

Quality of Care for Psychiatric Emergency Service Patients Presenting with Substance Use Problems

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Psychiatric emergency service assessments of 683 patients were observed to better understand the quality of care substance users receive and the effects of clinicians' attitudes toward their patients on such care. Findings run counter to those of previous reports in that substance users, once recognized, are likely to receive better care than other patients.

The psychiatric emergency service (PES) in general hospitals is a major point of entry into the mental health system, and thus important when assessing quality of patient care. Concern with services for substance users in the PES has received attention in the literature (Elangovan et al., 1993; Kirchner, Owen, Nordquist, & Fischer, 1998) due to the large percentage of patients with substance use problems (Brady, Casto, Lydiard, Malcolm, & Arana, 1991; Oyewumi, Odejide, & Kazarian, 1992). Some have argued that alcohol and drug use are the "major reasons for patient presentation to psychiatric emergency rooms" (Elangovan et al., 1993), and that substance users have greater utilization of emergency services than other populations (Bartels et al., 1993). This paper considers the quality of care substance users receive in the PES and seeks to determine whether, as hypothesized by previous investigators (Farrell & Lewis, 1990; Imhof, 1995; Solomon & Davis, 1986), it is affected by clinicians' negative attitudes toward these patients.

The two issues addressed herein appear in the literature as critiques of the mental health system: underreporting of substance use problems and mistreatment of substance using patients due to nega-

tive attitudes toward this group. Arguments for misdiagnosis, underdiagnosis, and unreliability of DSM substance use diagnoses have received attention and support in previous research (Ananth et al., 1989; Dixon et al., 1993; Elangovan et al., 1993; Lieberman & Baker, 1985). Clinicians are often accused of being the culprits by failing to inquire about use, or mistaking substance-induced psychotic states for evidence of mental disorders (Washington, 1995). It is suggested that care providers in the PES fail to make an effort to obtain information about the history of substance use, and even discharge documented substance users without detoxification (Sateia, Gustafson, & Johnson, 1990). Some studies have pointed to the patient as the source of error by suggesting that self-reporting is an unreliable measure, and thus that patient accounts of drug use can not be relied on for information (Brady et al., 1991; Elangovan et al., 1993). Further, there is literature documenting the phenomenon of the mental health provider's negative attitudes toward substance users (Farrell & Lewis, 1990; Imhof, 1995; Solomon & Davis, 1986). It is held that patients' diagnoses precede them, and thus may initiate an antagonistic climate and deter adequate treatment, such as hospitalization (Farrell &

Lewis, 1990). All these factors are used to infer impairment of the quality of care for substance users.

Yet, the assessment situation in the PES is perhaps more complex than previous research would lead us to conclude. Many PES patients present with problems that are severely influenced by substance use, yet may not meet the full criteria for a substance use diagnosis (Brady *et al.*, 1991). Presenting symptoms are often confusing, it is difficult to discern (especially in the first encounter of the initial assessment) whether the symptoms are due to a major mental illness or to substance use (Caton, Gralnick, Bender & Simon, 1989; Dixon *et al.*, 1993). Substance use diagnoses are also avoided because of the stigma associated with them—a concern fostered largely by the documentation of such stigma in the literature—or because a different diagnosis of mental illness would, under such circumstances, be viewed as more helpful in getting the patient hospitalized, thus assuring proper quality of care.

These points argue that concern, rather than ignorance, rules the utilization of substance use diagnoses. The current situation may well be reflective of an attempt to provide good, rather than poor, quality of care for PES substance users. This paper moves beyond previous research by exploring, *in vivo*, the idea that the problem with substance use in the PES is not one of underdiagnosing, but one of strategic underreporting, and that, counter to past research and common belief, this underreporting does not translate into poor care. The study investigates these hypotheses by assessing patients' quality of care, clinicians' attitudes toward substance users, and clinicians' use of appropriate screening for substance use, as well as taking into account the effect of PES setting differences on these relationships. This study's measures have been previously used in the PES setting to assess patient presentation and quality of care (Johnson, Rose & Gustafson, 1985; Segal, Egle, Watson, & Goldfinger, 1995, 1997; Segal, Egle, Watson, Miller, & Goldfinger, 1995).

