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Family Involvement in Psychiatric Hospitalizations: Associations with Discharge Planning and Aftercare Attendance

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Abstract

Objective: Involving key support persons in the inpatient care of patients with serious mental illnesses has established benefits. This study examined frequencies of family/support person involvement in care and discharge planning for 179 psychiatric inpatients.

Methods: Family/support person involvement and discharge planning data were obtained by reviewing randomly selected records of patients with Medicaid at two New York hospitals from 2012–13. Medicaid claims provided demographic, clinical, and post-discharge outpatient attendance data. Multiple regression models tested whether family involvement was associated with comprehensive discharge planning (contacting outpatient providers, scheduling aftercare appointments, and forwarding a discharge summary) and outpatient treatment.

Results: Inpatient staff contacted a family/support person for 134 (75%) participants. Sixty-seven (37%) participants received comprehensive discharge planning, and 96 (53%) and 139 (78%) attended an outpatient appointment within seven and 30 days, respectively. Inpatient staff contacting family and communicating about the patient's health/mental health and discharge plan were significantly associated with higher aftercare attendance rates by seven and 30 days. Family phone calls/visits with patients, attending family therapy sessions, and communicating with inpatient staff about services available to families were significantly associated with patients

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receiving comprehensive discharge planning. Having any family involvement with inpatient staff was significantly associated with patients attending an outpatient appointment by seven (OR=2.79, CI=1.28–6.08) and 30 days (OR=3.07, CI=1.29–7.32) when controlling for demographic and clinical factors.

Conclusions: The association of family/support involvement with comprehensive discharge planning and prompt entry into care post-discharge underscores the importance of family contact and communication during inpatient hospitalizations.

Introduction

Individuals with serious mental illness have better treatment outcomes when family and other support persons (SP) are involved in their care (1). Most prior research in this area focused on the effects of family involvement in outpatient care. Intensive family services such as psychoeducation showed the greatest benefit, with demonstrated reductions in relapse and rehospitalization rates, and improved family and patient functioning (1). Family member participation in outpatient services has also been associated with significant reductions in patient symptoms (2). Notably, many early studies of family psychoeducation recruited recently relapsed patients from inpatient units (3).

Less is known about the immediate effects of family/SP involvement in inpatient mental healthcare. This knowledge is important because families may be more available when individuals experience a crisis requiring psychiatric hospitalization, and such involvement can provide a gateway to ongoing engagement of patient and family/SP. Boyer et al. (4) found that family involvement during psychiatric hospitalization was related to increased linkage to aftercare. Family involvement during psychiatric hospitalizations, or refusal to involvement, has also been associated with post-discharge medication adherence or non-adherence, respectively (5–6). Perreault et al. (7) surveyed patients and families regarding family involvement during psychiatric hospitalizations and identified priority topics for communication between families and inpatient providers including: patient's illness and health status, warning signs of decompensation, ways to prevent rehospitalization, and services available to relatives. Patients and families also valued communication regarding discharge planning, discharge date, patient's post-discharge residence and activities (7).

We know of no study to date that has systematically evaluated the nuances of family/SP involvement with inpatient staff and whether they are associated with an increased likelihood of patients attending follow-up care. This study examined hospital records for evidence of family/SP involvement in care for 179 individuals with psychiatric hospitalizations at two urban hospitals. We aimed to measure contact between family/SP and the patient, as well as inpatient staff; communication between family/SP and inpatient staff about various treatment- and discharge-related subjects; and general family involvement with inpatient staff during the hospitalization. An exploratory aim was to assess whether these dimensions of contact, communication and involvement were associated with inpatient staffs' provision of comprehensive discharge planning and patients attending outpatient visits by seven- and 30-days post-discharge.

Methods

We examined Medicaid claims and closed medical records for 179 Medicaid patients who had a psychiatric hospitalization at two urban hospitals in New York in 2012–2013. The project was part of a larger study focusing on psychiatric hospitalization discharge planning for over 30,000 Medicaid recipients who received social security disability and/or had a serious mental illness or emotional disturbance. The initial phase of the larger study aimed to examine medical records as a means of assessing the reliability of information reported by Medicaid Managed Care Organizations (MCOs). We reviewed records at two high-volume urban community hospitals (over 1,000 yearly mental health admissions at each) that treat a substantial number of Medicaid recipients (55% of all discharges at Hospital A and 95% at Hospital B). Here we present a secondary analysis of the data extracted from medical record review.

