



**Study of Wyoming Parole  
Revocations 2005-2009: Produced for  
the Bureau of Justice Statistics and  
Justice Research and Statistics  
Association Multi-State Study**

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# **Study of Wyoming Parole Revocations 2005-2009: Produced for the Bureau of Justice Statistics and Justice Research and Statistics Association Multi-State Study**

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## 1. Introduction

### 1.1. Financial Support and reason for this project

The Bureau of Justice Statistics (BJS) solicited proposals from state Statistical Analysis Centers (SACs), inviting them to participate in a multistate study of factors related to parole violations and revocations. Awards were under this solicitation were made to five SACs to obtain data on parolees, prepare them for analysis, produce a report describing the frequency of, and factors related to, violations and revocations of parolees in the state, and provide an SPSS database to JRSA. Written reports were required of all SACs that received awards. These awards were supported by a cooperative agreement between the Justice Research and Statistics Association (JRSA) and the Bureau of Justice Statistics (BJS).

BJS believed that more information was needed about how states' policies and practices interact with individual and case characteristics, and this report provides information on how parole operates in Wyoming and a statistical analysis of parolee success and failure within a timeframe established by BJS and JRSA.

After receiving cooperation and permission to utilize data from the Wyoming State Board of Parole and the Wyoming Department of Corrections (WDOC), WYSAC submitted a successful proposal. WYSAC thanks the Board of Parole and WDOC for their cooperation and assistance in delivering this vitally important analysis.

### 1.2. Wyoming and its parole system

With 98,000 square miles and a statewide average of 5 persons per square mile, Wyoming has 23 counties and the Wind River Indian Reservation—17 classified as frontier, 4 that are nonmetropolitan, and 2 metropolitan counties (both of these cities are only slightly above the 50,000 metropolitan population threshold). The U.S. average of persons per square mile is 85. Wyoming is an indeterminate sentencing state where parole is granted at the sole discretion of the Board of Parole, which is a separate operating agency of the state. The lay Board is comprised of seven citizens residing throughout the State who are appointed by the Governor to serve six year terms. Administrative and operational support is provided by a seven person staff located in Cheyenne, headed by an executive director who is appointed by the Board.

Three-member hearing panels of the Board travel throughout the United States as needed to conduct inmate and parolee hearings, and conduct some hearings by telephone. A decision of the majority of the panel is the decision of the Board. The Board has jurisdiction over felony offenders sentenced to incarceration in Wyoming Department of Corrections institutions. The board holds regularly scheduled hearings at the various Wyoming state institutions in which inmates are housed. Inmate hearings are not open to the public.

Duties of the Board include:

- a) Review applications for parole
- b) Grant, deny, rescind or revoke paroles
- c) Recommend a commutation of sentence
- d) Revoke good time
- e) Restore good time

- f) Restore voting rights to approved applicants
- g) Consider and/or take action on any other matters brought before the Board

Members are expected to participate in hearings and attend annual administrative meeting. The Wyoming Department of Corrections is responsible for the Board receiving: criminal histories, information pertaining to the crime, information on inmate's adjustment while in custody, victim information, all assessment, evaluations and diagnostic materials; and other information deemed helpful in making a parole decision.

Inmate interviews are conducted by the hearing panel and done in person, by telephone or video conference. Inmates are allowed to present their version of the present offense and criminal history, discuss their problems and needs, discuss progress made toward rehabilitation, present reasons they should be paroled, and plans for the future. Inmates can request the presence of family, friends, or attorneys at the hearing. Those present will be allowed to provide relevant input, without being sworn under oath or cross-examined. The hearing panel reviews offenders' social, medical, psychological and criminal history along with patterns of behavior from institutional records. Documentation provided by the inmate or his or her supporters is also reviewed. Inmates must also submit a written parole plan prior to the hearing that outlines living arrangements, employment opportunities, and treatment and medical considerations. After the interview, the hearing panel renders its decision and the inmate is notified.

Victims who request notification of parole hearings are given the opportunity to appear. Information provided by the victim is not made available to the inmate. Restitution can be included as a condition of parole if the original offense requires restitution. The Board has the authority to modify or waive restitution. The Board can *require* that inmates successfully complete sex offender programs, substance abuse programs, or other programming. Many offenders are paroled to community correctional facilities or the Intensive Supervision Program. Unsupervised parole can be granted on the recommendation of parole agents.

Parole good time is awarded at Board discretion—up to 15 days per month served on parole status. The supervising parole agent must recommend monthly as to whether a parolee is deserving of a good time award based on compliance with conditions of parole. Alternatively, parole good time which has been previously awarded may be rescinded if a parolee is found guilty in an evidentiary hearing of a condition of his or her parole.

Revocations require a Board hearing unless the parolee admits to the allegation and waives the hearing. If revoked, no credit for the parolee's release period will count toward the original sentence, unless the board directs otherwise. During the revocation hearing, the parolee is allowed to hear evidence of the alleged violations and question witnesses. Parolees can be represented by attorneys.

To be eligible for parole, inmates must have served their minimum sentence. Ineligible are offenders serving life sentences, serving sentences for assault with a deadly weapon on an officer, employee or other inmate; or offenders having attempted escape. Although the Board does not employ a formal decision matrix to determine whether an offender will be granted parole, commonly used fundamental considerations for granting parole include:

- a) Board assessment of risk to the community

- b) Board assessment of the likelihood that the offender will adjust well to reintegration
- c) Offender participation in appropriate programming while incarcerated

In fiscal year 2006 the Board heard the cases of 1,077 inmates. Of those cases 738 were parole eligible and 419 inmates were granted parole. Approximately 600 individuals are on parole in Wyoming at any given time in the recent past, and in FY2008 there were 303 parole intakes with 251 parole termination. Currently, about 40% of eligible inmates waive their opportunity to parole. In an effort to entice more inmates to parole and reduce minor infraction threshold revocations, the Board ushered-in legislative action that as of July 2008 enables awards of good time credits to parolees and imposes intermediate interventions.

The Wyoming Department of Corrections Field Services Division manages probationers and parolees at 24 field offices around the state. The Department contracts with Adult Community Corrections Boards which in turn contract with a private service provider for the operation of three adult community corrections facilities located in Casper, Cheyenne and Gillette. The facilities provide parolees' with housing and case management services.

## 2. Background and Methods

In order to help policy makers develop a *profile of characteristics* of parolees who are returned to prison in Wyoming (those who violate their conditions of parole to the extent that their parole agreements are revoked), we examined several parolee attributes, criminal histories, and parole conditions. A primary research question driving the analysis was: Which parolee characteristics appearing in the data are associated with parole revocation? Of course one must keep in mind that a range of violations can occur that are simply unknown to parole agents and hence are not recorded.

Two types of revocations are recognized in Wyoming. The first is violating the terms of a parole agreement (technical violations), and the second is an arrest for a new crime. Depending on the parole board, the parolee may be given credit for "street time" served but this is not always the case. Data were gathered on every adult who was paroled in Wyoming during the calendar years 2005 and 2006. This resulted in 611 individuals becoming part of the study population. Parolees were selected for inclusion in the study based on two possible conditions (see Table 1 below). First, a parolee could have been incarcerated before 2005 and released onto parole sometime during 2005-2006. Second, an offender could have been convicted and incarcerated sometime during 2005-2006 and subsequently released onto parole before the end of the period. Each member of the study population was tracked from the date of parole to December 31, 2008, or until they were revoked, or their parole ended (whichever was first). Therefore, we needed a statistical method that would account for the different study periods.

