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Continuity of Care and Discharge Planning for Hospital Psychiatric Admissions

Thomas E. Smith, M.D.[1], **Morgan Haselden, B.A.**[1], **Tom Corbeil, M.P.H.**[2], **Fei Tang, M.P.H.**[3], **Marleen Radigan, Dr.P.H., M.S.**[3], **Susan M. Essock, Ph.D.**[4], **Melanie M. Wall, Ph.D.**[1], **Lisa B. Dixon, M.D., M.P.H.**[5], **Rui Wang, M.S.**[3], **Eric Frimpong, Ph.D., M.A.**[3], **Steven Lamberti, M.D.**[6], **Matthew Schneider, M.D.**[7], **Mark Olfson, M.D., M.P.H.**[1]

[1]New York State Psychiatric Institute, Department of Psychiatry, Columbia University Vagelos College of Physicians and Surgeons

[2]New York State Psychiatric Institute

[3]Office of Performance Measurement and Evaluation, New York State Office of Mental Health

[4]Department of Psychiatry, Columbia University Vagelos College of Physicians and Surgeons

[5]Department of Psychiatry, Columbia University Vagelos College of Physicians and Surgeons and NewYork-Presbyterian

[6]Department of Psychiatry, University of Rochester Medical Center

[7]Department of Psychiatry and Behavioral Sciences, Albert Einstein College of Medicine, Montefiore Medical Center

Abstract

Objective—This study examined whether communications between inpatient and outpatient mental health providers during patients' inpatient stays were associated with attendance at post-hospital discharge appointments.

Methods—One-hundred-eighty-nine psychiatric inpatient medical records of Medicaid recipients at two hospitals were reviewed to document whether inpatient staff communicated with current or prior outpatient providers. Medicaid claims provided demographic, clinical, and outpatient attendance data. Analyses evaluated the association between provider communications and follow-up care for patients who had/had not received outpatient mental health care within 30 days prior to admission.

Results—Inpatient staff communicated with outpatient providers for 118 (62%) patients. For patients who did not receive outpatient care within 30 days of admission, communication was associated with increased odds of attending timely outpatient appointments post discharge (OR: 2.73, 95% CI:1.09–6.84).

Conclusions—Communicating with outpatient providers may be especially important for patients who were not engaged in outpatient care prior to admission.

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Introduction

Continuity of care is a critical determinant of short- and long-term health care outcomes for people receiving inpatient psychiatric care. Roughly 30–50% of individuals admitted to hospital psychiatric units fail to attend an aftercare appointment within 30 days of discharge (1,2). This discontinuity is associated with poor outcomes including increased risk of relapse, homelessness, suicide, and criminal justice involvement (3–6). Timely follow-up visits after psychiatric inpatient care have also been associated with a reduced risk of readmission, although the evidence is mixed (5–7).

Communication by hospital mental health staff with outpatient mental health providers is a standard practice for inpatient treatment that promotes continuity of care (6,8–10). Olfson et al. (11) showed that patients were significantly more likely to attend post-discharge appointments when their inpatient provider spoke with an outpatient provider prior to discharge. Engagement in care prior to a hospital admission is also a strong predictor of continuity of care following hospital discharge (1,2). It is unclear whether and how engagement in care prior to admission and communication between providers during admission interact to further promote post-discharge continuity of care. Given the fast pace of hospital psychiatric care and short lengths of stay, it is important to know for whom direct communication between inpatient and outpatient providers is most strongly related to improved follow-up care.

A prior study estimated that hospital psychiatric providers contacted outpatient providers to discuss treatment plans for 70% of 17,053 Medicaid recipients discharged from hospital psychiatric units, and that discharge planning activities were associated with improved post-discharge follow-up in the first seven days following discharge (12). In this report of a subset of those cases, inpatient medical records were reviewed to examine associations of communications between inpatient and current or prior outpatient providers with attending outpatient follow-up care for inpatients who had and had not received mental health care during the 30 days prior to the admission. Prior to conducting these analyses, we hypothesized that communication with outpatient providers would be significantly related to outpatient follow-up care for inpatients who were not receiving care prior to the index hospital admission but not for those who were in care prior to admission.

