



ROBINA INSTITUTE
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Balancing Risk:

**COLORADO PAROLE BOARD'S RESPONSE
TO THE COVID-19 PANDEMIC**

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Executive Summary

This study examines the response of the Colorado Board of Parole to the COVID-19 pandemic.

To mitigate the spread of the virus within correctional facilities, it increased the parole grant rate, expedited case review, and utilized special needs and fast-track parole programs for non-routine releases. This response provided an opportunity to evaluate the Board's decision-making processes and to investigate the role of early release mechanisms in reducing prison populations.

Several factors expedited early release including: pressure from the governor and legislature; board member's sense of responsibility to safely release as many individuals as possible; and the availability of early release authority. Our findings show that to release more people, the Board slightly changed its release standards, placing less emphasis on risk scores but continuing to heavily emphasize readiness for release. The Board reverted to its previous release patterns a few months into the pandemic, highlighting the difficulty of reducing prison populations through back-end mechanisms.

Special needs and fast-track parole were the mechanisms used to promote early release. Special needs parole releases are typically people who have severe medical problems, long sentences, and serious commitment offenses. Targeting them in Colorado substantially decreased time served. The fast-track releases were mostly low risk people with shorter than average sentences. Targeting them had no effect on reducing time served. This demonstrates that early release mechanisms that target "safe bets" - that is, individuals who would have been released quickly through routine mechanisms are not an effective way to reduce prison populations.

We also discuss the importance of grant rate standards, suggesting that jurisdictions establish empirically based ranges contingent on risk and readiness composition of the release population. Future research should investigate how much parole grant rates can be increased without compromising public safety.

Introduction

Parole boards operate in thirty-four U.S. states and are responsible for screening individuals suitable for early release. They hold significant authority over determining actual time served, often even greater than the power of the judge who issues the initial sentence (Reitz and Rhine, 2020). During the COVID-19 pandemic, both advocates and the families of incarcerated individuals pressured governors and prison officials to release people early. They wanted to reduce the risk of contagion in correctional facilities and to release those who were most vulnerable to complications from the virus. However, some district attorneys, victim advocates, and legislators expressed concern about the public safety implications of making large scale prison releases (Laskorunsky et al., 2023).

According to the report, *Examining Prison Releases in Response to COVID* (Mitchell, et al., 2022), Colorado was one of many states which utilized parole as a mechanism for early release. There are limitations to the use of parole boards as a device to depopulate prisons. Parole authorities can only release those who are parole eligible. In almost all states, these are individuals who have served a minimum portion of their sentence, or who qualify for release under a specific release program, such as compassionate release. Nonetheless, parole authorities can use their discretion to decrease the prison population in three ways. First, they can speed up the rate of review of parole eligible cases. Second, they can increase the grant rate by simply saying “yes” to release more often. Third, they can utilize their authority to release people meeting special requirements. A primary example of this discretion is compassionate release for the terminally ill.

This study explores how the Colorado Board of Parole responded to the 2020 COVID-19 pandemic. We investigate whether the Board heard more cases, increased its grant rate, or changed its standards for release. It also examines how much earlier individuals in two specific groups of non-routine releases – special needs parole and fast-track parole - were released due to health and contagion concerns. The findings demonstrate how parole boards respond to pressure from various stakeholders. They also illustrate how parole boards can use their discretion to reduce prison populations.

Pandemic Prison Releases in Colorado

In response to the pandemic, Colorado Governor Jared Polis issued two executive orders (EO) (D 2020 016; D 2020 043, 2020) amending regulatory statutes concerning criminal justice. These orders, issued on March 25 and April 23, 2020, granted additional powers to the parole board and the Colorado Department of Corrections (CDOC) to move specifically targeted people out of prison during the pandemic. The orders expanded criteria for Special Needs Parole (i.e., Colorado’s version of compassionate release) to include individuals with underlying medical conditions that placed them at higher risk of COVID-19 mortality. These people had to have a low risk of reoffending, and an approved home and medical care plan. Additionally, the executive orders empowered the CDOC Executive Director to award up to six months of earned time to individuals serving time for non-violent offenses and who were within nine months of their release date, moving up their mandatory release or parole eligibility date. They also temporarily expanded criteria for the Colorado Intensive Supervision Program (ISP), which allows people to serve out part of their sentence at home. ISP individuals are those serving a sentence for a non-violent offense, and who were close to their parole eligibility or mandatory release date¹.

1. Release to ISP does not require parole board review and is not considered an official prison release.

However, on May 9, 2020, an individual released on special needs parole was arrested for suspicion of murder, leading to criticism of the early release program (Denver 7, 2020). Consequently, on May 22, 2020, Governor Polis allowed the executive order granting additional release power to CDOC and the board to expire. This halted the COVID-19 Special Needs Parole discharges and removed the additional CDOC authority to expand ISP and award sentence credits.

The Colorado Board of Parole is a 9-person, governor-appointed entity operating independently of the CDOC. Conversation with board members (K. Hilkey, personal communication, May 5, 2020 and C.Dillworth, February 9, 2023) indicated that during the pandemic they tried to use their discretionary release power to parole more people from prison. They used the newly expanded special needs parole mechanism, advanced case reviews of parole eligible people, and recalibrated their evaluation of risk. In addition, they made use of a power given to them by the legislature in 2017 called fast-track file review (CO HB1326, 2017). This power allows the board to expedite the release of low risk/high readiness individuals by forgoing a full hearing. Although the parole board had this power since August 2017, it was rarely used until the pandemic. For example, a report on Colorado's 2018 parole decisions stated that fast track file review had been used only 14 times out of the 9,189 parole application hearings (Ford, 2019).

Parole Board Decision Making

Prison release decision making must balance fairness with public safety (Rhine et al, 2016, pg. 280). In assessing individuals for release, parole authorities consider a range of factors. Buglar's (2016) research shows that their primary concerns are offender blameworthiness, community protection, and practical constraints. Research by Huebner and Bynum (2006) and Reitz and Rhine (2020) summarize the information parole boards use to make their release assessment. These include: an evaluation of recidivism risk, an appraisal of remorse for the offense, the amount of time served on the current offense, the seriousness of prior criminal history, and the type and severity of the offense. In most jurisdictions, parole boards use a validated risk assessment instrument or a set of release guidelines to apply structured criteria to the decision-making process.

Parole boards have been criticized for being risk-averse in their decision-making (Reitz & Rhine, 2020; van Zyl Smit, D., & Corda, A, 2018). As political appointees, they are vulnerable to criticism a governor may receive regarding public safety. There is always a risk that a released individual will commit a major crime. Thus, the safest position members can take is to release the fewest people. Research shows that parole board members are particularly concerned with public safety (Ruhland, 2020). However, risk tolerance is a factor that varies across board members and across parole boards. Their risk calculation – that is, how much risk parole board members are willing to tolerate and still release – is reflected in the parole grant rate (i.e., the proportion of eligible individuals who are granted parole). The grant rate varies widely between states and even within states over time (Gaes and Laskorunsky, 2022; Wilson, 2005), affecting time served and the size of prison populations (Gaes and Laskorunsky, 2023).

