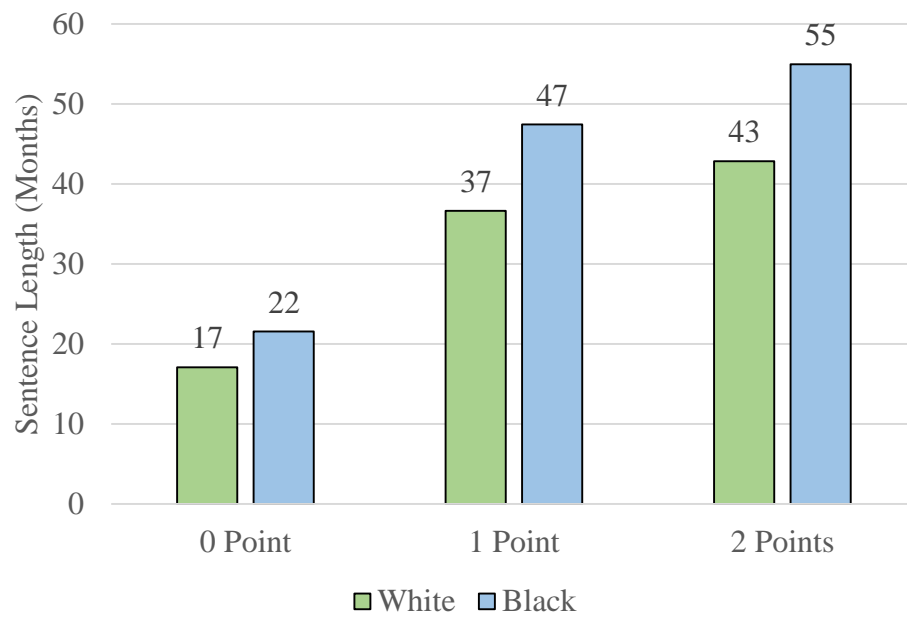
Proposed Study Phases and Timeline

Current Presentation: Preliminary Analysis of MSCCSP Data

       In the current phase, the impact of the juvenile score on sentencing outcomes for various subsamples was assessed, determining that the threshold for further study has been met. Analyses at this stage are not conclusive, but do indicate the presence of variation in sentencing outcomes in two domains: (a) across jurisdictions, and (b) between African-Americans and whites.

Study Phase #2: Juvenile Score Audit and Validation (end of 2016)

- Analyze juvenile history records from the Department of Juvenile Services to audit and specify the juvenile score as captured on MSCCSP worksheets.
- Analyze current adult history criminal records for the sample under study (2008-2012) to validate the predictive utility of the juvenile score.
- Assess the impact of measurement errors, possibly arising from variation in jurisdictional recording practices.

Study Phase #3: Performance of Alternate Juvenile Scoring Systems (if necessary, during 2017)

       Study Phase #2 results may suggest that an alternate juvenile scoring system would improve the reliability and validity of the juvenile score, and the final phase of this study would involve the construction and validation of a new juvenile delinquency scoring system. In addition to changes that may be suggested by Study Phase #2 results, alternate juvenile scoring systems from other jurisdictions will be examined in re-designing the juvenile score component. The MSCCSP will also be consulted to provide guidance in any re-design of the juvenile score component.

MARYLAND DATA ANALYSIS CENTER

Department of Criminology and Criminal Justice ◆ University of Maryland, College Park

**A Report to the
Maryland State Commission on Criminal Sentencing Policy**

*Study Phase 2:
A Preliminary Analysis of the Recording and Performance of the
Juvenile Delinquency Score under the Sentencing Guidelines*

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Associate Director

December 2016 Presentation Materials
(12/6/2016 draft – please do not cite or quote.)

Contents

Study Overview

Study Phase #1 (May 2016): Preliminary Analysis of MSCCSP Data

In Phase 1, the impact of the juvenile score on sentencing outcomes for various subsamples was assessed, determining that the threshold for further study has been met. Analyses at this stage were not conclusive, but indicated the presence of variation in sentencing outcomes in two domains: (a) across jurisdictions, and (b) between African-Americans and whites. (Data used: MSCCSP only.)

Study Phase #2 (December 2016): Juvenile Score Audit and Validation

- Analyze juvenile history records from the Department of Juvenile Services to audit and specify the juvenile score as captured on MSCCSP worksheets.
- Analyze current adult history criminal records for the sample under study (2008-2012) to validate the predictive utility of the juvenile score.
- Assess the impact of measurement errors, possibly arising from variation in jurisdictional recording practices.
- Data used: MSCCSP linked with data from the Department of Juvenile Services' ASSIST database; MSCCSP linked with adult criminal history records from the Department of Public Safety & Correctional Services' CJIS database.

Study Phase #3 (TBD 2017): Performance of the Juvenile Score and Alternate Juvenile Scoring Systems

The final phase of this study would involve further examining the results of Phase 2, and, depending on the preferences of the MSCCSP, the construction and validation of a new juvenile delinquency scoring system. In addition to changes that may be suggested by further examination of Phase #2 results, alternate juvenile scoring systems from other jurisdictions will be examined to inform the re-design the juvenile score component. (Data to be used: All three datasets linked with one another – MSCCSP, DJS's ASSIST, and DPSCS's CJIS.)

Phase 2 Data Sources

The analyses presented in May 2016 were deemed "preliminary" due to the limitations posed in analyzing the MSCCSP's sentencing data in isolation. Statistical analyses of all Maryland adult sentencing events during the period 2008-2012 suggested that sentencing outcomes are being influenced by variation across key variables of interest. The findings suggested that variations in sentencing outcomes across jurisdictions, interrelated with variations in average sentences received by different racial groups, cumulatively produced a racially disparate impact on sentencing outcomes.

In the current phase 2 stage of the study, we present analyses from two different linked datasets: (1) MSCCSP's data linked with data from the Department of Juvenile Services' ASSIST database about individual juvenile adjudication and commitment history; and (2) MSCCSP's data linked with adult criminal history records from the Department of Public Safety & Correctional Services' CJIS database. The input file of subjects with matched DJS records was returned to the researchers in June 2016, and the input file of subjects with matched CJIS records was returned to the researchers in May 2016.

In addition, a survey was conducted to understand better how the juvenile history score is recorded, what records are examined when calculating the juvenile score, and to learn about possible sources of variation in calculating the juvenile score. The survey was emailed to individuals who routinely calculate the juvenile score under the sentencing guidelines, and was conducted during November 2016. The survey was emailed by the MSCCSP to one representative of each Circuit Court's State's Attorney's Office and Probation and Parole Field Office, and in a couple of circuits, judicial staff/law clerks. Completed surveys were returned by 14 State's Attorney's and 13 Probation and Parole agents by December 1, 2016.

Juvenile Score Replication

Table 1a. Cross-tabulation between MSCCSP and Estimated Delinquency Scores (Total counts; no 5-year decay) (Ages 18 to 22; N = 16,470)

Sentencing Guidelines Delinquency Score	Estimated Delinquency Score			Total
	0 points	1 point	2 points	
0 points	11,927	1238	389	13,554
1 point	687	1130	281	2,098
2 points	134	235	449	818
Total	12,748	2,603	1119	16,470

1,908 cases where Sentencing Commission data indicates *lower* juvenile score than DJS data
1,056 cases where Sentencing Commission data indicates *higher* juvenile score than DJS data

Table 1b. Cross-tabulation between MSCCSP and Estimated Delinquency Scores (5-year decay) (Ages 18 to 22; N = 16,470)

Sentencing Guidelines Delinquency Score	Estimated Delinquency Score			Total
	0 points	1 point	2 points	
0 points	12,421	903	230	13,554
1 point	938	942	218	2,098
2 points	231	244	343	818
Total	13,590	2,089	791	16,470

1,351 cases where Sentencing Commission data indicates *lower* juvenile score than DJS data
1,413 cases where Sentencing Commission data indicates *higher* juvenile score than DJS data

Figure 1. Average Guideline Scores by Age at Offense (Presented in Phase 1) (N = 31,794) [15]
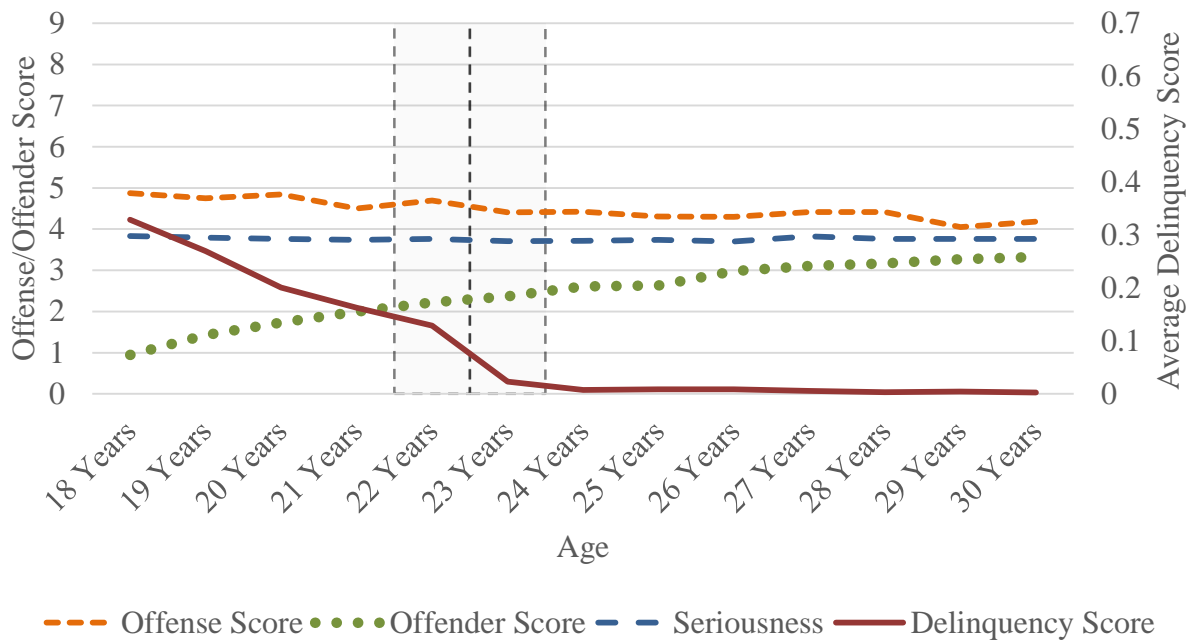
Table 2. Percent Distribution of the Differences Between Delinquency Scores (MSCCSP vs. DJS estimated) by Race (Percent in the Row; Ages 18 to 22; N = 16,470)

Race	MSCCSP > DJS		0	MSCCSP < DJS		Total
	-2	-1		+1	+2	
Black	1.5%	7.7%	81.6%	7.6%	1.5%	100.0%
White	1.2%	5.1%	85.7%	6.8%	1.2%	100.0%
Hispanic	0.5%	4.7%	90.4%	3.8%	0.5%	100.0%
Total	1.4%	6.8%	83.2%	7.2%	1.4%	100.0%

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[15] A very small proportion of offenders 23 years or older had values of 1 or 2 for their juvenile score, which is why the Delinquency Score is slightly elevated above "0" at age 23. This is due to a mistake, either regarding the age of the individual at sentencing, or for the date of their offense. This error was found for 154 observations, which corresponds to less than 0.3% of the total sample above 18 years of age.

Table 3. Percent Distribution of the Differences Between Delinquency Scores (MSCCSP vs. DJS estimated) by Jurisdiction (Percent in the Row) (5 year decay)

Jurisdiction	MSCCSP > DJS		0	MSCCSP < DJS		Total
	-2	-1		+1	+2	
Allegany	1.3%	7.3%	87.4%	2.7%	1.3%	100.0%
Anne Arundel	1.8%	9.0%	84.5%	4.0%	0.7%	100.0%
Baltimore City	1.4%	7.3%	77.8%	**11.5%**	**2.1%**	100.0%
Baltimore County	0.6%	5.1%	89.3%	4.3%	0.6%	100.0%
Calvert	2.1%	13.7%	81.6%	2.6%	0.0%	100.0%
Caroline	2.9%	10.6%	84.1%	1.8%	0.6%	100.0%
Carroll	1.8%	8.9%	81.6%	6.6%	1.2%	100.0%
Cecil	**5.1%**	**12.8%**	80.6%	1.5%	0.0%	100.0%
Charles	1.0%	5.2%	87.4%	5.1%	1.3%	100.0%
Dorchester	0.7%	5.5%	83.6%	8.9%	1.4%	100.0%
Frederick	0.6%	4.8%	81.9%	**9.8%**	**2.8%**	100.0%
Garrett	**0.0%**	**22.7%**	72.7%	4.6%	0.0%	100.0%
Harford	0.0%	4.9%	90.1%	3.7%	1.2%	100.0%
Howard	1.2%	8.6%	86.3%	2.9%	1.0%	100.0%
Kent	**1.0%**	**13.3%**	75.5%	**9.2%**	**1.0%**	100.0%
Montgomery	2.2%	9.3%	83.7%	4.0%	0.9%	100.0%
Prince George's	1.3%	6.2%	87.8%	3.9%	0.9%	100.0%
Queen Anne's	4.4%	7.3%	84.1%	2.9%	1.5%	100.0%
Somerset	1.2%	13.0%	82.1%	3.7%	0.0%	100.0%
St. Mary's	1.5%	8.0%	83.9%	5.1%	1.5%	100.0%
Talbot	0.7%	8.1%	81.6%	8.8%	0.7%	100.0%
Washington	**2.5%**	**10.0%**	74.1%	**10.5%**	**2.9%**	100.0%
Wicomico	2.0%	5.6%	81.2%	8.8%	2.4%	100.0%
Worcester	1.0%	4.9%	83.9%	8.0%	2.1%	100.0%
Total	**1.4%**	**7.2%**	**83.2%**	**6.8%**	**1.4%**	**100.0%**

Yellow cells: Below average matching, and errors skewed MSCCSP < DJS estimated score
Green cells: Below average matching, and errors skewed MSCCSP > DJS estimated score
Pink cells: Below average matching, and errors more normally distributed

Juvenile History Score Recording Practices Survey

The results of the juvenile score recording practices survey indicated that there are differences across the state, and between Probation & Parole agents and State's Attorneys, in the data accessed used to calculate the juvenile score. While we are using only using DJS's ASSIST database to analyze the juvenile score, and to replicate it, State's Attorneys in particular are less likely to cite reliance on DJS or DJS's ASSIST, in comparison to Probation & Parole agents. Survey respondents were asked to list up to three data sources consulted when determining juvenile delinquency and commitment history. While 76% of the sources Probation & Parole agents reported using were DJS's ASSIST, or contacting either the local or state DJS office, State's Attorneys reported having no direct access to ASSIST, and are divided roughly evenly between reporting contacting DJS (50%) as one of their consulted sources, or using their own within-county State's Attorney's Office records systems (42%).

In addition to different data sources consulted by the two groups of respondents, there may be jurisdictional differences (noted previously in Table 3) in juvenile history scoring that may be contributing to the jurisdictional variation in successfully replicating the MSCCSP score with DJS's ASSIST database.

Finally, some amount of variation is recording practices is likely related to the interpretation and application of the juvenile history scoring rules to individual cases. As part of the recording practices survey, respondents were presented with a hypothetical case, and asked to report whether the circumstances would result in a juvenile score of 0, 1, or 2. The results in the table below indicate some inconsistency in the application and interpretation of juvenile history scoring guidelines.

Table 4. Recording Practices Survey Hypothetical Scenario Response

Question	P&P		SAO	
	Freq.	**%**	**Freq.**	**%**
Does an individual aged 22 with 1 adult conviction at age 19, and 2 adjudications and 2 commitments when 13 years old, meet the "crime free" criterion?				
Yes, score of 0	2	16.7%	6	46.2%
No, score of 1	3	25.0%	1	7.7%
No, score of 2	7	58.3%	6	46.2%
Total	12	100.0%	13	100.0%

Table 5. Comparing the MSSCSP Score and the DJS Estimated Score on Variables of Interest Regarding Individual History and Sentencing (Ages 18 to 22; N = 16,470)

Variable	MSCCSP Score			DJS Estimated Score		
	0	**1**	**2**	**0**	**1**	**2**
Age at Offense (years)	20.42	19.84	19.88	20.47	19.73	19.48
Offender Score	1.30	1.69	2.03	1.31	1.74	1.72
Offense Score	4.62	5.09	5.65	4.68	5.02	5.18
Seriousness	3.74	3.96	4.08	3.74	3.96	3.98
Actual Sentence (Months)	27.02	48.76	66.88	29.50	41.39	46.79
Sentence as Percent of Max Guideline Sentence	41.7%	45.4%	45.7%	41.6%	45.4%	51.8%
Adjudications (5 year decay)	0.29	1.36	1.87	0.15	2.00	2.71
Adjudications (Total)	0.44	1.76	2.72	0.31	2.38	3.38
Commitments (5 year decay)	0.08	0.50	1.41	0.00	0.58	2.67
Commitments (Total)	0.13	0.62	1.83	0.05	0.70	2.95
N	13,554	2,098	818	13,777	2,105	797

Note: Offender Score excludes the Delinquency Score.

