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Project Title:
Assessing the Impact of Pre-Adjudication Assessment Approaches on Racial/Ethnic Disparities in Oregon

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Summary of Project

Major Goals and Objectives

A growing base of literature has demonstrated that actuarial assessments can provide a blueprint to determine how best to supervise an offender and reduce his or her risk to reoffend (Brennan, Dieterich, & Ehret, 2009; Hamilton et al., 2016; Latessa, Lemke, Makarios, Smith, & Lowenkamp, 2010; Olver, Stockdale, & Stephen, 2014). In the last few years, across the nation risk assessments have been increasingly used earlier in the process to aid the court's decision making. The use of risk assessment instruments has received increasing attention as a tool for, "unwinding mass incarceration without compromising public safety" (Skeem & Lowenkamp, 2016a, p. 680). Starr (2014) claims that risk assessment has been incorporated into criminal sentencing in at least 20 states. Post-adjudication risk assessment has been widely studied (e.g., Drake, 2014; Olver, Stockdale, & Stephen, 2014); however, little research exists that focuses on how such assessments are used in the *pre-adjudication* phase, and how they relate to judicial decision-making and sentencing outcomes (Skeem & Lowenkamp, 2016a). Significant concerns have been raised about pre-adjudication risk assessment, particularly the potential for exacerbating disparate racial/ethnic sentencing outcomes (Harcourt, 2015; Starr, 2014).[1] The controversy centers around what are considered to be neutral risk factors embedded in risk assessment tools (e.g. criminal history, marital status, employment) that may in fact be "proxies" for race,

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[1] It should be noted that while we emphasize the potential exacerbation of racial/ethnic disparity by the use of a PAA, we are keeping in mind the additional legal/ethical points to this controversy. For instance, using a risk-needs assessment in this decision provides information regarding an individual's social situation – such as socio-economic status, employment, family/marital situation, and friends/associates. It may be argued that objectifying this information (i.e., a person's social circumstance) in a way that provides a score of "risk-to-reoffend" is an extra-legal factor that ought not to be held against an individual at sentencing for their most recent offense. These ethical/constitutional concerns are not the primary focus of our proposal and therefore not explicitly addressed in the limited space available.

thus leading to racially disparate outcomes (Skeem & Lowenkamp, 2016a). Of greatest concern is the untested proposition that a defendant's criminal history, which is ubiquitous to all risk assessment tools and generally provides the strongest predictor of recidivism (Bonta & Andrews, 2017), is really a proxy for race[2]; thus, the tools may be inherently discriminatory (Harcourt, 2015). Skeem & Lowenkamp (2016a) note that risk assessment tools can be free of predictive bias, meaning they predict recidivism with similar accuracy across groups, but may still yield greater "costs" if used in sentencing decisions. Stemming from the criticisms, a number of researchers have started to examine whether risk assessment tools suffer from "predictive biases". Predictive bias can be summarized by the following statement, "any instrument used to inform sentencing must be shown to predict recidivism with similar accuracy across groups (Skeem & Lowencamp, 2016b:10)." Thus, a given score or risk level should be shown to equate to the same rate of recidivism among different sub-populations. A positive test for predictive bias would be evidence that the scale works differently for certain races (or men vs. women). Even if there are no predictive biases in a score, if mean differences in risk exist between racial/ethnic groups, decisions based on that score, despite its predictive accuracy, could produce disparate outcomes. **What is missing from this line of research is an examination of how risk assessment is actually being utilized by the courtroom and the impact on sentencing outcomes.** Skeem and Lowenkamp (2016a) rightly note that, "inequitable consequences may depend less on the magnitude of group differences in scores than on how those scores are used—that is,

[2] Due to the fact that racial/ethnic disparity has been demonstrated in that minorities have a higher likelihood of being arrested, convicted, and serving time in confinement (Crutchfield, Fernandes, & Martinez, 2010), critics are concerned criminal history is then a proxy of past disparity and institutional biases rather than an accurate measure of their past criminal behavior.

what decision they inform, how heavily they are weighed, and what practices they replace" (p.703). In other words, understanding *how assessments are being applied in actual courtroom decision-making* is critical to a more comprehensive understanding of potential bias in risk assessment. This represents the key knowledge gap this study sought to address.

Research Questions

The research for this grant is designed to address the following core questions regarding the use of pre-adjudication risk assessments (PAA) in two Oregon Counties:

1. Has the introduction of a PAA into the court decision-making process impacted racial and ethnic disparities in sentencing outcomes (e.g prison or probation, length of sentence) over time in each county?
2. Does one PAA process (i.e., use of a judicial conference vs. normal approach) appear to produce more promising results in impacting racial/ethnic disparities?
3. Using interviews and visual observations (e.g., viewing the judicial conferences in Multnomah County where the PAA is discussed), how does the PAA influence case discussion and negotiation, decision-making, and workgroup norms and culture?
    a. What is the weight of importance given to PAA information (i.e., more emphasis placed on static risk level [criminal history] or criminogenic needs [dynamic factors changeable with intervention])?
    b. Is the PAA information used differently for different races/ethnicities suggesting subtle implicit bias in the process?
4. Does validation of the PAA tool yield significant mean score differences across racial groups and/or predictive biases? In other words, if the average risk scores and

subsequent sentencing and supervision outcomes differ by race/ethnicity, is it the PAA that causes such disparate outcomes, or is it their application, or both?

Research Design and Methods

Study Setting:

The study examines two counties in Oregon (Multnomah and Yamhill) that have utilized a pre-adjudication risk assessment to inform criminal case negotiation since 2014. Multnomah County Oregon is the most populous county in the state. The county had 790,294 residents in 2015. It is home to Portland, OR, the largest city in the state, which accounts for 529,121 of the county's residents. In all about 20% of the state's residents live in Multnomah County, 70.9% of the county's residents are White non-Hispanic, while 5.8% were Black, 1.5% were Native American, 8.1% were Asian American, while 11.3% were Hispanic/Latino. Like most jurisdictions in the US, Multnomah County has experienced significant racial and ethnic disparities in their justice system. In 2015, the county authored a report on Racial and Ethnic Disparities (RED Report) across 9 decision points in the system (Ferguson, 2015). The report noted that disparities between Black and White individuals indicated that Blacks ranged from 4.2 times more likely to be referred to prison to as high as 7.5 times more likely to violate parole. Similar disparities exist among Native Americans and to a lesser extent, but still large, Hispanics. Yamhill County Oregon is substantially smaller than Multnomah County with about 102,659 residents or about 2.5% of the state's total population. In 2015 77.7% of the county's population was White non-Hispanic. Only 1.1% of the population was Black, 2.0% was Native American, 2.1% was Asian American, and 14.9% was Hispanic or Latino. Yamhill's non-White population is more Hispanic and has about 1/3 of the Black residents than Multnomah County.

In 2013 Oregon's prison population had increased to the point where it was necessary to begin the process of building a new prison. In order to avoid the expense and improve public safety outcomes, Oregon House Bill 3194 was passed – Oregon's Justice Reinvestment effort (Oregon Criminal Justice Commission, 2019). There were four official goals of the bill: reduce prison, reduce recidivism, maintain public safety, and improve offender accountability. Both Multnomah and Yamhill County used this opportunity to create and fund programs that targeted chronic offenders who, based on their current charges and criminal history, are recommended for prison based on Oregon Sentencing Guidelines. We refer to these cases as "presumptive prison" cases, which is an important eligibility feature of both programs. A large proportion of these cases also fell under Oregon's Ballot Measure 57 mandatory prison sentence for repeat property and drug offenders. Thus, the traditional starting point for negotiation on these eligible cases was prison.

Multnomah County developed a program called Multnomah County Justice Reinvestment Program (MCJRP) that handled during the study timeframe an ambitious 1,000 cases per year. In Yamhill County their program was referred to as DAR or Defendant Assessment Report and handled upwards of 100 cases per year. One central innovation of both programs is the use of an intensive screening process in the pre-adjudication stage of criminal cases. Both counties used risk assessment tools and additional information on eligible defendants (e.g. life narrative, supervision history) to create an assessment report (or PAA), which was provided to court decision-makers. The purpose of the PAA reports was to help decision-makers carefully examine defendants to determine which are most likely to be successful in the community in hopes of minimizing the public safety risk of this

program and reducing the prison population. Ultimately the court in both counties, led by the prosecution's negotiation, used the screening process to select cases for plea offers to a community-based sentence rather than a prison sentence (i.e. departures). In both counties the plea offers were intended to provide additional services and support to help defendants change their behavior. Despite these similarities there are important differences between the two PAA programs:

1. Case eligibility: In Multnomah County all presumptive prison cases were automatically eligible for the program, except cases with serious violent or sexual offenses. In Yamhill County, eligible cases were nominated by judges, prosecutors, or defense attorneys.
2. Risk/Needs Screening Assessment: In Multnomah County defendants that agree to participate are scheduled to meet with a probation officer who administers the Level of Service/Case Management Inventory (LS/CMI). The officer compiles the LS/CMI information along with an extensive life narrative and a summary of prior probation supervision cycles into an assessment report. The assessment report is provided to judges, prosecutors, and defense attorney prior to a settlement conference. In Yamhill County, defendants that agree to participate are scheduled to meet with a probation officer who administers the LS/CMI, but also the Adult Substance Use Survey, and Women's Risk/Needs Assessment (WRNA - female defendants only). The officer compiles the risk assessment information into an assessment report along with their sentencing recommendation. The assessment report is provided to judges, prosecutors, and defense attorney.

3. Probation Recommendation: In Yamhill County, the assessment report contains either a recommendation for community supervision and the requisite detailed plan of action or a recommendation that the defendant is currently not suitable for community-based supervision. In Multnomah County, probation officers are not authorized to give a recommendation to the court regarding the suitability of the defendant for community supervision or prison.
4. Judicial Settlement Conference: In Multnomah County, the prosecution, defense, defendant, and a probation officer meet with a judge in their courtroom to have a judicial settlement conference. The conference is set at the time of arraignment and must occur within 60 days. The courtroom workgroup receives the risk/needs assessment report prior to the conference. These conferences are off the record (e.g. no transcript), not open to the public (unless invited; e.g. defendant's family), and cannot be used by the prosecution at trial if the case leads to an unsuccessful negotiation. The conference is mediated by the judge and involves questioning the defendant on their past, current criminogenic needs, motivations for change, and potential programs and case outcomes. Sometime after the conference the prosecution makes an offer to the defense for a plea-bargained case resolution. In Yamhill County, there are no required judicial settlement conferences for DAR cases. After the courtroom receives the assessment report the prosecution decides whether or not to extend an initial plea offer to the defense based on the probation assessment recommendation or other outcome they're more comfortable offering.

Quantitative Data

Multnomah County: the final dataset was a combination of four data sources. 1) The base data source was from the Multnomah County District Attorneys' office. This data contained all 4,730 MCJRP eligible cases from February 2014 to June 2018. The DA dataset also contained a historic sample of 1,164 cases involving similar crimes that would have been eligible for the program in July 2012 to June 2013 had the program existed. The historic cases served as a control group. The datasets contained information on all charges filed in the cases, defendant demographics, defendant criminal history, and case outcomes. 2) The second data source was from the Multnomah Circuit Court and provided more detailed case outcome information like length of sentences, fines and fees. 3) The third data source was from the Multnomah Department of Community Justice and provided the LS/CMI risk score information for MCJRP defendants. 4) The fourth data source was from the Multnomah County Jail and provided information on whether the defendant was in jail at the time the case was initially filed and/or in jail at the disposition of the case. The final analysis dataset contained 3,930 MCJRP cases and 1,153 Control cases.[3]

Yamhill: the final dataset was a combination of three data sources. 1) The base data source was from the Yamhill Department of Community Justice. They had a database tracking 379 cases in the DAR program from March 2013 to April 2018 and contained information of their current case, defendant demographics, case outcomes, and risk assessment scores. 2) Oregon's Criminal Justice Commission provided the project with Yamhill Circuit Court Data of 2,995 cases from 2005 to 2014 to be used for the historic control sample, and more recent Circuit Court data that provided more detail on the charges

[3] 811 cases were ejected for the following reasons: 40 cases convicted but no sentencing information (all MCJRP), 341 cases were not convicted (334 were MCJRP), 426 cases still had an open resolution (all MCJRP), 1 case missing gender (control), 3 cases with anomalies in sentencing information.

in DAR cases. 3) Oregon Department of Corrections data provided by the Criminal Justice Commission was then matched to each case; it provided more detailed information on sentencing outcomes in court. The final analysis dataset contained, 290 DAR cases and 2,986 Control cases.[4]

Dependent Variable: Racial/Ethnic Disparity in Sentencing Outcomes and Length

The primary outcome measure for the study of the two PAA programs is racial/ethnic disparity in the sentencing outcome of receiving prison and also prison length. Sentencing outcomes involved any sentence related to incarceration in the Oregon Department of Corrections measured dichotomously (1 = prison, 0 = no prison). The second sentencing outcome examined the length of prison sentence. Measuring racial/ethnic disparity via propensity score modeling (PSM) approaches have been favored in the literature by Franklin (2015) and Patternoster and Brame (2008). In this sense, disparity is measured by isolating the effect (using PSM) of a defendant's race/ethnicity on the outcome. Disparity was assessed using two types of analyses, one with the full data and one that was done separately for each race (within-group). Both analyses allow for comparisons of racial/ethnic groups sentencing outcomes under the PAA program compared to matched defendants who would have been eligible in the past. The first analysis using the full data allows for each race/ethnicity to be compared to each other and compared to their matched sample of historic eligible defendants. Disparity is examined by assessing whether an interaction between race/ethnicity of defendants and participation in the PAA program is significant. This model examines whether any effects (positive or negative) of participating

[4] 98 cases were ejected for having open pending cases and missing sentencing information.

in the PAA program are conditioned by the race/ethnicity of defendants. If the interaction is insignificant along with a small effect size, the impact of the PAA program is creating equitable results across race/ethnicity. The second within-group race/ethnicity analysis of disparity allows us to determine if someone who is of a particular racial/ethnic group would be more or less likely to receive a prison sentence or longer/shorter sentence following the application of the PAA.