METHOD

Sample and Procedure

Of 711 attempted observations of patients who had visited one of nine PESs between 1985 and 1986, 683 were used for this study. The refusal rate of 3.9% ($N=28$) represented cases that were not included in the analysis due to their own preference or that of their clinician. PES observations

were obtained from seven San Francisco Bay Area, one Los Angeles, and one California Central Valley site. To insure narrow confidence intervals on validity estimates in dangerousness assessments, the primary purpose of the original study, a minimum of 50 observations were obtained from each PES. Sites outside the Bay Area were selected to expand the generalizability of the findings. Including Los Angeles and Fresno provided an opportunity to look at differences between PES practices in areas that functioned under the same legal and clinical criteria yet differed significantly in terms of sociocultural make-up.

Under California law, people are brought to the PES for an assessment of whether or not they should be held for further evaluation and treatment. All measurement refers to this assessment period. Patient evaluations were performed by PES clinicians and observed by mental health professionals—trained clinical observers, experienced in assessing severely disturbed behavior.

Observers as well as PES staff were informed by the investigators that the purpose of the study was to better understand the process of clinical decision-making in the PES. Assessments were observed in an apparently random manner. Subjects were chosen consecutively upon PES entry and observations were completed around the clock. As soon as one case was completed, the next was assessed. No case could be passed over for any reason other than the case's refusal to participate.

The observer accompanied the patient and the PES clinician throughout the course of the assessment, witnessing all interactions, including telephone contacts, and privy to all information available to the clinician. The observer recorded the entire assessment process until a disposition decision was reached by the PES clinician. Mean time for assessments was 1 hour and 40 minutes ($SD=1$ hour and 20 minutes; range=25 min.–10 hrs).

In addition to information about the patient that had been gathered by the clinician, observers coded their own impressions of the patient and several aspects of the PES clinician's treatment of the patient. Information was ascertained and was recorded on prestructured scales, as well as in the form of process notes. The measures assessed quality of care (Johnson *et al.*, 1985), severity of psychiatric presentation, and dangerousness (Segal, Watson, Goldfinger, & Averbuck, 1988a, 1988c). Data about substance use were available via PES records (including DSM diagnosis and other docu-

mentation), comments from patients, clinicians, reliable outside sources (e.g., physicians, case-workers), and other study instruments (Johnson *et al.*, 1985). Observer ratings were not available to the clinician. Acceptable interrater reliability between observers on key study instruments (in the .8–.9 range) was established before the independent observations were initiated. The observer witnessed all interactions between clinician and patient but did not actively participate in them or in any part of the assessment. Observers were not involved in development of study hypotheses, nor in the study beyond their observation and recording processes. The outcomes of this study are thus generally independent of observer bias.

Measures of PES Quality of Care

Three perspectives on quality of care (Segal, Egley, Watson, & Goldfinger, 1995; Segal *et al.*, 1997) were assessed: the patient's, the clinician's, and the administration's.

Patient perspective. The Art of Care Scale (Brook & Avery, 1976, 1977) considers the clinician's attempt to engage in collaborative interaction, elicit information, include the patient in planning, and attend to and respond empathically to the patient's feelings at a level appropriate to the patient's functioning. This four-item additive index was converted to reflect a proportion of optimal efforts to engage the patient; possible scores ranged from 0 to 1. Interrater agreement in coding these items from process notes (based on 20 randomly selected cases and four different rater pairs) averaged 79%. Internal consistency of the index was $\alpha = .69$.

