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Civil Commitment in the Psychiatric Emergency Room

III. Disposition as a Function of Mental Disorder and Dangerousness Indicators

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• In 251 evaluations observed in five California public psychiatric emergency rooms, patients who were retained, whether new to the system or having histories of hospitalization, rated higher on measures of danger to self, danger to others, and grave disability than patients who were released. They were also more severely symptomatic and more often given major diagnoses. The combination of dangerousness and mental disorder predicted disposition for 93% of new patients and 88% of recidivist patients. Impulsivity was the most influential aspect of mental disorder.
(Arch Gen Psychiatry 1988;45:759-763)

Most state commitment statutes today specify that patients may be detained in a psychiatric facility only on grounds of danger to self, danger to others, or (in many states) grave disability, and then only if the condition results from mental disorder. Judicial interpretations of these statutes indicate that the common denominator, ie, the only legitimate basis for civil commitment, is danger due to mental disorder.¹⁻⁴

Critics of the "dangerousness standard" have expressed concern that it shifts the focus of mental health staff and facilities to individuals who are "not really mentally ill" or who are not appropriately treated in acute-care services.⁵ Instances are cited in which criminal and civil courts ignore the distinction between "dangerousness" and "dangerousness due to mental disorder" and require retention of inappropriate persons in state hospitals.⁶ Other court decisions are said to have changed the civil commitment laws de facto from permissive (stating that clinicians *may* hold individuals who are dangerous due to mental disorder) to mandatory, with the effect that dangerous individuals

must be admitted whether or not they are in need of or able to benefit from treatment.

Most of the examples cited involve patients who represent a threat to others. Although only one of the three dangerousness criteria refers to danger to others, a picture emerges of mental health facilities bursting with nonsymptomatic but potentially violent persons while turning away severely ill patients "more likely to benefit from hospital care."⁷

Despite this widespread concern, few authors have cited empirical data regarding the relationship between mental disorder and the dangerousness criteria in acute-care psychiatric services. We have previously reported the reliability and validity of Three Ratings of Involuntary Admissibility (TRIAD), an assessment device we developed to model clinical application of the dangerousness criteria in psychiatric emergency rooms, where most civil commitments are initiated.^{8,9} We have also reported that different types of symptoms were related to severity of presentation on the three distinct dangerousness criteria; perceived danger to self—not danger to others—was related to the fewest indicators of mental disorder. Overall, severity of perceived dangerousness was significantly correlated with severity of most types of symptoms. In addition, we have demonstrated that severity of perceived dangerousness, as measured by TRIAD, is positively associated, in five California public psychiatric emergency rooms, with major mental disorders, is apparently unrelated to personality disorders, and is negatively associated with "other" mental disorders.¹⁰ These findings, along with our finding that severity of perceived dangerousness predicts disposition, led us to expect that those retained would also be primarily those with the most severe symptoms and diagnoses of major mental disorder.

In this article, the relative effects of dangerousness and mental disorder in the decision to release or retain patients in the acute-care setting will be described for the first time. These findings will contribute to an understanding of the effects of the dangerousness standard on the character of the population retained in acute-care services.

Toward these ends, we will examine the diagnoses,

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symptoms, and perceived dangerousness of patients retained under the dangerousness standard. If commitment laws such as California's Lanterman-Petris-Short Act¹¹ are operating correctly as a sieve for identifying patients properly served by the public, involuntary, acute-care system, patients released at evaluation should, as a group, look significantly less disturbed than patients retained. As new and recidivist patients may be evaluated differently,¹² we will compare new and recidivist patients retained. In a consistent system those chosen from among the new patients for retention should, as a group, look like the recidivist patients retained on the dimensions of dangerousness and mental disorder. In sum, the question addressed herein is "Which aspects of the clinical picture distinguish patients retained from patients released, and what is their relative weight in the decision?"

