Effectiveness of Peer Support in Reducing Readmissions of Persons With Multiple Psychiatric Hospitalizations

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Objective: **The study examined the feasibility and effectiveness of using peer support to reduce recurrent psychiatric hospitalizations.** _Methods:_ **A randomized controlled design was used, with follow-up at nine months after an index discharge from an academically affiliated psychiatric hospital. Patients were 18 years or older with major mental illness and had been hospitalized three or more times in the prior 18 months. Seventy-four patients were recruited, randomly assigned to usual care (N=36) or to a peer mentor plus usual care (N=38), and assessed at nine months.** _Results:_ **Participants who were assigned a peer mentor had significantly fewer rehospitalizations (.89±1.35 versus 1.53±1.54; p=.042 [one-tailed]) and fewer hospital days (10.08±17.31 versus 19.08±21.63 days; p<.03, [one tailed]).** _Conclusions:_ **Despite the study's limitations, findings suggest that use of peer mentors is a promising intervention for reducing recurrent psychiatric hospitalizations for patients at risk of readmission. (_Psychiatric Services_ 62: 541–544, 2011)**

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The past eight years have seen a dramatic expansion of the development of peer support services for adults with serious mental illnesses. Establishing mutual support groups, hiring people with histories of mental illness as mental health staff (1), and creating consumer-run programs and businesses are viewed as integral components of the transformation of mental health services to a recovery orientation, which was called for in the 2003 report of the President's New Freedom Commission on Mental Health (2). Since then, these services have expanded rapidly (3), offering a promising new resource for people facing the challenge of living with a serious mental illness (4–6).

However, evidence supporting the effectiveness of peer-provided services lags behind their rapid growth. Literature reviews published since 1999 (7–10) have shown that people with histories of mental illness (described as "peers") can provide services that are often comparable in effectiveness to those provided by mental health professionals, but these reviews have found little evidence of the superiority of peer-provided services for a wide range of outcomes (7,9). Mental health system leaders are thus left to balance the increasing emphasis on

providing evidence-based practices with pressures to offer more peer-delivered alternatives to conventional care. [A discussion of the historical evolution of peer support and a brief literature review are available in an online appendix to this report at ps.psychiatryonline.org.]

In another area of mental health services research, the cost and futility of multiple inpatient admissions are reflected by the absence of a consensus on important factors that underlie this phenomenon and on an effective therapeutic solution (11,12). In a failed effort to develop an effective administrative intervention to reduce multiple admissions to our psychiatric inpatient service, we observed that patients who were recurrently admitted had problems engaging with services (13,14). We surmised that an emphasis on engagement outside the conventional relationship between mental health professional and psychiatric patient might be useful. In the study reported here we hypothesized that persons with serious mental illness and a recent history of recurrent psychiatric hospitalizations who were assigned a peer recovery mentor after discharge would have fewer subsequent hospitalizations and fewer hospital days than a similar group of patients who did not have access to a recovery mentor.

Methods

This feasibility study used a randomized controlled design and was ap-

proved by the Institutional Review Board of the Yale School of Medicine (clinicaltrials.gov identifier NCT00400166; protocol 0607001641). Potential participants were identified and recruited during an index hospitalization at the Yale–New Haven Psychiatric Hospital, a 74-bed psychiatric hospital within an academic medical center. The center primarily serves the south-central region of Connecticut, and the hospital functions as the major inpatient psychiatric setting for the public sector in the area. To be eligible, patients had to be aged 18 or older; have experienced two or more psychiatric hospitalizations in the 18 months before the index hospitalization; have a documented *DSM-IV* (15) diagnosis of schizophrenia, schizoaffective disorder, psychotic disorder not otherwise specified, bipolar disorder (type I, type II, or not otherwise specified), or major depressive disorder; and be willing to accept random assignment to a peer recovery mentor with usual care or to usual care alone. Exclusion criteria were inability to give signed, written consent; inability to speak English; unavailability because of imminent incarceration; and a primary *DSM-IV* axis I diagnosis of substance abuse or dependence or an axis II diagnosis alone. Patients with co-occurring substance use disorders were included as long as their primary axis I diagnosis was one of those listed.

A randomization scheme was generated with SAS statistical software with a 50-50 split between recovery mentor and treatment as usual for 120 participants, which was the expected number of participants. Each randomized assignment was separated and placed in consecutive order in a sealed, numbered envelope by staff (who were not directly linked to the study) at the Program for Recovery and Community Health (PRCH), the administrative home of the study. Participants were assigned to conditions in order of numbered envelopes, and the assignment was not revealed to the participant or staff members until after the participant signed consent.

Of all admissions between November 1, 2006, and November 1, 2008,

307 were eligible on the basis of diagnosis, admission history, and age. Of these, 177 could not be approached because they were discharged before they could be seen, were admitted for electroconvulsive therapy only or for a medical or surgical hospitalization, or were acutely ill (agitated or violent). Of the 130 remaining patients who were approached, 33 refused to participate and eight were found to be ineligible. Of the 89 who were invited to participate, gave initial written consent, and were randomly assigned to a treatment condition, 15 withdrew their consent during the study. Our consent process did not allow us to use the data of patients who actively withdrew their consent. [Data on recruitment and assignment are summarized in a table in the online appendix at ps.psychiatryonline.org.]

The remaining 74 patients—38 in the peer mentor group and 36 in the usual care group—constituted our intention-to-treat sample. For the intervention, we adopted a modification of the peer companion model (9) in which the peers, although they received a salary from the state Department of Mental Health, functioned outside the traditional mental health clinical system—that is, they did not report to or take direction from clinical staff who were directly responsible for the care of the patient. As in the peer companion model, they acted in a partnership relationship with their mentees. The mentors were under the supervision of staff at PRCH, a policy and research structure of the Connecticut Department of Mental Health and Addiction Services (DMHAS).