Methods

We examined Medicaid claims and closed medical records for 189 Medicaid recipients admitted to hospital psychiatric units at two urban hospitals in 2012–2013. Cases were chosen from among 854 admissions with a primary mental health diagnosis at discharge that received concurrent utilization review by Medicaid Managed Care Organizations during the time period. A total of 240 discharges were selected for review (120 at each site). Cases were selected following a 2-step procedure. As an initial step and to achieve a heterogenous group with respect to discharge planning practices, all cases were chosen for which the Medicaid Managed Care Organization reported that the patient did not receive comprehensive discharge planning (e.g., inpatient staff failed to either communicate with an outpatient provider, schedule an aftercare appointment, or forward a discharge summary to

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an aftercare provider). This accounted for 122 cases; the other 118 cases were chosen randomly from among the remaining admissions, and another 50 additional admissions from each hospital were selected for training reviewers. Institutional Review Boards from the study research team site as well as both hospitals approved all study procedures and granted waivers of consent allowing for retrospective review of closed medical records.

Demographic data including age, gender, and race/ethnicity were extracted from Medicaid claims. Clinical characteristics extracted from Medicaid claims included length of hospital stay, primary diagnosis at discharge, and presence of a co-occurring substance-use-disorder diagnosis based on claims during the 12 months prior to admission. Pre-admission and post-discharge use of outpatient mental health services were obtained from Medicaid claims. Two dichotomous variables were created indicating: 1) whether patients received outpatient mental health care during the 30 days prior to admission; and 2) whether they received outpatient mental health care within seven days following hospital discharge. Outpatient mental health treatment services were defined as any visit to a clinic or specialty behavioral health service licensed by the state mental health authority. The 7-day cutoff for receiving outpatient mental health care was chosen to parallel the Healthcare Effectiveness Data and Information Set (HEDIS) quality measure: Follow-up After Hospitalization for Mental Illness, which identifies 7- and 30-day follow-up percentages that are commonly used in mental health quality and performance incentive programs.

Coders used a data-collection tool developed for this study as they reviewed the medical records to note evidence that inpatient staff communicated with an outpatient provider, which was defined as contacting a current (at the time of admission) or prior outpatient mental health or substance use disorder treatment provider and exchanging clinical information about the patient. Clinical information was defined as information regarding the patient's medical/clinical history or status, personal characteristics or behaviors that relate to the patient's mental health or SUD treatment, circumstances leading to the current admission, or information relevant to discharge planning and post-discharge community-based care. When there was no documentation of direct communication between inpatient staff and outpatient providers, but information from an outpatient provider was still present in the medical record, the case was coded as meeting the criteria for communication. Examples of this included information obtained by and documented in the inpatient record by emergency department staff or when inpatient staff had access to a patient's outpatient records and those records were referenced in the inpatient record with documented evidence that the information influenced the treatment and/or discharge plan. After training, interrater reliability was tested on a subset of training records also rated by the principal investigator and project coordinator. Interrater reliability for communicating with an outpatient provider was satisfactory (k=0.77). Coding was performed blinded to the post-discharge outpatient follow-up status.

Bivariate analyses first examined associations of inpatient staff communicating with an outpatient provider, patient demographic, and clinical characteristics with attending an outpatient appointment within 7 days of discharge and hospital treatment. Logistic regression models examined associations between inpatient staff communicating with an outpatient provider and patients attending an outpatient appointment within 7 days of

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discharge while controlling for all other variables. Separate logistic regression models were created for two subgroups: patients who had and had not received outpatient mental health care in the 30 days prior to admission.

Results

From among the original 240 cases available for review, the final sample included 189 unique psychiatric inpatients: 93 from Hospital A and 86 from Hospital B. Hospital inpatient staff communicated with an outpatient treatment provider for 118 (62%) of discharges. Additionally, 99 patients (52%) attended a mental health outpatient visit within 7 days following discharge. Bivariate analyses indicated significantly higher proportions of attending outpatient mental health visits within 7 days of discharge for patients who did (N= 53 out of 85 total; 62%) than did not (N= 46 out of 104 total; 44%) receive outpatient mental health care during the 30 days prior to admission (Odds Ratio (OR): 2.09; 95% Confidence Interval (CI): 1.16–3.75). Seven-day post-discharge follow-up attendance was also significantly higher for patients for whom the inpatient staff communicated (N= 71 out of 99 total; 60%) than did not communicate (N= 28 out of 99 total; 39%) with an outpatient provider during the admission (OR: 2.32; 95% CI: 1.27–4.24), and for white (N= 41 out of 99 total; 62%) as compared to black (N= 36 out of 99; 43%) patients (OR: 2.14; 95% CI: 1.11–4.14) (descripktive data and analyses for full population available in online supplemental table).

Table 1 displays demographic and clinical characteristics for the subgroups of patients who did (N=85) and did not (N=104) receive outpatient mental health services in the 30 days prior to admission. Separate logistic regression models adjusting for all covariates were fit for both groups. Among patients who received outpatient mental health services within 30 days prior to admission, none of the covariates were related to outpatient attendance within 7 days following discharge. Among patients who did not receive outpatient services within 30 days prior to admission, however, communication between inpatient staff and a prior outpatient provider was independently associated with receiving outpatient mental health care within 7 days of discharge (O R: 2.73; 95% CI: 1.09–6.84). No other variables were significant in this model (Table 1).