Parole boards have a high level of discretion in making their decisions. This can lead to sudden drops or spikes in releases due to changes in the political climate. Case studies show that parole boards may clamp down on releases in response to political pressure (Laskorunsky et al., 2023). For example, a triple homicide, and the subsequent gubernatorial and legislative response, caused the Alabama parole board to act more conservatively, essentially cutting the parole grant rate in half. Parole boards have also been used as safety valves for prison overcrowding. Wilson showed that in Tennessee, the parole grant rate increased when bed space became low, and vice versa (Wilson, 2005). The powers of discretionary parole release have been an important but unacknowledged contributor to the ebb and flow of prison populations (Reitz and Rhine,

2020). It is worth studying what role parole boards have played in the trajectory of mass incarceration and, perhaps more importantly, what role they can play in decarceration. By examining how the Colorado parole board used its discretionary power of release during the pandemic, this report seeks to contribute to the literature on parole release decision making and the role of back-end mechanisms of prison release in affecting time served.

Research Questions

We examined how Colorado Department of Corrections (CDOC) and the parole board responded to the pandemic by examining the following research questions.

1 How did the number of people released on discretionary or mandatory release change from the period prior to the pandemic to the period after the pandemic started? How much did the parole grant rate change across these two periods?

We might expect an increase in the number of discretionary parole releases if the Board was using its discretion to grant parole to more people. We would expect the number of mandatory releases to go down, because fewer people reach their mandatory release date. In addition, if the parole board were using its discretion to release more people earlier in their sentence, we would expect not just a higher number of releases, but a higher percentage of affirmative decisions.

2 How did the relationship between risk, readiness to release, and the decision to release change after the pandemic started? Was the Parole Board less likely to consider risk and readiness once the pandemic began?

Colorado parole members use separate scales for risk of recidivism and readiness for release to advise their release decision. If the standards for release changed in light of pandemic concerns, we would expect the influence of both of these scales to decline after the start of the COVID-19 pandemic. This would be reflected in a stronger relation between the risk and readiness scales prior to the onset of the pandemic than after pandemic began.

3 How many days earlier were individuals in the special needs parole and fast-track parole groups released, relative to similarly situated releases?²

Two groups of releases were the direct result of the pandemic: individuals released through special needs parole, fostered by the executive order, and individuals fast-tracked into release by the parole board. We would expect these individuals to be released earlier than other similarly situated releases during the pandemic period. We evaluate whether this occurred and whether the reduction in time served was substantial.

2. We had originally intended to examine whether individuals who were released early due to the pandemic had an increased or decreased risk in recidivism compared to similarly situated individuals who were released through routine means. Unfortunately discussions with staff and former Colorado parole officials convinced us that recidivism during the pandemic could not be measured with any degree of confidence.

Methods

Data and Sample

For this project, CDOC provided us with movement data (in and out of prison), types of releases and admissions, demographic information, criminal history, parole violation history, offense seriousness, prison misconduct, parole risk, and parole readiness. We were also given indicators of whether a person was convicted of a violent or sex offense since these impose restrictions on parole eligibility. Generally, these individuals serve a larger proportion of their sentence than the general class of sentenced people.

The first analysis file, which we refer to as the ***Imprisoned/Release*** file, was based on people who had been incarcerated and were released during the period of study. There are two main types of prison releases in Colorado: mandatory and discretionary release. Most individuals reach their parole eligibility date after serving 50% of their sentence, although that percentage can be lower with sentence credits earned for program participation (i.e., earned time). Discretionary parole release occurs if the parole board makes the decision to release at any point before a person reaches their mandatory release date (MRD). Mandatory release occurs when an individual has served the entirety of their sentence, minus any earned time. Individuals are seen by the board yearly until they are released, or they reach their MRD. Individuals who reach their mandatory release date have generally been denied by the board multiple times. All individuals – regardless of whether they are discretionary or a mandatory release – are released to parole supervision. The ***Imprisoned/Release*** file was used for two separate analyses. In the first case, we used it to study the frequency and rate of types of releases. This covered the period January 2018 to December 2020. In the second case, we used it in the analysis of the length of time individuals spent in prison past their parole eligibility date, and we limited the time frame to the pandemic period (March 2020-December 2020).

The second analysis file, the ***Parole Board Decision*** file, contains information which was used to enhance the set of covariates in the ***Imprisoned/Release*** file. However, we also independently used it to study factors that affect the board's decision to release. The ***Parole Board Decision*** file contains multiple records for each person, one for each time there is a parole release application. The file we were given did not include revocation or rescission decisions (rescind the release decision). It did contain the grant or deferral (i.e., deny) decision for every application for parole. The ***Parole Board Decision*** file also included information on people released on mandatory parole, because the parole board holds a hearing for mandatory releases to set the conditions of parole supervision. In the time frame we examined, all mandatory release entries in the file were released and not deferred. Because we were interested in the discretionary choices of the board, we dropped the mandatory release observations from analyses of the ***Parole Board Decision*** file. The variables contained in both of these analysis files are listed in Table 1. For each of the research questions, we describe the methodological approach and the results.

Table 1. Description of dependent and independent variables contained in both the Imprisoned/Release and Parole Board Decision files.

Dependent Variables	
Days Between Parole Eligibility Date (PED) and Release	This is the parole release delay. It is calculated as actual release date minus the initial parole eligibility date + 1 day.
Parole Release Decision (Release/Defer)	A binary variable indicating whether the Parole Board released or deferred their decision; release coded 1, defer coded 0.
Independent Variables	
Special Needs and Fast-Track Parole Status	People who were released on special needs parole or fast-track parole, as a direct result of COVID-19.
Age at Release	Individual's age at release from prison
Prior Incarcerations	Number of prior incarcerations
Prior Parole Returns	Number of prior revocation returns
Ethnicity/Race – Indicator variables for ethnicity/race	White (referent) Black Hispanic American Indian Asian
Offense Seriousness (Referent - category 1) Indicator variables for offense seriousness based on logical cut points of the sentence length; Categories 1 (lowest seriousness) to 5 (highest seriousness)	Category 1 = sentence < 360 days Category 2 = sentence > 360 days & sentence ≤ 720 days Category 3 = sentence > 720 days & sentence ≤ 1,080 days Category 4 = sentence > 1,080 days & sentence ≤ 1,800 days Category 5 = sentence > 1,800 days
Enhancement	Binary (yes/no) indicator variable signifying whether the person received a sentencing enhancement. Enhancements are most often given for a habitual offender status.
Gender (referent: female)	Indicator variable for females and males
Age at release x prior incarcerations	Interaction between age at release and the number of prior incarcerations variable. This is included to determine whether the effect of age depends on the number of prior incarcerations.
Serious Misconduct in Past Year	Binary (yes/no) misconduct status for serious prison misbehavior in the previous 12 months. This is defined as a Class I misconduct by the Colorado Department of Corrections.