Clinician perspective. The Technical Quality of Care Index (Johnson *et al.*, 1985), developed by a panel of psychiatrists and physicians experienced in PES assessment, specifies 27 components necessary to the evaluation, and rates them according to the relative importance of their presence or absence in a given evaluation. Two panels independently rated the quality of patient evaluations, based on patients' records; correlation between the mean ratings of the panels was .89 (Delbecq, Van De Ven, & Gustafson, 1975).

Administrative perspective. The Optimum Investment of Time Index, a measure of efficiency, matches the complexity of the patient's clinical needs and presentation with the amount of time allocated to attend to them. The "optimum time" measure is the difference between the time allocated to clinical tasks and the estimated time to

complete a high-quality evaluation (Segal, Egley, Watson, Miller, & Goldfinger, 1995). Patients' scores on this measure ranged from -2.16 to .84. A negative score implies that the clinician conserved time at the expense of quality; a positive score indicates that the clinician spent more time than was required, on average, for a quality evaluation. A score of zero means the evaluation was done in the amount of time it takes to do a quality evaluation.

In addition to addressing the overall picture of quality of PES care, this study assessed a more specific criterion reported in the literature as frequently overlooked in assessing substance using patients in mental health facilities—i.e., whether or not a substance use history was taken (Sateia *et al.*, 1990). This assessment was based on observation of clinicians' and PES workers' interactions with the patient during the PES visit, as well as their case record notes. If no question had been asked of the patient regarding substance use, observers recorded a "no"; if there had been an attempt to solicit information about substance use, observers recorded a "yes".

Measures of Sources of Variation in Quality of Care

Substance use. Based on a previously established Severity Index (Johnson *et al.*, 1985), observers were asked to determine whether a substance use problem existed, and whether it contributed to the severity of the case. Information on this item was gathered from patients themselves, patient symptom presentations, and clinicians, as well as other reliable outside sources (e.g., physicians, caseworkers). Observers responded with either "yes," "no," or "not enough information." The cases that were rated as "yes," were considered to be substance use cases.

Clinician's attitude toward the patient. The clinician's attitude was determined by the observer's evaluation of whether the clinician liked (score=2), was neutral toward (score=1), or disliked (score=0) the patient. Attitudinal assessments were made on the basis of direct verbalizations and other actions of the clinician; these may have been expressed privately to the observer or a colleague in the PES or emerged in the interactions the clinician had with the patient.

Control variables. Control variables already demonstrated to influence quality of PES care (Segal, Egley, Watson, Miller, & Goldfinger, 1995) included the clinician's workload (measured by a three-item factor score based on patient-staff ratio,

clinician's patient load, and total number of inpatient beds available); the difficulty of the setting in which the evaluation was performed; the clinician's experience (defined as the average of the total number of years of experience, number of years in direct clinical contact, and number of years making PES decisions); patient demographic characteristics (i.e., age, gender, ethnicity); and four psychiatric admission evaluation criteria for patient retention in a controlled hospital setting: 1) clinician-assigned diagnosis of a psychotic disorder, 2) whether the disorder was viewed as treatable by the clinician (Treatability Scale score) (Segal, Egley, Watson, & Goldfinger, 1995), 3) patient's ability to benefit from hospitalization (Benefit from Hospitalization Scale score) (Segal, Egley, Watson, & Goldfinger, 1995), and 4) patient's likelihood of causing harm to self or others or being considered gravely disabled at the time of the index evaluation (TRIAD Scale score) (Segal, Egley, Watson, & Goldfinger, 1995; Segal, Egley, Watson, Miller, & Goldfinger, 1995; Segal et al., 1988b).

Data Analysis

In addition to descriptive sample characteristics, bivariate statistics (chi-square and *t* tests) were used to assess differences between substance users and non-substance users. Differences on the three dimensions of quality of care—Art of Care Scale, Technical Quality of Care Index, and Optimum Time Measure—were analyzed. The frequency of substance use DSM diagnoses recorded by a clinician, the extent to which substance use histories were taken, and the characteristics of the assessments where no histories were obtained were investigated. Observer process notes indicating the presence of substance use problems without a substance use diagnosis were reviewed for evidence of clinician knowledge of the substance use.