One-hundred-twenty individuals were randomly selected from each hospital (240 total) using a stratification method to ensure sampling of cases for which MCOs reported incomplete discharge planning (e.g., failure to contact a provider, schedule an aftercare appointment, or forward a discharge summary). An additional 50 cases from each site were randomly selected for training reviewers and were not included in the analytic sample. Institutional Review Boards from the research team site and both hospitals approved study procedures and granted waivers of consent allowing for retrospective review of closed medical records.

Demographic data were extracted from Medicaid claims. Age was categorized as youth (under 21) or adult (21 and over). Clinical characteristics extracted from Medicaid claims included length of hospital stay; primary diagnosis at discharge; and co-occurring substance use disorder diagnosis based on claims during the 12 months prior. We created dichotomous variables indicating whether patients attended an outpatient mental health appointment within seven- and 30-days post-discharge. Mental health appointments were defined as any visit to a clinic or specialty behavioral health service licensed by the state mental health authority or any outpatient service with a primary diagnosis of mental disorder that was provided by a mental health practitioner or physician.

We developed a data extraction tool and guidebook (see online supplement) for reviewers to extract information about family/SP documented in the medical records. The guidebook drew upon prior literature (4–5, 7) to define specific activities including family/SP visiting patients and/or speaking by phone along with a range of family/SP interactions with inpatient staff. A variable named “any family/staff involvement” was created to denote family/SP interactions with inpatient staff that included discussion about any of the following: services (inpatient or community) available to family/SP; the patient’s health or mental health; discharge date; post-discharge treatment plan; post-discharge residence; warning signs of decompensation or ways to prevent readmission; or concerns expressed by family/SP regarding discharge and/or aftercare treatment. Family/SP did not have to be blood related and were defined as anyone who is close to the patient and provides support (e.g. significant others, friends, foster families etc.). Family/SP excluded individuals who supported the patient as part of their paid job (e.g. parole officers, case managers etc.).

The guidebook and rating tool also included instructions for raters to document completion of three discharge planning activities routinely completed by inpatient staff: communicating with a prior outpatient provider; scheduling an outpatient mental health appointment; and forwarding a discharge summary to the aftercare provider. A composite variable titled "comprehensive discharge planning" was created to note hospitalizations that the inpatient staff completed all three activities.

Two reviewers were trained to rate medical records and then independently rated nine of the training records which the principal investigator and study coordinator also rated to test interrater reliability, which was satisfactory (kappa statistics for the three discharge planning activities were 0.77 for contacting a provider, 1.00 for scheduling an appointment, and 0.88 for forwarding a discharge summary). To ensure ongoing reliability, the study coordinator reviewed data extraction forms for all medical record reviews. If there was insufficient evidence to justify a rating, the study coordinator reviewed the case with the reviewer and developed a consensus rating. When there was not a consensus, the principal investigator reviewed the case and determined the final rating. All medical record coding was performed blinded to the outpatient follow-up status of the patients.

We completed three sets of analyses. First, we created multiple logistic regression models for each family involvement variable and the composite "any family/staff involvement" variable, to examine their associations with three outcomes: a) completion of comprehensive discharge planning, b) patient attending an outpatient mental health appointment within seven days of discharge, and c) patient attending an appointment within 30 days of discharge. In each regression model, we controlled for hospital site, age, gender, and race/ethnicity. Second, we created a set of unadjusted regressions to examine associations between demographic and clinical characteristics with the three outcome variables above as well as "any family/staff involvement." Finally, we created two exploratory regression models to further examine the relationship between "any family/staff involvement" and attending an appointment within seven and 30 days, when controlling for comprehensive discharge planning, demographic and clinical factors. All analyses were conducted using SAS version 9.4.