Table 1. Month and year of study population parole date

Date	Frequency	Percent	Cumulative Percent
Jan-05	23	37.60%	3.80%
Feb-05	21	34.40%	7.20%

Mar-05	25	40.90%	11.30%
Apr-05	18	29.50%	14.20%
May-05	16	26.20%	16.90%
Jun-05	23	37.60%	20.60%
Jul-05	17	27.80%	23.40%
Aug-05	27	44.20%	27.80%
Sep-05	28	45.80%	32.40%
Oct-05	26	42.60%	36.70%
Nov-05	34	55.60%	42.20%
Dec-05	24	39.30%	46.20%
Jan-06	23	37.60%	49.90%
Feb-06	21	34.40%	53.40%
Mar-06	33	54.00%	58.80%
Apr-06	32	52.40%	64.00%
May-06	17	27.80%	66.80%
Jun-06	26	42.60%	71.00%
Jul-06	28	45.80%	75.60%
Aug-06	38	62.20%	81.80%
Sep-06	37	60.60%	87.90%
Oct-06	21	34.40%	91.30%
Nov-06	20	32.70%	94.60%
Dec-06	33	54.00%	100.00%
<b>Total</b>	<b>611</b>	<b>100.00%</b>	

Our research required us to assemble an extensive database that included information about Wyoming parolee behavior while on parole. It also required a study population that was large enough for us to examine variation across offenders, and a long enough follow-up period in the community so that violations would have had time to proceed through the decision-making process, reaching a final recorded outcome (revocation back to prison or not). No single database contained all of the information our study required, and we knew that assembling the data would be difficult and time consuming. Indeed, assessing, merging, and cleaning the requisite datasets was extremely time consuming since some of the needed data were paper records!

Offender data for this report was collected from the Wyoming Correctional Information System (WCIS), the COMPAS<sup>1</sup> risk assessment, and the Wyoming Department of Corrections (DOC) Probation and Parole Termination Reports. Relevant data includes information on parolee demographics, past history (e.g. parole revocations, previous crimes), incarceration information, parole information, revocation information, and initial location to which the offender was paroled.

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<sup>1</sup> COMPAS is a statistically based risk assessment specifically designed to assess key risk and needs factors in correctional populations and to provide decision-support for justice professionals when placing offenders into the community. Created by the Northpointe Institute for Public Management Inc., WDOC adopted the use of COMPAS as its primary instrument for offender risk and needs assessment in 2003.

This information was then merged for statistical analyses, often requiring recoding or the creation of new variables based on one or more existing variables that made the data more suitable to the analysis at hand.

### 3. Demographics

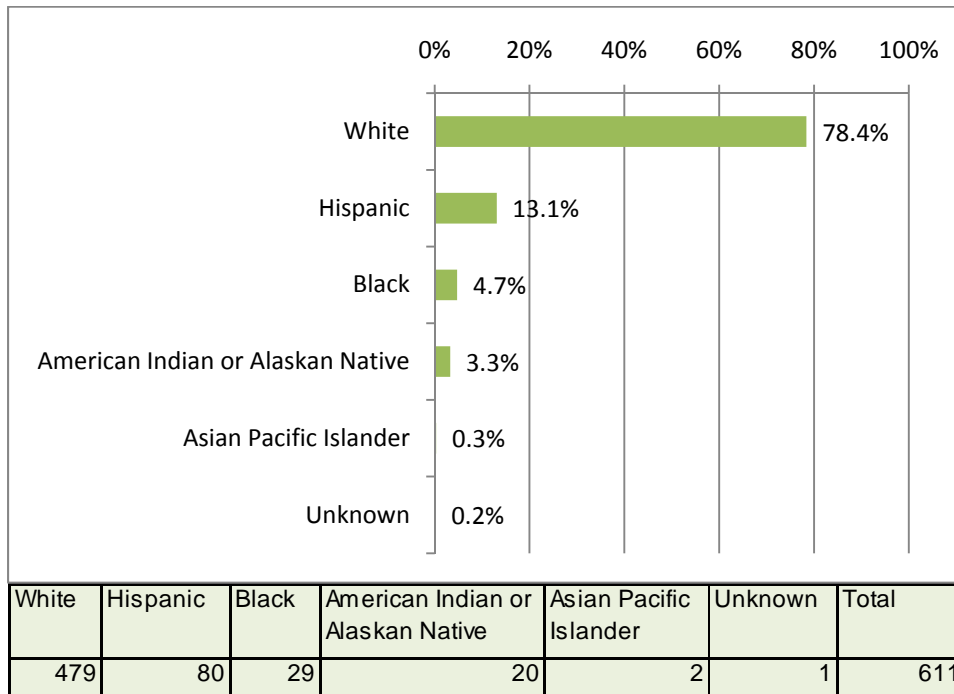
There were 611 adults paroled in Wyoming during 2005 and 2006. The majority of parolees were male (84%), and 16% of parolees were female. Just over 40% of the parolees were between the ages of 18 and 30 when they began parole, nearly 44% were between the ages of 31 and 44, and 16 percent were aged 45 years or older when they started parole.

Table 2. Age at time of parole

Age Category	Frequency	Percent
18-30	245	40.10%
31-44	268	43.90%
45+	98	16.00%
<b>Total</b>	<b>611</b>	<b>100.00%</b>

The overwhelming majority of parolees in 2005-2006 were White (78.4%). Just over 13% of the parolees were Hispanic (see Figure 1). Black parolees account for 4.7% and American Indians account for 3.3% of the 611 parolees.

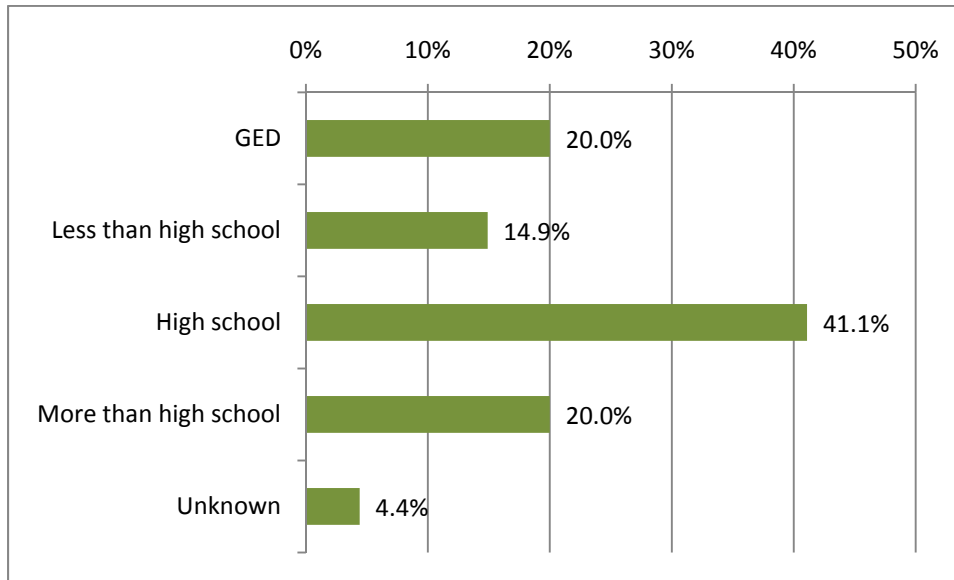
Figure 1. Race of parolees





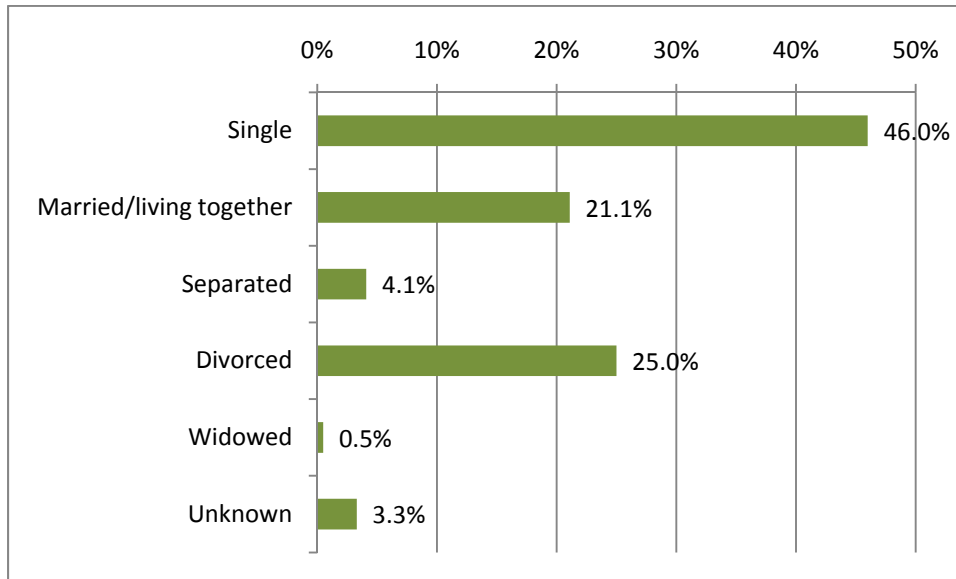
Of the 96% of parolees that had non-missing education data, the majority had either graduated from high school or obtained a GED (43% and 21% respectively), and 10% had at least some high school education. Approximately 6% had junior high school level education or lower. Approximately 21% had at least some college education.

