

## The Use of Collateral Reports for Patients with Bipolar and Substance Use Disorders

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### ABSTRACT

This study investigated the value of collateral informant reports of substance use for patients with current bipolar disorder and substance dependence. We collected collateral informant reports on 132 occasions for 32 patients and found a high level of agreement between collateral reports and self-report/urine screen data (75.0%). In only 3 instances did collateral informants report substance use for patients who denied use and had negative urine screens. Frequency of contact between informants and patients was associated significantly with the level of agreement. These findings suggest that obtaining collateral informant data when studying this population may be of limited value.

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## INTRODUCTION

Clinicians and researchers frequently rely on self-reports to assess substance use by their patients (1–4). These self-reports may be substantiated by other methods, most commonly collateral informant reports or biological measures such as urine screens or blood markers (2–4). Among these alternatives, collateral reports (i.e., reports of the patient's behavior by friends or family members) have the advantage of being less invasive than biological measures and can provide information regarding longer time intervals of substance use (1).

Despite these advantages, collateral reports have some limitations. Most important, some patients entering substance abuse treatment may be unable or unwilling to identify a collateral informant; these patients often are isolated socially, and their initial ambivalence about entering treatment may keep them from wanting to involve a significant other in the process. Second, contacting collateral informants can be time consuming for clinical or research staff. Informants may be difficult to reach and then may want to talk at length once contacted.

In addition to these concerns, a number of factors can influence the level of patient/informant agreement, such as the frequency of contact between the collateral informant and patient, the nature of their relationship, and the level of an informant's opportunity to observe use (1). Moreover, although research indicates that collateral informants are useful for assessing alcohol use, they may be less able to detect drug use (5).

Little research has been published on the use of collateral reports for patients with substance use disorders and comorbid mental disorders. Although the prevalence of substance use disorders is very high among individuals with a psychiatric diagnosis (6, 7), we are aware of only two studies that have focused on the use of collateral reports for dually diagnosed patients (4, 8). Both of these studies focused on the use of collateral informant data to validate subjects' self-reports (4, 8). However, we previously reported a high level of validity for self-reports of substance use among substance-dependent subjects with comorbid bipolar disorder or post-traumatic stress disorder when we compared these reports with urine toxicology screens (9). We are aware of no research that has studied the validity and value of collateral reports themselves in patients with dual diagnoses.

For this study, we posed several questions about the use of collateral informant reports for a population of patients diagnosed with current bipolar disorder and substance dependence. First, what is the level of agreement between collateral informant data and other sources of data, specifically, patient self-reports and urine toxicology screens? In particular, what value is added by obtaining collateral informant data in addition to self-reports and urine toxicology screens? Fi-

nally, are there specific characteristics of patients, collateral informants, or their relationship that influence the level of patient/informant agreement?

## METHOD

### Study Design

This study was performed as part of a larger study designed to develop and pilot test a new group psychotherapy for patients with substance use disorder and bipolar disorder (10). Subjects were recruited from patients hospitalized at McLean Hospital (Belmont, Massachusetts) with current diagnoses of both bipolar disorder and substance dependence, as diagnosed by the Structured Clinical Interview for DSM-IV (11); all patients had used drugs or alcohol within 30 days prior to admission. There were 21 patients recruited for the group therapy (integrated group therapy, IGT) condition. The group therapy lasted 12 or 20 weeks (the treatment was lengthened after the second iteration of the group), and patients were assessed monthly during treatment and during the 3 months following treatment completion. A comparison “non-IGT” cohort of 24 patients with the same diagnoses received six monthly assessments, but no group therapy.

### Assessment of Substance Use

*Self-reports.* Substance use self-report data for all patients were collected monthly using the fifth edition of the Addiction Severity Index (12). The period of time in the hospital was excluded. No negative consequences were attached to reporting substance use, and patients were encouraged repeatedly to be honest in their self-reports.

