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Validation of the LS/CMI in Oregon

by Abt Associates

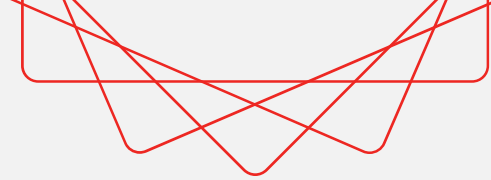
*Commissioned by the Oregon Criminal Justice Commission
May 30, 2019*

The LS/CMI



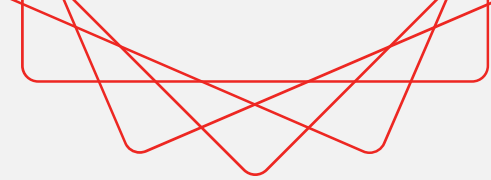
- Level of Service/Case Management Inventory
- Used for recidivism risk prediction and case planning
- Predicted risk level determines how offender is supervised (e.g., frequency of office/field visits, treatment referrals)
- Captures risk factors that change over time (e.g., employment status)

LS/CMI Domains



- Criminal History
- Family/Marital
- Companions
- Pro-criminal Attitude/Orientation
- Education/Employment
- Leisure/Recreation
- Alcohol/Drug Problem
- Antisocial Pattern

LS/CMI Use in Oregon



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graph LR; A[All offenders receive PSC assessment before starting supervision] --> B[Offenders receiving "medium" or "high" PSC score get an LS/CMI assessment]; B --> C[LS/CMI domain scores used for case planning];
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All offenders receive
PSC assessment
before starting
supervision

Offenders receiving
“medium” or “high”
PSC score get an
LS/CMI assessment

LS/CMI domain
scores used for
case planning

Key Takeaways



- The LS/CMI has moderate power for predicting recidivism
- Alternative assessments do not perform better than the LS/CMI
- Overall referral to any treatment reduces recidivism
- Certain types of treatment (e.g., for pro-criminal attitudes) are associated with a decline in domain scores and recidivism

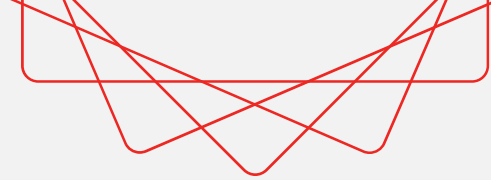
Study Overview



Research Topics:

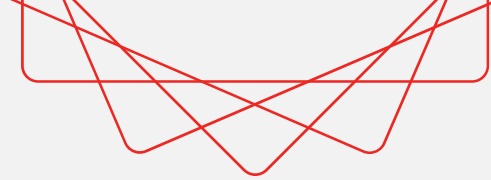
- 1) Changes in LS/CMI scores over time
- 2) LS/CMI and treatment referrals
- 3) Populations most successful on supervision
- 4) LS/CMI as a predictor of recidivism
- 5) Impact of treatment on recidivism

Methods



- Statistical data analyses using data on recidivism, LS/CMI risk scores, and treatment receipt (2010 – 2015) provided by CJC
- Interviews and focus groups with probation officers, county community corrections directors, and DOC staff

Quantitative Data Sources



Data type	Description
Offender data	Offenders starting supervision from 2010-2015. Includes age, race, sentence length and initial offense type.
LS/CMI scores	Data from 2005-2018, including initial and follow-up scores.
Treatment data	Data on treatments referral, categorized by treatment type where possible
Recidivism data	Recidivism is defined as an arrest, conviction, or new prison sentence occurring within 36 months of the date the LS/CMI was administered. These three events were examined both separately and combined.

Qualitative Data Sources

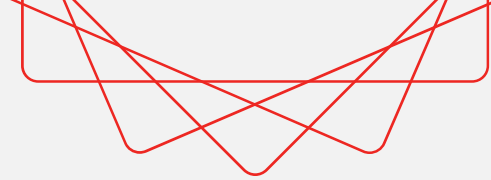


Data type	Description
Probation Officer Focus Groups	Conducted 3 focus groups with 2-12 probation officers each. Officers represented 4 counties
Stakeholder Interviews	Conducted 6 key stakeholder interviews, including 5 interviews with county Community Corrections Directors and 1 with DOC staff member

