

Using Base Rates and Correlational Data to Supplement Clinical Risk Assessments

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The current study is a partial replication of previous studies designed to estimate the level of risk posed by capital murder defendants. The study draws on data describing the behavior of nearly 2,000 incarcerated capital murderers to forecast violence propensity among defendants sentenced to life imprisonment. Logistic regression is used to model various violence outcomes, relying on the following predictors: age, educational attainment, prior imprisonment, and gang affiliation. This exercise is designed to illustrate how actuarial data may be used to anchor individualized clinical assessments of risk in capital murder trials.

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Assessing the future dangerousness of convicted capital offenders is of special interest in Texas and Oregon, the only two states that require juries during sentencing deliberations to predict offenders' actions. Before imposing the death penalty, capital juries in these states must unanimously agree that there is a probability that the defendant would commit criminal acts of violence that would constitute a continuing threat to society.^{1,2} In many other states, however, including the federal system, future dangerousness is relied on as a statutory or nonstatutory aggravating factor in capital murder trials. Even in states where the risk of future violence is not an explicit aggravating factor in death penalty decisions, research indicates that it plays an important role in jury decision-making.³ Moreover, evidence supporting lack of future dangerousness is constitutionally permissible as a mitigating factor in all jurisdictions.

Punishing a defendant for possible future crimes seems to contradict the innocent-until-proven-guilty premise of the American judicial system. However, as upheld in *Jurek v. Texas*,⁴ jurors may consider future dangerousness when making death penalty

decisions. Further, *Barefoot v. Estelle*⁵ confirmed the admissibility of mental health expert testimony in future-dangerousness decisions. The role of mental health experts in this context has been called into question when they rely strictly on clinical judgment (Ref. 6, p 67). Nonetheless, having heard testimony coupled with unclear definitions of such terms as dangerousness, deliberate intent, probability, criminal acts of violence, and what constitutes a society, juries tasked with judging future dangerousness among convicted capital murderers often rely on expert recommendations.^{7–10}

Because of their standardized nature, actuarial approaches can provide “more precise probability estimates than is possible [strictly] through the clinical process” (Ref. 11, p 289). Actuarial assessments are developed through tests of specific relation of essential items, characteristics, and variables to an outcome. Predictors are combined to maximize predictive accuracy and efficiency.¹² As in the insurance industry, the actuarial approach used in predicting future dangerousness relies “on a finite number of preidentified variables that statistically correlate to risk and that produce a definitive probability or probability range of risk” (Ref. 11, p 283). Research demonstrates that clinical judgments informed by base rates and correlational data outperform those that are not grounded in statistical data.^{13,14}

Reliance on actuarial tools to assess risk has been an accepted practice in legal arenas for over a century.

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Court records cite actuarial devices on evidentiary bases as far back as mass access to such records has been available. Burgess¹⁵ introduced actuarial tools as risk assessments for criminal recidivism, but their use in predicting future dangerousness has only begun to be accepted in the past 15 years.^{16,17} Before that time, nonactuarial methods dominated dangerousness evaluations.¹¹ The use of actuarial data in predicting future dangerousness has recently been upheld by U.S. courts.¹⁸

Several actuarial and structured risk assessment models (e.g., Violence Risk Appraisal Guide (VRAG)¹⁶; Level of Supervision Inventory-Revised (LSI-R)¹⁹; and Historical, Clinical, and Violence Risk Assessment Scheme (HCR-20))²⁰ have been fairly successful in predicting future violence and offending in the community, but have seldom been used to predict institutional violence among high-risk populations.^{10,21,22} Because of the limited availability of institutional data on capital offenders, the development of actuarial tools for this special population has been a recent enterprise.¹⁷ Yet, several models have been developed for deep-end inmate populations, particularly murderers and capital murderers. The purpose of the current study was to examine, by way of a partial replication using data from a recent period in a jurisdiction that houses a large number of capital murderers, the potential utility of relying on local actuarial data to supplement clinical risk assessments when predicting future dangerousness among capital murder defendants.