Figure 2. Educational attainment of parolees



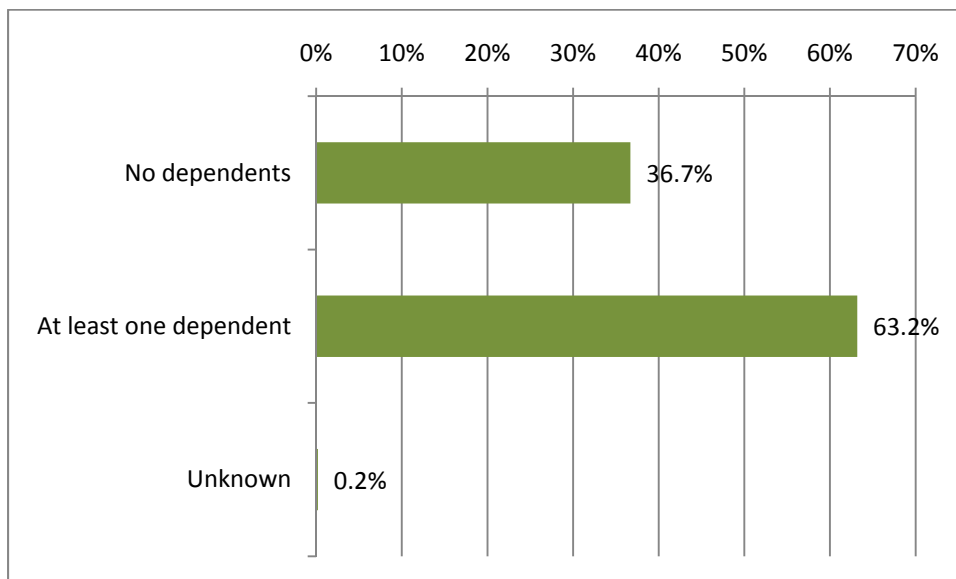
The majority of parolees were not “married or living with someone.” Approximately 46% were single, 25% were divorced and 4% were separated. Twenty-one percent were married or living with someone (based on information reported on 97% of parolees).

Figure 3. Marital status of parolees.



The majority of parolees consider themselves to have at least one dependent (22% had one dependent, 21% have two dependents, and approximately 20% have three or more dependents), while just under 37% have no dependents. Of the 94% of parolees whose military service is identified, the majority are not military veterans (93%).

Figure 4. Dependents of parolees



## 4. Key Findings

### 4.1. Parolees' Prior Record

According to the available data, nearly two in five parolees have no prior arrest, either felony or misdemeanor. Over half the parolees (51.9%) have no prior felony conviction(s), and a third of the parolees (33.4%) have no prior misdemeanor conviction(s).

Of parolees who have prior convictions, burglary and drugs are the most common crimes (20% and 28%). Approximately 20% of the parolees have a previous violent or sexual conviction (murder, robbery, assault, sexual assault, including rape, and other violent offenses). Of those prior offenses, 80% were for a felony conviction.

Twenty-seven percent have served a previous prison sentence in Wyoming. Approximately 53% of these parolees have served two years or less.

### 4.2. Current Incarceration

Approximately a third of all parolees (33.2%) were paroled for drug related crimes, 18% for violent crimes, 5% for sexual crimes, 40% for property crimes (including burglary, larceny/theft, fraud/identity theft, receipt of stolen property, destruction of property/vandalism, forgery, other property) and 4% for other (including weapons, flight/escape from custody, and driving-related). The shortest sentence (maximum) was 18 months and the longest was 1140 months. Approximately 29% of parolees have been serving sentences for two or more convictions.

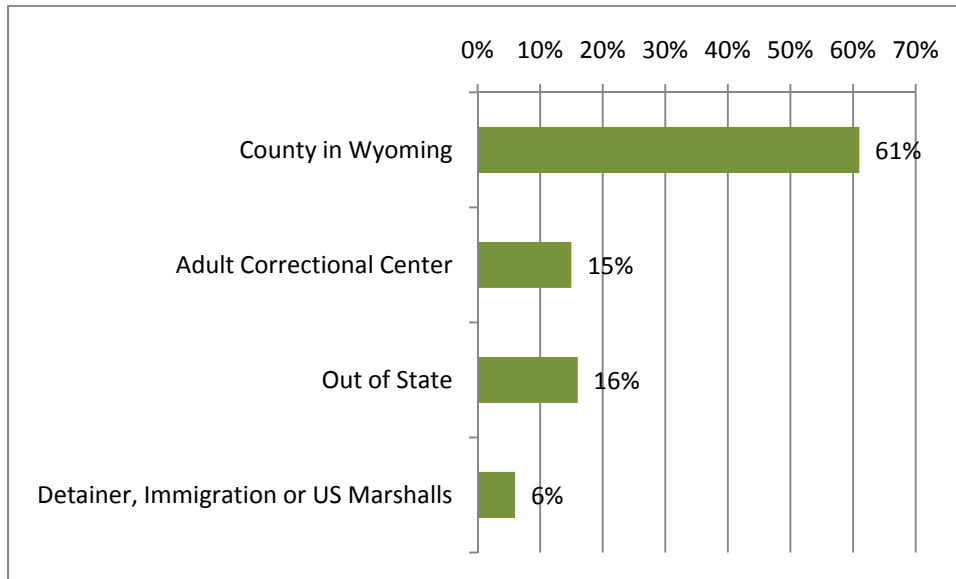
The longest time served when compared to the maximum sentence awarded was 100% of the sentence, and the shortest was 12.5%. Only 1.5% of the parolees have participated in the Serious and Violent Offenders Reentry Initiative (SVORI) program. However, nearly 42% of parolees had participated in some type of programming 12 months before they were paroled. These programs included, but were not limited to, Narcotics Anonymous, Thinking for a Change, and Anger Management.

Only 3.4% of parolees had served less than one year for their current sentence, 31.6% served between one and two years, 27.8% served between two and three years, 14.3% served between three and four years, 9.3% served between four and five years, and 13.6% served over five years for their current offense(s).

### 4.3. Parole Information

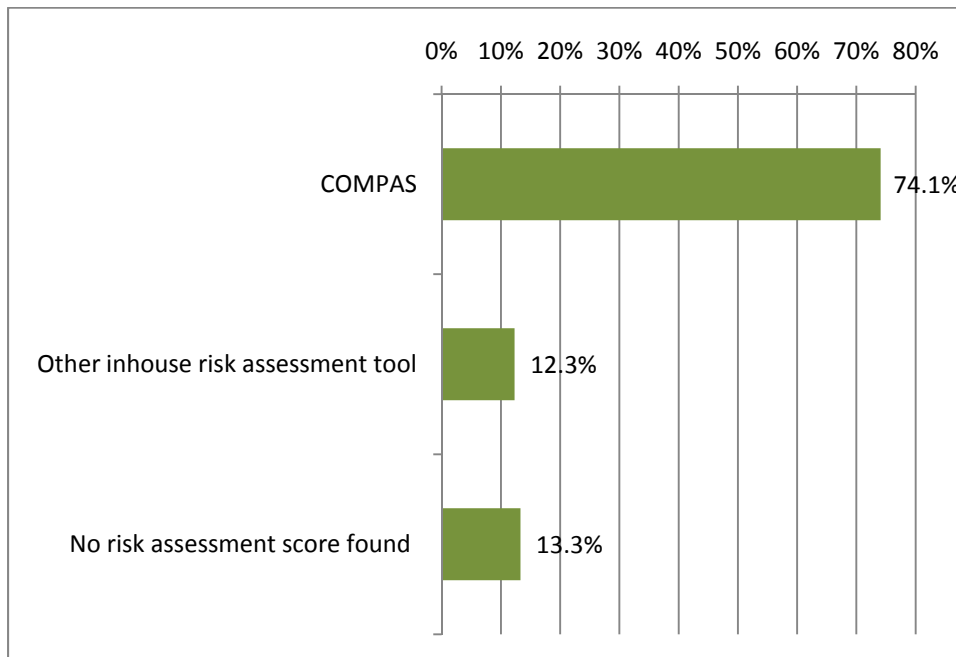
The majority of Wyoming parolees were paroled to Wyoming (61% to a Wyoming County) and 15% to an Adult Correctional Center (ACC). However, 16% of parolees paroled from Wyoming initially went out of state, and 6% were detained, went to immigration, or to U.S. marshals (see Figure 5).

