Hennepin-University Partnership:
Determining Alignment of Probation Conditions

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Executive Summary

This report details a collaboration between the Robina Institute of Criminal Law and Criminal Justice (the Robina Institute) and Hennepin County Department of Community Corrections and Rehabilitation (DOCCR) to examine whether probation conditions are aligned with evidence-based practices in corrections, specifically the risk-needs-responsivity (RNR) principles (i.e., Andrews, Bonta, & Hoge, 1990) for community supervision, and to explore the effect of alignment on supervision outcomes.

This project was conceived in order to test whether there is a need to bridge the sentencing process with the RNR principles followed by DOCCR. Research suggests that in order to reduce re-offending, probation conditions should reflect RNR principles and that over-supervising low risk individuals can increase recidivism (Lowenkamp, Latessa, & Holsinger, 2006). But because sentencing often occurs *before* the risk assessment has been completed, the probation conditions imposed at sentencing may not relate to the probationer's risk and needs, or may require a higher degree of contact and intervention by the corrections department than suggested by the probationer's risk to reoffend. Since Hennepin prepares a presentence investigation (PSI) for some cases and administers a pre-screener for others, this practice provides a natural "experiment" to explore how assessment might influence conditions.

The project explored the relationship between the sentencing process and RNR principles by asking the following three questions:

1. How well do the risk/needs of offenders align with probation conditions?
2. Does the timing of assessment impact this alignment?
3. Are supervision outcomes improved when conditions are aligned with risk/needs?

Key Findings

The key findings from this study were as follows:

- Most people on probation were assigned a similar number of conditions and similar types of conditions; there was not much variation.

- The average number of probation conditions assigned to people on probation increases with risk, but only slightly. This increase ranged from less than one condition to one condition per increase in risk level.

- People who received a PSI have on average approximately 5 more conditions assigned at each risk level when compared to people who did not receive a PSI.

- A majority of the supervision conditions people were assigned did not target their criminogenic needs.

  ➢ However, most people who had identified needs in the drugs and alcohol domain were assigned probation conditions that aligned with that need, though alignment was better when a PSI was conducted before sentencing.

➢ The majority of people who had identified needs in the family/marital, leisure and recreation, companions (criminal vs. anticriminal), and antisocial pattern were not assigned probation conditions that align with those needs.

➢ When a PSI was not administered, the majority of people who had identified needs in pro-criminal attitudes and orientation were not assigned probation conditions that align with that need; when a PSI was administered, a more substantial proportion of individuals with this need were assigned such a condition.

➢ When there is better alignment between needs and supervision conditions, it appears to be associated with the administration of a PSI, and to be driven by the assignment of conditions to address the domains for alcohol and drugs, education and employment, and pro-criminal attitude and orientation.

• Improved alignment of supervision conditions with risk and needs did not significantly reduce the likelihood of reconviction one year out, however, more research is needed on measuring alignment since this non-significant finding might be due to the small variation in the number of conditions by risk level.

Recommendations

Due to the lack of variation in the number of conditions assigned across people and the small percentage of alignment with needs in the total sample for this study, these results should not be considered the last word on this subject. More research is needed on people with more varied conditions across risk and needs to test additional measures of alignment. Additional research should also measure alignment on other outcome measures such as violations, revocations, and longer follow-up periods for reconviction. Regardless, the data in this study have allowed us to identify recommendations for Hennepin to link better court decision-making and probation supervision, as well as a future research agenda to help Hennepin and other probation agencies bridge the gap between conditions and RNR.

1. Review and refine the content of the PSI to include risk and needs assessment information, which will help inform conditions aligned with recidivism reduction.

2. Provide information on the RNR framework to judges so alignment can improve between supervision conditions with risk and needs.

3. Work to determine whether programming or services are available that could address the criminogenic needs which are currently not targeted among people on probation (specifically, companions, leisure and recreation, family and marital, and antisocial pattern).

4. Continue to monitor data on this topic for people on probation in Hennepin and pursue additional research on this topic.

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I.   Introduction

This report details a collaboration between the Robina Institute of Criminal Law and Criminal Justice (the Robina Institute) and Hennepin County Department of Community Corrections and Rehabilitation (DOCCR) to examine whether probation conditions are aligned with evidence-based practices in corrections, specifically the risk-needs-responsivity (RNR) principles for community supervision, and to explore the effect of alignment on supervision outcomes.

A.   Prior Research

Prior research has established that in order to reduce recidivism, supervision should adhere to a risk-needs-responsivity (RNR) framework (Andrews, Bonta, & Hoge, 1990; Bonta & Andrews, 2017). The risk principle states that supervision should match the intensity of a person's risk to reoffend. For example, a person who is high risk to reoffend should receive more intensive supervision (i.e., report more often to their probation officer, receive more treatment, etc.) than someone who is low risk to reoffend. The need principle provides that programs and services should target the needs or dynamic risk factors of the individual that are associated with their likelihood of reoffending (i.e., criminogenic needs) and that can be changed with appropriate intervention. The responsivity principle requires matching the style and mode of intervention to the abilities, motivation, and learning style of the individual (Bonta et al., 2011).

Additionally, studies have shown that validated, actuarial, objective risk assessment tools should be used to gauge risk to reoffend as a more reliable and valid means to determine someone's likelihood of committing a new offense (Ægisdóttir et al., 2006). Therefore it is important that when supervision is matched according to risk, a risk and needs assessment tool should be used that is grounded in data and that has been validated on a population similar to that for which it will be used.

Most research on the RNR framework virtually ignores the role of the courts in establishing the conditions of probation at sentencing. One challenge in the application of the RNR framework is that even when probation departments design supervision practices to vary by risk level of the offender, they might conflict with the requirements imposed by the court. Research has demonstrated that recidivism rates improve when probation officers spend more time talking with the people they supervise about criminogenic needs and less time talking about probation conditions. "Although probation officers have a duty to enforce the conditions of the court and to deal with crisis that may be noncriminogenic in nature, their time needs to be balanced with addressing the factors that are more directly related to criminal behavior" (Bonta et al., 2011, p. 1144).

Individuals who are high risk to reoffend should receive the most intensive correctional resources and programming (Lowenkamp, Latessa, & Holsinger, 2006). In contrast, placing individuals who are low risk in similarly intensive and highly structured programming can actually increase recidivism, partly because mixing low risk with high risk individuals affords an opportunity for them to learn antisocial behaviors and partly because the high-intensity programming can disrupt the prosocial networks that individuals who are low risk already have (Lowenkamp, Latessa, & Holsinger, 2006). As such, it has been suggested

that probation outcomes can be improved when probation conditions align with risk, and when judges have information at sentencing that clearly differentiates between individuals who are high risk and low risk and have at their disposal correctional intervention options appropriate to these risk levels (Lowenkamp, Latessa, & Holsinger, 2006). This study seeks to address a gap in the research by exploring the relationship between the sentencing process, during which the conditions of probation are established by the court, and the RNR framework used in probation supervision.

B.   Sentencing, Presentence Investigation, and Risk/Needs Assessment in Hennepin

When a person is sentenced to probation for a felony offense, the court will articulate a list of probations conditions that the individual must follow or complete in order to successfully complete probation. Conditions may include requirements such as remaining law abiding, refraining from contact with the victim, or completing a drug or alcohol treatment program. Probation conditions are a court order that must be followed unless later amended by the court.

Minnesota law requires a presentence investigation report (PSI) to be completed prior to sentencing for every felony conviction (Minn. Stat. § 609.115). A PSI is a report that provides additional detail to the court including information about the offense, the individual's criminal record, the individual's social history, and input from the victim. The PSI typically includes recommendations to the court regarding the sentence, and if probation is recommended, as to the conditions of probation. If the risk assessment (or risk and needs assessment, if appropriate) has been completed at the same time, the assessment results inform the probation officer's recommendations to the court. Because of the heavy volume of cases in Hennepin County, Hennepin has developed tiered system of PSIs such that the detail in the report will vary depending on the tier level ordered by the court. Risk and needs assessments are included in Tier 3 and 4 PSIs but not Tier 1 and 2 PSIS; thus, in some cases the recommended probation conditions may be informed by the assessment whereas in other cases, they may not.

DOCCR utilizes the RNR framework to differentiate supervision type for the individuals they supervise on probation. Most individuals who receive a PSI will be assessed using the Level of Service Case Management Inventory (LS/CMI), which is a validated risk and needs assessment tool designed to assess the likelihood of reoffending (i.e., risk level) as well as the factors associated with reoffending that can be changed with intervention (i.e., criminogenic needs). The LS/CMI identifies an individual's likelihood to reoffend by classifying them into a risk level: very low, low, moderate, high, or very high. It also includes domains for criminal history and criminogenic needs including: 1) education/employment; 2) family/marital; 3) leisure/recreation; 4) companions (criminal vs. anticriminal); 5) alcohol/drug Problem; 6) procriminal attitude/orientation; and 7) antisocial pattern. These domains receive a needs level of low, moderate, high, or very high. In contrast, individuals who did not receive a PSI—often those who have been convicted for drug and property offenses--are typically first assessed using a pre-screening tool, which identifies risk of reoffending. The pre-screening tool includes nine items that cover questions related to areas such as criminal history and substance use. The pre-screener classifies people as low, medium, or high risk. Individuals who score high on the pre-screening tool will be administered the more comprehensive LS/CMI risk and needs assessment when they start supervision. The results from these two instruments are used to assign individuals on probation to high, medium, or low supervision. Probationers on high supervision engage in more frequent contacts with probation and are subject to more requirements than probationers on a low supervision level.

C.   Project Purpose and Research Questions

This project was conceived in order to test whether there is a need to bridge the sentencing process with the RNR principles followed by DOCCR. Research suggests that in order to reduce re-offending, probation conditions should reflect RNR principles and that over-supervising low risk individuals has the potential to increase recidivism (Lowenkamp, Latessa, & Holsinger, 2006). But because sentencing often occurs *before* the risk assessment has been completed, the probation conditions imposed at sentencing may not relate to the probationer's risk and needs, or may require a higher degree of contact and intervention by the corrections department than suggested by the probationer's risk to reoffend. Since Hennepin prepares a PSI for some cases and administers a pre-screener for others, this practice provides a natural "experiment" to explore how assessment might influence conditions. The PSI is informed by the LS/CMI and therefore, information provided at sentencing is shaped by the risk and needs of the individual. This PSI group serves as a "treatment" group. Conversely, individuals who do not receive the PSI are the "control" group, since their risk and needs assessment information is not available at sentencing when conditions are established. Though this natural experiment is not random (i.e., the offense type is closely related to the use of the PSI), the two different pathways to condition-setting provide a unique opportunity to explore how DOCCR and the courts can work together to improve RNR supervision.

This project seeks to explore the relationship between the sentencing process and RNR principles by asking the following three questions:

1. How well do the risk/needs of offenders align with probation conditions?
2. Does the timing of assessment impact this alignment?
3. Are supervision outcomes improved when conditions are aligned with risk/needs?

This project is the first to examine whether conditions assigned by the court support or interfere with RNR principles and successful supervision outcomes, and affords Hennepin DOCCR an opportunity to determine how best to coordinate its goals in supervising people convicted of felony offenses with the goals of the court in sentencing them.