Results

The final study sample included 179 unique individuals and discharges: 93 from Hospital A and 86 from Hospital B. Of the 240 records selected for review, 225 were rated (15 from Hospital B were not due to time constraints). Forty-six of the remaining 225 records were excluded from study analyses for the following reasons: 22 did not meet inclusion criteria for the main reliability study after review; 14 were readmissions of participants already in the sample; and 10 it was clear in the record that there was no family/SP available to engage in care. Table 1 describes demographic and clinical characteristics of the final sample. Ninety-six (53%) and 139 (78%) of patients attended an appointment within seven- and 30-days post-discharge respectively.

Table 2 lists the frequencies of specific family/SP involvement activities. Inpatient staff contacted a family member/SP for 134 (75%) patients. Staff attempted to contact but were

not successful for another two (1%) patients. There was no documentation of attempts to contact a family member/SP of the 43 (24%) remaining patients. Seven (4%) had no mention of family/SP throughout the medical record; 19 (10%) had evidence in the record that a family/SP existed, but there was no specified reason for why inpatient staff did not attempt to contact them; 14 (8%) patients refused to involve family/SP in treatment or would not give permission to contact them; and 3 (2%) were unable to provide contact information/ staff could not obtain contact information.

The first set of regressions are reported in Table 2. Family/SP interaction with the patient, visiting the patient, attending a family therapy session, and communicating with inpatient staff about services available to families were significantly associated with patients receiving comprehensive discharge planning. Inpatient staff contacting a family/SP, communicating about patient's health/mental health, and discussing discharge-related topics were significantly associated with attending an appointment within seven and 30 days.

The second set of regression analyses showed that younger age was significantly associated with having more family/SP involvement, (OR=0.07, 95%CI= 0.01–0.56) as was a length of stay 14+ days compared to reference group 0–6 days (OR=2.49, 0=1.03–5.97). Patients with a length of stay of 7–13 days were significantly more likely to receive comprehensive discharge planning compared to the reference group of 0–6 days (OR=2.65, CI=1.15–6.11). Co-occurring substance use disorder was significantly associated with no family involvement (OR=0.39, CI= 0.2 to 0.77) and lower likelihood of receiving comprehensive discharge planning (OR=0.46, CI= 0.24–0.86). Patients at Hospital A (n=45, 48%) were also significantly more likely to receive comprehensive discharge planning than patients at Hospital B (n=22, 26%) (OR=2.73, 0=1.45–5.13). No demographic or clinical characteristics were significantly associated with attending an appointment within seven or 30 days of discharge.

Table 3 shows the regression model examining the association between "any family/staff involvement" and aftercare attendance. Any family/staff involvement was the only variable that was significantly associated with attendance at seven and 30 days after controlling for discharge planning and other factors.

Discussion

Despite widespread recognition of the importance of family involvement, there is a paucity of information about the nuances of involvement typically seen during psychiatric hospitalizations. This study examined hospital medical records to assess frequencies of inpatient staff involving families/SP in treatment and discharge plans. Our findings showed similar percentages of families visiting patients, attending a family meeting/therapy session, and discussing patient's post-discharge treatment plan with inpatient staff as a prior study by Boyer et al. (4). Both studies also showed significant association between family involvement and linkage to aftercare, suggesting validity in these results (4). Prior family reports have elaborated on a range of hospital- and discharge-related topics that families deem important (7) but have not addressed the frequency with which they are addressed by inpatient staff. The most frequently occurring family involvement activities in this study

involved discussions of the patient's health/mental health and logistics of discharge planning (discharge date, post-discharge treatment plan and residence). These activities, along with the composite family/staff involvement variable, were positively associated with attending an outpatient mental health appointment within seven and 30 days. This lends support to the benefits of family involvement in mental healthcare (1) and adds new evidence that these benefits extend to the psychiatric hospitalization setting. Furthermore, family involvement was associated with patients receiving more comprehensive discharge planning, underscoring the importance of family involvement and its impact on treatment.