Recent Less Serious Misconduct	Binary (yes/no) misconduct status for less serious prison misbehavior in the preceding 3 months. This is defined as a Class II misconduct by the Colorado Department of Corrections.
Risk Score	Based on the combination of the Colorado risk tool (CARAS) and the following additive factors – whether the individual has threatened their victim during incarceration, serious misconduct, less serious misconduct, whether the person has attempted to escape, a reduction if the person was over 60 years at the time of the decision. Range 1-8; a higher score implies a higher risk of failure.
Readiness for Release Score	An assessment of readiness for release based on LSI-R assessment, Level of Service Inventory Assessment, participation in prison programming, treatment participation, quality of the parole plan. Colorado's 1 through 4 needs/readiness scale is oriented so that higher values imply higher needs and less readiness for release, however, in our analysis we reverse coded the scale so that higher value means higher needs/less readiness.
Sex Offender Indicator	Binary (yes/no) to indicate if the person was convicted of a sex offense.
Violent Offense Indicator	Binary (yes/no) to indicate if the person was convicted of a violent offense.

Results

Discretionary Releases Spiked at the Start of COVID-19

Research Questions: How did the number of people released on discretionary or mandatory release change from the period prior to the pandemic to the period after the pandemic started? How much did the parole grant rate change across these two periods?

The first task was to evaluate whether release decisions in Colorado changed as a result of the COVID-19 pandemic. We examined whether the pandemic resulted in any significant changes to the patterns of release by comparing the number of discretionary and mandatory releases pre- and post-pandemic. These results are based on the Imprisoned/Release file. Figure 1 shows all discretionary and mandatory prison releases from January 1, 2018, to the end of 2020. The blue line represents discretionary releases and the red line represents mandatory releases; the vertical red line is March 2020, the consensus start of the pandemic.

Figure 1. Number of individuals exiting prison with a discretionary parole or mandatory release in Colorado; 2018 through 2020. Discretionary releases show a spike after the start of the COVID-19 pandemic (vertical red line).

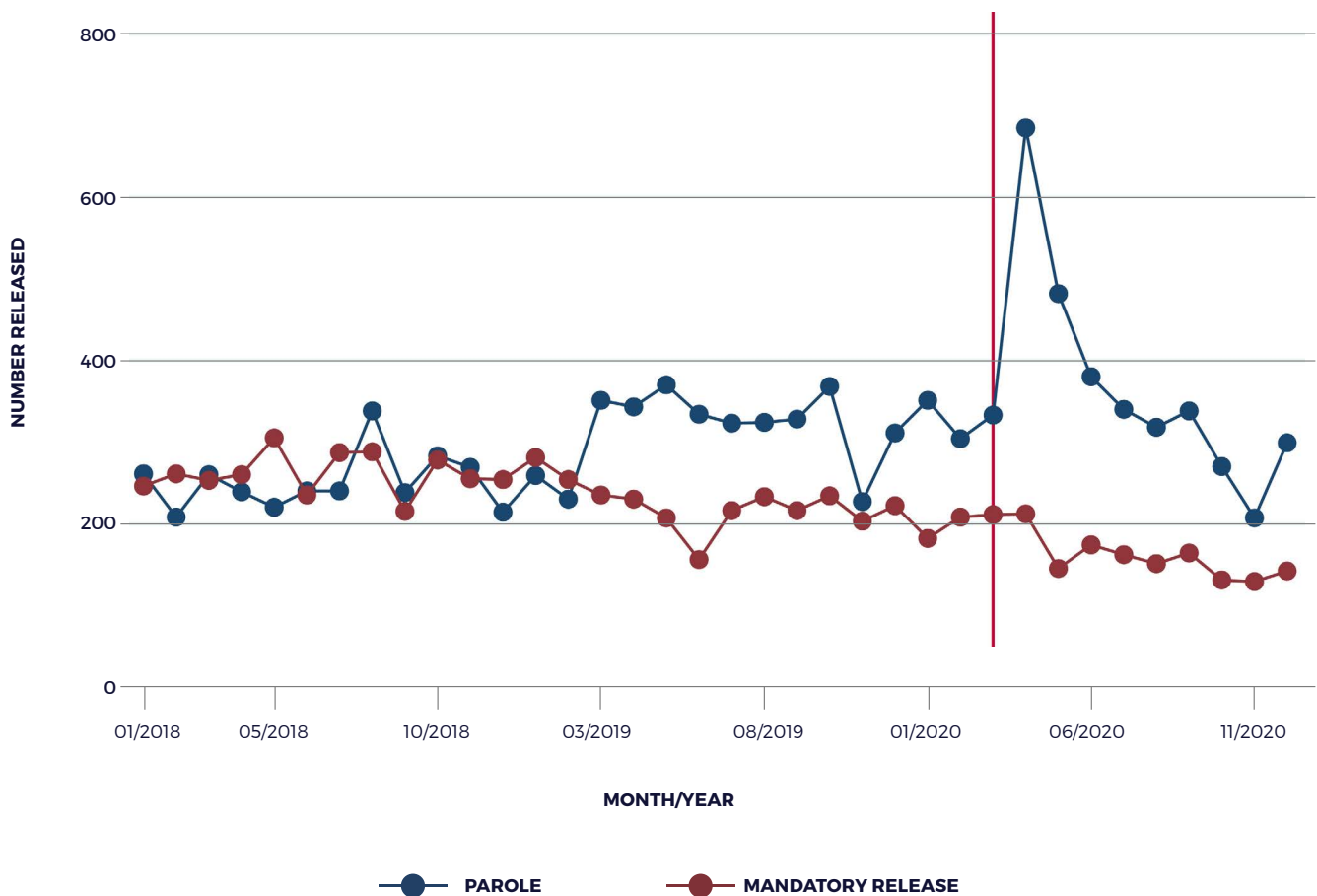
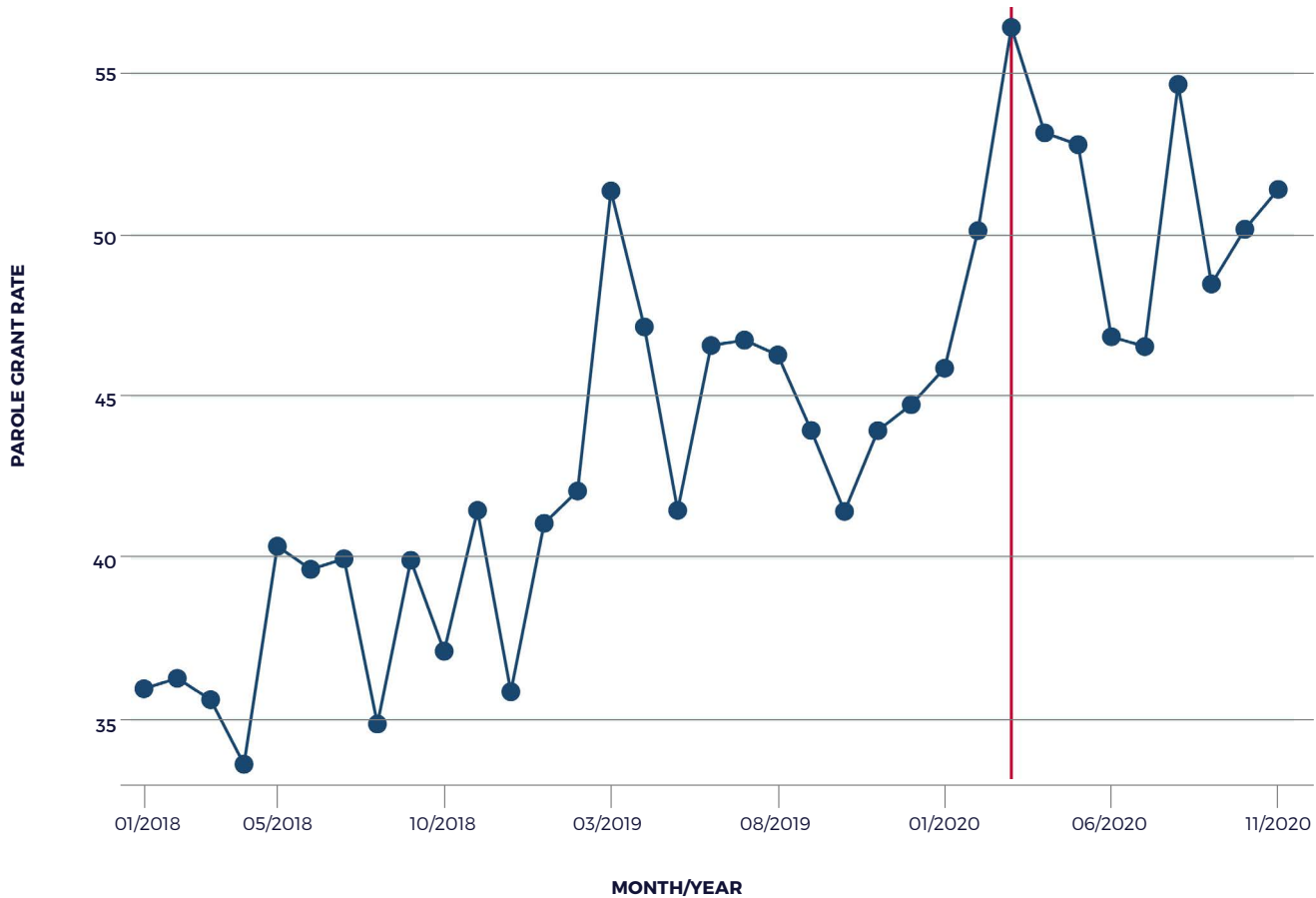