In addition to these analyses, a two-stage multivariate regression model was run for each quality-of-care criterion. The first stage modeled the relationship between the quality-of-care criterion, substance use status, clinician's attitude toward the patient, and interaction of the latter two variables, as well as all the control factors previously found to account for the variance in quality of PES care (Segal, Egley, Watson, Miller, & Goldfinger, 1995). In the second stage, each PES setting was individually entered, in stepwise mode to determine whether or not the relationships observed in the first stage obtained following control for setting

variations in practice. A two-stage logit model, with the same variables and setting control procedures, was also run, using substance use history as a criterion.

RESULTS

Patient and Clinician Characteristics

Of the 683 patients who completed the observed assessments, 43% were female ($N=295$), 57% male ($N=388$); 65% were Caucasian ($N=445$), 19% African American ($N=126$), 11% Latino ($N=73$), 2% Asian ($N=14$), and 4% other racial or ethnic groups ($N=25$). Most patients (89%) were under 45 years old, and about half (49%) had never been married. Many had been brought to the PES involuntarily (46%).

Of the 231 patients with substance use contributing to their presenting problem (33% of the total sample), 68% were male ($N=158$) and 32% female ($N=73$), $\chi^2=19.11$, $df=1$, $p<.000$. Substance users were younger ($M=33$ years for users, 38 for non-users, $t=3.39$, $df=584$, $p<.001$), and no racial differences were observed. Only 36% ($N=82$) of substance users received an Axis-I DSM substance use diagnosis from a clinician.

Observer process notes revealed, however, that, despite the lack of a diagnosis in 149 cases, clinicians made comments on 73% ($N=109$) indicating awareness on their part that substance use was present and an important factor in the patient's current symptom presentation. Among the many points addressed by the clinicians in the psychiatric evaluation and reflected in the observers' process notes, yet not recorded in the form of diagnoses, were reviews of patients' daily substance use habits, money spent on drugs, and comments such as: "patient is afflicted with alcoholism," "patient is in an intoxicated state," etc.

Clinician Attitudes Toward Substance Users

Most of the emergency service evaluations were performed by psychiatrists (49%), followed by nurses (10%), licensed psychiatric technicians (9%), social workers (8%), and other professionals, paraprofessionals, or professionals in training (24%). The average amount of experience of a clinician doing an evaluation was 7.3 years ($SD=6.3$). This did not differ for users and non-users.

More clinicians liked non-substance users than substance users, $\chi^2=13.53$, $df=2$, $p=.001$). Of non-substance users, 29% were liked, 63.5% viewed neutrally, and 7.5% disliked by clinicians. Of sub-

Table 1

SUBSTANCE USE PROBLEM INDICATORS IN CASES (N=189) WHERE SUBSTANCE USE HISTORY WAS NOT ASSESSED BY CLINICIANS

PROBLEM INDICATOR*	%	N
PCP Ingestion	0.0	0
Use of Alcohol and Drugs in Combination	0.5	1
Current Toxic State	3.2	6
Recent Use of Alcohol and/or Drugs	4.8	9
Total Cases Indicating Substance Use	6.9	13

*One individual may fall into more than one category; thus, summed within category Ns do not equal 13.

stance users, 19.2% were liked, 70.1% viewed neutrally, and 12.6% disliked by clinicians.

Quality of Care

Quality measures all showed that substance users got better care than non-substance users. The Art of Care Scale scores were higher for substance users than non-users (.73 vs .67; $t=-2.26$, $df=681$, $p=.024$); Technical Quality of Care Index scores were better for substance users than non-users (.63 vs .49; $t=4.68$, $df=681$, $p<.000$); and the Optimum Time Measure showed less savings of time at the expense of quality performance for users versus non-users (-.93 vs -.95; $t=1.96$, $df=681$, $p=.05$).