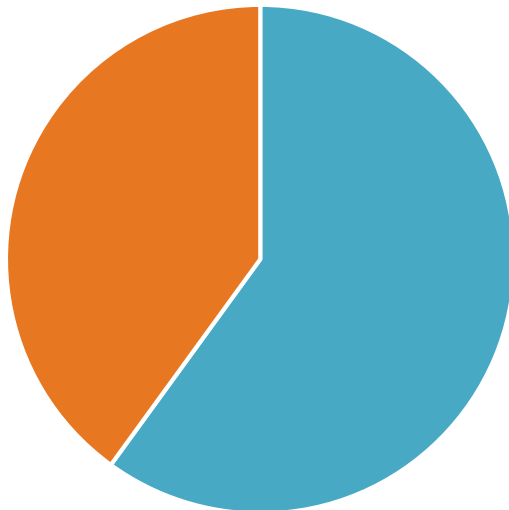
Findings



Changes in Scores Over Time



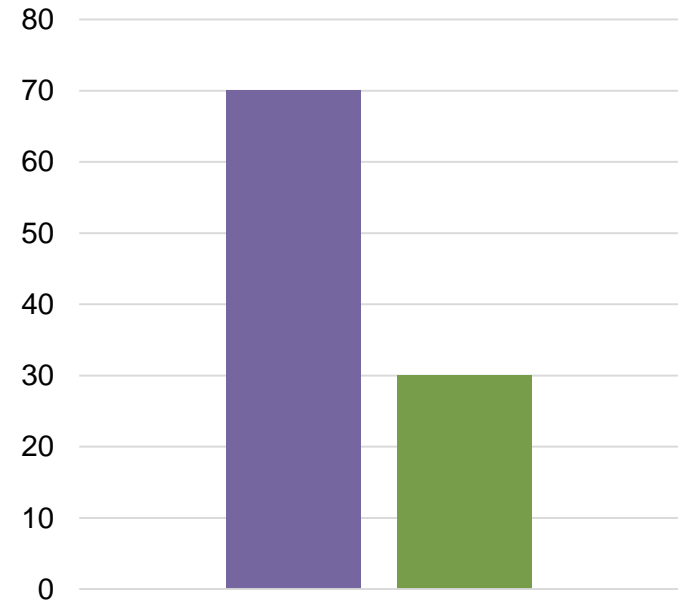
60% of Offenders were Re-Assessed



■ Re-Assessed ■ Not Re-Assessed



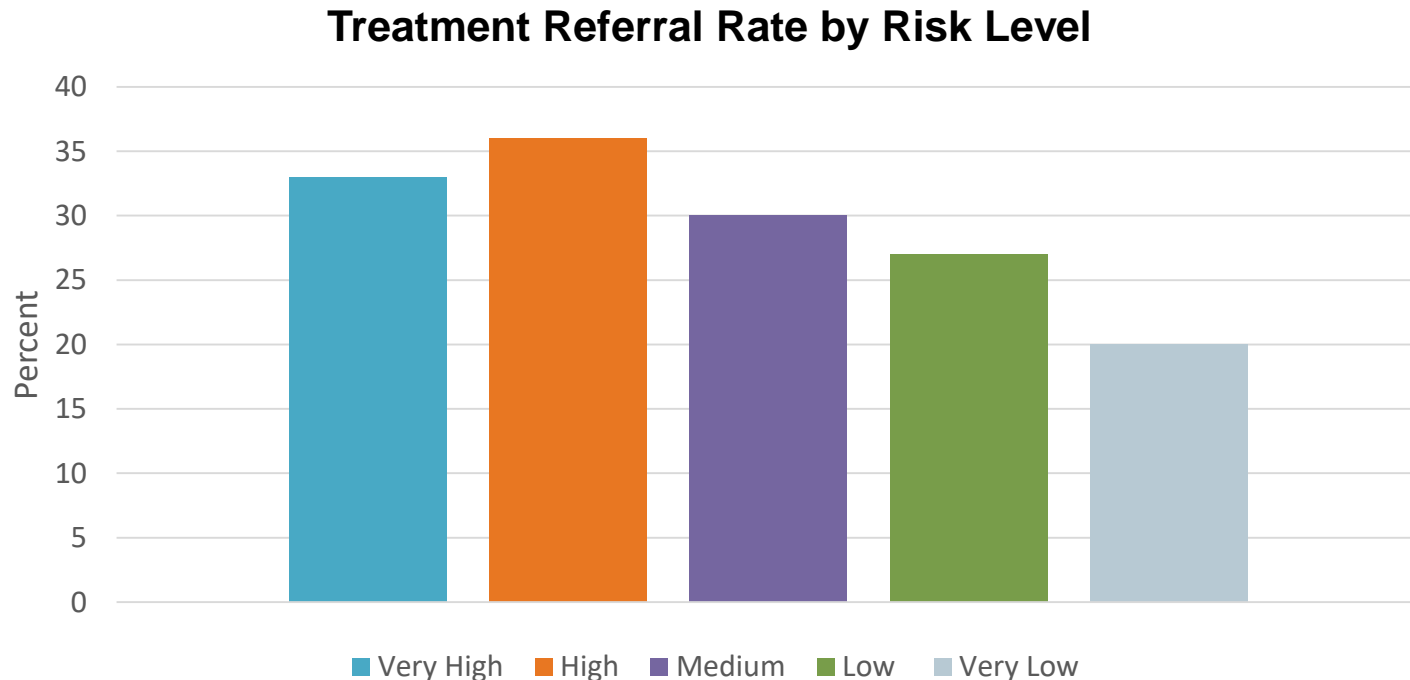
70% Received the Same Score



■ No Change in Score ■ Change in Score

LS/CMI and Treatment

- Treatment referrals occur early in a supervision term
- High and very high risk offenders more likely to receive treatment referral than lower risk offenders



