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Determinations of Dangerousness in Forensic Patients: An Archival Study

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ABSTRACT: The involvement of mental health professionals in determinations of dangerousness is both common and controversial. Among the various contexts for these evaluations, the release of potentially violent forensic patients from maximum security facilities evokes justified concern from involved experts and apprehension to outrage from the immediate community. We sought to examine how conclusions are reached on dangerousness at two sequential stages: clinical recommendations and Manifest Dangerousness Hearings decisions. In an archival study of 245 patients, we found that lack of progress in the institution and physical assaultiveness were the strongest correlates with dangerousness. In contrast, experts and review boards appeared to be relatively less influenced by diagnosis, types of treatment, and sociodemographic variables.

KEYWORDS: psychiatry forensic psychology, dangerousness, diagnosis

The release of "dangerous" patients from maximum security facilities evokes in the public mind images of violently deranged persons preying on an unsuspecting and unprotected community [1]. The truth is far less sensational. Studies of patients released from forensic hospitals suggest only a relatively small percentage engage in violent recidivism. These modest percentages for discharged forensic patients have remained generally constant from the earlier classic studies [2-6] to more recent research efforts [7,8]. These predictions are typically confounded by continued clinical interventions with released forensic patients that are designed to minimize aggression [9] as well as enduring problems in establishing violence as an outcome criterion [10].

How are decisions made to release previously designated dangerous patients from maximum security facilities? Litwack, Kirschner, and Wack [11] in an incisive review suggest that dangerousness must be considered within the broader context of risk assessment. From this perspective, a forensic patient with a one in three chance of committing homicide would be considered much more dangerous than a chronic assaulter. Because the most dangerous offenders are never released, estimates based on marginally dangerous persons, who are judicially released against clinical judgements of

dangerousness, do not provide a fair test either of future violence or overall risk. To address one facet of this problem, Litwack and his colleagues advocated that the process of rendering dangerousness determinations be studied more closely.

One obvious shortcoming of dangerousness research is its necessary attention to group differences and relative inattention to the task facing forensic experts and review boards, namely how to decide whether a particular maximum security patient with his or her unique background and clinical presentation poses an acceptable or unacceptable risk of violence [12]. To address this question, Werner and Meloy [13] examined the role of clinical variables on these decisions for 50 forensic inpatients. By asking four forensic experts to rate patients on dimensions of the Brief Psychiatric Rating Scale (BPRS), they found impulsivity, uncooperativeness, and hostility were correlated with non-release decisions. In addition, suspiciousness, thought disorder, and lack of anxiety were also associated decisions not to release. Beyond the BPRS, other important considerations were the lack of community/family support and continued needs for supervision. In a two-year follow-up, none of the 24 released patients recidivated; this latter finding probably reflects more on the intensive outpatient treatment, mandated with conditional releases, than the accuracy of any predictions.

In this study, we were interested in identifying what variables were significantly associated with formal assessments of dangerousness. These determinations of dangerousness were conducted for the express purpose of rendering release decisions for patients in a maximum security hospital. In an archival study, we addressed three related issues: First, what variables (background and clinical) are associated with experts' recommendations about dangerousness? Second, what variables are associated with review boards' decisions about dangerousness? Third, what variables are associated with disagreements between expert recommendations and review board decisions?

Method

Archival data were gathered at Vernon State Hospital, the maximum security hospital for Texas. With the exception of patients in their initial evaluation and treatment for competency to stand trial, the status of all patients is periodically reviewed at Manifest Dangerousness Hearing to determine their current dangerousness with reference to their continued need for maximum security hospitalization.

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Sources of Clinical Data

With Institutional Review Board approval, we systematically compiled data from three sources. From a master list of Manifest Dangerousness Hearings in 1992, a consecutive sampling of their reports were collected. For patients with dangerousness hearings, their forensic evaluations prepared for those hearings were assembled. Finally, the computer data base for each patient, comprised largely of background and demographic information, were compiled. One critical source of clinical data, which we were unable to retrieve, was the brief interviews by the dangerousness review board of the patients themselves; apparently the content of these interviews is not recorded.

