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SEX OFFENDER SENTENCING IN WASHINGTON STATE: SEX OFFENDER RISK LEVEL CLASSIFICATION TOOL AND RECIDIVISM

The 2004 Legislature directed the Washington State Institute for Public Policy (Institute) to conduct a comprehensive analysis and evaluation of the impact and effectiveness of current sex offender sentencing policies.¹ Because this is an extensive topic, we are publishing a series of reports.

The 1990 Washington State Legislature passed the Community Protection Act, an omnibus bill that authorized the release of information to the public regarding dangerous sex offenders.² In 1990, the multi-disciplinary End of Sentence Review Committee (ESRC) within the Department of Corrections began issuing three types of notifications to law enforcement.³ The Legislature directed a more consistent statewide approach to notifications in 1997.⁴

As a result, the ESRC began using the Washington State Sex Offender Risk Level Classification Tool (classification tool) to determine a sex offender's risk to the community.⁵ This tool places sex offenders into one of three notification levels by combining a risk assessment score and a notification considerations score. The resulting notification levels are sent to local law enforcement who make the final determination of the risk level.

In a previous report, the Institute analyzed the relationship between these notification levels and recidivism.⁶ The report concluded the ESRC does not classify sex offenders into groups that accurately reflect their risk for reoffending.

This report examines how well the components within the Sex Offender Risk Level Classification Tool, the notification considerations and risk assessment scores, predict felony sex recidivism.

SUMMARY

The 1990 Washington State Legislature passed the Community Protection Act authorizing the release of information to the public regarding dangerous sex offenders. In 1997, the Legislature directed a more consistent statewide approach to notifications.

Since 1997, the Washington State End of Sentence Review Committee (ESRC) has placed sex offenders into one of three notification levels using the Sex Offender Risk Level Classification Tool. This tool combines two scores to determine an offender's notification level: a risk assessment score and a notification considerations score. The resulting notification level is sent to local law enforcement who make the final determination of the level communicated to the public.

A previous Institute report concluded that the ESRC risk levels do not classify sex offenders into groups that accurately reflect their risk for reoffending. This report examines the relative accuracy of the two components within the Sex Offender Risk Level Classification Tool in predicting recidivism.

Key Findings Regarding the Classification Tool

- The notification considerations score has little or no accuracy in predicting sex offender recidivism.
- The risk assessment score has little or no accuracy in predicting sex offender recidivism. Some elements, however, predict felony sex recidivism with moderate accuracy.
- The necessary steps for developing a more accurate risk assessment instrument are outlined at the end of this report.

¹ ESHB 2400, Chapter 176, Laws of 2004.

² RCW 4.24.550.

³ *Policy 350.500, End of Sentence Reviews*, Olympia: Washington State Department of Corrections, May 1990.

⁴ RCW 4.24.5502; see:

http://www.doc.wa.gov/CPU/eosrc_index.htm.

⁵ See: <http://www.wsipp.wa.gov/rptfiles/05-12-1205.pdf>.

⁶ R. Barnoski, 2005, *Sex Offender Sentencing in Washington State: Notification Levels and Recidivism*. Olympia: Washington State Institute for Public Policy, Document No. 05-08-1202.

The Institute entered information from Washington State Sex Offender Risk Level Classification Tool documents in the ESRC files to create a database for this report. Since measuring sex offender recidivism requires a five-year time period in the community, and one additional year for processing in the courts,⁷ the Institute obtained the ESRC files for sex offenders released between October 1997 and June of 1999.

We measure three types of recidivism: a conviction in Washington State for (1) any new felony offense, (2) any new violent felony offense, and (3) any new felony sex offense.⁸

Exhibit 1 describes the sample used in this study. ESRC data was entered for 684 sex offenders released from prison between October 1997 and June of 1999.

Of the 684 sex offenders in the study sample, 149 (22 percent) recidivated with a felony offense within five years. Only 23 (3 percent) of the sex offenders recidivated with a felony sex offense.

Exhibit 1
Classification Tool Study Sample
For 684 Sex Offenders Released From Prison
Between October 1997 and June of 1999

Number Recidivating With:	
Any Felony	149 (22%)
Violent Felony	67 (10%)
Felony Sex	23 (3%)

The small number of recidivists with sex offenses makes prediction difficult. Given these rates, the assumption that no sex offenders will reoffend with a felony sex offense would be accurate 97 percent of the time.

We use a statistic called the Area Under the Receiver Operating Characteristic (AUC) to measure predictive accuracy. The AUC is the best measure of predictive accuracy for a dichotomous outcome like recidivism.⁹ The AUC statistic varies between .500 and 1.00. AUCs in the .500s indicate little or no predictive accuracy, .600s indicate weak

⁷ R. Barnoski, 2005, *Sex Offender Sentencing in Washington State: Measuring Recidivism*, Olympia: Washington State Institute for Public Policy, Document No. 05-08-1202.