Figure 5. Initial parole location



Formal risk assessment levels were available on 87% of the parolees (these risk assessments were conducted prior to community supervision). Of those parolees that had information available, the majority (85%) were obtained through the COMPAS assessment tool used widely in Wyoming.

Figure 6. Type of risk assessment tool



COMPAS	Other inhouse risk assessment tool	No risk assessment score found
453	77	81

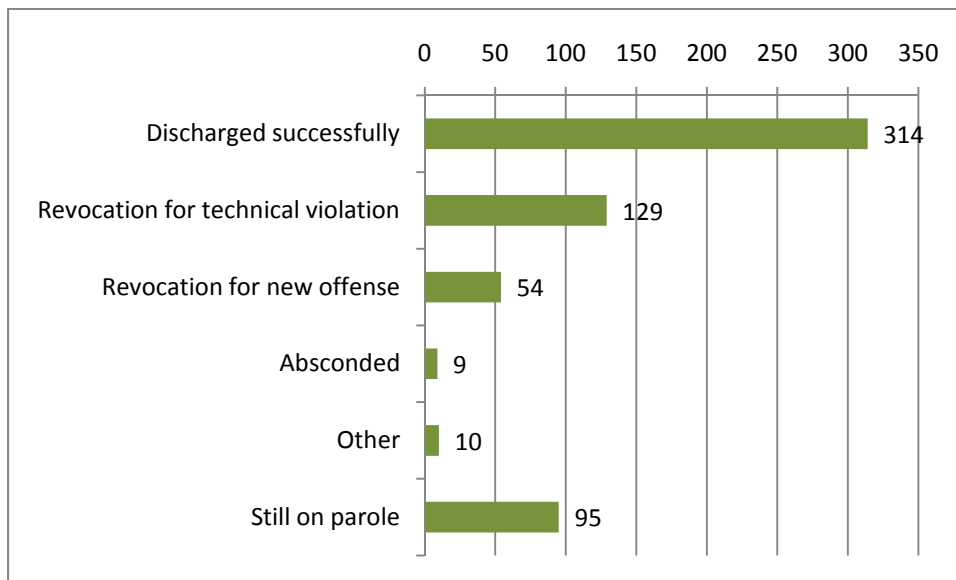
The majority of offenders (66%) were classified on the risk assessments as medium risk. “Medium” as defined here includes both those assessed at *medium risk* and those assessed as *medium with intensive supervision*. Twenty-one percent of the study population was classified as high risk, and 13% at low risk.

According to parole records, 82% of parolees were classified as having some kind of alcohol or drug related problem, and 9% were classified as having a mental health problem.

Nearly one in four parolees (23.7%) received a parole term of less than one year, 36.8% received between one and two years, 22.4% received two to three years, while 17% received over three years.

As of December 31, 2008 (the end date of the tracking period for parolees) or the end of their parole date (whichever was first) the majority of parolees were discharged successfully (51%). Of the rest of the study population, 16% were still on parole, 21% were revoked for technical violation(s), 9% were revoked for new offenses, 2% had absconded, and 2% were classified as ‘other’. Of those parolees who were revoked (new offenses or technical violations), 30% were for a new offense, and 70% were for a technical violation (see Figure 7).

Figure 7. Study population disposition on 12/31/2008 (end of tracking period)



Just over 9% of the study population had already been paroled once for their current offense, and a further 35% had come from probation. Approximately 13% of parolees previously had ever been on parole.

#### 4.4. Possible Predictors of Parole Revocations

In order to fully explore the data gathered for this study, both univariate statistics (Pearson’s chi-square analysis) and univariate inferential statistics (Kaplan-Meier survival analysis) were utilized. See Appendix A for a complete list of chi-square tables.

The Kaplan-Meier Survival Analysis procedure was selected because one of the key strengths of the method is that it makes analytical use of observations (cases) where only partial data is available over

the study period. In other words, the method does not require that offenders be paroled at the same time and then either be revoked or successfully complete their parole sometime during the study period. Survival analysis is particularly useful in recidivism studies where individuals leave prison at different points along a timeline and can be “censored” before the study period ends. “Censoring” in survival analysis occurs when some empirical information about survival time is known, but the exact time of survival is unavailable. For example, an offender might have been on parole for 24 months when the study period ended. We know that the offender met the criteria of inclusion as they were paroled during 2005 or 2006, but beyond the study’s end the offender’s status is unknown. The offender could be revoked after the study period or never be revoked, but survival analysis only considers events of interest (revocation) before the study ends. Thus, anything beyond the study period is “censored.”

Survival curves (or revocation curves) are estimated using partial data through partitioning the time (study period) into small increments (e.g. days). Then through combining these time intervals, a “hazard rate” for being revoked is calculated. The “hazard rate” is based on revocations over a period of time *given that the person has not been revoked up to that point* (Hosmer, 1999).

By calculating the hazard rate for each day separately, all available data can efficiently be utilized. For example, there are 611 people in the study with the possibility of being revoked on day one; whereas there are only 40 people with that possibility by day 1,035 (3 years). By calculating the hazard rate for each day, and then combining this information over all time periods, a revocation curve is created which graphically shows revocations and how this rate can vary over time. Additionally, different revocation curves can be compared among various groups to assess if one group experienced a greater hazard rate than another. These analyses are especially useful when trying to assess risk factors for revocation.

In this study, the number of days until the revocation is defined as the date of incarceration minus the offender’s starting parole date. Since not all inmates were released on the same day over the period of study, it was necessary to assess the number of days *eligible* to be revoked. This “start date” was defined as the day the offender left prison. Thus, for each inmate a unique *day zero* was determined. The *date of revocation* was defined as the day on which a former inmate was physically returned to prison. If an offender was not returned to prison then the date calculated was the end of their parole, or the time from their release until December 31, 2008 (whichever was first). Due to data limitations, it was not possible to clearly define the date of the crime, the date of the trial, or the date of sentencing. If comparisons are to be made with another state’s data, it is important to note the method of defining the revocation date.

For our analysis, revocations were defined any of the follow: *technical violation*, *new offense*, or *absconding*. *Successful parole* is defined as any of the following: a) offenders completing their parole without revocation, b) offenders who were still on parole as of December 31, 2008, or c) “other” which included offenders with detainers or those dying while on parole.

*Region of parole equal to Wyoming* is defined as paroled to either: a) “Wyoming” represents those offenders who were paroled to a county within Wyoming; or b) “ACC” are those paroled to any of WDOC’s Adult Community Corrections facilities in Wyoming. *Out-of-state* are those parolees initially going to another state after their release or “other” for those parolees who went to a detainer, ICE, or U.S. Marshall.

From the significant chi-square analysis we expected region to be a predictor of whether parolees were revoked. A person who was paroled to a county in Wyoming was revoked 36.4% of the time, compared to 33.3% of those that entered an ACC unit in Wyoming, while 21.4% of parolees who were revoked when sent out-of-state, and 2.5% of people who are classified as other. However, if we included only the 461 people who were initially paroled in Wyoming we find that region *is not* a predictor. Therefore, two separate analyses were run, one which included all 611 offenders (paroled anywhere, including the “other” category) and one which included only those 461 parolees who were originally paroled somewhere in Wyoming (a county or ACC).

Age was organized into categories for Kaplan-Meier and chi-square analysis and the ages were defined as 18-30 years, 31-44 years, and 45 years and older – this too was based on Gratten *et al's* study of parolees in California. Using Kaplan-Meier Survival Analysis we find that in Wyoming, parolees who were aged between 18 and 30 were more likely to be revoked *within one year* on parole at 20.9% compared to 14.8% for those aged 31-44, and 12.4% for those aged over 45 years old (see Table 3). This is confirmed with a chi-square analysis where we found that 36.7% of those aged 18-30 were revoked, compared to 29.5% of those aged 31-44, and 23.5% of those 45 years of age or older for all 611 parolees. This trend is similar for the 461 parolees originally paroled in Wyoming. Therefore, we expect age to be a predictor of revocations, and the older a parolee is when they are released to parole the less likely they are to be revoked.