Variables

As an archival study, we were limited to those variables which were commonly available from our sources of clinical data. These variables included the following sociodemographic variables: gender, race, age, height, marital status, and family size. We also reviewed past history (i.e., prior criminal charges, prior hospitalizations, and history of substance abuse), current diagnosis, and prominent psychotic symptoms (e.g., hallucinations, delusions, and disorganized speech). With respect to treatment, we gathered information on overall response (i.e., deteriorated, unimproved, and improved) and types of medication employed. Finally, we examined their hospital adjustment which included variables, such as activeness, uncooperativeness, status in the step system, breaking of rules, verbal hostility, and physical assaultiveness. Nearly all variables were nominal (presence and absence) and were rated only if directly mentioned in one of the three sources of clinical data. While not exhaustive, these variables address the major domains of dangerousness available in maximum security hospitals that are associated with risk assessment [14].³

Results

A total sample of 331 cases were compiled from the first nine months of 1992. We eliminated all but the most recent data for patients with multiple hearings. As a result, complete data were available on 245 patients that were comprised of 218 males (89.0%) and 27 females (11.0%) with a mean age of 36.70 years (SD = 10.50). The racial composition of the sample was 112 African-Americans (45.9%), 90 Whites (36.9%) and 42 Hispanics (17.2%). With respect to marital status, the majority were single (169 or 73.2%) with 40 (16.3%) divorced, and only 22 (9.5%) married. Approximately three-fourths of the sample had committed violent crimes against a person (132 or 73.3%); the remaining had perpetrated property or status crimes (48 or 26.7%). Common diagnostic categories were psychotic disorders (191 or 77.6%), mood disorders (52 or 21.2%), substance abuse disorders (58 or 23.6%), and mental retardation/organicity (52 or 21.1%).

The clinical recommendations were almost evenly split with 129 dangerous (53.3%) and 113 non-dangerous (46.7%; four reports had no opinion). In contrast, the review boards found a slightly greater number to be dangerous (144 or 58.8%) than non-dangerous (101 or 41.2%). The overall level of agreement between clinical recommendations and review board decisions was high at 83.1%. For the 41 disagreements, the review board believed, con-

trary to clinical recommendations, that 35 cases remained dangerous and that only six were non-dangerous.

The first step in this exploratory analysis was to compute biserial correlations for 41 individual variables for (a) clinical recommendations, (b) review board decisions, and (c) disagreements between the two. To protect against Type I errors, only correlations with two-tail probabilities <.01 were considered significant. Table 1 summarizes the salient findings.

Sociodemographic variables appeared to have only a marginal effect on determinations of dangerousness. Race and gender, in particular, were unrelated to dangerousness both in terms of recommendations and subsequent decisions. Even more interesting, diagnosis and key psychotic symptomatology were not associated with either recommendations or decisions, although a trend was noted for delusions in review board decisions. Instead, determinations of dangerousness appeared to be moderately correlated with two constellations of clinical variables: (a) aggression as measured by physical assaultiveness and verbal hostility and (b) improvement in clinical status. These correlations remained significant for both clinical recommendations and review board decisions.

Review board decisions appeared to parallel clinical recommendations with respect to dangerousness. The sole exception was a prior history of violent offenses. In these cases, the review board appeared to utilize this information in rendering their final decisions. The small number of disagreements between clinical recommendations and review board decisions militated against significant findings. Although trends were observed, no variables were significantly related to the disagreements.

The next step was to perform stepwise logistic regressions to see which variables predicted clinical recommendations and review board decisions about dangerousness. We must emphasize that these analyses are preliminary, since archival data are typically incomplete. Several promising variables were dropped from the logistic regression analyses because of missing data.

The stepwise logistic regression for clinical recommendations yielded three variables that predicted the actual classification with an overall hit rate of 75.2% with a RIOC (rate of improvement over chance) of 24.2% for dangerous and 25.9% non-dangerous recommendations. Two of the three variables were highly significant ($P < .0001$): physical assaultiveness and lack of improvement.

TABLE 1—Manifest dangerousness of forensic patients: significant correlates with clinical recommendations, review board decisions, and disagreements.