⁸ Felony recidivism includes reoffending for any felony offense. Violent felony recidivism includes homicide, sex, robbery, assault, and weapon offenses. Felony sex recidivism is also included in violent felony recidivism.

⁹ V.L. Quinsey, G.T. Harris, M.E. Rice, C.A. Cormier, 2005, *Violent offenders: Appraising and managing risk, second edition*, Washington, DC: American Psychological Association. M.E. Rice & G.T. Harris, 2005, Comparing effect sizes in follow-up studies: ROC area, Cohen's d, and r, *Law and Human Behavior* 29(5): 615-620.

accuracy, .700s moderate, and those above .800 have strong predictive accuracy.¹⁰

Exhibit 2 shows the three types of recidivism rates for the three levels of risk in the study sample. Level I is the lowest risk and Level III the highest. The AUCs indicate that the notification levels have little or no predictive accuracy. These results are consistent with Institute's previous report.¹¹

Exhibit 2
Five-Year Recidivism Rates for Notification Levels
for Classification Tool Study Sample

Risk Level	Percent Sample	Five-Year Recidivism Rate		
		Felony	Violent Felony	Felony Sex
Level I	54%	24%	9%	4%
Level II	29%	21%	11%	2%
Level III	17%	25%	15%	5%
AUC		0.500	0.565	0.502

We now examine the two parts of the classification tool in more detail. First we analyze the relationship between the notification considerations and recidivism. Then we analyze the relationship between recidivism and the risk assessment.

Four notification consideration items are calculated in the classification tool:

- 1) The victim in a non-familial sex conviction was particularly vulnerable or incapable of resistance due to physical or mental disability or ill health.
- 2) The sex offense was of a predatory nature, or the offender used a position of community trust or a professional relationship to facilitate the non-familial sex offense.
- 3) The offender continued to act out sexual deviancy during incarceration.
- 4) The offender was an adult male with a Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR) score of 4 to 6.¹²

The notification considerations score is the number of items possessed by a sex offender; a score of zero means no notification considerations.

¹⁰ University of Michigan, 2003, *The Area Under an ROC Curve*. See: <http://gim.unmc.edu/dxtests/roc3.htm>.

¹¹ R. Barnoski, 2005, *Sex Offender Sentencing in Washington State: Notification Levels and Recidivism*, Olympia: Washington State Institute for Public Policy, Document No. 05-12-1203.

¹² R.K. Hanson, 1997, *The development of a brief actuarial risk scale for sexual offense recidivism*. Department of the Solicitor General of Canada, Public Works and Government Services Canada, cat. No. JS4-1/1997-4E.

Exhibit 3 displays the percentage distribution and recidivism rates for the notification considerations score. About 64 percent of the sex offenders in the sample have no notification considerations, and nearly 25 percent have one. The recidivism rates do not increase with an increasing score.

The AUCs in Exhibit 3 indicate that the notifications considerations score has little or no predictive accuracy.

Exhibit 3
Five-Year Recidivism Rates for Number of Notification Considerations

Notification Considerations Score	Percent Sample	Five-Year Recidivism Rate		
		Felony	Violent Felony	Felony Sex
Zero	63.7%	23.6%	8.7%	3.4%
One	24.7%	19.5%	13.0%	3.6%
Two	8.8%	16.7%	8.3%	3.3%
Three	2.3%	18.8%	12.5%	0.0%
Four	0.4%	0.0%	0.0%	0.0%
AUC		0.537	0.532	0.513

Exhibit 4 displays the percentage distribution and recidivism rates for each notification consideration.

Thirteen percent of the offenders had a vulnerable victim consideration, and their recidivism rates are not higher than the rates for those offenders without this factor. Multivariate analyses are used to test whether the notification considerations could be combined to more accurately predict recidivism. These analyses failed to produce an increase in predictive accuracy.