METHODS

Our measures of dangerousness and mental disorder, the data-gathering procedures, patient sample, and characteristics of the clinicians and settings in our study have been described in two companion articles.^{9,10}

RESULTS

Retention Under the "Dangerousness" Standard and Severity of Mental Illness

Retained patients were significantly more likely to have major mental disorders (70.1%), whereas released patients were more likely to have "other" diagnoses (46.4%). Although nearly three times as many personality disordered patients were retained as were released, the proportions of personality disorder diagnoses in the two groups were not significantly different.

Comparing the severity of symptom presentations among those who were released after evaluation and those who were retained (Table 1) provides evidence that those retained represented a more severely disturbed population than those released. This is true of ten of the 13 symptom dimensions considered. The proportion of individuals considered moderately or severely expansive in the retained group was not significantly different from the proportion in the released group. More notably, patients who were subsequently released by psychiatric emergency service clinicians were significantly more likely than the patients who were retained to have moderate or severe anxiety and show a trend toward increased depression. Impulsivity was far more characteristic of patients retained (92%) than patients released (38%). Patients retained were also much more likely to have moderate or severe disorders of judgment, thought, behavior, and affect, and moderate or severe irritability. Although less common in the sample, moderate or severe disorders of perception, memory, and orientation were significantly more frequent in the retained group.

Table 2 summarizes the symptom presentations of new and previously hospitalized patients who were selected for retention. Recidivist and new patients retained were about equally likely to be moderately or severely impulsive, to be depressed or anxious, or to have moderate or severe disorders of judgment, thought content and form, behavior, orientation, or memory. Returning patients were significantly more likely to be irritable or expansive or to have disorders of affect or perception.

An additional finding of interest is that the relationship between severity of specific symptoms and disposition varied for different diagnostic groups. Most notably, for patients with Axis II personality disorders and no Axis I major disorder, disposition was related only to impulsivity.

Retention and Severity of Perceived Dangerousness

Whether dangerousness is measured by TRIAD or the Clinician's Global Rating (CGR), those retained in the system were generally perceived as more dangerous than those released.⁹ TRIAD dangerousness severity scores were equally predictive of disposition for new patients ($\gamma = .71$) and patients with prior

Table 1.—Proportion of Patients Presenting With Moderate or Severe Disturbance by Symptom Type and Disposition*

Symptom Type	Total Sample (N = 251)	Patients Released (n = 29)	Patients Retained (n = 162)
Impulsivity†	80	38	92
Judgment disorder	65	54	72
Depression	60	67	56
Thought content disorder	49	30	59
Behavior disorder	49	35	56
Irritability	44	31	51
Thought form disorder	43	25	53
Inappropriate affect‡	41	28	49
Anxiety	35	47	28
Perception disorder	27	16	34
Memory disorder	25	13	33
Disorientation	21	6	30
Expansiveness	12	7	15

*Values are percentages. Symptom types are ordered according to the frequency of their appearance in the total sample. Only differences in the proportion of released vs retained patients with depression and expansiveness were not significant at a level of at least $P \leq .05$.

†Sample numbers are 199, 72, and 127, respectively.

‡Sample numbers are 200, 72, and 128, respectively.

Table 2.—Proportion of Retained Patients Presenting With Moderate or Severe Disturbance by Symptom Type and Treatment History*

Symptom Type	Patients Never Previously Hospitalized Who Were Retained (n = 34)	Patients Previously Hospitalized Who Were Retained (n = 81)	P (Two-tailed)
Impulsivity	93†	96‡	NS
Judgment disorder	76	72	NS
Depression	65	58	NS
Thought content disorder	47	58	NS
Behavior disorder	38	56	NS
Irritability	35	63	<.01
Thought form disorder	35	53	NS
Inappropriate affect	24†	59‡	<.01
Anxiety	24	32	NS
Perception disorder	15	35	<.05
Memory disorder	18	33	NS
Disorientation	27	28	NS
Expansiveness	3	19	<.05

*Values are percentages. NS indicates not significant.

†n = 29.

‡n = 68.