*Urine toxicology screens.* Observed urine samples were collected at each monthly assessment visit from both the group therapy patients and the non-IGT comparison cohort. Samples were analyzed with an EMIT (enzyme multiplied immunoassay test) screening procedure and gas chromatography/mass spectrometry confirmation.

*Collateral informant reports.* When giving written informed consent to participate in the study, patients were asked to identify a close relative or friend with whom they had frequent contact and whom the research staff could contact to discuss the patient’s progress. Although patients were encouraged to supply

a collateral informant, they were allowed to enter the larger study if they were either unable or unwilling to do so. Data from collateral informants were collected monthly via telephone interviews using a structured interview that we have used elsewhere (13). Collateral informants were asked to tell us, to the best of their knowledge, how many days in the past 30 days the patient had used drugs or alcohol and which drug(s) the patient was using. Informants were then asked about their level of confidence in their answers, on a 5-point scale, ranging from 1 (“don’t know”) to 5 (“certain or almost certain”). Finally, informants were asked for permission to reveal to the patient what they reported in the collateral interview.

## RESULTS

### Sociodemographic and Diagnostic Characteristics

There were 45 patients (23 men and 22 women) who participated in the study. The mean age of the sample was 36.2 years ( $SD = 8.7$ ). Patients were primarily white ( $n = 39$ ; 86.7%), single ( $n = 19$ ; 42.2%) or divorced ( $n = 11$ ; 24.4%), and unemployed ( $n = 24$ ; 53.3%). A majority of the patients ( $n = 31$ ; 68.9%) were diagnosed with both drug and alcohol dependence; 7 patients (15.6%) were only alcohol dependent; and 7 patients (15.6%) were diagnosed solely with drug dependence. Cannabis ( $n = 13$ ; 28.9%), cocaine ( $n = 13$ ; 28.9%), and sedative-hypnotic drugs ( $n = 9$ ; 20.0%) were the most common primary drugs used among patients diagnosed with drug dependence. Most patients ( $n = 33$ ; 73.3%) were diagnosed with bipolar I disorder; 8 (17.8%) had bipolar II disorder, and 4 patients (8.9%) had bipolar disorder not otherwise specified.

We were able to collect collateral reports for 32 of the 45 patients (71.1%). The only significant difference between patients with and without collateral reports on the above sociodemographic characteristics was age; patients with collateral reports were older, on average, than patients without collateral reports ( $M = 38.0$ ,  $SD = 8.6$  vs.  $M = 31.9$ ,  $SD = 7.6$ ;  $t(43) = -2.2$ ,  $p < .03$ ).

### Collateral Informant Report Agreement with Patient Self-Reports and Urine Toxicology Screens

As shown in Table 1, self-reports, urine screens, and collateral informant reports were all collected on 132 occasions from the 32 patients who had collateral informants. Since one of the primary purposes of this study was to determine

**Table 1.** Percentages of Agreement Among Urine Screens, Patient Self-Reports, and Collateral Reports

Urine screen	Self-report	Collateral report	<i>N</i>	Percentage of total reports (%)
–	–	–	64	48.5
–	–	+	3	2.3
–	+	–	20	15.2
–	+	+	24	18.2
+	–	–	5	3.8
+	–	+	2	1.5
+	+	–	5	3.8
+	+	+	9	6.8

–, negative report; +, positive report.

the additional information gained by obtaining collateral informant data, we combined self-report and urine screen data when conducting some of the analyses that addressed this issue. Specifically, the combination of self-report and urine screen was considered negative if both were negative, but was considered positive if either the self-report or the urine screen was positive. Our results indicated 99 instances of agreement (75.0%) between collateral reports and our combined self-report and urine screen data (e.g., a positive collateral report and a positive self-report or urine screen). Of these 99 collateral reports, 64 (64.6%) agreed with a negative patient self-report and urine screen, and 35 collateral reports agreed with a positive self-report or urine screen (35.4%).

There were only 3 instances (2.3%) in which collateral informants reported use despite negative self-reports and urine screens. Conversely, there were 30 instances (22.7%) in which collateral informants failed to report substance use when the self-report or urine screen was positive.

