

Prison Recidivism Analysis

2015 Release Cohort

Recidivism Basics

Findings

How is the recidivism rate derived?

- It is the proportion of felony offenders that returns to prison within 36 months of release.
- What are the components of the calculation? Nevada felony offenders released during a calendar year and that return within 36 months of release.
- Have efforts to reduce repeat prison incarcerations succeeded over time? Yes, the return rate has decreased by 1.02% yearly.

Prison recidivism is a measure of success post incarceration. Failure to obey the law can result in serving time in prison, and modern correctional theory points that time serving a sentence must be invested productively to assist offenders to become better members of society inside a facility and in the community at large. Offenders possess various demographic and criminogenic characteristics, and their tendency to violate rules or their ability to rehabilitate varies. An offender with no history of criminal offenses might be improved after a period of probation or incarceration than one with a tendency to steal property. Thus, to better craft correctional programs and policies, the Nevada Department of Corrections routinely analyses the characteristics of its yearly release cohorts and tracks recidivism patterns for thirty-

six consecutive months following exit from prison. This newsletter examines the readmission pattern of offenders released during Calendar Year 2015 and attempts to arrive at conclusions regarding an offender's likelihood to return to the prison system, his or her ability to survive in the community, and time to fail. This analysis inspects data across core offender strata to arrive at conclusions that provide insight on what individuals to target the most when desiring to achieve reduced recidivism rates.

During 2015, 3,005 individuals were paroled and 1,991 were discharged. Of all the 4,996 offenders that were released from the prison system, 27.52% or 1,375 returned—a decline of 3.87% relative to the 2014 release cohort. Worth noting is that 15.19% of the 2015 cohort was made up of women and 84.81 % men. Although recidivism rates for men and women are not statistically different, males are more likely to return to prison than females, and their predictive probability of recidivating is 28.46% versus 22.75% for women. Release statuses have statistically different return rates and play a significant role in an offender's likelihood to recidivate. For an offender that discharges a sentence, the probability of readmission is 20.08% versus 32.58% for paroles.

Trends in Recidivism

Year	Rate	% Change
2010	20.03%	--
2011	29.08%	-1.7%
2012	30.24%	3.9%
2013	29.20%	-3.4%
2014	28.63%	-1.95%
2015	27.52%	-3.87%

Release type	Did not return	%	Returned	%	Total
Discharged	1583	80.33%	408	19.67%	1991
Paroled	2038	70.09%	967	29.91%	3005
Grand Total	3621	74.08%	1375	27.52%	4996

Gender	Did not return	%	Returned	%	Total
Female	565	75.71%	194	24.29%	759
Male	3056	73.72%	1181	26.28%	4237
Grand Total	3621	74.08%	1375	27.52%	4996

Factors known about the 2015 release cohort

- Males have larger recidivism rates than women.
- Offenders released between the age of 17 and 27 have larger predictive probabilities of re-incarceration than offenders released from prison at an older age.
- Property and violent offenders have larger predictive probabilities than the other groups.