II.   Methods

A.   Sample Parameters and Description

The sample for this study was created from all adults sentenced to supervision for a felony offense in Hennepin County during 2016 – 2017. The total sample size was 2,414 people. One outlier (one person was assigned 113 supervision conditions) was removed for the analyses resulting in 2,413 cases that were analyzed in the research questions. In order to examine all three research questions, a study and comparison group were created. The study group contains the individuals who received a PSI at sentencing (n = 1,038; 43%) while the comparison group includes the individuals who did not receive a PSI and instead received the pre-screener (n = 1,375; 57%). For the purposes of this study, only people sentenced with felony level offenses in Hennepin were included and people sentenced for criminal sexual conduct were removed from the sample. The study excluded sex offenders since the research literature suggests using a specialized tool to assess risk of committing a new sex offense to supervise and treat this population (Mann, Hanson, & Thornton, 2010). Therefore using this population in the

study would be incomplete without additional assessment and treatment information to capture alignment to risk and needs.

One limitation to this "natural" study group is that certain offenses are more closely associated with preparation of a PSI (for instance, court policy and practice focuses on prescreening drug and property cases in the district court while all other felony cases are likely to receive the PSI), which means that outcomes could be driven by offense type or characteristics related to people sentenced for certain offense types. However, there is no research that suggests RNR would not apply equally well across different offense types or offense levels. But it may be possible in some analyses that differences found in the PSI and non-PSI group are the result of different offense types. Fortunately, a validated risk level from the LS/CMI or the pre-screener is available for both groups, which can help control for likelihood of reoffending.

The LS/CMI is not administered in all cases and so it is not possible to match or compare all individuals on a validated risk and needs assessment tool. In analyses that examine alignment between supervision conditions and needs, the sample size is smaller since it only includes people who had their needs assessed with the LS/CMI (n = 1,444). Some individuals who did not have a PSI still had an LS/CMI assessment once they started supervision or had assessments from a prior case, therefore it was possible to compare the PSI and non-PSI groups on alignment between conditions and needs. However, one limitation in this approach was that some of the needs information was not assessed at the time the person was sentenced (for the non-PSI group) and it is possible that their needs had changed.

B. Data Description and Measures

i. Supervision conditions

One of the key variables of interest for this study is supervision conditions. Written descriptions for 243 supervision conditions were pulled from the sample in this study that served as the original list for coding. The researchers in this study collaborated with others to code the supervision conditions to ensure they were coded in a way that reflected how supervision conditions operated in practice. For example, a supervision condition might state someone should receive an evaluation for treatment, therefore we worked with Hennepin to receive clarification on what this might look like in the community and clarify things like whether treatment is always substance abuse related and who conducts the assessment. One other example of a condition that required clarification was a condition that ordered someone to attend a specific program, in which case we made sure to clarify what type of program it was by learning about the program target and the modality used to deliver services. Robina staff first coded supervision conditions and then worked with a probation officer who has experience supervising people on felony probation in Hennepin County and is familiar with many of the conditions and requirements imposed on people. Next, we provided our coding to research and program staff at Hennepin to review. In the end, supervision conditions were coded in two ways for this study. Each of these 243 condition descriptions were coded to indicate whether they targeted an LS/CMI domain and whether the conditions adhered to evidence-based practices, both of which are further explained below.

Matching conditions to criminogenic needs and the LS/CMI domains: In this study the over-arching goal was to determine how well supervision conditions align with risk and needs so the first type of approach we took was to code the supervision conditions by matching them to a domain on the LS/CMI.

Conditions were considered to match an LS/CMI domain when the primary purpose of that condition was to address the domain in a manner that matched the criteria in the LS/CMI scoring guide. For example, one common condition was the requirement that someone receive an assessment for drug and alcohol use. This was coded as matching the alcohol and drug domain since the purpose of this condition was to address this need by requiring an assessment in this area that would inform future treatment. In some cases there were conditions that did not target an LS/CMI domain (these were coded as "none"). We also identified instances where a supervision condition targeted more than one domain on the LS/CMI in which case we consulted the LS/CMI scoring guide to determine which primary area the condition targeted by learning more about what the condition looked like in application and how well it aligned with scoring in the domain. For example, some conditions related to domestic abuse could be related to the family and marital domain on the LS/CMI where the program might target relationships with family members, while other conditions related to domestic abuse might refer to a specific program that targets attitudes and thinking underlying abusive relationships which would relate more to the procriminal attitudes/orientation domain on the LS/CMI. Because criminal history cannot be changed with an intervention, this domain was excluded but all other domains were used to code this variable: education and employment, family and marital, leisure and recreation, companions, alcohol and drug, procriminal attitude/orientation, antisocial pattern.

Identification of conditions as evidence-based practices: As the matching to the LS/CMI domain was conducted, it was determined that one limitation to this approach was that a supervision condition might target a specific need but the condition might not target it effectively. For example, a common supervision condition is to request regular drug testing for someone on probation. While this may be intended to target substance abuse, there is no research demonstrating that this practice reduces recidivism and in fact much of the research suggests that this practice alone without other interventions can in fact increase detection of violations (*see*, *e.g.*, Turner, Petersilia, & Deschenes, 1992). To address this, all 243 supervision conditions were labeled as an intervention or service that was associated with evidence-based practices to reduce recidivism or not. This variable was coded as 0 = not an evidence-based practice and 1 = adheres to an evidence-based practice.

Alignment between supervision conditions with risk and needs. Two measures of alignment were developed in this study to capture alignment between supervision conditions with risk and needs. These specific measures are discussed in more detail in the results section for research question 1, where the concept of alignment is explored in the probation population.

> ii.   Risk and needs information

Risk level was obtained from the pre-screener for people who did not receive a PSI and the LS/CMI risk level was used for people who received a PSI. Some individuals who received the pre-screener also had an LS/CMI score in the system because they received one during the course of their supervision or had one completed for another probation case. The needs domains were used in the second research question to examine how the use of the LS/CMI at sentencing might improve alignment of conditions to criminogenic needs. However, the risk level from the LS/CMI is not used for the non-PSI group since the primary purpose of this study is to understand how risk assessment information *at sentencing* might impact supervision conditions; therefore it is assumed the LS/CMI is only used to inform the PSI and not used in non-PSI cases.

Risk level was coded as low, moderate, or high. Needs were coded according to the LS/CMI domains: education and employment, family and marital, leisure and recreation, companions, alcohol and drug, procriminal attitude/orientation, and antisocial pattern. These needs were collapsed from the LS/CMI risk levels (very low, low, moderate, high, and very high) into binary measures that were coded as very low and low (0) or moderate or higher (1). If the domain is coded as a 1, it was considered a need for the individual.

iii. Demographics

Demographics included in this study are gender, race, and age at the time the person started supervision. Gender was coded as male or female. Race was coded as American Indian/Alaskan Native, Asian/Pacific Islander, Black/African American, White, or Missing/Unknown. Age was measured as a continuous variable in years representing the age at the start of probation supervision.

iv. Supervision and court related information

Offense information was from the most serious offense at sentencing that resulted in the individual starting supervision 2016 – 2017. The offenses were categorized as domestic assault, drugs, DWI or other, person (non-domestic), property, prostitution or sex related, societal conduct, and weapons. A variable for supervision type was included, which captures information on reporting and supervision level. This was coded as: administrative, low, medium, high, and other (which included people who were part of a one day DWI program and people who were sentenced to service (i.e., community service).

v. Outcome variables

One outcome variable was used to measure the impact of alignment in this study. This measure is a recidivism measure that includes any new criminal conviction for a misdemeanor or higher in the state of Minnesota within one year from the start of supervision.

C. Analysis techniques

Research question 1 examined how well supervision conditions aligned with the risk and needs of people on probation. Descriptive statistics (mean and standard deviation for continuous variables, frequency and percentage for nominal variables) were used to compare the non-PSI (control) and PSI (treatment) groups on the alignment of supervision conditions with risk and needs. The continuous measures (number of conditions, proportion of needs targeted by conditions (Alignment #1), proportion of conditions targeted by needs (Alignment #2)), independent samples t-tests or Analysis of Variance (ANOVA)'s were conducted to see if alignment significantly differed between non-PSI and PSI groups. Pearson Chi-Square was used to compare nominal variables (examining alignment between people who scored moderate or higher on the LS/CMI domains and who had at least one condition targeting LS/CMI domains).

Research question 2 asked whether the timing of assessment improved the alignment between supervision conditions with risk and needs. The PSI is used as a proxy to capture the timing of assessment. The use of the PSI assumes that risk and needs assessment information is incorporated into the PSI at sentencing and as such, people who receive the PSI have more timely assessment information at sentencing that allows the judge to make a more informed decision about setting conditions. Conversely, those who receive the pre-screener at sentencing do not have timely risk and needs

assessment information since the pre-screener information is limited to risk and does not include needs. This research question was analyzed in a few different ways. First, a linear regression model was developed to determine if the PSI was predictive of the number of supervision conditions assigned to someone on probation. The goal was to determine if the PSI, which is informed by assessment, predicts the number of conditions assigned to someone on supervision. Next, binary logistic regression models were developed for two different alignment measures that tested alignment of conditions with needs. In the first research question, two measures of alignment were created which were proportions. Both of these measures of alignment were collapsed into binary measures for this part of the analysis (rationale and methods for doing this are provided in the results section). The first measure of alignment captures both risk and needs by creating a proportion of needs targeted by conditions to all needs. The second binary logistic regression model tested the impact the PSI had on the second alignment measure, which conceptualized alignment as the proportion of conditions targeting needs to all conditions.

Research question 3 explored the impact of alignment on the outcome of recidivism measured as reconviction within one year from the start of supervision. To accomplish this, binary logistic regression models were used to analyze each alignment measure of supervision conditions with risk and needs on recidivism. Binary logistic regression was used since the outcome variable was equalized as one year from start of supervision for each case in the sample.

For each regression model, the variance inflation factor (VIF) and tolerance values for variables were examined to prevent multi-collinearity. The Hosmer-Lemeshow test was used for all binary logistic regression models in order to test goodness-of-fit. Due to the large sample size, p values of .01 and .001 were considered significant.

III.   Results

        A.   Descriptive Statistics

The descriptive statistics are presented below to provide an overview of the individuals in this study who were on probation for felony offenses in Hennepin County from 2016 – 2017 (excluding criminal sexual conduct cases). The demographics are presented first in Table 1, followed by information related to their offense and supervision. Then, information on recidivism is provided. Since the conditions were coded from 243 categories, these descriptive statistics are not provided in this report.

Information for age, gender, and race for people on supervision for felony offenses (excluding people sentenced for criminal sexual conduct) are presented below for the 2016-2017 time period. In total, 2,414 people are included in this study. Slightly more people in the study did not get a PSI (1,376) than those who did get a PSI (1,038), which created somewhat uneven comparison and treatment groups for this research (as a reminder, the comparison and study groups are not randomly assigned but the result of case processing practices mostly related to offense type). The average age was approximately 32 years old for both the non-PSI and PSI groups. The PSI study group had more people who were African American (55.7%) than the non-PSI group (42.2%), while the non-PSI group had more people who were white (45.6%) than the PSI group (36.7%). In regard to other races, the percentages are more similar. The non-PSI group also had more females (24.5%) than the PSI group (15.4%).