Table 6. Distribution of MSCCSP and DJS Estimated Delinquency Scores by Race (Ages 18 to 22; N = 16,470)

Race	MSCCSP Score			DJS Estimated Score		
	0 Point	1 Point	2 Points	0 Point	1 Point	2 Points
White	85.0%	11.3%	3.7%	86.6%	10.0%	3.4%
African-American	80.4%	13.9%	5.7%	80.3%	14.2%	5.6%
Hispanic	91.0%	7.6%	1.5%	90.7%	7.1%	2.1%
Total	82.1%	12.9%	5.0%	82.5%	12.7%	4.8%

Table 7. Distribution of Types of Delinquency Outcome Events, by Race, As Indicated in DJS's ASSIST Data (Total Count Estimate) (Ages 18 to 22; N = 16,470)

Outcome	Counts of Delinquency Outcome Events						
	0	1	2	3	4	5	6+
Adjudications							
White	68.7%	16.1%	7.8%	4.2%	1.8%	1.0%	0.5%
African-American	59.5%	18.2%	11.6%	5.9%	2.9%	1.2%	0.6%
Commitments							
White	88.5%	6.7%	2.4%	1.3%	0.7%	0.2%	0.2%
African-American	82.9%	9.2%	4.4%	1.9%	1.0%	0.3%	0.3%

Table 8. Comparing the MSCCSP and DJS Estimated Scores by Rates of Delinquency Outcome Events by Race (Total Count Estimate) (Ages 18 to 22; N = 16,470)

Race	Finding	MSCCSP Score			DJS Estimated Score		
		0 Points	1 Point	2 Points	0 Points	1 Point	2 Points
White	Adjudications	0.36	1.67	2.72	0.27	2.37	3.64
	Commitments	0.10	0.50	1.68	0.04	0.71	2.97
African-American	Adjudications	0.50	1.80	2.73	0.35	2.39	3.33
	Commitments	0.15	0.65	1.87	0.07	0.69	2.94
Hispanic	Adjudications	0.17	1.36	3.00	0.11	2.00	3.00
	Commitments	0.05	0.64	1.75	0.02	0.63	2.42
Total	Adjudications	0.45	1.76	2.73	0.32	2.38	3.39
	Commitments	0.13	0.61	1.83	0.06	0.69	2.94

Grey cells: Where the average Delinquency Outcome Rate is at least 25% higher for African-Americans compared to Whites. *Green cells:* Less than 25% difference between groups.

Table 9. Ordinary Least Squares Model for Sentence Length with Race Interactions, Comparing 4 Different Measures of Juvenile History

Variables	Delinquency Scores		Counts of Delinquency Outcomes	
	MSCCSP Score	DJS Estimate	Adjudications	Commitments
Delinquency Score				
Delinquency Score = 1	22.01**	3.88	11.68**	1.50
	(2.547)	(2.16)	(1.786)	(1.821)
Delinquency Score = 2	40.02**	12.64*	17.15**	0.11
	(4.934)	(6.07)	(3.471)	(2.375)
Findings of Delinquency (Total)				
One Finding			9.84**	3.34*	18.23**	3.13
			(1.758)	(1.224)	(2.696)	(1.709)
Two Findings			14.53**	3.37	22.74**	10.76*
			(2.019)	(1.789)	(3.618)	(4.212)
Three Findings or More			15.84**	9.42**	18.91**	11.08
			(2.493)	(2.919)	(2.241)	(5.725)
Race (White=0)				
Black	3.81**	3.01**	5.09**	5.36**
	(1.005)	(0.987)	(1.275)	(1.106)
Hispanic	-1.25	-2.04	-0.06	-0.10
	(3.123)	(3.096)	(3.239)	(3.293)
Other race	0.79	0.03	0.62	0.95
	(2.128)	(2.086)	(1.798)	(1.638)
Race Interactions (White=0)				
Black * Score/Finding = 1	9.41**	12.66**	2.53	6.49**
	(2.359)	(1.822)	(1.311)	(1.749)
Black * Score/Finding = 2	12.15	24.32**	4.10	-0.81
	(6.97)	(4.602)	(3.536)	(6.168)
Black * Score/Finding = 3+			-1.13	-4.08
			(2.742)	(6.022)
Hispanic * Delinquency Score = 1	4.57	7.78	1.06	-6.48
	(6.444)	(6.832)	(5.782)	(3.172)
Hispanic * Delinquency Score = 2	9.20	21.25	0.40	-28.17
	(34.023)	(33.596)	(3.752)	(22.759)
Hispanic * Score/Finding = 3+			-22.16	-1.89
			(12.43)	(11.993)
Other race * Delinquency Score = 1	4.75	7.97	-1.72	-9.75
	(7.258)	(6.786)	(2.861)	(5.62)
Other race * Delinquency Score = 2	-17.18	-5.22	3.83	10.78
	(10.138)	(6.505)	(9.267)	(19.986)
Other race * Score/Finding = 3+			0.02	-14.78
			(11.069)	(12.067)
Offense Type (Property=0)				
Drug	-12.13**	-12.34**	-12.49**	-12.30**
	(3.841)	(3.862)	(3.798)	(3.816)
Person	19.64**	19.56**	19.55**	19.56**
	(1.601)	(1.589)	(1.55)	(1.53)
Adult Criminal History Score				
Adult Score = 1	5.14**	5.16**	5.20**	5.45**
	(0.859)	(0.891)	(0.891)	(0.908)
Adult Score = 2	10.53**	10.65**	10.67**	11.22**
	(1.236)	(1.285)	(1.247)	(1.27)
Adult Score = 3	20.99**	21.17**	20.95**	21.34**
	(2.214)	(2.218)	(2.131)	(2.164)
Adult Score = 4	31.72**	31.92**	31.75**	32.23**
	(2.082)	(2.037)	(2.301)	(2.343)
Adult Score = 5	42.82**	43.04**	42.78**	43.30**
	(3.556)	(3.602)	(3.665)	(3.786)
Adult Score = 6	48.07**	48.37**	47.77**	48.06**
	(5.393)	(5.391)	(5.539)	(5.642)

Adult Score = 7	68.30**	68.77**	68.85**	69.25**
	(14.072)	(14.218)	(14.347)	(14.452)
Offense Seriousness Score (VII=0)				
Seriousness Score = VI	-9.98**	-9.87**	-9.49**	-9.66**
	(3.019)	(3.022)	(3.113)	(3.138)
Seriousness Score = V	-3.22	-3.15	-3.00	-3.06
	(1.632)	(1.602)	(1.538)	(1.564)
Seriousness Score = IV	9.00**	9.08**	9.30**	9.15**
	(1.966)	(1.96)	(1.923)	(1.931)
Seriousness Score = III	32.63**	32.80**	33.22**	33.16**
	(4.093)	(4.091)	(4.089)	(4.104)
Seriousness Score = II	161.95**	162.13**	162.78**	162.59**
	(15.677)	(15.653)	(15.547)	(15.555)
Seriousness Score = I	460.66**	460.72**	463.07**	462.67**
	(14.032)	(13.979)	(13.62)	(13.62)
Plea Agreement	-18.53*	-18.64*	-19.02*	-18.96*
	(8.817)	(8.801)	(8.98)	(8.941)
Private Representation (0 or 1)	2.86**	2.81**	2.51*	2.49*
	(0.918)	(0.916)	(0.925)	(0.929)
Age (18 years=0)				
19 years	4.44**	4.41**	4.19**	3.83*
	(1.468)	(1.451)	(1.473)	(1.539)
20 years	6.12**	6.04**	5.46**	4.93**
	(1.003)	(0.97)	(0.909)	(0.965)
21 years	5.52**	5.44**	4.57*	3.91*
	(1.834)	(1.753)	(1.678)	(1.708)
22 years	6.55**	6.53**	5.46**	4.65**
	(1.795)	(1.65)	(1.581)	(1.617)
Male (0 or 1)	2.31	2.47	2.43	2.80*
	(1.226)	(1.253)	(1.306)	(1.336)
Jurisdiction (Baltimore City=0)				
Allegany	10.27*	10.41*	11.91*	11.41*
	(4.388)	(4.488)	(4.387)	(4.315)
Anne Arundel	-0.64	-0.38	0.67	0.23
	(3.818)	(3.93)	(3.929)	(3.847)
Baltimore County	1.92	1.98	2.31	2.12
	(4.81)	(4.884)	(5)	(4.879)
Calvert	4.44	4.93	6.28	5.92
	(5.416)	(5.475)	(5.62)	(5.7)
Caroline	13.17**	13.50**	15.43**	14.50**
	(2.49)	(2.611)	(2.652)	(2.492)
Carroll	-9.37	-8.99	-8.77	-8.73
	(5.762)	(5.788)	(6.015)	(5.761)
Cecil	1.15	2.42	3.00	2.32
	(8.345)	(8.334)	(8.553)	(8.443)
Charles	8.64*	8.75*	9.55*	8.61*
	(3.791)	(3.892)	(3.95)	(3.864)
Dorchester	40.69**	40.75**	40.79**	40.24**
	(3.632)	(3.696)	(3.915)	(3.844)
Frederick	15.68**	15.77**	16.60**	16.00**
	(2.81)	(2.865)	(2.848)	(2.773)
Garrett	7.41	8.30	9.20	8.08
	(5.878)	(5.939)	(6.106)	(6.088)
Harford	48.55**	48.53**	49.16**	48.38**
	(4.406)	(4.437)	(4.549)	(4.517)
Howard	3.16	3.20	4.49	4.02
	(4.853)	(4.969)	(4.945)	(4.843)
Kent	-0.87	-0.91	1.26	0.44
	(8.416)	(8.452)	(8.449)	(8.353)
Montgomery	10.88**	11.01**	12.25**	11.55**
	(3.499)	(3.648)	(3.77)	(3.627)
Prince George's	8.08	8.20	8.84	7.91

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		(6.376)		(6.52)		(6.633)		(6.428)
Queen Anne's		14.35**		15.06**		16.51**		15.66**
		(3.535)		(3.702)		(3.693)		(3.622)
St. Mary's		29.08**		29.40**		30.75**		29.75**
		(2.983)		(3.094)		(3.077)		(2.959)
Somerset		14.89*		15.11*		15.40*		14.77*
		(5.505)		(5.587)		(5.623)		(5.436)
Talbot		11.02*		10.91*		12.27*		11.94*
		(4.372)		(4.391)		(4.648)		(4.511)
Washington		4.28		4.44		4.52		3.83
		(9.203)		(9.246)		(9.429)		(9.36)
Wicomico		25.80**		25.86**		27.15**		26.07**
		(2.631)		(2.716)		(2.653)		(2.602)
Worcester		6.50		6.42		7.01		6.28
		(3.908)		(4)		(4.132)		(3.955)
Constant	26.96**	-10.03	29.441**	-9.505	27.086**	-10.8	28.804**	-9.567
	(2.559)	(11.075)	(2.77)	(11.283)	(2.809)	(11.132)	(2.672)	(11.123)
R²	0.017	0.574	0.004	0.574	0.006	0.571	0.007	0.571
Observations	16,444	16,425	16,444	16,425	16,444	16,425	16,444	16,425

Regression Results for the Adjudication and Commitment Outcome Count Models:

Figure 2a. Predicted Sentence Length by Total Number of Juvenile <u>Adjudications</u> and Race
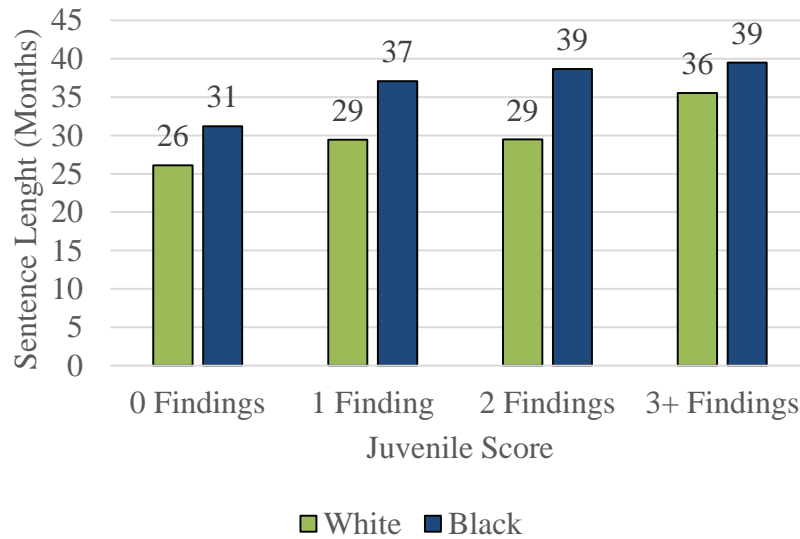
Figure 2b. Predicted Sentence Length by Total Number of Juvenile <u>Commitments</u> and Race
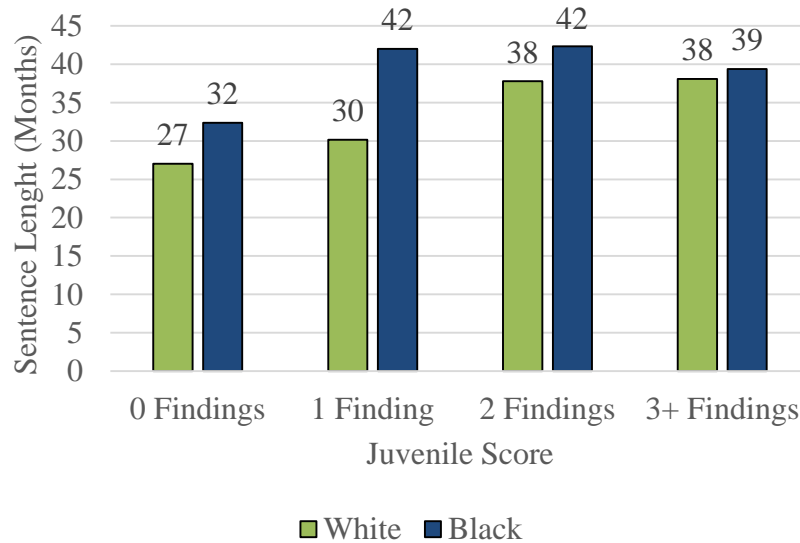
Figures 3a&b. Overall Percentage of Reoffending by Type of Recidivism and MSCCSP Delinquency Score (Prison or Jail = 0; Ages 18 to 22; N = 6,546)
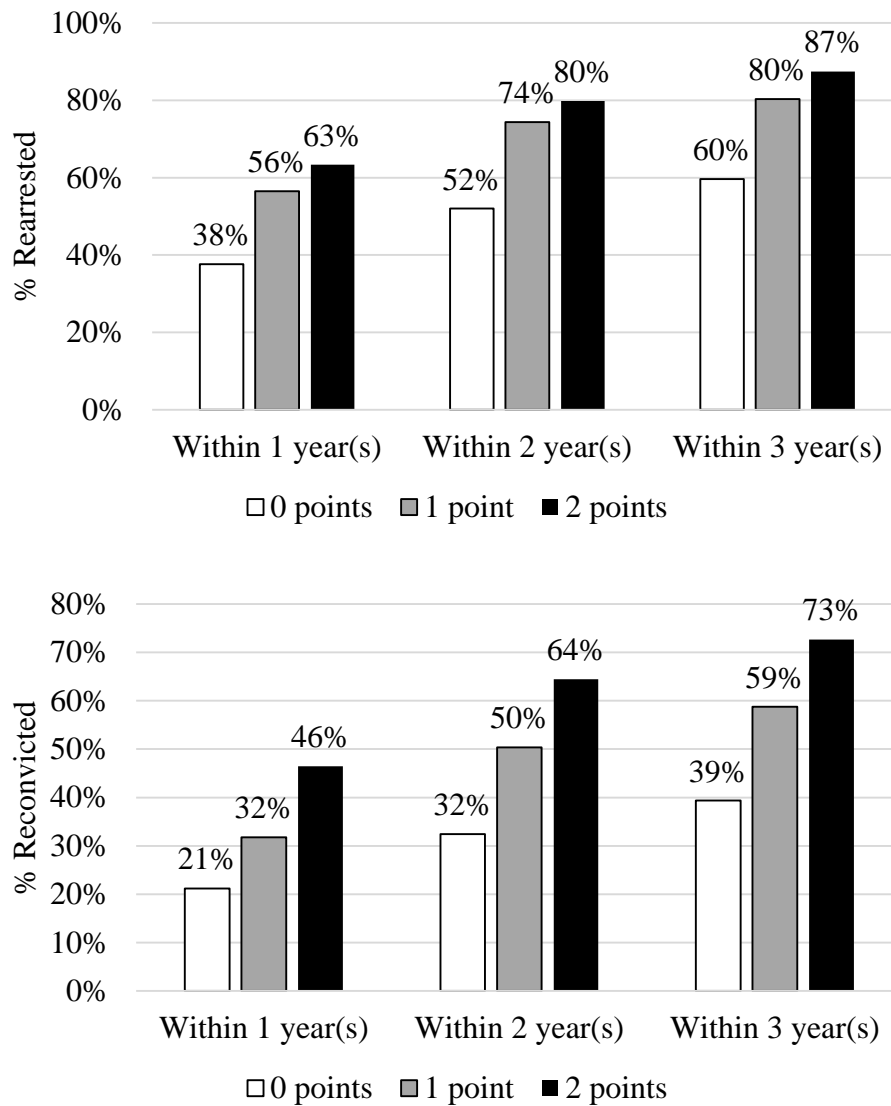
Table 10 & Figures 4a&b. Whites Only - Percentage of Reoffending by Type of Recidivism and MSCCSP Delinquency Score (Prison or Jail = 0; Ages 18 to 22; N = 1,937)