Multnomah County Final Regression Variables:

1. PAA (historic control or treatment case MCJRP)
2. Gender (male, female)
3. Race/ethnicity of defendant (White, Black, Hispanic, Other)
4. Age = age at indictment
5. Repeat defendant = defendant had more than one distinct case in analysis timeframe of our analysis; 0 = no, 1 = yes)
6. Measure 11 case = At least one charge is Measure 11 eligible (mandatory prison sentence; 0 = no, 1 = yes)
7. Measure 57 indicator = at least one charge and defendant's criminal history make them a repeat drug or property offender under Measure 57 (mandatory prison sentence; 0 = no, 1 = yes)
8. Pretrial detention fully detained (In jail at filing and disposition)
9. Top charge seriousness score = highest sentencing grid seriousness score
10. Grid criminal history score = sentencing grid criminal history (ranges from I no criminal history to A highest).
11. Convictions = criminal history total convictions (adult felonies and misdemeanors, and juvenile felonies)
12. Specialty court (indicator for START, STOP, or Mental Health court eligibility; 0 = no, 1 = yes)
13. Charges = total charges on case
14. Unit = 6 different units in the DA's office that handled cases

Yamhill County Final Regression Variables:

1. PAA (historic control or treatment case DAR)
2. Race/ethnicity of defendant (White, Black, Hispanic, Other)\
3. Measure 57 = a variable to capture whether control defendants were likely sentenced under these mandatory prison sentences based on the year (2009, 2012,2013, 2014) and whether it involved an eligible offense.
4. Gender (male, female)
5. Age = age at indictment
6. Grid criminal history score = sentencing grid criminal history (ranges from I no criminal history to A highest).

7. Multi-custody = defendant has multiple custody cycles (0 = no, 1 = yes)
8. Prior revocation = defendant has a prior revocation (0 = no, 1 = yes)
9. PSC felony risk = static risk score between 0 and 1 to show likelihood the individual will have a new felony conviction within 3 years.
10. Charges = total charges on case
11. JRI_Offense = total JRI (Justice Reinvestment eligible offenses) charges on a case
12. Top charge seriousness score = highest sentencing grid seriousness score

Other Measures

The following other measures were used to weight and match the data for the propensity scoring and used in the post-weighted regression models.

Multnomah County Matching/Weighting Variables: (data was first sorted by race/ethnicity of defendant - White, Black, Hispanic, Other)

1. Gender (male, female)
2. Age = age at indictment
3. Age quartile
4. Repeat defendant = defendant had more than one distinct case in analysis timeframe of our analysis; 0 = no, 1 = yes)
5. Measure 11 case = At least one charge is Measure 11 eligible (mandatory prison sentence; 0 = no, 1 = yes)
6. Measure 57 indicator = at least one charge and defendant's criminal history make them a repeat drug or property offender under Measure 57 (mandatory prison sentence; 0 = no, 1 = yes)
7. Pretrial detention (0 = Not in jail at filing or disposition, 1 = In jail at filing only, 2 = In jail at disposition only, 3= In jail at filing and disposition)
8. Top charge seriousness score = highest sentencing grid seriousness score
9. Grid criminal history score = sentencing grid criminal history (ranges from the letter I -no criminal history - to A highest criminal history in terms of quantity and seriousness).
10. Convictions = criminal history total convictions (adult felonies and misdemeanors, and juvenile felonies)
11. Specialty court (indicator for START, STOP, or Mental Health court eligibility; 0 = no, 1 = yes)

Yamhill County Matching/Weighting Variables (data was first sorted by race/ethnicity of defendant - White, Black, Hispanic, Other)

1. Gender (male, female)
2. Age = age at indictment
3. Age quartile
4. Age at first arrest in Oregon LEDS
5. Age at first arrest quartile

6. Previous status civilian = (prior to current case, no prior DOC incarceration or supervision history)
7. Previous status discharge = (prior to current case, discharged DOC incarceration or supervision)
8. Previous status community supervision = (prior to current case, on probation or post-prison supervision)
9. Previous status confinement = (prior to current case, in prison or jail)
10. Grid criminal history score = sentencing grid criminal history (ranges from I no criminal history to A highest).
11. Multi-custody = defendant has multiple custody cycles (0 = no, 1 = yes)
12. Prior incarceration = defendant has a prior incarceration(0 = no, 1 = yes)
13. Prior revocation = defendant has a prior revocation (0 = no, 1 = yes)
14. PSC felony risk = static risk score between 0 and 1 to show likelihood the individual will have a new felony conviction within 3 years.
15. PSC property risk = static risk score between 0 and 1 to show likelihood the individual will have a new property arrest within 5-10 years.
16. PSC violent risk = static risk score between 0 and 1 to show likelihood the individual will have a new violent arrest within 5-10 years.
17. Charges = total charges on case
18. Person charges = total person crime charges in the case
19. Property charges = total property crime charges in the case
20. Statutory = total statutory crime charges in the case
21. JRI_Offense = total JRI (Justice Reinvestment Eligible) charges on a case
22. JRI_Drug = total JRI drug charges on a case
23. JRI_Prop = total JRI property charges on a case
24. JRI_Possession = total JRI poss charges on a case
25. Top charge seriousness score = highest sentencing grid seriousness score

Quasi-Experimental Design and Propensity Score Modeling

The analysis is designed to isolate the effect of using a PAA on racial/ethnic disparity in sentence type and length. To do this, we employ a quasi-experimental design using multiple propensity score models in a double-robust approach to estimate the unbiased effects of both the PAA and race/ethnicity. Table A, provides a breakdown of this two-step approach.

Propensity score modeling (PSM) approaches have been a technique increasingly relied on in criminal justice contexts (e.g., Hamilton & Campbell, 2014; Vito, Higgins, &

Tewksbury, 2015) to remove selection bias that exists between groups, and has been shown to simulate a randomized controlled trial or experimental setting (e.g., Campbell & Labrecque, 2018). As a result, PSM allows the researcher to estimate an unbiased, average effect of one group's condition in relation to the comparison, and is done so in a way that is often a more valid and reliable estimate than that provided by simple regression techniques (Guo & Fraser, 2014). This is accomplished by balancing cases on their propensity to be in one group over another (Rosenbaum & Rubin, 1983). The propensity score provides a statistical summary of how the covariates are related to the group of interest (Leite, 2017). Similar to the methods employed by past examinations of race/ethnicity (e.g., Franklin, 2015), we employ PSM as a way to balance between racial/ethnic categories as well as between PAA and the historical group. Two primary approaches were relied on to conduct this analysis[5] – marginal means weighting through stratification (MMW-S) for balance across racial/ethnic groups, and the inverse probability of the treatment weight (IPTW) for balance across the PAA conditions; both techniques were used to identify the average treatment effect for the treated. For the MMW-S, weights are calculated using a multinomial logistic regression to estimate the likelihood of being in a different racial/ethnic group based on the observed covariates. The subsequent weighted analyses provide a counterfactual estimate as to the likelihood of receiving prison if the individual was a member of a different racial/ethnic group.[6] Similarly, the IPTW technique calculates a weight for each control case

[5] It should be noted that although we rely on and report the findings related to these two approaches, we checked the results across five types of propensity score modeling (including optimal pairwise matching, 1-to-1, 1-to-many, and entropy balancing). With little variance across the best-fitting model estimates, we are reporting the approach that consistently minimized the mean standardized percent bias as close to zero as possible.

[6] For our full sample analysis, we use MMW-S which produces an estimate for each group being compared, thus almost all measures associated with this will be presented as an average across the groups. The only

(i.e., non-PAA) as a function of the propensity score that emphasizes cases that are most similar to the treatment (PAA).

Using PSM in this process allows us to “think causally about disparity in the absence of experimental designs” using a less restrictive view of causality (Franklin, 2015, p. 661). For each county PSM eliminates or minimizes the influence of covariate differences between racial and ethnic categories, as well as any selection bias that might exist between the PAA groups. Following the implementation of PSM, the balanced data is then examined using regression to control for any confounding effects between the treatment (PAA), race/ethnicity, and any other covariates that might help explain when someone receives a prison sentence. This two-stage process is called a double-robust approach, and has been shown to be a reliable approach to isolating the unbiased estimate of a treatment on a given outcome (see Stuart, 2010).

In addition to the balancing across race/ethnicity and PAA condition, we also investigated more nuanced within-race/ethnicity effects for Multnomah County, and within non-White effects for Yamhill. To do this, we followed the same steps shown in Table A, but only focused our efforts on subsamples of Black, White, and Hispanic defendants in Multnomah County, and only on non-White in Yamhill. This analysis allows us to determine if someone who is of a particular racial/ethnic group would be more or less likely to receive a prison sentence following the application of the PAA. The PSM approach relied upon for within group analyses was IPTW, average treatment effect for the treated.

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exceptions include a few of the balance measures (e.g., AUC) which focus on the ability to predict White compared to any other minority.

Table A. Quantitative, double-robust analytical plan used for both counties

Examination Step 1	PSM Analyses
Likelihood of receiving prison:	
A1. Isolating the effects of race/ethnicity	A1. PSM balancing across race/ethnicity
A2. Isolating the effects of the PAA	A2. PSM balancing across PAA and Historical sample
Length of prison sentence received:	
B1. Isolating the effects of race/ethnicity	B1. PSM applied to only incarceration cases, balancing across race/ethnicity
B2. Isolating the effects of the PAA	B2. PSM applied to only incarceration cases, balancing across PAA and Historical cases
Examination Step 2	**Outcome Analyses**
Likelihood of receiving prison:	
C1. Estimating effects of race/ethnicity in relation to PAA	C1. Binary logistic regression using full sample balanced across race/ethnicity, with and without interactions of race/ethnicity and PAA
C2. Estimating effects of PAA in relation to race/ethnicity	C2. Binary logistic regression using each racial/ethnic group balanced across PAA, with and without interactions of race/ethnicity and PAA
Length of prison sentence received:	
D1. Estimating effects of race/ethnicity in relation to PAA	D1. Linear regression using full sample balanced across race/ethnicity, with and without interactions of race/ethnicity and PAA
D2. Estimating effects of PAA in relation to race/ethnicity	D2. Linear regression using each racial/ethnic group balanced across PAA, with and without interactions of race/ethnicity and PAA

Balance. When using PSM, it is important to assess existing differences between the primary comparison groups, both before and after applying PSM. We assess the degree of differences across groups using multiple methods, including *t*-tests or analyses of variance (ANOVA), standardized percent bias, and area under the curve (AUC) statistic. ANOVAs and *t*-tests are commonly used to assess balance by examining the differences in the propensity score across the groups being compared. After the propensity score is conditioned and if the groups contain selection bias, the distribution of the propensity scores should be significantly different across all of the groups. Conversely, after PSM is applied, there should be no significant differences. The AUC statistic is used to indicate the ability of the

propensity score to predict when a case is to be part of the treatment condition.[7] Before applying the PSM approach, the AUC should be able to predict when a case is in the treatment group with a high degree of accuracy (e.g., AUC = .715, see Rice & Harris, 2005).[8] After applying the PSM technique, the propensity score should no longer be able to identify the differences between groups (i.e., AUC = .5). Lastly, realizing that *t*-tests and chi-squared *p*-values are susceptible to sample size, the standardized percent bias is an effect size identified by Rosenbaum and Rubin (1983) to assess when a covariate is unbalanced between groups. Prior literature has suggested benchmarks to be used when assessing the standardized percent bias, where a standardized bias after applying PSM should be at least below 20%, and ideally below 10% (Austin & Stuart, 2015; Rosenbaum and Rubin, 1983). Tables B and C provide the breakdown of each balance measure across all of the analyses for both counties. Although one measure might indicate concern for balance, it is the totality of the measures (particularly the standardized bias) that matters most given the doubly robust analytical plan. The balance results in Tables B and C illustrate the effectiveness of the PSM weighting in reducing the mean percent bias below the ideal 10% threshold.

[7] In the full sample analysis, the "treatment condition" is treated as "White" compared to other minorities. In the within race/ethnicity analysis, the "treatment condition" is being part of the PAA group.

[8] A caveat to the propensity score's ability to predict the treatment group is that this applies to propensity scores conditioned by traditional regressions and boosted regression models. The covariate balancing propensity score is a score that is designed to maximize balance rather than prediction, and therefore will not necessarily predict the treatment cases with greater accuracy.

Table B. Balance summaries of models examining effects of race/ethnicity

	Full sample balance across race (MMW-S)		Black defendants only		Hispanic defendants only		White defendants only	
	Pre-weight	Post-weight	Pre-weight	Post-weight	Pre-weight	Post-weight	Pre-weight	Post-weight
Analyzing likelihood to receive prison								
ANOVA *F* (*p*-value)	378.9 (<.001)	0.9 (.515)	293.0 (<.001)	1.8 (.177)	195.5 (<.001)	1.0 (.318)	562.4 (<.001)	0.6 (.444)
Mean percent bias	13.9	3.9 [b]	11.9	2.6	11.9	4.5	7.1	1.1
Percent of covariates with bias ≥ 20%	26.3	0.0 [b]	21.1	0.0	21.1%	0.0	10.5	0.0
AUC	.742	.556 [a]	.773	.707	.628	.529	.612	.511
PAA sample size [c]	3,930	3,885	930	930	418	418	2,424	2,424
Control sample size	1,153	1,184	272	228	123	397	726	2,394
Analyzing effects on prison sentence length								
ANOVA *F* (*p*-value)	119.1 (<.001)	0.2 (.904)	104.3 (<.001)	50.6 (<.001)	5.8 (<.001)	0.2 (.651)	35.7 (<.001)	0.4 (.556)
Mean percent bias	18.1	4.1 [b]	14.1	5.9	11.2	9.9	4.9	1.0
Percent of covariates with bias ≥ 20%	47.4	0.0 [b]	26.3	5.3	5.3	10.5	0.0	0.0
AUC	.727	.562 [a]	.690	.470	.566	.516	.600	.501
PAA sample size	1,386	1,370	313	313	180	180	839	839
Control sample size	619	631	130	307	79	217	394	821

[a] Ability to predict White, in multinomial logistic and logistic models.
[b] Mean percent bias in relation to White.
[c] Some of the PAA sample sizes may change due to trimming the cases for common support.