Figure 1 shows that the number of discretionary releases was between 300 to 400 a month from March 2019 (except for November 2019) to the first month of the pandemic. The number of discretionary releases jumped significantly during the second month of the pandemic (April 2020) to 685. This is consistent with a high number of releases granted in March 2020, because it takes some time for an administrative decision to result in a physical release. It should be noted that discretionary release patterns returned to pre-pandemic levels fairly quickly by June of 2020. During the year prior to the pandemic the number of mandatory releases was somewhat steady at around 200 per month. As expected, this number took a small dip during the third month of the pandemic and continued to modestly decline through 2020; fewer people reached their mandatory release dates without first being approved for discretionary release.

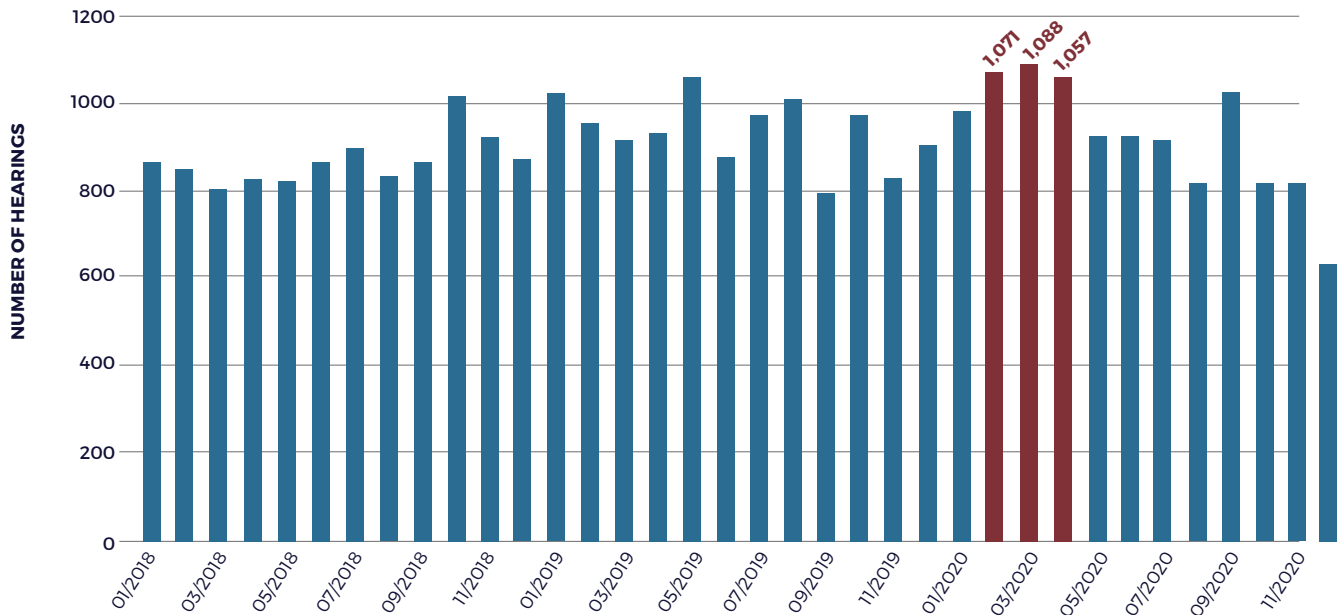
Increases in discretionary release during the start of the pandemic are one indicator that the parole board was granting more releases, although it could also reflect the number of people who became parole eligible. The EO, which gave the Executive Director power to award additional sentence credits during April and May, likely advanced people to an earlier PED. In order to determine whether the parole board was actually changing its rate of approvals once the pandemic began, we examined the parole grant rate month to month. Here we asked, of all the people who had a parole hearing in a given month what percentage were granted parole? This is based on the Parole Board Decision file. There can be more than one decision per person if they are deferred several times before release. Figure 2 shows that the parole grant rate was increasing prior to the start of the pandemic, but then jumped again during the first month of the pandemic (vertical red line). During March 2020, the parole board approved approximately 56% of all cases (614 people) that it reviewed. The rate of release decreased as the pandemic went on. However, on average, it stayed elevated compared to pre-pandemic grant levels.

Figure 2. Percent of individuals granted discretionary parole release in Colorado; 2018-2020. Excludes mandatory releases. The parole grant rate spiked in March 2020, the start of the COVID-19 pandemic (vertical red line).



In an additional analysis, we examined whether the board heard a larger number of discretionary release cases in the months following the pandemic. The data suggests that they did, but the numbers are not striking. When we look across 2018-2020, the months with the greatest number of hearings were in fact February, March, and April of 2020 (Figure 3). In each of those three months the parole board reviewed over 1,000 cases for discretionary parole release. However, it is unclear whether the elevated number in February was in response to early warnings about the pandemic, or if the parole board was simply ramping up reviews for other reasons. Either way, combining a greater than average hearing load with a jump in the parole grant resulted in the increased discretionary releases we see across that period in Figure 1.