There were 7 instances in which patients ( $n = 5$ ) gave a negative self-report despite a positive urine screen. Only 2 of the 7 collateral reports were positive for substance use, and both of these collateral reports indicated use of substances different from those detected by the urine screens.

### **Influence of Characteristics of Patients, Informants, or Their Relationship on Agreement Between Patients and Collateral Informants**

To address the question of the extent of influence of the characteristics of patients, informants, or their relationship on the agreement between patients and

collateral informants, we examined (a) the frequency of contact between collateral informants and patients, (b) the relationship between collateral informants and patients, (c) collateral informants' confidence in their assessments, (d) whether the collateral informants agreed that their reports could be revealed to patients, and (e) whether the patient was assigned to the group therapy (IGT) or assessment-only (non-IGT) experimental group.

*Frequency of contact.* The frequency of contact each month between patients and collateral informants was related significantly to the likelihood of agreement between patient and informant. Among the 68 reports by collateral informants who had daily contact with patients, 58 (85.3%) agreed with combined patient self-reports and urine toxicology screen data. Conversely, only 42 of the 64 (65.6%) reports by collateral informants who had less than daily contact with patients agreed with patient self-reports/urine screens [ $\chi^2(1, N = 132) = 7.1, p < .02$ ].

*Relationship between collateral informant and patient.* The type of relationship between collateral informants and patients was also related to the degree of patient/informant agreement; spouses/significant others were significantly more likely to agree with patient reports/urine toxicology screens than were such other informants as friends or parents. Of the 47 reports by spouses/significant others, 42 (89.4%) agreed with patient self-reports/urine screens. Among the 85 reports by collateral informants who were not spouses/significant others, only 58 (68.2%) agreed with patient self-reports or urine screens [ $\chi^2(1, N = 132) = 8.1, p < .01$ ]. This finding, however, appears to be a function of frequency of contact. Since spouses/significant others were more likely than other collateral informants to have daily contact with patients [78.7% vs. 36.5%;  $\chi^2(1, N = 132) = 22.7, p < .01$ ], we reanalyzed the data regarding the nature of the relationship after controlling for the frequency of contact between informants and patients; relationship status was no longer related to the likelihood of agreement between collateral informants and patient self-reports or urine toxicology screens.

*Collateral informants' confidence ratings.* Collateral informants' confidence ratings did not correlate with the level of agreement with patient self-reports and urine screens. Rather, we found informants to be highly confident in their reports of substance use regardless of whether these reports were accurate. Collateral informants reported high confidence ratings even in the 30 instances in which they failed to report substance use despite a positive patient self-report or urine screen. Indeed, the median confidence rating for reports of both drug and alcohol

use in these instances was 4 (“very confident”) on our 1–5 confidence scale, while the means were 4.4 (SD = 1.0) and 4.3 (SD = 0.9), respectively.

Controlling for the frequency of contact between patients and informants revealed that collateral informants who had less than daily contact with patients were more likely to agree with patient self-reports or urine toxicology screens only when reporting the highest levels of confidence (i.e., a score of 5, “certain or almost certain”) in their ratings. Of the 24 collateral informant reports on patient alcohol use with confidence ratings of 5, there were 20 (83.3%) that agreed with patient self-reports or urine screens. On the contrary, only 21 (53.8%) of the 39 collateral alcohol reports with confidence ratings of less than 5 agreed with patient self-reports or urine screens [ $\chi^2(1, N = 132) = 6.1, p < .01$ ]. Similarly, 27 (84.4%) of the 32 reports with the highest confidence ratings for drug use agreed with patient self-reports and urine screens, compared to 15 (46.9%) of the 32 reports with less than certain confidence ratings [ $\chi^2(1, N = 132) = 10.4, p < .01$ ].

*Whether collateral information could be revealed to the patient.* Our findings suggested that patient/informant agreement was not related to whether collateral information was permitted to be revealed to patients. Indeed, in most instances (92.1%), collateral informants allowed their reports to be passed on to patients.