LS/CMI and Treatment Programming

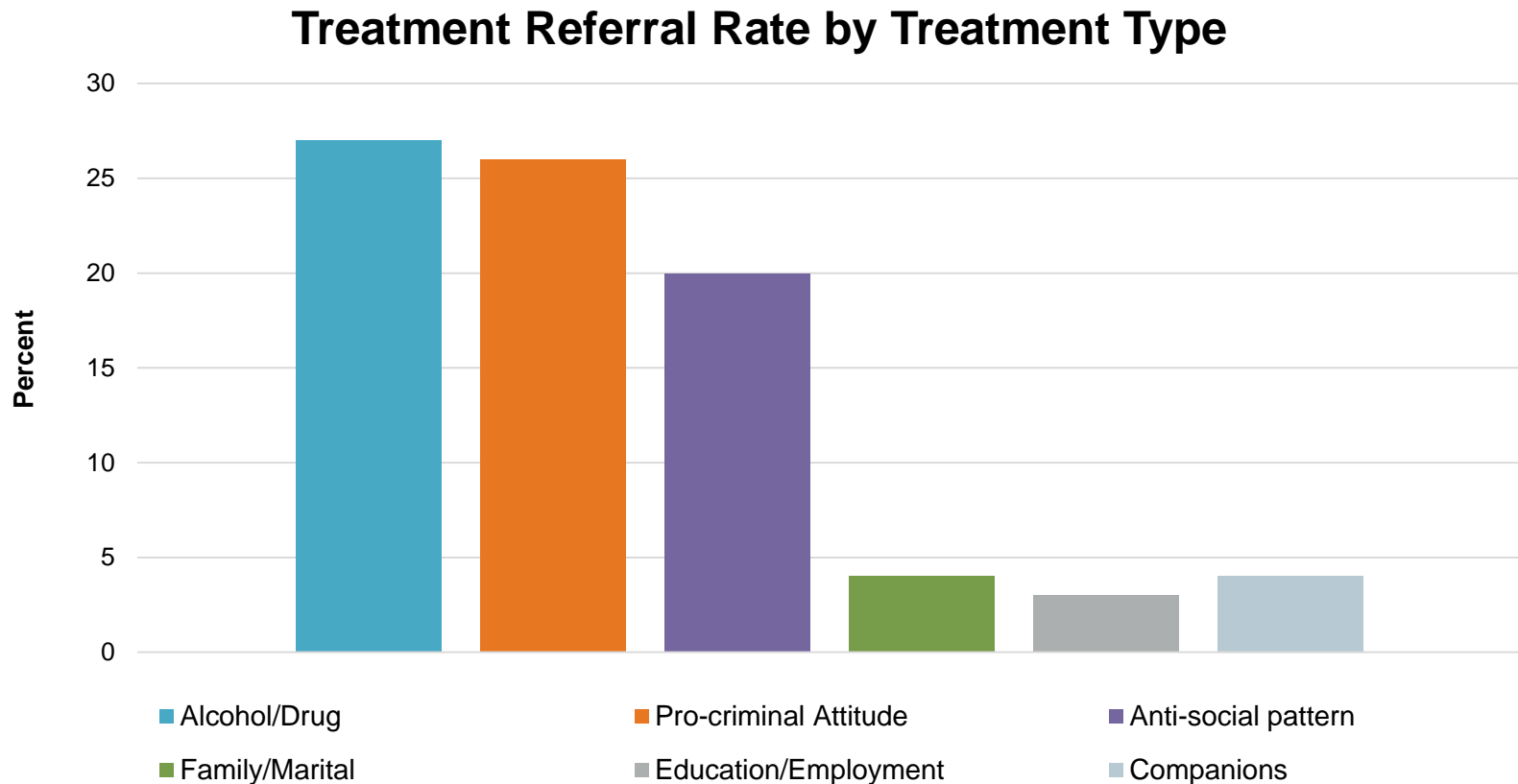


- Mapping LS/CMI and Treatment Categories to LS/CMI Domains

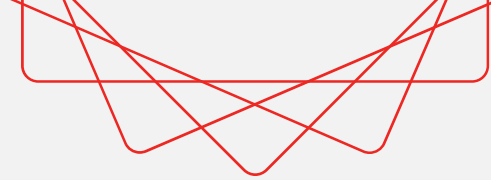
LS/CMI Domains	Treatments
History	N/A
Family	Parenting Skills; Youth Prevention Services; Family Support Services
Education	Education Programs/Classes
Recreation	Jobs/Employment Related Programs
Associates	Cognitive Restructuring Programs
Drug	Substance Abuse Treatment; Other Substance Use Services; Drug Court