Figure 3. Percent of discretionary parole hearings heard by the Colorado parole board; 2018-2020. The red bars represent February, March, and April 2020 in which the parole board heard, the highest number of cases in the depicted time period.



Overall, this analysis confirms that the number of individuals released through discretionary parole went up substantially at the start of the pandemic, coinciding with the Executive Order and parole board efforts to fast track individuals into release. The higher number of discretionary releases was the result of the parole board not only reviewing a more cases as the pandemic began, but more importantly, approving a higher percentage of those cases for release.

Parole Board Reduced Their Emphasis on Risk for Release Post-COVID-19

Research Question: How did the relationship between risk, readiness to release, and the decision to release change after the pandemic started? Was the Parole Board less likely to consider risk and readiness once the pandemic began?

One potential practice that the Board could adopt, even without a change in policy, is to give less consideration to risk and readiness in their release decisions. In other words, in order to move more people out of prison, parole board members could change their standards for release. Beginning in 2012, the Colorado Parole Board adopted an advisory release decision grid called the Parole Board Release Guideline Instrument (PBRGI) (Ford, 2012). Individuals are categorized into the risk and readiness levels by their risk and readiness for release scores. The risk score is based on a combination of an actuarial risk tool, a measure of conduct in prison, and the person's age. It ranges from 1 to 8, with a higher score meaning a higher risk of failure. The readiness for release score is a combination of two actuarial needs assessments, program participation, and parole plan assessment. The scale ranges 1 to 4, with a higher score meaning higher needs and less readiness for release³. See Table 1 for a more detailed description of the scored items.

We analyzed the influence of the two key components of the PBRGI -- risk and readiness -- on the release decision. To do this, we used the Parole Board Decision file. As mentioned, we dropped all actions that had a release type decision of "mandatory," since these would not involve parole board discretion. We categorized two periods, a pre-pandemic time frame from January 1, 2018, to February 29, 2020, and a pandemic period, March 1, 2020, to December 31, 2020. There could be multiple parole applications per person, but there was missing data on risk (8,232 cases) and readiness (7,931 cases) and even a few parole decisions (326 cases). Rather than impute those values we did a complete cases analysis of observations without missing values.

Table 2 shows means and standard deviations (SD) for the non-missing risk and readiness measures. The frequency and percentage are also shown in Table 2. Each of these statistics are recorded for the period prior to the start of the pandemic and after the start of the pandemic. Table 2 shows that, absent any controls, the parole grant rate went up after the pandemic, the denial (defer) rate went down, but the mean risk and readiness scores of the parole eligible pool did not appreciably change.

3. Colorado uses a low readiness score to indicate low readiness for release, and vice versa, however for this analysis it is reverse coded. Thus, a higher score implies more needs and less readiness for release.

Table 2. Descriptive statistics of parole decisions prior to and after the start of the pandemic.

	Pre-COVID-19	Post-COVID-19	Total
Parole Decision			
Defer			
Frequency	13,784	4,509	18,293
Percent	58.13	50.13	55.93
Release			
Frequency	9,929	4,486	14,415
Percent	41.87	49.87	44.07
Risk Score			
Mean	3.80	3.70	3.77
Standard deviation	1.46	1.49	1.47
Readiness Score (reverse coded)			
Mean	2.31	2.25	2.29
Standard deviation	0.69	0.71	0.70

We used logistic regression to examine the relationship between the binary parole release decision in the pre- and post- pandemic periods. If the parole board changed their calibration of risk or readiness, the odds of granting a release relative to the level of risk and readiness of the individual should change pre- to post-pandemic. In other words, we looked at how much the decision to release someone depended on both their risk to reoffend and on their readiness for release.

Table 3a contains the separate logistic regressions prior to and after the start of the COVID-19 pandemic. The complete case analysis sample size for the “pre-COVID-19” logistic regression was 17,779, and the Likelihood Ratio (LR) Chi-square (2) was 2809.67. The chi-square significance was $P > .0000$ and the pseudo-R-square was .11. For the “Post COVID-19” analysis, the sample size was 6,767 and the LR Chi-square (2) = 868.89, with a significance level of $P > .0000$ and pseudo-R-square = .09. The LR Chi-square tests whether the independent variables in the model have a significant effect on the dependent variable, in this case the parole decision. The results showed that the independent variables of release risk and release readiness had significant effects on the dependent variable both before and after the pandemic. The odds ratios and significance tests are shown in Table 3a.

Table 3a. Parole board release decisions associated with risk and readiness: odds ratios, standard errors, z -scores, p-values and 95% confidence intervals for the pre- and post-COVID-19 periods.

Pre-COVID-19	Odds Ratios	Std. error	z	p-value	95% CI
Risk Score	0.83	0.01	-16.59	0.00	[0.81, 0.85]
Readiness Score*	0.32	0.01	-43.11	0.00	[0.30, 0.33]
Intercept	25.78	1.89	44.37	0.00	[22.33, 29.75]
N=17,779					
Post-COVID-19	Odds Ratio	Std. error	z	p-value	95% CI
Risk Score	0.88	0.02	-6.94	0.00	[0.85, 0.91]
Readiness Score*	0.35	0.01	-25.92	0.00	[0.33, 0.38]
Intercept	22.73	2.59	27.40	0.00	[18.18, 28.43]
N= 6,767					

*Higher readiness score equals higher needs and less readiness for release.

To help with interpretation, we calculated changes in the probabilities of a favorable parole board decision for the two periods based on risk and readiness scores. We used Stata's `mchange` command which is an algorithm written by Scott Long and Jeremy Freese (see Long and Freese, 2014) and capitalizes on Stata's margins commands.⁴ We report the results in Table 3b.

We found that the probability of a parole release was 43% in the pre-pandemic period and 57% in the period after the start of the COVID-19 pandemic. This indicates that people with the same risk and readiness scores were more likely to be granted parole after the pandemic started than before. Specifically, an individual with the same risk and readiness scores would have a 34%⁵ higher probability of being granted parole after the pandemic started than before.

We used Stata's `mchange` command to calculate the relative influence of release risk and release readiness before and after the start of the pandemic. The results are presented in Table 3b, where all effects were statistically significant at $p=0.0000$. The table shows the changes in predicted probabilities based on a one-unit change in risk and readiness scores from their observed values to observed values + 1 unit (+1 rows in white), and a one standard deviation change in risk and readiness from its observed value (+SD rows in grey). The standard deviation change is useful for comparing the effects of different continuous variables on the same scale. A one-unit change in risk is not equivalent to a one-unit change in readiness due to differences in their respective ranges. However, by using one-standard deviation changes, we can standardize the magnitude of the effects and make meaningful comparisons.