Table 3. Revocation rates by age category

Time After Release	Revocation Rate (18-30)	Revocation Rate (31-44)	Revocation Rate (45+)
2 months	-	1.9%	-
4 months	5.4%	3.8%	-
6 months	10.2%	6.5%	-
8 months	15.0%	10.5%	-
10 months	17.3%	11.7%	8.7%
1 year	20.9%	14.8%	12.4%
2 years	37.8%	26.6%	-
3 years	57.7%	46.2%	-

Nearly half (49%) of the parolees between the ages of 18 and 30 were serving time for property offenses, whereas drug offenses were more common among those aged 31 years and older. Offenders who were convicted of drug crimes were successful 77.3% of the time compared to 64.6% of offenders who committed property crime.

A person's sex does not appear to be a significant predictor of whether they will be paroled. One explanation could be that the type of crime was influencing these results. For all parolees, property crime was the most commonly reported severe crime for both sexes; however, this was 58.8% for females and 36.8% for males.

Parolees' race was coded as 'white' for people who identified themselves as white, 'non-white' for those who identified themselves as African American, 'Asian American', 'American Indian', or 'other'; there is also a category of 'missing' which is where people identified their ethnicity as Hispanic but did not identify their race. Since we have reason to believe that the missing category is better defined as Hispanic we have kept it in our analysis. From the Chi-square analysis, we found that white parolees at the two year mark revoked at 28.4% compared to 45.9% of non-whites. In

fact, parolees who are white have lower revocation rates across the entire time period compared to parolees who are non-white. For example, after two months on parole the revocation rate of white parolees is 1.5% compared to 5.8% of non-whites, and after one year on parole this increases to 15.3% for white parolees and 31.3% for non-white parolees (See Table 4).

**Table 4. Revocation rates by race**

Time After Release	Revocation Rate (Overall)	Revocation Rate (White)	Revocation Rate (Non-White)
2 months	1.5%	1.5%	5.8%
4 months	4.7%	4.4%	11.6%
6 months	7.7%	7.7%	-
8 months	11.4%	10.9%	17.9%
10 months	13.3%	12.3%	22.3%
1 year	16.6%	15.3%	31.3%
2 year	30.9%	28.4%	45.9%
3 year	47.4%	43.9%	-

Education was used as a categorical variable in this analysis and the categories were “less than high school” for anyone with less than 12 years of education; “high school education” for people who had completed high school; “more than high school” when offenders had at least some college; and “GED” for people who identified themselves as having obtained a GED. Parolees with a GED are less successful at completing parole in Wyoming. Parolees with a GED are successful at parole 48.4% of the time compared to 75.8% of parolees with less than complete high school education, 73.3% of parolees with a high school education, and 68.9% of parolees with more than a high school education. From Kaplan-Meier it can be seen that parolees with a GED are revoked 48.7% of the time, compared to 30.4% of parolees with a high school education, and 30.1% of those parolees with more than a high school education (See Table 5).

**Table 5. Revocation and parolee education**

Time After Release	Revocation Rate GED	Revocation Rate Less than high school	Revocation Rate High School	Revocation Rate More than high school
2 months	1.7%	-	2.0%	-
4 months	8.4%	-	3.6%	5.8%
6 months	13.5%	-	7.4%	-
8 months	20.6%	8.2%	11.2%	-
10 months	24.2%	-	12.1%	-
1 year	28.2%	-	14.9%	15.9%
2 year	48.7%	-	30.4%	30.1%
3 year	76.1%	-	39.2%	-

This fact that we find education level to be a predictor of revocations, and that people with a GED are revoked more often than people without a GED is true of both all parolees and just those who were initially paroled to a Wyoming. We must be careful in our interpretation of this data. Wyoming correctional facilities *strongly* encourage prisoners without a high school diploma to obtain a GED while in prison. Another explanation for differences could be that offenders with a GED are more likely to be younger, which is a risk factor itself.



Next we examine marital status, which demonstrates significant differences. Parolees who are separated are revoked 16% of the time compared to 24.8% of parolees who are divorced, 31.8% who are married or living together, and 37.7% of parolees who are single. This trend is similar to what we see for those parolees who were paroled within Wyoming. However, this could be confounded by age as offenders who are between 18 and 30 are single 68.2% of the time.

“Arrests” were dichotomously coded: offenders either had no previous arrests, or had at least one previous arrest. For all parolees we expected this to be a significant predictor and indeed saw a significant but not overwhelming difference—of those who have a previous arrest, 36.2% were revoked compared to 26.6% of parolees who had not had a previous arrest. However, arrests are not significantly associated with revocation for those parolees who were initially paroled within Wyoming.

Type of crime was categorized into violent, sexual, property, drugs, and other. For all parolees we expected this might be a significant predictor, and it was—38.9% of violent crime paroles were revoked compared to 22.7% of parolees with drug crimes as their most serious crime. However, crime type is not associated with revocations for those parolees who were initially paroled in Wyoming.

It was hypothesized that the amount of time a parolee was given would affect their capacity to be revoked and a variable “Paroletime” was created based simply on the number of days of the parole sentence. For the chi-square analysis this variable was categorized into months as “Factorparole” and was broken down as 0-12 months, 13-24 months, 25-36 months, and 37+ months. Of people paroled in Wyoming, 25.2% of those receiving 0-12 months parole were revoked, compared to 40% of those receiving 13-24 months, 43.1% of those receiving 25-36 months and 32.1% of those receiving longer than 37 months parole. This pattern is similar for all parolees. This indicates that the length of the parole sentence may be an indicator of their relative chances of successfully completing parole. However, this could be related to the type of crime for which they are serving a sentence.

Alcohol was a possible predictor for all parolees, but not for those parolees who were only paroled in Wyoming. For all parolees, those who were noted as having alcohol/drug problems were revoked at 35.3% compared to 13.8% of parolees who were not recorded as having an alcohol/drug problem.

If an offender had previously broken parole for this offense then they were more likely to break parole again either for the whole group, or just those who were paroled in Wyoming. Of those who had broken parole before, 51.1% were revoked compared to 34.1% for those paroled in Wyoming. This indicates that people who have broken parole recently are more likely to revoke.

Revocation for technicalities occur earlier than do revocations for new offenses during the first two years of the parole period. However, by three years the revocation rates for either condition are fairly similar (see Table 6).

Table 6. Revocation rates for technicalities and new offenses over time

Time After Release	Revocation Rate (Overall)	Revocation Rate (Technicalities)	Revocation Rate (New Offenses)
2 months	1.5%	6.2%	-
4 months	4.7%	17.1%	9.3%
6 months	7.7%	27.9%	14.8%
8 months	11.4%	41.9%	20.4%
10 months	13.3%	48.1%	22.2%
1 year	16.6%	55.0%	40.7%
2 year	30.9%	86.8%	68.5%
3 year	47.4%	98.0%	98.1%

#### 4.5. Cox Regression

Cox Regression survival analysis was used to determine which variables were the strongest predictors of revocation out of all the predictors discussed in the previous sections. This multivariate method allowed us to examine both the likelihood and timing of revocations. The goals of survival analysis are to:

1. Estimate the time between two events—release from incarceration and the date of revocation;
2. Calculate the varying rates of revocation over the study period; and
3. Compare rates of revocation between groups.

With this technique, one can test the effects of *multiple* variables simultaneously. Important to note with this method, is that the data are smoothed so that a baseline hazard function is created. Then, the effects of each variable are estimated with respect to this baseline reference function. This automatic “smoothing” of the data is one possible disadvantage of the Cox regression method.

The first survival analysis conducted for Wyoming was for all parolees and this included the following variables: the dependent variable was *Survival* and this was recorded as a continuous variable in days, calculated from the day parole began until they were revoked, until their parole was successfully completed, or until 12/31/08 whichever came first. Parolee *status* was revoked (discussed earlier).

Due to the cases with any missing data, only 573 cases were included in the analysis. One hundred and eighty-four events occurred and 389 were censored. Offenders who were paroled out-of-state were 45% more likely to be revoked compared to people paroled within Wyoming, and people paroled to “other” were 86% less likely to be revoked compared to people paroled in Wyoming.