Discussion

Despite being noted as a standard of care, providers completing routine discharge planning do not consistently communicate with outpatient providers (13–15). Our findings suggest that these communications may be particularly important for patients who were not attending outpatient care in the month prior to discharge. In these instances, communication may provide opportunities to help coordinate outpatient care with providers who may not be familiar with the patient’s treatment plan and the circumstances surrounding the inpatient admission. These communications were significantly associated with outpatient mental health follow-up care after controlling for several potentially confounding variables.

Limitations of this study include its small sample size, focus on only two hospitals, and the inability to measure some patient, hospital, and service system factors that also may

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influence entering outpatient treatment after inpatient discharge. Obtaining collateral clinical information from previous providers may be nothing more than a surrogate marker for more skilled providers, better staffing for treatment teams, more cooperative patients, greater family involvement, or many other factors. We also could not establish whether lack of communications reflected unavailability of providers at certain points in time or across geographic areas. Future research is needed to clarify the relative impact of these multiple factors on care transitions.

Further such research is also critical for hospital quality programs such as the Center for Medicare and Medicaid's Inpatient Psychiatric Facility Quality Reporting System. Identifying specific practices, such as communications with providers, that are most likely to improve patient outcomes will inform selection of measures for these programs and ensure meaningful incentives. The findings reported herein suggest that encouraging hospital staff to communicate with prior outpatient providers is particularly important for individuals in the precarious position of being asked to enter outpatient treatment with a provider with whom they have no recent familiarity. Staff who take care to contact outpatient providers may also be more likely to work with patients in ways that encourage successful transition to outpatient care following discharge.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1.

Adjusted associations between demographics, clinical characteristics and attending an outpatient appointment within 7 days following discharge for patients who did and did not receive outpatient care in the 30 days prior to the inpatient admission.

	Received outpatient care in 30 days prior to inpatient admission (n=85)				Did not receive outpatient care in 30 days prior to inpatient admission (n=104)			
	Attended outpatient appointment within 7 days following discharge (n=53; 62%)				Attended outpatient appointment within 7 days following discharge (n=46; 44%)			
Variable	**N**	**% (Row)**	**Adjusted Odds Ratio**	**95% C.I.**	**N**	**% (Row)**	**Adjusted Odds Ratio**	**95% C.I.**
Communication with outpatient provider								
No	10	67	ref		18	32	ref	
Yes	43	61	.65	.18–2.33	28	58	2.73	1.09–6.84
Age								
Youth (20 and under)	9	82	ref		10	50	ref	
Adult (21+)	44	59	.53	.07–3.95	36	43	.93	.27–3.18
Gender								
Female	32	67	ref		20	44	ref	
Male	21	57	.60	.20–1.77	26	44	.97	.39–2.39
Race/ethnicity								
Black non-Hispanic	15	48	ref		21	40	ref	
Hispanic/Puerto Rican	11	69	2.43	.63–9.47	1	20	.30	.02–3.64
White non-Hispanic	21	72	2.58	.79–8.44	20	54	1.50	.57–3.97
Other/unknown	6	67	1.51	.27–8.55	4	40	.89	.19–4.23
Inpatient length of stay								
1–6 days	10	67	ref		9	33	ref	
7–13 days	24	67	1.59	.36–7.04	18	45	1.76	.58–5.30
14 days or longer	19	56	.85	.19–3.77	19	51	2.38	.72–7.88
Primary discharge diagnosis								
Psychotic disorder	24	56	ref		16	41	ref	
Mood disorder	25	66	.91	.29–2.86	24	46	1.47	.57–3.81
Other	4	100	N/A[a]	N/A[a]	6	46	2.07	.44–9.85

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	Received outpatient care in 30 days prior to inpatient admission (n=85)				Did not receive outpatient care in 30 days prior to inpatient admission (n=104)			
	Attended outpatient appointment within 7 days following discharge (n=53; 62%)				Attended outpatient appointment within 7 days following discharge (n=46; 44%)			
Variable	**N**	**% (Row)**	**Adjusted Odds Ratio**	**95% C.I.**	**N**	**% (Row)**	**Adjusted Odds Ratio**	**95% C.I.**
Co-occurring substance use disorder								
No	34	67	ref		23	46	ref	
Yes	19	56	.74	.27–2.01	23	43	1.10	.45–2.68

[a]Value not available due to small sample size