Table C. Balance summaries of models examining effects of race/ethnicity in Yamhill

	Full sample balance across race (MMW-S)		Minority defendants only		White defendants only	
	Pre-weight	Post-weight	Pre-weight	Post-weight	Pre-weight	Post-weight
Analyzing likelihood to receive prison						
ANOVA *F* (*p*-value)	222.7 (<.001)	0.5 (.656)	321.7 (<.001)	17.7 (<.001)	736.6 (<.001)	5.5 (.019)
Mean percent bias	8.5	5.3 [b]	23.2	2.5	19.0	0.9
Percent of covariates with bias ≥ 20%	5.3	0.0 [b]	50.9	0.0	38.6	0.0
AUC	.676	.511 [a]	.856	.557	.865	.507
PAA sample size [c]	290	336	62	62	229	229
Control sample size	2,986	2,934	661	58	2,329	224
Analyzing effects on prison sentence length						
ANOVA *F* (*p*-value)	81.8 (<.001)	0.2 (.904)	201.7 (<.001)	26.7 (<.001)	255.9 (<.001)	26.8 (<.001)
Mean percent bias	11.9	8.0 [b]	23.8	6.0	15.4	2.6
Percent of covariates with bias ≥ 20%	19.3	3.5 [b]	52.6	1.8	24.6	0.0
AUC	.795	.519 [a]	.840	.651	.793	.560
PAA sample size	166	193	38	38	128	128
Control sample size	895	827	225	28	670	116

[a] Ability to predict White, in multinomial logistic and logistic models.
[b] Mean percent bias in relation to White.
[c] Some of the PAA sample sizes may change due to trimming the cases for common support.

Qualitative Data

Interviews: Interviews were conducted with 75 participants involving 24 prosecutors, 21 judges, 14 defense attorneys, and 16 probation officers. The interviews lasted approximately 1 hour involving a mixture of uniform questions, targeted questions for certain roles, and a variety of probing questions, almost all were tape recorded. The

transcribed interviews were entered into the qualitative analysis software Atlas.ti for the development of codes and organizing our review of the data. A codebook was developed for the research involving important themes necessary for answering key research questions and project goals and to capture emergent themes.

Qualitative Observations: Research staff attended 3 judicial settlement conferences in Multnomah County. These observations were used as a validity check on the interview questions we asked everyone regarding how conferences are carried out and the types of dialogue and interactions that would occur.

Expected Applicability of the Research

There is great interest in the application and integration of risk assessment into pre-adjudication decision-making. More attention has been given to the use of such tools in pre-trial detention decisions and less towards its use to inform sentencing decisions. This is the first study to our knowledge that examines the impact of pre-adjudication risk assessment on sentencing outcomes. The importance of this study to practitioners and the research community is the following:

1) First to examine how pre-adjudication risk assessment impacts sentencing outcomes in two jurisdictions that have been doing so for four years.
2) Focuses on a large metropolitan and smaller suburban-rural jurisdiction increasing generalizability and broader interest in the findings.
3) Directly addresses the primary concern of risk assessment critics that such programs could exacerbate racial/ethnic disparity in sentencing outcomes.

Hence, the study is not based on hypothetical arguments about the dangers of using risk assessment, but its real application.

4) Utilizes a quasi-experimental design that approximates a true experiment increasing confidence in study results.
5) In addition to a rigorous quantitative approach, the study also provides an in-depth qualitative examination of how risk tools and risk/needs information is being interpreted and utilized by court decision-makers.
6) Allows for interested parties that seek to adopt a PAA program an opportunity to learn about program variability and options, benefits, and implementation obstacles.

Participants and other collaborating organizations

Portland State University Research Team: Brian Renauer, Ph.D.(PI), Mark Harmon Leymon, Ph.D. (Co-PI), Chris Campbell, Ph.D. (Co-PI), Ann Leymon, Ph.D. (Adjunct Research Assistant)

Organizational Partners: Multnomah County District Attorney's Office, Multnomah County Circuit Court, Multnomah County Department of Community Justice, Multnomah County Local Public Safety Coordinating Council, Multnomah County Jail, Multnomah Defenders Inc., Metropolitan Public Defender, Oregon Criminal Justice Commission, Yamhill County Department of Community Justice, Yamhill County District Attorney's Office, Yamhill County Circuit Court.

Changes in Approach from Original Design

The original research plan called for multiple observations using video recordings of the judicial settlement conferences in Multnomah County. This plan was negotiated with court leadership prior to grant submission. During the post award period the leadership of Multnomah County Court subsequently changed hands. There was wide agreement about the benefits of videotaping JSCs initially, but over time court administration was skeptical of the prospect for the following reasons: 1) JSCs were not open to the public and off the record, and there was fear that any recording would automatically be subjected as a public record or need to be legally kept. 2) The County was already feeling the logistical stress of handling upwards of 1,000 JSCs per year; videotaping would be a tremendous added burden. 3) The content of the JSCs often explored serious trauma and abuse throughout the life course and defendants can become emotional, thus the new leadership viewed them as too sensitive to have a record of.

The Court was open to the idea of observations and note taking, but only if defendants agreed to it. Thus, due to the County's concerns observations became our back up plan. A plan to allow defense attorneys to recruit and consent defendants was rejected in our initial IRB application. IRB required the researchers to have a face-to-face consent with defendants. This proved difficult because of the time constraints of defense attorneys and the proceedings, and transportation delays of defendants to the courtroom. We were able to conduct 3 observations which provided a validity check on our interviews which focused heavily on court perceptions of how the JSCs were handled.

Outcomes

Activities/Accomplishments

The primary activities of the project involved the following:

1) Quantitative data acquisition and analysis. Obtained the data necessary from multiple sources in Multnomah and Yamhill County Oregon to address the primary research questions.
2) 75 transcribed interviews (24 prosecutors, 21 judges, 14 defense attorneys, 16 probation officers). 2 additional interviews with a lead prosecutor and judge were not transcribed and provided background information on the program.
3) 3 observations of judicial settlement conferences.
4) The mentorship plan required by the grant for Dr. Chris Campbell involved the provision of training opportunities to increase his knowledge and expertise in using Propensity Score Matching statistical techniques. Dr. Campbell was involved in three seminars:
    a. Propensity Score Analysis (by Statistical Horizons): A 2-day seminar taught by Shenyang Guo, Ph.D. April 12-13, 2015 - Philadelphia
    b. Treatment Effects Analysis Online (by Statistical Horizons): An online seminar taught by Stephen Vaisey, Ph.D. June 22 -July 20, 2018
    c. Matching and Weighting for Causal Inference with R A 2-Day Seminar Taught by Stephen Vaisey, Ph.D. June 6-7, 2019 – Chicago.

Results and Findings

Research Question 1: Has the introduction of a PAA into the court decision-making process impacted racial and ethnic disparities in sentencing outcomes (e.g. jail, prison, traditional probation, intensive probation, diversion, or trial; and length of sentence) over time in each county?

The results for Research Question 1 are presented separately for each jurisdiction and are broken down by the full sample as well as by race/ethnicity for Multnomah, and by non-White versus White for Yamhill. Full sample results relied on the MMW-S technique to balance across race, which was then used in an interaction model to test the effect of the PAA implementation as it relates to race. The findings presented supply an unbiased estimate of how the PAA influenced the outcomes for each racial/ethnic group. The within group comparisons relied on the IPTW application, which similarly supplies an unbiased estimate of the PAA effects on sentencing outcome as it relates to each racial/ethnic group.

Multnomah County PAA

Full sample. The baseline sentencing outcomes, by race/ethnicity and PAA exposure are provided in Table D. Prior to controlling for factors that would influence the likelihood to receive a prison sentence, it is clear there has been a reduction in prison sentences with the implementation of the PAA in Multnomah County. The smallest reduction has been experienced by Black defendants with a 14.1% reduction in the proportion being sentenced to prison, and the largest has been experienced by Hispanic defendants with a 21.1% reduction using the historic control samples for comparison. Thus, the Multnomah County Justice Reinvestment Program targeting of presumptive prison cases has been reducing the likelihood these types of cases are in fact going to prison for each racial category.

Table D. Pre-weight breakdown of sentencing outcomes in Multnomah County

Full sample comparison	Black		Hispanic		White		Other	
	PAA	Control	PAA	Control	PAA	Control	PAA	Control
Pre-weight *n*	930	272	418	123	2,424	726	158	32
Percent receiving prison	33.7%	47.8%	43.1%	64.2%	34.6%	54.3%	35.4%	50.0%
Prison months (SD)	28.4 (20.7)	24.6 (12.0)	31.8 (16.7)	28.4 (14.3)	26.8 (14.3)	27.2 (13.8)	24.7 (13.4)	30.9 (24.0)

After ensuring an acceptable degree of balance across race/ethnicity, we regressed our dependent variable of interest (any prison or months sentenced) on the case's defendant characteristics while also controlling for all other factors that might influence the sentencing decisions. Table E displays the associated regression coefficients for each of the dependent variable models; the control variables in the model are not shown. The racial category of "White defendants" was held as the referent in models reporting other categories. The logistic regression's main effect results indicate that overall, ***a defendant experiencing the PAA program was 52% less likely to receive a prison sentence compared***

to the historical sample. Also, while Black defendants were 38% less likely to receive prison sentences than White defendants, Hispanic defendants were over three times more likely to receive prison.

The interaction terms investigate the notion that the effect of the PAA on the likelihood to receive prison is conditioned by the race/ethnicity of the defendant. **Table E shows that none of the interactions are near statistical significance, which suggests that the effects of the PAA on the likelihood to receive a prison sentence are independent of one's race. In other words, the PAA program is not advantaging or disadvantaging any particular racial/ethnic group.** Although the models show that the race of a defendant is independently related to incarceration decisions, it is not likely due to the influence of a PAA program. The primary criticism that using risk assessment information in a pre-adjudication setting will exacerbate racial/ethnic disparities appears to be unfounded in this research setting. That being said, most notable about the interaction effects is that the use of a PAA substantially reduces the likelihood of Hispanic defendants to receive prison compared to White defendants; however, this change is not statistically significant. It is important to note that although the program does not appear to be harmful it is unlikely to impact overall racial/ethnic disparities in the jurisdiction because the program is creating equitable results across race/ethnicity. Despite reducing the proportion of persons of color going to prison compared to like cases in the past, county-wide racial/ethnic disparities related to prison admissions **are likely to remain unchanged** indicating that racial disparities, while not worsening, could remain persistent in a PAA setting.

Table E. Interaction models for PAA and defendant race/ethnicity

	DV: Any prison		DV: Months sentenced	
	Odds ratio	*p*-value	*B*	*p*-value
Main effects[a]				
PAA	.48	<.001	.32	.734
Black defendants	.62	<.001	-2.10	.129
Hispanic defendants	3.03	.006	-1.41	.403
Other defendants	1.08	.524	3.60	.409
Interaction effects[a]				
PAA*Black defendants	1.12	.599	.014	.433
PAA*Hispanic defendants	.63	.245	.011	.341
PAA*Other defendants	1.63	.508	.010	.300

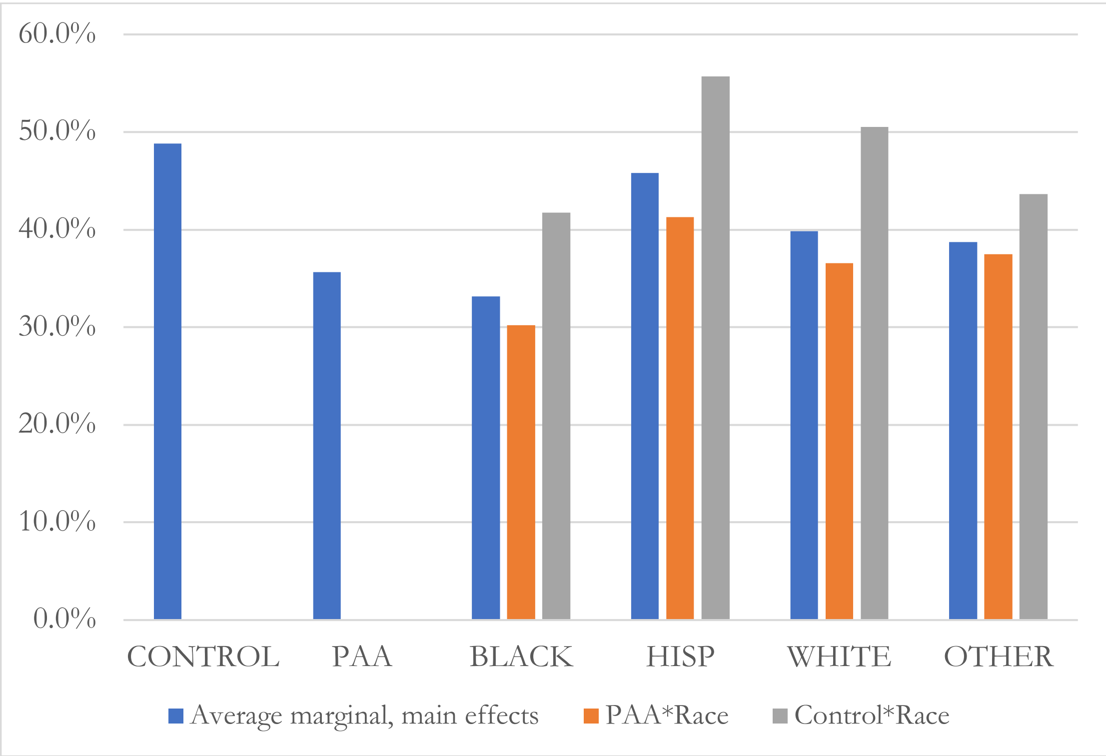
[a] White was held as referent in models reporting other categories.

Figure 1 depicts the marginal effects of race/ethnicity and the PAA on the likelihood to receive prison as a sentence compared to any other outcome. After controlling for all other observed measures, and aside from the influence of the PAA, an otherwise average Black defendant possessed the lowest likelihood to receive prison (33.1%), compared to White (39.9%), Hispanic (45.8%), and defendants of Other races/ethnicities (38.7%). Given the purpose of the MMW-S, the main effect differences between the racial/ethnic categories indicate a notable, extra-legal difference in the likelihood of each group to be sentenced to prison after controlling for observed legal factors. Most notably is the 12.4 percentage point difference between Black and Hispanic defendants' chance to receive prison. Although, neither Black nor Hispanic defendants experience a widely different chance of prison than White defendants, it is also worth noting that these estimates do not account for any prior disproportionate contact with the justice system which are relative to their population proportions.