Literature Review

Given that life without parole is the alternative to a death sentence for nearly all capital murderers in the United States, the question of future dangerousness is concerned almost exclusively with the potential threat that capital offenders pose to fellow inmates and prison staff. Prisoners, in general, are housed mainly according to their perceived risk. Emphasis is placed on the accuracy of assignment to appropriate levels of restriction for the dual purposes of increased safety and security of the prison community and to ensure the proper utilization of costly, restrictive housing units.²³ Prisoner assessments used in housing and work assignments are often based on objective classification models constructed from actuarial data.^{23,24}

Prior research regarding the level of violent risk posed by convicted murderers and capital offenders

in prison has culminated in counterintuitive results. Convicted murderers are neither likely nor disproportionately likely, when compared with other inmates, to commit serious violent rule violations in prison.^{25,26} Capital murderers held in general prison populations are not disproportionately likely to engage in assaultive behavior.^{27,28} Mainstreamed, death-sentenced inmates have been found to display rates of assaultive misconduct similar to those of inmates serving life without parole and half that of those who are parole eligible.²⁹ Former death row inmates (reversed cases) are not disproportionately likely to engage in violent misconduct in the general prison population.^{28,30–33}

Price and Byrd³⁴ reviewed 14 empirical studies examining the frequency with which convicted capital murderers committed a subsequent murder or other felony. The results showed that among capital murderers who had been paroled, the subsequent murder rate was 0.02 per 100,000, and the subsequent felony rate was 0.26 per 100,000. Of the capital offenders who remained in prison at the point of observation or until their death, the subsequent murder rate was 0.09 per 100,000, and the subsequent felony rate was 3.97 per 100,000. Relying on Federal Bureau of Investigation (FBI) data for comparison, Price and Byrd found that the average murder rate in the free community over the previous 20 years had been 7.6 per 100,000, and the average felony rate had been 613.7 per 100,000. While clinicians are typically aware of this dynamic, jurors are often surprised to learn how successful prisons have become in controlling their charges.

Whereas earlier studies were concerned mainly with the base rates of violence among capital murderers, recent studies have searched for correlates of violence that may be used in individualized risk assessments. Sorensen and Pilgrim¹⁷ pioneered the construction of an actuarial model for future violence of capital murder offenders. They examined the records of over 6,000 incarcerated murderers in Texas serving time throughout the 1990s. In their study, the likelihood of a newly received capital murderer committing an act of violence was estimated to be 16.4 percent over a 40-year term of incarceration. In addition, six predictors of violence were found: involvement in a contemporaneous robbery or burglary, presence of multiple victims, additional murder attempts and assaults, gang membership, prior prison terms, and age. Using the predictors, the au-

thors found a 54.6 percent likelihood of engaging in future acts of institutional violence among offenders meeting all risk factors versus a 2 percent likelihood among offenders with none of the risk factors.

The Risk Assessment Scale for Prison (RASP-Potosi) was created from a logistic regression model predicting violent misconduct among inmates at Missouri's maximum-security Potosi Correctional Center. Using factors available at conviction and prison admission, Cunningham *et al.*³⁵ developed the RASP-Potosi to better inform risk assessment and classification determinations. Predictors used by RASP-Potosi include age, length of sentence, education, prior prison terms, prior probated sentences, conviction for a property offense, and years served. The overall area under the curve (AUC) of 0.719 and double cross-validation showed the model to be modestly successful in predicting violence among Potosi inmates.

More recent actuarial studies have attempted to replicate findings from the original Sorensen and Pilgrim (S&P) and RASP models. Cunningham and Sorensen³⁶ examined a cohort of inmates newly admitted to the Florida Department of Corrections, running logistic regression models similar to those used in computing the RASP-Potosi. Again, age of inmate was found to be the strongest predictor of violent misconduct. The overall relationship was negative, with younger inmates more likely to commit violence than older inmates. In addition, education and offense were significant predictors of violent misconduct among the Florida cohort. The original RASP and several variations were found to be modestly successful, with AUCs ranging from 0.645 to 0.707, in predicting prison violence among the Florida cohort.

Two independent replications of the S&P model have been completed. In one of the studies, the authors examined the accuracy of risk assessments by the model in a sample of 155 executed, reversed-sentence, and death row inmates.³⁷ They found that risk scores were better at predicting minor and non-violent rule infractions than was serious assaultive behavior. Another replication examining the accuracy of the S&P scale among 136 capital murderers sentenced to life in prison found that the scale was better at predicting assaults resulting in serious injuries (AUC 0.755) than at predicting less serious assaultive infractions (AUC 0.648) or potentially violent rule infractions (AUC 0.612). When the scale

was pared down to include a limited set of pre-confinement factors (age, prior prison commitment, and contemporaneous robbery or burglary), the predictive power ranged from AUCs of 0.715 to 0.766, depending on the severity of the misconduct.⁹ Again, the model was most successful in predicting serious assaults, the offenses of greatest concern to juries and prison staff.