As mentioned earlier in the report, the PSI is most often completed for certain types of felony offenses. The percentages below in Table 2 represent the portion of cases within the treatment or control group

associated with a certain offense. The percentages are presented this way so it is possible to compare the proportion of cases within the treatment and control group by offense type. To illustrate, though 29.3% of people who had a PSI were sentenced for a person (non-domestic) offense, almost all person (non-domestic) cases received a PSI; 304 people sentenced for this type of offense received a PSI while only 57 did not receive a PSI. The table below demonstrates that most person related offenses such as domestic assault, person (non-domestic), and weapons offenses received a PSI. Most drugs and property cases did not, though a portion do comprise the PSI group. While this study used the PSI and pre-screener process as a natural experiment, the offense information below does indicate that the PSI group actually does have a similar proportion of cases in the group for property offenses as the non-PSI group. However, more than half of the non-PSI group is comprised of drug cases, whereas only 14% of the PSI group were drug cases. These differences demonstrate that the natural experiment has created unequal groups based on offense at sentencing.

Table 1: Demographics for people in the study

Demographic Variable	No PSI	PSI Study Group	Total
Age at start of supervision			
Average (SD)	32.6 (10.8)	32.8 (11.0)	32.7 (10.9)
Median, Mode	30, 27	30, 27	30, 27
Range	17 - 71	17 - 85	17 - 85
Race			
American Indian/Alaskan Native	106 (7.7%)	43 (4.1%)	149 (6.2%)
Asian/Pacific Islander	39 (2.8%)	24 (2.3%)	63 (2.6%)
Black/African American	580 (42.2%)	578 (55.7%)	1,158 (48.0%)
White	627 (45.6%)	381 (36.7%)	1,008 (41.8%)
Missing/Unknown	24 (1.7%)	12 (1.2%)	35 (1.4%)
Gender			
Female	337 (24.5%)	160 (15.4%)	497 (20.6%)
Males	1,039 (75.5%)	878 (84.6%)	1,917 (79.4%)
Total	1,376 (100%)	1,038 (100%)	2,414 (100%)

Table 2: Offense type people were convicted of at sentencing for people in the study

Offense Type from Sentencing	No PSI	PSI	Total
Domestic assault	21 (1.5%)	150 (14.5%)	171 (7.1%)
Drugs	757 (55.1%)	145 (14.0%)	902 (37.4%)
DWI or other	38 (2.8%)	53 (5.1%)	91 (3.8%)
Person (non-domestic)	57 (4.1%)	304 (29.3%)	361 (15.0%)
Property	433 (31.5%)	224 (29.3%)	657 (27.2%)
Prostitution or sex related	15 (1.1%)	41 (3.9%)	56 (2.3%)
Societal conduct	46 (3.3%)	77 (7.4%)	123 (5.1%)
Weapons	8 (0.6%)	44 (4.2%)	52 (2.2%)
Total	1,376 (100%)	1,038 (100%)	2,413 (100%)

In regard to RNR and recidivism reduction, offense type is less of a concern than risk to reoffend. The risk level for the probation population is provided below in Table 3. The risk level for the PSI group was the LS/CMI, which DOCCR has collapsed into three risk level categories from the five on the tool. The pre-screener risk level was used for the non-PSI group. The PSI group has a greater percentage of people

classified as high risk (56.8%), while the non-PSI group had the greatest majority of people classified as low risk to reoffend (42.5%). The higher concentration of people classified as lower risk to reoffend in the non-PSI group and the greater concentration of people classified as higher risk to reoffend in the PSI group indicates additional differences between the people in the treatment and comparison groups.

Table 3: Risk level for people in the study

Risk Level	No PSI	PSI	Total
Low	585 (42.5%)	273 (26.3%)	858 (35.5%)
Moderate/Medium	340 (24.7%)	175 (16.9%)	515 (21.3%)
High	451 (32.8%)	590 (56.8%)	1,041 (43.1%)
Total	1,376 (100%)	1,038 (100%)	2,414 (100%)

Note: Risk level was pulled from different assessments depending on the study group. The LS/CMI was used for the PSI group and the pre-screener was used for the non-PSI group.

The next table presents information on the type of supervision (i.e., supervision level) that people were assigned by Hennepin DOCCR. Administrative reporting is the least restrictive supervision type in which the individual is placed on non-reporting status. People might receive this type if they are low risk, but also some other risk levels might be transferred to this case type if they are compliant with supervision conditions for a period of time and do not present any threat to public safety. On the other end of the spectrum, high supervision requires someone to report at least monthly to their supervision officer and includes other forms of supervision such as collateral contacts and home visits. Typically, supervision level type is informed by someone's risk level. However, sometimes people on supervision may have their supervision level increased for reasons such as certain person or case characteristics that warrant additional supervision or reporting. Or, sometimes a supervision officer might use increased reporting as a sanction and request someone to report more often if they are not complying with conditions. As Table 4 displays below, most people in the PSI group (74.1%) had high supervision compared to 53.5% of the non-PSI group. The non-PSI group had more people on administrative supervision (24.1%) though the PSI group had some on administrative supervision as well (12.7%). Based on the information presented below, it appears the PSI group had more people who received more intensive supervision such as increased reporting requirements. It should be noted that the supervision types in Table 4 do not correspond to the risk levels shown in Table 3. Far more individuals in the sample were placed on high-level supervision than were assessed as high risk to reoffend, and this was true for both the non-PSI and PSI groups.

Table 4: Supervision type for people in the study

Supervision Type	No PSI	PSI	Total
Administrative	331 (24.1%)	132 (12.7%)	463 (19.2%)
Low	64 (4.7%)	38 (3.7%)	102 (4.2%)
Medium	79 (5.7%)	33 (3.2%)	112 (4.6%)
High	736 (53.5%)	769 (74.1%)	1,505 (62.4%)
Other	165 (12.0%)	66 (6.4%)	231 (9.6%)
Total	1,375 (100.0%)	1,038 (100.0%)	2,413 (100.0%)

Table 5 below displays information on recidivism for people in the study. The recidivism information available for this study was conviction for a new offense within one year from the start of supervision.

The PSI group had a slightly lower percentage of people who were reconvicted: 28.8% recidivated during this time period for the PSI group and 33.6% in the non-PSI group.

Table 5: Recidivism outcomes for people in the study

	No PSI	PSI	Total
Reconviction within one year			
No	913 (66.5%)	739 (71.2%)	1,652 (68.4%)
Yes	463 (33.6%)	299 (28.8%)	762 (31.6%)
Total	1,376 (100%)	1,038 (100%)	2,414 (100%)

As demonstrated in the descriptive statistics above, there are some differences that exist between the PSI and non-PSI groups. Though the groups are similar in age and regarding reconviction rates, there are differences that exist among offense types and risk level that are notable. The PSI group is comprised of a greater proportion of people who are classified as higher risk to reoffend than the non-PSI group. Approximately half of the non-PSI group included people who were sentenced for drug offenses, but this represented only about 14% of the people in the PSI group.

        B.   Question 1: How well do the risk and needs of people on probation align with supervision conditions?

Risk

Adherence to risk and needs were analyzed separately to explore how well the risk and needs of people on probation align with supervision conditions. Risk was examined for both the non-PSI and PSI group by looking at the average number of conditions for each risk level as a means to conceptualize alignment with risk. Based on the principles of RNR, it would be expected that people classified as low risk to reoffend would have fewer conditions than those classified as moderate risk, and that those classified as moderate risk would have fewer conditions than people classified as high risk. Risk level for the PSI group is based off of the LS/CMI assessment conducted at the PSI stage since this assessment would have informed the PSI, while the non-PSI group's risk level is from the pre-screener assessment.

To inspect risk, the goal was to analyze whether an increase in risk level was associated with an increase in the number of conditions. This was accomplished by examining the average number of conditions assigned to people according to risk level. The results are presented separately for non-PSI, PSI, and the total probation sample in the study. A two-way Analysis of Variance (ANOVA) was conducted to see if the average number of conditions by risk level were significantly different between the PSI and non-PSI group. Results for the descriptive statistics and ANOVA are presented in Table 6 below.

As this table demonstrates, the average number of conditions assigned to people increases between low and medium/moderate risk level for both the PSI and non-PSI group. For the non-PSI group, there is only a 0.1 difference between the average number of conditions for medium/moderate and high risk. For the PSI group, there is an increase in approximately one supervision condition for each increase in risk level. With the exception of moderate and high risk level in the non-PSI group, the average number of conditions increases with risk level. However, the PSI group has approximately 5 more conditions assigned on average for each risk level when it is compared to the non-PSI group. This illustrates that even though the number of conditions varies by risk, those who receive a PSI are also assigned more supervision conditions on average. The significant results (F= 87.591, p<.001) from the two-way ANOVA

demonstrate that there is a significant difference for the average number of conditions assigned to the PSI and non-PSI group.

Table 6: Examining the mean number of conditions assigned to people by risk level

	Mean (SD) for Number of Conditions		
	No PSI	**PSI Group**	**Total**
Risk Level			
Low	13.8 (6.4)	18.2 (8.2)	15.3 (7.3)
Medium/Moderate	15.8 (5.3)	19.5 (4.6)	17.0 (5.4)
High	15.7 (5.6)	20.8 (6.4)	18.6 (6.6)
Total	15.0 (6.0)	19.9 (6.8)	17.1 (6.8)
ANOVA			
F value	87.591**		

Note: Risk level was pulled from different assessments depending on the study group. The LS/CMI was used for the PSI group and the pre-screener was used for the non-PSI group.
**$p<.001$

The results from the ANOVA indicate there is not much variation in the number of conditions assigned by risk level, though strictly speaking the number of conditions does increase for each risk level. Instead, the more important conclusion drawn from this analysis is the more noticeable difference in the average number of conditions between the non-PSI and the PSI group. Figure 1 provided below contrasts the number of conditions assigned for the PSI and non-PSI groups by displaying the number of conditions assigned by each risk level. A majority of people received 12-24 conditions regardless of risk level or the use of the PSI, which can be seen below with the concentration of red and blue bars within the same range on the charts for all three risk level histograms. However, we can also view the red bars (the PSI group) tend to concentrate more towards the right side of the x-axis, which indicates slightly higher averages for the number of conditions assigned to the PSI group.

