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The Quality of Psychiatric Emergency Evaluations and Patient Outcomes in County Hospitals

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ABSTRACT

Quality of care is widely assumed to be related to patient outcomes, but little is known about care in relation to outcomes in county general hospital psychiatric emergency services. It was hypothesized that conformity to professional standards (technical quality) and engagement of the patient (artful care) in psychiatric emergency services evaluations would contribute to improved patient functioning (Global Assessment Scale score) and appropriate disposition. A total of 583 cases in seven facilities were analyzed. Conformity to technical standards of care was associated with retention even after constraints, biases, and admission criteria had been taken into account. Conversely, artful care was associated with lower probability of retention and improved functioning. (*Am J Public Health.* 1995;85:1429–1431)

Introduction

The assumption that quality of care affects patient outcomes has stimulated little research to describe the relationship. A recent handbook of quality assurance in mental health cited only one study attempting to demonstrate the effects of a quality assurance program on mental health care.[1] No such work has been carried out in general hospital psychiatric emergency services, the major point of entry of severely mentally ill individuals into the mental health system.

The focal question in psychiatric emergency services evaluation is whether to admit the person for inpatient care. Interventions may be applied to prevent unnecessary admission and to enhance decision making. In this manner, quality of care may affect disposition. Furthermore, high-quality care focused on facilitating appropriate disposition may also change patient functioning. In this paper, disposition and functioning outcomes of the psychiatric emergency services evaluation are examined in relation to three dimensions of quality of care.

Methods

Data on 583 cases in seven California county general hospital psychiatric emergency services were gathered from independent observation of each assessment, patient records, and the psychiatric emergency services staff clinician's responses to a brief questionnaire. Subjects were chosen consecutively on entry to the psychiatric emergency services, and observations were completed around the clock. Mental health professionals experienced in assessing severely mentally ill patients used structured instruments for observation and chart review.

Outcome Measures

The first outcome measure was the disposition decision after the initial evaluation, that is, the decision to either release or retain, whether in the psychiatric emergency services (for further observation) or in an inpatient unit. The second outcome measure was the clinician's rating of the client's psychosocial functioning at exit from the psychiatric emergency services using the Global Assessment Scale.[2] Change in Global Assessment Scale score is logically the difference between the scale score assigned by psychiatric emergency services staff on first seeing the patient and the score assigned by a psychiatric emergency services clinician as the patient is discharged up to 24 hours later. We estimated the change in this scale score as the amount of variance in the score at exit not explained by the score at entry. Thus, for control purposes, Global Assessment Scale scores were also obtained from clinician ratings

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TABLE 1—Prediction of Retention at the End of Initial Evaluation in Psychiatric Evaluation Services (n = 472)

Block and Predictors	Logistic Regression Coefficient (b)	P	Odds Ratio
1. Psychiatric admission criteria			
Dangerousness	0.334	.000	1.397
Major mental disorder	1.3175	.000	3.73
Benefit from hospitalization	4.9963	.000	147.86
Treatability	0.2884	.739	
Global Assessment Scale score at exit	−0.0372	.000	0.9634
2. Institutional constraints			
Clinician experience	−0.0618	.017	0.9401
Language match	−0.1005	.870	
Ethnic match	0.0430	.932	
No insurance	0.2200	.549	
Work load	0.0327	.753	
Difficult setting	−0.3139	.094	
Less restrictive alternative overlooked	−0.5201	.000	0.595
3. Social bias sources			
Clinician liking	−0.6311	.033	0.532
Clinician	0.0720	.852	
Female gender	−0.4612	.200	
Client age	0.0002	.988	
Client ethnicity	−0.4600	.458	
Police referral	−0.5527	.218	
Nuisance score	−0.0136	.004	0.99
Homeless and resourceless	10.2895	.571	
No. prior hospitalizations	0.0022	.672	
4. Quality of care indices			
Technical quality	1.949	.009	7.02
Art of care	−1.9302	.002	0.145
Optimum time	−0.8509	.047	0.427

TABLE 2—The Accuracy of Patients' Classification by Retention as Predicted by Logistic Regression Model

Observed	Predicted No. Released	Predicted No. Retained	% Predictions Correct
Released	132	34	79.72
Retained	19	287	93.79
Total			88.77

at entry into the facility. While the interrater reliability of the scale has been demonstrated, improvements in scores may represent temporary change. However, such improvements are consistent with the role of psychiatric emergency services to reduce acute symptoms and stabilize patients in order to prevent hospitalization of those who can be treated in the community.[3]

Predictors of Outcomes

Quality of care measures. Three dimensions of quality of care—making efforts to engage the patient in the evaluation, conformity to professional standards, and efficiency or optimum investment of time—were measured, re-

spectively, by (1) the Art of Care Scale,[4,5] (2) the Technical Quality of Care Index,[6] and (3) the deviation of the amount of time spent in completing clinical tasks from the average amount of time needed for completing clinical tasks in a quality evaluation (i.e., "optimum time").