In a recent study, the predictive accuracy of the S&P model was examined, along with simplified versions from the S&P and RASP replications, among 110 former death row inmates.³⁸ The results showed all to be modestly successful in predicting potentially violent and assaultive rule infractions, averaging AUCs of about 0.65. The ability of the models to predict serious assaults was relatively high, with AUCs of 0.80 or higher in three of the four models. It was noted, however, that because of the low base rates of prison violence among the former death row inmates, predictions made according to the scales resulted in high rates of false positives. Negative post-dictive classifications among the low- and medium-risk groups were almost always correct, whereas positive predictions among the high-risk group were in error three of four times, a false-positive rate of 75 percent. Studies have shown an even more extreme dichotomy between the success of positive and negative prediction made by clinicians,^{10,39} prosecutors,²⁷ and juries^{28,40} during capital murder trials. In each case, when gauged by a serious violent outcome in prison, negative predictions were right more than 9 of 10 times, whereas positive predictions were wrong more than 9 of 10 times.

Methods

Sample

The best source of actuarial data is a sample with characteristics as similar as possible to the group for which the forecast is being extrapolated. Therefore, information should be gathered from a sample that is in the location where the capital murder defendant will be serving time and that is experiencing similar conditions and restraints. The data should be the most recent available. The sample should be as large as possible and yet be restricted to those participants who share important characteristics, to ensure the most reliable estimation procedures.

In following the aforementioned rules, our work relied on a cross-sectional sample of all convicted

capital murderers serving life sentences in the Texas Department of Criminal Justice (TDCJ) who were incarcerated during Texas state fiscal year (FY) 2008 (September 1, 2007 through August 31, 2008). The electronic database for the FY 2008 observation period was obtained from the TDCJ. Contemporaneously, data were collected on serious staff assaults and inmate homicides from Emergency Action Center files. These data were then merged with the electronic disciplinary database to construct a relatively complete picture of serious misbehavior in TDCJ for the cohort of inmates serving during FY 2008. The total pool included 2,018 capital murderers. Less than three percent of the pool was dropped from the analysis because of missing data on one of the predictor variables, for a total of 1,962 capital murderers with complete data.

Because this study was based on a retrospective review of archival data and only deidentified and group data were reported in our findings, individual informed consent was not sought. This procedure was approved by the Institutional Review Board, Office of Research and Development, Prairie View A&M University, Prairie View, Texas.

Measures

This analysis involved the specification and selection of two sets of indicators. The first was the target or outcome. A variety of operational definitions has been used in assessing violent or assaultive misconduct.^{10,41-44} The most comprehensive definitional category of such behavior used in the current study included a broad range of rule violations that had the potential to result in violent outcomes (all level 1: major rule violations and minor assaults and fights). Another category included all assaults (major and minor) on officers and inmates. The most restrictive definitional category relied on in the current study included only assaultive behavior that resulted in injuries requiring treatment beyond first aid.³⁸ The prevalence of such behavior in a study population is referred to as the base rate in an actuarial analysis.

The second set of indicators to be specified were those characteristics that best differentiated among the study participants in the occurrence of the outcome. Prior studies have shown that certain predictors correlate consistently with assaultive behavior in inmates generally and in those convicted of capital murder. The correlates included in the current study were age, level of educational attainment, prior

prison confinement, and gang affiliation. Research has shown that age is the most influential, inversely related predictor of prison violence among general prison population inmates.^{45,46} As with inmates generally, this relationship has also been found to be the strongest predictor of violent or assaultive rule infractions among capital inmates.^{9,27} Level of educational attainment has also been shown to reduce the level of prison violence among incarcerated capital murderers.^{30,35} Continuous age and educational attainment measures were included in the logistic regression models. Cutoff points were used to divide each into discrete categories for further actuarial comparisons.

The two remaining predictors have been shown to increase the likelihood of prison violence. Having served a prior prison term has been found to be a significant correlate of increased prison violence among inmates generally^{25,26} and among inmates convicted of murder specifically.^{9,17} Prison and street gang affiliation have been linked to prison violence generally⁴⁶⁻⁴⁸ and among inmates convicted of murder specifically.^{17,49} Prior prison confinement and prison gang membership are coded as categorical predictors, with 1 indicating the presence and 0 the absence of each characteristic.