The second set of analyses in this study highlighted differences in family involvement, discharge planning, and connection to aftercare in risk populations. Youth were more likely to have family involvement, which may indicate that younger individuals have more contact with family or family is more readily available; it also makes sense that inpatient staff would be more likely to involve families of youth patients, as prior literature has shown that youth are at high risk for disengagement in care and the family-therapeutic alliance is a critical protective factor to engagement (9). Individuals with co-occurring substance use disorder were less likely to have family involvement and receive comprehensive discharge planning. Family involvement may be lower in this population due to strained relationships often experienced by individuals with substance use. However, given that co-occurring substance use disorders are a strong predictor of failed transitions to outpatient care (10) and the protective factors of family involvement identified in this study, inpatient staff should consider alternative strategies to engage families of individuals with co-occurring SUD. Patients with longer length of stay were more likely to have family involvement and comprehensive discharge planning than those with shorter length of stay. This is understandable, given that inpatient staff have more time to complete these activities. Prior literature has shown longer hospital stays are associated with increased outpatient-care linkage (11). These findings suggest the need for sustained efforts to complete discharge planning practices and engage families before discharging patients.

While medical records may not provide complete details of all events that occur during hospitalization, the reviews indicated the presence of significant family involvement, with activities occurring in 40–75% of the sample. Olfson et al. (5) examined family involvement during hospitalization by interviewing patients and reported that 16% of families participated in therapy, whereas review of medical records in this study found that 40% of families participated in family therapy. Nevertheless, some dimensions were less frequently reported, such as family/SP expressing concerns about discharge or aftercare. This finding may suggest that such conversations are under-documented. It challenges inpatient staff to make a concerted effort to ask and problem solve around the key issue of transitioning to outpatient care. A primary barrier to such engagement may be that inpatient lengths of stay are typically very brief. However, given the high rates of readmission and failed care transitions in this population, and given the evidence that family involvement is associated with better outcomes, inpatient units should consider implementing clear processes to better educate and elicit feedback from families regarding discharge plans.

There are caveats to be aware of and addressed in future research. Medical record documentation should not be considered as fully representing actual activities and

interactions, especially given the pace of inpatient care and lack of uniform documentation standards. For example, families and patients speaking by phone was not significantly associated with our main outcomes, but it is likely these conversations are not reliably reported in medical records. Additionally, we do not know the impact of an urban vs. rural hospital setting. Families likely live closer to hospitals and have greater access to transportation supports in urban settings and these results may not generalize to rural settings. This sample was also composed of Medicaid patients and findings may not generalize to commercially-insured patients.

Our regression models suggesting an impact of family involvement above and beyond discharge planning also do not account for other known predictors of successful care transitions such as housing stability, persistent symptoms, and engagement in care prior to admission. Another limitation is that patients with family contact may have unmeasured characteristics that make them more likely to have follow-up, and we could not control for those factors in this study. While there is correlation between family involvement during hospitalization and aftercare adherence, we cannot assume causation. Certain families may have a strong influence on aftercare adherence independent of any contact with inpatient staff.

It would be important to get a deeper understanding of why 14 patients (8% of the sample) refused to involve family/SP. There may be instances when it is appropriate to limit family involvement. On the other hand, prior research has emphasized that inpatient staff should consider both the patient's and family members' points of view regarding treatment and discharge planning when patients are refusing to involve families (5). The potential for positive family/SP involvement may also depend on the type of kin available and the patient's living situation; it is a limitation that this study did not collect data on these two factors. We must also acknowledge the 10 people who had no family available to contact (excluded from analyses) and 3 (2%) people who could not provide contact information. In these instances, hospital staff could elicit support of professional workers such as case managers and engage with prior and/or future outpatient providers to establish a support network for the patient. Research has shown that patients meeting outpatient providers and/or starting outpatient programs before discharge more than tripled the odds of successful linkage to aftercare (4). For individuals without family available or refusing to involve family, this could be a useful alternative strategy for hospital staff. Finally, it is notable that for 19 individuals (10% of the sample) there was documentation that family existed but inpatient staff did not contact them and did not specify why in the record, and another 7 (5%) did not mention family in the record at all. This underscores the need for inpatient staff to set specific procedures and expectations regarding engagement of family/SP.