Admission criteria. Because most patients in our sample were evaluated against the standards for civil commitment, we chose admissibility criteria (and defining measures) consistent with current and proposed legal requirements: (1) a severe mental disorder (a clinician-assigned major mental disorder diagnosis, as defined in the *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition[7]), (2) a disorder viewed as treatable (Treat-

ability Scale score),[8] (3) the ability to benefit from hospitalization (Benefit from Hospitalization Scale score),[8] and (4) a likelihood of causing harm to self or others (TRIAD Scale score).[9,10]

Institutional constraints and social bias sources were also assessed.[8]

Statistics

Two models were derived to show how quality of care indices are related to patient outcomes after other variables have been taken into account. In predicting retention in acute care after the psychiatric emergency services evaluation, we used logistic regression. In predicting Global Assessment Scale score at exit from psychiatric emergency services, we used ordinary least squares regression. Measures of the patient's standing on admission criteria were first entered in a block, followed by institutional constraints, social bias indicators, and, finally, quality of care indices.

Results

Sixty-five percent of the patients were retained. Global Assessment Scale scores at exit were approximately normally distributed, with a mean of 37.1 (SD = 13.32). Most patients were having serious difficulty in functioning.

Retention

The model for retention (Tables 1 and 2) correctly classified 88.77% of the cases (*P* = .0001). As expected, variables related to eligibility for admission—dangerousness, major mental disorder, and potential to benefit from hospitalization—were among the significant predictors of retention. Global Assessment Scale score at exit was also significantly but negatively related to retention.

Art of care and technical quality also contributed significantly to predicting disposition. However, these two quality measures had opposite effects. Patients with the average score on the Technical Quality of Care Index were 7.02 times more likely to be retained than those scoring one point less on this scale. Those with the average score on the Art of Care Scale were .86 times less likely to be retained than those with a score one point lower.

Efficiency, institutional constraints, and social biases had little relationship to disposition.

Change in Functioning

Global Assessment Scale score changes ranged from −15 to 35 (i.e., from

TABLE 3—Prediction of Global Assessment Scale (GAS) Scores at Exit from Psychiatric Emergency Services (n = 451)

Block and Predictor(s)	Multiple Regression Coefficient (b)	P	Standardized Regression Coefficient (β)	Variance Explained by Block
1. Baseline functioning				.210
GAS score at entry	0.5883	.000	.326	
2. Institutional constraints				.045
Clinician	−0.341	.000	−.149	
Language match	−1.472	.609		
Ethnic match	−3.3	.015	−.105	
No insurance	0.031	.969		
Work load	0.413	.188		
Difficult setting	0.361	.641		
Less restrictive alternative overlooked	2.731	.105		
3. Social bias sources				.047
Clinician liking	0.8898	.418		
Clinician	1.305	.332		
Female gender	1.632	.158		
Client age	−0.0798	.042	−.077	
Client ethnicity	−0.729	.139		
Police referral	−1.237	.010	−.091	
Nuisance score	0.796	.046	.074	
Homeless and resourceless	−1.744	.383		
No. prior hospitalizations	−0.1692	.018	−.086	
4. Psychiatric admission criteria				.047
Dangerousness	−1.347	.000	−.198	
Major mental disorder	−8.5504	.000	−.263	
Benefit from hospitalization	−3.9604	.014	−.096	
Treatability	−0.2066	.398		
5. Quality of care indices				.016
Technical	−0.1789	.934		
Art of care	7.878	.000	.158	
Optimum time	−1.89	.194		

Note. For the multiple regression model, adjusted R^2 = .464, F = 17.23, P = .0000.

15 points worse to 35 points better between entry and exit from the psychiatric emergency services). These changes were negatively correlated with Global Assessment Scale scores at entry; the patients with the lowest scores at entry were the ones who improved the most (r = −.307, $P \leq$ .000). Our model of patient functioning at exit from psychiatric emergency services (Table 3) was statistically significant ($P <$ .0000) and explained 46% of the variance in Global Assessment Scale scores.

Because Global Assessment Scale score at entry was entered into the model before any of the other independent variables, any score variance at exit not explained by score at entry represented a change in level of psychosocial functioning. Any of the remaining score variance at exit explained by other variables represented a contribution by that variable to change in functioning. As expected, the higher the patients' scores on most of the criteria for admission, the lower their functioning at exit from psychiatric emergency services. After these scores had been taken into account, however, Art of Care Scale score was positively associated with improvement in the psychiatric emergency services. Neither technical quality nor efficiency was related to level of functioning at exit.

Discussion

Results were consistent with the assumption that quality of care affects the outcome of psychiatric emergency services evaluations. However, the finding that conformity to technical standards was associated with retention, even after the patient's status on admission criteria had been taken into account, was unexpected, as was the finding that technical quality was unrelated in the short term to improved functioning.

By contrast, an interpersonally sensitive approach to the patient was associated with both improved functioning and release from acute care, even when dangerousness and severity of illness were controlled. Therapeutic engagement apparently pays off in avoidance of unnecessary hospitalization.

The study described here provides a model for approaching the relationship of quality of care to outcomes in acute psychiatric settings. The unexpected findings regarding the impact of technical quality suggest the need for future efforts to refine both quality and outcome measures and to attempt to identify the links between process and outcomes. □

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