Substance use histories were taken by clinicians for 67.2% (N=459) of all patients; for 5.1% (N=35), it was unclear or unknown whether or not a history had been taken. Of the 27.7% (N=189) who did not have substance use histories taken, independent evaluators indicated 6.9% (N=13) as potential cases where they believed that substance use might have been involved with the presenting problem (i.e., 1.9% of the total sample). These results are reported in TABLE 1.

Finally, of the 231 patients with substance use

problems, 98.3% (N=227) had their substance use history taken, and only 1.7% (N=4) did not.

Multivariate Perspective

Effects of patient admission criteria (benefit from hospitalization, treatability, dangerousness, and presence of severe mental disorders); institutional constraints (clinician's workload, clinician's experience, difficulty of the setting); and patient demographics (age, sex, race) on the three overall quality-of-care criteria have been studied previously (Segal, Egley, Watson, & Goldfinger, 1995), with no differences found in the significance of these factors once substance use issues were added to the models. The current report treats these variables as controls and confines itself to the issues of substance use status and clinicians' attitudes toward substance using patients. As shown in TABLES 2a and 2b, results for the multivariate regression models revealed that substance use status led to significantly better quality of care, after all other factors are taken into account, on all four criteria. Positive clinician attitudes led to better quality of care on three of the four, the only exception being technical quality of care. The interaction between substance use and clinician attitude, after all other variables are taken into account, was not significant in any of the models. Substance use status increased the likelihood of having a substance use history taken by 7,901%, all other factors taken into account. Clinicians' liking the patient increased the probability of having a history taken by, at most, 306%.

The two-stage linear regression model revealed that, although there were significant differences in the technical quality of care across PESs, this did not affect the relationship between quality of care criteria and substance use status. Thus, the second step did not modify the first stage results.

Table 2a

LINEAR REGRESSION MODELS: INFLUENCE OF SUBSTANCE USE STATUS ON INDICATORS OF QUALITY OF CARE IN THE PES

INDEPENDENT VARIABLE	ART OF CARE		TECHNICAL QUALITY		OPTIMUM TIME	
	β	p	β	p	β	p
1. Substance Use	0.09	0.01	0.16	0.00	0.09	0.049
2. Clinician's Liking Patient	0.26	0.00	NS		0.24	0.000
3. Interaction of Variables 1 & 2	NS		NS		NS	
Adjusted R^2	0.20		0.13		0.11	
F	13.78		9.01		9.79	
Sig.	0.00		0.00		0.00	

Note. The model controlled for admission criteria, institutional constraints, and social bias (N=683). Only β coefficients of $p<.05$ are reported.

Table 2b

LOGISTIC REGRESSION MODEL: INFLUENCE OF SUBSTANCE USE STATUS ON INDICATORS OF QUALITY OF CARE IN THE PES

INDEPENDENT VARIABLE	SUBSTANCE USE Hx ASSESSMENT		
	β	p	EXP(B)
1. Substance Use	4.37	0.00	79.01
2. Clinician's Liking Patient	0.43	0.03	1.53
3. Interaction of Variables 1 & 2		NS	
Correct Classification		75.62%	
χ^2		218.05	
Sig.		0.00	

Note. See Table 2a footnote.

DISCUSSION

Study results indicate that substance use cases make up a third of the PES patient population and that their utilization of PES, while underreported in the form of DSM diagnoses, may receive greater recognition than previously acknowledged in the literature. Further, these findings indicate that substance use cases receive better quality of care in the PES than do other patients on all four study criteria. This is true even after accounting for all significant factors previously thought to influence PES quality of care, as well as basic differences in quality of care across PES settings, and even though clinicians are less likely to like such patients than other patients. It is particularly important to note that liking a patient, while related to the clinician's engagement of that patient and clinician's efficiency (in a manner that increased quality), was not related to technical performance (i.e., the professional standard of care the patient received). In addition, the lack of a significant "liking \times substance abuse" interaction in the models would belie any notion that the attitude of the clinician toward the patient was linked to substance use status in a way that influenced the quality of care the patient received.