Recidivism	Delinquency Score			
	0 points	**1 point**	**2 points**	**Total**
Rearrests				
Within 1 year(s)	29.4%	41.2%	53.3%	30.7%
Within 2 year(s)	41.3%	58.2%	76.7%	43.2%
Within 3 year(s)	48.9%	66.7%	83.3%	50.9%
Reconvictions				
Within 1 year(s)	19.0%	29.4%	46.7%	20.3%
Within 2 year(s)	28.1%	45.8%	63.3%	30.0%
Within 3 year(s)	34.7%	53.6%	70.0%	36.7%
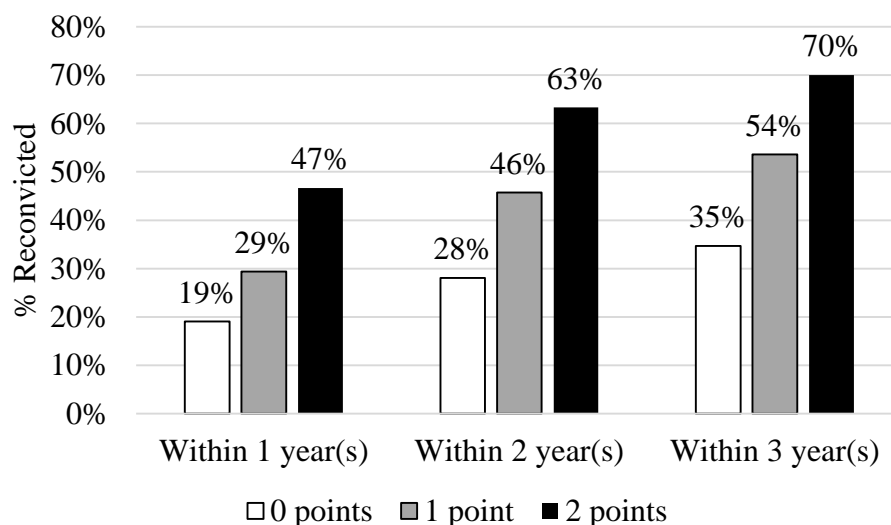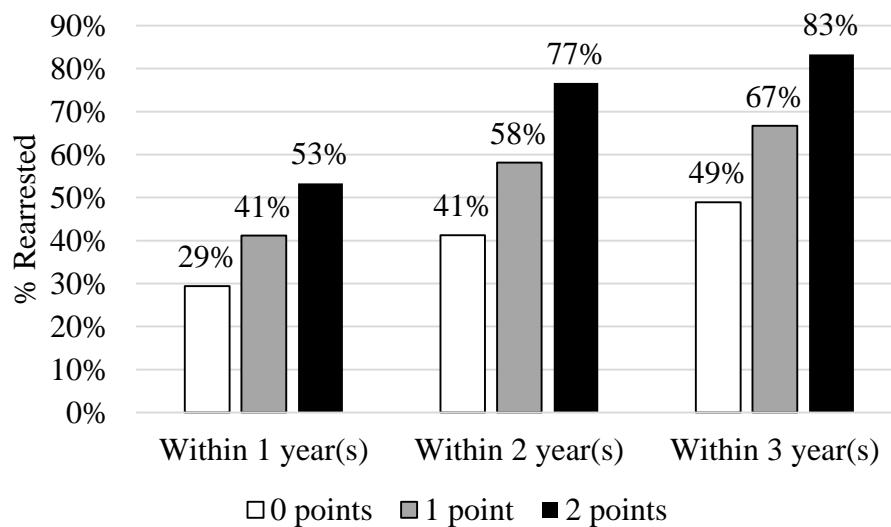
Table 11 & Figures 5a&b. African Americans Only - Percentage of Reoffending by Type of Recidivism and MSCCSP Delinquency Score (Prison or Jail = 0; Ages 18 to 22; N = 4,168)

Recidivism	Delinquency Score			
	0 points	1 point	2 points	Total
Rearrests				
Within 1 year(s)	42.4%	61.8%	65.3%	45.4%
Within 2 year(s)	58.3%	79.4%	81.0%	61.5%
Within 3 year(s)	66.0%	84.8%	88.4%	68.9%
Reconvictions				
Within 1 year(s)	22.6%	32.2%	46.9%	24.6%
Within 2 year(s)	35.3%	52.0%	65.3%	38.3%
Within 3 year(s)	42.3%	60.7%	74.2%	45.6%

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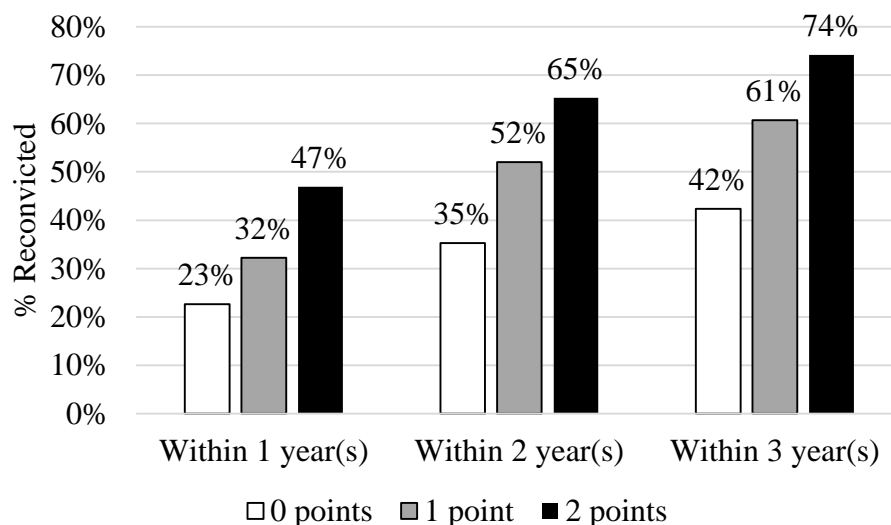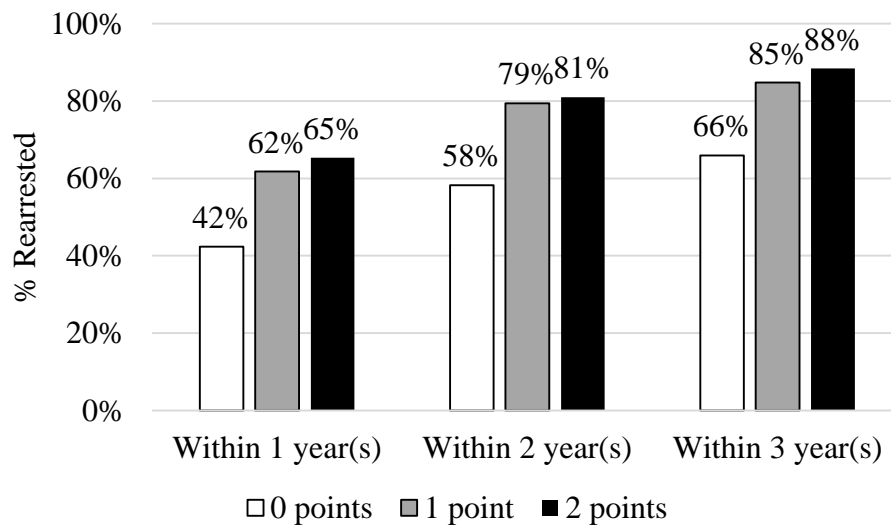
Survey Results and Parameters for Redesigning the Juvenile Score

Table 12. Juvenile History Recording Practices Survey – Ability to Calculate Juvenile Score Using Commitments of At Least 30 Days

Question	P&P		SA	
	Freq.	%	Freq.	%
Have access to necessary information to calculate a new score in which <u>only commitments of at least 30 days</u> count as commitments				
No	5	38.5%	6	42.9%
Yes, accessible	4	30.8%	3	21.4%
Yes, not easily accessible	4	30.8%	5	35.7%
Total	14	100.0%	14	100.0%

Table 13. Juvenile History Recording Practices Survey – Ability to Calculate Juvenile Score Using Commitments in Secure Facilities

Question	P&P		SA	
	Freq.	%	Freq.	%
Have access to necessary information to calculate a new score in which <u>only commitments to a secure facility</u> count as commitments				
No	7	53.8%	6	42.9%
Yes, accessible	2	15.4%	1	7.1%
Yes, not easily accessible	4	30.8%	7	50.0%
Total	13	100.0%	14	100.0%

Table 14. Juvenile History Recording Practices Survey – Ability to Calculate Juvenile Score Using Offense Seriousness Equivalency

Question	P&P		SA	
	Freq.	%	Freq.	%
Have access to necessary information to calculate a new score in which <u>only adjudications for acts that are equivalent to those of certain Seriousness Categories</u> count as adjudications?				
No	6	46.2%	2	14.3%
Yes, accessible	4	30.8%	7	50.0%
Yes, not easily accessible	3	23.1%	5	35.7%
Total	13	100.0%	14	100.0%

P&P = Probation & Parole
SA = State's Attorneys

Appendices

Appendix 1 – Sentencing Matrix for Offenses against Persons

Maryland State Commission on
Criminal Sentencing Policy

Sentencing Matrix for Offenses Against Persons
(Revised 7/2001)

Offense Score	Offender Score							
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7 or more**
1	P	P	P-3M	3M-1Y	3M-18M	3M-2Y	6M-2Y	1Y-3Y
2	P-6M	P-1Y	P-18M	3M-2Y	6M-3Y	1Y-5Y	18M-5Y	3Y-8Y
3	P-2Y	P-2Y	6M-3Y	1Y-5Y	2Y-5Y	3Y-7Y	4Y-8Y	5Y-10Y
4	P-3Y	6M-4Y	1Y-5Y	2Y-5Y	3Y-7Y	4Y-8Y	5Y-10Y	5Y-12Y
5	3M-4Y	6M-5Y	1Y-6Y	2Y-7Y	3Y-8Y	4Y-10Y	6Y-12Y	8Y-15Y
6	1Y-6Y	2Y-7Y	3Y-8Y	4Y-9Y	5Y-10Y	7Y-12Y	8Y-13Y	10Y-20Y
7	3Y-8Y	4Y-9Y	5Y-10Y	6Y-12Y	7Y-13Y	9Y-14Y	10Y-15Y	12Y-20Y
8	4Y-9Y	5Y-10Y	5Y-12Y	7Y-13Y	8Y-15Y	10Y-18Y	12Y-20Y	15Y-25Y
9	5Y-10Y	7Y-13Y	8Y-15Y	10Y-15Y	12Y-18Y	15-25Y	18Y-30Y	20Y-30Y
10	10Y-18Y	10Y-21Y	12Y-25Y	15Y-25Y	15Y-30Y	18Y-30Y	20Y-35Y	20Y-L
11	12Y-20Y	15Y-25Y	18Y-25Y	20Y-30Y	20Y-30Y	25Y-35Y	25Y-40Y	25Y-L
12	15Y-25Y	18Y-25Y	18Y-30Y	20Y-35Y	20Y-35Y	25Y-40Y	25Y-L	25Y-L
13	20Y-30Y	25Y-35Y	25Y-40Y	25Y-L	25Y-L	30Y-L	L	L
14	20Y-L	25Y-L	28Y-L	30Y-L	L	L	L	L
15	25Y-L	30Y-L	35Y-L	L	L	L	L	L

P=Probation, M=Months, Y=Years, L=Life

Appendix 2 – Sentencing Matrix for Drug Offenses

Maryland State Commission on
Criminal Sentencing Policy

Sentencing Matrix for Drug Offenses
(Revised 10/2001)

Offense Seriousness Category	Offender Score							
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7 or more**
VII	P	P	P	P-1M	P-3M	P-6M	3M-6M	6M-2Y
VI	Available for future use. There are currently no seriousness category VI drug offenses.							
V	P-6M	P-12M	3M-12M	6M-18M	1Y-2Y	1.5Y-2.5Y	2Y-3Y	3Y-4Y
IV	P-12M	P-18M	6M-18M	1Y-2Y	1.5Y-2.5Y	2Y-3Y	3Y-4Y	3.5Y-10Y
III-A Marijuana import 45 kilograms or more, and MDMA 750 grams or more	P-18M	P-2Y	6M-2Y	1Y-4Y	2Y-6Y	3Y-8Y	4Y-12Y	10Y-20Y
III-B Non-marijuana and non-MDMA, Except Import	6M-3Y	1Y-3Y	18M-4Y	3Y-7Y	4Y-8Y	5Y-10Y	7Y-14Y	12Y-20Y
III-C Non-marijuana and non-MDMA, Import	1Y-4Y	2Y-5Y	3Y-6Y	4Y-7Y	5Y-8Y	6Y-10Y	8Y-15Y	15Y-25Y
II	20Y-24Y	22Y-26Y	24Y-28Y	26Y-30Y	28Y-32Y	30Y-36Y	32Y-37Y	35Y-40Y

P=Probation, M=Months, Y=Years

Appendix 3 – Sentencing Matrix for Property Offenses

Sentencing Matrix for Property Offenses
(Revised 7/2001)

Offense Seriousness Category	Offender Score							
	0	1	2	3	4	5	6	7 or more
VII	P-1M	P-3M	3M-9M	6M-1Y	9M-18M	1Y-2Y	1Y-3Y	3Y-5Y
VI	P-3M	P-6M	3M-1Y	6M-2Y	1Y-3Y	2Y-5Y	3Y-6Y	5Y-10Y
V	P-6M	P-1Y	3M-2Y	1Y-3Y	18M-5Y	3Y-7Y	4Y-8Y	8Y-15Y
IV	P-1Y	3M-2Y	6M-3Y	1Y-4Y	18M-7Y	3Y-8Y	5Y-12Y	10Y-20Y
III	P-2Y	6M-3Y	9M-5Y	1Y-5Y	2Y-8Y	3Y-10Y	7Y-15Y	15Y-30Y
II	2Y-5Y	3Y-7Y	5Y-8Y	5Y-10Y	8Y-15Y	10Y-18Y	12Y-20Y	15Y-40Y

P=Probation, M=Months, Y=Years

Appendix 4 – Maryland Sentencing Guideline Worksheet

MARYLAND SENTENCING GUIDELINES WORKSHEET	OFFENDER NAME - Last, First, Middle		SID#		SEX __ M __ F	BIRTHDATE		JURISDICTION

PSI __ Yes __ No	DATE OF OFFENSE	DATE OF SENTENCING	DISPOSITION TYPE		REPRESENTATION	ETHNICITY	RACE	__ Unidentifiable

PSI __ Yes __ No

AT THIS SENTENCING, NUMBER OF: CONVICTED OFFENSES [ ] CRIMINAL EVENTS [ ] WORKSHEET #_____ OF CRIMINAL EVENT #_____.

