Washington State Institute for Public Policy

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NEW RISK INSTRUMENT FOR OFFENDERS IMPROVES CLASSIFICATION DECISIONS

Background

In 1999, the Washington State Legislature passed the Offender Accountability Act (OAA), which affects how the state provides community supervision to adult felony offenders.[1] One purpose of the OAA is "to reduce the risk of reoffending by offenders in the community." The OAA directs the Department of Corrections (DOC) to:

- Classify felony offenders according to their risk for future offending as well as the amount of harm they have caused society in the past; and
- Deploy more staff and rehabilitative resources to higher-classified offenders and, because budgets are limited, spend correspondingly fewer dollars on lower-classified offenders.

As part of the 1999 law, the Washington State Institute for Public Policy (Institute) was directed to determine whether the OAA results in lower recidivism rates. The Institute reports findings of its studies on the OAA annually; the final report is due in January 2010.

Summary

The 1999 Offender Accountability Act (OAA) affects how the Department of Corrections (DOC) supervises convicted felony offenders in the community. The Washington State Institute for Public Policy (Institute) was directed by the Legislature to evaluate the OAA. The Institute reports its findings annually.

The OAA requires DOC to supervise felony offenders according to their risk for future offending. Risk for future offending is estimated using instruments that classify offenders into groups with similar characteristics.

The Institute developed a "static risk" instrument, and DOC began using the tool as part of its Risk Level Classification (RLC) system in 2008 (static risk factors, such as criminal history, do not change over time). This new system replaced DOC's previous Risk Management Identification (RMI) system, which had been used since the OAA was implemented.

In a previous Institute report, the static risk assessment was determined to have higher predictive accuracy than DOC's previous risk classification system. This report compares the recidivism rates of offenders classified under the new RLC and the old RMI systems. The findings continue to indicate that the new system has better predictive accuracy than the prior system.

Suggested citation: E.K. Drake & R. Barnoski (2009). *New Risk Instrument for Offenders Improves Classification Decisions.* Olympia: Washington State Institute for Public Policy, Document No. 09-03-1201.

[1] E2SSB 5421, Chapter 196, Laws of 1999.

Risk Classification

When DOC first implemented the OAA, the department developed a "Risk Management Identification" (RMI) system to assess offenders and assign them to four community supervision levels (in descending order of seriousness, the levels were RMA, RMB, RMC, and RMD). The Institute described the RMI system in detail in an earlier report.[2]

The Institute published a 2005 report on the predictive validity of the RMI.[3] The report described an alternative classification system, developed by the Institute, which could be implemented with greater predictive accuracy. In August 2008, DOC implemented this new "Risk Level Classification" (RLC) system in lieu of the RMI. DOC made this decision because the new static risk assessment has the following advantages:[4]

- Increased predictive accuracy;
- Prediction of three types of high-risk offenders—drug, property, and violent;
- Increased objectivity;
- Decreased time to complete the assessment; and
- Accurate recording of criminal history for use with other DOC reporting requirements.

The Risk Level Classifications include the following categories that correspond to RMA, RMB, RMC, and RMD respectively:

- High Violent
- High Non-Violent (drug/property)
- Moderate
- Low

Study Population

For this report, we compare the recidivism rates of offenders under the old and new risk classification systems as an additional test of the new system. The population for this analysis includes all DOC offenders with an RMI released from prison and offenders sentenced directly to community supervision between July 1, 2001, and June 30, 2004.[5] This cohort was chosen because it is the last group to be released having an RMI while allowing a 36-month recidivism follow-up period.

The group includes 56,547 offenders. Of these, 14,459 were released after serving a prison sentence, and the remaining 42,088 offenders were sentenced primarily to jail terms, as well as periods of community supervision.

Defining Recidivism

Recidivism is defined as any offense committed after release to the community that results in a Washington State conviction.[6] The follow-up period is 36 months from the time the offender became "at-risk" in the community. An additional 12-month period is used to allow for cases to be adjudicated by the courts. Two types of recidivism are reported:

- Violent felony convictions, and
- Felony convictions, including violent felonies.