§n = 69.

hospitalization ($\gamma = .73$). (The computation of the γ statistic treats the dangerousness severity scores as hierarchical, consistent with our assumption that the greater the severity of dangerousness the higher the probability the person will be retained.) Likewise, CGR severity scores predicted disposition about equally well for both groups ($\gamma = .82$ and $.89$, respectively). Thus, although new patients were less likely to rate high on dangerousness scales,

Table 3.—Disposition of Cases at Severity Level 4 by Scale/Total Score*

Score Qualifying Case for Severity Level 4	Released	Retained Voluntarily	Retained Involuntarily	Total
Danger to self, 3 or 4	5 (12)	5 (12)	31 (76)	41 (100)
Danger to others, 3 or 4	11 (17)	3 (5)	50 (78)	64 (100)
Grave disability, 3	5 (7)	3 (4)	62 (89)	70 (100)
Total score ≥ 4 but no scale score of 3 or 4	1 (20)	0	4 (80)	5 (100)

*Values are number (percent); $n = 145$ (34 cases scored at highest level on two or more scales, including one case that scored at the highest level on all three scales). For summary purposes, those cases considered "correctly predicted" include cases in which patients scoring at severity level 4 were retained and patients scoring at severity levels 1 through 3 were released.

those new patients who presented as dangerous were selected for retention at the same rate as old patients with similar presentations.

Given the impression created by its critics that the dangerousness standard selects primarily people who are a danger to others,⁷ it is important to note that patients in this sample scored high on all three criteria. After the psychiatric emergency evaluation, 16% of the 251 patients scored high (ie, received an individual scale score of 3 or 4) on TRIAD danger to self, 25% scored high on TRIAD danger to others, and 28% scored high on TRIAD grave disability. Altogether, 145 patients (58%) scored at the highest level of severity on TRIAD. Thirty-four of these patients scored high on more than one scale.

Examination of cases at the highest level of perceived dangerousness (severity, 4) provides some indication of the probability of being retained with severe but different patterns of perceived dangerousness (Table 3). A high score on TRIAD grave disability was most predictive of retention (93%), followed by danger to self (88%) and danger to others (83%).

In our sample, therefore, gravely disabled patients were most, not least, likely to be admitted, whereas patients who were dangerous to others were less likely to be admitted than patients who were gravely disabled or dangerous to self.

Dangerousness and Mental Disorder in the Disposition Decision

Another way to consider effects of the dangerousness criteria on the character of the acute-care population is to look at the influence of the combination of dangerousness and mental disorder on the clinician's disposition decision, that is, whether a clinician chooses to retain or to release a patient following the patient's evaluation in the emergency room.

Diagnosis, Dangerousness, and Disposition.—Not surprisingly, the relationship between TRIAD dangerousness and disposition was strongest for the "other diagnoses" group ($n = 84$; $\gamma = .82$); 81% of dispositions were correctly predicted from the dangerousness score. (For summary purposes, those case dispositions considered correctly predicted were cases in which patients scoring at TRIAD severity level 4 were retained and patients scoring at severity levels 1 through 3 were released.) For the psychotic group ($n = 195$), the relationship was also strong ($\gamma = .75$), with 78% of dispositions correctly predicted. For the personality disordered group ($n = 29$), however, TRIAD dangerousness had only moderate effect on disposition ($\gamma = .44$), with only 62% of dispositions correctly classified. In fact, more than half the personality disordered patients scoring low on TRIAD were retained, whereas nearly half of those scoring high were released.

Symptoms, Dangerousness, and Disposition.—Specific types of symptoms are more descriptive vehicles than diagnosis for understanding the combined effects of mental disorder and dangerousness in disposition. No individuals with severe dangerousness scores, ie, severity level 4 on the TRIAD scale, were retained after evaluation unless they evidenced moderate to severe symptoms.