Procedures

First, a description of the predictor and outcome variables is provided. The description of the outcomes provides the base rate of each measure of prison violence. Second, logistic regression models are calculated to model the relationship among predictors and outcomes. The overall predictive accuracy of the models and the influence of individual coefficients are delineated. Third, line charts are used to depict the relationship between the strongest correlate, which is age, and prison violence. Fourth, coefficients from the logistic regression models are calculated for each of the cases, to assess the combined impact of correlates of prison violence. Finally, a bar graph is used to illustrate how this information may be presented in a capital murder trial.

Results

Table 1 includes a description of predictors and outcomes. The average age of capital murderers at the outset of the observation period was 36. The average educational attainment score on the Texas Adult Basic Education (TABE) examination showed that the sample of inmates was performing academically

Table 1 Description of Variables for the Sample of Incarcerated Capital Murderers (N = 1,962)

Variables	Mean	S.D.	N	Percent
Predictors				
Age on 9/1/2007	36.4	9.8		
Educational attainment	8.2	3.9		
Prior prison incarceration			537	27.4%
Gang affiliation			329	16.8%
Outcomes				
Potential violence			302	15.4%
Assaultive infractions			91	4.6%
Injurious assaults			24	1.2%

ically at eighth grade level. Among the positive predictors, just over one-fourth of the inmates had a record of prior prison incarceration, and just under one-sixth were confirmed members of a prison gang. Related to the outcomes, 1 in 6 of the inmates was involved in misconduct involving potential violence, 1 in 22 was involved in an assaultive infraction, and 1 in 82 was involved in an assault that resulted in an injury requiring treatment beyond first aid.

The base prevalence or rate data can be used to show jurors that acts of violence in the prison system are relatively uncommon, even for inmates convicted of capital murder. Emergency Action Center Select Statistics, July 2012, prepared by Executive Services of the TDCJ showed that the most serious acts of violence are a rarity in the prison system. The average rate of serious assaults (requiring treatment beyond first aid) on correctional staff averaged 4.2 per 10,000 inmates annually from 2003 through 2011. The average rate of offender homicide was 2 per 100,000 inmates per year during the same period, whereas the statewide rate was 6 per 100,000 inhabitants. Three staff members were killed by inmates in TDCJ from 2001 through 2010, compared with

45 police officers statewide: 1 per 100,000 compared with 8 per 100,000 annually, respectively.

Table 2 presents the logistic regression models predicting various outcomes. The overall models were found to be statistically significant. The pseudo r^2 indicates that between five and eight percent of the variance in outcomes was explained by the models. The model predicting potential violence, the broadest category, fared best on this measure, whereas the model predicting injurious infractions, the narrowest category, fared worst. However, r^2 is influenced by the marginal distribution of the outcome measure. That explains why, when the area under the curve (AUC) was used, the results appeared to be the reverse: the model predicting injurious infractions fared best, and the model predicting potential violence the worst. Regardless, given the overlap in confidence intervals among the AUCs, it should be stated that all of the models were similarly and modestly successful in predicting prison violence.

The individual predictors were related to outcomes in the expected manner. Age and educational attainment related negatively to prison violence. Age was consistently and strongly related, whereas the relationship between educational attainment and outcomes was a bit weaker. In the model predicting assaultive infractions, for instance, the $\exp(b)$ indicates that an increase of one year of age led to a six percent decrease in the odds of committing an assaultive infraction, whereas an increase of one unit of educational attainment resulted in a four percent decrease in the odds of committing an assaultive infraction. Prior prison incarceration and gang affiliation were both related to an increased likelihood of prison violence among the sample. The $\exp(b)$ indicated that previous prison confinement or membership in

Table 2 Logistic Regression Models Predicting Violent Disciplinary Misconduct

Predictor Variables	Potential Violence			Assaultive Infractions			Injurious Assaults		
	<i>b</i>	<i>s.e</i>	$\text{Exp}(b)$	<i>b</i>	<i>s.e</i>	$\text{Exp}(b)$	<i>b</i>	<i>s.e</i>	$\text{Exp}(b)$
Age on 9/1/2007	-.061	(.011)	.941***	-.064	(.020)	.938***	-.075	(.040)	.928*
Educational attainment	-.035	(.017)	.965*	-.041	(.028)	.960 [†]	-.002	(.056)	.998
Prior prison incarceration	.410	(.161)	1.506**	.874	(.261)	2.333***	1.050	(.490)	2.859*
Gang affiliation	.487	(.154)	1.627***	.641	(.243)	1.898**	.646	(.457)	1.908 [†]
Time served control	-.011	(.015)	.989	-.023	(.028)	.978	.029	(.052)	1.030
Constant	.569	(.354)	1.766	-.760	(.611)	.468	-2.572	(1.234)	.076*
Nagelkerke r^2	.078***			.076***			.045*		
Model AUC	.668*** (CI = .636 - .700)			.699*** (CI = .647 - .750)			.706*** (CI = .605 - .807)		