This analysis uses the Institute's criminal history database, which was developed to conduct criminal justice research for the legislature. The database is a synthesis of criminal charge information for individuals using data from the Administrative Office of the Courts and DOC's databases.[7]

[2] The report describes an offender's classification in relation to the Level of Service Inventory-Revised and DOC's "harm done" criteria. See: S. Aos & R. Barnoski (2005). *Washington's Offender Accountability Act: A first look at outcomes*. Olympia: Washington State Institute for Public Policy, Document No. 05-07-1202.

[3] R. Barnoski & S. Aos (2003). *Washington's Offender Accountability Act: An analysis of the Department of Corrections' risk assessment*. Olympia: Washington State Institute for Public Policy, Document No. 03-12-1202.

[4] R. Barnoski & E.K. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument*. Olympia: Washington State Institute for Public Policy, Document No. 07-03-1201.

[5] Offenders must have had an RMI assessment to be included in this analysis. However, although the static risk assessment was not implemented by DOC until 2008, we have the ability to calculate an offender's Risk Level Classification at any point in time using the Institute's criminal history database, since the static risk assessment is based on criminal history and demographics.

[6] R. Barnoski (1997). *Standards for improving research effectiveness in adult and juvenile justice.* Olympia: Washington State Institute for Public Policy, Document No. 97-12-1201, pg. 2.

[7] Each quarter, the Institute conducts a matching process using the court case number and the primary identification number from the data systems to link criminal history records. While every effort is made to accurately identify persons across data sources, 100 percent accuracy is not possible. However, the Institute's criminal history database provides a reasonably accurate source of criminal charge data for aggregate reporting and analysis.

Findings

Exhibit 1 displays the distribution of the study population under the RMI, DOC's previous classification system, and the RLC, DOC's current system. For example, 28 percent of prison releases were classified as RMA compared with 31 percent classified as High Violent under the new system. The new system places proportionally more prison releases in the higher risk categories (67 percent) than the RMI (52 percent), and fewer community supervision offenders in the lowest risk category.

Exhibit 1
Percentage Distribution of Total Population by Risk Classification

Prison (N=14,459)					
RMI (old system)			RLC (new system)		
RMA	28%	52%	High Violent	31%	67%
RMB	24%		High Non-Violent	36%	
RMC	35%		Moderate	19%	
RMD	13%		Low	14%	
Total	100%		Total	100%	
Community (N=42,088)					
RMI (old system)			RLC (new system)		
RMA	18%		High Violent	11%	
RMB	16%		High Non-Violent	23%	
RMC	27%		Moderate	38%	
RMD	39%		Low	27%	
Total	100%		Total	100%	

Exhibit 2 displays actual 36-month felony and violent felony recidivism rates for prison releases under the two classification systems. The exhibit shows there are greater differences among the recidivism rates of the RLC categories than among the RMI groups. This means the RLC does a better job of predicting both felony and violent felony recidivism.

- The RLC's new High Violent category has higher felony (60 percent) and violent felony (24 percent) recidivism rates than the old RMA group (44 and 18 percent).
- The new High Non-Violent category has a slightly higher felony recidivism rate (51 percent) than the old RMB group (50 percent). However, the High Non-Violent group has a lower violent felony rate (9 percent) than the RMB group (14 percent) since the non-violent group predicts felony property and drug recidivism not violent recidivism.
- Also the Low risk category has lower recidivism rates (13 and 4 percent) than RMD group (34 and 8 percent).

The new Risk Level Classification has better predictive accuracy than the prior Risk Management Identification system for prison releases. This finding is true for both felony and violent felony recidivism.