These probabilities shift slightly when examining the added effects of the PAA. The findings suggest that after controlling for measures that influence sentencing decisions (e.g.,

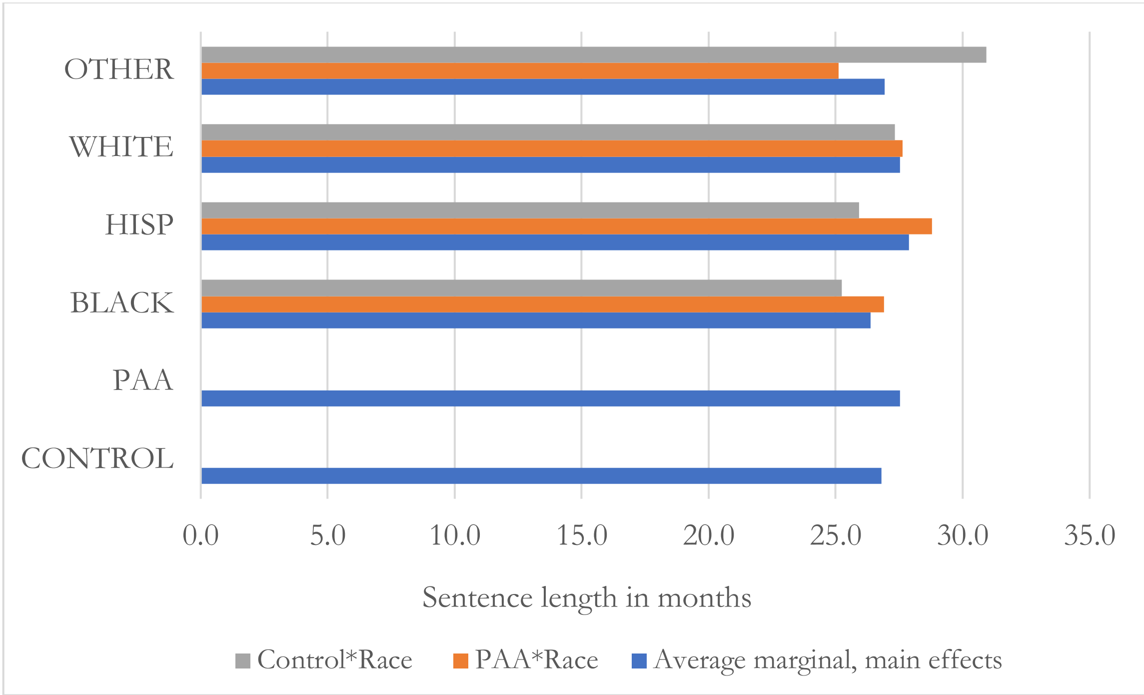
criminal history and crime severity) the likelihood to receive prison is lower across all racial/ethnic groups as they relate to the implementation of the PAA. For each racial/ethnic group the likelihood of receiving a prison sentence dropped by at least 6.1% (Other) and as much as 14.4% (Hispanic) from each group's likelihood of prison prior to the PAA. However, while the interactions between race/ethnic groups and the PAA yielded a reduction in the likelihood of prison, they were not significantly different from the main effects produced by the PAA alone. On average, the PAA reduced the likelihood to receive prison by 55% (odds ratio (OR) = .45, $p < .001$), which translates to an otherwise average defendant experiencing the PAA process possessing a 36% chance of receiving a prison sentence, compared to having a 49% chance of prison prior to the PAA. Taken together, the analyses revealed that the PAA appears to reduce the likelihood to receive a prison sentence generally, but does not necessarily reduce proportional differences across racial groups.

Figure 1. Marginal effects of race/ethnicity and PAA on receiving prison



In contrast to the PAA effects on the likelihood to receive a prison sentence, it does not appear to have the same effect on the length of the sentence for those who receive prison. Figure 2 depicts the marginal effects of the PAA, race/ethnicity, and their interaction on prison sentence length. As shown in the figure, after controlling for the observed covariates that influence sentencing, each group's estimated prison sentence length settles between 25 and 30 months. Our analyses reveal that there is actually a slight increase in the sentence length experienced by each group when exposed to the PAA process, although this increase is not statistically different from the historical comparison groups. Only one group of defendants, those from the "Other" race/ethnicity category, experienced sentences that were approximately six months longer prior to the PAA implementation. None of the interaction terms (PAA * race/ethnicity) were significant (not shown) demonstrating equitable impact of the PAA in sentence length across race/ethnicity.

Figure 2. Marginal effects of race/ethnicity and PAA on prison sentence length



Within race/ethnicity. To examine more nuanced effects of the PAA in Multnomah County in relation to race/ethnicity, we followed the same analytical procedure as in the full sample analysis discussed above, but focused our efforts on the effects within racial/ethnic categories. In other words, we aimed to answer a more specific question: How different are the sentencing outcomes of defendants from a specific racial/ethnic category following the PAA implementation? We completed this by using the post-weight data to regress the sentencing outcome on receiving the PAA, while controlling for other observed factors. Table F provides the post-weight regression coefficients by within-group analysis. **Here we see that the implementation of the PAA has equally benefited each group by reducing the likelihood to receive a prison sentence by between 12% and 14% compared to past sentencing outcomes for these groups**. Overall, the analyses suggest that a defendant of these three racial/ethnic groups are less likely to go to prison than a statistically similar defendant who did not experience the PAA process. This analysis supports the findings from the full model/data analysis and is another indicator that the primary concerns of using pre-adjudication risk assessments were not validated in this jurisdiction.

Table F. Within race/ethnicity comparison

	Black				**Hispanic**				**White**			
	Prison		**Months**		**Prison**		**Months**		**Prison**		**Months**	
	OR [a]	***p***	***B***	***p***	**OR**	***p***	***b***	***p***	**OR**	***p***	***b***	***p***
PAA	.86	<.001	.90	.540	.88	.005	2.32	.158	.88	<.001	.23	.772

[a] OR= odds ratio

Yamhill County PAA

Full sample. The baseline sentencing information for Yamhill broken out by race/ethnicity and PAA exposure are provided in Table G; these are the unweighted/matched estimates. Before factors that would influence sentencing were

controlled for, the implementation of the PAA in Yamhill County appears to be associated with an increase in prison sentences, and slightly longer sentences. It should be noted, however, that there is not only a large difference in the sample sizes within the PAA and Control groups, but there are also far fewer persons of color in Yamhill County than Multnomah. In other words, this pre-weighted/matched control sample contains cases that were most likely ineligible for the DAR program in Yamhill. Nevertheless, the differences between the PAA and Control groups with regard to the proportion receiving prison is important to highlight. The only racial/ethnic category that did not experience an increase in the proportion to receive prison is the "Other" group.

Table G. Pre-weight breakdown of sentencing outcomes in Yamhill

Full sample comparison	Black		Hispanic		White		Other	
	PAA	Control	PAA	Control	PAA	Control	PAA	Control
Pre-weight *n*	6	57	44	510	229	2,325	11	94
Percent receiving prison [a]	66.7%	43.9%	66.7%	31.6%	55.9%	28.8%	36.4%	41.5%
Prison months (SD)	23.5 (2.5)	22.3 (16.5)	22.2 (7.3)	33.6 (39.6)	23.0 (9.5)	23.2 (20.2)	21.0 (5.6)	21.6 (16.6)

[a] Including the Measure 57 adjustment.

After controlling for key factors used in sentencing decisions and weighting the groups using PSM, Table H demonstrates how ***participation in PAA yields a minimal difference in sentencing outcomes (approximately 1% reduction in prison versus other outcome) compared to the statistically similar control/historical group, and across racial/ethnic categories*.** The one notable exception is among Black defendants. Main effects models suggest that on average Black defendants had approximately 55% higher likelihood than White defendants to receive prison. Additionally, the interaction models highlight the fact that the PAA does not influence this difference across race/ethnicity. Similar to Multnomah County, **Table H also shows that none of the interactions are**

statistically significant. Thus, the minimal impact of the PAA on the likelihood to receive a prison sentence is independent of one's race. Although Black defendants were significantly more likely to receive prison compared to White defendants, it is not due to the influence of a PAA program.

Table H. Main effects models for PAA and defendant race/ethnicity in Yamhill

	DV: Any prison [a]		DV: Months sentenced	
	Odds ratio	***p*-value**	***b***	***p*-value**
Main effects[b]				
PAA	.99	<.001	3.30	.009
Black defendants	1.55	<.001	.21	.954
Hispanic defendants	.88	.293	-2.30	.341
Other defendants	1.00	.542	1.87	.322
Interaction effects[b]				
PAA*Black defendants	1.06	.727	3.04	.635
PAA*Hispanic defendants	1.24	.729	.59	.853
PAA*Other defendants	1.22	.700	-.32	.905

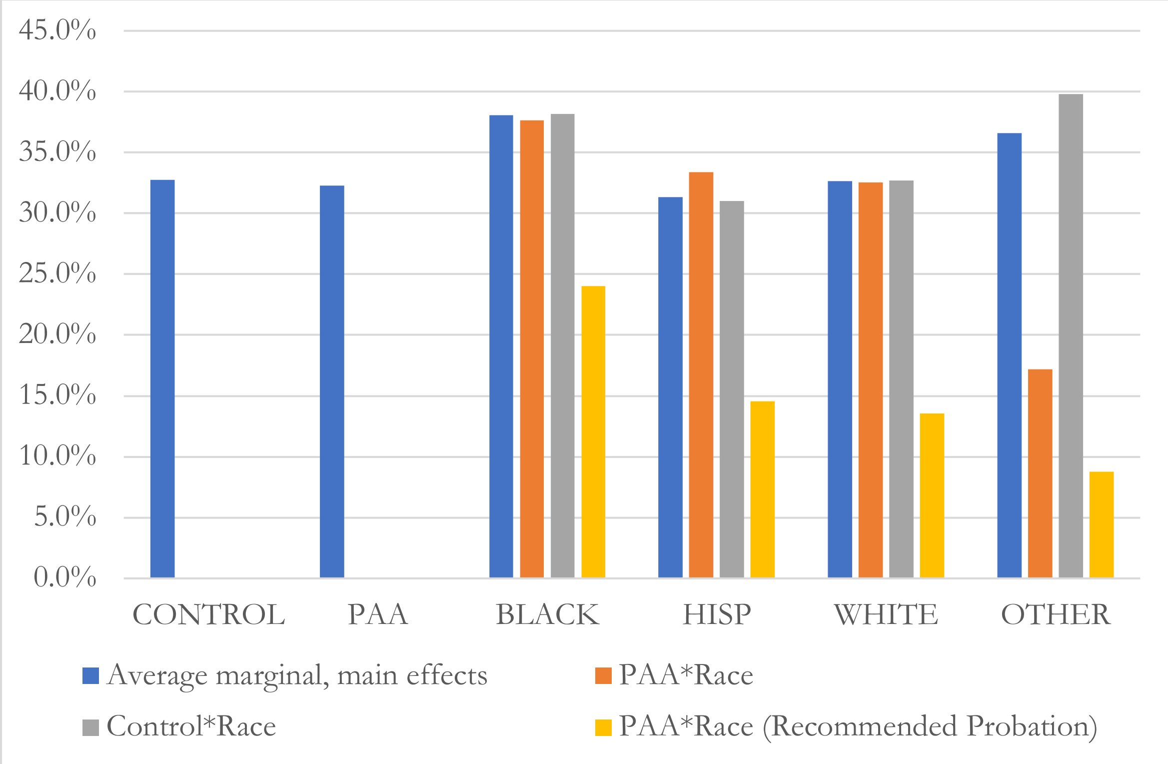
[a] Including the Measure 57 adjustment. DV=dependent variable. [b] White was held as referent in models reporting other categories.

Figure 3 depicts the post-weight, average marginal effects from the interaction models derived from the outcome models predicting any prison, reported in Table H. The estimates in Figure 3 hold all measures at their means and estimates the average likelihood to receive a prison sentence, given the regression output. As shown, there appears to be no substantive difference between the PAA group and control/historical group for an otherwise average defendant of any racial/ethnic group, giving exception to the "Other" grouping.

That being said, one important aspect of Yamhill's implementation of the PAA is that the probation officer writing the PAA report often supplies a sentencing recommendation. We find that 38% of the time when probation recommends a defendant can be supervised in the community without major concern it was rejected by the prosecution and court. We

constructed a hypothetical model that changed the case's dichotomous sentencing outcome to be probation in all cases when it was recommended. The fourth yellow bar in Figure 3 shows that if the sentence were to follow the sentencing recommendation of probation whenever it was offered, the average likelihood to receive prison drops for every race/ethnic group by between 8.4% and 19.0%.

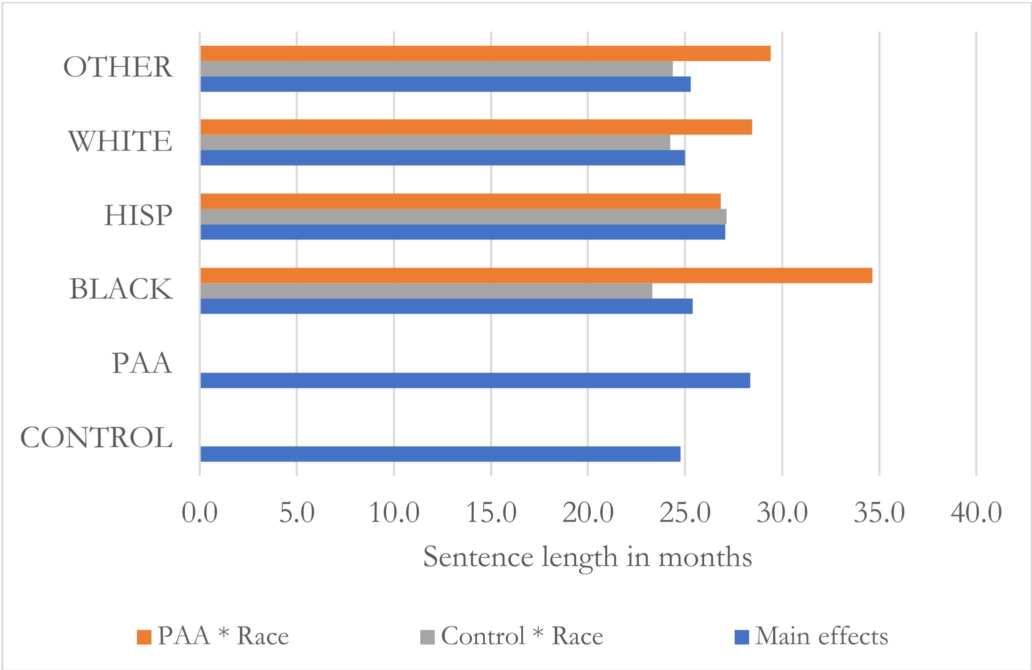
Figure 3. Marginal effects of race/ethnicity and PAA on receiving prison in Yamhill



The right column of Table H and Figure 4 both depict the findings examining the effects of race/ethnicity and PAA implementation on sentence length. After applying PSM and controlling for all observed relevant factors, the PAA implementation appears to lengthen the average prison sentence by approximately three months. In examining the interactions with race/ethnicity, there does not appear to be any differential influence for any group. That being said, Figure 4 shows an increase in the prison sentence length by approximately 10 months for Black defendants when the PAA is applied. It is important to

note that this difference, though substantial, is not statistically significant. Both the magnitude of the difference shown and the lack of statistical significance here is in all likelihood largely due to the small sample size of Black defendants.