* $p < .05$; ** $p < .01$; *** $p < .001$; $p < .10$

Base Rates and Correlational Data

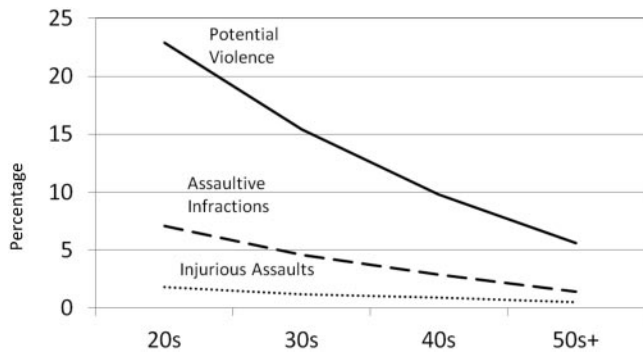


Figure 1. Relationship between age and commission of violent disciplinary infractions.

a prison gang approximately doubled the odds of committing an assaultive infraction.

The information in Table 2 can be used in various ways for statistically grounding a prediction that a defendant would commit criminal acts of violence that constitute a continuing threat to the prison community. First, knowing the strength of individual correlates allows one to calculate simple prevalence or rate figures across categories of a given predictor. For instance, the relationship between gang membership and outcomes indicates that gang members are more than twice as likely to commit assaults on fellow inmates (9.1% versus 3.7%). In Figure 1, the relationship between age and various outcomes for this sample of capital murderers is shown with a line chart. The graphic depiction shows that the older the defendant, the less likely he is to engage in violent acts while incarcerated. Those in the youngest age group (less than 30 years) are four to five times as likely as those in the oldest age group (50 years or older) to commit acts of various degrees of violence. Figure 2 depicts the relationship between the most serious acts of violence occurring in the prison system and age of an incoming inmate more generally. Age

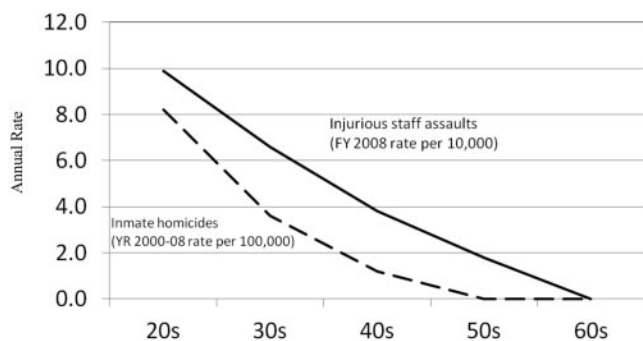


Figure 2. Age and the rate of injurious staff assaults and homicides.

disparity in the commission of these serious violent acts is even greater. Such graphic depictions can be powerful aids in a capital murder trial for older defendants and, in the case of younger defendants, to show the effects of aging on propensity for violence in prison.

Second, logistic regression models can be used to describe the combined influence of characteristics included in the model. The maximum likelihood (ML) estimates (logit coefficients) from the regression model can be used to compute the natural logarithm of the predicted log odds with the following equation:

$$\ln\left(\frac{p}{1-p}\right) = a + b_1(X_1) + b_2(X_2) + b_3(X_3) + b_4(X_4) + b_5(X_5).$$