Figure 1: Histograms contrasting the number of conditions for the PSI and non-PSI group by risk level

Medium/Moderate Risk Level

High Risk Level
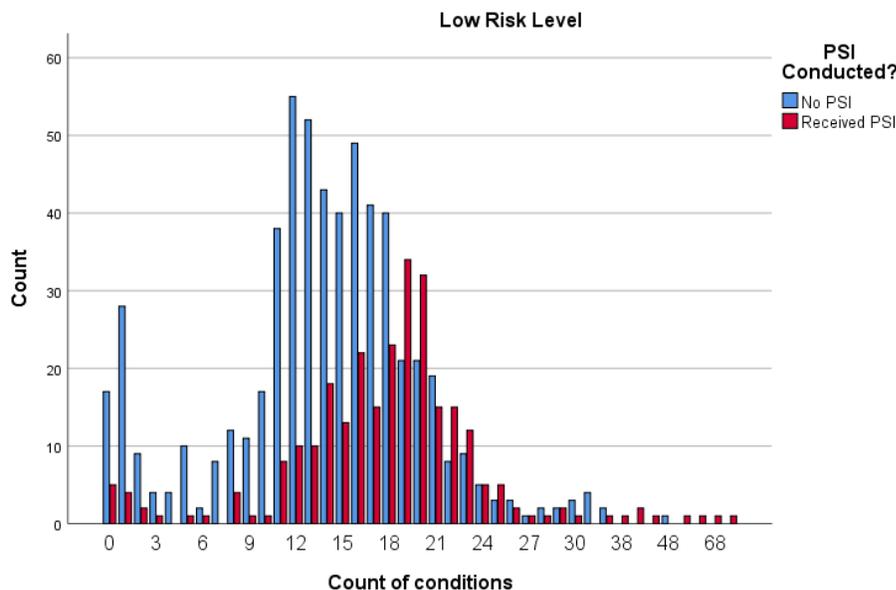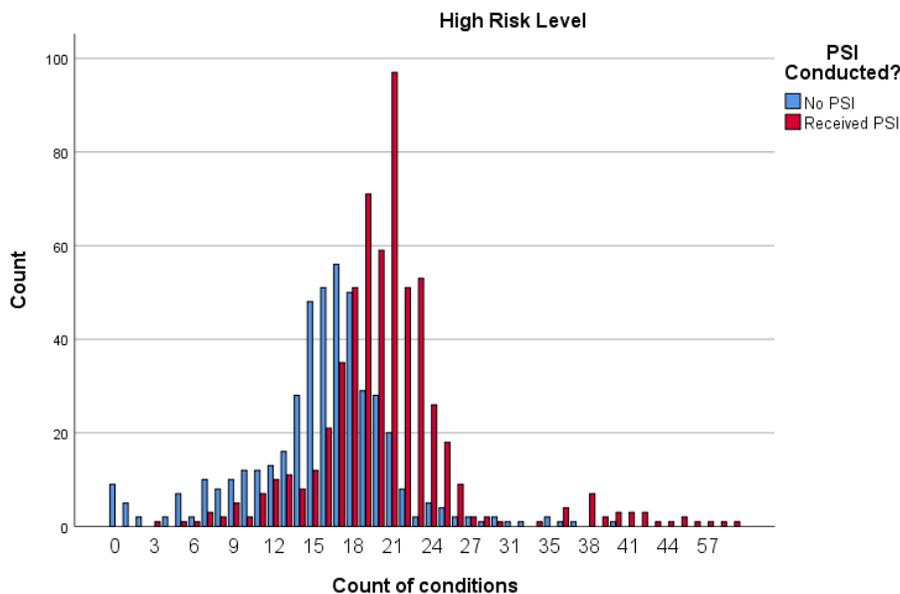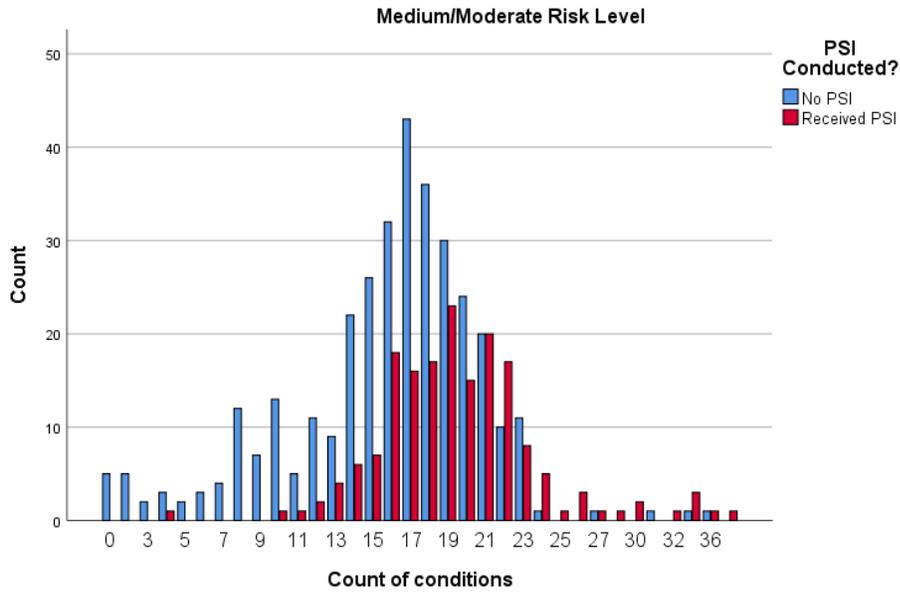
Needs

To examine alignment of supervision conditions with criminogenic needs, analyses were conducted on only those PSI and non-PSI people who had an LS/CMI score. Therefore anyone who did not have an LS/CMI and as a result, did not have any criminogenic needs assessed, were not included in this analysis. As discussed in the methods section, not every person in the non-PSI group has an LS/CMI and in some cases, the LS/CMI included in the analysis may be up to one year old.

Because prior research has not examined the alignment of supervision conditions and criminogenic needs, the data was examined from multiple perspectives to explore this concept. First, people on

probation who scored moderate or higher under each domain on the LS/CMI are presented in Table 7 below. This sub-sample of individuals was then divided into two groups indicating the percentage of people who had at least one supervision condition targeting the domain and the percentage of people who had no supervision conditions targeting that domain. A Pearson Chi-Square analysis was conducted to determine if there was a significant difference between the PSI and the non-PSI group regarding how well needs were targeted by supervision conditions. As revealed in Table 7 below, most people were not assigned supervision conditions that align with their criminogenic needs as demonstrated by the small percentage of people who have supervision conditions related to the domains for which they have a score of moderate or higher risk level on the LS/CMI. One exception to this was the alcohol and drugs domain, where 91.1% of all people who scored moderate or higher in this domain had at least one supervision condition targeting this.

Table 7: Examining the alignment of supervision conditions with needs for people who scored moderate or higher for domains on the LS/CMI

	No PSI	PSI Group	Total
Moderate or Higher on LS/CMI Domain:			
Education & Employment			n = 1,000
No conditions aligned to this domain	292 (67.6%)	236 (41.5%)	528 (52.8%)
At least one condition is aligned to this domain	140 (32.4%)	332 (58.5%)	472 (47.2%)
Family & Marital**			n=989
No conditions aligned to this domain	366 (96.6%)	364 (70.0%)	730 (81.2%)
At least one condition is aligned to this domain	13 (3.4%)	156 (30.0%)	169 (18.8%)
Leisure & Recreation			n=1,254
No conditions aligned to this domain	413 (85.5%)	682 (88.5%)	1,095 (87.3%)
At least one condition is aligned to this domain	89 (11.5%)	89 (11.5%)	159 (12.7%)
Companions (criminal vs. anticriminal)*			n=1,196
No conditions aligned to this domain	492 (98.4%)	646 (92.8%)	1,139 (95.2%)
At least one condition is aligned to this domain	8 (1.6%)	50 (7.2%)	58 (4.8%)
Alcohol & Drugs**			n=1,140
No conditions aligned to this domain	81 (17.3%)	22 (3.3%)	103 (9.0%)
At least one condition is aligned to this domain	387 (82.7%)	650 (96.7%)	1,037 (91.1%)
Procriminal Attitude/Orientation*			n=739
No conditions aligned to this domain	222 (79.0%)	184 (40.2%)	406 (54.9%)
At least one condition is aligned to this domain	59 (21.0%)	274 (59.8%)	333 (45.1%)
Antisocial Pattern			n=884
No conditions aligned to this domain	386 (97.2%)	423 (86.9%)	89 (91.5%)
At least one condition is aligned to this domain	11 (2.8%)	64 (13.1%)	75 (8.5%)

Note: This table presents information on people who scored moderate or higher risk by domain on the LS/CMI since it is expected that for each domain someone has a need in there should be at least one condition of supervision addressing this need (i.e., alignment). Therefore sample size for each domain varies depending on the number of people who had a score of moderate or higher on the domain across both the PSI and non-PSI groups. Items were significant at $p<.001$(**) or $p<.01$(*) in Pearson Chi-Square analysis.

There were four domains in which the PSI and non-PSI displayed significant differences in how well supervision conditions aligned with needs: family and marital, ($p<.001$), companions ($p<.01$), alcohol and drugs ($p<.001$), and procriminal attitude and orientation ($p<.01$). In the PSI group, 30.0% of people with a family and marital need had at least one supervision condition targeting this area in comparison to

3.4% of people in the non-PSI group. More individuals in the PSI group (59.8%) who had a need in procriminal attitude/orientation also had at least one supervision condition targeting this need whereas only 21.0% of those who had this need in the non-PSI group had supervision conditions targeting this area. Though most individuals on probation received supervision conditions aligned with drugs and alcohol, alignment was better for the PSI study group: 96.7% of individuals who had this as a need also had at least one alcohol and drugs related condition in comparison to 82.7% of those in the non-PSI group. Lastly, 7.2% of people in the PSI group who had companions scored as a need were assigned at least one supervision condition related to this area but only 1.6% of individuals in the non-PSI group had this need targeted by a condition.

One limitation to this analysis was that not all LS/CMIs were current for people in the non-PSI group, however, these scores should provide a fair approximation of needs since it is plausible that most domains did not change dramatically over the time period. Regardless of this limitation, the findings in this section are still noteworthy. Overall, a low percentage of the needs of the probation population are addressed by supervision conditions, regardless of the use of the PSI. The one exception to this is the drugs and alcohol domain, where a high percentage of people who scored as a need in this domain on the LS/CMI had at least one supervision condition targeting this need. This is unsurprising given the number of conditions related to drug testing and referrals for assessment and treatment in the community (as a reminder, conditions coded as targets for the LS/CMI require the goal of targeting that need even if it is not an evidence-based practice). Some differences are notable between the non-PSI and PSI groups. For those with a PSI, there appears to be slightly better alignment between the probation population's needs and supervision conditions for the areas under alcohol and drugs, family and marital, companions, and procriminal attitude/orientation. Though the PSI group had slightly better alignment than the non-PSI group in the companions need, this need was targeted at a very low rate overall (4.8% of people with this need had at least one supervision condition targeting it). It also appears that the areas of antisocial pattern (i.e., prior pattern of generalized trouble, early antisocial behavior) and leisure and recreation are rarely addressed with supervision conditions, as evidenced by the low percentages of supervision conditions that target these needs across both the PSI and non-PSI groups.

Next, we developed two different measures of alignment between supervision conditions and needs so that alignment might be evaluated with a specific construct. First, one measure (Alignment #1) was constructed by counting the number of LS/CMI domains in which a person had a need *and* had at least one supervision condition targeting that area to the total number of needs the individual had from the LS/CMI (criminal history was excluded since this is not a dynamic need that can be targeted). In other words, the numerator of the equation included the number of domains targeted by conditions and the denominator included the number of needs the person had based on their LS/CMI assessment (i.e., each domain they scored moderate or higher). The resulting number represented the proportion of criminogenic needs targeted by supervision conditions to the total number of needs that they have. There are a total of 7 possible needs since 7 of the 8 domains on the LS/CMI measure dynamic risk factors. To illustrate this measure, if there was perfect alignment between criminogenic needs and supervision conditions, one person might have scored moderate or higher on 3 LS/CMI domains (education and employment, companions, and alcohol and drugs) and *at least* one supervision condition targeted each of these domains. However, if someone only had conditions targeting alcohol and drugs, the proportion of needs targeted would be 1 to 3, or 0.33. This measure was constructed as a proportion of needs targeted because it may be possible that the number of conditions does not matter, but rather that conditions target a range of needs.