According to Grattet et al, younger parolees aged 18-30 have the greatest risk of parole violations. Since they have the greatest expected risk of violation we could expect them to have the greatest number of revocations. This is true in Wyoming where we find that for every year older a parolee is when they go on parole there is approximately a 2% lower risk of being revoked. Parolees’ age was measured in years and this was their age on the date of their parole.

Compared to white parolees, those parolees who are classified as non-white have a 59% higher risk of being revoked. Compared to white parolees, those parolees classified as “unknown” (because of coding in Wyoming it is suspected that most of them are Hispanic) have a 61% higher risk of being revoked. White was the reference category for race, which was coded as white, non-white, and “missing”.

In the literature, education is often considered an important variable for predicting whether a parolee will be revoked. Parolees *with a GED* were the reference category in the Cox Survival Analysis, and we found that, compared to parolees having a GED, those with less than high school education had a 49% lower risk of being revoked; those with a high school education had a 50% lower risk of being revoked; and those with more than a high school level of education had a 38% lower risk of being revoked. It is not known why parolees with a GED are revoked more often, but parolees with a GED tend to be younger which may be the reason that GED is so much more at risk of being revoked.

Compared to parolees who have no dependents, those parolees with at least one dependent have a 29% lower risk of being revoked. This was coded as “0” for no dependents, and “1” for one or more dependents.

It was hypothesized that the percent age of a sentence served would have an impact on the likelihood of revocation. A 10% increase in time served computed to maximum sentence given will increase the hazard rate by 16%. This indicates that the more of the sentence served, the more likely is revocation. This may be explained by the hypothesis that those offenders who are less likely to follow rules serve longer sentences of incarceration before attaining parole status.

Compared to those offenders who have been identified as having alcohol/drug problems, those who do not have are at a 54% lower risk of being revoked.

Compared to those who have not previously been on parole, those who have been on parole in the past are at 64% more of a risk of being revoked.

Compared to parolees who have been on parole for a year, those parolees who have two to three years have a 53% lower risk of being revoked; and parolees who have three or more years have a 69% lower risk of being revoked. It must be noted that those offenders with longer parole sentences tend to be for sex crimes, which in Wyoming tend to have a lower revocation rate.

In the Cox model considering only people paroled in Wyoming we have 453 cases, after losing 8 due to missing data. Parolees with a GED were the reference category, and in comparison to this category, we found that those with less than high school education had a 56% lower risk of being revoked; those with a high school education had a 58% lower risk of being revoked; and those with more than a high school level of education had a 43% lower risk of being revoked.

Compared to those who have not previously broken parole for their current offense, those who have been on parole are at a 82% higher risk of being revoked. Compared to parolees who have a year or less of parole, those parolees who have two to three years have a 53% lower risk of being revoked; and parolees who have three or more years have a 69% lower risk of being revoked.

Parolees who are divorced have a 53% lower risk of being revoked compared to those who are single.

Moreover, using three statistical tests, several variables in the available data were found to be statistically associated with revocation and hence conversely, successful completion of parole.

## **5. References**

Grattet, Ryken; Petersilia, Joan & Lin, Jeffrey (2008). Parole Violations and Revocations in California. U.S. Department of Justice. Document No.: 224521, Award No.: 2005-IJ-CX-0026.

## 6. Appendices

### Appendix A. Chi-Square Analysis

#### Chi-Square Tables (All Parolees)

Included in the revoked *yes* category are those that have been revoked for technical violations, those that have been revoked for a new offense, and those that have absconded. Included in the revoked *no* category are those that are still on parole, those that successfully finished parole, and other. The other category was comprised of those that left the state and there is no further information, and a few people died while on parole. The Chi-square tests are for all offenders who went on parole during 2005 and 2006 in Wyoming.

Table 1. Revoked and Region

		Region				Total
		Wyoming	Acc, DOC Wyoming	Out of State	Other	
Revoked	No	236 63.6%	60 66.7%	77 78.6%	39 97.5%	412 68.8%
	Yes	135 36.4%	30 33.3%	21 21.4%	1 2.5%	187 31.2%
	Total	371 100%	90 100%	98 100%	40 100%	599 100%

Significant differences exist between the regions where the parolees were initially paroled,  $\chi^2(3) = 24.543$ ,  $p = 0.000$ . Twelve people were removed from the analysis because there was no record of where they were paroled initially. People who were paroled to ICE, U.S. Marshalls and Detainers were collapsed into the other category.

Table 2. Revoked and Age

		Age			Total
		18-30	31-44	45+	
Revoked	No	155 63.3%	189 70.5%	75 76.5%	419 68.6%
	Yes	90 36.7%	79 29.5%	23 23.5%	192 31.4%
	Total	245 100%	268 100%	98 100%	611 100%

Significant differences exist between the parolees age when paroled and whether their parole is revoked,  $\chi^2(2) = 6.555$ ,  $p = 0.038$ .

Table 3. Revoked and Gender

		Gender		Total
		Male	Female	
Revoked	No	345 67.1%	74 76.3%	419 68.6%
	Yes	169 32.9%	23 23.7%	192 31.4%
	Total	514 100.0%	97 100.0%	611 100.0%

No significant differences exist between the parolees sex and whether their parole is revoked,  $\chi^2(1) = 3.183, p = 0.074$ .

Table 4. Revoked and Race

		Race			Total
		White	Non-White	Missing	
Revoked	No	340 71.0%	27 51.9%	52 65.0%	419 68.6%
	Yes	139 29.0%	25 48.1%	28 35.0%	192 31.4%
	Total	479 100%	52 100%	80 100%	611 100%

Significant differences exist between the parolees race and whether their parole is revoked,  $\chi^2(2) = 8.453, p = 0.015$ .

Table 5. Revoked and Education

		Region				Total
		GED	Less than High School	High School	More than High School	
Revoked	No	59 48.4%	69 75.8%	184 73.3%	84 68.9%	396 67.6%
	Yes	63 51.6%	22 24.2%	67 26.7%	38 31.1%	190 32.4%
	Total	122 100%	91 100%	251 100%	122 100%	586 100%

Significant differences exist between the parolees education and whether their parole is revoked,  $\chi^2(3) = 27.238$ ,  $p=0.000$ . Twenty-five people were removed from this analysis as their education level was not reported.

Table 6. Revoked and Marital Status

		Region				Total
		Single	Married/ Living together	Separated	Divorced	
Revoked	No	175 62.3%	88 68.2%	21 84.0%	115 75.2%	399 67.9%
	Yes	106 37.7%	41 31.8%	4 16.0%	38 24.8%	189 32.1%
	Total	281 100%	129 100%	25 100%	153 100%	588 100%

Significant differences exist between the parolees marital status and whether their parole is revoked,  $\chi^2(3) = 10.750$ ,  $p=0.013$ . Twenty people were removed from this analysis as their marital status was not reported, and three people were removed who were widowed.

Table 7. Revoked and Dependents

		Dependents		Total
		No Dependents	At Least One Dependent	
Revoked	No	148 66.1%	271 70.2%	419 68.7%
	Yes	76 33.9%	115 29.8%	191 31.3%
	Total	224 100.0%	386 100.0%	610 100.0%

No significant differences exist between whether the parolees had dependents and whether their parole is revoked,  $\chi^2(1) = 1.127$ ,  $p=0.288$ . One person was removed as the number of dependents were not reported.



Table 8. Revoked and Veteran

		Veteran		Total
		Yes	No	
Revoked	No	28 70.0%	359 67.0%	387 67.2%
	Yes	12 30.0%	177 33.0%	189 32.8%
	Total	40 100.0%	536 100.0%	576 100.0%

No significant differences exist between whether the parolees were veterans and whether their parole is revoked,  $\chi^2(1) = 0.154$ ,  $p = 0.695$ . Thirty-five people were removed from this analysis as their status as a veteran was not reported.

Table 9. Revoked and Previous Arrest

		Previous Arrest		Total
		No	Yes	
Revoked	No	223 73.4%	196 63.8%	419 68.6%
	Yes	81 26.6%	111 36.2%	192 31.4%
	Total	304 100.0%	307 100.0%	611 100.0%

Significant differences exist between whether the parolees had a previous arrest and whether their parole is revoked,  $\chi^2(1) = 6.413$ ,  $p = 0.011$ .