From this equation, various scenarios can be estimated. For instance, the log odds of a 21-year-old capital murder defendant with a TABE score of 6.0, prior prison confinement, and membership in a gang who committed an assault during the first year of incarceration would be: $-0.760 + (-0.064)(21) + (-0.041)(6) + 0.874(1) + 0.641(1) + (-0.023)(0) = -0.835$; the odds, $\exp(b) = e^{-0.835} = 0.433$; and the probability, $p/1-p = \text{odds}$; $p = .302$. Based on ML estimates from the model, the likelihood that the hypothetical person above would commit an assault during their first year of incarceration was 30.2 percent, more than six times the overall average observed prevalence (base rate) of assaultive infractions (4.6%). A hypothetical example could also be calculated from the other end of the spectrum using a 45-year-old capital murder defendant with a TABE score of 12.0, no prior prison confinements, and no gang affiliation: $-0.760 + (-0.064)(45) + (-0.041)(12) + 0.874(0) + 0.641(0) + (-0.023)(0) = -4.132$; and the odds, $\exp(b) = e^{-4.132} = 0.016$; and the probability, $p/1-p = \text{odds}$; $p = .016$. Based on ML estimates from the model, the likelihood that this hypothetical person would commit an assault during the first year of incarceration is 1.6 percent. That is about one-third the overall average observed prevalence (base rate) of assaultive infraction (4.6%).

The corresponding estimates from the other models were also calculated and incorporated along with these into Figure 3. What is clear from Figure 3 is that a group of capital murderers with characteristics

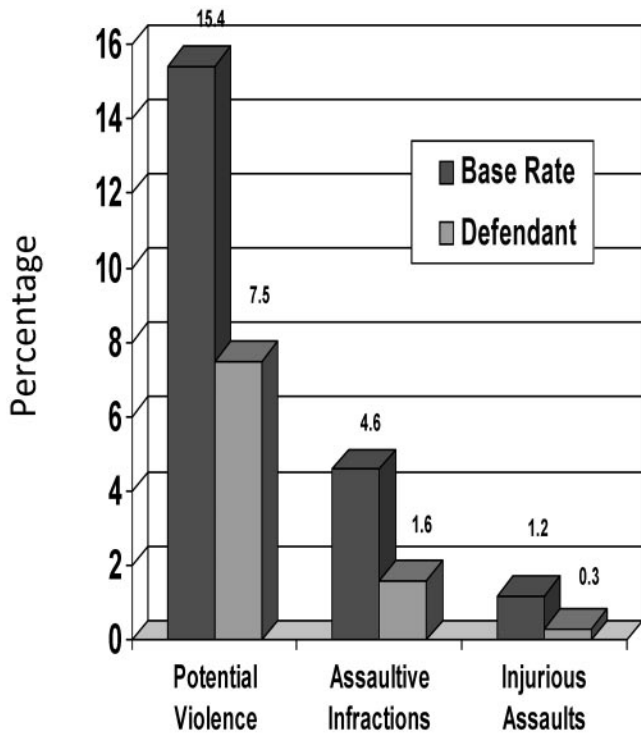


Figure 3. Prevalence of serious rule violations among incarcerated capital murderers in comparison to Defendant's expected likelihood.

similar to the older capital murder defendant from the scenario in the prior paragraph, serving life sentences under conditions of confinement nearly identical to those that will be experienced by the Defendant, was less likely to commit violent acts than the entire cohort of incarcerated capital murderers. Depending on which outcome is specified, the group of inmates most similar to the Defendant was 25 to 49 percent as likely to commit violent rule infractions in comparison to the base prevalence among the entire cohort.

Discussion

The exercise undertaken in the current study supports the relationship between the most consistent predictors of violent institutional misconduct found in previous studies. It also highlights some of the advantages of utilizing statistical data in the context of risk assessment at capital murder trials. First, an actuarial analysis can provide accurate base rates and prevalence of serious and violent behavior among capital murderers serving time under conditions similar to those that will be encountered by capital murderers entering a prison system. This is advantageous, considering that jurors have previously been exposed

to very little of this type of information and have been forced to rely on their own stock of largely inaccurate information, intuition, and sometimes distorted information presented by clinicians or prison experts.¹⁴

Clinicians have been called on by the prosecution to show the defendant to be a dangerous person who would continue to commit criminal acts of violence in the future, given any opportunity to do so.^{50,51} Prison experts have been called by the prosecution to show that prisons are dangerous places where acts of violence occur regularly, often recounting the most horrific incidents along with the presentation of visual aids (i.e., prison-made weapons).⁵² This one-two punch can be softened by the presentation of actual statistics that show the rate of serious violent behavior in prison overall to be low, typically lower than in the broader free society, and by showing that the likelihood of serious violence among a group of men like the defendant (i.e., capital murderers) is similarly low. Such information assists jurors to think in terms of probabilities instead of possibilities.