Exhibit 2: Prison
The Old Risk Management Identification (RMI) vs. the New Risk Level Classification (RLC)
For All Offenders Sentenced to the Department of Corrections

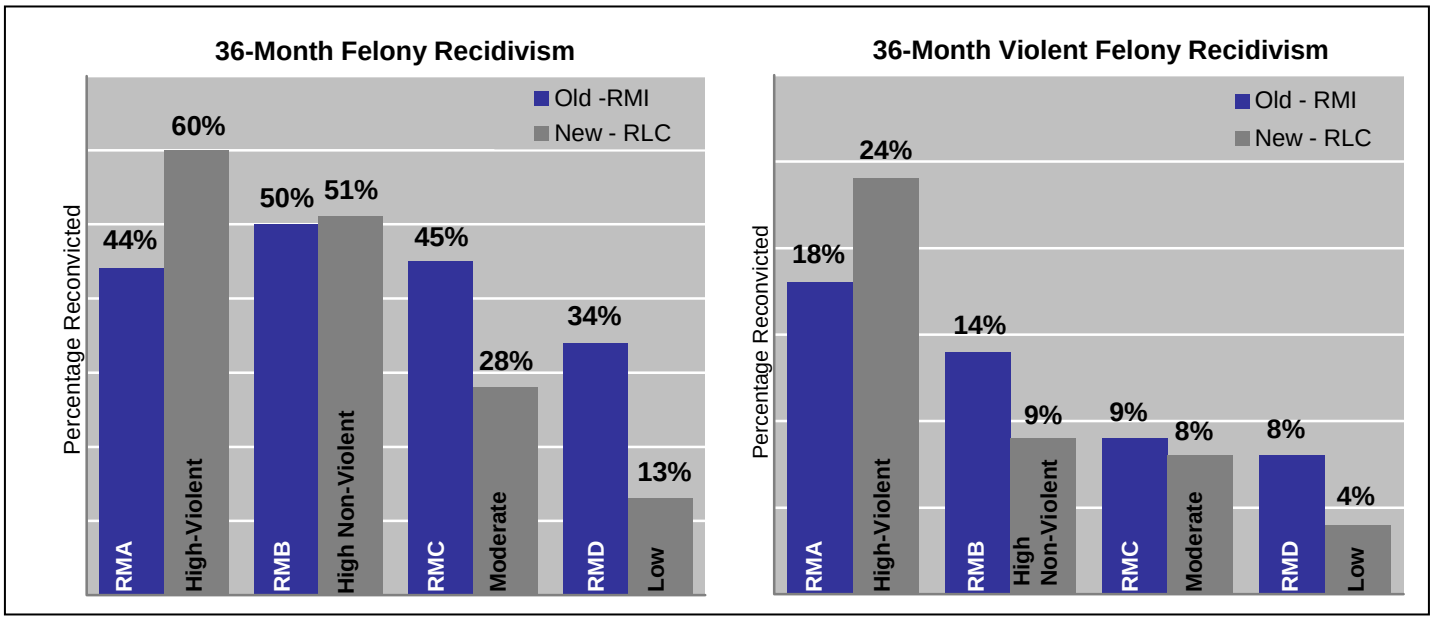

***Exhibit 3:* Community Supervision**
The Old Risk Management Identification (RMI) vs. the New Risk Level Classification (RLC)
For All Offenders Sentenced to the Department of Corrections

