



The Block Center
FOR TECHNOLOGY AND SOCIETY



Assessment of Prior Record Score Informs Pennsylvania Commission's Comprehensive Review of Sentencing Guidelines, Highlights Value of University-State Research Partnerships

Summary

In 2021, the Pennsylvania Commission on Sentencing (PCS)—a legislative agency responsible for developing and adopting sentencing guidelines for use by the court in determining the appropriate sentence for defendants convicted of felonies and misdemeanors in the Commonwealth—partnered with researchers at Carnegie Mellon University's (CMU) Heinz College of Public Policy and Information Systems to conduct a [systematic review of the role of criminal history in determining sentencing recommendations](#). The research informed the Commission's ongoing comprehensive review of sentencing guidelines in the Commonwealth of Pennsylvania, and serves as the seventh research collaboration between PCS and CMU.

The study sought to answer the following two questions:

- Are the current Prior Record Score (PRS) categories indicative of likelihood to recidivate?
- Accounting for Prior Record Score, are Black offenders disproportionately receiving more severe sentences than their white counterparts?

The report provides extensive analyses of offender demographics (race, age, offense type) along with recommendations for actionable steps towards more equitable sentencing. Analyses were conducted upon data provided by PCS which included sentences imposed for individuals convicted of felonies and misdemeanors between 2001 and 2019. Analyses revealed that PRS, as currently constructed, is not a reliable proxy for risk of reoffending.





Key Findings

The current (7th Edition Sentencing Guidelines) PRS categories are not highly correlated with recidivism rates. Proposals under consideration by the Commission for revisions to the PRS are more highly correlated and supportive of viewing prior criminal history as a proxy for an offender's risk of future reoffending. Additional fine-tuning in the design of PRS categories may improve the correlation between an offender's criminal history and risk of reoffending.

- Over one-half of all offenders in the sample have a PRS of zero. These offenders have a recidivism rate (defined as a new conviction within three years) of 15%; below the baseline average of 18.8% across all PRS categories. After that increases in PRS are not associated with material changes in recidivism and in some instances are associated with decreases in recidivism. The likely explanation is that individuals with more lengthy conviction histories are also older. Because younger adult offenders (18-24) have higher rates of recidivism than their older counterparts, PRS loses its recidivism predictive power.
- Most offenders committing violent crimes, sex crimes, and firearms offenses are first-time offenders, and they typically recidivate at a lower rate than average. New convictions to the same crime type are less than 3% for offenders convicted of violent crimes, sex crimes, and violent offenses.

Comparison of sentencing dimensions by race, severity of offense (OGS), and PRS can reveal disparities in sentencing. Black offenders are more likely to have higher PRS than white offenders, despite being younger on average, and are also more likely to receive an incarceration sentence across most PRS categories.

- Fifty-seven percent of white offenders have a PRS of zero; 41% of Black offenders have a PRS of zero.
- Black offenders with little to no prior criminal records (PRS category 0) receive materially longer sentences, even for less serious offenses (offense gravity scores of 0-2).
- Young Black males are even more significantly impacted, receiving longer average sentence lengths than both young white males and older Black males.





How the Pennsylvania Sentencing Matrix is Used in Practice by Trial Judges

In Pennsylvania’s sentencing system, trial judges use the 7th Edition Sentencing Guidelines issued by the Pennsylvania Commission on Sentencing to facilitate sentencing decisions. An essential fixture of the 7th Edition Sentencing Guidelines is a Sentencing Matrix, which combines the seriousness of the offense and the prior criminal history to suggest a set of sentence ranges.