- Long and Freese's algorithms use Stata's margins output. There are three types of margins that can be calculated. Marginal effect at the mean (MEM) is the most common according to Long and Freese (2014). For logistic regression, this is the probability of an event based on a particular variable holding all other variables at their means. Marginal effects at representative values (MER) are used to calculate the probability of an event contingent on some variable when all the other variables are set to specific values. Average marginal effects (AME) are more difficult to explain because they depend on the concept of the numerical derivative of a given predictor. Intuitively, AME's are changes in the probability of the outcome when small incremental changes are made to the observed values for the entire sample. Long and Freese (2014, P. 245-246) argue that if you are interested in the average effect of a variable on the predicted probabilities then the AME is appropriate. The `mchange` command allows you to specify an AME, MEM or MER. We chose AME as most appropriate.
- We calculated the proportion increase as $(.573/.427) = 1.34$, a 34% increase in the probability of release from pre- to post-pandemic.

Table 3b. Change in probabilities of discretionary parole release prior to and after the start of the pandemic based on average marginal effects.

	Prior To Pandemic	After Start of Pandemic
Risk Score		
+1	-.04	-.027
+SD	-.059	-.040
Readiness Score*		
+1	-.224	-.222
+SD	-.162	-.160
Average Predictions		
Defer	.527	.473
Release	.427	.573

*Higher readiness score equals higher needs and less readiness for release.

We conducted significance tests of the coefficients for risk and readiness from the pre-pandemic period to the start of the post pandemic period using Stata's `suest` and `test` commands. This allowed us to test whether the odds ratios change pre-to post for the risk and readiness scores. Both the risk and release readiness coefficients were statistically different between the prior period to the period after the start of the pandemic. The `suest` approach is conservative because it does not assume the pre and post variance-covariance matrices are the same.

Prior to the pandemic, holding readiness at the observed values and increasing risk by one standard deviation decreased the probability of release by 5.9% (-.059). After the start of the pandemic, holding readiness at observed values and increasing risk by one standard deviation, decreased the probability of parole release by a value of 4% (-.04).

These results suggest that release risk was more influential in determining an unfavorable parole outcome prior to the pandemic, than after the start of the pandemic. However, it should be noted that a decrease from 5.9% to 4% is only a modest substantive change. There was a similar statistically significant result for readiness, but the probabilities changed very little (16.2% to 16%). Substantively, readiness had the same influence on the decision to release prior to and after the start of the pandemic. In both periods, however, readiness was about three time more influential than risk in predicting the probability of a release. This suggests that parole board members weighed release readiness more heavily than risk both before and after the start of the pandemic.

Special Needs and Fast-Track Parole Groups Had a Lower Parole Release Delay

Research Question: How many days earlier were individuals in the special needs parole and fast-track parole groups released, relative to similarly situated releases?

The parole board employed two discretionary release mechanisms as a result of the COVID-19 pandemic. The first was special needs parole. This allows those who do not pose a threat to society and need medical treatment for serious, chronic health conditions or mental illnesses to be released from prison before their parole eligibility date. The March 2020 EO expanded the criteria for special needs parole to include COVID-19 vulnerabilities, allowing the Board to review more eligible cases. The second was fast-track release, which let the board bypass hearings for individuals deemed low risk with high readiness for release. Here we examine to what extent these designations resulted in faster releases.

Using the Imprisoned/Release file, we conducted an analysis of the delay in the parole release relative to the initial parole release eligibility date (PED). This delay was calculated as the release date minus the initial parole eligibility date plus one day. A larger delay indicated a greater delay in parole release. We used an indicator variable to distinguish individuals who were released on special needs parole or fast-track parole from those who were not, and then examined each early release group separately. We restricted the analysis period to the period of the pandemic (March – December 2020).

Out of 7,921 releases during this period, we excluded youth-sentence releases, people whose release was classified as a death, and people released to a detainer. We dropped 17 observations with negative days to release after the initial PED, which left us with 7,661 unique people released during the pandemic. We cannot be sure whether these were incorrect entries in the administrative database, or if there was a logical reason the data system would record a release before initial parole eligibility. We further excluded four observations with extremely high influence and leverage values, potential outliers that could bias our estimates of the effect of special needs and fast-track parole on parole release delay. A few observations were dropped because when we merged the movement data with the parole hearing data, there were a few non-matches. Therefore, the final sample prior to the regression analysis was 7,594 people. The regression analysis was conducted on 6,258 observations due to dropped cases with missing data.

Of all of the releases, 586 were related to the pandemic, including 155 special needs parole releases and 431 fast-track parole releases. Because of the temporary expanded criteria of the EO, almost all special needs parole releases occurred in April (N=38) and May (N=116); one additional release occurred in December. Fast-track parole releases were more evenly distributed throughout the pandemic period, with two-thirds of them occurring in April and May, and the rest released through the end of the year.

Descriptive statistics for the analysis variables appear in table 4. The average parole delay post COVID-19 was 578 days. This is how long, on average, individuals were waiting after the parole eligibility date before being granted release. About 7.6% of the releases made after March 2020 were special needs or fast-track parole.

Table 4. Descriptive Statistics for Colorado Parole Releases; March-December 2020

	Mean	Standard deviation	Factor-variable frequency	Factor-variable percent
Days between PED and Release	577.58	795.27		
Fast Track/Special Needs Release				
0			7,010	92.31
1			584	7.69
Prior Parole Returns	0.93	1.42		
Age at Release	38.29	10.66		
Prior Incarcerations	0.52	0.88		
Risk Score	3.72	1.47		
Readiness Score*	2.29	0.72		
Race/Ethnicity				
White			3,743	49.29
Black			1,000	13.17
Hispanic			2,409	31.72
Am. Indian			352	4.64
Asian			78	1.03
Hawaiian/PI			12	0.16
Offense Seriousness				
1			1,360	17.91
2			2,561	33.72
3			2,231	29.38
4			981	12.92
5			461	6.07
Sentencing Enhancement				
0			7,457	98.20
1			137	1.80
Serious Misconduct				
0			7,412	97.60
1			182	2.40
Less Serious Misconduct				
0			7,144	94.07
1			450	5.93
Gender				
F			1,169	15.39
M			6,425	84.61

	Mean	Standard deviation	Factor-variable frequency	Factor-variable percent
Violent Offense				
0			4,631	60.98
1			2,963	39.02
Sex Offense				
0			6,454	84.99
1			1,140	15.01

*A higher score indicated higher needs and less readiness for release.

We conducted a statistical analysis to determine the effect of being in the special needs/fast track group on the delay in parole release. We used a comprehensive set of covariates to control for other factors that might delay or speed up the parole release process. Explanations of the control variables appear in Table 1. The analysis included different classes of parole-eligible sentences, including general, violent, and sex offenses. Although we used multiple control variables, our primary interest was the effect of being released on special needs or fast-track parole. Therefore, we make no effort to interpret the control variables. There was substantial missing data for the risk score (18% missing) and readiness score (16% missing) in the parole hearing file. Typically, when risk was missing, readiness was also missing. Rather than use multiple imputation methods in our regression, we did complete case analysis.