DISPOSITION TYPE
__ ABA plea agreement __ Jury trial
__ Non-ABA plea agreement __ Reconsideration
__ Plea, no agreement __ Review
__ Court trial

REPRESENTATION
__ Private
__ Public Defender
__ Court Appointed
__ Self

ETHNICITY Hispanic/Latino Origin __ Yes __ No

Victim Court Costs Imposed __ Yes __ No

RACE
__ Black __ Asian
__ White __ Other
__ Native Hawaiian/Pacific Islander
__ American Indian/Alaskan Native

CONVICTED OFFENSE TITLE	I-VII	CJIS CODE	MD CODE, ART, & SECTION	STAT. MAX	MAND. MIN	CASE #/DOCKET #
1st Convicted Offense		—				
2nd Convicted Offense		—				
3rd Convicted Offense		—				

OFFENSE SCORE(S) — Offense Against a Person Only

1st Off	2nd Off	3rd Off		A. Seriousness Category
1	1	1	=	V – VII
3	3	3	=	IV
5	5	5	=	III
8	8	8	=	II
10	10	10	=	I

1st Off	2nd Off	3rd Off		B. Victim Injury
0	0	0	=	No Injury
1	1	1	=	Injury, Non-Permanent
2	2	2	=	Permanent Injury or Death

1st Off	2nd Off	3rd Off		C. Weapon Presence
0	0	0	=	No Weapon
1	1	1	=	Weapon Other Than Firearm
2	2	2	=	Firearm or Explosive

1st Off	2nd Off	3rd Off		D. Special Victim Vulnerability
0	0	0	=	No
1	1	1	=	Yes

_____ _____ _____ **OFFENSE SCORE(S)**

OFFENDER SCORE

A. Relationship to CJS When Instant Offense Occurred
0 = None or Pending Cases
1 = Court or Other Criminal Justice Supervision

B. Juvenile Delinquency
0 = 23 years or older or crime-free for 5 years or no more than 1 finding of a delinquent act
1 = Under 23 years old and: 2 or more findings of a delinquent act or 1 commitment
2 = Under 23 years and committed 2 or more times

C. Prior Adult Criminal Record
0 = None   3 = Moderate
1 = Minor   5 = Major

D. Prior Adult Parole/Prob Violation
0 = No   1 = Yes

_____ **OFFENDER SCORE**

GUIDELINES RANGE

1st Con. Off.
_____
TO
_____

2nd Con. Off.
_____
TO
_____

3rd Con. Off.
_____
TO
_____

Overall Guidelines Range Multiple Counts Only
_____
TO
_____

50% of Sentence Announced for COVs __ Yes __ No

ACTUAL SENTENCE - Imposed, Suspended, Time Served, Probation, Restitution, Fine, Corrections Options Programs (Drug Treatment Court, Home Detention, Etc.)

1st Convicted Offense

For Theft, Fraud, and Related Crimes, please indicate: ☐Economic loss $_____ ; ☐Unknown Amount
Subsequent Offender Filed __ Yes __ No   Restitution Requested __ Yes __ No
Subsequent Offender Proven __ Yes __ No   Restitution Proven __ Yes __ No

2nd Convicted Offense

For Theft, Fraud, and Related Crimes, please indicate: ☐Economic loss $_____ ; ☐Unknown Amount
Subsequent Offender Filed __ Yes __ No   Restitution Requested __ Yes __ No
Subsequent Offender Proven __ Yes __ No   Restitution Proven __ Yes __ No

3rd Convicted Offense

For Theft, Fraud, and Related Crimes, please indicate: ☐Economic loss $_____ ; ☐Unknown Amount
Subsequent Offender Filed __ Yes __ No   Restitution Requested __ Yes __ No
Subsequent Offender Proven __ Yes __ No   Restitution Proven __ Yes __ No

Was the offender sentenced to a Corrections Options program under Commission criteria?
Drug Court __ Yes __ No   Other __ Yes __ No

Additional Information or Institutional/Parole Recommendation

Parole Notification __ Yes __ No

Worksheet Completed By
_____

Title
_____

Sentencing Judge (Please Print)
_____

Sentencing Judge's Signature
_____

VICTIM INFORMATION

Victim	__ Yes	__ No
Victim Non-participation	__ Yes	__ No
Victim Notification Form	__ Yes	__ No
Victim Notified Plea	__ Yes	__ No
Victim Notified Date	__ Yes	__ No
Victim Present	__ Yes	__ No
Written VIS	__ Yes	__ No
Oral VIS	__ Yes	__ No
No Contact Requested	__ Yes	__ No
No Contact Ordered	__ Yes	__ No

SENTENCE DEPARTURE INFORMATION

If the actual sentence departs from the guidelines range, please indicate the Court's reason(s) using the numerical code(s) on the list of common departure factors in the manual, if applicable.

[ ] [ ] [ ]

Departure Code 9 or 18 (Please Explain):

COPIES: White – Judge; Blue – Sentencing Commission; Green – Attach to Commitment or Probation Order; Yellow – File; Pink – Prosecution; Gold – Defense   4/2013 (1.8)

109

Appendix C- Phase 3 / May 2017 Presentation

MARYLAND DATA ANALYSIS CENTER

DEPARTMENT OF CRIMINOLOGY AND CRIMINAL JUSTICE ◆ UNIVERSITY OF MARYLAND, COLLEGE PARK

A Report to the Maryland State Commission on Criminal Sentencing Policy

STUDY PHASE 3:

A PRELIMINARY ANALYSIS OF THE RECORDING AND

PERFORMANCE OF THE JUVENILE DELINQUENCY

SCORE UNDER THE SENTENCING GUIDELINES

Avinash Bhati, Ph.D.

Mateus Rennó Santos, Ph.D. Candidate

Jinney Smith, Ph.D.

5/9/17 Presentation

1

Study Phase #1 (May 2016)

In Phase 1, the impact of the juvenile score on sentencing outcomes for various subsamples was assessed, determining that the threshold for further study had been met. Analyses of only MSCCSP data were not conclusive, but indicated the presence of variation in sentencing outcomes in two domains:

(a) across jurisdictions, and

(b) between African-Americans and whites

2

Study Phase #2 (December 2016)

- Analyzed juvenile history records from the Department of Juvenile Services to replicate the MSCCSP's juvenile score
- Analyzed current adult history criminal records for the sample under study (2008-2012) to validate the predictive utility of the current juvenile score
- Audit the recording practices for the juvenile score (field survey)
- Data used:
  - MSCCSP linked with data from the Department of Juvenile Services' ASSIST database
  - MSCCSP linked with adult criminal history records from the Department of Public Safety & Correctional Services' CJIS database.

3

Study Phase #3

- Further examination of the results of Phase 2 & address follow-up questions from the MSCCSP

- Test scoring instructions for the current score with recidivism outcomes

- Design and test alternate scores with recidivism outcomes

- Data to be used: All three datasets linked – MSCCSP, DJS's ASSIST, and DPSCS's CJIS, for a study population of all those 18-22 sentenced in 2008-2012

4

MSCCSP's Juvenile History Scoring Instructions

The individual completing the worksheet shall assign <u>a score of **0**</u> if:
- 1. an offender is 23 years or older by the date of the offense; or
- 2. an offender has been crime free for 5 years since the last finding of a delinquent act or last adjudication; or
- 3. an offender has no more than one finding of a delinquent act.

The individual completing the worksheet shall assign <u>a score of **1**</u> if:
- 1. an offender is younger than 23 years old; **and**
- 2. has two or more findings of a delinquent act *or* one commitment

The individual completing the worksheet shall assign <u>a score of **2**</u> if:
- 1. an offender is younger than 23 years old; **and**
- 2. has been committed two or more times

5

MSSCSP Worksheet

B. Juvenile Delinquency

0   = 23 years or older <u>or</u> crime-free for 5 years <u>or</u> no more than 1 finding of a delinquent act

1   = Under 23 years old <u>and</u>: 2 or more findings of a delinquent act <u>or</u> 1 commitment

2   = Under 23 years <u>and</u> committed 2 or more times

6

Limits to Redesigning the Juvenile Score

Question	Probation & Parole		State's Attorneys	
	Freq.	%	Freq.	%

*Have access to necessary information to calculate a new score in which **only commitments of at least 30 days** count as commitments?*

No	6	42.9%	6	42.9%
Yes, accessible	4	28.6%	3	21.4%
Yes, not easily accessible	4	28.6%	5	35.7%
Total	14	100.0%	14	100.0%

*Have access to necessary information to calculate a new score in which **only commitments to a secure facility** count as commitments?*

No	8	57.1%	6	42.9%
Yes, accessible	2	14.3%	1	7.1%
Yes, not easily accessible	4	28.6%	7	50.0%
Total	14	100.0%	14	100.0%

*Have access to necessary information to calculate a new score in which **only adjudications for acts that are equivalent to those of certain Seriousness Categories** count as adjudications?*

No	7	50.0%	2	14.3%
Yes, accessible	4	28.6%	7	50.0%
Yes, not easily accessible	3	21.4%	5	35.7%
Total	14	100.0%	14	100.0%

7

Scoring Juvenile History Across Time

	Juvenile Complaints	Formal Cases	Adjudicated Delinquent*	Post-Disposition Placement
2000	54848	23742		1354
2001	52441	21562		2648
2002	54242	19935		1511
2003	53502	18323		2138
2004	53201	18299		2102
2005	51369	18920		1806
2006	53473	18550		1787
2007	51137	18173		1584
2008	51127	17136		1483
2009	48387	20262	9867	1378
2010	40660	17513	8879	1707
2011	35868	16058	8767	1627
2012	32997	15817	8272	1223
2013	27550	14259	7471	1006
2014	25135	13417	7204	922
2015	23473	12001	6324	771
2016	22429	10846	5932	789

*Estimated based on Department of Juvenile Services' *Data Resource Guides* 2009-2016 of cases adjudicated. Other data drawn from *Data Resource Guides* for the years 2009-2016, Annual Statistical Reports for the years 2000-2009, and the Statewide Trends Fiscal Year 2016 Report.

8

Score Design Constraints & Principles

Internal

- Use the existing framework of 0, 1, 2
- Score should not increase in complexity
- Score should perform as well or better than the status quo on benchmarks of interest (recidivism, distribution, and disparity)

External

- Patterns and trends in DJS adjudications and commitment
- Limitations of data systems (e.g., adjudications & commitments are not linked)
- Variation in data access among scorers

9

Cross-tabulation between MSCCSP and Estimated Delinquency Scores
(Total counts; no 5-year decay) (Ages 18 to 22; N=16,470)

Sentencing Guidelines Delinquency Score	Estimated Delinquency Score			
	0 points	1 point	2 points	Total
0 points	11,927	1238	389	13,554
1 point	687	1130	281	2,098
2 points	134	235	449	818
Total	12,748	2,603	1119	16,470

1,908 cases where Sentencing Commission data indicates *lower* juvenile score than DJS data
1,056 cases where Sentencing Commission data indicates *higher* juvenile score than DJS data

Cross-tabulation between MSCCSP and Estimated Delinquency Scores
(5-year decay) (Ages 18 to 22; N=16,470)

Sentencing Guidelines Delinquency Score	Estimated Delinquency Score			
	0 points	1 point	2 points	Total
0 points	12,421	903	230	13,554
1 point	938	942	218	2,098
2 points	231	244	343	818
Total	13,590	2,089	791	16,470

1,351 cases where Sentencing Commission data indicates *lower* juvenile score than DJS data
1,413 cases where Sentencing Commission data indicates *higher* juvenile score than DJS data

10

Score Definitions and Distributions

Scoring Rule	Score Description	Delinquency Score Distribution			Total
		0 points	1 point	2 points	
Actual Worksheet	Score as recorded on worksheets 2008-2012	13,524	2,094	817	16,435
		82.3%	12.7%	5.0%	100.0%
Five-year Decay	0 = Crime free for 5 years, or up to 1 adjudication 1 = 1 commitment or 2+ adjudications 2 = 2+ commitments (Include all events within past 5 years)	13,648	2,084	791	16,523
		82.6%	12.6%	4.8%	100.0%
Replicated Worksheet	0 = Crime free for 5 years, or up to 1 adjudication 1 = 1 commitment or 2+ adjudications 2 = 2+ commitments (Crime free = 0 adult convictions and 0 adjudications within past 5 years, but include all events)	10,757	4,684	1,082	16,523
		65.1%	28.4%	6.6%	100.0%
Alternate Scores	*All counts within past 5 years of sentenced offense*				
Commitments Only	0 = 0 commitments 1 = 1 commitment 2 = 2+ commitments	14,525	1,207	791	16,523
		87.9%	7.3%	4.8%	100.0%
Adjudications Only #1	0 = 0 adjudications 1 = 1-3 adjudications 2 = 4+ adjudications	11,659	4,549	315	16,523
		70.6%	27.5%	1.9%	100.0%
Adjudications Only #2	0 = 0 adjudications 1 = 1-2 adjudications 2 = 3+ adjudications	11,659	3,988	876	16,523
		70.6%	24.1%	5.3%	100.0%
Adjudications Only #3	0 = 0-1 adjudications 1 = 2 adjudications 2 = 3+ adjudications	14,341	1,306	876	16,523
		86.8%	7.9%	5.3%	100.0%

11

121

Introduction of Five Recidivism Measures & Performance of the Actual Worksheet Score across Measures
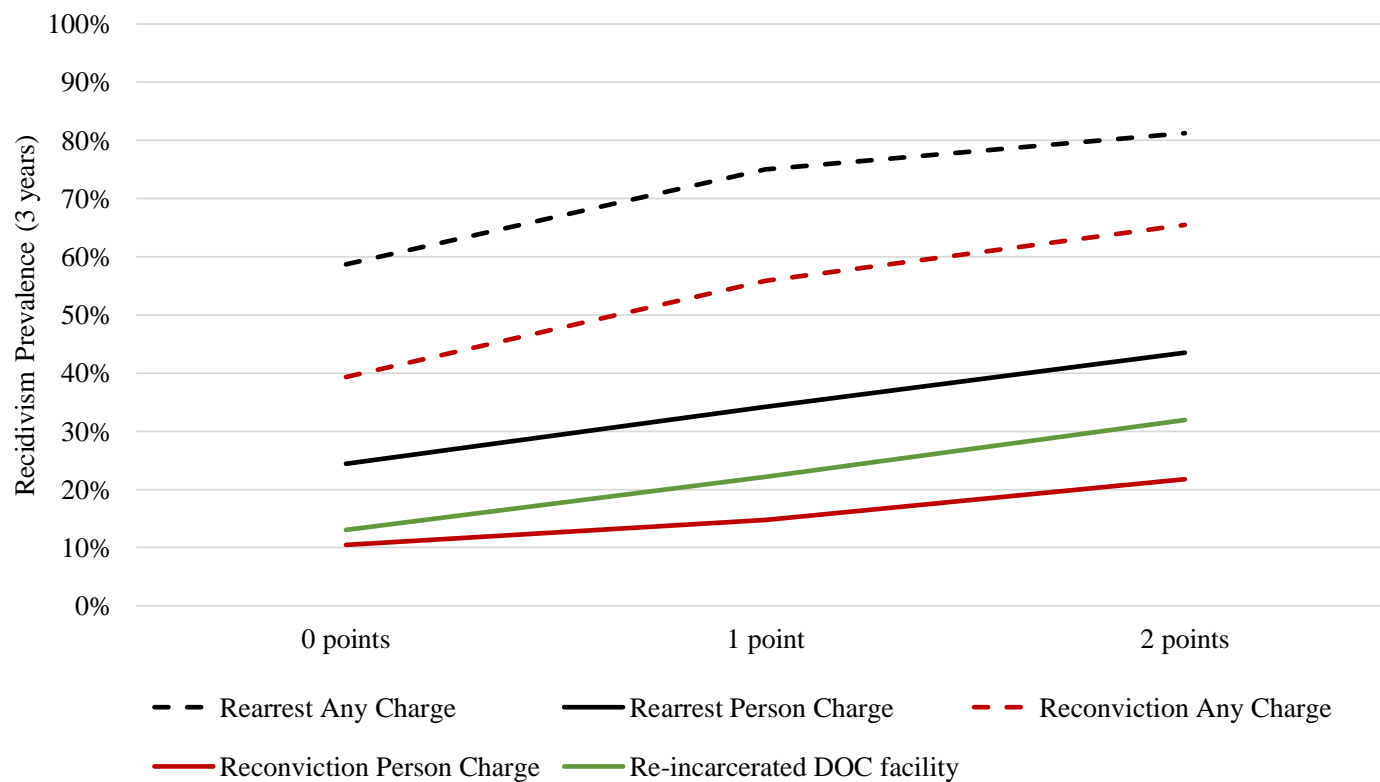
Baltimore Only - Actual Worksheet Score
across Five Recidivism Measures
(Race Distribution: 4,008 African Americans; 209 Whites)
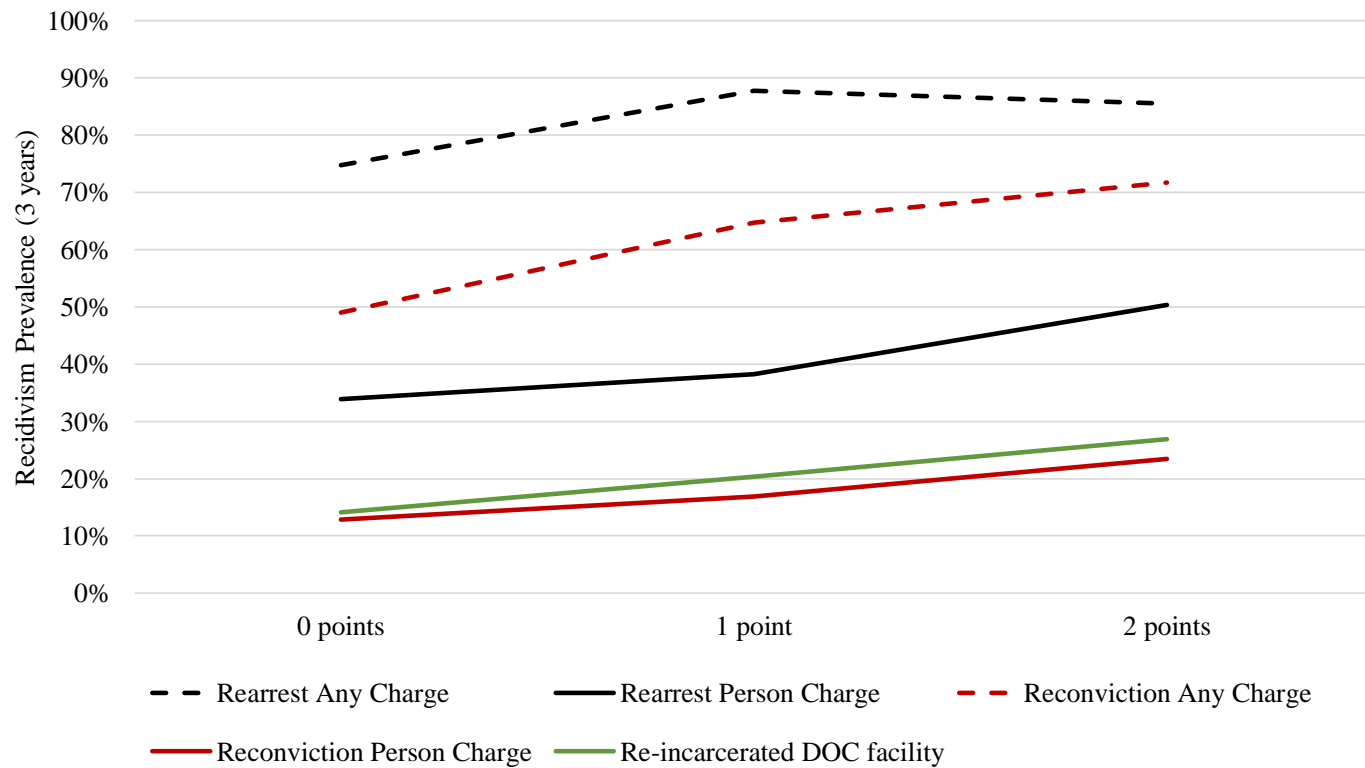
Male vs. Female Recidivism for Actual Worksheet Score