Figure 4. Marginal effects of race/ethnicity and PAA on prison sentence length in Yamhill



***Within race/ethnicity*.** Our final analyses examined the effects of the PAA in Yamhill as it relates only to non-White defendants and only to White defendants. Similar to the within-group analysis of Multnomah County, the intent with this analysis is to determine if a non-White or White defendant would receive the same outcome after the PAA has been implemented compared to prior implementation. Due to the fact that individual non-White groups consisted of so few cases, we focused our efforts on aggregate non-White outcomes and that of all White defendants. Table I provides the post-PSM, multiple regression coefficients. According to the within-group analysis, consistent with that of the full sample, the PAA has the potential to provide a reduction in the likelihood of prison, however, these were not statistically significant. Similar to Multnomah County, the PAA does not appear to

be disadvantaging or advantaging non-White defendants compared to White defendants. Also similar to the findings of the full sample, the analysis suggests that for both non-White and White defendants, the PAA is associated with an increase in prison sentence length by approximately three to four months. In contrast to the likelihood to receive prison, this increase in sentence length was found to be statistically significant for both groups.

Table I. Within race/ethnicity comparison in Yamhill

	Minority				**White**			
	Prison [b]		**Months**		**Prison [b]**		**Months**	
	OR	***p***	***B***	***P***	**OR**	***p***	***b***	***p***
PAA	.68	.367	3.13	<.001	.82	.296	4.02	<.001

[a] OR= odds ratio
[b] Including the Measure 57 adjustment.

The primary conclusion of the results for Research Question 1 is that any effects of the PAA efforts on sentencing outcomes is not conditioned on the race/ethnicity of defendants. There are important differences in the sentencing outcomes across the counties where the Multnomah PAA effort is decreasing the likelihood of incarceration but having no impact on sentence length, while in Yamhill the PAA effort is not impacting rates of incarceration, but appears to have increased sentence length. The key finding, however, is that these programs have not created special circumstances for any particular race/ethnicity as critics have feared.

Research Question 2: Does one PAA process (i.e., use of a judicial conference vs. standard approach with a probation recommendation) appear to produce more promising results in impacting racial/ethnic disparities?

To answer this question, we created a combined dataset of the two counties. Given the uniqueness of the data sources and variables we did not feel confident utilizing a propensity score matching/weighting for this analysis. In both counties the percentage of

cases with defendants rated as High or Very High with the LS/CMI was identical at 82%; this increased our confidence that we can do a simple comparison of the two counties. Given the small counts for race/ethnicity in Yamhill, we created a non-White vs. White defendants variable. The data used for this analysis is the raw data (e.g. not weighted/matched) and uses only PAA cases; there are no historic cases. An important variable that both counties shared was the use of the LS/CMI so we're able to assess the impact of defendant risk scores on sentencing outcomes. Generalized linear models with robust standard errors were used to assess whether there appears to be a "county effect" that moderates the relationship between PAA defendants' total LS/CMI scores and the likelihood of going to prison. *In other words, does the LS/CMI appear to be evaluated/weighed differently by county in their decisions to send defendants to prison?* If an interaction term between LS/CMI score and county were significant in the models, it would be an indication that a county effect appears to be occurring. The results presented for all cases in Table J show that both county and LS/CMI score are significantly related to decisions to imprison in Models 1 and 2. In Multnomah County, PAA defendants are approximately 59% less likely to go to prison than Yamhill County and each increase in LS/CMI risk score increases the likelihood of prison by 5.3%. However, in Model 3 for all cases we find that county is no longer significant, but the interaction between LS/CMI and county is significant. This finding suggests that the large difference in imprisonment decisions between the two counties could be due to how they are applying LS/CMI information. In Multnomah county they're implicitly or explicitly using the LS/CMI to some degree as a tool to inform decisions to divert individuals from prison.

Since 82% of cases involve defendant's with risk levels of High or Very High "the court"[9] was likely looking for information outside of the risk score itself to inform sentencing decisions, a topic we'll address in the qualitative research questions. We also have strong evidence from the qualitative interviews that the risk score information by itself was not important to most court decision-makers. Another interpretation of this finding is related to the fact that 38% of recommendations for probation in the Yamhill cases were not followed by prosecution and the court. In Yamhill, the court appears less willing to take a chance on higher risk defendants and appears to apply the more traditional sentencing guidelines on a larger portion of cases. Given the limited variables in the quantitative models, we don't know for sure how this is occurring. Table J also shows the results when the data is restricted to only non-White defendants or White defendants. **In the non-White and White only models, the interaction terms are not significant. Hence, the county differences in apparent use of LS/CMI information to inform sentencing decisions are not dependent on race/ethnicity.** Additional models not shown substituted a dichotomous risk level variable combining Very High/High defendants compared to Medium/Low/Very Low defendants. In these additional models the interaction term is not statistically significant, although close (p = .064). Thus, the county differences may be in relation to how they address medium and lower risk cases.

[9] Throughout the document we refer to "the court" as being behind the eventual sentencing decisions in these cases. That is accurate to the extent that each party (prosecution, defense, judge and probation in these cases) has some say in the eventual outcome. However, it is clear that in both counties, similar to most court research, that the prosecution plays a larger role in that eventual sentencing outcome than the other participants.

Table J. Impact of County and LS/CMI Total Risk on Prison

	Model 1		Model 2		Model 3	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
All cases						
County	0.414	(.123)***	0.393	(.133)***	1.610	(.626)
LS/CMI score			1.053	(.005)***	1.107	(.022)***
LS/CMI * County					0.948	(.023)*
Non-White only						
County	0.286	(.300)***	0.277	(.291)***	2.905	(1.279)
LS/CMI score			1.049	(.008)***	1.147	(.049)**
LS/CMI * County					0.912	(.050)
Whites only						
County	0.428	(.153)***	0.424	(.152)***	1.404	(.726)
LS/CMI score			1.057	(.007)***	1.101	(.025)***
LS/CMI * County					0.956	(.026)

Note: * p< .05, ** p<.01, *** p<.001; Model = Generalized Linear Model, Logit, with robust errors.

The evidence for this research question indicates that neither county appears to have a better approach for impacting racial ethnic disparities in sentencing outcomes than the other. However, the sentencing outcomes in both counties are significantly different; they're just not moderated by race/ethnicity of defendants. We have evidence from Research Question 1 that the impact of the PAA program is equally benefiting each racial/ethnic group (or equally not benefiting in the case of Yamhill). In the analyses reported for this question it is clear that the benefits of a PAA program, in terms of the likelihood of going to prison, vary by county. In addition, there is some evidence that application of the LS/CMI risk assessment may be interpreted and applied differently between the two counties. It's important to interpret this finding within the Justice Reinvestment goals of the counties; both developed their PAA programs to assist the state in its efforts to stabilize and reduce the prison population. What we're finding may be less of an impact of the risk tool itself and more a representation of cultural differences and

political preferences across the two counties. Multnomah County exhibits a greater willingness and uniformity of focus to reduce the prison population through their program compared to Yamhill County; in the later, the percent going to prison on these cases would be a lot lower if probation recommendations were closely followed. Counties are likely to be nuanced in their utilization of risk assessment information, which appears to be influenced by the intensity of an overarching jurisdictional goal to reduce incarceration from the past that's being funneled down from the "court elite" (e.g. District Attorney, Head Judge, County Commissioners). The good news is we're not finding a race-effect also embedded within this county-effect in the application of risk assessment information. There does not appear to be an inequitable application of a county's willingness to divert from prison based on race/ethnicity and LC/CMI risk.

Research Question 3: Using interviews and visual observations (e.g., viewing the judicial conferences in Multnomah County where the PAA is discussed), how does the PAA influence case discussion and negotiation, decision-making, and workgroup norms and culture?

a. What is the weight of importance given to PAA information (i.e., more emphasis placed on static risk level [criminal history] or criminogenic needs [dynamic factors changeable with intervention])?
b. Is the PAA information used differently for different races/ethnicities suggesting subtle implicit bias in the process?

A strong theme throughout almost all of the interviews was that the actual risk score itself and risk designations of low to high risk was not deemed important to case decision-making by most participants we interviewed. A principle reason why is because prosecution, defense, and judges routinely examine defendant criminal history from their own databases or reports and form their own perceptual short hand of risk. Criminal history is embedded into Oregon's sentencing guidelines grid (criminal history by current offense seriousness) and is used to determine the initial sentencing starting point. This routine

review of criminal history used to identify where any plea negotiation begins was not disrupted or substituted by the introduction of a risk score and needs assessment report. Some in the court believe it is more accurate and intuitive to read the actual criminal history report (not score) and self-determine the risk level. Some believe they've observed cases where the risk level was clearly inaccurate. Others expressed skepticism about the LS-CMI because it was unclear how it was scored or they saw differences in the depth of probing that probation officers use in interviews and variation in report detail.

> You know I can tell you, often, without ever seeing one of these whether they'll come back high risk to re-offend or not. Just look at their record, look at their contact. We can give you, we've been doing this a long time. We can give you a pretty good read. It's the idiosyncrasies of different pieces of this that we don't have. You know, where is the risk coming from, you know what criminogenic factors should they be paying attention to. If we're going to have them in the community what do they need to be paying attention to. (Prosecutor 2)

> The LSC/MI I think is. . . I think in academic circles it's more heavily influential than it actually is in practice. I don't want to say I don't care what the risk assessment is, but I see cases that really worry me that come in at medium. And I see cases where I'm really not a lot bothered by the equities of it all and they're very high. I think the way the tool is used has some value but I'd be dishonest in saying that it really makes any significant difference in my decision making in a case. It doesn't take into effect a number of other factors like the strength of evidence and am I going to win? (Prosecutor 6)

> [The LS/CMI is] sort of helpful but less than the other parts we've been talking about…. In terms of criminal history, I already know what that is anyway and rather than look at this abstract low to high thing, I'm going to know what it is by the actual convictions. It's abstract to look at employment, education, family, and marital as high or low because it's hard to know what that would mean. I'd rather get it more specifically from the narrative portion. If I just read they dropped out of school in eighth grade and never got a GED, I'm not interested in the numerical score applied to that. If they don't have any family and the only people they associate with are other drug users, I don't need a number. I know what it means just from reading it. (Prosecutor 21)

A helpful component of the risk score noted by some is that it provided an indicator of defendant eligibility for particular programming that required a high or very high score.

Only a small portion of decision-makers referenced specific domain scores in the risk tool as part of their consideration process, like pro-criminal attitudes and criminal associates.

> Criminal history doesn't really separate people for those cases as much but the pro criminal attitude and antisocial pattern scores do. To me it indicates someone that is more criminal in their thinking and behavior than someone who is for maybe other reasons finding themselves involved in the criminal justice system. (Prosecutor 19)

> Typically almost every one we deal with is going to, their cumulative risk is going to be very high or high. I do like to look at which areas are they very high. Is it pro-criminal thought process? Is it the people they associate with? Is it their addiction? If it is their addiction, I have a little bit more hope that something can work out, because there are all sorts of ways to try to treat that. (Judge 5)

One important element to the LS/CMI risk scores of defendants in these programs is that *82% were assessed as high to very high risk by the LS-CMI*. Therefore, the general risk categories didn't help to distinguish differences among the bulk of defendants. We were commonly told, "they're almost all high risk, it's not very helpful"; a perception that turned out to be accurate. In other words, no one appears to be applying the risk scores in the manner feared by critics, "look at how high this risk score is, they deserve prison", because they would have to send most defendants to prison then. Decision-makers were more likely to talk about using a defendant's full criminal history they already have access to in order to make prison determinations, not the risk score. *We believe this unique context of the programs is critical to the generalizability of this study, our findings may only apply to programs that are targeting high risk defendants who are facing a presumptive prison sentence*. Courtroom decision-makers had to glean other information from the overall assessment reports, or judicial settlement conferences, to inform decisions.

In Multnomah County, the most important information for decision-making in the assessment report was the narrative life history section. It was deemed helpful by many

because it humanizes the defendant and helps the team understand the factors leading the defendant to this point in their life. The narrative allowed DAs to know defendants well enough to get comfortable taking a risk on deviating from the presumptive sentence of prison, with enough information to judge one suitable for probation. In addition, the judicial settlement conference proved equally important to decision-making in Multnomah County. These conferences provided an opportunity for the prosecutor, defense, and judge to hear the defendant verbalize their commitment to treatment and change, and express remorse.

> No matter how bad the crime is, hearing about someone's really bad childhood or really negative experience in a past relationship just changes people's minds and gives people a more human connection, which I think is always going to be better for our clients, if someone else gets to know them as a human being. (Defense 1)

> I think they focus on [criminal history] in the beginning, but I've seen them change their mind after they meet the person. You will go in chambers and they will be, look at this guy's history. There is no way this isn't a prison offer. I'll say, wait until you meet him. He's pretty engaging. Then they meet him and the next thing you know they are talking probation. I have seen that happen many, many times (Probation 13).