Conclusions

This study demonstrated that involving families/SP during inpatient care is significantly associated with comprehensive discharge planning and aftercare attendance at seven and 30 days post-discharge. This study suggests that even a low threshold of involvement is significant; future studies should further examine key family involvement activities associated with improved outcomes and whether there is a higher threshold of involvement

needed. This is an inexpensive intervention, and while it is standard care for hospitals to contact and involve families, this is not always the case. Hospitals should formalize efforts to educate staff about the benefits of involving families/SP in treatment and implement standard operating procedures requiring family contact. These procedures should include detailed steps to ensure family engagement beyond contact and establish alternative approaches for at-risk patients including individuals with substance use disorders and those with no family available to participate in care. Further research can examine the impact of implementing such requirements.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Highlights:

- Little is known about the relationship between family/support person involvement during mental health inpatient care and patients receiving discharge planning and attending outpatient follow-up appointments.
- Family phone calls/visits with patients, attending family therapy sessions, and communicating with inpatient staff about services available to families were significantly associated with patients receiving comprehensive discharge planning.
- Inpatient staff contacting family and communicating about the patient's health/mental health and discharge plan were significantly associated with higher rates of attending aftercare appointments.
- Contacting and involving family/support persons should be standard operating procedures for mental health inpatient care.

Table 1.

Demographic and clinical characteristics for 179 individuals discharged from hospital psychiatric inpatient care.

Variable	n	%
Age		
Youth (20 and under)	31	17
Adult (21+)	148	83
Gender		
Female	90	50
Male	89	50
Race/ethnicity		
Black non-Hispanic	77	43
Hispanic/Puerto Rican	21	12
White non-Hispanic	64	36
Other/unknown	17	9
Length of stay		
1–6 days	41	22
7–13 days	69	39
14 days or longer	69	39
Primary discharge diagnosis		
Psychotic disorder	75	42
Mood disorder	87	49
Other	17	9
Co-occurring substance use disorder	80	45
Received all 3 discharge planning activities	67	37
Attended outpatient mental health appointment within 7 days of discharge	96	54
Attended outpatient mental health appointment within 30 days of discharge	139	78

Table 2.

Frequency of specific family/ support person activities during psychiatric hospitalization for 179 individuals and associations with discharge planning activities and aftercare follow-up.

			All 3 discharge planning activities completed (N=67)		Attended mental health appointment within 7 days (N=96)		Attended mental health appointment within 30 days (N=139)	
Variable	**n**	**%**	**OR[a]**	**CI**	**OR[a]**	**CI**	**OR[a]**	**CI**
Any interaction with patient								
No	**53**	**30**	**ref**		**ref**		**ref**	
Yes	126	70	2.39*	(1.09 – 5.22)	1.05	(0.53 – 2.09)	1.35	(0.60 – 3.03)
Spoke to the patient on the phone								
No	**114**	**64**	**ref**		**ref**		**ref**	
Yes	65	36	1.20	(0.59 – 2.45)	1.20	(0.60 – 2.40)	1.11	(0.49 – 2.52)
Visited the patient (includes pick-up at discharge)								
No	**72**	**40**	**ref**		**ref**		**ref**	
Yes	107	60	2.34*	(1.13 – 4.82)	1.11	(0.58 – 2.15)	1.79	(0.81 – 3.96)
Contacted by inpatient staff								
No	**45**	**25**	**ref**		**ref**		**ref**	
Yes	134	75	1.14	(0.53 – 2.46)	2.42*	(1.15 – 5.07)	2.71*	(1.18 – 6.19)
Communicated about patient health or mental health								
No	**51**	**28**	**ref**		**ref**		**ref**	
Yes	128	72	1.37	(0.64 – 2.93)	2.32*	(1.12 – 4.79)	2.80*	(1.22 – 6.40)
Communicated about services offered to families								
No	**99**	**55**	**ref**		**ref**		**ref**	
Yes	80	45	2.25*	(1.10 – 4.60)	0.86	(0.44 – 1.67)	1.40	(0.62 – 3.16)
Attended family meeting or therapy								
No	**108**	**60**	**ref**		**ref**		**ref**	
Yes	71	40	2.74*	(1.26 –5.92)	0.83	(0.41 – 1.66)	1.38	(0.58 – 3.32)
Family expressed concerns about discharge								
No	**155**	**87**	**ref**		**ref**		**ref**	
Yes	24	13	0.62	(0.24 – 1.59)	2.16	(0.80 – 5.80)	1.61	(0.48 – 5.40)
Discussed date of discharge								
No	**64**	**36**	**ref**		**ref**		**ref**	

