Interagency Council on Intermediate Sanctions
Assessment Data Brief

Screening for Risk of Re-Offending: Hawaii's Proxy Scale and Level of Service Inventory-Revised

Offenders in Hawaii are screened with the Proxy to determine those who have a higher probability of recidivating. Offenders with the highest probabilities of recidivism are categorized for priority in receiving the more detailed Level of Service Inventory – Revised (LSI-R) assessment (described in the next section). Overall, young current age, young age at first arrest, plus high numbers of prior arrests taken together are predictive of recidivism and are reflected in an offender's Proxy score.

The proxy scale currently utilized in Hawaii was developed by Justice System Assessment & Training (JSAT), a contractor for the Interagency Council on Intermediate Sanctions (ICIS). Consideration of feasible administrative workloads by probation and parole officers, and other corrections personnel, is the primary purpose of this scale. It is most appropriate to focus on the highest risk offenders when resources are limited.

Table 1. Rearrest Rates by Proxy Scores, 2004

Proxy Score	Percent Rearrest (Base Numbers in Parentheses)
2	9.0 (334)
3	18.4 (207)
4	25.3 (392)
5	28.4 (278)
6	33.5 (230)
7	47.6 (105)
8	44.8 (96)
Total Rearrest	25.3 (1,642)

The desired workload distribution for the ICIS effort has been set such that 45% of offenders will be supervised at an administrative level (meaning no LSI-R assessment) and the remaining 55% of offenders will be assessed and subsequently receive treatment interventions via the LSI-R. An initial analysis of Hawaii cases by JSAT revealed that, to receive this desired workload distribution, offenders who score a 4 and below on the Proxy should be supervised at an administrative level and those who score 5 and above should receive an LSI-R assessment and be treated accordingly.

It is important to validate this instrument on Hawaii's offender population to determine its suitability for continued use. Table 1 demonstrates an analysis of offenders who were given the proxy in Hawaii between January 24, 2003 and April 4, 2004. These offenders were followed for a minimum of 6 months to determine whether any recidivating event had occurred. Per the ICIS, recidivism is defined as a new arrest on probation, parole, or pre-trial revocation. As expected, the proxy score is predictive of future recidivism. The higher the proxy score, the higher the rate of recidivism. While the overall six month recidivism rate for this sample is 25.3%, only 9.0% of offenders who scored a 2 on the proxy recidivated while 44.8% of those who scored an 8 did. The differences in recidivism rates by proxy score are statistically significant.

It is also important to control for the time that each offender was at risk for recidivism, especially since each offender had varying exposure times to risk while in the community. Statistical methods known as event history analyses are well suited to analyze these types of cases. For this reason, Kaplan Meier Analysis, a

specific form of event history analysis, was employed to determine whether there was also varying times to recidivism based on the different exposure times to risk.