Attitude	Support Group; Cognitive Restructuring Programs; Anger Management Treatment; Mental Health Treatment; Domestic Violence; Theft Offender Counseling; Substance Abuse Treatment; Other Substance Use Services
Antisocial	Anger Management Treatment; Cognitive Restructuring Programs; Mental Health Treatment
Unassigned Treatments	Transitional Programs; Medical Services

LS/CMI and Treatment

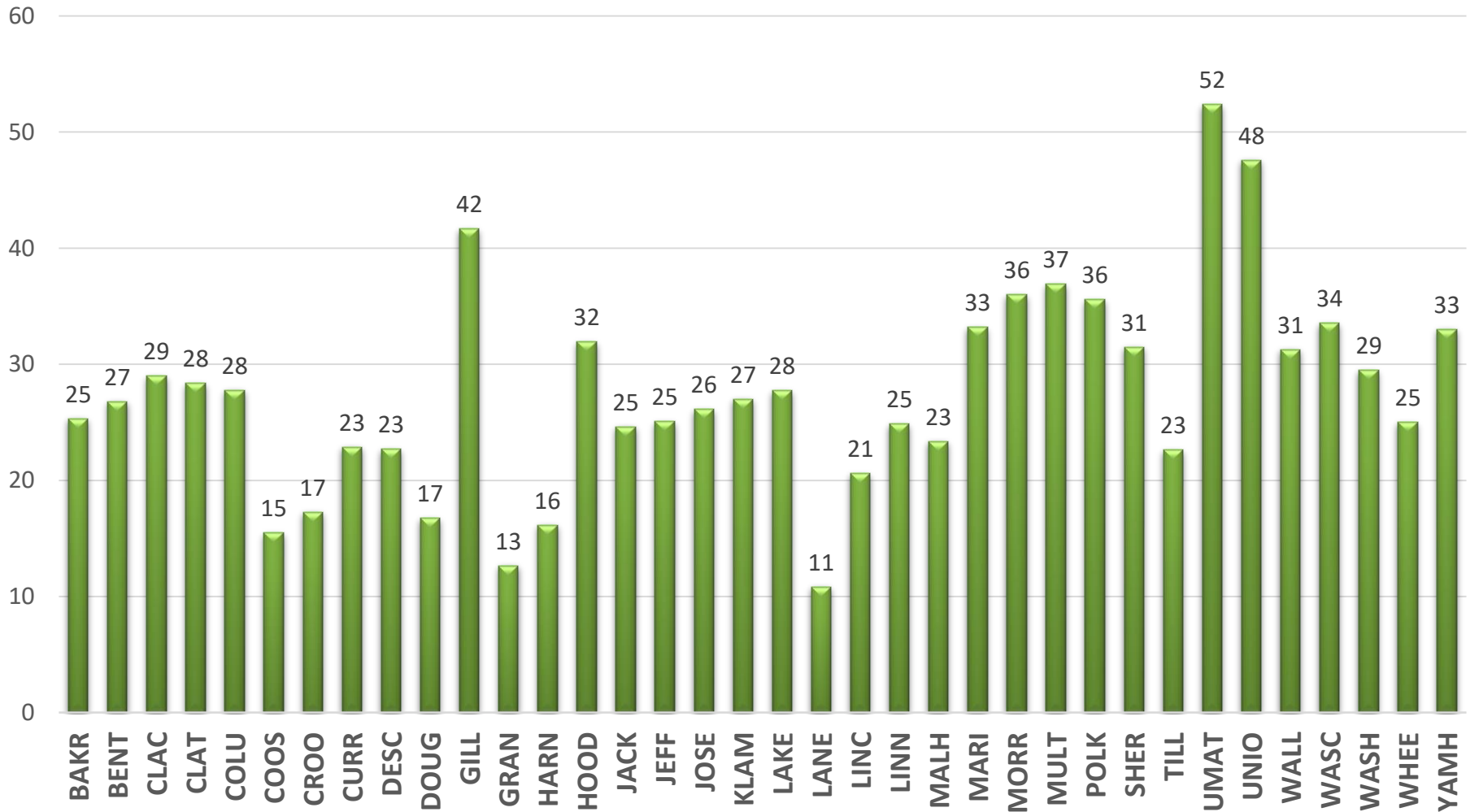
- Rates varied by domain type associated with treatment:



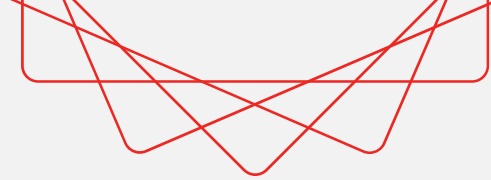
LS/CMI and Treatment



Percent of Supervision Terms with Treatment Referrals by County

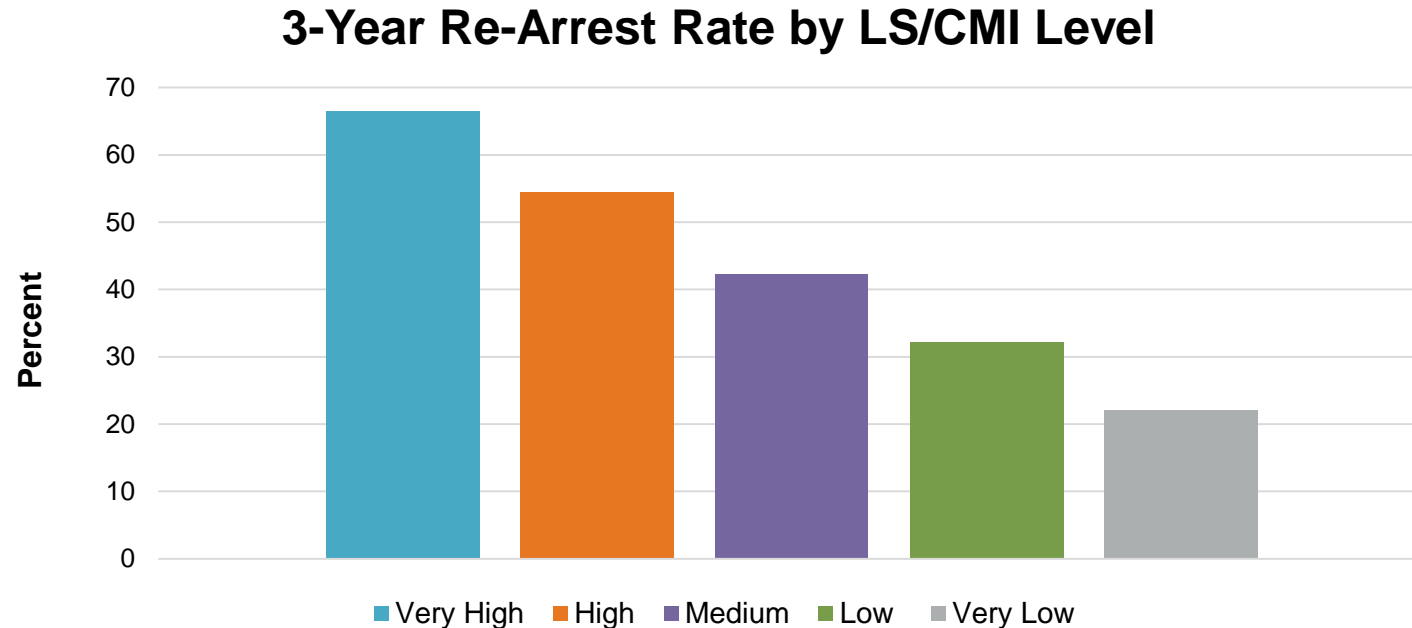


Populations Most Successful on Supervision



- Offenders with a reduction in their LS/CMI scores are less likely to have:
 - Past person felonies
 - Past incarceration or supervision
 - Past drug offense
 - Past property offense
 - Current property offense
 - A higher criminal severity score
- Factors that did not LS/CMI scores included:
 - Age
 - Past driving offenses
 - Current drug offenses

LS/CMI as a Predictor of Recidivism



- LS/CMI has moderate predictive accuracy
- Could be because low-risk offenders do not receive LS/CMI
- We tested other models and none was a better predictor

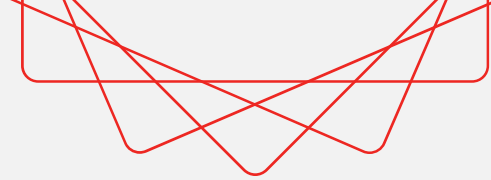
LS/CMI as a Predictor of Recidivism



- 3-year recidivism rate

Risk Assessment	AUC
LS/CMI	0.63 [0.62, 0.64]
PSC	0.64 [0.63, 0.64]
Synthetic Score – Sensitivity equals Specificity	0.61 [0.61, 0.62]
Synthetic Score – Youden's Index	0.62 [0.61, 0.62]

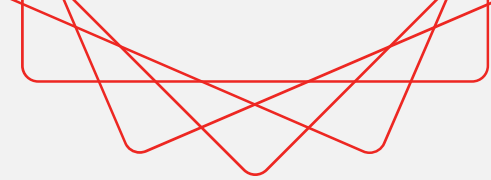
LS/CMI as a Predictor of Recidivism



- Regression of 3-year recidivism rate on LS/CMI overall score

Time LS/CMI was conducted	Odds ratio (SE)
Within 3 months	1.05 (0.002)***
>3 to 6 months	1.05 (0.004)***
>6 to 12 months	1.06 (0.003)***
>12 to 18 months	1.05 (0.004)***
>18 to 24 months	1.05 (0.006)***
>24 – 26 months	1.04 (0.007)***
>36 months	1.06 (0.014)***