			All 3 discharge planning activities completed (N=67)		Attended mental health appointment within 7 days (N=96)		Attended mental health appointment within 30 days (N=139)	
Variable	**n**	**%**	**OR[a]**	**CI**	**OR[a]**	**CI**	**OR[a]**	**CI**
Yes	115	64	1.60	(0.78 – 3.29)	1.84	(0.94 – 3.62)	2.29 *	(1.03 – 5.12)
Discussed patient treatment plan following discharge								
No	**77**	**43**	**ref**		**ref**		**ref**	
Yes	102	57	1.83	(0.88 – 3.80)	2.20 *	(1.11 – 4.37)	2.22	(0.97 – 5.11)
Discussed patient residence following discharge								
No	**60**	**34**	**ref**		**ref**		**ref**	
Yes	119	66	1.21	(0.59 – 2.48)	1.68	(0.85 – 3.30)	2.30 *	(1.03 – 5.11)
Any family/staff involvement								
No	**47**	**26**	**ref**		**ref**		**ref**	
Yes	132	74	1.26	(0.59 – 2.73)	2.81 **	(1.33 – 5.93)	3.65 **	(1.58 – 8.47)

[a]Multivariable logistic regression adjusting for hospital site, age, gender, and race. All significant associations indicate that more family involvement was associated with better outcomes.

*p<.05,

**p<.01

Table 3.

Relationship between any family/staff involvement and aftercare attendance when controlling for discharge planning, demographic and clinical factors.

			Attended mental health appointment within 7 days		Attended mental health appointment within 30 days	
Variable	**n**	**%**	**OR[a]**	**CI**	**OR[a]**	**CI**
Any family/staff involvement						
No	47	26	ref		ref	
Yes	132	74	2.79**	(1.28 – 6.08)	3.07*	(1.29 – 7.32)
All 3 discharge planning activities completed						
No	112	63	ref		ref	
Yes	67	37	1.63	(0.83 – 3.20)	1.51	(0.64 – 3.56)
Age						
Youth (20 and under)	31	17	ref		ref	
Adult (21+)	148	83	1.03	(0.39 – 2.72)	0.93	(0.27 – 3.24)
Gender						
Female	90	50	ref		ref	
Male	89	50	0.81	(0.41 – 1.58)	1.03	(0.45 – 2.36)
Race/ethnicity						
Black non-Hispanic	77	43	ref		ref	
Hispanic/Puerto Rican	21	12	1.24	(0.44 – 3.48)	1.39	(0.38 – 5.03)
White non-Hispanic	64	36	1.91	(0.90 – 4.06)	2.44	(0.92 – 6.42)
Other/unknown	17	10	1.08	(0.34 – 3.41)	0.85	(0.23 – 3.07)
Length of stay						
1–6 days	41	23	ref		ref	
7–13 days	69	39	1.55	(0.66 – 3.60)	1.76	(0.66 – 4.68)
14 days or longer	69	39	1.31	(0.53 – 3.23)	2.11	(0.72 – 6.18)
Primary diagnosis at discharge						
Schizophrenia and other psychotic disorders	75	42	ref		ref	
Mood disorders	87	49	1.23	(0.59 – 2.56)	1.54	(0.62 – 3.80)
Other	17	10	1.62	(0.46 – 5.74)	1.01	(0.24 – 4.17)
Co-occurring substance use disorder in 12 months prior						
No	99	55	ref		ref	
Yes	80	45	0.93	(0.48 – 1.80)	0.75	(0.33 – 1.69)

[a]Adjusted for all variables shown in the table.

*p<.05,

**p<.01