Table 10. Revoked and Crime Type

		Crime Type					Total
		Violent	Sexual	Property	Drugs	Other	
Revoked	No	66 61.1%	21 67.7%	159 64.6%	157 77.3%	16 69.6%	419 68.6%
	Yes	42 38.9%	10 32.3%	87 35.4%	46 22.7%	7 30.4%	192 31.4%
	Total	108 100%	31 100%	246 100%	203 100%	23 100%	611 100%

Significant differences exist between the most serious crime type and whether their parole is revoked,  $\chi^2(4) = 11.822$ ,  $p = 0.019$ .

Table 11. Revoked and Two or More Offenses

		Offenses		Total
		One	Two or More	
Revoked	No	292 67.0%	127 72.6%	419 68.6%
	Yes	144 33.0%	48 27.4%	192 31.4%
	Total	436 100.0%	175 100.0%	611 100.0%

No significant differences exist between whether the parolee is serving time for one offense or numerous offenses and whether their parole is revoked,  $\chi^2(1) = 1.817$ ,  $p = 0.178$ .

Table 12. Revoked and Program

		Program		Total
		No	Yes	
Revoked	No	246 69.3%	173 67.6%	419 68.6%
	Yes	109 30.7%	83 32.4%	192 31.4%
	Total	355 100.0%	256 100.0%	611 100.0%

No significant differences exist between whether the parolee partook in any programs in prison and whether their parole is revoked,  $\chi^2(1) = 0.204$ ,  $p = 0.652$ .

Table 13. Revoked and Length of Parole

		Length of Parole				Total
		0-12 Months	13-24 Months	25-36 Months	37+ Months	
Revoked	No	113 77.9%	148 65.8%	86 62.8%	72 69.2%	419 68.6%
	Yes	32 22.1%	77 34.2%	51 37.2%	32 30.8%	192 31.4%
	Total	145 100%	225 100%	137 100%	104 100%	611 100%

Significant differences exist between the length of time of the parole and whether their parole is revoked,  $\chi^2(3) = 28.867$ ,  $p = 0.031$ .

Table 14. Revoked and Risk Level

		Risk Level			Total
		High	Medium	Low	
Revoked	No	73 66.4%	221 62.4%	48 72.7%	342 64.5%
	Yes	37 33.6%	133 37.6%	18 27.3%	188 35.5%
	Total	110 100%	354 100%	66 100%	530 100%

No significant differences exist between the parolees risk level and whether their parole is revoked,  $\chi^2(2) = 2.782$ ,  $p = 0.249$ . Eighty-one people were removed from this analysis as their risk level was not reported.

Table 15. Revoked and Alcohol

		Alcohol		Total
		Yes	No	
Revoked	No	324 64.7%	94 86.2%	418 68.5%
	Yes	177 35.3%	15 13.8%	192 31.5%
	Total	501 100.0%	109 100.0%	610 100.0%

Significant differences exist between whether the parolee was noted as having alcohol/drug concerns and whether their parole is revoked,  $\chi^2(1) = 19.308$ ,  $p = 0.000$ . One person was removed from analysis as their status regarding alcohol/drugs was not reported.

Table 16. Revoked and Mental Health

		Mental Health		Total
		Yes	No	
Revoked	No	40 71.4%	378 68.4%	418 68.6%
	Yes	16 28.6%	175 31.6%	191 31.4%
	Total	56 100.0%	553 100.0%	609 100.0%

No significant differences exist between whether the parolee was noted as having mental health concerns and whether their parole is revoked,  $\chi^2(1) = 0.223$ ,  $p = 0.637$ . Two people were removed from analysis as their status regarding mental health was not reported.

Table 17. Revoked and Broke Parole for this Offense Previously

		Broke Paroke		Total
		No	Yes	
Revoked	No	389 70.1%	30 53.6%	419 68.6%
	Yes	166 29.9%	26 46.4%	192 31.4%
	Total	555 100.0%	56 100.0%	611 100.0%

Significant differences exist between whether the parolee had previously broken parole for their current offense and whether their parole is revoked during the study period,  $\chi^2(1) = 6.441$ ,  $p = 0.011$ .

Table 18. Revoked and Broke Probation for this Offense Previously

		Broke Probation		Total
		No	Yes	
Revoked	No	275 69.3%	144 67.3%	419 68.6%
	Yes	122 30.7%	70 32.7%	192 31.4%
	Total	397 100.0%	214 100.0%	611 100.0%

No significant differences exist between whether the parolee had previously broken probation for their current offense and whether their parole is revoked during the study period,  $\chi^2(1) = 0.253$ ,  $p = 0.615$ .

Table 19. Revoked and Broke Parole Previously

		Broke Probation		Total
		No	Yes	
Revoked	No	372 70.1%	47 58.8%	419 68.6%
	Yes	159 29.9%	33 41.3%	192 31.4%
	Total	531 100.0%	80 100.0%	611 100.0%

Significant differences exist between whether the parolee had previously broken parole and whether their parole is revoked during the study period,  $\chi^2(1) = 4.124$ ,  $p = 0.042$ .

Table 20. Age and Crime

		Age			Total
		18-30	31-44	45+	
Crime	Violent	39 15.9%	55 20.5%	14 14.3%	108 17.7%
	Sexual	8 3.3%	15 5.6%	8 8.2%	31 5.1%
	Property	120 49.0%	91 34.0%	35 35.7%	246 40.3%
	Drugs	65 26.5%	99 36.9%	39 39.8%	203 33.2%
	Other	13 5.3%	8 3.0%	2 2.0%	23 3.8%
	Total	245 100%	268 100%	98 100%	611 100%

Significant differences exist between the parolees age when paroled and the type of crime committed,  $\chi^2(8) = 22.081$ ,  $p = 0.005$

Table 21. Age and Education

		Age			Total
		18-30	31-44	45+	
Crime	GED	63 26.8%	44 17.1%	15 16.1%	122 20.8%
	Less than high School	39 16.6%	40 15.5%	12 12.9%	91 15.5%
	High School	108 46.0%	105 40.7%	38 40.9%	251 42.8%
	More than High School	25 10.6%	69 26.7%	28 30.1%	122 20.8%
	Total	235 100%	258 100%	93 100%	586 100%

Significant differences exist between the parolees age when paroled and the type of crime committed,  $\chi^2(6) = 28.172$ ,  $p = 0.000$ . Twenty-five people were removed from analysis as their education level was not reported.

Table 22. Age and Marital Status

		Age			Total
		18-30	31-44	45+	
Crime	Single	161 68.2%	95 36.5%	25 27.2%	281 47.8%
	Married/Living Together	41 17.4%	64 24.6%	24 26.1%	129 21.9%
	Separated	7 3.0%	13 5.0%	5 5.4%	25 4.3%
	Divorced	27 11.4%	88 33.8%	38 41.3%	153 26.0%
	Total	236 100%	260 100%	92 100%	588 100%

Significant differences exist between the parolees age when paroled and the type of crime committed,  $\chi^2(6) = 28.172$ ,  $p = 0.000$ . Twenty-three people were removed from analysis as their marital status was not reported.

### Chi-Square Tables (Initially Paroled in Wyoming)

The following chi-square are for those parolees who were initially paroled in Wyoming. It was hypothesis that parole outside Wyoming may be different and wanted to examine just those parolees who at least initially were within the Wyoming parole jurisdiction.

Table 1a. Revoked and Region

		Region		Total
		Wyoming County	ACC, DOC Wyoming	
Revoked	No	236 63.6%	60 66.7%	296 64.2%
	Yes	135 36.4%	30 33.3%	165 35.8%
	Total	371 100.0%	90 100.0%	461 100.0%

No significant differences exist between where the parolees were paroled and whether their parole is revoked,  $\chi^2(1) = 0.294, p = 0.588$ .

Table 2a. Revoked and Age

		Age			Total
		18-30	31-44	45+	
Revoked	No	104 56.8%	138 68.0%	54 72.0%	296 64.2%
	Yes	79 43.2%	65 32.0%	21 28.0%	165 35.8%
	Total	183 100%	203 100%	75 100%	461 100%

Significant differences exist between the parolees age when paroled and whether their parole is revoked,  $\chi^2(2) = 7.572, p = 0.023$ .