Another measure (Alignment #2) was created that tallied the number of supervision conditions which targeted criminogenic needs to all supervision conditions. This measure was created by counting the number of supervision conditions that targeted need for which a person scored moderate or higher on in the LS/CMI domains divided by the total number of conditions. This measure was constructed because alignment of conditions might also be conceptualized as a certain amount or proportion of all conditions that target criminogenic needs. Alignment #1 focuses on the proportion of needs targeted by conditions and Alignment #2 captures the proportion of conditions targeting needs.

The information in Table 8 below reviews the descriptive statistics for the proportions developed in both needs alignment measures. The PSI group had better alignment with both measures. The PSI group had a higher proportion of needs (0.38) targeted by conditions to all needs than the non-PSI group (0.24). This means that on average for people who have a PSI, less than half of a person's criminogenic needs are being addressed by conditions, and for the non-PSI group, only a quarter of needs are addressed. The difference in proportions for Alignment #1 was significant in the independent samples t-test at $p<.001$, which demonstrates a meaningful difference between these two groups. The PSI group also fared better with the Alignment #2 measure though it was significant at $p<.01$. For the PSI group, 20% of supervision conditions targeted their criminogenic needs compared to 18% for the non-PSI group. This means in the average case with 15 conditions, just 3 of the 15 conditions were aimed at addressing the criminogenic needs of those in the PSI group.

Table 8: Examining the alignment of criminogenic needs with supervision conditions

Alignment Measures	Non-PSI	PSI	Total
n	564	859	1,423
Proportion of Alignment #1: Number of criminogenic needs targeted by conditions to total needs**			
Average (SD)	0.24 (0.20)	0.38 (0.20)	0.33 (0.21)
Range	0 – 1.00	0 – 1.00	0 – 1.00
Proportion of Alignment #2: Number of conditions targeting moderate or higher needs to total conditions*			
Average (SD)	0.18(0.14)	0.20 (0.11)	0.19 (0.12)
Range	0 – 1.00	0 – 0.89	0 – 1.00

Note: n in this analysis only includes people who had LS/CMI assessments.
**$p<.001$ or *$p<.01$ significant in Independent Samples t-tests

In summary, a majority of the supervision conditions people were assigned did not target their criminogenic needs nor did they vary by risk. The one exception to this was in the alcohol and drugs domain, where for both the non-PSI and the PSI group a substantial percentage of individuals who had an alcohol and drug need had at least one supervision condition targeting this area. The PSI group demonstrated significantly better alignment between conditions and needs than the non-PSI group, but the alignment measures were extremely weak for both groups as demonstrated by their low average proportions. When there is better alignment between needs and supervision conditions, it appears to be associated with the administration of a PSI, and to be driven by the assignment of conditions to address the domains for alcohol and drugs, education and employment, and procriminal attitude and orientation.

C.   Research question 2 – Does the timing of assessment impact this alignment?

The second main research question examined how the timing of assessment impacts alignment to risk and needs. This is of interest because hypothetically, if the judge has assessment information at the time of sentencing it would be expected that there is improved alignment between the supervision conditions that are ordered and the criminogenic needs of the individual on supervision. The PSI group in this study was considered the group that has more "timely" risk and needs assessment results since the judge had a PSI, which is informed by the LS/CMI risk and needs scores, at sentencing. The availability of this information could allow judges to set conditions informed by risk and needs whereas those cases in which a PSI was not conducted judges would not have the same detail of risk and needs information provided at sentencing. In order to investigate how the timing of assessment impacts the assignment of conditions by risk and needs, regression models were built to explore the impact the PSI had on alignment to risk (i.e., does the PSI and increase in risk level predict an increase in the count of conditions) and alignment to needs (i.e., does the use of the PSI predict greater likelihood that conditions and needs match). One limitation to this approach is that the PSI incudes additional information to the LS/CMI, therefore, any significance in the outcome associated with the PSI could be a result of *any* information judges use from the report. PSIs often include a great amount of detail on the current offense(s), prior criminal history, victim statements, and other factors that may not relate to risk and needs. Furthermore, even if a PSI is prepared for a case, it does not always mean that the judge reviews the PSI and uses the information for sentencing decisions.

Risk

To examine how timing impacted the adherence between risk and supervision conditions, a linear regression model was created that examined the use of a PSI in predicting the number of supervision conditions. The PSI was deemed to be a proxy for timing because presumably it is prepared to inform the sentence; therefore, cases in which a PSI is completed should have been informed by a risk assessment performed *before* sentencing whereas cases in which a PSI was *not* completed likely did not have a risk assessment performed until after sentencing.

Before reviewing the results of this regression model, a main limitation must be discussed. The linear regression model exploring risk does not fully test alignment to risk since the outcome variable is the number of conditions and not *alignment* between the number of conditions and risk. We made multiple attempts to create a measure of alignment for risk so that a specific construct could be tested. We explored measures such as different categories of condition counts that were associated with risk. However, regardless of risk level most people fell within a certain range of conditions so creating different cut-offs for the number of conditions for each risk level was arbitrary and not meaningful. For example, Table 9 below shows that the greatest number of conditions for someone in this analysis was 72, but the average and median was 17 and the mode was 18. Most people in the sample (approximately 80%) had 10-20 conditions. Another approach considered was to divide the total number of conditions into three groups since there are three risk levels, but again, the arbitrary nature of the number of conditions assigned and the concentration of cases within a certain range of conditions prevented us from developing a categorical measure of alignment where risk might be associated with a range of conditions (i.e., if the sample was cut into equal thirds for each risk level then low risk might be 0-15 conditions). Because there was not much variation in the number of conditions or conditions by

risk, we were unable to develop a measure of alignment specifically testing risk and the number of supervision conditions.

Table 9: Descriptive statistics on the number of conditions in the sample

Descriptive Statistics	Conditions
Mean, Median, Mode	17.1, 17.0, 18.0
SD	6.8
Range	0.0 – 72.0
Percentiles	
First third (33.3%)	15.0
Second third (66.6%)	19.0

Despite the limitation to this analysis the linear regression model does provide some insight into the impact of the PSI on supervision conditions. At a minimum, we would expect an increase in risk level to be associated with an increase in the number of conditions someone receives even with other control variables added. The regression model tested the impact of timing by determining if the PSI – which is informed by the LS/CMI - *and* risk level are associated with an increase in conditions once control variables were included. The linear regression model included the PSI and risk level to determine their impact on the number of conditions. The following control variables were used: gender, race, age at start of supervision, most serious offense from sentencing, and risk level.

The results of the linear regression model (Table 10) found four variables that predicted the number of supervision conditions assigned to people on probation. The only offense type that was predictive was DWI or other, which was significant at $p<.01$. Since the reference category is domestic assault, the analysis demonstrated that a DWI or other offense was associated with an increase in the number of conditions assigned relative to those sentenced for domestic assault offenses. Moderate/medium risk and high risk were both significant at $p<.001$, signifying that an increase in risk from low risk was associated with an increase in the number of conditions assigned. Moderate/medium risk (Beta = .107) and high risk (Beta = 0.172) values showed that high risk had a slightly stronger impact than moderate/medium risk. Finally, for the variable of interest, the analysis demonstrated that having a PSI conducted was also associated with an increase in supervision conditions assigned. Interestingly, the PSI was associated with the largest increase of all variables in the model (Beta = 0.292).

This model demonstrates that with control variables, the use of the PSI does predict the number of conditions used such that people who receive the PSI also receive more conditions (an average of 4 more conditions) than those who do not receive a PSI. However, risk was also predictive which reveals that an increase in risk is also associated with an increase of supervision conditions. For example, high risk was associated with approximately 2 more supervision conditions than low risk. Based on this analysis, it appears that the supervision conditions vary partly because of risk level but that more conditions were assigned to people who receive the PSI. It is interesting to note that, commensurate with the pattern noted above where needs in the drug and alcohol domain are frequently addressed, people convicted for DWI offenses received 2 more conditions on average compared to the reference group.

Table 10: Linear regression model predicting the number of conditions assigned to people on probation

Variable	B	Standard Error	Beta	t	Sig.
(Constant)	14.373	.881		16.322	.000
Received PSI[a]**	4.016	.318	.292	12.637	.000
Age at time of supervision start	-.020	.012	-.032	-1.667	.096
Male[b]	.410	.323	.024	1.267	.205
Race					
Asian/Pacific Islander[c]	-.265	.947	-.006	-.280	.779
Black/African American	.249	.550	.018	.452	.651
White	.418	.559	.030	.748	.455
Missing or unknown	-.954	1.161	-.017	-.822	.411
Offense category					
Drugs[d]	-.538	.575	-.038	-.935	.350
DWI or other*	2.281	.822	.064	2.776	.006
Person (non-domestic)	.645	.584	.034	1.104	.270
Property	-1.159	.567	-.076	-2.043	.041
Prostitution or sex related	1.216	.981	.027	1.239	.215
Societal conduct	-.993	.741	-.032	-1.340	.180
Weapons	-1.422	.986	-.030	-1.442	.149
Risk level on pre-screener or LS/CMI					
Moderate or Medium[e]**	1.767	.354	.107	4.997	.000
High**	2.367	.306	.172	7.732	.000
Model F	30.565*				
Adjust R Square	0.164				

[a]Reference group did not have a PSI and received the prescreener. Reference group is female,[b] American Indian/Alaska Native,[c] domestic assault,[d] and low risk.[e]

**$p <.001$, * $p <.01$

One limitation to this analysis was that the outcome measure did not capture alignment to risk but was instead a crude measure that helped test whether or not the PSI and risk level significantly predicted an increase in the number of conditions assigned to someone on probation. In the next section, two different needs alignment measures were tested to determine the impact the PSI had on alignment once other predictor variables were controlled. The first needs alignment measure analyzed below indirectly also includes alignment to risk, so does allow for a partial test of risk *and* needs.

Needs

In research question 1, two measures of alignment were created to capture how well supervision conditions and criminogenic needs aligned. One measure captured the alignment between needs and conditions by gauging how well supervision conditions targeted someone's needs (Alignment #1). A proportion was created that reflected the number of needs targeted by conditions to all the needs the individual had scored on the LS/CMI. The other measure counted the number of conditions that matched a criminogenic need to all conditions (Alignment #2). The first measure reflects the theoretical concept that in RNR, in order to reduce recidivism, a person should have programs and services targeting the domains they score moderate or higher in on their risk and needs assessment. The second measure taps into the concept that more conditions should target needs than not target needs.

The Alignment #1 measure was further refined for this analysis so that it was collapsed into a binary measure. This was done for a few reasons. First, the distribution of proportions was not normal and would prevent any regression or other complex analyses from being conducted. See Figure 2 for an illustration of this. Next, from a practical perspective, it is unlikely that a unit increase such as a percentage increase would be associated with an improvement in outcomes and rather, a certain "threshold" might be more relevant. Because no prior research has been conducted on this, a similar approach to prior research on risk and needs was followed but we incorporated a more liberal threshold. In prior research on correctional program effectiveness, it has been found that programs which target at least 50% of criminogenic needs in their programs are associated with reductions in recidivism (University of Cincinnati Corrections Institute, 2015). Though this threshold was set for the program level, we translated a similar approach to the percentage of conditions that should target needs at 50% or more as well.