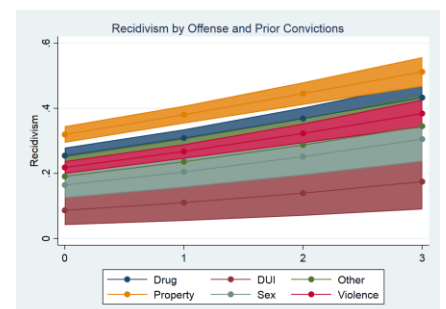
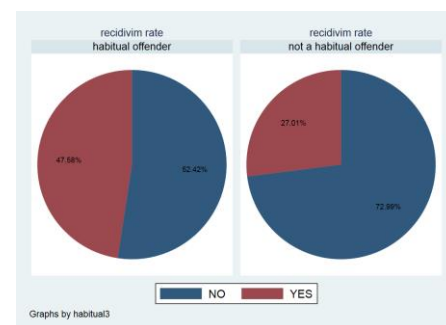
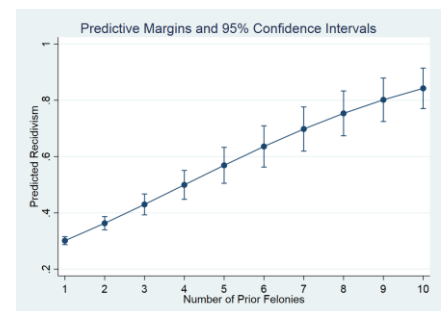
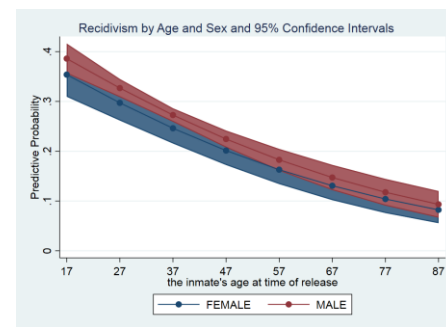
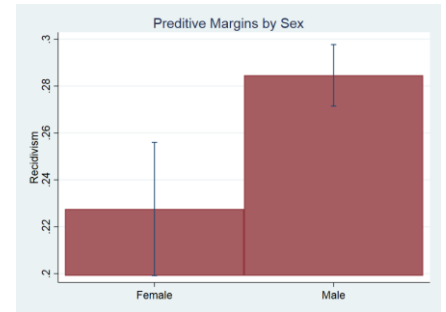
Are habitual offenders more likely to return more often?

- Across release cohorts, habitual offenders returned to the NDOC 1.7 times as a non-habitual offender.
- 27.01% of non-habitual offenders returned versus 52.42% of habitual offenders.
- 55.24% of offenders who had at least three prior felony convictions before their initial booking returned to the NDOC.
- Each additional prior felony conviction in an offender's history increases the likelihood of incarceration by 34.21%.

Are there specific characteristics that increase or decrease the predictive probability of returning to prison?

The likelihood that inmates will recidivate increases when select characteristics are present. Specifically, when the individual is less than 40 years of age, a property or drug offender, a category "A" felon, released on parole, or male, the chances of readmission are larger than when these attributes are not present. Although the NDOC collects data on race and ethnicity, U.S. citizenship status, and the main language spoken by the offender, these variables were identified as having no significant effect on recidivism. Knowledge of the influence of core attributes is useful in predicting the probability of readmission and assists with classification and case management planning. For example, as an individual ages, the possibility of re-incarceration declines by 3.83 % for each additional year of age; and once an offender reaches the age of 37, the probability decreases to 26.69% or .83 percentage points smaller chance than average. Although recidivism rates decline for both male and female, rates for males stay above female rates at every age. Of much significance is an offender's criminogenic history, such as the number of prior felony convictions,

as they have a statistically significant influence on the likelihood that an individual will return. For an offender without prior convictions, the predictive probability of re-incarceration is 24.57%, and this proportion increases by 34.21% with each additional felony conviction, to the extent that the chance of readmission can reach 86.50% for an individual with as many as 10 convictions prior to the initial booking. DUI felon offenders have the lowest predicted rates of return to prison even when accounting for the possibility of accumulated prior felonies. Property offenders have the largest predicted rates regardless of the number of prior felonies. Likewise, recidivism can be predicted based on an individual's habitual status, given that the chance of readmission is 18.8 percentage points larger for habitual offenders making them 45.92% likely to return versus 27.04% for offenders without habitual status.

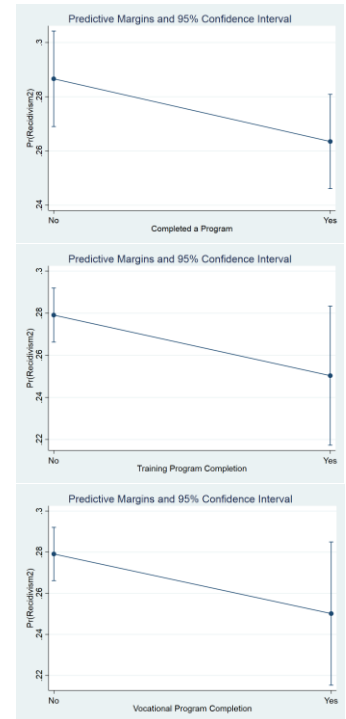


Predictive Margins and Program Completions

Programs not only provide life skills for prisoners; they provide discipline and structure, count as credits towards their sentences, and can improve an individual's odds of being successful post incarceration. Forty-one percent of offenders released in 2015 had completed a program offered by the NDOC during the booking that was released. To determine the relationship between re-incarceration and program completion, programs were grouped into six main categories: correctional, educational,