A second advantage to an actuarial analysis is that certain features related to engaging in violence in prison can be highlighted, especially those that act as mitigation in a particular defendant's case. The factors relied on in this exercise have been shown to be related to prison violence time and again in the literature. Although the current study relied on a database ordered by the court and supplied by the prison system, the information on prevalence and base rates can often be culled from existing statistical reports. Institutional breakdowns of the rates of prison violence, such as by the prison unit or security level in which capital murderers will be classified, should also be readily available. Often a bit of web browsing or a call to the research department can yield additional information that will be helpful in a particular defendant's case.

Third, actuarial data provide an objective means of grounding the estimated probability that a capital murder defendant will commit future acts of violence in the prison setting. Supplying outcome information for prior capital defendants currently serving life sentences sets the bandwidth of violent offending that may be expected from a capital murder defendant headed to prison. To the extent that mitigating correlates can be found, the bandwidth can be narrowed in a defendant's favor. The presentation of relative prevalence or incidence data, such as that in

Figure 3, comparing a smaller group sharing some of a defendant's characteristics with the larger cohort of incarcerated capital murderers, can be especially useful in a particular defendant's case.

With the range thus supplied and narrowed accordingly, individualized clinical information, along with the defendant's prior history of offending in a similar environment (a closed, same-sex institution with a high degree of internal control) can then be drawn upon to fine tune the estimated likelihood of future violent offending. The scholarly penological and psychological literature should also be useful in backing up claims related to particular mitigating characteristics.

There are also limitations to this approach. First, such an analysis is incapable of providing an estimate of lifetime prevalence for an individual. The past 30 years have seen dramatic reductions in nearly all types of prison violence, including homicides, riots, escapes, disturbances, and assaults on inmates.⁵³ It would not be possible, then, to extrapolate, from an analysis of the behavior of capital murderers serving time during the distant past, prospectively to newly entering capital murderers set to begin a life term. Relying on data from an actuarial analysis, it is possible to chart the likely course of a reduction in violent behavior associated with the effect of aging. This estimate, however, is bounded by conditions in the prison environment, which are likely to change with further advances in therapeutic and technological approaches to violence prevention. Also, other than age, dynamic data gathered at intake into prison do not change in a predictable manner throughout the life course, making long range predictions of future violent conduct particularly suspect.

A related potential limitation of the actuarial approach is that contextual variables which could influence behavior are typically not specified beyond those related to the crime of conviction and sentence. Because of the nature of the crime and length of sentence, inmates convicted of capital murder are restricted to higher custody levels than are inmates serving shorter sentences for lesser crimes, yet they are still typically housed in the general prison population with a high degree of freedom of movement.⁵⁴ Although not explicitly considered herein, examining a cross-sectional period encompassing many inmates well into their sentences allows for a self-selection process whereby inmates prone to misbehave are placed in higher custody levels. Essentially,

such a study period allows for a forecast that builds in not only inmate propensity toward violent behavior, but also the ability of the prison system to manage and respond to such risks as needed.⁵⁵ As such, the sampled period assures the highest degree of accuracy in forecasting how capital murderers will behave in a particular prison system under the constraints and conditions of confinement experienced recently by a group of similarly situated inmates.

The forecast does not extend to the risk an offender presents if released from prison into the community. Courts in states with explicit affirmative future-dangerousness provisions, such as Oregon⁵⁶ and Texas,⁵⁷ anticipate that jury predictions will be made in a manner that is free from the context in which the offender resides. Although this context-free determination is permissible, it violates the tenets of risk assessment. Most capital defendants are theoretically dangerous at the time of trial, yet pose little threat to the community after serving a lengthy prison sentence.³¹ Further, since life without parole is specified as an alternative sentence in all death penalty jurisdictions, the question of how capital offenders would behave in the community remains purely hypothetical.

The existence of policies mandating the prediction of a defendant's future conduct during the sentencing deliberations of a capital murder trial make it necessary to present statistical evidence that aids jurors in making a more informed judgment about an individual defendant's likelihood of committing future acts of violence. Nonetheless, given the limitations in making predictions of future behavior, documented repeatedly by social and behavioral scientists, and the extraordinary error rate attributed to positive predictions of future violent conduct in capital murder cases, we suggest that clinicians present such evidence only in mitigation, where the data and characteristics of the case warrant, or that they serve in rebuttal, presenting the scholarly evidence now accumulating related to our inability to make accurate predictions for the long term.

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