We used a method called Ordinary Least Squares (OLS) regression, which allowed us to control for the effect of other factors that may affect parole release. To produce more reliable estimates, we used robust standard errors in our analysis. Our analysis was based on 6,258 complete observations. The results showed that the model as a whole was statistically significant (F-statistic = 53.47, p-value < 0.0000), and explained 22% of the variance in parole release delay (R-squared = .22). The root mean square error was 570.7. This is a metric of average differences between the predicted and observed values.

After controlling for other factors that may affect parole release, we found that people in the special needs/fast track group were released to parole an average of 63 days, or about 2 months, earlier than other people released during the pandemic (table 5, first row shown in bold letters). This difference was statistically significant (p-value < .02), meaning that it is unlikely to have occurred by chance. Because we were unsure of how Colorado was accommodating the release of parole returns, we ran the same regression with only new court commitments (not shown). This model was also statistically significant and showed a 62-day decline in parole delay for fast track and special needs parole releases (Prob > F < .0001). In either case, special needs and fast-track parole groups were released, on average, about two months sooner than their statistically equivalent routine release counterparts.⁶

6. Since we did not construct a counterfactual analysis, we are not claiming to evaluate a causal relation between the fast track and special needs parole group and earlier release.

Table 5. OLS Regression of Days Between PED and Release and Special Needs/Fast Track Parole Status

	Coefficient	Std. error	t	p-value	95% CI
Fast Track/ Special Needs Parole	-62.74	26.03	-2.41	0.02	[-113.78, -11.71]
Age at Release	6.74	1.22	5.51	0.00	[4.34, 9.14]
Prior Incarcerations	-163.17	45.13	-3.62	0.00	[-251.64, -74.70]
Age at Release X Prior Incarcerations	-0.06	0.96	-0.06	0.95	[-1.93, 1.82]
Race/Ethnicity					
White	0.00	0.00			
Black	45.72	24.69	1.85	0.06	[-2.69, 94.13]
Hispanic	13.19	16.07	0.82	0.41	[-18.31, 44.69]
Am. Indian	85.06	35.86	2.37	0.02	[14.77, 155.35]
Asian	50.81	57.61	0.88	0.38	[-62.13, 163.75]
Hawaiian/PI	180.93	109.08	1.66	0.10	[-32.91, 394.76]
Offense Seriousness					
1	0.00	0.00			
2	137.41	13.42	10.24	0.00	[111.10, 163.72]
3	295.05	17.34	17.02	0.00	[261.06, 329.03]
4	523.19	38.11	13.73	0.00	[448.49, 597.89]
5	767.83	112.79	6.81	0.00	[546.73, 988.93]
Prior Parole Returns	107.32	8.00	13.41	0.00	[91.63, 123.01]
Sentencing Enhancement					
0	0.00	0.00			
1	579.71	256.07	2.26	0.02	[77.72, 1081.70]
Serious Misconduct					
0	0.00	0.00			
1	-6.16	38.84	-0.16	0.87	[-82.30, 69.99]
Less Serious Misconduct					
0	0.00	0.00			
1	103.03	30.42	3.39	0.00	[43.39, 162.67]
Gender					
F	0.00	0.00			
M	108.09	14.96	7.22	0.00	[78.76, 137.42]

	Coefficient	Std. error	t	p-value	95% CI
Offense Seriousness					
1	0.00	0.00			
2	10.77	13.92	0.77	0.44	[-16.52, 38.06]
3	23.71	20.78	1.14	0.25	[-17.02, 64.45]
4	-29.47	40.57	-0.73	0.47	[-109.01, 50.06]
5	-192.92	96.20	-2.01	0.04	[-381.50, -4.35]
Risk Score	46.84	6.24	7.51	0.00	[34.62, 59.07]
Readiness Score	143.56	11.64	12.33	0.00	[120.74, 166.39]
Violent Offense					
0	0.00	0.00			
1	-6.12	16.04	-0.38	0.70	[-37.57, 25.32]
Sex Offense					
0	0.00	0.00			
1	390.06	107.28	3.64	0.00	[179.75, 600.37]
Intercept	-631.12	60.65	-10.41	0.00	[-750.03,-512.22]

The rows with zeros in the coefficient and standard error columns are the referent categories for the categorical variables.

As a final refinement, we conducted separate regressions for special needs releases and fast track releases (not shown). This allowed us to compare each type of COVID-19 release against routine releases. The regression model for special needs releases had an F-statistic probability value of 0.0000 and an R-square of .23, meaning it explained 23% of the variation in parole release delay. There was a 212-day decline in delay ($P < .0000$), meaning that individuals who were releases through special needs parole served an average of almost 7 months less past their parole eligibility date. In contrast, the fast-track regression model had an F-statistic probability value of 0.0000 and an R-square of .23; but the decline in delay was only 13 days and was not statistically significant ($P < .638$). This means that we cannot conclude that the 13-day reduction in parole delay is a real difference or one due to chance. Overall, our analysis suggests that the decline in parole release delay seen between COVID-19 and routine releases was due to special needs releases rather than fast track accommodations.

Discussion

The COVID-19 pandemic put pressure on parole boards across the United States to consider early prison releases as a means of reducing prison populations to mitigate the spread of the virus within correctional facilities. Parole boards have several ways to effect early prison releases, such as increasing their grant rate, speeding up case review, and using special release programs to effect non-routine releases. Our findings show that, in response to the pandemic, the Colorado Board of Parole did all three. After the pandemic began, the Board not only slightly increased its hearing load but also approved releases for a greater proportion of applicants and made use of special needs and fast-track parole to speed up release for qualifying individuals. Moreover, the increase in releases was less influenced by client risk, suggesting that the board actively used its discretionary power to reduce the prison population in Colorado even though this effect was modest.

System factors that encouraged early release

According to series of reports on non-routine prison releases during the pandemic, not only did many paroling states make no early releases, some parole boards, like Alabama's, actually decreased their rate of release (Laskorunsky et al., 2023, Mitchell, et. al., 2022;). It is worth examining the structural factors that prompted some boards to act while others continued business as usual. One factor is pressure from the governor or legislature. For example, Colorado's Governor Polis signed an executive order at the beginning of the pandemic that granted more power to the Board and sent a clear message that getting people out of prison was an important goal. While the executive order only changed criteria for special needs parole temporarily, it also gave an implicit signal that the Board was expected to respond to the pandemic by making releases. This likely encouraged the board to make use of fast-track release, and to recalibrate their emphasis on risk in individual hearings. This suggests that the same political pressure that has historically caused parole boards to clamp down on releases could be used to speed up release, even for generally risk-averse boards. Directives from the governor or legislature instructing the parole board to look for ways to maximize releases may encourage them to reexamine their release practices.

Another factor is the individual Board members' sense of responsibility to release as many individuals as safely possible. Boards are made up of individuals with differing views. Some boards may simply have members that are more cautious about release. Recent scholarship on parole board professionalization has noted the benefits of appointing individuals outside the law enforcement/victim's rights sector that have traditionally made up board membership (Paparozzi and Caplan, 2009; Rhine, et al., 2015). Appointing professionals who are educated in the areas of substance abuse, mental health and social work may contribute to a more holistic perspective about offending behavior and result in less punitive decisions. If the goal of the board is to safely maximize release, it is perhaps just as important to identify individuals who are comfortable operating under a level of uncertainty for board membership. Empirical research on the ways Board member philosophies affect decision making would be useful.