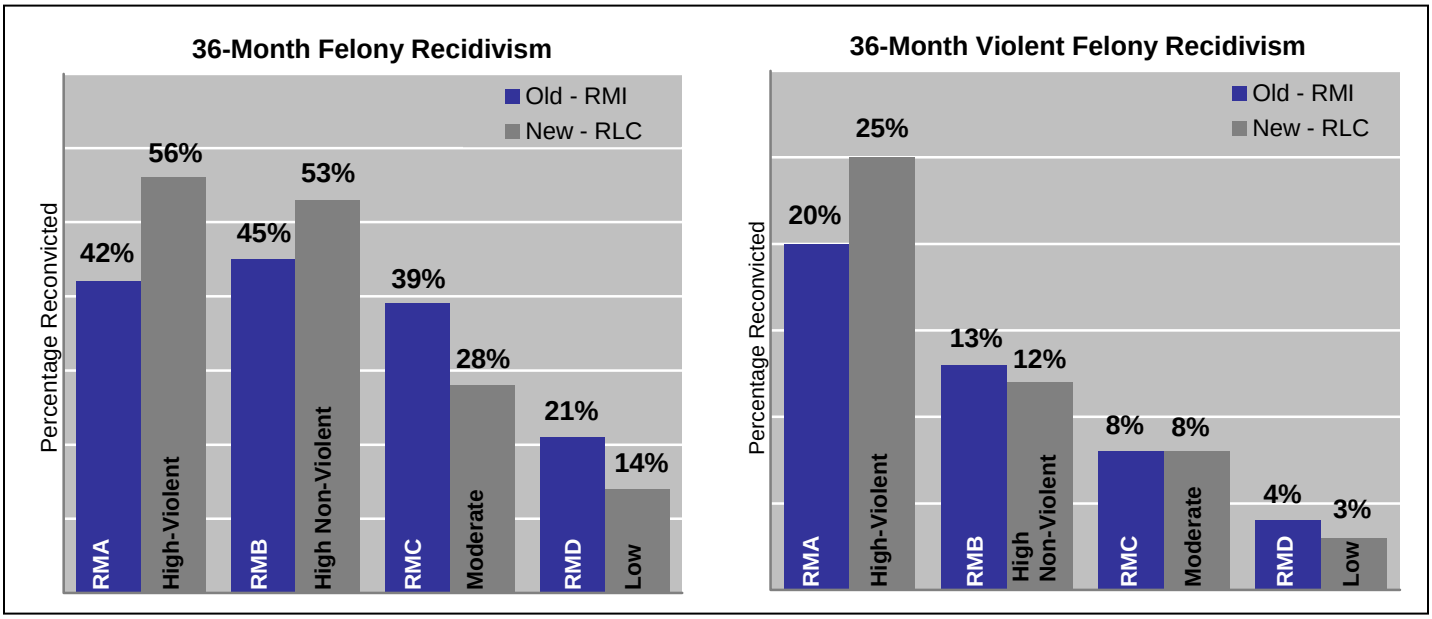

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Exhibit 3 displays 36-month felony and violent felony recidivism rates for offenders placed on community supervision under the two classification systems. The results for the community supervision population are the same as the results for prison releases. The new system outperforms the old.

In addition to displaying the recidivism rates graphically, we also conducted logistic regression analyses to determine how well the two classification systems predict recidivism. We used a "batting average-like" statistic to measure the accuracy of the recidivism predictions under the new classification system. This measure is called the *area under the receiver operating characteristic* (AUC).

Exhibit 4 presents the AUCs for both classification systems for each type of recidivism.[8]

Exhibit 4
A Comparison of the AUCs
for Both Risk Classification Systems

Risk Classification System	Felony	Violent Felony
RLC (new system)	0.704	0.689
RMI (old system)	0.605	0.661

The AUCs demonstrate there is stronger predictive power under the new RLC system compared with the old RMI system, especially for felony recidivism.

[8] In order to compare the predictive power of the new classification system with the old system, the AUCs in this report were based on the four risk levels of the two systems. The AUCs in our 2007 report, however, were based on the three risk scores, which are used to define the four risk levels for the new classification system. Two factors contribute to lower AUCs in this report compared with our 2007 report. First, the risk scores are a continuous measure, which is a more precise measure of risk to reoffend compared with four risk levels. The risk scores produce higher AUCs than four risk levels (.726 for felony recidivism and .730 for violent felony recidivism compared with the AUCs for the RLC system in Exhibit 4). Second, violations are included as a component of the risk assessment. We observed that recorded violations fell significantly after the OAA went into effect, which is probably not due to a sudden change in offender behavior; rather, due to DOC data entry practices. The Institute will work with DOC to incorporate these data entry changes into the risk assessment before our final OAA report is published in 2010.

Document No. 09-03-1201

Washington State Institute for Public Policy

The Washington State Legislature created the Washington State Institute for Public Policy in 1983. A Board of Directors—representing the legislature, the governor, and public universities—governs the Institute and guides the development of all activities. The Institute's mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.