Figure 2: Distribution of proportions from Alignment #1: Proportion of needs targeted by conditions
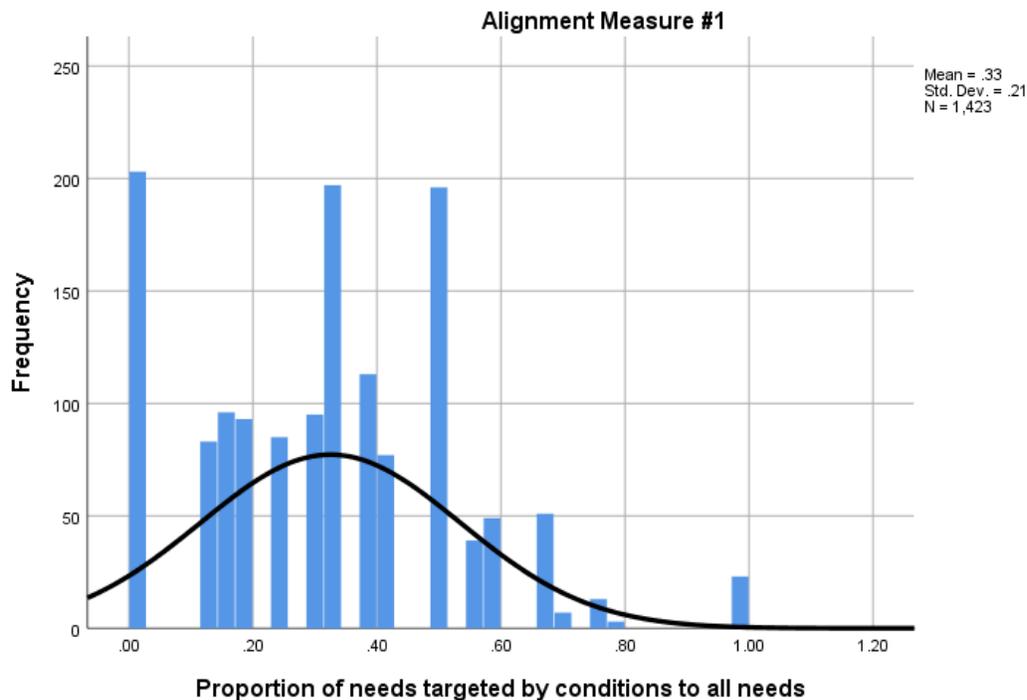
Table 11: Binary logistic regression model that examines factors that predict alignment (#1) between supervision conditions and criminogenic needs (i.e., at least 50% of needs are targeted by supervision conditions)

Variable	B	S.E.	Wald	DF	Sig.	Exp(B)
Received a PSI	.854	.241	12.526	1	.000	2.349
Age at time of supervision start	-.029	.009	9.519	1	.002	.971
Male	.398	.274	2.107	1	.147	1.489
Race			2.678	4	.613	
Asian/Pacific Islander[a]	.617	.672	.843	1	.358	1.854
Black/African American	.127	.399	.102	1	.750	1.136
White	.131	.415	.100	1	.752	1.140
Missing or unknown	.981	.736	1.774	1	.183	2.666
Collapsed version of offense for HUP study			36.047	7	.000	
Drugs[b]	-1.294	.325	15.873	1	.000	.274
DWI or other*	-1.336	.483	7.668	1	.006	.263
Person (non-domestic)	-.149	.275	.292	1	.589	.862
Property	-1.287	.322	16.000	1	.000	.276
Prostitution or sex related	-.359	1.164	.095	1	.758	.698
Societal conduct	-.784	.413	3.608	1	.057	.456
Weapons	-1.445	.603	5.737	1	.017	.236
Medium or higher on Criminal History	.300	.235	1.627	1	.202	1.350
Medium or higher on Education & Employment	.440	.213	4.260	1	.039	1.553
Medium or higher on Family & Marital	.039	.189	.042	1	.837	1.040
Medium or higher on Leisure & Recreation	-.648	.272	5.663	1	.017	.523
Medium or higher on Companions	-1.298	.221	34.510	1	.000	.273
Medium or higher on Alcohol & Drugs	1.735	.311	31.076	1	.000	5.670
Medium or higher on Procriminal Attitude & Orientation	.535	.209	6.547	1	.011	1.708
Medium or higher on Antisocial Pattern	-1.207	.235	26.439	1	.000	.299
Constant	-1.396	.719	3.768	1	.052	.248
Model Chi-Square	200.023**					
Nagelkerke R Square	0.244					

Note: Reference group is American Indian/Alaska Native[a] and domestic assault[b].

**p<.001

In order to examine how the PSI impacted the alignment of conditions with needs, a binary logistic regression model was used. The outcome variable was alignment of supervision conditions with needs, with at least 50% of needs (i.e., LS/CMI domains someone scored moderate or higher) targeted by supervision conditions (categorized as 1) or less than 50% of needs targeted by supervision conditions (categorized as 0). The main explanatory variable of interest was the PSI, specifically, whether someone

received a PSI or did not receive one. Control variables included gender, race, offense type, and criminogenic needs. Since this model is exploring alignment with needs, a binary version of each domain (i.e., the person scored moderate or higher in that domain) was included as well. Risk level was not included since the needs domains would be redundant for risk level. Related, this alignment measure did serve as a partial test for both risk *and* needs. It is a partial test of risk as well because if someone scored moderate or higher on more domains, they would also score higher risk on the LS/CMI. Conversely, if someone scored moderate or higher on fewer or no domains, they would score as low risk on the LS/CMI.

Age was significant (p<.01), where an increase in age was associated with a decrease in the likelihood that the person had at least 50% of their needs targeted by their supervision conditions. Certain offenses were also predictive of a decrease in the likelihood that at least 50% of needs were targeted by conditions: drugs (p<.001), DWI or other (p<.01), and property (p<.001). There were some interesting results for a few domains that were significant. By scoring moderate or higher on the companions domain (p<.001) and the antisocial pattern domain (p<.001) of the LS/CMI, there was a decrease in the likelihood that at least 50% of needs were targeted by supervision conditions. However, scoring moderate or higher in the alcohol and drugs domain (p<.001) was associated with an increased likelihood that at least 50% of the person's needs were targeted by supervision conditions. The need domains findings are unsurprising given the crosstabs examined in the first research question found that the drugs and alcohol domain was targeted more often by conditions overall and was significantly more aligned for the PSI group. And finally, of most relevance to the discussion here, having a PSI conducted was significant (p<.001) and associated with an increased likelihood that at least 50% of needs were targeted by supervision conditions.

Alignment #2

The second alignment measure was collapsed into a binary measure as well. However Alignment #2 had a much lower average ratio of alignment and a different distribution as demonstrated below in Figure 3. Though part of the distribution appears normal, a substantial number of cases are on the lower end near 0 (i.e., no or a very small proportion of conditions targeted needs). Because the proportions were much lower with this measure, a different cut-off was created for the binary measure. If 50% was used as the cut-off, only 3% of cases would have been categorized as having 50% or more conditions aligned with needs to all conditions. Instead, Alignment #2 was collapsed into an outcome measure defined as 25% or more of total conditions targeted an individual's needs (1) and less than 25% (0).

A binary logistic regression analysis was conducted to examine the second alignment measure between needs and conditions. The same control variables were included for age, gender, race, offense type, and domains from the LS/CMI. The PSI was the main independent variable to determine if the PSI, which includes timely risk and needs assessment information from the LS/CMI, improves alignment of supervision conditions to criminogenic needs. Table 12 presents the results for this analysis.

This measure of alignment was predicted by certain offense types as well: drugs (p>01), DWI or other (p<.01) and property (p<.001). However, a DWI or other offense was associated with an increase in the likelihood that at least 25% of supervision conditions or more targeted needs while the others were associated with a decrease in the likelihood. Four domains were associated with an increase in the likelihood of someone having more conditions that targeted needs: education and employment (p<.001), family and marital (p<.01), alcohol and drugs (p<.001), and procriminal attitude and

orientation (*p*<.01). Unlike the prior model, however, the use of a PSI was not significantly related to at least 25% of conditions aligned with needs.

Figure 3: Distribution of proportions from Alignment #2: Proportion of conditions aligned with needs
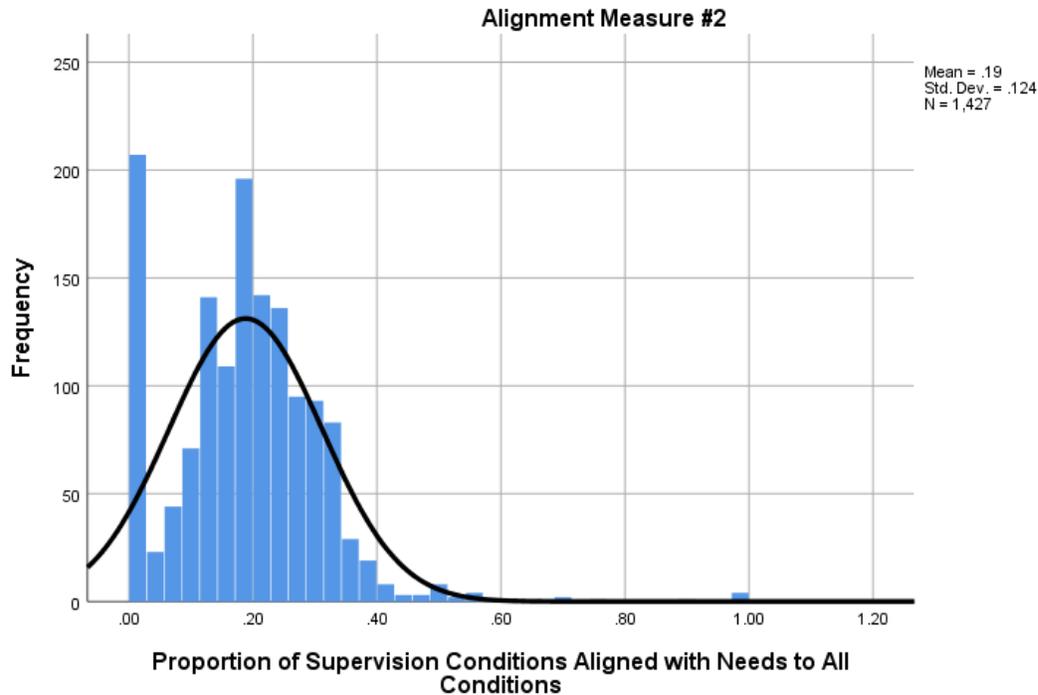
In summary, the PSI predicted an increase in the likelihood that supervision conditions were aligned with criminogenic needs in the first alignment measure but not the second. It appears the timing of assessment – the use of the LS/CMI at the PSI stage – was associated with an improvement in alignment when alignment was measured as the number of needs targeted by conditions to the total number of needs. The PSI was not associated with an improvement in alignment when it was conceptualized by the proportion of all conditions targeting needs. These findings suggest that the PSI, which incorporates risk and needs assessment information at sentencing, impacts the number of needs targeted, but not the total number of conditions. One limitation in these analyses was the use of the PSI as the explanatory variable. The PSI was used as a proxy for timely risk and needs assessment results since the LS/CMI assessment informs the PSI. But there are limitations to using the PSI as a proxy. One limitation concerns the additional information in the PSI beyond risk and needs assessment, which may have influenced the assignment of conditions. Another limitation is the assumption that each judge uses the information from the PSI to set conditions. Interestingly, in the first model where the PSI was predictive of alignment (Exp(*B*)=2.3), the odds of alignment increased more by scoring moderate or higher on the alcohol and drugs domain (Exp(*B*)=5.7). This is likely related to the large proportion of people who had an alcohol or drug condition aligned with this need. Finally, one more limitation to these analyses is the outcome measure. There is no prior research on this topic to refer to that would provide a general framework for measuring alignment or the number of conditions or needs most effective at reducing recidivism or improving outcomes. The alignment measures in these analyses were developed from the data and are exploratory. It is possible that with additional or different data there might be more variation in conditions, and subsequently other measures of alignment that capture better the variation of alignment necessary between risk and needs.