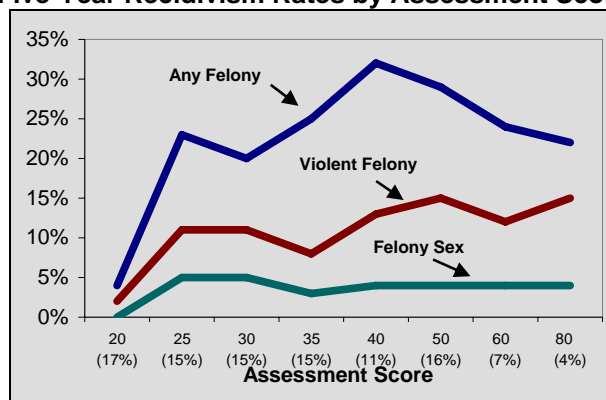
Exhibit 4
Five-Year Recidivism Rates for Notification Items

Notification Consideration	Percent Sample	Five-Year Recidivism Rate		
		Felony	Violent Felony	Felony Sex
A. Victim Vulnerability				
Not Vulnerable	87%	23%	10%	4%
Vulnerable Victim	13%	16%	9%	1%
AUC		0.521	0.504	0.543
B. Predatory Offense				
Not Predatory	74%	24%	10%	3%
Predatory	26%	15%	10%	3%
AUC		0.552	0.507	0.503
C. Continued Deviancy				
No Prison Deviancy	91%	21%	9%	4%
Prison Deviancy	9%	25%	14%	2%
AUC		0.509	0.518	0.522
D. RRASOR				
Under 4	96%	22%	10%	3%
4 to 6	4%	25%	14%	7%
AUC		0.504	0.510	0.524

We conclude that the notification considerations on the classification tool have little or no accuracy in predicting sex offender recidivism. We next examine the risk assessment portion of the tool.

Exhibit 5 shows the recidivism rates of sex offenders by their assessment score. The percentages in parenthesis represent the percentage of sex offenders in the sample with that score. For example, 17 percent of the sex offenders have an assessment score between zero and 20 points; these sex offenders have very low rates of reoffending. The recidivism rates do not consistently increase when the assessment scores above 25 points increase. Using these risk scores, we could not identify sex offenders with a high risk for either violent or felony sex reoffending.

Exhibit 5
Five-Year Recidivism Rates by Assessment Score



The AUCs for the association between the risk score and the three types of recidivism are:

- 0.614 for felony recidivism
- 0.616 for violent felony recidivism
- 0.557 for felony sex recidivism.

These AUCs indicate that the assessment risk score has, at best, weak predictive accuracy.

Technical Appendix A shows the AUCs for each item on the assessment. One item has weak accuracy in predicting felony sex recidivism, and three items have weak predictive accuracy in predicting violent felony recidivism.

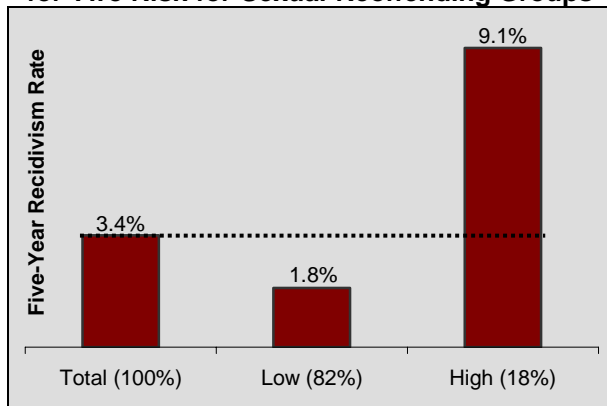
We now use multivariate statistical analyses, stepwise logistic regression, to determine if the individual notification and assessment items can be combined to form a better predictor of violent felony and felony sex recidivism.

Technical Appendix B shows the items included in the resulting prediction equation. The AUC for predicting violent felony and felony sex recidivism from individual items are 0.708 and 0.738 respectively; moderate predictive accuracy.

Exhibit 6 displays the felony sex recidivism rates for offenders classified as either low or high risk for sexual reoffending based on the prediction equation in Appendix B; it was not possible to form a moderate risk group. The felony sex recidivism rate for the total sample is 3.4 percent, while the low risk group's rate is 1.8 percent and the high risk group's is 9.1 percent. Eighteen percent of the sample is in the high risk group, and 82 percent is in the low risk group. A critical question for policy and decision-makers is whether a 9 percent felony sex recidivism rate warrants a label of high risk.

Exhibit 6

Recidivism Rates Based on Multivariate Analysis for Two Risk-for-Sexual-Reoffending Groups



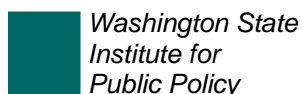
Discussion. The results of the multivariate analysis of the individual items in the risk assessment are encouraging since the AUC indicates moderate predictive accuracy for felony sex recidivism. That is, it may be possible to have a better predictor of felony sex recidivism. However, these results can not reliably be used as the basis of a new risk prediction tool.

To implement a new risk assessment for sexual reoffending requires the following steps:

- a rigorous review of existing sex offender risk assessment research,
- involvement of clinicians and those who will be using the assessment,
- construction of an assessment tool that combines the best information available in the research literature, and
- further statistical analyses.

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