Impact of Treatment on LS/CMI Scores and Recidivism

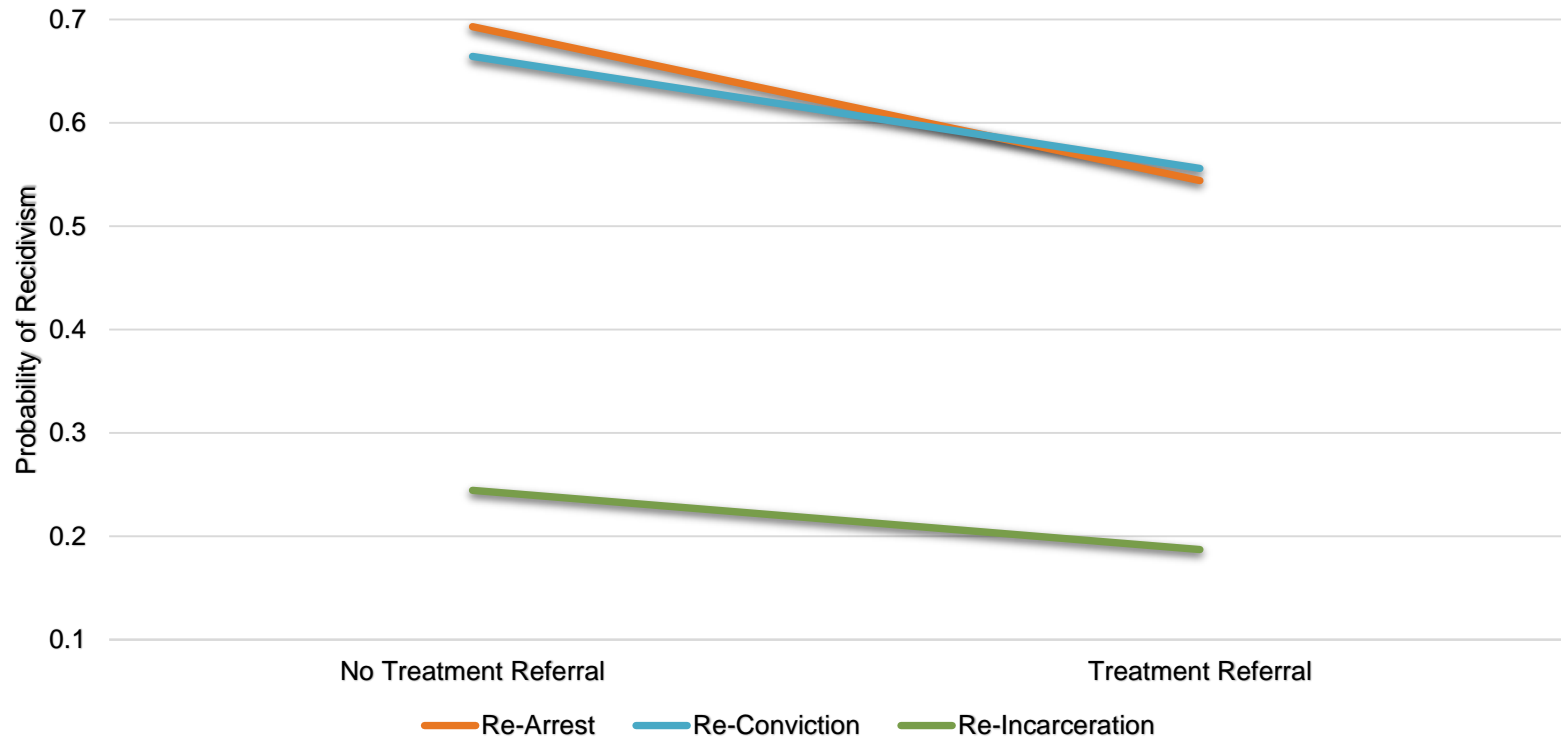


- Compared similar offenders who received treatment to those who did not
- We found treatment referral:
 - Reduced rates of all 3 recidivism outcomes
 - Had no significant effect on overall LS/CMI score
 - Domain-specific treatment
 - Drop in recidivism for treatment linked to drug/alcohol abuse and pro-criminal attitudes
 - Drop in LS/CMI scores for treatment linked to recreation, companions, and pro-criminal attitudes

Impact of Treatment on LS/CMI Scores and Recidivism



Probability of Recidivism by Treatment Referral



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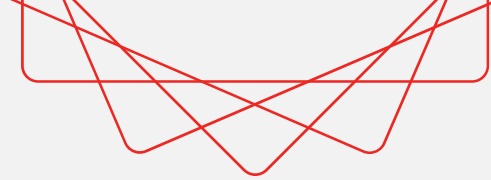
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Appendix

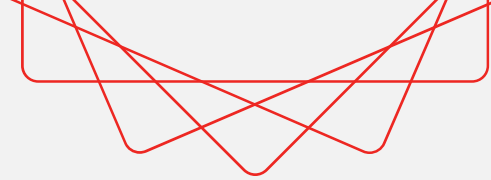


History of LS/CMI in Oregon



- Previously, no standard tool used across counties to measure risk and needs
- LS/CMI officially rolled out across Oregon in 2010
- Fully adapted for recidivism assessments across counties
- Probation Officers still learning to create case plans and use the LS/CMI to inform them

Definitions



- Recidivism measures:
 - Rearrest, reconviction, or reincarceration within 3 years
- Scores v. Levels
 - Overall score ranges from 0 to 42
 - Risk levels: very low, low, medium, high, and very high
 - Same principles apply within each domain
- Two definitions of success during supervision:
 - Decrease in overall LS/CMI score
 - Decrease in domain-specific LS/CMI scores