To evaluate the relative contributions of dangerousness and the various indicators of mental disorder to the clinician's disposition decision, we used discriminant function analysis. This procedure is used to create a model wherein each variable is given a weight, and the equation derived is then employed to predict which group

Table 4.—Discriminators in Decision to Release or Retain*

	Relative Importance	Differences in Mean Scores for New Patients Retained vs Recidivist Patients Retained, P
Perceived dangerousness	.76	NS
Impulsivity	.69	NS
Impaired judgment	.38	NS
Formal thought disorder	.37	NS
Disorientation	.35	NS
Thought content disorder	.34	NS
Memory disorder	.29	NS
Inappropriate affect	.29	.002†
Disordered behavior	.25	.014†
Irritability	.24	.002†
Anxiety	-.22	NS
Perception disorder	.18	.002†
Expansiveness	.13	.003†
Depression	-.08	NS

*All patients ($n = 198$). NS indicates not significant. Percent correct classification, 82% (78% of patients released, 84% of patients retained); canonical correlation, .65; Wilks' $\lambda = .57$; $P < .0000$.

†Recidivist patients had significantly higher mean scores than new patients.

each individual patient belongs to, ie, the group retained or the group released. The accuracy of the model is evaluated on the basis of the proportion of patients it correctly classifies and the theoretic relevance of the information used in making these correct classifications.

Among all cases in the sample for which complete symptom assessments and diagnoses were available ($n = 198$), 82% of dispositions were correctly classified by a discriminant function that included perceived dangerousness and symptom severity (Table 4). The discriminant function was characterized by severity of perceived dangerousness and impulsivity; it correctly classified 78% of patients released and 84% of patients retained. Including diagnostic category along with symptom scores and dangerousness improved classification by less than 2%.

Table 4 gives the correlations between the discriminating variables and the discriminant function. The high coefficients for dangerousness (.76) and impulsivity (.69) are followed by more moderate coefficients for (in rank order) impaired judgment, formal thought disorder, disorientation, thought content disorder, memory impairment, inappropriate affect, disorganized behavior, and irritability. Anxiety is negatively correlated with the discriminant function—the higher the anxiety level, the more likely that the patient was released—but this relationship is relatively

Table 5.—Accuracy of Predicted Disposition Classifications Using Perceived Dangerousness and Alternative Indicators of Mental Disorder*

Discriminant Function	% Correct Classification	Canonical Correlation	Wilks' λ	P <
Patients Without Previous Hospitalizations (n = 71)				
Model 1	77	.58	.67	.000
Model 2	91	.78	.38	.000
Model 3	93	.85	.28	.000
Patients With Previous Hospitalizations (n = 113)				
Model 4	80	.55	.69	.000
Model 5	84	.67	.55	.000
Model 6	88	.7	.5	.000

*Models 1 and 4, disposition = f(dangerousness + diagnosis); models 2 and 5, disposition = f(dangerousness + symptom scores); models 3 and 6, disposition = f(dangerousness + symptom scores + diagnosis).

Table 6.—Relative Importance of Discriminators in the Decision to Release or Retain*

Symptom	Correlation With Discriminant Function
Patients Without Previous Hospitalizations (n = 71)	
Impulsivity	.57
Danger (TRIAD)	.43
Thought content	.40
Judgment	.31
Thought form	.25
Orientation	.24
Memory	.22
Anxiety	-.18
Behavior	.15
Affect	.12
Depression	-.04
Irritability	-.01
Perception	-.01
Expansiveness	-.00
Patients With Previous Hospitalizations (n = 113)	
Danger (TRIAD)	.82
Impulsivity	.57
Irritability	.38
Judgment	.37
Orientation	.33
Anxiety	-.26
Memory	.23
Affect	.23
Thought form	.21
Thought content	.17
Behavior	.16
Perception	.16
Expansiveness	.11
Depression	-.09

*TRIAD indicates Three Ratings of Involuntary Admissibility.

modest (-.22). Perception disorders, expansiveness, and depression have little relationship to disposition.

Disposition as a Function of Dangerousness, Diagnosis, and Specific Symptoms for Those With and Without Prior Hospitalization.—Given our observations that patients coming to the emergency room without previous hospitalizations, as a group, present lower levels of mental disorder and dangerousness than patients who have experienced such hospitalizations, we explored the contribution of dangerousness and mental disorder indicators to the clinician's disposition decision for these two groups separately.