> Then the narrative, which I call narrative, so the history of the person, I find super-helpful…. it tells me a lot about their childhood, how they grew up, how long they have been -- most people have an addiction, as you can imagine, so it tells me about the path of their addiction, when they started. I've had people as early as 4 years old, start drinking or taking meds or something. (Judge 16)

> It just seems to me that there was no downside to it. This person's criminal history was there, and that is what was being harped on by the DAs office as far as making choices, and whatever the crime was. It just seemed to me that getting more information about who this person was as an individual and how we could capitalize on their strengths, there is only upside on that. We already had the bad stuff, so I don't see how any more information could make it any worse, it could just make it better. (Defense 1)

> Out of the criminal history report section 19, early defendant analysis sort of life story, that's definitely the most useful to me. It tells me who you are and that's what I want to know. Trying to distill your risk into a number doesn't make me feel really comfortable with how much I take a chance on you. But knowing where you come from and how willing are you to sit down and talk about it and share your vulnerabilities and problems versus minimizing your behavior. Those things are huge and I don't usually get to talk to defendants so it's nice to hear what they had to say. I can gauge how contemplative of

change you are or are you non-contemplative, are you interested in getting clean or do you think you don't have a problem. (Prosecutor 6)

Sometimes these defendants have gone through an unbelievable amount of trauma in their lives and in some ways I think in CJ system we are looking for a narrative for them, like why did they end up here. So they'll tend to put things in there that kind of alert me to okay, here's where things were going well for you and here's where things went horribly wrong. Oftentimes we also see narratives where people just take no ownership at all, I love all my friends, I've never done drugs before in my life. So that can be informative too just to see what stage are they are at. Also when we go into these JSCs we spend an hour talking to these defendants so it creates talking points but you do have an idea going in because you are meeting people for the first time. (Prosecutor 7)

You kind of know from reading the report already but just to see how he reacts to it, he acted pretty defeated saying "I just do this cycle over and over again, I use, I get depressed, I feel ashamed of it, so I keep using, then I got to steal stuff to support my habit." That's a lot more insightful to me that he'll say that as opposed to saying like, "I got out and my mom died so that was stressful, then my dog died, then I lose my job." You know, it turns into a country song after a while and you're like alright I get it. Some guys who are just "I use because I get really depressed, then I get depressed about using, then I use some more, then I'm around my girlfriend and she uses," you kind of understand that a little bit more. (Prosecutor 8)

It's all well and good if they sit in the attorney's office with the LSC/MI investigator comfortable, but when you sit across from someone and they're aware of your role, you have a chance to gauge their genuine responses to things. When you hear their explanations does it make sense when they say it on the fly, do they sound genuine about it, can you see they actually feel bad or is it just a monotone yeah I feel bad? That's how I like to use my time because when you look at a police report or LSC/MI, it's just words on a paper. Certainly, they trigger you to feel and think certain things but it's not the same as the context of an interpersonal relationship and hearing it from them directly- what they sound like and their genuineness I guess. (Prosecutor 22)

In Yamhill County, the probation recommendation in the assessment report was an important starting point for most decision-makers. Often prosecution, defense, and judges would begin their assessment by jumping to the probation recommendation found at the end of the report. It also became evident that the weight of the probation recommendation in Yamhill was amplified by the high level of trust expressed in the probation assessors and the department's ability to effectively supervise clients in the community. Despite this

expressed trust, probation recommendations for community supervision were still declined 38% of the time during the study timeframe.

> The probation officers that they have doing these are probation officers that have a lot of miles on their shoes and they're also probation officers who in my opinion are not easily manipulated. Some probation officers are more easily manipulated. A lot of this is self-report and so they have to be able to have a healthy dose of skepticism in it. And a part of the LSCMI and the way the questions are posed in various different ways is designed to pick up on that and so the POs in particular that they've had doing them, they're very experienced POs. They've been POs for 20+ years. So I think there's inherent trust by who they have doing the evals. Now if they said, "Ok now we want to put a newbie in doing these, we'll that's going to be different". And that's just a matter of experience, that's not criticism, it's just experience. (Prosecutor 1)

Prosecutors often talked about their decisions as taking chances and risks in deciding whether someone should receive probation who normally would have gone to prison. For some this prospect was daunting. Prosecutors appeared to carry a heavy weight concerned for defendant failure in the community that could harm others, but also their professional reputation because they "went out on a limb" to advocate for the probation sentence.

> To get someone probation you're taking a chance that they'll victimize someone else. The law says for that crime, that person, they should go to prison. So if they go out and steal a car, it's like if you had followed the law, the car wouldn't be stolen. (Prosecutor 17)

> I wish there was something that would outweigh criminal history. The majority of these cases, I do have to staff them and it's the number one concern we have. What happens if this person commits another crime then we have to explain to the newspapers and victim, yes this person committed serious crimes in the past and we let them on probation so sorry that happened to you. (Prosecutor 25)

The role of the prosecutor was arguably most deeply impacted by these programs. All the prosecutors we interviewed expressed value in the programs; however, there was clearly some tension. The tension was between the uniformity of sentencing guidelines, criminal history, and treating like cases similarly and this new approach focused on rationalizing a departure from the codified sentencing laws based on an assessment of risk,

need, and responsivity. Hence, many prosecutors continued to discuss the importance of more traditional factors weighing on their decisions including the extent of defendant's criminal history, victim preferences, seriousness of current offense, equity in outcomes, and strength of evidence. A byproduct of these concerns in Multnomah County was the use of "staffing." The initial plea offer by prosecution in the majority of cases in Multnomah County was decided by a committee of lawyers and unit supervisor. The staffing approach was discussed as a mechanism to ensure like cases are treated similarly.

> My experience with the staffing process is I feel like they get it right most of the time but there are cases where I feel very strongly one way or the other that I was disagreed with on. I felt like if they had been at the settlement conference they might have seen it differently which is why I saw it differently. It's difficult to communicate that in person, then to your supervisor in pre-staffing, and to the staff in staffing. It's hard to translate what you actually observed and what's important to take away from that, it's difficult to recreate the context of an in-person conversation. I can say I think this person is being genuine until I'm blue in the face, but is it going to affect my supervisor the way it affected me to hear it? I don't think so. There have been a couple cases where I felt we should have done one thing and that was not the ultimate recommendation. (Prosecutor 15)

> I don't know how you could ever remove a person's criminal history from the equation of what to do in the sentence. Most of the time it's legally required, you need to know, do you have the predicate offenses to be subject to a particular sentence. I think you'll find that every DA finds that a really critical tool if not the most important tool in determining what's an appropriate sentence. (Prosecutor 6)

> But really the controlling chip on the board is going to be a client's criminal history. What we run into if the criminal history is going to be controlling, then obviously that aligns itself with the whole equal protection issue that the state always is saying. You have a terrible criminal history, person A, B, C, they all had terrible histories, they got prison and you are getting prison. I don't care about the mitigation. I don't understand then how does this program work. (Defense 10)

The focus on criminal history by some prosecutors and the practice of staffing was disconcerting to some judges, defense attorneys, and probation officers. Although they recognized the argument that staffing and the sentencing grid provides some equal

protection assurances, it embodied the traditional approach to how the court has always handled cases. For some it felt defeating to the purpose and intent of the program.

> We are looking at their needs and their responsivity, and what is driving their criminality. So we do that, and then immediately at the JSC the conversation is prison or probation. The explanation is we take an individual with a similar crime and a similar criminal history profile, and just a similar profile, and then we compare that to what we have made in decisions previously, and then that is the decision we go with. Essentially, what you just told me is that it does not matter how much energy, effort or information I just provided you, you throw it all out and put a cookie cutter example up on the board and say what do we do with that. Now you are crap shooting about whether or not this person is going to be successful or not (Probation 5).

There was also evidence that many prosecutors and judges examined criminal history with a much more discerning and nuanced approach. Thus, use of criminal history did not always entail a counting exercise to assess risk. Examinations of criminal history often involved looking for patterns in types of offenses and current offending, finding big gaps in criminal history, and disregarding drug offenses from the 1980's and 90's. These more nuanced approaches to reading criminal histories were used by decision-makers to assist them in identifying the needs and responsivity of defendants. It allowed one to explore what may have worked in the past and what's currently going on in defendant's lives.

> I think right off the bat, criminal history is incredibly important but not everything. I don't look at someone's criminal history dating back to like the 70s. If there's a gap I want to know why. I don't just look at the criminal history and think it's bad person and they'll commit more crimes. The criminal history guides me into what kinds of questions I want to ask. I don't think criminal history defines the individual, it just helps me craft how I'm going to adjust the settlement conference. People grow up and age out of crime or sometimes people get the right help. If your question is how do I use that criminal history, my bottom line answer is it's a tool to help me get to the right questions. It doesn't give me the answer. (Prosecutor 23)

> If you've got a Black defendant for a delivery on crack, and he has a CH from the 80s with a ton of crack convictions, I'm not going to use that as he should go to prison because of his history. Those were all usage crimes that wouldn't be convicted the same

> today. It's a fair critique, incumbent on us to recommend that. It's not the quantity of crimes, it's the crime they're convicted of. Stealing to get high. Robberies, rapes, those are the crimes you should pay attention to. (Prosecutor 13)

> When we started out, I had DA's showing up and going, "well, Judge, look, this guy has a three-page criminal history. This guy is never -- he has 22 felony convictions. He is never getting probation. He is going to prison." I would say, OK, but let's look at this. This guy is a 52-year-old Black male and of the 22 felony convictions, 20 of them are for possessing cocaine, right… That is the most glaring example, but there are much more nuanced variations on that where the DA's office is counting the number of this thing or the number of that thing, oh, the criminal history is too bad. They have been engaged in criminal behavior since they were 17 years old, and they are 32 now, so yeah. Maybe that says as much about us as it does about them. They have been doing this for 15 years, and been in our system for 15 years, and we haven't changed them one bit. (Judge 3)

> It may be that if there is a significant gap between convictions, that is a sign to me that I need to know what happened there. So either that person was in prison, or the other option, or maybe the person wasn't caught, but it is usually the person was in prison, or for some period of time things were going better for that person. Then I want to find out about that period and what was working and why it stopped, and whether or not that person can get back to whatever that period of stability was that shown in the lack of convictions for a certain period of time. That is why I am kind of curious (Judge 17).

Another important component in case decision-making was the supervision history of prior probation sentences and any history of failure to appear in the assessment reports. This information allowed decision-makers to gain a more detailed sense of the defendant's prior motivation, engagement, and failures with programming. Probation supervision history was information not typically shared with the court before and weighed heavily into many decision-makers thought processes.

> The supervision history I think is a really important and telling piece of information. Even if their participation on supervision has been abysmal for the last 20 years, that is at least warranted a conversation about why it is going to be appropriate for you, right now, and how it is going to work for you, because it literally never has been successful for you. I think that is the most important part of the report, is why are we just going to do supervision and resources when you've never, ever accessed that before or really wanted to (Probation 7).

> We don't know, unless we have represented somebody before, what their supervision history is really like. That used to be kind of in a black box that the probation office had. Every now and then if we are at a probation revocation hearing or something like that, then they will bring it up. It is nice to have more of that data and information as far as, Oh, okay, I've never represented this person before. How did they do on probation last time and how did it work out. That's helpful because we historically have not been given access to that information. (Defense 3)

In general, most prosecutors did not talk directly about the needs of the defendant, nor did they tend to look for needs information from the risk and needs assessment. Rather, they looked through the biography in the narrative and in the JSC (in Multnomah) to identify places where defendants' lives have gone wrong and where there are opportunities to change the circumstances. They looked for factors that lead to criminal activity and problems that can be aided with programming. Prosecutors often didn't verbalize the importance of defendant "responsivity", but it was clear they were looking for evidence of responsivity to programming. Instead of using LS/CMI official responsivity indicators for this judgement, prosecutors relied on the life narrative, supervision history, probation recommendation, or one-on-one dialogue with defendants.

> If I look in their performance history and they've got good stuff and bad stuff, that is one of the things I like to talk about a lot during the JSC. I see you really want to go to treatment but you left inpatient treatment when you were there, tell me what happened. Sometimes they speak articulately about what happened and sometimes they're like I just couldn't be there anymore. That's not necessarily the end all to the conversation because sometimes they're like I wasn't ready at that point and I see that a lot where people are not ready so they need more than one shot at it. I get that, but those are some details I think are important to making the determination about what sort of offer to recommend. (Prosecutor 18)

Defense, POs, and judges were more likely to talk about and emphasize the needs of the clients. Like prosecutors, judges and defense typically used the narrative and the JSC to determine how to manage the factors that have led to criminal activity or the places they went wrong in the past. POs frequently noted that the way the decision-makers considered

needs was often not quite fitting from their perspective. For example, some Multnomah County POs felt there was often a quick, over-prescription of a need for “treatment”, without a deeper exploration of the assessment materials in front of the court to understand why addiction existed in the first place. POs often felt the court was not utilizing all the assessment information available to craft a more individualized plan. Another concern mentioned by POs was the court seeing that a defendant was eligible for a program based on their risk, but without a deeper dive to determine whether it was a good fit based on responsivity factors.

> The only way, if you really want to have a probation be successful, you have to figure out what needs the person has, and how to address those needs. You are not going to be able to do that pre-adjudication without some sort of an in-depth interview where you meet with the client and you get directly from that person, who are they, what has their experience been, why are they behaving this way and what can be done about it. (Defense 9)

> I think they focus a little too much on alcohol and drugs. It just seems that they want to throw everyone in treatment, like that is a band aid rather than try to get at the issues at why people are using alcohol and drugs. I simultaneously understand that that's hard. You can't order somebody to make new friends….You can write it on a court order and then if they don't do it, you can enforce the fact that they didn't do it, and sanction them, when what they really need is a community of supportive people who don't use drugs. You can't order that. You can't say you have to come in here in 3 months and bring in 5 friends and you have to prove that they are nice people and don't use drugs. They are lawyers. They want things that they write down in black and white and enforce. (Probation 12)

> What’s important is, the only reason someone wouldn’t go to prison is because they have a need for services and acknowledge their need for services. We’re trying to discern, what do you think you need for help, what are you willing to do so you can be on probation? (Judge 8)

One of the biggest changes to the traditional courtroom workgroup in both the Multnomah and Yamhill County efforts is the integration of probation officers at the pre-trial stage. This integration was even more pronounced in Multnomah County where the

POs would attend and participate in judicial settlement conferences with prosecution, defense, judge, and defendant.

> This system involves a PO at a far greater degree than you would have ever worked with a PO at the pretrial stage. You don't work with POs at pretrial stages and that's a unique part of this so I say utilize them. Know your POs because they are a great resource, don't ignore them. They can be very helpful and give good insight so don't ignore that. (Prosecutor 26)

Prosecutors in both counties were appreciative of the information about defendants that probation officers were able to provide in the risk/needs reports. In particular, POs were viewed as an important resource for developing concrete and workable case plans for defendants. In Multnomah County, because PO knowledge could be accessed in the judicial settlement conference, a POs ability to provide information on realistic programing and treatment opportunities was also praised. However, many POs expressed they were rarely utilized in this fashion. Traditionally, defense and prosecution lack knowledge of the local resources available for a community-based sanction and realistic programming. Thus, traditional sentencing negotiations are not framed around important program and client-specific details. The lack of such information may lessen the likelihood of probation being offered. In Yamhill County, probation officers had a more direct impact on the cases, compared to Multnomah County, by offering a sentence recommendation along with thoughts on a successful case plan. In Multnomah County, POs could only get very detailed about probation programming if directly asked by the court. The quotes below illustrate that integration of a risk/needs report developed by POs and access to the PO can offer the pre-trial courtroom workgroup important insight.