Chart 1: Rates and Times to Recidivism by Proxy Score
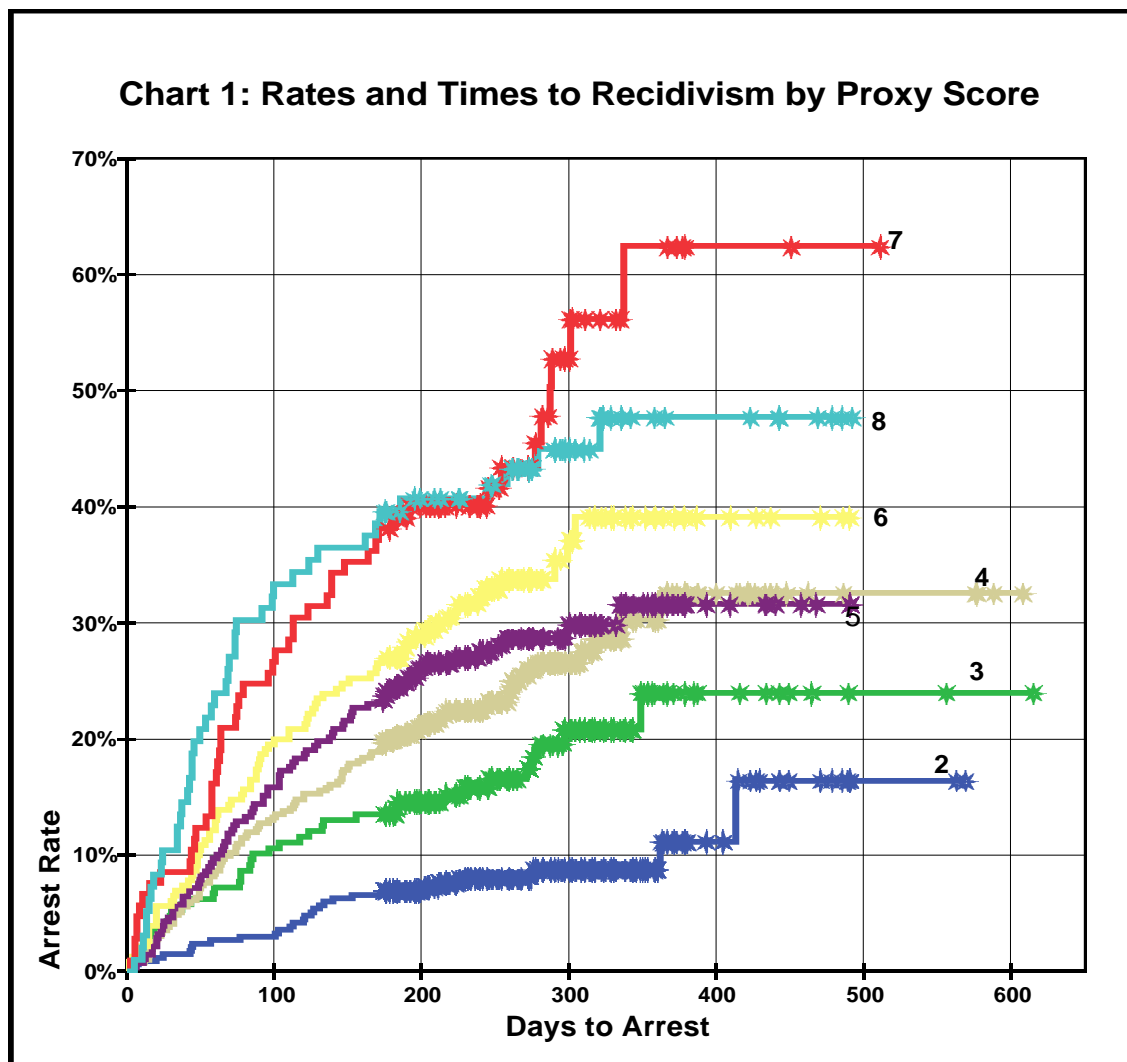
The Kaplan-Meier analysis not only demonstrates that those who score higher on the proxy demonstrate higher overall recidivism rates, but those offenders also begin to recidivate sooner than do those who score lower on the proxy. Kaplan-Meier analysis presents a visual description of both those who have recidivated and those who are predicted to recidivate by proxy score. Each line in Chart 1 demonstrates the actual and predicted recidivism rate for each score of the proxy. The y-axis, or the left side, represents the overall arrest rate for each group while the x-axis, or bottom scale, represents the time each group takes to reach the cumulative arrest rate. Each group is plotted in terms of both actual and predicted rearrest rates. For example, the bottom line on Chart 1 represents the group of offenders who scored a 2 on the Proxy. The actual recidivism rate for that group at almost 200 days out is 9.0%, but is projected to reach about 18% at close to 600 days out. These analyses demonstrate an initial validity of the Proxy for use in Hawaii. However, validity can only truly be established with the continued finding of these results over time. As such, these results should be considered as preliminary while research on the Proxy continues.