Significant Variables	Clinical	Review	Disagreements
Unimproved	.49	.41	.04
Physical assaultiveness	.40	.30	<u>.14</u>
Uncooperative	.35	.31	<u>.10</u>
Treatment noncompliance	.32	.06	.07
Verbal hostility	.26	.25	.04
Status in program (lower)	.25	.24	.02
Activity (greater)	.23	.09	<u>.15</u>
Violent offense	.19	.32	.04
Age (younger)	<u>.16</u>	.09	<u>.16</u>
Height (taller)	.12	<u>.17</u>	.02
No lithium	.05	<u>.01</u>	<u>.13</u>
Low IQ or organic	.04	.05	<u>.15</u>
Delusions	.03	<u>.18</u>	<u>.13</u>

NOTE: To protect against Type I error, only variables with $P < .01$ were considered significant and placed in **bold**. Variables with $P < .05$ and $> .01$ are designated as "trends" and are underlined. For dangerousness, clinical = clinical recommendations; review = review board decisions.

³The sole exception is contextual variables which are very limited in cross-situational predictions from a highly atypical setting, such as a maximum security hospital.

The third significant variable ($P = .01$) was paranoid diagnosis (combining paranoid schizophrenia and delusional disorder, paranoid).

A second logistic regression retained two of these variables with an overall hit rate of 71.1% with a RIOC of 13.4% for dangerous and 21.2% for non-dangerous decisions. Obviously, this model is relatively weak at predicting dangerousness. The variable, lack of improvement, was highly significant ($P < .0001$), while the other, physical assaultiveness, was significant ($P = .01$).

Discussion

A major consideration of forensic evaluations [15,16] is whether mental health experts are unduly influenced by sociodemographic characteristics, such as age, race, and gender. In this study of dangerousness conclusions, we did not find any apparent biases in either clinical recommendations or review board decisions. At most, younger and larger forensic patients may be judged slightly more often as dangerous ($R_s < .20$), although these findings do not inherently reflect bias in decision making. Within the context of this study, sociodemographic variables appear to be peripheral to clinical recommendations and subsequent review board decisions.

The role of diagnosis in dangerousness conclusions remains unclear. In an interesting descriptive study of state hospital patients, Tardiff [17] found that assaultiveness appeared to vary by diagnosis according to patient status (inpatient versus outpatient) and gender. In the present study only paranoid diagnosis and delusions were associated with dangerousness and these variables appeared to be of secondary importance. Main diagnostic categories (e.g., psychotic and mood disorders) were unrelated to these determinations. We also observed that records rarely reported the diagnosis of antisocial personality disorder; because of its infrequent occurrence, we were unable to test its relationships to conclusions about dangerousness [18].

The best predictors of clinical recommendations were physical assaultiveness and the lack of improvement. Certainly, physical assaultiveness should be a critical dimension of dangerousness conclusions, since prior violence is typically a robust predictor of future dangerousness [19,20]. Moreover, the lack of improvement has important implications for the care and management of forensic patients. If the original decision for placement in a maximum security facility was correct, then lack of improvement would suggest that factors predisposing a particular patient to violence have yet to be remediated. In addition, mental health professionals may reason that substantial remission of prominent symptomatology should be a prerequisite to a reduction in security through placement either on an open unit or directly into the community. The rationale for this approach is that highly structured settings, such as maximum security hospitals, offer the best external controls for aggressive behavior. Therefore, the simple elimination of physical assaultiveness may not be sufficient justification for release of otherwise unimproved forensic patients, because tenuous controls may reflect a temporary accommodation to external structure rather than any appreciable change in the patients themselves.

Procedural fairness is an important dimension of forensic evaluations and quasi-judicial decisions (for example, dangerousness hearings). While not addressing the accuracy of these recommendations and consequent decisions, the present study is heartening for two reasons. First, decision-makers do not

appear to be unduly influenced by extraneous factors in their determinations of dangerousness. Second, mental health experts appear to give considerable weight to relevant factors (physical assaultiveness and lack of progress) in offering clinical recommendations. While the adequacy of release decisions for forensic patients has long been questioned [21], further study and standardization of this process will allow investigators to establish and test explicit decision rules.

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