Finally, the Colorado Board had two early release mechanisms available to them to elevate early releases. It is notable that both fast-track parole and special needs parole were rarely utilized pre-pandemic in Colorado. This is consistent with research by Mitchell et al., (2022) who found that the majority of jurisdictions that enacted early release during the pandemic did so using existing, but underutilized, early release mechanisms. Obviously having the authority to release is different from exercising that authority. If jurisdictions are interested in maximizing parole eligible releases, they should think about how to encourage the use of the early release tools they already have. This may include permanently expanding eligibility requirements or simply asking the DOC to identify qualifying participants on a monthly basis.

In Colorado, there were notable changes in the patterns of early prison release during the first few months of the pandemic. However, by July 2020, the rate of case review, the grant rate, and the number of people released had returned to pre-pandemic levels, even though the dangers of contagion were still present. While there could be several reasons for this return to baseline, by July Colorado had already experienced a significant reduction in its prison population. Between March and December 2020, the state's prison population decreased by 13%, or 3,884 individuals (Karlik, 2021) because prison admissions dramatically decreased during the initial months following onset of the pandemic (see Carson, Nadel & Gaes, 2022, Table 2). This reduction was much larger than reductions due to increased parole release. This same pattern was observed in many states and highlights the limits of parole board power (Laskorunsky et al., 2023). If the goal is to reduce prison populations, whether during the pandemic or beyond, policies that limit the number of individuals entering prison are likely to be more effective than increasing parole releases.

Developing standards for rates of release

Although the Board grant rate increased to a high of 56% at the beginning of the pandemic, 44% of parole-eligible petitioners were still denied release. Was 56% a high rate of approval? There is a lack of research or policy on what an acceptable grant rate might be. A review by the Prison Policy Initiative (Renaud, 2018) found that in 2014, grant rates ranged from a high of 87% in Nebraska to a low of 7% in Ohio. The disparity could be due to differences in the risk and readiness composition of the parole-eligible pool or to different standards for release across states. Future research should focus on exploring the relationship between parole system factors and grant rates, in order to determine if and how much parole grant rates can be increased without compromising public safety. Jurisdictions could also establish an empirically established grant rate range. That is, they could determine what percentage of individuals should be expected to be released at their PED and what yearly grant rate their jurisdiction should be expected to have if the system is functioning optimally. Grant rate ranges can be empirically based on the risk and readiness composition of the release population and validated with recidivism analysis. Abrupt shifts outside this range might alert officials to monitor the release decisions more closely, or that system wide issues, such as correctional program availability, are affecting processes downstream.

Risk aversion in early release decisions

While the Colorado Board used both special needs parole and fast-track case review as a response to the pandemic, our findings show that it was only special needs parole that resulted in a substantial reduction in parole delay. The reason may have to do with the difference between the goals of fast-track parole and the types of people eligible for each program. Fast-track case review is a power given to the board that allows them to conduct a file review in lieu of a hearing for parole eligible individuals who are low risk and who have a high readiness for release. This mechanism was created to free up the resources of the board, rather than to affect early releases. By allowing the Board to forgo a full hearing for probable releases, the Board can focus their resources on cases where release decisions are more tentative. This speeds up parole consideration, saving time and resources, but does not increase the grant rate.

In contrast, special needs parolees are individuals often serving sentences for serious offenses. While they are required to be low-risk, their release is more likely to pose a threat to the Board's credibility. When the governor's Executive Order expanded special needs eligibility, it gave the Board temporary political cover to use this mechanism. Since most early release mechanisms target the safest release choices, they are not going to produce substantial changes in time served (Mitchell, et al., 2022). If jurisdictions are interested in using early release mechanisms in a way that is appreciably different from routine release, they will have to target individuals who are serving longer sentences for more serious crimes.

Reconsidering the importance of risk and readiness

During the COVID-19 pandemic, individuals with identical risk and readiness scores were more likely to be granted parole because the parole grant rate increased. In addition, the Colorado parole board was marginally less likely to consider risk in their release decisions post-pandemic, while the influence of readiness remained unchanged. This shows that the Board used its discretion to change the standards for release, diminishing the influence of risk and elevating the importance of other factors, such as remorse or crime severity. However, this change did not result in an average riskier pool of releasees as measured by the PBRGI risk scale. This suggests that the Board can increase its release rate without compromising public safety. However, a more definitive test would involve a study of recidivism. Further research on the public safety implications of releases during the pandemic would be valuable - both in Colorado and nationwide.

Notably, the readiness for release score was three times more likely than risk to affect the release decision, prior to, and after the start of the pandemic. Studies have identified various factors that influence parole decisions in the U.S., such as institutional behavior, crime type and severity, and risk of re-offense (Caplan, 2007; Huebner and Bynum, 2006). There has been less focus on practical consideration, such as the quality of the home plan or treatment needs. In Colorado, readiness for release is assessed using two needs assessment instruments, along with other measures such as the quality of the home plan and treatment completion. Our findings suggest that parole board members are far more likely to be flexible about risk than they are about readiness when deciding to release or deny parole. This may come down to the practical realities of what "low readiness" means. For example, individuals without an approved home plan cannot be released without anywhere to go. Individuals who have high mental health needs without a connection to appropriate service in the community cannot be released because they may pose a public safety threat to themselves or others. And while individuals who have not finished their treatment or programming can certainly be released, parole board members are likely to table these cases

until programming is fully completed. This suggests that focusing on improving readiness for release, rather than reducing risk, is a pathway to improve rates of release.

Parole boards are generally risk averse (Reitz and Rhine, 2020; van Zyl Smit, 2015), because there is no personal risk accompanying the decision to deny parole. The pressures of the pandemic caused the Colorado Board to temporarily become less risk averse and more willing to grant release. Whether parole boards should be encouraged to be less risk-averse – and to what extent – outside of national emergencies is still unclear. We need a better understanding of the public safety implications of such changes. Nonetheless, research suggests that parole boards can make more releases without compromising public safety (Wilson, 2005). One way to reduce the role risk aversion plays in our parole system is to promote policies that diffuse responsibility for release. Automated early release programs, such as the administrative parole programs found in twelve states, can reduce procedural steps, and eliminate the need for case-by-case discretion by parole board members (Reitz et al., 2022). Instead, individuals who complete predetermined treatment and programming goals are automatically released. This could provide some cover to risk-averse parole boards by removing the responsibility of release decisions from individual board members.

Conclusion

In conclusion, the Colorado parole board showed flexibility in their decision-making process during the COVID-19 pandemic by temporarily releasing more individuals and marginally reducing the consideration of risk. This provides a valuable opportunity to reflect on the decision-making processes of the parole board and the role of early release mechanisms in reducing mass incarceration. To maximize parole releases outside of national emergencies, we suggest addressing barriers to the use of early release mechanism, focusing on improving readiness for release, and promoting policies that diffuse responsibility for release.

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