One may wonder about the positive quality-of-care findings of this study, particularly since the literature has suggested that health care professionals generally seem to dislike substance using patients and provide poor care to them (Farrell & Lewis, 1990; Imhof, 1995; Solomon & Davis, 1986). Results may differ from those of prior research because the present study used more comprehensive and direct measures of quality of care.

Previous quality-of-care studies have relied mainly on medical record diagnosis and number or types of referrals (Imhof, 1995; Kirchner et al., 1998) and on medication dispensed (Farrell & Lewis, 1990; Solomon & Davis, 1986). Relying on recordings of diagnoses as an index of quality of care can be deceiving because of the unreliability of substance use diagnosis in the PES and clinicians' attempts to spare the patient the stigma accompanying such diagnosis.

In the PES, information about substance use is gathered that may not fit the specific diagnoses of substance abuse or dependence, or other strict DSM criteria, and thus may not be recorded as such. Informal and formal screenings are a large part of the evaluation process, and may not be reflected in the diagnosis. Yet, for this study, this in-

formation was available in the form of the observers' process notes.

Sateia (1990), in his review of quality assessment, stated that chart audit—which is how evidence of clinician diagnosis is obtained—is a poor indicator of care, clinician performance, and quality of care, due to poor documentation. Typically, as the PES gets busier, the thoroughness of record keeping on the part of the clinician is often sacrificed for patient care efforts. The current study was able to offer a more complete representation of patient symptoms, clinician behavior, and performance by making use of independent observers' recordings.

Using number of referrals as an indicator of care is unreliable, since it is well known that substance users frequently do not follow through with these referrals (Farrell & Lewis, 1990), and, thus, giving such a referral may be a way to avoid providing service to these patients.

Using the prescribing and dispensing of medication as a measure of quality of care is also debatable (Farrell & Lewis, 1990; Solomon & Davis, 1986) since, for substance users, less prescribing of medication may reflect the care and concern of clinicians who are aware of drug interactions. In their investigation of this quality criterion, Farrell and Lewis (1990) used a survey with substance use case examples, so that actual clinician behavior was not observed but inferred from a hypothetical situation.

In addition, since much of the past literature assumed that negative attitude toward a patient predicts poor patient treatment, earlier work often failed to investigate patient care directly, simply assuming the attitude-behavior link (Carroll, 1993).

While the good news is that substance users seem to receive care that is of relatively good quality, the bad news has to do with the extent to which clinicians fail to inquire into PES patients' substance use histories. For 29% of the present sample (189 patients), this aspect of their history was not addressed. Although substance use history was taken for almost all cases that were deemed to be related to substance use (98%), there remains a gap in the general substance use assessment in the PES. The literature argues that substance use history should always be taken (Dixon et al., 1993; Sateia et al., 1990; Washon, 1995). Further, in a PES setting, there are many patients who present as a danger to themselves or others due to substance use. In order to treat them ethically and effi-

ciently, these patients need to be assessed for substance use. (In California, for example, they may need involuntary detention under provisions of the state's Mental Health Services Act.)

In the present study, all observer records were reviewed for indications that the clinician might have overlooked evidence indicating substance use. Such evidence was found for only 13 (6.9%) of these 189 patients. It seems the realities of the PES may, unfortunately, lead to efficiencies based on experience and intuition; yet such efficiencies should be of concern, since the PES is a place where small errors have large consequences—for both the patient and the service. For the patient, the result can be harm to self or others, or even death; for the PES, such errors can bring media and other public attention that undermines institutional credibility and threatens funding. All told, however, the study findings suggest that, despite their less positive attitudes toward substance users, PES clinicians provide quality service to these patients.

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