Table 5 summarizes the results of six separate models employing dangerousness with diagnosis, symptom scores, or both diagnosis and symptom scores, as the variables determining whether or not a given individual was a member of the released or the retained patient populations. The first three models in Table 5 apply to patients without previous hospitalization. Using the TRIAD

dangerousness score and diagnosis, we were able to classify 77% of the cases in the correct disposition category, ie, as to whether or not they were actually released or retained. Using symptom scores and dangerousness, we were able to classify 91% of the cases, a significant improvement ($P < .05$). Combining symptom scores and diagnosis with dangerousness yields a marginal increase to 93% accuracy of classification. This latter increase was not statistically significant. It would therefore appear that for patients new to the system, that is, those without previous hospitalizations, the combination of dangerousness and symptom assessment seems to be the most efficient predictor of clinician disposition decisions.

For patients with a history of hospitalizations, there was also a clear increase in the proportion of individuals correctly classified as we progressed to the full model (from model 4 to model 6); however, for this group the increase was not statistically significant. Eighty-eight percent of dispositions were correctly classified by combining dangerousness, diagnosis, and symptom severity.

Table 6 provides us with an indication of the relative importance of each of the discriminators in model 2 (a model for patients without previous hospitalizations) and model 5 (a model for patients with previous hospitalizations). Patients coming to the emergency room with previous hospitalizations (model 5) have a discriminant function defined primarily by their perceived dangerousness, followed by impulsivity and a combination of other symptom patterns.

Among those without previous hospitalizations (model 2) the most important factor in determining who is released vs retained is the *degree of impulsivity*, followed by dangerousness as measured by TRIAD, and then other symptoms. Note that again the mood disorders anxiety and depression seem of very little importance and are even related to the decision in a negative way. Thus, the greater the patient's impulsivity score, the more likely it is that she will be retained, whereas the greater her anxiety score, the less likely it is that she will be retained.

COMMENT

We believe the findings reported herein are generalizable to emergency psychiatric evaluations in public general hospitals in a state in which the dangerousness standard includes a strict grave disability criterion, along with the criteria of danger to self or others.

One surprisingly clear finding in our study is that degree of impulse control as perceived by clinicians is the most important aspect of the person's clinical state in determining disposition. This is consistent with the results of Mezzich et al,¹³ who also found that impulsivity was one of the symptoms most strongly correlated with inpatient vs outpatient disposition. Impulsivity, one discrete manifestation of mental disorder, is apparently more influential than diagnostic category or treatment history in determining disposition. For patients new to the system, it is even more influential than dangerousness.

The relatively greater importance of impulsivity for new patients as compared with recidivist patients may be a reflection of clinicians' hesitation to introduce emergency room patients without previous hospitalizations to the inpatient role unless they clearly lack control over any destructive tendencies. Thus, an extra weight would be given to impulsivity, which increases the risks that dangerous threats or actions will be followed up by the person.¹⁴ For people new to the system, assessment of impulse control may be the key to avoid an event that can have lasting impact not only on their survival and the survival of others but on their relationship to society in subsequent years. Increased risks associated with impulsivity for all patients presenting as dangerous may also have implications for statutory definitions of mental disorder, which do not specifically mention impulse control.

A related finding is that impulsivity is the only manifestation of mental disorder that influences disposition of

personality disordered patients without major mental disorder. Dangerousness is not a good predictor of disposition for this group, which seems to pose the greatest disposition problem for emergency room clinicians.^{6,15,16} However, given the small number of individuals we observed who were given personality disorder diagnoses without major mental disorder diagnoses, it would be premature to make any suggestions regarding a differential approach to them in the civil commitment process.