Measure	Follow-up	Male Offenders				Female Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	38.0%	49.0%	53.1%	40.2%	25.1%	38.8%	53.3%	26.2%
	2 years	52.5%	67.5%	70.3%	55.3%	36.3%	53.0%	58.3%	37.4%
	3 years	60.6%	75.5%	81.8%	63.4%	44.1%	64.5%	54.6%	45.3%
Rearrest Person Charge	1 year	13.3%	17.3%	20.5%	14.2%	7.4%	10.5%	26.7%	7.7%
	2 years	20.3%	27.1%	32.2%	21.8%	11.4%	18.2%	33.3%	11.9%
	3 years	25.5%	34.7%	43.9%	27.5%	15.7%	22.6%	36.4%	16.2%
Reconviction Any Charge	1 year	23.3%	30.4%	38.6%	25.0%	14.5%	23.9%	33.3%	15.2%
	2 years	34.2%	47.0%	52.4%	36.7%	20.9%	28.8%	33.3%	21.4%
	3 years	41.0%	56.7%	66.2%	44.2%	26.2%	37.1%	27.3%	26.8%
Reconviction Person Charge	1 year	6.6%	7.8%	9.9%	6.9%	2.7%	6.0%	13.3%	3.0%
	2 years	9.1%	12.1%	15.4%	9.8%	3.9%	7.6%	16.7%	4.2%
	3 years	11.1%	15.0%	21.9%	12.1%	5.2%	9.7%	18.2%	5.6%
Re-incarcerated DOC facility	1 year	8.5%	12.1%	17.4%	9.4%	3.8%	10.5%	13.3%	4.2%
	2 years	11.9%	18.8%	24.5%	13.4%	5.0%	12.1%	16.7%	5.5%
	3 years	14.0%	22.5%	32.4%	15.9%	5.8%	14.5%	18.2%	6.3%
Sample Sizes									
1 Year Follow-up		9,780	1,581	599	11,960	1,198	67	15	1,280
2 Years Follow-up		9,485	1,514	559	11,558	1,188	66	12	1,266
3 Years Follow-up		8,904	1,380	488	10,772	1,147	62	11	1,220
Non-incarceration Sentences		4,890	618	178	5,686	800	37	4	841
Size of Score Groups		12,014	2,007	796	**14,817**	1,493	87	19	**1,599**
%		81.1%	13.6%	5.4%	100%	93.4%	5.4%	1.2%	100%

14

Recidivism for Actual Worksheet Score, by Types of Recidivism and Race

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	29.2%	39.7%	54.5%	31.3%	40.5%	52.3%	52.9%	42.8%
	2 years	40.9%	56.9%	70.2%	43.6%	55.9%	70.7%	70.6%	58.6%
	3 years	48.6%	65.9%	77.1%	51.4%	64.4%	78.6%	82.3%	67.1%
Rearrest Person Charge	1 year	8.8%	14.8%	24.8%	10.1%	14.7%	18.1%	20.0%	15.5%
	2 years	13.4%	20.8%	37.3%	15.0%	22.5%	28.5%	31.0%	23.7%
	3 years	17.3%	28.3%	41.0%	19.3%	28.2%	36.1%	44.2%	30.0%
Reconviction Any Charge	1 year	20.2%	26.3%	41.4%	21.6%	23.7%	31.6%	37.8%	25.5%
	2 years	28.5%	40.9%	54.5%	30.8%	35.1%	48.4%	51.8%	37.7%
	3 years	34.8%	51.3%	62.3%	37.4%	42.1%	57.6%	67.1%	45.3%
Reconviction Person Charge	1 year	4.4%	5.3%	11.0%	4.7%	7.1%	8.8%	9.8%	7.5%
	2 years	6.3%	8.3%	18.7%	6.9%	9.8%	13.3%	14.6%	10.5%
	3 years	7.8%	11.9%	23.8%	8.7%	12.0%	15.9%	21.6%	12.9%
Re-incarcerated DOC facility	1 year	6.5%	12.9%	20.0%	7.7%	8.8%	12.0%	16.7%	9.6%
	2 years	9.0%	19.1%	29.1%	10.8%	12.3%	18.7%	22.7%	13.7%
	3 years	10.5%	23.3%	35.3%	12.6%	14.6%	22.0%	30.7%	16.3%
Sample Sizes									
1 Year Follow-up		3,326	418	145	3,889	7,075	1,176	450	8,701
2 Years Follow-up		3,266	408	134	3,808	6,843	1,121	419	8,383
3 Years Follow-up		3,123	378	122	3,623	6,395	1,020	362	7,777
Non-incarceration Sentences		1,825	155	31	2,011	3,552	483	147	4,182
Size of Score Groups		4,072	528	173	4,773	8,681	1,501	616	10,798
%		85.3%	11.1%	3.6%	100.0%	80.4%	13.9%	5.7%	100.0%

15

Failure example #1: Flat Performance of the Commitment Only Score across Five Recidivism Measures
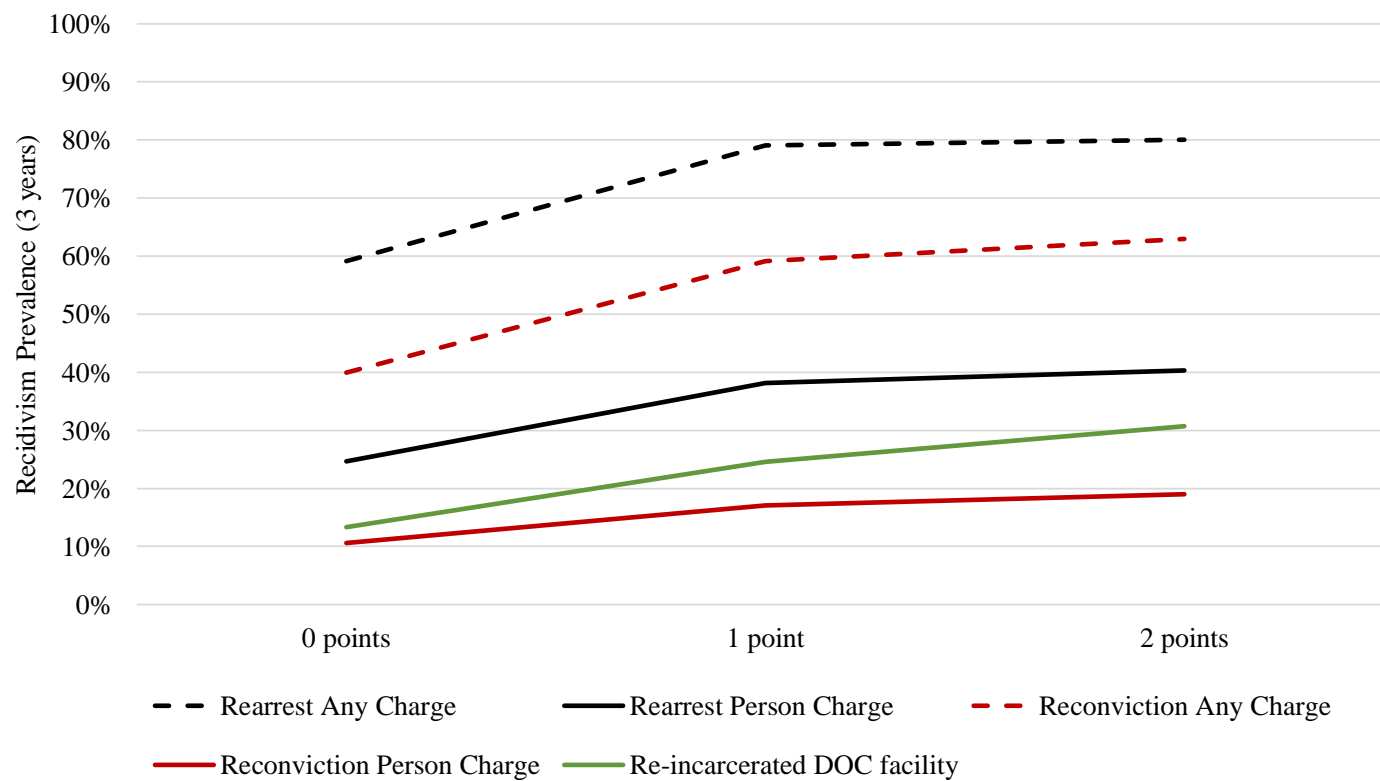
Failure example #2: Performance of the Adjudication #1 Score in Overall Score Distribution

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	27.2%	42.9%	54.1%	31.4%	37.7%	52.1%	60.7%	42.7%
	2 years	39.1%	57.0%	67.2%	43.8%	52.4%	70.2%	80.1%	58.5%
	3 years	46.4%	66.1%	74.5%	51.4%	60.8%	79.2%	89.2%	66.9%
Rearrest Person Charge	1 year	8.1%	15.6%	21.3%	10.1%	13.9%	18.1%	23.0%	15.4%
	2 years	12.7%	21.4%	32.8%	15.1%	21.4%	27.7%	35.0%	23.6%
	3 years	16.5%	27.1%	39.2%	19.3%	26.8%	35.7%	45.6%	29.9%
Reconviction Any Charge	1 year	18.8%	29.3%	47.5%	21.8%	21.5%	33.1%	37.8%	25.4%
	2 years	26.9%	41.3%	62.1%	30.9%	32.0%	48.7%	56.5%	37.6%
	3 years	32.6%	50.9%	68.6%	37.4%	38.8%	57.8%	67.7%	45.1%
Reconviction Person Charge	1 year	3.9%	6.9%	11.5%	4.8%	6.8%	8.9%	8.2%	7.5%
	2 years	5.8%	9.8%	19.0%	7.0%	9.3%	12.9%	13.4%	10.5%
	3 years	7.2%	13.0%	19.6%	8.8%	11.4%	15.9%	19.0%	12.9%
Re-incarcerated DOC facility	1 year	6.1%	12.1%	18.0%	7.7%	8.0%	12.6%	17.9%	9.6%
	2 years	8.7%	16.2%	29.3%	10.8%	11.1%	18.3%	26.3%	13.7%
	3 years	10.0%	19.8%	31.4%	12.6%	13.5%	21.5%	31.7%	16.3%
Sample Sizes									
1 Year Follow-up		2,912	938	61	3,911	5,846	2,703	196	8,745
2 Years Follow-up		2,857	913	58	3,828	5,657	2,584	186	8,427
3 Years Follow-up		2,731	863	51	3,645	5,300	2,356	158	7,814
Non-incarceration Sentences		1,598	409	16	2,023	2,938	1,180	76	4,194
Size of Score Groups		3,648	1,081	71	4,800	7,315	3,304	235	10,854
Score %		76.0%	22.5%	1.5%	100.0%	67.4%	30.4%	2.2%	100.0%
Actual Worksheet Score		85.3%	11.1%	3.6%	100.0%	80.4%	13.9%	5.7%	100.0%

Failure example #3: Adjudication #3 Score across Five Recidivism Measures

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	29.1%	48.6%	52.7%	31.4%	40.2%	55.5%	56.6%	42.7%
	2 years	41.5%	63.1%	63.9%	43.8%	55.3%	75.5%	77.1%	58.5%
	3 years	48.9%	72.7%	73.6%	51.4%	64.0%	82.7%	85.2%	66.9%
Rearrest Person Charge	1 year	9.2%	14.6%	22.8%	10.1%	14.7%	19.0%	19.4%	15.4%
	2 years	13.9%	22.0%	30.4%	15.1%	22.5%	30.7%	29.5%	23.6%
	3 years	17.9%	28.2%	36.8%	19.3%	22.5%	30.7%	29.5%	23.6%
Reconviction Any Charge	1 year	20.1%	34.0%	38.9%	21.8%	23.6%	34.6%	36.3%	25.4%
	2 years	28.7%	46.5%	55.1%	30.9%	34.8%	52.5%	55.3%	37.6%
	3 years	34.8%	57.3%	65.3%	37.4%	41.9%	62.8%	64.7%	45.1%
Reconviction Person Charge	1 year	4.5%	6.1%	8.4%	4.8%	7.2%	10.0%	8.0%	7.5%
	2 years	6.5%	10.0%	12.7%	7.0%	9.9%	14.5%	12.6%	10.5%
	3 years	8.1%	14.1%	14.6%	8.8%	12.1%	18.3%	15.9%	12.9%
Re-incarcerated DOC facility	1 year	6.8%	14.2%	16.8%	7.7%	8.9%	14.1%	13.1%	9.6%
	2 years	9.5%	19.5%	25.3%	10.8%	12.3%	21.1%	20.8%	13.7%
	3 years	10.9%	26.5%	29.2%	12.6%	14.8%	24.7%	24.8%	16.3%
Sample Sizes									
1 Year Follow-up		3,497	247	167	3,911	7,385	809	551	8,745
2 Years Follow-up		3,429	241	158	3,828	7,136	768	523	8,427
3 Years Follow-up		3,267	234	144	3,645	6,654	701	459	7,814
Non-incarceration Sentences		1,859	114	50	2,023	3,624	336	234	4,194
Size of Score Groups		4,320	286	194	4,800	9,224	975	655	10,854
%		90.0%	6.0%	4.0%	100.0%	85.0%	9.0%	6.0%	100.0%

Failure example #4: Five Year Decay Score Across Five Recidivism Measures

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	28.4%	48.3%	53.6%	31.4%	39.7%	54.2%	55.7%	42.7%
	2 years	40.7%	62.1%	66.2%	43.8%	54.5%	75.5%	72.4%	58.5%
	3 years	48.3%	70.2%	76.0%	51.4%	63.2%	83.5%	81.2%	66.9%
Rearrest Person Charge	1 year	8.8%	16.8%	21.4%	10.1%	14.5%	18.7%	21.2%	15.4%
	2 years	13.5%	22.7%	30.8%	15.1%	22.0%	30.0%	30.8%	23.6%
	3 years	17.4%	30.1%	34.4%	19.3%	27.7%	38.2%	41.8%	29.9%
Reconviction Any Charge	1 year	19.6%	32.0%	45.0%	21.8%	23.1%	34.0%	37.1%	25.4%
	2 years	28.0%	45.6%	57.7%	30.9%	34.1%	53.3%	49.6%	37.6%
	3 years	34.2%	54.6%	68.0%	37.4%	41.2%	62.0%	62.2%	45.1%
Reconviction Person Charge	1 year	4.3%	7.3%	8.6%	4.8%	7.0%	9.4%	9.1%	7.5%
	2 years	6.3%	9.5%	15.4%	7.0%	9.7%	13.9%	13.4%	10.5%
	3 years	7.9%	12.6%	17.6%	8.8%	11.9%	16.7%	19.3%	12.9%
Re-incarcerated DOC facility	1 year	6.6%	13.4%	18.6%	7.7%	8.6%	12.3%	18.2%	9.6%
	2 years	9.1%	18.5%	28.5%	10.8%	11.9%	19.8%	24.2%	13.7%
	3 years	10.6%	22.0%	35.2%	12.6%	14.3%	23.1%	29.6%	16.3%
Sample Sizes									
1 Year Follow-up		3,361	410	140	3,911	7,004	1,269	472	8,745
2 Years Follow-up		3,297	401	130	3,828	6,780	1,205	442	8,427
3 Years Follow-up		3,148	372	125	3,645	6,328	1,108	378	7,814
Non-incarceration Sentences		1,817	173	33	2,023	3,488	547	159	4,194
Size of Score Groups		4,169	468	163	4,800	8,721	1,534	599	10,854
%		86.9%	9.8%	3.4%	100.0%	80.4%	14.1%	5.5%	100.0%