Level of Service Inventory - Revised

The Level of Service Inventory-Revised (LSI-R) has increasingly been recognized as the best-available risk assessment instrument for offenders. The LSI-R is one of only two instruments designed specifically to contain criminogenic needs (Bonta, 1996)[1], including static, or unchangeable, and dynamic, or changeable, correlates of recidivism. This tool is the most widely used of these validated tools and is used not only in the United States, but also in Canada, the United Kingdom, Australia, and New Zealand (Bonta et al., 2001)[2]. In the United States alone, more than 600 agencies utilize the LSI-R assessment instrument (Lowenkamp, 2004)[3]. The instrument contains 54 items and is similar to the Burgess method of scoring. For example, the presence of a risk factor is scored as a 1 and the absence of a factor is a 0. The sum of all the scores provides the total overall risk score. Additionally, the 54 items in the LSI-R can be collapsed into 10 general criminogenic categories. Bonta notes (1996) that high scores on the specific domains suggest which criminogenic needs should be targeted for treatment or other intervention. Theoretically, lowering scores on dynamic items through appropriate treatment (level of service), and hence overall risk levels, will lead to a reduction in recidivism.

Although this instrument has been validated on a national sample, it is also important to validate this instrument on Hawaii's offender population. Table 2 demonstrates an analysis of probation and parole offenders who were assessed with the LSI-R between July 18, 2002 and June 20, 2004. Data were collected on December 20, 2004 such that all offenders in this sample were followed for a minimum of 6 months to determine whether any recidivating event had occurred. The differences in recidivism rates by LSI-R risk level are statistically significant. While offenders who were classified as

Table 2. Rearrest Rates by LSI-R Classification Levels, 2004

	Percent Rearrest	Base Numbers
Administrative	22.6	425
Low	32.9	76
Medium	42.2	263
High	41.6	346
Surveillance	42.2	90
Total	34.5	1,200

administrative risk on the LSI-R had the lowest recidivism rates (22.6%), there was no distinction in rates between offenders classified as medium and those classified as surveillance. However, these early numbers should be viewed with caution since low base numbers, for example, in the surveillance category can skew the overall numbers. Additionally, the average follow-up time for offenders is 229 days. The intent of ICIS, and the recommendation of the research committee, is that offenders be followed for at least 3 years. As such, these numbers may change once enough time passes to allow for a more robust analysis. Additionally, if surveillance and high risk cases are being treated with interventions, according to LSI-R assessment information, their rates of rearrest may be reflected in these comparatively lower numbers. However, more research will need to be conducted to make such a statement.
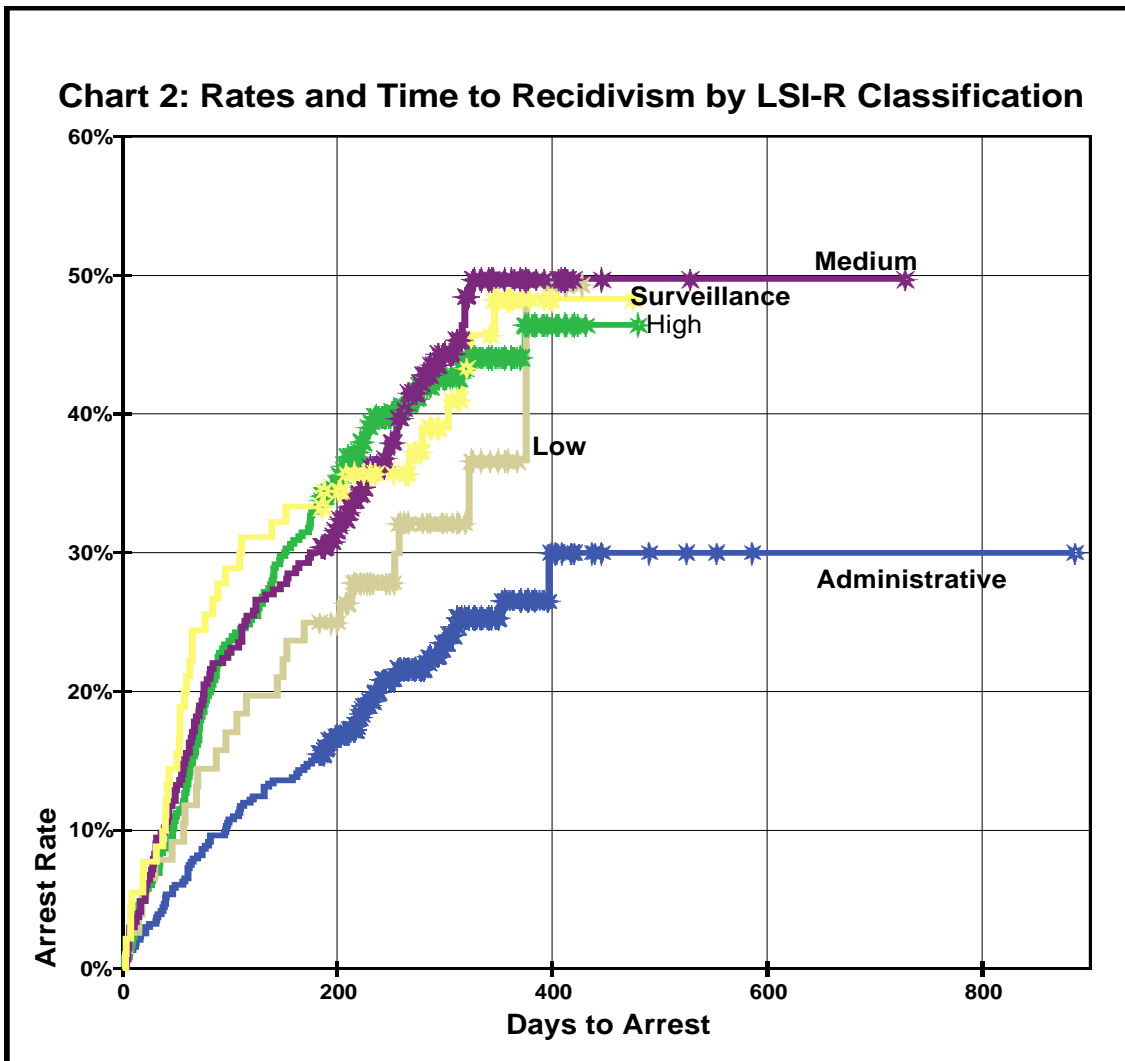
As with the Proxy, It is also important to control for the time that each offender was at risk for recidivism. Kaplan-Meier analysis was also employed in the analysis of LSI-R outcomes to determine differences in time to recidivism by risk level.