substance abuse, job training, vocational, and no program completion. Although not statically significant in regards to recidivism, the probability of returning to prison for an individual that completed a program is 0.13 percentage points lower than for offenders that don't complete a program. In fact, only 25.69% of the ones that completed a program returned during the observation period versus 28.82% of their counterparts. Two types of programs stand out in terms of lower predicted chance of recidivism-

vocational and job training. The probability of recidivism for an offender that completed either a vocational or a job training program is 2.7 percentage points lower than for an offender who didn't complete either of these programs. Vocational and job training programs can be completed in relatively short periods of time and provide useful skills that bring about employment opportunities post incarceration. These are career training programs such as fire fighter; forklift, photovoltaic, or AutoCAD operator; and classes in computers, culinary, or construction, among various others.



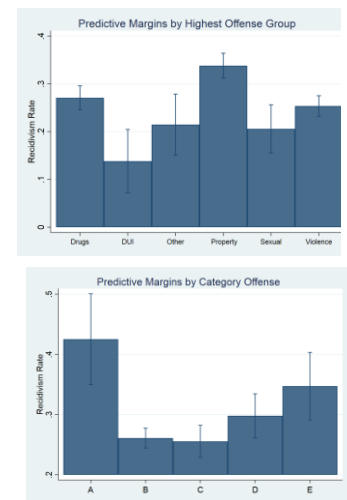
Recidivism and Offense Type

The 2015 cohort shares similarities with former cohorts in regards to recidivism and the offender's highest offense group and category offense. This steady trend provides insightful information for correctional administrators when deciding what types of offenders are most at risk of failing in the community. Based on the results from yearly recidivism studies, it is evident that the offenders

that are at most risk are property and drug offenders and the least at risk are DUI and sex offenders. Property offenders exhibit a predicted rate of recidivism that is 6.28 percentage points above the 27.52% average, and drug offenders' predicted rate is 0.46 percentage points below the average but still several points above the other four groups. Predicted rates for DUI, sex, violent, and other offenders are lower

Program	Rate
Job training	24.78%
Vocational	23.80%
No program	28.82%

than the average, ranging from 13.80% for DUI to 25.34% for violent offenders. Category A felons are also at significant risk of returning (42.5%) seconded by E felons whose probability of returning is 29.78%.

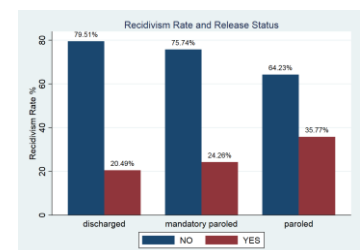


Recidivism and Release Status

Whether the offender discharges the sentence or is released to the community provisionally has a significant effect on the outcome of success in the community. After discharging a booking, an offender is 20.08% likely to return to prison, while an offender who is

released on parole is 32.58% likely to return. This phenomenon could be related to the length of stay in prison, which is typically longer for offenders that don't have to serve a minimum period behind bars before release to parole supervision. Offenders that are

required to be under supervision are more serious offenders who have to comply with various conditions to live freely with the rest of society. Perhaps, this is the reason why only 20.49% discharged returned versus 32.18% of those that were paroled.

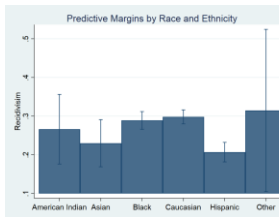


Race & Ethnicity

- Are distinct racial groups more likely to recidivate?