19

Failure example #5: Replicated Worksheet Score Across Five Recidivism Measures and Score Distribution

Measure	Follow-up	White Offenders Delinquency Score			Total	African American Offenders Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	26.8%	39.5%	53.1%	31.4%	37.3%	50.5%	52.4%	42.7%
	2 years	38.6%	53.8%	66.1%	43.8%	51.4%	69.0%	70.4%	58.5%
	3 years	45.7%	63.2%	74.1%	51.4%	59.9%	77.8%	79.5%	66.9%
Rearrest Person Charge	1 year	7.9%	13.9%	21.1%	10.1%	13.8%	17.2%	21.2%	15.4%
	2 years	12.2%	20.0%	30.6%	15.1%	20.9%	27.1%	30.9%	23.6%
	3 years	15.8%	26.4%	34.1%	19.3%	26.2%	34.6%	41.6%	29.9%
Reconviction Any Charge	1 year	18.4%	26.7%	43.8%	21.8%	21.2%	31.4%	33.8%	25.4%
	2 years	26.5%	38.1%	56.3%	30.9%	31.6%	46.9%	47.0%	37.6%
	3 years	31.8%	47.9%	65.3%	37.4%	38.2%	55.6%	59.8%	45.1%
Reconviction Person Charge	1 year	3.8%	6.7%	8.8%	4.8%	6.9%	8.3%	9.0%	7.5%
	2 years	5.6%	9.4%	14.2%	7.0%	9.3%	12.0%	13.4%	10.5%
	3 years	6.6%	13.3%	16.5%	8.8%	11.2%	14.9%	19.4%	12.9%
Re-incarcerated DOC facility	1 year	5.8%	10.8%	19.1%	7.7%	7.9%	11.3%	16.3%	9.6%
	2 years	8.3%	14.5%	27.3%	10.8%	11.0%	16.7%	22.3%	13.7%
	3 years	9.3%	18.3%	32.4%	12.6%	13.1%	19.9%	28.0%	16.3%
Sample Sizes									
1 Year Follow-up		2,712	1,005	194	3,911	5,266	2,822	657	8,745
2 Years Follow-up		2,669	976	183	3,828	5,107	2,709	611	8,427
3 Years Follow-up		2,555	920	170	3,645	4,815	2,477	522	7,814
Non-incarceration Sentences		1,520	457	46	2,023	2,726	1,261	207	4,194
Size of Score Groups		3,428	1,147	225	4,800	6,660	3,379	815	10,854
Score %		71.4%	23.9%	4.7%	100.0%	61.4%	31.1%	7.5%	100.0%
Actual Worksheet Score		85.3%	11.1%	3.6%	100.0%	80.4%	13.9%	5.7%	100.0%

20

Results for the Alternate Adjudication #2 Score
(0=0; 1=1-2; 2=3+ adjudications only)
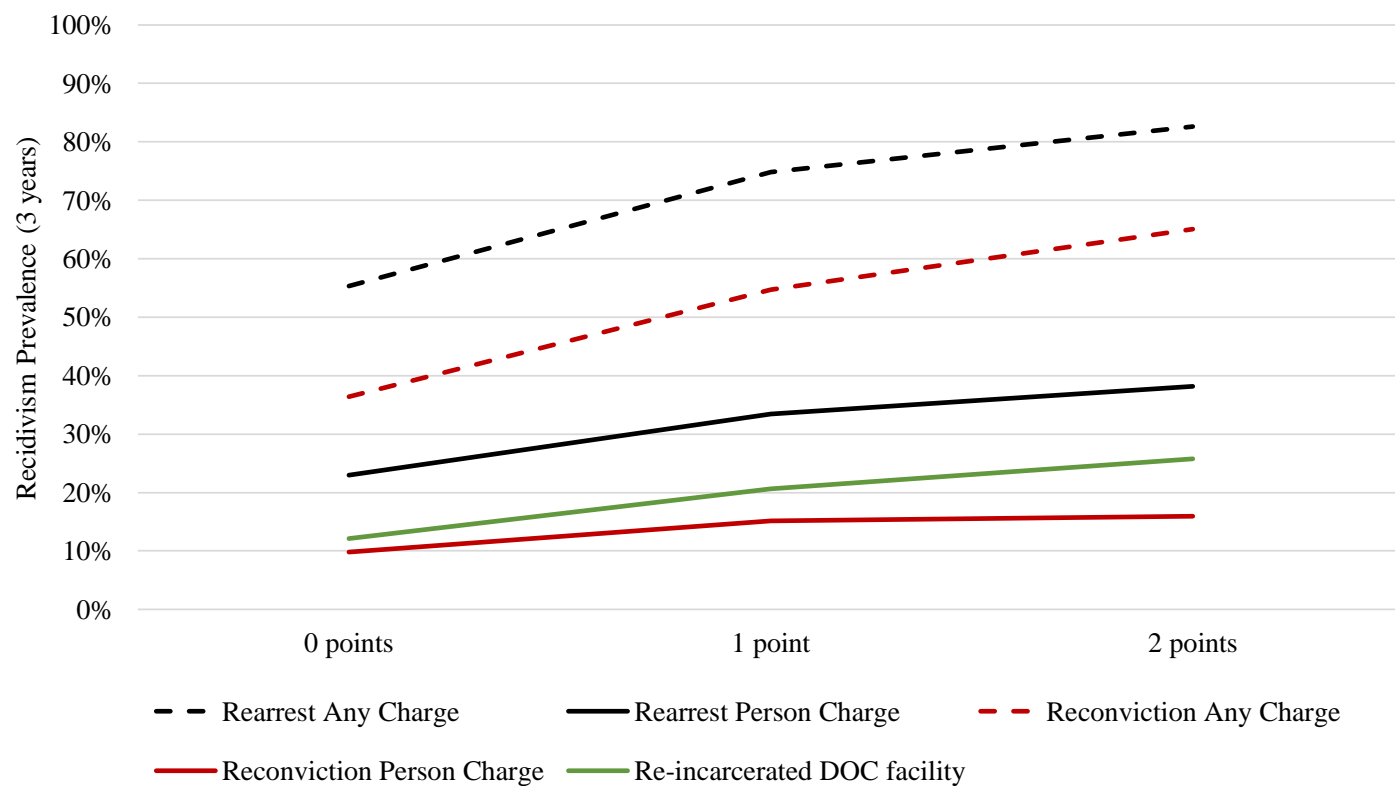
Results for the Alternate Adjudication #2 Score
(0=0; 1=1-2; 2=3+ adjudications only)

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	27.2%	41.7%	52.7%	31.4%	37.7%	51.8%	56.6%	42.7%
	2 years	39.1%	56.3%	63.9%	43.8%	52.4%	69.4%	77.1%	58.5%
	3 years	46.4%	65.2%	73.6%	51.4%	60.8%	78.6%	85.2%	66.9%
Rearrest Person Charge	1 year	8.1%	14.5%	22.8%	10.1%	13.9%	18.2%	19.4%	15.4%
	2 years	12.7%	20.4%	30.4%	15.1%	21.4%	27.9%	29.5%	23.6%
	3 years	16.5%	26.1%	36.8%	19.3%	26.8%	36.1%	37.5%	29.9%
Reconviction Any Charge	1 year	18.8%	28.7%	38.9%	21.8%	21.5%	32.7%	36.3%	25.4%
	2 years	26.9%	40.1%	55.1%	30.9%	32.0%	47.8%	55.3%	37.6%
	3 years	32.6%	49.4%	65.3%	37.4%	38.8%	57.0%	64.7%	45.1%
Reconviction Person Charge	1 year	3.9%	7.0%	8.4%	4.8%	6.8%	9.1%	8.0%	7.5%
	2 years	5.8%	9.8%	12.7%	7.0%	9.3%	13.0%	12.6%	10.5%
	3 years	7.2%	13.1%	14.6%	8.8%	11.4%	16.2%	15.9%	12.9%
Re-incarcerated DOC facility	1 year	6.1%	11.5%	16.8%	7.7%	8.0%	12.9%	13.1%	9.6%
	2 years	8.7%	15.4%	25.3%	10.8%	11.1%	18.4%	20.8%	13.7%
	3 years	10.0%	18.8%	*29.2%*	12.6%	13.5%	21.5%	*24.8%*	16.3%
Sample Sizes									
1 Year Follow-up		2,912	832	167	3,911	5,846	2,348	551	8,745
2 Years Follow-up		2,857	813	158	3,828	5,657	2,247	523	8,427
3 Years Follow-up		2,731	770	144	3,645	5,300	2,055	459	7,814
Non-incarceration Sentences		1,598	375	50	2,023	2,938	1,022	234	4,194
Size of Score Groups		3,648	958	194	4,800	7,315	2,884	655	10,854
Score %		76.0%	20.0%	4.0%	100.0%	67.4%	26.6%	6.0%	100.0%
Actual Worksheet Score %		85.3%	11.1%	3.6%	100.0%	80.4%	13.9%	5.7%	100.0%

Logit Regression Results – Three-year Predicted Recidivism Outcomes

(add'l controls for age, gender, sentenced offense, and adult criminal history)

Actual Worksheet Score				
Variables	Any Reconviction		DOC Re-incarceration	
	Controlled	Baseline	Controlled	Baseline
0 points	40%	39%	13%	13%
1 point	53%	56%	19%	22%
2 points	62%	65%	27%	32%
Not African-American	42%		13%	
African-American	43%		15%	
Not Baltimore	40%		15%	
Baltimore	50%		12%	

Alt. Only Adjudications #2 Score				
Variables	Any Reconviction		DOC Re-incarceration	
	Controlled	Baseline	Controlled	Baseline
0 points (0)	38%	36%	12%	12%
1 point (1-2)	52%	55%	18%	21%
2 points (3+)	60%	65%	23%	26%
Not African-American	42%		13%	
African-American	43%		15%	
Not Baltimore	40%		15%	
Baltimore	49%		12%	

Juvenile Score Decay during 18-22 for Actual Score, Five Year Decay Score, Replicated Score, and Adjudication #2 Score
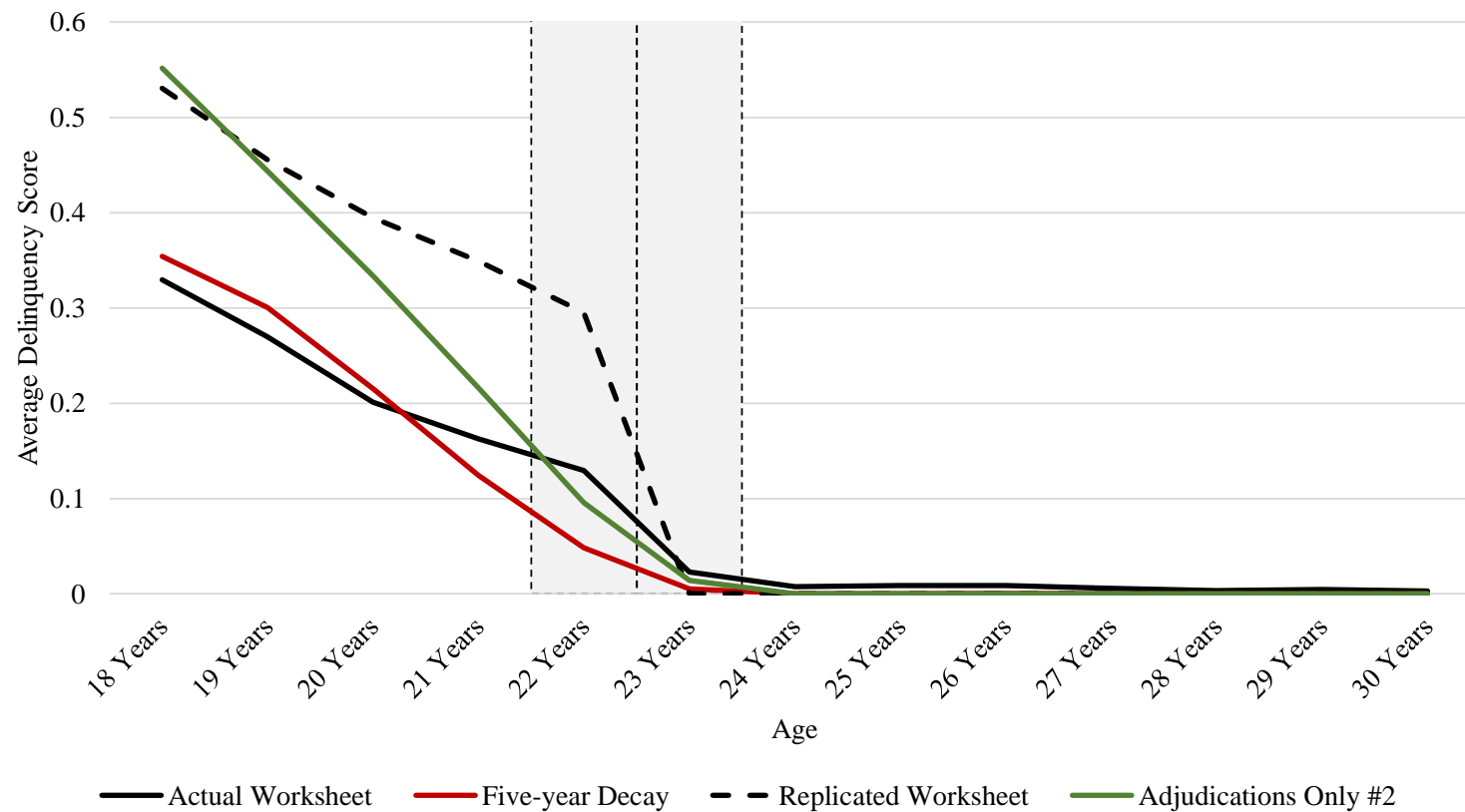
MARYLAND DATA ANALYSIS CENTER

DEPARTMENT OF CRIMINOLOGY AND CRIMINAL JUSTICE ◆ UNIVERSITY OF MARYLAND, COLLEGE PARK

Supplemental Analyses and Discussion
Binary Score Versions of Current & Alternate Juvenile Scores &
Total Count Versions for Adjudications Only #2 and #3 Scores
July 2017

Binary Score Versions

The following pages (pp. 3-14) provide results for three alternate binary scores, wherein juvenile history is scored 0 or 1, and the 2-point category is eliminated. The concern that prompted these supplemental analyses is that the new Adjudications Only #2 score (presented May 9) increased the number of 1's, compared to the actual worksheet/five year decay replicated score. (Adjudications Only #2 doubles the number of 1's, and produces a very slight increase in the number of 2's – proportionately across racial groups.)

By categorizing those who were formerly 2's into the new 1-point category, the difference in recidivism between new 0's and 1's is magnified in a binary scoring system. The results across the following pages for all three binary scores indicate this. (The tripartite version of each binary score is noted, so that these results may be compared to the results presented at the May 9 meeting.)

While the recidivism outcomes appear to validate the binary scores, it does so by increasing the heterogeneity of the 1-point category (i.e., by importing higher-recidivating 2's). Binary recidivism measures here are artificially superior to tripartite measures, especially when a more serious group is collapsed into a less serious group, and when 1's and 2's had been validated as being sufficiently different.

In addition, the following cautions and limitations should be kept in mind:

This study was not designed to test whether the juvenile score should be a binary or tripartite score, and thus whether the juvenile score's contribution to the offender score should be

altered. The study assumed a tripartite score, and sought to identify a scoring system that would maximize differences between groups, minimize racial disparity, and address the problematic commitment issue.

Given the significant decline in DJS adjudications and commitments starting in 2010-present, the number of individuals with a juvenile history (and the quantity of juvenile history events), should decline under all scoring systems in future years. In our study group, even those 22-years-old in the final study cohort year of 2012 accumulated juvenile history during the previous DJS era of doubled adjudications and commitments. A 22-year-old sentenced in 2018 was approximately 14-years-old in 2010 when the decline in DJS activity began accelerating. Additionally, as the impact of DJS's caseload decline begins to appear in adult sentencing cohorts, collecting more information about juvenile history on worksheets will allow the MSCCSP to document the impact more fully.

Going forward, collecting data under a binary scoring system, versus a tripartite system, will decrease the utility of the juvenile score and the ability to research the role of juvenile history on sentencing outcomes for those aged 18-22. In the Phase I stage of this study, when only sentencing worksheet data were available, we were unable to have confidence in the juvenile score analyses – because even in a tripartite scoring system, variation exists among those classified as being similar. This heterogeneity problem increases under a binary scoring system. Capturing as much information as possible after any scoring change will help the MSCCSP better understand the implementation and impact of the new score.