Level	OGS	Prior Record Score						RFEL	REVOC	AGG/MIT
		0	1	2	3	4	5			
LEVEL 5	14	72-SL	84-SL	96-SL	120-SL	168-SL	192-SL	204-SL	SL	~/-12
	13	60-78	66-84	72-90	78-96	84-102	96-114	108-126	240	+/- 12
	12	48-66	54-72	60-78	66-84	72-90	84-102	96-114	120	+/- 12
	11	36-54	42-60	48-66	54-72	60-78	72-90	84-102	120	+/- 12
	10	22-36	30-42	36-48	42-54	48-60	60-72	72-84	120	+/- 12
	9	12-24	18-30	24-36	30-42	36-48	48-60	60-72	120	+/- 12
LEVEL 4	8	9-16	12-18	15-21	18-24	21-27	27-33	40-52	NA	+/- 9
LEVEL 3	7	6-14	9-16	12-18	15-21	18-24	24-30	35-45	NA	+/- 6
	6	3-12	6-14	9-16	12-18	15-21	21-27	27-40	NA	+/- 6
LEVEL 2	5	RS-9 P2 (225-250)	1-12	3-14	6-16	9-16	12-18	24-36	NA	+/- 3
	4	RS-3 P1 (100-125)	RS-9 P2 (225-250)	RS-12 P2 (300-325)	3-14	6-16	9-16	21-30	NA	+/- 3
	3	RS-1 P1 (50-75)	RS-6 P1 (150-175)	RS-9 P2 (225-250)	RS-12 P2 (300-325)	3-14	6-16	12-18	NA	+/- 3
LEVEL 1	2	RS (25-50)	RS-2 P1 (75-100)	RS-3 P1 (100-125)	RS-4 P1 (125-150)	RS-6 P1 (150-175)	1-9	6- <12	NA	+/- 3
	1	RS (25-50)	RS-1 P1 (50-75)	RS-2 P1 (75-100)	RS-3 P1 (100-125)	RS-4 P1 (125-150)	RS-6 P1 (150-175)	3-6	NA	+/- 3

The vertical axis of the matrix features an Offense Gravity Score (OGS) that represents the seriousness of the crime. This value is scaled from 1 to 14 — the higher the number, the more serious the offense. On the horizontal axis, the Prior Record Score (PRS) measures criminal history and is calculated using the number and nature of prior criminal convictions and juvenile adjudications. This value ranges from 0 to 5 and includes two unique classifications for Repeat Violent Offenders (REVOC) and Repeat Felony 1 or 2 Offenders (RFEL).

In practice, trial judges use three ranges produced by the Sentencing Matrix to aid their decision-making:

- 1) A standard range, for use under typical circumstances;
- 2) An aggravated range, for use when the judge determines that there are aggravating circumstances (factors that tend to increase the seriousness of the offense); and
- 3) A mitigated range for use when the judge determines that there are mitigating circumstances (factors that tend to “lessen” the seriousness of the crime).





Policy Considerations

States should pursue data-driven analyses of sentencing practices with a focus on the relationships between demographics, criminal history, and recidivism.

- University research partnerships can be an invaluable approach for conducting impartial evaluations of the effectiveness and efficacy of guideline systems and for providing valuable insights to sentencing commissions. Any analyses should be mindful of the quality and completeness of available data.

Specific attention should be directed towards determining whether there is bias in sentencing by race.

- Additional research into why Black offenders tend to be in higher PRS categories would help reveal the structural and non-structural factors that lead to these differences. Sentencing commissions should consider revisiting the goals and purposes of PRS and ways to mitigate differential impacts by race.

Equitable sentencing initiatives should be supported by monitoring metrics that can be accessed, reviewed, and used in a dynamic manner to evaluate outcomes.

- Metrics should be updated at a frequency that provides meaningful insights towards the progress of initiatives (e.g., quarterly, annually). Evaluation of initiatives should be done in collaboration with qualified statistical experts to ensure that appropriate methodologies are applied, alongside the correct translation of results to non-technical audiences.

This policy memorandum was jointly authored by [The Block Center for Technology and Society](#) at Carnegie Mellon University and the [Pennsylvania Commission on Sentencing](#). The original report can be found [here](#). The 7th Edition Sentencing Guidelines for the Commonwealth of Pennsylvania can be found [here](#).

If you would like to schedule a briefing on these findings or to learn more about this research collaboration, please contact blockcenter@andrew.cmu.edu.