> It's a game changer! It's a big deal (having POs present). You couldn't do this program without that. You have to have the PO involved on the front end for this to be worthwhile. And I say that because I can talk to the PO at the settlement conference and

> if we're going to do probation I know what needs to be ordered as a condition of that probation to satisfy what the PO needs as a tool for various decisions. The PO can tell me yes, I can get him a bed, it will be this many days, this is how long the jail sentence needs to be to make sure we don't have him hit the street first. The PO has to be present to get those commitments, and for the court to feel comfortable ordering those kinds of sentences. Otherwise the judge is just guessing and it's difficult for me to get a judge to bite off on my plan if I don't have some kind of proof it'll work. (Prosecutor 9)

> It's useful having them there because there are some administrative things they know and information they can provide. You know attorneys and judges, we determine-attorneys put together a joint recommendation and the judge chooses to follow or not the joint recommendation and they typically do for sentencing. From that point on, it's in the hands of DCJ or DOC. I don't have the perspective they have and sometimes these POs have years of supervision of this individual that was being considered, they know them a lot better and they know what their triggers are (Prosecutor 17)

> As much as this has morphed what prosecution is like, I think it has changed the Judges approach to the cases too. They didn't necessarily know everything the PO could do. Even things as simple as GPS monitoring. We know it means you can tell where someone is but what does it actually mean, can you set parameters or curfews? Since MCJRP has come out, judges are much more willing to use it because of how flexible it is and what a great tool it is. It keeps people out of custody but also keeps tabs on them. (Probation 5)

> A lot of the times it would be helpful to have a PO present for non-settlement conference cases. The reason being is they have a whole body of information available to them which we do not have, all of the person's supervision history. Particularly when there is a supervision cycle, they can be more accurate historians about here's what supervision actually looked like to this person. They did or did not make calls, they did or did not make check ins, they were revoked, they were not revoked, they were case banked. That's also something important to know because it's not often something we get to know, is what sort of supervision they were required to have. But the thing they're most useful at is getting into the mechanics of it. If we're getting into a probation case, what that will look like, what's the waitlist now to get them to in-patient treatment? What are the different treatment programs he can get into? (Prosecutor 20)

Although there was generally uniform appreciation of POs integration into pre-trial stages, it is also clear that a successful integration of POs judgement, information, and expertise at the pre-trial stage is based upon trust.

> I mean probation officers they've been working with the LS-CMI for a long time now, the real difference here is the LS-CMI is done before sentencing rather than to somebody placed on probation. And as I said when this first came around several years ago, you

> might guess the kind of traditional prosecutors who were like, ‘what are we getting into here kind of thing.’ And my position was, ‘how can we ever balk at having more information about an individual.’ We shouldn’t be afraid of that. And so, we kind of have to trust (Prosecutor 5).

In Yamhill County, this trust is particularly important because the probation assessment report provides a recommendation for or against community-based supervision. As noted previously, some of that trust is built up through long-term working relationships, these were more commonly expressed in smaller Yamhill County.

> We start with the recommendation, if it says can’t be safely managed. And the same people who are saying can’t be safely managed in the community are the ones who would be managing them, that’s a pretty big indicator. And that’s why there are so few of those that the judge rules otherwise on it (Prosecutor 1).

A common factor related to weakened trust is the presence of different POs across a case. The ideal situation in the minds of prosecutors and judges is to have the same PO who conducts the LS/CMI also be present for the judicial settlement conference, and responsible for any subsequent sentence supervision. This ideal became exceptionally difficult in Multnomah County given the sheer size of the program handling 1,000 or more cases a year, and for some that impacted their level of trust in the outcome of a case.

> But I had a very pessimistic and cynical view of DCJ and probations. So only the author can reinforce or give me hope and say, ‘Now I know what you’re thinking Mr. [redacted], with community service, cross our fingers, this will be the plan,’ and if I have the person there to say that, that’s helpful. Similarly, the PO who authored the report probably has a plan, and says this is what I was thinking when I wrote that report. In a perfect world, it’ll be the author who’s doing it and again I would say it’s 50/50 at best that’s in practice. (Prosecutor 19)

> It seems to me that very frequently the PO who wrote the report is not the PO who is sitting in the JSC. So that PO doesn’t really have anything to add to the JSC process versus if they actually wrote the report they might be able to say, ‘while we’re talking I didn’t put it in the report but here’s something you should ask’ or will encourage the defendant, ‘can you tell the judge about this or that’. (Prosecutor 1)

> It would be even nicer if the PO that wrote this was the one sitting there and I get that it's maybe not possible. But that would be nicer. If the PO involved in the conversations that set the whole deal up was the one who actually executed the plan and supervised the person, that would be nice too because then when we're back on a PV, we're not in a situation where the PO is going I haven't met this person. We're like well we had a long process where we tailored this plan specifically to this person's needs, there was a different PO part of that conversation that assured us these programs would be available and would facilitate the transfer and all this stuff, and it happened. They went a totally different direction. (Prosecutor 4)

Some prosecutor's expressed distrust about the level of supervision that was actually being provided when probation sentences were given and distrust of recidivism levels. There was also sometimes concern expressed that POs may be duped by defendants and skepticism about POs abilities to detect deceit during the LS/CMI interview, thus leading to distrust in the accuracy of the risk/needs report.

> DCJ does give recidivism information and I don't buy their recidivism information. (Prosecutor 23)

> And the POs who write this report are not particularly- I don't think they're trained to challenge the information. They're just taking the information down (Prosecutor 20)

It's also important to note that despite their integration, probation officers often felt *they were underutilized*. This feeling was primarily felt in Multnomah County where the general process of negotiation was a sentence crafted by prosecution/defense/judge, using probation officers (if needed) as information resources about the feasibility and logistics of particular program elements. In Yamhill County, probation officers were more integrally tied to the ultimate sentence because they are asked to provide a recommendation of whether the defendant would be successful on a community supervision plan if probation was recommended. There were a number of possible factors leading to this sense of underutilization by POs including the following: 1) POs were less likely to play a role in cases that leaned heavily towards prison, 2) idiosyncratic styles/preferences of certain judges and

deputy DA’s, 3) reliance on a prosecutorial staffing committee to make the final sentencing decision, 4) lack of time during the settlement conferences to include balanced participation, and 5) potential lack of trust in POs judgement or familiarity of defendant/case.

> Sometimes I think they forget we are there if we haven't said anything. I think sometimes they think, okay, the Probation Department wrote this report and maybe that is where our role stops, until they decide what are we going to do with this case. I don't see my role as that. I think it is part of the whole process, so we are all involved. Sometimes they want to make decisions about where somebody is going to be supervised or how they will be supervised or things like that, where that is actually not realistic from the Probation Department's perspective, and here is why. So even logistically speaking, I think it is important that we are there and we are involved in those conversations. (Probation 1)

> I am always sitting there watching kind of all that happens, and nobody ever really talked to me, it is pretty minimal, which is so much different than how it was in the beginning when we were piloting it. I was talking about what I was going to do with their case plan, what would be the most appropriate level of care, all this kind of stuff. The judges were really seeking our opinions, not about sentencing but just about, what would you do with this person on probation and talk about the risk assessment and what does it mean. We don't get questions like that anymore. (Probation 3)

> I am just the body, and that's it. I wait around, and they don't really talk to me, and that is pretty much how it usually goes. (Probation 6)

> I think some of them really do trust us, and really do trust my reports and really do take a look at them. Others, you know, it is the same as anything else. You've got people who are really there to do the thoughtful thing, and then you have people who are there to just move cases. I think some of them have just sort of reverted to just pushing the paper, and let's just do what's quickest and fastest and best, and easiest. I think it goes easiest, least expensive, right. (Probation 14)

Perhaps the most unique change to typical criminal case processing occurred in Multnomah County with the use of *a judicial settlement conference (JSC) for every case*. Traditional judicial settlement conferences typically occur at the request of prosecution or defense when they’ve reached an impasse in how to resolve a potential plea negation in a case before going to trial, where the judge may help broker an agreeable solution. In

contrast, the JSCs for the MCJRP effort involved the usual prosecution, defense, and judge, but also included the defendant and a probation officer (ideally the author of the risk/needs assessment report). These conferences occurred off the record, were facilitated by a judge who is not the assigned trial judge, and involved a mutual agreement that any discussion within the conference was inadmissible at trial if a case could not be resolved. The novel contribution of these conferences is that they are designed for the courtroom workgroup to help negotiate the most appropriate sentence outcome for the defendant and entailed open questioning of the defendant. The JSCs were judged as the most important source of information for case decision-making by most in the courtroom. All participants are given an opportunity, at the discretion of the judge, to engage defendants in a conversation about criminal history, family and upbringing, current life circumstances, needs and barriers, and motivations for change. This was clearly a new and eye-opening opportunity for prosecutors who would normally refrain from open conversation with defendants in a pretrial setting or face potential complaints to the bar. Prosecutors defined their role within the JSCs as trying to find evidence for mitigation to help them justify community supervision and build arguments for their plea recommendations which might be reviewed in front of colleagues at staffing. Traditionally, mitigation evidence comes to the prosecution from the defense and is not something prosecution would regularly seek. Some prosecutors expressed a little trepidation over concerns that their colleagues may judge their recommendations as being “too soft.” Since the goal of these PAA efforts is to reduce the prison population, the prosecution is seeking justification and assurances of successful community supervision (i.e. a type of mitigation) with the help of input from the judge, defense, defendant, and probation officer.

(referring to JSCs) It's really helpful because it gives you a chance to see who you're working with and who the defense attorney is working with and learn from their own mouths where they're at. It's one thing to read a report about a person and it certainly gives perspective, but it's another thing to look a person in the eye and meet them and have them talk about growing up in a meth house or where the dad was pimping out the mom. It's good to have them explain to you how that affected them. I think it's very powerful in terms of understanding not only your case but the person behind your case as well. (Prosecutor 13)

I think I do like that our office is exploring these restorative justice concepts, I think it's helpful. I think it's really a different, a different role, to go into a JSC and ask, 'Can I offer you services and what would help you? Are we able to help you out of this predicament?' I think MCJRP informed that, but I have always known my role as a prosecutor to be fair. We are supposed to wear the white hat so to speak and we show it every day. You should try to do that, the right thing, and I think this is an additional tool to figure it out if we can do the right thing in each and every case. (Prosecutor 18)

Well, I think there are probably a lot of benefits, just having the facetime. I think a lot of the defendants feel like they're not just getting railroaded by a system, they're getting attention, they're getting particularized attention. I mean if you go to the doctor and see them for 4 seconds and don't get better the next day you're like, 'they didn't even check me.' But if they go and they run a bunch of tests and you don't get better the next day you just figure they're still working through it or the tests haven't come back or something. And it's probably a lot like that. We get to hear from the defendant too and so you get more information about really how articulate is this person, is this somebody who you know had a job, had a house, had a family, was in a car crash and got addicted to pain pills, got addicted to heroin when that got cut off. And now is doing residential burglaries or whatever the new crime is. But could still go back to a more normal life. Or is this somebody who just really this is how their life is, they don't really want to change it, they don't see it changing, they don't want to work at it. And they just kind of want to get back out right away. (Prosecutor 8)

But, it's almost always mitigating information and this way the defense attorney doesn't have to try to figure out where to get this information, where to give it to us. Because it's done in a more formal setting we're going to trust it maybe even more than if the defense attorney gets letters from mom and sister. And the defense attorney's job is to tell us all the best things about their client, versus somebody who's doing this type of evaluation saying, 'the whole family is pro-social, non-criminal.' This is the only person (i.e. PO) that I believe that rather than coming back and asking, 'what's mom's full name' and then having to run a few people, 'Ok they are pro-social, they don't have any criminal history.' So that's good. (Prosecutor 6)

There were times in committee where I could have asked the defense attorney if this person is willing to do treatment. Their response would be always, because when I get a chance to talk to defendants the answer is usually yes. But, there's a difference

> between an answer and a face-to-face answer where you can read someone's body language, and the way they're talking, looking at you, and saying it. For me, it gave me, either it seemed genuine or they're just telling me and the judge what they think is necessary to get what they want. That was beneficial but I think it is nice, it's a nice reminder those are individuals. When you're working ninety cases it's always good to meet those people. (Prosecutor 9)

> I can think of a specific instance where I was like this is prison all day long and I read the evaluation which was all drugs. The defendant for whatever reason did not share with the defense attorney that they were the victim of sexual molestation. That then changed the context of why there's a drug problem and they start stealing so it did change my analysis on it and seeing what resources are out there for this person. That's a freak thing because if you do have those issues, the process is to get that out there so that when the parties come to negotiate, they have as much information as they can. I think of it as, I went in without information and I got more information that changed my analysis of it. Obviously, I worked a lot with the defense counsel to confirm that because unfortunately I am in a business where I need some type of confirmation more than just saying it, that's not good enough for me. (Prosecutor 14)

> The value of MCJRP is it gives us another tool and I hope that's why it was created because prison is not helping anything. As a society we should be able to acknowledge that and if the goal is really to fix it, then we have to look at other tools. This report is the only tool that gives me anything close to this level of assessment through the justice lens or whatever. As a prosecutor the JSC is better because it also forces me to access empathy which I otherwise would not develop. (Prosecutor 12)

We asked all persons we interviewed what they thought about the critique that risk assessment tools at pre-trial stages could exacerbate racial/ethnic disparity in sentencing outcomes. Almost no respondents were previously aware of this critique of risk assessment tools, so we asked for their immediate reaction. These could easily be categorized into three groups: Acknowledgement, Defensive, and Noncommittal. What became apparent in these discussions was that many discussed bias as being something that happens only in discrete cases or with specific individuals, rather than a pattern of differential treatment. In general, there was a lack of understanding about institutional bias. The importance of race neutrality was embraced, but less openly recognized or discussed were institutional/societal biases related to criminal enforcement history,

education, family, and economy that could impact risk scores. As previously noted, there was some evidence of decision-makers approaching defendant's criminal history with a more discerning framework to recognize potential biases existing during prior times. We recommend greater attention be given to training programs that illustrate how societal and institutional biases may impact risk/needs assessment outcomes and how court personnel should carefully interpret and utilize such information using an equity lens.

Research Question 4: Does validation of the PAA tool yield significant mean score differences across racial groups and/or predictive biases? In other words, if the average risk scores and subsequent sentencing and supervision outcomes differ by race/ethnicity, is it the PAA that causes such disparate outcomes, or is it their application, or both?

Are there significant differences in risk scores across race ethnicity?

An analysis of variance test using a Bonferroni post-hoc comparison was conducted for both counties to examine whether the LS/CMI total risk score differed by race ethnicity and is presented in Table K. In Multnomah County, the results indicate Black, White, and Other race defendants have similar average LS/CMI total risk scores. Hispanic risk scores are significantly lower than both Black and White defendants. In Yamhill County, there were not significant differences in total LS/CMI risk scores between non-White and White defendants. The fact that no racial/ethnic groups had significantly higher risk levels may be a factor in why there were not significant differences in sentencing outcomes due to participation in the PAA programs.