Finally, the recidivism rates used to validate a scoring system are not the same performance measures one should apply when considering the purposes of the score. The scoring of a number of variables of interest, the offense-type matrices, and the Guidelines overall, seek to promote uniformity in sentencing and to allow documentation of compliance and departure patterns. We can assume that, regardless of the scoring rule, judges and attorneys will continue to have additional information on juvenile history that may impact sentencing for those aged 18-22. To the extent that a binary score does not capture as much information about juvenile history as a tripartite score, and then should the heterogeneity of hybrid 1's promote variation in the sentencing outcomes for 1's, a binary score may produce the unintended impact (albeit limited) of an increase in departures under the Guidelines.

8.3.1. New Binary <u>Score A</u> – Collapsed Adjudications Only #1 & 2

<u>Zero Points</u>: 23 years or older at the time of the current adult offense **or** zero juvenile adjudication within 5 years from the date of the offense;

<u>One Point</u>: Under 23 years old **and**: One or more finding of a delinquent act within 5 years from the date of the offense.

Recidivism by New Binary Score A, Recidivism Measure, and Follow-up period (ages 18 to 22 only)

Measure	Follow-up	Delinquency Score		Total
		0 points	**1 point**	
Recidivism controlling for time at risk				
Rearrest Any Charge	1 year	33.8%	50.2%	38.8%
	2 years	47.4%	67.4%	53.4%
	3 years	55.3%	76.2%	61.5%
Rearrest Person Charge	1 year	11.8%	17.7%	13.6%
	2 years	18.2%	26.7%	20.8%
	3 years	23.0%	34.3%	26.3%
Reconviction Any Charge	1 year	20.4%	32.4%	24.1%
	2 years	30.0%	47.2%	35.2%
	3 years	36.4%	56.5%	42.3%
Reconviction Person Charge	1 year	5.7%	8.4%	6.5%
	2 years	8.0%	12.2%	9.2%
	3 years	9.8%	15.3%	11.4%
Re-incarcerated DOC facility	1 year	7.3%	12.7%	8.9%
	2 years	10.1%	18.2%	12.6%
	3 years	12.1%	21.5%	14.9%
Recidivism after non-incarceration sentences				
Rearrest Any Charge	1 year	34.8%	54.9%	40.2%
	2 years	49.0%	71.6%	55.0%
	3 years	56.4%	78.8%	62.3%
Reconviction Any Charge	1 year	19.4%	32.9%	23.0%
	2 years	29.8%	49.7%	35.1%
	3 years	36.1%	58.5%	42.1%
Sample Sizes				
1 Year Follow-up		9,271	4,042	13,313
2 Years Follow-up		9,014	3,881	12,895
3 Years Follow-up		8,508	3,552	12,060
Non-incarceration Sentences		4,817	1,742	6,559
Size of Score Groups		11,659	4,864	16,523
%		70.6%	29.4%	100.0%

Recidivism by New Binary Score A and Recidivism Measure (ages 18 to 22 only)

By Race - Recidivism by New Binary Score A, Recidivism Measure, and Follow-up period (ages 18 to 22 only)

Measure	Follow-up	White Offenders			African American Offenders		
		Delinquency Score		Total	Delinquency Score		Total
		0 points	1 point		0 points	1 point	
Recidivism controlling for time at risk							
Rearrest Any Charge	1 year	27.2%	43.5%	31.4%	37.7%	52.7%	42.7%
	2 years	39.1%	57.6%	43.8%	52.4%	70.9%	58.5%
	3 years	46.4%	66.5%	51.4%	60.8%	79.8%	66.9%
Rearrest Person Charge	1 year	8.1%	15.9%	10.1%	13.9%	18.5%	15.4%
	2 years	12.7%	22.0%	15.1%	21.4%	28.2%	23.6%
	3 years	16.5%	27.8%	19.3%	26.8%	36.4%	29.9%
Reconviction Any Charge	1 year	18.8%	30.4%	21.8%	21.5%	33.4%	25.4%
	2 years	26.9%	42.5%	30.9%	32.0%	49.2%	37.6%
	3 years	32.6%	51.9%	37.4%	38.8%	58.4%	45.1%
Reconviction Person Charge	1 year	3.9%	7.2%	4.8%	6.8%	8.9%	7.5%
	2 years	5.8%	10.3%	7.0%	9.3%	12.9%	10.5%
	3 years	7.2%	13.4%	8.8%	11.4%	16.1%	12.9%
Re-incarcerated DOC facility	1 year	6.1%	12.4%	7.7%	8.0%	12.9%	9.6%
	2 years	8.7%	17.0%	10.8%	11.1%	18.8%	13.7%
	3 years	10.0%	20.5%	12.6%	13.5%	22.1%	16.3%
Recidivism after non-incarceration sentences							
Rearrest Any Charge	1 year	27.5%	43.8%	30.9%	39.5%	58.8%	45.3%
	2 years	39.1%	59.5%	43.4%	55.1%	75.8%	61.3%
	3 years	46.6%	67.3%	50.9%	62.8%	82.6%	68.7%
Reconviction Any Charge	1 year	17.5%	30.1%	20.2%	20.6%	34.2%	24.6%
	2 years	25.9%	44.2%	29.8%	32.3%	52.0%	38.2%
	3 years	32.0%	52.5%	36.3%	38.9%	60.8%	45.5%
Sample Sizes							
1 Year Follow-up		2,912	999	3,911	5,846	2,899	8,745
2 Years Follow-up		2,857	971	3,828	5,657	2,770	8,427
3 Years Follow-up		2,731	914	3,645	5,300	2,514	7,814
Non-incarceration Sentences		1,598	425	2,023	2,938	1,256	4,194
Size of Score Groups		3,648	1,152	4,800	7,315	3,539	10,854
%		76.0%	24.0%	100.0%	67.4%	32.6%	100.0%

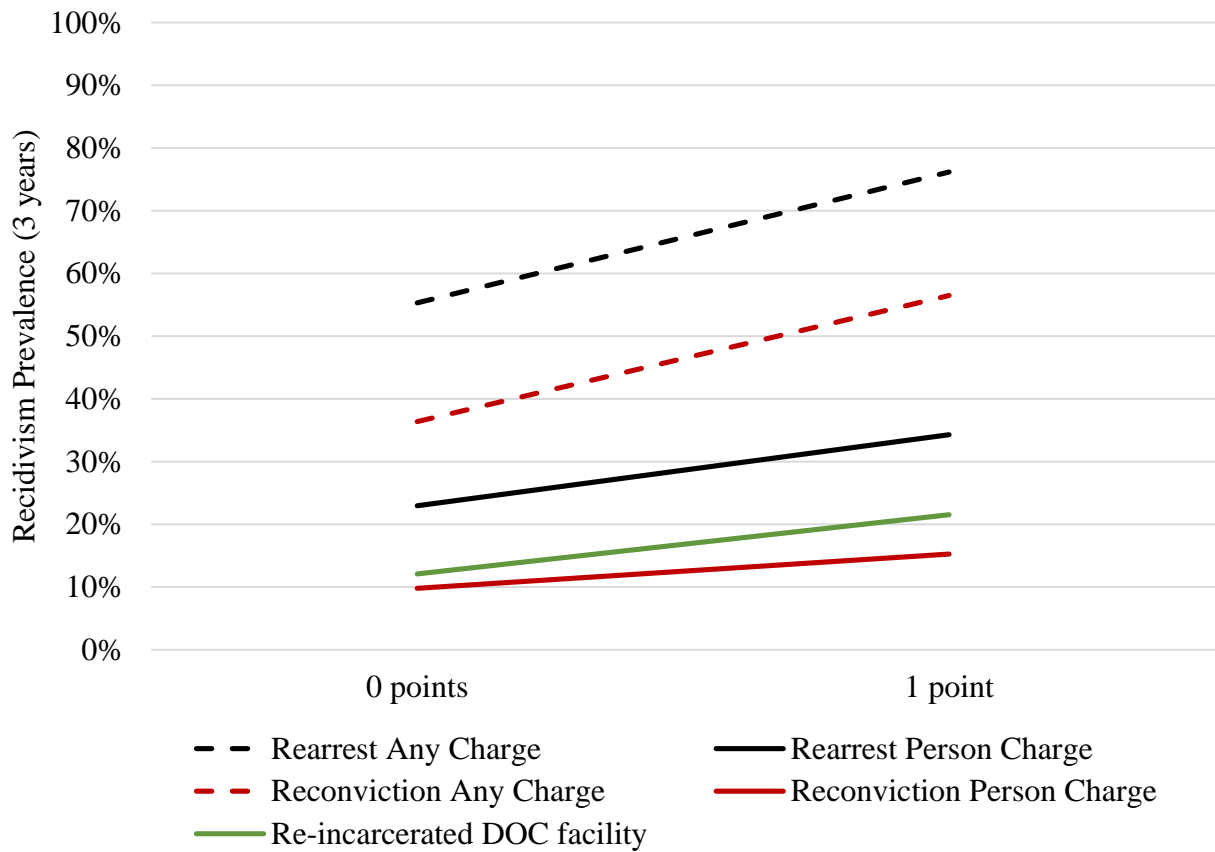### 8.3.2. New Binary <u>Score B</u> – Collapsed Adjudications Only #3

<u>Zero Points</u>: 23 years or older at the time of the current adult offense **or** one or fewer juvenile adjudications within 5 years from the date of the offense;

<u>One Point</u>: Under 23 years old **and**: Two or more findings of a delinquent act within 5 years from the date of the offense.

Recidivism by New Binary Score B, Recidivism Measure, and Follow-up period (ages 18 to 22 only)

Measure	Follow-up	Delinquency Score		Total
		0 points	1 point	
Recidivism controlling for time at risk				
Rearrest Any Charge	1 year	36.3%	54.6%	38.8%
	2 years	50.4%	73.1%	53.4%
	3 years	58.5%	81.1%	61.5%
Rearrest Person Charge	1 year	12.7%	18.9%	13.6%
	2 years	19.4%	29.3%	20.8%
	3 years	24.6%	37.3%	26.3%
Reconviction Any Charge	1 year	22.2%	35.5%	24.1%
	2 years	32.5%	52.6%	35.2%
	3 years	39.3%	62.5%	42.3%
Reconviction Person Charge	1 year	6.2%	8.7%	6.5%
	2 years	8.6%	13.1%	9.2%
	3 years	10.6%	16.6%	11.4%
Re-incarcerated DOC facility	1 year	8.1%	14.0%	8.9%
	2 years	11.3%	21.0%	12.6%
	3 years	13.3%	25.1%	14.9%
Recidivism after non-incarceration sentences				
Rearrest Any Charge	1 year	37.4%	61.5%	40.2%
	2 years	51.8%	79.1%	55.0%
	3 years	59.4%	85.0%	62.3%
Reconviction Any Charge	1 year	21.2%	36.6%	23.0%
	2 years	32.5%	55.1%	35.1%
	3 years	39.1%	64.8%	42.1%
Sample Sizes				
1 Year Follow-up		11,481	1,832	13,313
2 Years Follow-up		11,150	1,745	12,895
3 Years Follow-up		10,472	1,588	12,060
Non-incarceration Sentences		5,800	759	6,559
Size of Score Groups		14,341	2,182	16,523
%		86.8%	13.2%	100.0%

Recidivism by New Binary Score B and Recidivism Measure (ages 18 to 22 only)

By Race - Recidivism by New Binary Score B, Recidivism Measure, and Follow-up period (ages 18 to 22 only)

Measure	Follow-up	White Offenders			African American Offenders		
		Delinquency Score		Total	Delinquency Score		Total
		0 points	1 point		0 points	1 point	
Recidivism controlling for time at risk							
Rearrest Any Charge	1 year	29.1%	50.2%	31.4%	40.2%	56.0%	42.7%
	2 years	41.5%	63.4%	43.8%	55.3%	76.1%	58.5%
	3 years	48.9%	73.0%	51.4%	64.0%	83.7%	66.9%
Rearrest Person Charge	1 year	9.2%	17.9%	10.1%	14.7%	19.2%	15.4%
	2 years	13.9%	25.3%	15.1%	22.5%	30.2%	23.6%
	3 years	17.9%	31.5%	19.3%	28.3%	38.8%	29.9%
Reconviction Any Charge	1 year	20.1%	36.0%	21.8%	23.6%	35.3%	25.4%
	2 years	28.7%	49.9%	30.9%	34.8%	53.6%	37.6%
	3 years	34.8%	60.3%	37.4%	41.9%	63.5%	45.1%
Reconviction Person Charge	1 year	4.5%	7.0%	4.8%	7.2%	9.2%	7.5%
	2 years	6.5%	11.0%	7.0%	9.9%	13.7%	10.5%
	3 years	8.1%	14.3%	8.8%	12.1%	17.3%	12.9%
Re-incarcerated DOC facility	1 year	6.8%	15.2%	7.7%	8.9%	13.7%	9.6%
	2 years	9.5%	21.8%	10.8%	12.3%	21.0%	13.7%
	3 years	10.9%	27.5%	12.6%	14.8%	24.7%	16.3%
Recidivism after non-incarceration sentences							
Rearrest Any Charge	1 year	29.1%	51.8%	30.9%	42.4%	63.9%	45.3%
	2 years	41.3%	67.1%	43.4%	58.0%	82.5%	61.3%
	3 years	48.7%	76.2%	50.9%	65.8%	87.4%	68.7%
Reconviction Any Charge	1 year	18.7%	37.2%	20.2%	22.8%	36.1%	24.6%
	2 years	27.7%	53.7%	29.8%	35.5%	55.8%	38.2%
	3 years	33.9%	62.8%	36.3%	42.3%	65.6%	45.5%
Sample Sizes							
1 Year Follow-up		3,497	414	3,911	7,385	1,360	8,745
2 Years Follow-up		3,429	399	3,828	7,136	1,291	8,427
3 Years Follow-up		3,267	378	3,645	6,654	1,160	7,814
Non-incarceration Sentences		1,859	164	2,023	3,624	570	4,194
Size of Score Groups		4,320	480	4,800	9,224	1,630	10,854
%		90.0%	10.0%	100.0%	85.0%	15.0%	100.0%