The third and major implication relates to the current widespread criticism of the dangerousness standard for civil commitment. From the findings reported herein we conclude that the dangerousness standard in California, where it includes a strict grave disability criterion, is functioning as a sieve whereby both the most dangerous and most severely ill patients in the psychiatric emergency room are being selected into the acute-care system. Whether returning patients or patients new to the system, those who are both most severely ill and most dangerous are selected for retention. From 88% to 93% of dispositions can be predicted on the basis of the combination of dangerousness and severity of symptoms.

These results may serve to illuminate a major mental health policy question. Currently, many severely ill persons may be screened out of the acute-care system before they

get to a psychiatric emergency room because referral sources know they will not qualify for involuntary treatment under the dangerousness standard. On the other hand, we have shown that patients chosen for emergency commitment under a dangerousness standard that includes grave disability are also by and large severely ill. The large numbers of potentially violent but asymptomatic individuals that some opponents of the dangerousness standard suggest are being retained in the system were not in evidence in the settings we studied. These findings effectively counter a major assumption of these critics, the assumption that the dangerousness standard forces the mental health system to devote its resources to a population that is dangerous but not mentally ill. Given these findings, arguments for broadening the commitment standard beyond dangerousness must be stated more positively, ie, they must be based on the proposition that hospital-based treatment is more readily available and/or more effective (and if so, under what circumstances) than responsive, flexible, and assertive community-based services for non-dangerous patients.

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References

1. *Doremus v Farrell*, 407 FSupp 509, 514-515 (D Neb 1975).
2. *Doe v Gallinot*, 486 FSupp 983, (S D Cal 1979), *aff'd* 657 F2d 1017 (9th Cir 1981).
3. Lipsitt PD, Lelos D: Decision makers in law and psychiatry and the involuntary civil commitment process. *Community Ment Health J* 1981;17:114-122.
4. Mills MJ: Civil commitment of the mentally ill: An overview. *Ann Am Acad Polit Soc Sci* 1986;484:28-41.
5. Stromberg CD, Stone AA: Statute: A model state law on civil commitment of the mentally ill. *Harvard J Legislation* 1983;20:275-396.
6. Appelbaum PS: Hospitalization of the dangerous patient: Legal pressures and clinical responses. *Bull Am Acad Psychiatry Law* 1984;12:323-329.
7. Rabkin JG, Zitrin A: Antisocial behavior of discharged mental patients: Research findings and policy implications, in Bloom BL, Asher SJ (eds): *Psychiatric Patient Rights and Patient Advocacy: Issues and Evidence*. New York, Human Sciences Press, 1982, pp 148-170.
8. Segal SP, Watson MA, Nelson LS: Consistency in the application of civil commitment standards in psychiatric emergency rooms. *J Psychiatry Law* 1986;14:125-148.
9. Segal SP, Watson MA, Goldfinger SM, Averbuck DS: Civil commitment in the psychiatric emergency room: I. The assessment of dangerousness by emergency room clinicians. *Arch Gen Psychiatry* 1988;45:748-752.
10. Segal SP, Watson MA, Goldfinger SM, Averbuck DS: Civil commitment in the psychiatric emergency room: II. Mental disorder indicators and three dangerousness criteria. *Arch Gen Psychiatry* 1988;45:753-758.
11. CAL WELF & INST CODE, Div 5, chap 2, pt 1 (West 1980).
12. Holmes W, Solomon P: Criteria used in first admission and readmission to psychiatric hospitals. *Soc Sci Med* 1980;14a:55-59.
13. Mezzich JE, Evanczuk KJ, Mathias RJ, Coffman GA: Symptoms and hospitalization decisions. *Am J Psychiatry* 1984;141:764-769.
14. De la Torre J: Discussion of Walker WR, Parsons L, Skelton WD: Brief hospitalization on a crisis service: A study of patients and treatment variables. *Am J Psychiatry* 1973;130:895-896.
15. Friedman HJ: Some problems of inpatient management with borderline patients. *Am J Psychiatry* 1969;126:299-304.
16. Mestrovic S: Need for treatment and New York's revised commitment laws: An empirical assessment. *Int J Law Psychiatry* 1983;6:75-83.