While race or ethnicity don't increase or decrease the chances of returning to prison, select groups are predicted to have recidivism rates above or below the average of 27.52% as follows:

- Other (31.46%)
- Caucasian (29.80%)
- African Americans (28.9%)
- Native (26.60%)
- Asians (22.30%)
- Hispanics (20.68%)



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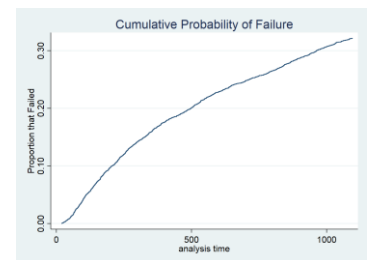
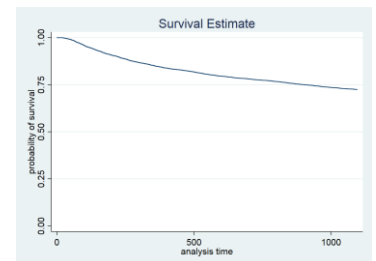
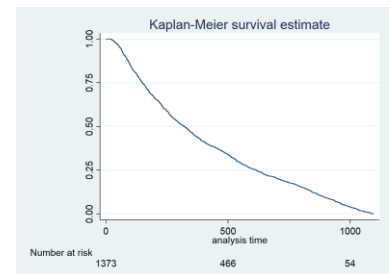
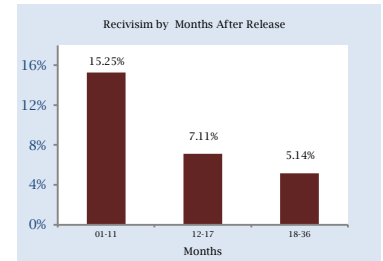
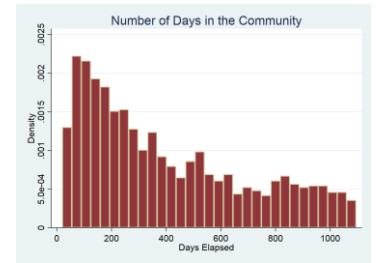
A note regarding the methodology

NDOC derives recidivism rates as per the Performance Based Measures established by the Association of State Correctional Administrators.

Time at Risk

A common inquiry is the length of time that an offender is at most risk of failure in the community. Should offender monitoring schemes be designed based on time at risk? Are select offenders more at risk soon after release from prison or much later? What factors affect median survival time in the community? To answer these types of inquiries a survival model was built with the same indicators utilized to derive the predictive probability to recidivate. It was noted that the ex-prisoners failed in as few as 20 days and as many as 35½ months of release, and the mean survival time for the 2015 cohort was 29.8 months. The first 11 months, however, is when inmates are at most risk. As shown in the bar chart to the right, 15.52% (approximately half) were reincarcerated after first 11 months. For the average offender, the survival rate dropped at a declining rate reaching 84.75% by the end of the 12th month, to 72.52% by the 35th month, and after that time, there were no additional failures through the end the period of observation. Survival rates vary by type of offender and supply further evidence regarding the relationship between recidivism and criminogenic and

demographic characteristics. The chances of surviving remained in the 90% range for DUI offenders and in the 90% to 80% range for sex offenders up to 35½ months after release. However, for drug offenders the survivor function declined to 71.12% and for property offenders to 64.88% after 35½ months. Offenders that completed a program from the NDOC had 75% chance of being successful outside 32 months of release versus 26 months for those that didn't complete a program. Based on the Kaplan-Meier estimate, 25% of ex-prisoners were estimated to fail by the 30th month. After 30 months, the probability of surviving in the community longer was 75%, and once it reached 35½ months, the cumulative probability of failure reached 27.52%. However, for drug and property offenders the 25% failure rate was reached by the 16th and the 27th month, respectively. Offenders with prior felonies also have statistically different survival functions. An offender without prior convictions has 75.90% chance of success after 35½ months, while an offender with 3 or more prior convictions has 55.59% chance.



Summary. Survival functions and predictive probabilities of recidivating are statistically different across offense groups, program participation, category offenses, prior felonies, and age groups; and these are relationships that can be of excellent value when aiming at reducing recidivism and increasing the chances that ex-offenders will succeed after incarceration. Recidivism is a complex issue, and not one that can be permanently resolved. There are many other factors that affect an individual before commission of a crime and after incarceration, and that are outside the scope of this study. The conclusions arrived at from this study should, at minimum provide core knowledge about prison recidivism for Nevada offenders and help craft evidence-based practices.