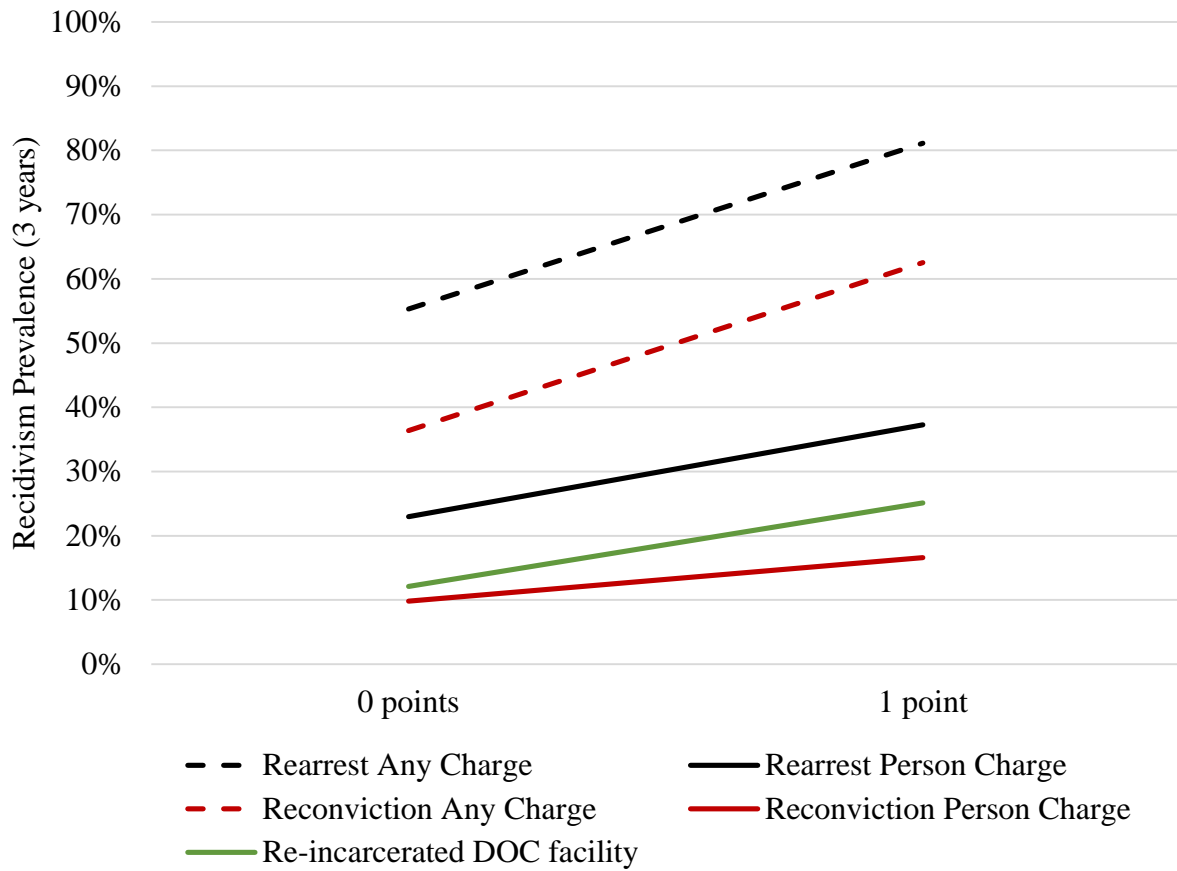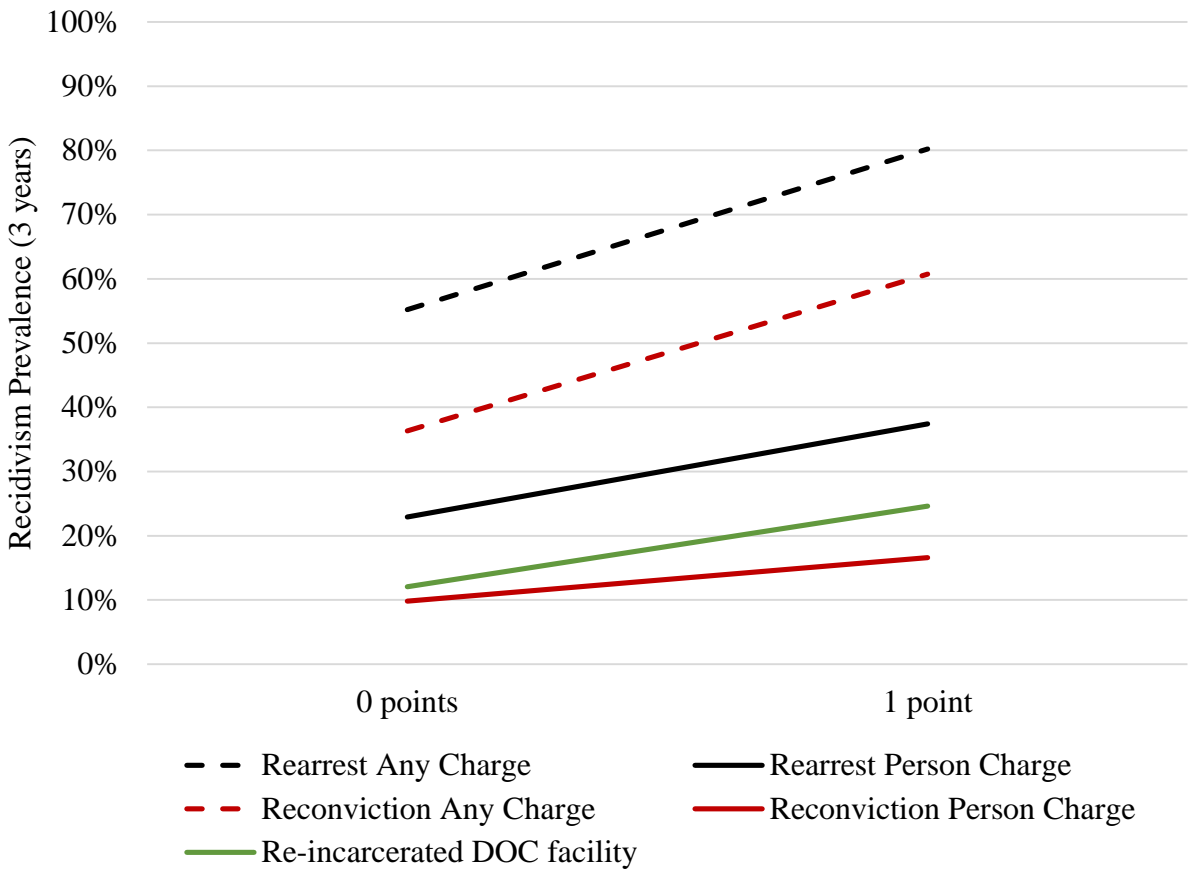### 8.3.3. New Binary <u>Score C</u> – Collapsed Five Year Decay

<u>Zero Points</u>: 23 years or older at the time of the current adult offense **or** one or fewer juvenile adjudications within 5 years from the date of the offense;

<u>One Point</u>: Under 23 years old **and**: Two or more findings of a delinquent act **or** one or more commitment within 5 years from the date of the offense

Recidivism by New Binary Score C, Recidivism Measure, and Follow-up period (ages 18 to 22 only)

Measure	Follow-up	Delinquency Score		Total
		0 points	1 point	
Recidivism controlling for time at risk				
Rearrest Any Charge	1 year	33.7%	53.4%	37.8%
	2 years	47.3%	71.9%	52.3%
	3 years	55.2%	80.2%	60.1%
Rearrest Person Charge	1 year	11.7%	19.0%	13.2%
	2 years	18.1%	29.1%	20.4%
	3 years	22.9%	37.4%	25.7%
Reconviction Any Charge	1 year	20.4%	34.8%	23.3%
	2 years	30.0%	51.1%	34.2%
	3 years	36.3%	60.8%	41.1%
Reconviction Person Charge	1 year	5.7%	8.9%	6.4%
	2 years	7.9%	13.0%	9.0%
	3 years	9.8%	16.4%	11.1%
Re-incarcerated DOC facility	1 year	7.3%	13.9%	8.6%
	2 years	10.1%	20.6%	12.2%
	3 years	12.1%	24.6%	14.5%
Recidivism after non-incarceration sentences				
Rearrest Any Charge	1 year	34.8%	61.0%	39.1%
	2 years	48.9%	78.7%	53.8%
	3 years	56.3%	84.5%	61.0%
Reconviction Any Charge	1 year	19.3%	37.2%	22.2%
	2 years	29.7%	55.4%	33.9%
	3 years	36.0%	64.4%	40.7%
Sample Sizes				
1 Year Follow-up		9,207	2,381	11,588
2 Years Follow-up		8,956	2,264	11,220
3 Years Follow-up		8,458	2,059	10,517
Non-incarceration Sentences		4,794	946	5,740
Size of Score Groups		11,580	2,875	14,455
%		80.1%	19.9%	100.0%

Recidivism by New Binary Score C and Recidivism Measure (ages 18 to 22 only)

By Race - Recidivism by New Binary Score C, Recidivism Measure, and Follow-up period (ages 18 to 22 only)

Measure	Follow-up	White Offenders			African American Offenders		
		Delinquency Score		Total	Delinquency Score		Total
		0 points	1 point		0 points	1 point	
Recidivism controlling for time at risk							
Rearrest Any Charge	1 year	27.1%	49.6%	30.7%	37.7%	54.6%	41.6%
	2 years	39.1%	63.1%	42.8%	52.3%	74.7%	57.3%
	3 years	46.4%	71.6%	50.3%	60.7%	82.9%	65.6%
Rearrest Person Charge	1 year	8.1%	18.0%	9.6%	13.9%	19.4%	15.2%
	2 years	12.6%	24.7%	14.5%	21.4%	30.2%	23.4%
	3 years	16.3%	31.2%	18.6%	26.8%	39.1%	29.5%
Reconviction Any Charge	1 year	18.7%	35.3%	21.4%	21.4%	34.8%	24.5%
	2 years	26.9%	48.6%	30.3%	32.0%	52.3%	36.6%
	3 years	32.5%	58.0%	36.5%	38.8%	62.1%	43.9%
Reconviction Person Charge	1 year	3.9%	7.6%	4.5%	6.8%	9.3%	7.4%
	2 years	5.8%	10.9%	6.6%	9.2%	13.8%	10.3%
	3 years	7.2%	13.9%	8.2%	11.4%	17.4%	12.7%
Re-incarcerated DOC facility	1 year	6.1%	14.7%	7.5%	8.0%	13.9%	9.3%
	2 years	8.6%	20.9%	10.5%	11.1%	21.0%	13.3%
	3 years	9.9%	25.4%	12.3%	13.4%	24.8%	15.9%
Recidivism after non-incarceration sentences							
Rearrest Any Charge	1 year	27.4%	51.9%	30.2%	39.5%	63.5%	44.1%
	2 years	39.1%	68.5%	42.4%	55.1%	81.4%	60.2%
	3 years	46.5%	76.2%	49.9%	62.7%	86.7%	67.4%
Reconviction Any Charge	1 year	17.5%	37.9%	19.8%	20.4%	37.1%	23.7%
	2 years	25.8%	54.9%	29.1%	32.2%	56.1%	36.9%
	3 years	31.9%	63.1%	35.5%	38.8%	65.2%	43.9%
Sample Sizes							
1 Year Follow-up		2,896	550	3,446	5,802	1,741	7,543
2 Years Follow-up		2,842	531	3,373	5,617	1,647	7,264
3 Years Follow-up		2,717	497	3,214	5,266	1,486	6,752
Non-incarceration Sentences		1,593	206	1,799	2,920	706	3,626
Size of Score Groups		3,629	631	4,260	7,260	2,133	9,393
%		85.2%	14.8%	100.0%	77.3%	22.7%	100.0%

Total Count Versions of Adjudications Only Scores #2 and #3

  The remainder of this document provides "Total Count" versions of two adjudications-only scores that had been presented in May with a 5-year decay filter.

Adjudications Only #2

Score		0	1	2	
Adjudications Only #2	0 = 0 adjudications	11,659	3,988	876	16,523
Five Year Decay	1 = 1-2 adjudications				
	2 = 3+ adjudications	70.6%	24.1%	5.3%	100.0%
Adjudications Only #2	0 = 0 adjudications	10,741	4,281	1,501	16,523
Total Count / no decay	1 = 1-2 adjudications				
	2 = 3+ adjudications	65.0%	25.9%	9.1%	100.0%

  The May presentation of various alternate scores found Adjudications Only #2 was the best alternate score. This score was validated by multiple recidivism measures, and equitably increased the number of individuals with a score of "1" or "2" across racial groups. However, it did double the proportion of those with a juvenile score of "1" in creating a "true zero" delinquency category. But, given that these estimates result from applying a new scoring rule to data from an older era of much greater DJS activity, the new rule applied going forward in 2018 should result in the number of individuals with a juvenile score being much less (by half).

  When removing the 5-year decay filter and counting all delinquent adjudications, the number of individuals with a juvenile score, as expected, increases, from about 30% overall to 35% overall. The following page shows the recidivism outcomes for the total count version of the Adjudications Only #2 score, disaggregated by racial group.

  Comparing the recidivism of Whites and African-Americans indicates that the no decay version of this score does not perform as well as the 5-year decay version (p. 22 of the May presentation), in terms of the following criteria: (1) a disproportionate increase in the number of African-Americans with a juvenile score (green highlighting), and (2) poorer recidivism validation distinguishing the "1" and "2" scores compared to the 5-year decay version of this score (and more so for African-Americans than whites) (yellow highlighting).

Recidivism Outcomes for Adjudications Only #2, NO DECAY

(compare to p. 22 in May presentation)

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score				Delinquency Score			
		0 points	1 point	2 points	Total	0 points	1 point	2 points	Total
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	26.8%	39.4%	49.0%	31.4%	37.3%	49.9%	53.4%	42.7%
	2 years	38.7%	53.7%	61.9%	43.8%	51.5%	67.6%	73.6%	58.5%
	3 years	45.8%	63.0%	70.4%	51.4%	60.0%	76.4%	82.7%	66.9%
Rearrest Person Charge	1 year	7.9%	13.6%	19.8%	10.1%	13.8%	17.6%	18.7%	15.4%
	2 years	12.2%	19.5%	28.6%	15.1%	21.0%	27.4%	28.8%	23.6%
	3 years	15.8%	25.6%	34.4%	19.3%	26.2%	35.0%	37.9%	29.9%
Reconviction Any Charge	1 year	18.4%	27.4%	35.8%	21.8%	21.2%	30.8%	34.4%	25.4%
	2 years	26.5%	38.2%	49.5%	30.9%	31.6%	44.8%	52.5%	37.6%
	3 years	31.8%	47.8%	59.6%	37.4%	38.2%	54.0%	62.6%	45.1%
Reconviction Person Charge	1 year	3.8%	6.9%	7.3%	4.8%	6.9%	8.6%	7.8%	7.5%
	2 years	5.6%	10.2%	10.3%	7.0%	9.3%	12.4%	12.0%	10.5%
	3 years	6.6%	13.7%	14.0%	8.8%	11.2%	15.5%	16.0%	12.9%
Re-incarcerated DOC facility	1 year	5.8%	10.8%	16.3%	7.7%	7.9%	11.9%	13.2%	9.6%
	2 years	8.3%	14.4%	23.1%	10.8%	11.0%	16.9%	20.1%	13.7%
	3 years	9.3%	18.1%	28.4%	12.6%	13.1%	20.4%	24.3%	16.3%
Sample Sizes									
1 Year Follow-up		2,711	912	288	3,911	5,260	2,543	942	8,745
2 Years Follow-up		2,668	887	273	3,828	5,103	2,438	886	8,427
3 Years Follow-up		2,554	841	250	3,645	4,811	2,228	775	7,814
Non-incarceration Sentences		1,519	418	86	2,023	2,721	1,111	362	4,194
Size of Score Groups		3,425	1,039	336	4,800	6,648	3,087	1,119	10,854
%		71.4%	21.7%	7.0%	100.0%	61.3%	28.4%	10.3%	100.0%

Score		0	1	2	
Adjudications Only #3 Five Year Decay	0 = 0-1 adjudications	14,341	1,306	876	16,523
	1 = 2 adjudications				
	2 = 3+ adjudications	86.8%	7.9%	5.3%	100.0%
Adjudications Only #3 Total Count / no decay	0 = 0-1 adjudications	13,377	1,645	1,501	16,523
	1 = 2 adjudications				
	2 = 3+ adjudications	81.0%	10.0%	9.1%	100.0%

The Adjudications Only #3 score was not preferred because it failed to distinguish between 1's and 2's, especially so for African-Americans. The results displayed on the following page indicate that including additional, older events in calculating juvenile scores does not remedy this problem (yellow highlighting). In addition, by counting all juvenile history, a noticeable increase occurs in the number of those in the 2-point category for both racial groups, such that the number of 2's is almost equal to the number of 1's (green highlighting). However, given the external issue of the decline in DJS activity in recent, these numbers should decline (by half, if proportionate) if this scoring rule is applied going forward in 2018.

Recidivism Outcomes for Adjudications Only #3, NO DECAY

(compare to p. 18 in May presentation)

Measure	Follow-up	White Offenders				African American Offenders			
		Delinquency Score			Total	Delinquency Score			Total
		0 points	1 point	2 points		0 points	1 point	2 points	
Recidivism controlling for time at risk									
Rearrest Any Charge	1 year	28.6%	44.1%	49.0%	31.4%	39.7%	53.0%	53.4%	42.7%
	2 years	40.8%	59.3%	61.9%	43.8%	54.4%	72.3%	73.6%	58.5%
	3 years	48.4%	68.1%	70.4%	51.4%	63.0%	80.4%	82.7%	66.9%
Rearrest Person Charge	1 year	8.9%	14.0%	19.8%	10.1%	14.6%	18.3%	18.7%	15.4%
	2 years	13.2%	22.3%	28.6%	15.1%	22.3%	28.3%	28.8%	23.6%
	3 years	17.3%	27.8%	34.4%	19.3%	27.8%	37.2%	37.9%	29.9%
Reconviction Any Charge	1 year	19.8%	29.8%	35.8%	21.8%	22.9%	33.9%	34.4%	25.4%
	2 years	28.2%	43.0%	49.5%	30.9%	33.9%	49.9%	52.5%	37.6%
	3 years	34.3%	52.1%	59.6%	37.4%	40.9%	59.7%	62.6%	45.1%
Reconviction Person Charge	1 year	4.3%	7.0%	7.3%	4.8%	7.2%	9.2%	7.8%	7.5%
	2 years	6.3%	11.5%	10.3%	7.0%	9.9%	13.3%	12.0%	10.5%
	3 years	7.8%	14.9%	14.0%	8.8%	12.0%	16.8%	16.0%	12.9%
Re-incarcerated DOC facility	1 year	6.6%	11.8%	16.3%	7.7%	8.6%	13.4%	13.2%	9.6%
	2 years	9.1%	17.4%	23.1%	10.8%	11.9%	19.7%	20.1%	13.7%
	3 years	10.3%	23.6%	28.4%	12.6%	14.2%	23.7%	24.3%	16.3%
Sample Sizes									
1 Year Follow-up		3,308	315	288	3,911	6,797	1,006	942	8,745
2 Years Follow-up		3,250	305	273	3,828	6,581	960	886	8,427
3 Years Follow-up		3,107	288	250	3,645	6,160	879	775	7,814
Non-incarceration Sentences		1,794	143	86	2,023	3,409	423	362	4,194
Size of Score Groups		4,106	358	336	4,800	8,507	1,228	1,119	10,854
%		85.5%	7.5%	7.0%	100.0%	78.4%	11.3%	10.3%	100.0%

152