Table K. Mean Differences in LS/CMI Total Risk Score by Race/Ethnicity

Demographics	N	Avg. LS/CMI Risk Score
Mult. All Cases	3422	26.4
Mult. Black	836	27.1[a]
Mult. Hispanic/Latino	365	24.6[b]
Mult. Other	141	25.6[a]
Mult. White	2080	26.5[a]
Yam. All Cases	245	26.9
Yam. Non-White	53	26.5[c]
Yam. White	192	27.0[c]

a ANOVA (Bonferroni post-hoc) test = average risk scores not significantly (p > .05) different between Black, Other, and White

b ANOVA (Bonferroni post-hoc) test = average risk scores significantly (p < .05) different compared to Black and White

c ANOVA test = average risk score not significantly (p > .05) different between Non-White and White.

Does the LS/CMI help differentiate who is likely to be incarcerated?

An analysis of variance test is presented in Table L using a Bonferroni post-hoc comparison to assess whether defendant's LS/CMI risk levels (VL, L, Med, H, VH) help to differentiate the likelihood of incarceration. If risk levels are a strong predictor of incarceration there should be significant differences between each risk level and the mean average of receiving a prison sentence starting from Low through Very High. Table L includes analyses for all cases and each race individually. For Multnomah County, the aggregate results indicate that *defendants who are Low (28%), Medium (26%), and High risk (33%) have a similar likelihood of being sentenced to prison*. Only Very-High risk defendants had significantly different mean averages of being sentenced to prison compared to all the risk levels. This same general finding also occurred for White and Black defendants. This was not the case for Hispanic defendants in Multnomah County where all the risk levels exhibit significantly similar rates of prison sentences. There were no significant differences in prison rates and risk levels for Other race defendants. In Yamhill county, there was less of a clear pattern between risk level and prison rates, this is partly due to the low sample

size for defendants in the Low (n=5) and Very Low (n = 2) risk categories. However, there was a systematic significant increase in prison rates at each risk level going from Medium (25%) to High (55%) to Very High (76%). Overall the results indicate that the use of LS/CMI risk levels did not help distinguish the likelihood of going to prison in Multnomah County, except at the highest risk level. In contract, LS/CMI risk levels in Yamhill County did better distinguishing the likelihood of going to prison between the Medium, High, and Very High risk levels. Other factors beyond risk appear to weigh more heavily into plea negotiations in Multnomah County than Yamhill.

Table L. LS/CMI Risk Levels by Race and Proportion Going to Prison

Demographics	N	% VHigh cases	% prison	% High cases	% prison	% Med cases	% prison	% Low cases	% prison	% VLow cases	% prison
Mult. All Cases[a]	3422	41.8%	46.0%	40.5%	33.0%	12.5%	26.0%	3.8%	28.0%	1.6%	7.0%
Mult. AA	836	45.1%	47.0%	38.6%	30.0%	13.2%	16.0%	2.5%	19.0%	0.6%	0.0%
Mult. His/Lat.	365	35.1%	43.0%	38.9%	46.0%	17.0%	37.0%	7.1%	46.0%	1.9%	14.0%
Mult. Other	141	39.0%	45.0%	41.1%	36.0%	10.6%	20.0%	5.7%	38.0%	3.5%	20.0%
Mult. White	2080	41.9%	46.0%	41.5%	32.0%	11.2%	28.0%	3.6%	24.0%	1.8%	5.0%
Yam. All Cases[b]	245	41.6%	76.0%	40.8%	55.0%	14.7%	25.0%	2.0%	60.0%	0.8%	50.0%
Yam. Non-White	53	34.0%	83.0%	49.1%	65.0%	15.1%	50.0%	0.0%	0.0%	1.9%	0.0%
Yam. White	192	43.8%	75.0%	38.5%	51.0%	14.6%	18.0%	2.6%	60.0%	0.5%	100%

a ANOVA (Bonferroni post-hoc) test = Very High risk significantly ($p < .05$) different prison rate from High, Medium, Low, and V-Low risk; High, Medium, and Low risk cases not significantly ($p<.05$) different from one another.

b ANOVA test = Medium, High, and Very High risk levels all significantly ($p <. 05$) different prison rates compared to each other.

Does the LS/CMI exhibit predictive biases?

We applied a similar "predictive bias" test as articulated by Skeem and Lowencamp (2016b); however, rather than using volitional behavior as the dependent variable, we examined the relationship between defendants LS/CMI scores and the decision to incarcerate or not incarcerate, controlling for race of defendants and an interaction between race and LS/CMI scores. If the interaction variable in these models is significant, it means that the race/ethnicity of defendants moderates the utility of risk scores in predicting

case outcomes. In other words, it is evidence that the use of risk information is being applied differently for certain races and impacting sentencing decisions. The results indicate that in both counties race/ethnicity of PAA defendants, by itself, does not have an independent relationship to likelihood of prison. When defendants total LS/CMI scores are entered into the model it has a significant positive impact on likelihood of imprisonment. The likelihood of prison increases 5.1% for every 1 unit increase in the LS/CMI score in Multnomah County and a 10.9% increase in Yamhill County. However, the interaction terms between race/ethnicity and LS/CMI were insignificant in all the models in both counties. In sum, LS/CMI scores do not appear to differentially impact the likelihood of incarceration depending on the race of the defendant. Additional models were run substituting a dummy variable for risk comparing High to Very High risk vs. Medium, Low, and Very Low risk. Defendant's with risk scores of High to Very High were twice as likely to have a prison sentence than Medium, Low, and Very Low risk defendants in Multnomah County and four times as likely in Yamhill. The interaction variables in these models between race and LS/CMI risk levels were also not significant.

Borrowing from risk tool validation studies, we also completed an Area Under the Curve (AUC) test using the likelihood of imprisonment as the state variable rather than volitional behavior. The AUC represents the chance that a case where a defendant was sentenced to prison (a "true positive") chosen at random will have a higher risk score than a randomly chosen case where the defendant was not sentenced to prison. If the AUC score is .500 that means that the risk score is no better than chance or flipping a coin in predicting who is likely to be sentenced to prison. The results indicate that the total LS/CMI score is a "fair" predictor of the likelihood of incarceration with an overall AUC score of .603 (Black =

.645, Hispanic = 523. White = .606, Other = .608) in Multnomah County. An examination of Z-score differences in AUC by race in Multnomah County indicate there are some significant differences. Black AUC scores are significantly higher than all race/ethnicities, and Hispanic scores are significantly lower than all other race/ethnicities. Hence, total LS/CMI risk score is a "good" predictor of prison outcomes for Black defendants and "poor" predictor for Hispanic defendants. In Yamhill County the total LS/CMI score is a "good" predictor of the likelihood of incarceration with an overall AUC score of .709 (Minority = .757, White = .705). The Z-score differences between White and Non-White defendants in Yamhill was not significant.

The following are the key important findings in this final research question: 1) In both counties there were no significant differences across race/ethnicity in the LS/CMI risk scores. This lack of variation in risk may help explain why the earlier models for Research Question 1 found that the programs are not having differential impacts on defendants based on their race/ethnicity. 2) There is evidence that increased risk scores and the highest risk levels are related to increased imprisonment outcomes; the strength of this relationship differed across the two Counties. The LS/CMI risk scores showed a much stronger relationship to increased prison outcomes in Yamhill compared to Multnomah County. This finding appears evident in the overall differences that the two PAA programs send defendants to prison, 35.3% in Multnomah compared to 56.9% in Yamhill. These findings validate some of the concerns of risk assessment critics that higher risk scores will play a part in pre-trial sentence negotiations and increase prison outcomes. This shouldn't come as a surprise since risk is highly correlated with criminal history, which in turn increases a defendant's prison exposure in sentencing guidelines. What we find is that the court's

willingness to depart from the State's recommended sentencing outcome is likely to vary from county to county. Despite the positive relationship between risk score and prison outcomes, we find weak evidence for the core concern of risk assessment critics: that the use of pre-adjudication risk assessment will exacerbate racial/ethnic inequities in sentencing outcomes. 3) The predictive bias analyses and our analyses for Research Question 1 did not find evidence that race/ethnicity moderated the relationship between using risk assessment information and incarceration decisions. At least in these two counties the courtroom workgroup found approaches to weigh risk assessment information in a manner that did not unfairly impact different racial/ethnic groups.

Conclusion/Discussion

The following points represent the primary takeaways we believe are important for readers to understand:

1. The greatest fears of risk assessment critics do not appear to be realized by the data analysis of sentencing outcomes in these two counties and in-depth discussions and observations of the decision-making process. The impact of a PAA approach on sentencing outcomes appears to create equitable results across race/ethnicity. It is not advantaging or disadvantaging any particular group.
2. These programs appear to be race neutral, but are not corrective. In other words, we do not find compelling evidence that these programs would actually lower any existing disparities in sentencing outcomes.
3. Critics fear that the PAA risk and needs assessment information provides justifications to increase harsher sanctioning. We found evidence to support this

concern in Research Question 4, which found a positive relationship between LS/CMI risk score/level with incarceration outcomes. However, we find that court decision-making within the PAA context to be more nuanced, where specific scores and categories of risk are of little value compared to a wholistic grounding of a defendant's likelihood of success in the community based on a multitude of assessment sources. Our interviews clearly support that most decision-makers perceptions of defendant risk come from an enculturated, systematic review of defendant's *criminal history* necessary for evaluating cases in light of sentencing guideline recommendations and local court traditions of case worthiness. The court has been using criminal history to inform their perception of defendant risk for decades; hence, the court's perception of risk was not being replaced by assessment instrument scores. Court decision-makers are using multiple sources of assessment information (e.g. face-to-face discussion with defendants, probation recommendations, prior programming engagement) to inform perceptions of responsivity – "do we have something that can help this individual in the community and are they likely to follow-through." Risk critics like Starr (2014) note that, "responsivity instruments at least address the right question: what can be gained by treating an offender in a certain way? In any event, such uses of actuarial instruments raise less serious constitutional and policy concerns (p.871)." Ensuring the courtroom workgroup understands how to find and use risk assessment information for responsivity assessments will be important for the advancement of PAA programs in the future and protection from its more harmful possibilities.

4. Most everyone we interviewed agreed that more information about defendants is always good. Defense attorneys largely came to support PAA programs because they saw the willingness of prosecution to bargain on cases that would not have happened in the past and clients were able to connect with resources for their betterment. Nonetheless, critics of risk assessment may not be heavily dissuaded by the results of this study. The additional information offered by risk assessment reports and judicial settlement conferences still interjects subjectivity into sentence decision-making processes. Our interviews and observations showed that each decision-maker had their own idiosyncratic way of handling these cases. Hence, there are some inherent risks to utilizing risk/needs assessment information in pre-adjudication decision making. We believe these risks can be overcome with proper training on the gathering and utilization of risk/needs information that highlights potential areas where inequities could manifest and greater emphasis on using the information for identifying needs and assessing responsivity.
5. Almost all defendants in both programs we evaluated were rated High to Very High risk (82%) and all were facing a presumptive prison sentence. We believe this context may be behind the generally positive results we find for the use of a PAA. PAA programs may be best suited for high-risk presumptive prison cases where the risk information is utilized more for mitigation based on the assessed degree of responsivity of defendant's to successful and available community supervision programs, treatments, and resources.

Limitations

The first limitation to the research is related to the manner in which cases are determined for eligibility in the two counties. In Yamhill, DAR cases become eligible through a nomination process while in Multnomah County MCJRP cases are automatically eligible based on the underlying offense type and sentencing grid score (i.e. needs to be a presumptive prison case). Since the DAR eligibility is by nomination, it is unclear the degree to which these cases represent the underlying pool of potentially eligible cases. Most likely very low risk and the very highest risk individuals are less likely to be nominated. In addition, the Yamhill County data entails a small sample size of total cases, which makes sub-population comparison of persons of color or females less stable. The size differences in the county is a strength of our analysis, one large urban county and one small suburban/rural one, but it also creates very different dynamics. Multnomah is large and bureaucratic and Yamhill is small and informal (everyone is very familiar and only a small number of actors participate in the entire process). The control group used in Yamhill, despite involving intensive matching and weighting to the PAA cases, differs from the process used to create the control group in Multnomah County which involved a much more systematic process of determining history case eligibility by researchers and practitioners in the county.

Another important difference between the two counties is the manner in which cases are resolved, which is vastly different. Hence, making direct comparisons and broad generalizations is more tenuous. In Yamhill County, probation officers offer sentencing recommendations, which are sometimes not accepted by prosecution and the court. Whereas, in Multnomah County there is much more idiosyncratic dynamics to the

decision-making process because it involves so many different decision-makers (multiple prosecutors, judges, defense attorneys, and probation officers) and decision points including judicial settlement conferences and prosecution staffing meetings.

Overall the number of study sites we examined is small for making sweeping generalizations about the efficacy or dangers of using pre-adjudication risk assessments. Our findings may only be applicable to programs that are targeting like-defendants and cases. Since 82% of defendants in both programs were assessed High to Very High risk and all faced a presumptive prison sentence, the results may not be applicable to a program that is applied to lower risk or non-presumptive prison cases.

Artifacts

Dissemination activities to date: Conference Presentations/Papers

1. Renauer, B., (2018, February). *Impact of Pre-Adjudication Risk Assessment on Court Outcomes and Racial/Ethnic Disparity*. Academy of Criminal Justice Sciences, New Oreleans, LA.
2. Renauer, B., (2018, November). *Risk vs. Need: The Influence of the LS/CMI on Pre-Adjudication Negotiations in Oregon*. American Society of Criminology, Atlanta, GA.
3. Renauer, B. (2019, February). *Court Personnel Perceptions of Bias and Disparity in the Application of Pre-Adjudication Risk Tools*. Western Society of Criminology, Honolulu, HI.
4. Renauer, B.; Campbell, C.; & Harmon, M. (2019, November). *Pre-Adjudication Risk Assessment and Racial/Ethnic Disparity in Sentencing Outcomes*. American Society of Criminology, San Francisco, CA.
5. Renauer, B., (2019, September). *Is Using Risk Tools to Lower Incarceration An Equitable Approach*. European Society of Criminology, Ghent, Belgium.

Data sets generated:

1. Multnomah County.sav (SPSS)
2. Multnomah County Variables Codebook (Word doc)
3. Yamhill County.sav (SPSS)
4. Yamhill County Variables Codebook (Word doc)
5. PAA Cases Only_Combined County.sav (SPSS)
6. PAA Cases Only_Combined County Variable Codebook (Word doc)

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