Table 12: Binary logistic regression model that examines factors that predict alignment (#2) between supervision conditions and criminogenic needs (i.e., at least 25% of supervision conditions target needs)

Variable	B	SE	Wald	df	Sig.	Exp(B)
Received a PSI	.331	.159	4.329	1	.037	1.392
Age at time of supervision start	-.012	.007	3.123	1	.077	.988
Male	.175	.191	.845	1	.358	1.191
Race			6.407	4	.171	
Asian/Pacific Islander[a]	.479	.523	.840	1	.360	1.615
Black/African American	-.035	.252	.019	1	.890	.966
White	.297	.262	1.282	1	.257	1.346
Missing or unknown	.519	.596	.757	1	.384	1.680
Offense Type			53.484	7	.000	
Drugs[b]	-.670	.253	7.035	1	.008	.512
DWI or other*	1.181	.366	10.424	1	.001	3.257
Person (non-domestic)	-.371	.246	2.278	1	.131	.690
Property	-1.089	.251	18.748	1	.000	.337
Prostitution or sex related	-19.186	12998.350	.000	1	.999	.000
Societal conduct	-.497	.331	2.247	1	.134	.608
Weapons	-.030	.401	.006	1	.940	.970
Medium or higher on Criminal History	.197	.192	1.049	1	.306	1.217
Medium or higher on Education & Employment	1.210	.185	42.734	1	.000	3.354
Medium or higher on Family & Marital	.484	.149	10.498	1	.001	1.623
Medium or higher on Leisure & Recreation	-.042	.237	.031	1	.859	.959
Medium or higher on Companions	.039	.212	.033	1	.856	1.039
Medium or higher on Alcohol & Drugs	2.225	.302	54.310	1	.000	9.258
Medium or higher on Procriminal Attitude & Orientation	.460	.153	9.060	1	.003	1.583
Medium or higher on Antisocial Pattern	.044	.181	.059	1	.808	1.045
Constant	-4.106	.602	46.476	1	.000	.016
Model Chi Square	298.294**					
Nagelkerke R Square	0.269					

Note: Reference group is American Indian/Alaska Native[a] and domestic assault[b].
**$p<.001$

    D. Research question 3 – Are supervision outcomes improved when conditions are aligned with risk and needs?

Binary logistic regression models were developed to test each of the measures of alignment and their impact on recidivism. These analyses use reconviction as the recidivism and outcome measure. We would expect that improved alignment between supervision conditions with risk and needs would improve recidivism outcomes since RNR practices are associated with recidivism reduction.

<u>Alignment #1</u>

The first model was created to examine Alignment #1, which conceptualized alignment as the proportion of needs targeted by conditions to all needs. The outcome measure was reconviction one year from the start of supervision (0 = no reconviction and 1 = yes reconvicted). The control variables included in this model were: age at start of supervision, gender, race, offense type, domain risk levels, and two new additional controls that were added which were previously not included in the prior analyses. First, supervision type was added since the frequency of contacts might impact the likelihood someone recidivates. Second, a variable was added to capture adherence to evidence-based practices. Since prior research demonstrates that the type of interventions used with people on supervision can impact recidivism (Bonta et al., 2011), a variable was created that measured the proportion of conditions associated with evidence-based practices to all conditions. This variable was created from the coding described in the methods section where each condition was coded as a condition that adheres to evidence based practices (1) or does not adhere (0) (i.e., AA might be targeting the alcohol and drug domain on the LS/CMI but it is not an evidence-based practice to reduce recidivism among people on community supervision). This variable is one way to capture evidence-based practices since this data did not contain information on other aspects of evidence based practices in supervision such as referrals to treatment or quality of interactions with supervision officers. Finally, the primary variable of interest was Alignment #1. The continuous measure of this was used (i.e., the proportion) and not the binary measure used in the prior section, which examined the impact of the PSI on predicting alignment[1]. Table 13 presents the results of this analysis.

Alignment #1 was not a significant predictor of recidivism in this model. The variables that were significant include: the PSI ($p<.01$), age at start of supervision ($p<.001$), DWI or other offense ($p<.001$), scoring medium or higher on the criminal history domain ($p<.01$), medium or higher on procriminal attitude and orientation ($p<.01$), and other supervision type ($p<.01$). The use of the PSI was associated with a decrease in the likelihood that someone was reconvicted. As age increased, the likelihood of someone recidivating decreased. A DWI or other offense was associated with a decrease in the likelihood someone recidivated, and this is an especially interesting result because the drug and alcohol domain was the one criminogenic need area that was consistently targeted. Scoring moderate or higher on the criminal history domain and the procriminal attitude and orientation domain was associated with an increase in the likelihood someone recidivated. In fact, if someone scored moderate or higher in the criminal history domain their odds of reconviction increased by 1.7 times and if they scored moderate or higher in procriminal attitude and orientation their odds of reconviction increased by 1.6 times.

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[1] For both measures of alignment, two models were run that tested the binary version of alignment and the original version that measures alignment as a continuous measure of the proportion of conditions/needs aligned. The continuous versions are presented here to conserve space since the binary measures were not significant for either alignment measure and they are seen as less precise since their binary forms capture less variation in alignment that occurs across the sample.

Table 13: Binary logistic regression model that examines the impact of Alignment #1 on reconviction one year from supervision

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Received a PSI	-.473	.156	9.132	1	.003	.623
Age at time of supervision start	-.028	.006	18.632	1	.000	.972
Male	.078	.173	.202	1	.653	1.081
Race			7.109	4	.130	
Asian/Pacific Islander[a]	.409	.464	.778	1	.378	1.506
Black/African American	.087	.243	.129	1	.720	1.091
White	-.134	.255	.277	1	.599	.875
Missing or unknown	-1.194	.681	3.078	1	.079	.303
Offense Type			25.090	7	.001	
Drugs[b]	-.419	.248	2.852	1	.091	.658
DWI or other*	-1.533	.463	10.939	1	.001	.216
Person (non-domestic)	-.365	.235	2.423	1	.120	.694
Property	.035	.236	.022	1	.882	1.036
Prostitution or sex related	-19.892	14963.184	.000	1	.999	.000
Societal conduct	-.456	.314	2.099	1	.147	.634
Weapons	-1.097	.436	6.344	1	.012	.334
Medium or higher on Criminal History	.522	.182	8.177	1	.004	1.685
Medium or higher on Education & Employment	.044	.154	.081	1	.777	1.045
Medium or higher on Family & Marital	.338	.138	6.021	1	.014	1.401
Medium or higher on Leisure & Recreation	-.037	.214	.030	1	.863	.964
Medium or higher on Companions	.318	.208	2.325	1	.127	1.374
Medium or higher on Alcohol & Drugs	.254	.179	2.020	1	.155	1.289
Medium or higher on Procriminal Attitude & Orientation	.440	.140	9.814	1	.002	1.553
Medium or higher on Antisocial Pattern	.130	.167	.608	1	.436	1.139
Supervision Type			12.789	4	.012	
Low supervision[c]	-1.562	1.064	2.156	1	.142	.210
Medium supervision	.276	.502	.302	1	.583	1.317
High supervision	.693	.302	5.252	1	.022	2.000
Other supervision	1.005	.364	7.600	1	.006	2.731
Proportion of conditions adhering to EBP	-.816	.691	1.396	1	.237	.442
Alignment Measure #1	.201	.381	.278	1	.598	1.222
Constant	-1.167	.556	4.401	1	.036	.311
Model Chi-Square	225.429**					
Nagelkerke R Square	.203					

Note: Reference group is American Indian/Alaska Native[a], domestic assault[b], and administrative supervision[c].
**$p<.001$

Alignment #2

A binary logistic regression model was developed to examine the impact of greater alignment of supervision conditions to needs on recidivism (Alignment #2). The outcome variable was also reconviction one year from start of supervision. The same control variables were included as the prior model: age at start of supervision, race, gender, offense type, supervision type, proportion of conditions adhering to evidence-based practices, the PSI, and risk levels for the LS/CMI domains. Alignment #2, which is a proportion of conditions targeting needs to all conditions, was the explanatory variable examined. The continuous measure for this alignment measure was used as well instead of the binary form that was examined in the prior section.

The second measure of alignment did not predict reconviction one year from start of supervision. The PSI and some of the control variables were predictive of recidivism. First, the PSI ($p<.01$) was associated with a decrease in likelihood of recidivism. Holding all else constant, receiving a PSI decreased someone's odds of reconviction by a little over half (Exp(B))=.638). Age was predictive ($p<.001$), where an increase in age was associated with a decrease in the likelihood of recidivism. Two offense types were significant, including domestic assault ($p<.001$) and DWI or other ($p<.001$), which was associated with a decrease in the likelihood of recidivism. Other supervision type ($p<.01$) was also associated with recidivism. Finally, two LS/CMI domain risk levels of moderate or higher were significant. Criminal history ($p<.01$) and procriminal attitude and orientation ($p<.01$) were both associated with an increase in the likelihood of recidivism. Again, both of these domains were associated with an increase in odds of 1.7 (criminal history) times and 1.6 (procriminal attitudes and orientation) times more likely to recidivate when holding other factors constant.

In summary, we did not find that either measure of alignment was associated with a decrease in the likelihood that someone was reconvicted one year from the start of their supervision. This included one measure that conceptualized alignment by the proportion of needs targeted by conditions to all needs and another measure that conceptualized alignment by the proportion of conditions targeting needs to all conditions. However, these models suffered similar limitations as those discussed in the previous sections. Most people were assigned a similar range of conditions and types of conditions so there is not much variation to examine in the alignment between supervision conditions with risk and needs. Also, this data was limited to a recidivism measure that looked at reconviction one year from start of supervision. Recidivism measures like reconviction are sensitive to other explanatory variables such as the community programming or services people receive while on supervision or the adherence of evidence based practices by supervision officers. Other outcome measures could provide additional insight into this research question, such as the use of revocations or violations, which are outcomes directly linked to supervision conditions. An outcome like recidivism might be a more distal outcome for this question.

It should be noted, however, that in the one area where probation conditions targeted needs for the majority of offenders – the drug and alcohol domain – the model predicted a decrease in recidivism. This suggests that a further limitation of this study may be the lack of alignment itself. With so few needs areas being consistently targeted by supervision conditions, the data may not be a good test case for the theory that better alignment leads to better outcomes.