*Whether the patient received integrated group therapy or no group therapy.* We found that the level of patient-informant agreement was not related to whether or not the patient received the experimental group therapy. Of the 82 collateral informant reports for group therapy patients, 65 (79.3%) agreed with patient self-reports or urine screens, compared to 35 (70.0%) of the 50 collateral reports for non-group therapy patients [ $\chi^2(1, N = 132) = 1.4, n.s.$ ].

Since the data presented above were based on monthly reports rather than individuals as cases, patients may have contributed different numbers of reports. To correct for this, the data were analyzed to see if the patterns reported above (with all months combined) were found each month or, alternatively, if the findings varied by month. These analyses supported the results reported above: For most months, informants who (a) were spouses/significant others (5 of 6 months) and (b) reported daily contact (5 of 6 months) had greater agreement with patients than did informants who were not spouses/significant others or who reported less than daily contact. While these differences were not significant statistically due to small sample sizes, they do increase confidence in the findings reported above.

## DISCUSSION

In this sample of patients with bipolar disorder and substance dependence, our results demonstrated a high level of agreement between collateral informant reports of substance use and patient self-reports and urine screens. However, despite the high level of agreement between patients and informants, collateral reports offered little additional information beyond that acquired from our combined self-report and urine screen data. This suggests that collateral informant reports may not be highly useful for this population. Although previous research has indicated the advantages of using collateral reports for patients with substance use disorders (1–3), differences between substance users with and without a comorbid mental disorder may affect the value of collateral informant data. Although we did not include a comparison group of substance-abusing patients without psychiatric illness, it is possible that a combined psychiatric and substance-related diagnosis may make it harder for collateral informants to interpret patients' unusual behavior; they may attribute some substance-related symptoms to the patient's bipolar disorder, thus reducing the likelihood that they could identify surreptitious substance use.

Our findings may also partially reflect the particular context in which self-report data were collected. In our study, patients were well known to research staff, experienced no adverse consequences for reporting substance use, and had prior knowledge that urine toxicology screens would be collected. As a result of these conditions, we usually obtained valid self-reports of substance use (9). It is thus possible that collateral informant data may be more useful in other contexts in which these conditions do not exist (e.g., for individuals mandated to attend treatment).

Since our initial results demonstrated that collateral reports were not very useful in detecting patient substance use, we considered specific factors that might influence the utility of collateral reports. Consistent with other research (4), the only significant factor related to patient/informant agreement was the frequency of contact between informants and patients; frequency of contact was related to the likelihood of patient/informant agreement. Although other studies found that spouses/significant others and collateral informant confidence ratings were associated significantly with the level of patient/informant agreement (1, 3), they did not control for the frequency of contact between informants and patients. We found that spouses/significant others were not significantly more likely to agree with patient self-reports/urine screens after controlling for the frequency of contact between patients and informants. Frequent contact between patients and informants may provide more opportunities for collateral informants to observe



substance use (1). For this population, direct observation may be particularly critical in identifying substance use.

Collecting collateral reports requires a great deal of effort and time on the part of clinicians and researchers and may discourage or disqualify some patients from entering a treatment program or a research study that requires them to identify an informant. Our findings suggest that the information gained in this population may not justify these costs. Moreover, our results lend further support to the value of self-report data under certain specific circumstances (e.g., when there are no negative consequences attached to reporting substance use and when honest self-reporting is encouraged repeatedly) for patients with dual diagnoses (9).

There are several limitations to this study. We recognize, for instance, that our sample population was relatively small and not necessarily representative of other substance-dependent patients or patients with dual diagnoses. Moreover, there were relatively few instances of disagreement between the various data sources. Finally, we were only able to obtain collateral informant data on 71% of the population. The last limitation underscores the potential difficulty inherent in requiring a patient to identify a collateral informant as a condition of entry into a treatment program or research study. Future research should focus on other samples of patients with dual diagnoses to determine if our results can be generalized to other populations.

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