Table 3a. Revoked and Gender

		Gender		Total
		Male	Female	
Revoked	No	236 62.3%	60 73.2%	296 64.2%
	Yes	143 37.7%	22 26.8%	165 35.8%
	Total	379 100.0%	82 100.0%	461 100.0%

No significant differences exist between the parolees sex and whether their parole is revoked,  $\chi^2(1) = 3.486, p = 0.062$ .

Table 4a. Revoked and Race

		Race			Total
		White	Non-White	Missing	
Revoked	No	246 67.2%	22 47.8%	28 57.1%	296 64.2%
	Yes	120 32.8%	24 52.2%	21 42.9%	165 35.8%
	Total	366 100%	46 100%	49 100%	461 100%

Significant differences exist between the parolees race and whether their parole is revoked,  $\chi^2(2) = 7.874, p = 0.020$ . Missing are believed to be Hispanic for Race.

Table 5a. Revoked and Education

		Region				Total
		GED	Less than High School	High School	More than High School	
Revoked	No	43 44.3%	41 69.5%	150 72.5%	58 62.4%	292 64.0%
	Yes	54 51.6%	18 24.2%	57 27.5%	35 37.6%	164 36.0%
	Total	97 100%	59 100%	207 100%	93 100%	456 100%



Significant differences exist between the parolees education and whether their parole is revoked,  $\chi^2(3) = 23.6153$ ,  $p = 0.000$ . Five people were removed from this analysis as their education level was not reported.

Table 6a. Revoked and Marital Status

		Region				Total
		Single	Married/ Living together	Separated	Divorced	
Revoked	No	119 57.2%	59 60.8%	17 81.0%	98 75.4%	293 64.3%
	Yes	89 42.8%	38 39.2%	4 19.00%	32 24.6%	163 35.7%
	Total	208 100%	97 100%	21 100%	130 100%	456 100%

Significant differences exist between the parolees marital status and whether their parole is revoked,  $\chi^2(3) = 14.550$ ,  $p = 0.002$ . Five people were removed from this analysis as their marital status was not reported or they were widowed.

Table 7a. Revoked and Dependents

		Dependents		Total
		No Dependents	At Least One Dependent	
Revoked	No	91 59.1%	205 67.0%	296 64.3%
	Yes	63 40.9%	101 33.0%	164 35.7%
	Total	154 100.0%	306 100.0%	460 100.0%

No significant differences exist between whether the parolees had dependents and whether their parole is revoked,  $\chi^2(1) = 2.789$ ,  $p = 0.095$ . One person was removed as the number of dependents were not reported.

Table 8a. Revoked and Veteran

		Veteran		Total
		Yes	No	
Revoked	No	16 61.5%	267 63.4%	283 63.3%
	Yes	10 38.5%	154 36.6%	164 36.7%
	Total	26 100.0%	421 100.0%	447 100.0%

No significant differences exist between whether the parolees were veterans and whether their parole is revoked,  $\chi^2(1) = 0.037$ ,  $p = 0.847$ . Fourteen people were removed from this analysis as their status as a veteran was not reported.

Table 9a. Revoked and Previous Arrest

		Previous Arrest		Total
		No	Yes	
Revoked	No	135 67.2%	161 6.9%	296 64.2%
	Yes	66 32.8%	99 38.1%	165 35.8%
	Total	201 100.0%	260 100.0%	461 100.0%

No significant differences exist between whether the parolees had a previous arrest and whether their parole is revoked,  $\chi^2(1) = 1.355$ ,  $p = 0.244$ .

Table 10a. Revoked and Crime Type

		Crime Type					Total
		Violent	Sexual	Property	Drugs	Other	
Revoked	No	49 59.0%	16 72.7%	121 60.2%	98 72.1%	12 63.2%	296 64.2%
	Yes	34 41.0%	6 27.3%	80 39.8%	38 27.9%	7 36.8%	165 35.8%
	Total	83 100%	22 100%	201 100%	136 100%	19 100%	461 100%

No significant differences exist between the most serious crime type and whether their parole is revoked,  $\chi^2(1) = 26.723$ ,  $p = 0.151$ .

Table 11a. Revoked and Two or More Offenses

		Offenses		Total
		One	Two or More	
Revoked	No	204 67.0%	92 69.2%	296 64.2%
	Yes	124 33.0%	41 30.8%	165 35.8%
	Total	328 100.0%	133 100.0%	461 100.0%

No significant differences exist between whether the parolee is serving time for one offense or numerous offenses and whether their parole is revoked,  $\chi^2(1) = 2.005, p=0.157$ .

Table 12a. Revoked and Program

		Program		Total
		No	Yes	
Revoked	No	172 65.6%	124 62.3%	296 64.2%
	Yes	90 34.4%	75 37.7%	165 35.8%
	Total	262 100.0%	199 100.0%	461 100.0%

No significant differences exist between whether the parolee partook in any programs in prison and whether their parole is revoked,  $\chi^2(1) = 0.548, p=0.459$ .

Table 13a. Revoked and Length of Parole

		Length of Parole				Total
		0-12 Months	13-24 Months	25-36 Months	37+ Months	
Revoked	No	83 74.8%	102 60.0%	58 56.9%	53 67.9%	296 64.2%
	Yes	28 25.2%	68 40%	44 43.1%	25 32.1%	165 35.8%
	Total	111 100%	170 100%	102 100%	78 100%	461 100%

Significant differences exist between the length of time of the parole and whether their parole is revoked,  $\chi^2(3) = 9.572, p=0.023$ .

Table 14a. Revoked and Risk Level

		Risk Level			Total
		High	Medium	Low	
Revoked	No	63 64.9%	185 61.7%	37 69.8%	285 63.3%
	Yes	34 35.1%	115 38.3%	16 30.2%	165 36.7%
	Total	97 100%	300 100%	53 100%	450 100%

No significant differences exist between the parolees risk level and whether their parole is revoked,  $\chi^2(2) = 1.426$ ,  $p = 0.490$ . Eleven people were removed from this analysis as their risk level was not reported.

Table 15a. Revoked and Alcohol

		Alcohol		Total
		Yes	No	
Revoked	No	255 62.8%	40 74.1%	295 64.1%
	Yes	151 37.2%	14 25.9%	165 35.9%
	Total	406 100.0%	54 100.0%	460 100.0%

No significant differences exist between whether the parolee was noted as having alcohol/drug concerns and whether their parole is revoked,  $\chi^2(1) = 2.630$ ,  $p = 0.105$ .  $p = 0.105$ . One person was removed from analysis as their status regarding alcohol/drugs was not reported.

Table 16a. Revoked and Mental Health

		Mental Health		Total
		Yes	No	
Revoked	No	31 72.1%	264 63.5%	295 64.3%
	Yes	12 27.9%	152 36.5%	164 35.7%
	Total	43 100.0%	416 100.0%	459 100.0%

No significant differences exist between whether the parolee was noted as having mental health concerns and whether their parole is revoked,  $\chi^2(1) = 1.264$ ,  $p = 0.261$ . Two people were removed from analysis as their status regarding mental health was not reported.

Table 17a. Revoked and Broke Parole for this Offense Previously

		Broke Paroke		Total
		No	Yes	
Revoked	No	273 65.9%	23 48.9%	296 64.2%
	Yes	141 34.1%	24 51.1%	165 35.8%
	Total	414 100.0%	47 100.0%	461 100.0%

Significant differences exist between whether the parolee had previously broken parole for their current offense and whether their parole is revoked during the study period,  $\chi^2(1) = 5.312$ ,  $p = 0.021$ .

Table 18a. Revoked and Broke Probation for this Offense Previously

		Broke Probation		Total
		No	Yes	
Revoked	No	182 64.3%	114 64.0%	296 64.2%
	Yes	101 35.7%	64 36.0%	165 35.8%
	Total	283 100.0%	178 100.0%	461 100.0%

No significant differences exist between whether the parolee had previously broken probation for their current offense and whether their parole is revoked during the study period,  $\chi^2(1) = 0.003$ ,  $p = 0.954$ .

Table 19a. Revoked and Broke Parole Previously

		Broke Probation		Total
		No	Yes	
Revoked	No	258 65.2%	38 58.5%	296 64.2%
	Yes	138 34.8%	27 41.5%	165 35.8%
	Total	396 100.0%	65 100.0%	461 100.0%

No significant differences exist between whether the parolee had previously broken parole and whether their parole is revoked during the study period,  $\chi^2(1) = 1.087$ ,  $p = 0.297$ .