Table 14: Binary logistic regression model that examines the impact of Alignment #2 on reconviction one year from supervision

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Received a PSI	-.450	.155	8.483	1	.004	.638
Age at time of supervision start	-.028	.006	19.071	1	.000	.972
Male	.080	.173	.211	1	.646	1.083
Race			7.093	4	.131	
Asian/Pacific Islander[a]	.368	.460	.638	1	.424	1.445
Black/African American	.109	.243	.203	1	.652	1.115
White	-.124	.254	.239	1	.625	.883
Missing or unknown	-1.167	.680	2.942	1	.086	.311
Offense Type			25.708	7	.001	
Drugs[b]	-.425	.245	3.013	1	.083	.654
DWI or other*	-1.555	.463	11.301	1	.001	.211
Person (non-domestic)	-.355	.235	2.274	1	.132	.701
Property	.043	.235	.033	1	.855	1.044
Prostitution or sex related	-19.655	12952.112	.000	1	.999	.000
Societal conduct	-.452	.314	2.079	1	.149	.636
Weapons	-1.096	.436	6.321	1	.012	.334
Medium or higher on Criminal History	.520	.183	8.099	1	.004	1.682
Medium or higher on Education & Employment	.042	.156	.073	1	.787	1.043
Medium or higher on Family & Marital	.343	.137	6.254	1	.012	1.409
Medium or higher on Leisure & Recreation	-.002	.214	.000	1	.992	.998
Medium or higher on Companions	.345	.204	2.856	1	.091	1.412
Medium or higher on Alcohol & Drugs	.260	.183	2.023	1	.155	1.297
Medium or higher on Procriminal Attitude & Orientation	.438	.141	9.631	1	.002	1.549
Medium or higher on Antisocial Pattern	.112	.166	.459	1	.498	1.119
Supervision Type			12.757	4	.013	
Low supervision[c]	-1.559	1.062	2.153	1	.142	.210
Medium supervision	.294	.502	.343	1	.558	1.342
High supervision	.690	.301	5.250	1	.022	1.993
Other supervision	1.005	.363	7.646	1	.006	2.731
Alignment Measure #2	.553	.658	.705	1	.401	1.738
Proportion of conditions targeting EBP	-1.018	.746	1.862	1	.172	.361
Constant	-1.245	.542	5.277	1	.022	.288
Model Chi-Square	238.758**					
Nagelkerke R Square	.212					

Note: Reference group is American Indian/Alaska Native[a], domestic assault[b], and administrative supervision[c].
**$p<.001$

Although alignment between supervision conditions and criminogenic needs might set someone up for better success on supervision by limiting the number of court requirements and in turn reducing opportunities for revocation, supervision conditions must be complemented by other effective supervision practices. For example, the concept of dosage probation has been introduced because community supervision must tackle risk and needs differently across systems, agencies, and interventions (Center for Effective Public Policy, 2014). Supervision conditions may need to align with risk and needs, but then case planning, interventions by officers, referrals to community services, and other aspects of community supervision must align as well. Because a substantial amount of research exists to support the generalization of RNR principles across community supervision practices, these analyses should be considered a first investigation into the impact of alignment of supervision conditions with risk and needs on outcomes but not the final word on how RNR and supervision conditions can combine effectively.

IV.   Implications and Recommendations

To our knowledge, this study is the first of its kind to explore the link (or disconnect) between supervision conditions with RNR. Hennepin's support of this research merits much recognition for their partnership and willingness to study the role that RNR can have at sentencing and with supervision conditions. Based on the analyses investigated above, the following conclusions and recommendations were identified:

Review and refine the content of the PSI to include risk and needs assessment information, which will help inform conditions aligned with recidivism reduction. In general, most people received a similar number of supervision conditions regardless of risk or the use of the PSI. What was most noticeable in the data regarding risk and supervision conditions, was the greater increase in conditions associated with the use of the PSI (i.e., 4-5 conditions on average), whereas risk level was associated with a more moderate increase in the number of conditions (i.e., one for each risk level on average). In the linear regression model that was designed to examine predictors for the number of conditions assigned, we found that both the PSI and risk level were predictive with control variables such as offense type. Therefore some information in the PSI might be prompting judges to offer more conditions for people; it is possible too much information may not be helpful. For example, if PSIs contain a significant amount of detail about person related offenses (which are the offenses most likely to receive the PSI), this may influence condition-setting so that judges are more inclined to set more restrictions or more requirements on people. However, assigning more conditions to someone with these types of offenses may not actually reduce their likelihood of reoffending and if they are low risk to reoffend, might actually make their likelihood of reoffending worse. Judges in the Hennepin County courts and Hennepin DOCCR should come together to discuss how supervision conditions can protect public safety, which in some circumstances may be needed for reasons other than recidivism reduction (i.e., no contact orders), and how conditions might create barriers for people who are low risk (i.e., requiring someone with a job to report daily to their probation officer). The PSI could be designed to provide a more concise report of information needed for sentencing and focus on information related to risk and needs so that the number of conditions is not arbitrarily increased from PSI information that is unrelated to a person's success on supervision.

Provide information on the RNR framework to judges so alignment can improve between supervision conditions with risk and needs. Related, future research should explore and evaluate data where there is more variation in the range of conditions assigned across risk levels. This may require educating judges

on the principles of RNR so that judges can be more heedful in setting conditions that align with risk and needs. While it is expected that some supervision conditions might be necessary for reasons other than recidivism reduction such as deterring people from certain behaviors (i.e., drug testing) or offering a restorative function by requiring the individual to contribute to society (i.e., community service), prior research on RNR would suggest that some proportion of conditions or some number should match with the risk and needs assessment results for people on probation. Setting too many conditions for low risk people might interfere with their ability to do well on supervision. For example, creating too many requirements for a person classified as low risk to reoffend might jeopardize the things going well such as employment and positive relationships with family members when they report to their probation office frequently for meetings, drug testing, and programs. Conversely, someone convicted of a lower level offense who is classified as high risk to reoffend might not receive enough supervision and services to give them the skills and knowledge to change their behavior long-term. Hennepin supervision officers and judges should work together to strike a balance of meeting court and legal requirements, but set conditions in a manner that support the risk and needs of individuals. Furthermore, this judicial education component should include basic concepts from evidence-based practices so that more conditions are aligned with requirements that would promote recidivism reduction. This would include an overview on the importance of cognitive-behavioral modalities for changing behavior, the importance of skill-building for long term change, and other topics. Training judges on the principles of RNR and how to interpret the LS/CMI can give judges an RNR framework to use when setting the conditions of probation.

Work to determine whether programming or services are available that could address the criminogenic needs which are currently not targeted among people on probation (specifically, companions, leisure and recreation, family and marital, and antisocial pattern). Even without training on RNR and condition-setting, the analyses in this study did find some needs were targeted more frequently for people on probation. It was uncovered in question 1 that 91.1% of all people who scored as moderate or higher risk in the alcohol and drugs domain had at least one condition targeting this need. Unsurprisingly, a large portion of individuals with employment and education needs had this domain targeted by at least one supervision condition (47.2%) though individuals who had been assessed with a PSI were assigned conditions at a higher rate (58.5%) than those who had not been assessed with a PSI (32.4%). The next best alignment was that between conditions and procriminal attitude and orientation (45.1%). Here too, alignment was significantly greater for people with a PSI (59.8% vs. 21%); incidentally, there is a policy in place related to this, where individuals who are assessed high in this domain (during the PSI process) are referred to a cognitive-behavioral program in the community. This is an important dynamic risk factor in RNR (Bonta and Andrews, 2017). It is important because targeting the attitudes and values people hold can support change in other needs areas such as employment and substance use. For example, if someone weighs pros and cons differently, this can improve how they view engaging in criminal behavior but also their consideration of drug use. However, most conditions did not target domains for people with needs in areas for companions, leisure and recreation, family and marital domains, and antisocial pattern. One reason may be related to the lack of options in the community to address these needs or it may be because traditionally supervision conditions were not developed to address these areas. Another reason may be that additional assessment is needed in these areas before assigning a condition or specifying an intervention. For example, addressing antisocial pattern issues may require additional assessments by mental health providers. Hennepin DOCCR should determine if there is programming or services available to address these needs or ways to form conditions in a manner that supports supervision officers' efforts and interventions to address them. If programs or services do not

exist, then DOCCR could work with the County Board and community partners to identify opportunities to fill in those gaps.

Continue to monitor data on this topic for people on probation in Hennepin and pursue additional research on this topic. Finally, to our knowledge, this study is the first of its kind to explore alignment between supervision conditions with risk and needs. Other samples from other courts in other jurisdictions might find different condition-setting practices that allow for a more precise test of alignment between supervision conditions and needs. Interestingly, even though the number of conditions range between a certain amount for most people, the use of the PSI was associated with some improved alignment between risk and needs with supervision conditions. The analyses in this study might also find different outcomes with longer follow-up periods or with different outcome measures, such as revocations or violations of conditions. Conducting analyses with these different measures might result in more positive outcomes with alignment. Some other outcome measures could be revocations, violations, successful discharge from supervision, and improvement in needs scores. More research is needed to explore and refine alignment that is required between risk and needs with supervision conditions so that the courts and probation can bridge a neglected area in the RNR framework.

V.   References

Andrews, D. A., Bonta, J. and Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior, 17*, 19-52.

Ægisdóttir, S., White, M. J., Spengler, P. M., Maugherman, A. S., Anderson, L. A., Cook, R. S., Nichols, C. N., Lampropoulos, G. K., Walker, B. S., Cohen, G., and Rush, J. D. (2006). The meta-analysis of clinical judgment project: Fifty-six years of accumulated research on clinical versus statistical prediction. *The Counseling Psychologist, 34*, 341-382.

Bonta, J. & Andrews, D. A (2017). *The Psychology of Criminal Conduct*, (6th ed.). Routledge. London; New York.

Bonta, J., Bourgon, G., Rugge, T., Scott, T., Yessine, A. K., Gutierrez, L., & Li, J. (2011). An experimental demonstration of training probation officers in evidence-based community supervision. *Criminal Justice and Behavior, 38*, 1127-1148.

Center for Effective Public Policy (2014). *Dosage probation: Rethinking the structure of probation sentences*. Prepared for the National Institute of Corrections. Retrieved online from: https://s3.amazonaws.com/static.nicic.gov/Library/027940.pdf.

Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs?. *Crime & Delinquency*, *52*(1), 77-93.

Mann, R. E., Hanson, R. K., & Thornton, D. (2010). Assessing risk for sexual recidivism: Some proposals on the nature of psychologically meaningful risk factors. *Sexual Abuse*, *22*(2), 191–217. https://doi.org/10.1177/1079063210366039.

Turner, S., Petersilia, J., & Deschenes, E. P. (1992). Evaluating Intensive Supervision Probation/Parole (ISP) for drug offenders. *Crime & Delinquency*, *38*(4), 539–556. https://doi.org/10.1177/0011128792038004009.

University of Cincinnati Corrections Institute (2015). Evidence Based Correctional Program Checklist Scoring Guide 2.0. Cincinnati, OH: Center for Criminal Justice Research.