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[1] Bonta, James. 1996. "Risk-Needs Assessment and Treatment." *Choosing Correctional Options that Work: Defining the Demand and Evaluating the Supply*. Chapter 2. Edited by Alan T. Harland. Thousand Oaks: Sage Publications.

[2] Bonta, James; Bogue, Brad; Crowley, Michael; and Laurence Motiuk. 2001. "Implementing Offender Classification Systems: Lessons Learned." *Offender Rehabilitation in Practice*, Chapter 11. Edited by G.A. Bernfeld, D.P. Farrington and A.W. Leschied. John Wiley & Sons.

[3] Lowenkamp, C.T. and E.J. Latessa. 2004. "Understanding the Risk Principle: How and Why Correctional Interventions can Harm Low-Risk Offenders." Topics in Community Corrections, National Institute of Corrections.

Kaplan-Meier analysis presents a visual description of both those who have recidivated and those who are predicted to recidivate by proxy score. The Kaplan-Meier analysis demonstrates that those who score lower, especially at administrative and low levels, are rearrested slower and less often than are those at the medium, high, and surveillance levels. Each line in Chart 2 demonstrates the actual and predicted recidivism rate for each level of LSI-R classification. The y-axis, or the left side, represents the overall arrest rate for each group while the x-axis, or bottom scale, represents the time each group takes to get to the cumulative recidivism rate. For example, the bottom line on Chart 2 represents the group of offenders who were classified as administrative risk by the LSI-R. The actual recidivism rate for that group at almost 200 days out is 22.6, but is projected to reach about 30.0% at roughly 400 days out. Although the results of this preliminary analysis are not as linear as might be expected, they do nonetheless demonstrate an initial validity of the LSI-R for use in Hawaii based on the distinction, in overall rates, between the administrative and low risk categories as compared to that of the medium, high, and surveillance categories. However, these analyses need to be checked on an ongoing basis to determine validity of this instrument on Hawaii's population. Additionally, there is still a need to norm these data to Hawaii's population, and undoubtedly change cutoffs for risk classifications.

Chart 2: Rates and Time to Recidivism by LSI-R Classification