To qualify for the position, recovery mentor candidates were expected to be in recovery from a mental illness (either in a collaborative treatment relationship or with other means of dealing with their symptoms), to openly self-identify as having a history of mental illness, to demonstrate strong interpersonal skills during the interview with the hiring staff at PRCH (as manifested by flexibility, good social reality perception, and an interest in and desire to help others), and to be willing to work in the community and complete a paid training

program. [Mentor recruitment and training is described in more detail in the online appendix.]

Recovery mentors had ongoing weekly group supervision conducted by the study supervisors (ML and MW) and the mentors' direct supervisor. Sessions provided a venue to solve problems and identify strategies to develop and enhance relationships with participant partners, as well as to conduct ongoing training and administrative tasks. The mentors were instructed not to aim for any specific goal other than to support their participant partners. Recovery mentors were trained to use their own firsthand experiences as a basis from which to provide support to participants. Consistent with the partnership nature of the relationship, the frequency of contact was determined by the mentee in collaboration with his or her mentor. Over the course of the study, eight different mentors were employed.

The direct clinical care received by participants in both groups consisted of what was available to them through their own efforts and resources. Postdischarge clinical care for patients was planned during their index hospitalization. Most of the clinical care was delivered in the public sector via community-based organizations that are funded by the DMHAS either through a state facility or grants to private, nonprofit community-based, mental health care centers. A few patients in both groups used fee-for-service insurance benefits. Generally, direct clinical care consisted of medication (evaluation, prescription, and monitoring), psychoeducation and case management, and some form of supportive psychotherapy. Except for the opportunity of contact with the recovery mentor, participants assigned to usual care had the same opportunities for outpatient services as their counterparts assigned to a peer mentor.

The outcome measures were the number of hospitalizations and hospital days during the nine-month study period, which were documented through medical records and an administrative database. Hospitalization data were available for all 74 patients. Diagnoses used in this report

were made at the final inpatient discharge and were based on *DSM-IV* criteria (15). Data were collected, coded, and entered into an electronic database. An analysis of covariance that controlled for inpatient admissions and inpatient days in the 18 months before the index hospitalization assessed differences between the two treatment conditions in hospital admissions and total hospital days over the nine-month follow-up. Partial eta squared (η^2) served as an estimate of between-group effect size. The significance criterion was set at ≤.05.

Results

The two groups did not differ on most variables at baseline, supporting the effectiveness of the random allocation. An inexplicable significant difference in marital status was noted; eight (21%) of the patients in the peer mentor group were married, compared with one (3%) in the usual care group (p< .02). However, no significant differences between the two groups were found in the number of participants who were living with another person and the presence of children in the household.

Thirteen of the 38 patients (34%) who were assigned a peer mentor had no contact with their mentor during the study period. We received reliable information about contacts from 21 (55%) of the patients in the peer mentor group. Over nine months, frequency of contact ranged from one to 39 visits (mean±SD contacts=13.43± 11.46). Total hours of contact with the peer mentor ranged from two to 61 hours (mean=24.15±17.41).

Participants who were assigned recovery mentors had significantly fewer admissions than those in usual care (.89±1.35 and 1.53±1.54 admissions; F=3.07, df=1 and 71, one-tailed p= .042; partial η^2=.04) and significantly fewer hospital days (10.08±17.31 and 19.08±21.63 days; F=3.63, df=1 and 71, one-tailed p<.03; η^2=.05). For the peer mentor group, a subanalysis showed no significant association between the number of mentor contacts and hospitalization outcomes. [Tables summarizing data from analyses discussed in this section are available in the online appendix.]

Discussion

We implemented a recovery mentor program for patients who had a recent history of recurrent psychiatric hospitalization. For the program we recruited and trained mentors who had experienced major mental illness and who were able to assume a caregiving role. This study found that implementation of the program was feasible and that patients who were assigned a recovery mentor had fewer hospital admissions and hospital days over a nine-month period than patients who were not assigned a mentor.

The strength of our study is based on its random-allocation design and the careful preparation and supervision of the mentors. No substantial differences were found between study participants before random assignment. A between-group difference in marital status was noted after assignment, but we believe that the lack of differences in other household data (number of participants living with another person and number with children in the household) is evidence against a systematic between-group difference in participants' ability to maintain intimate relationships.

A weakness of the study is the small number of participants, which is a function of the difficulty of engaging these patients. Our sample may not be representative of all psychiatric inpatient admissions, because only 24% of the 307 patients admitted to our facility over two years were eligible on the basis of age, hospitalization history, and diagnosis. On the basis of available data, we found no evidence of a systematic difference between those who were enrolled in the study (N=74) and the 307 who were not enrolled but were eligible by age, diagnosis, and recurrent readmission status. However, further research is needed to determine whether the sample was representative. Other weaknesses include the use of only one setting. Because of these weaknesses, we do not assert that the results can be generalized to other settings or to a general population of recurrently admitted patients.

In addition, we did not have verifiable data on whether patients were hospitalized at other facilities during the follow-up period. The study lacked a comparison group to control for factors that were not exclusive to the recovery mentors but were associated with their function. For example, we cannot conclude that differences in outcome were attributable to the training and skills of the mentors rather than simply to the presence in the patients' lives of a helpful and interested person. In addition, we did not have strict separation between the supervisory and evaluative functions of the study in that the supervisors also participated in some of the follow-up evaluations and were not blind to the participants' treatment status. Finally, because we did not have information on all outpatient mental health services used during the follow-up period, we cannot estimate cost savings from the peer mentor intervention.

Conclusions

Despite these weaknesses, the random-assignment design allows us to conclude that the recovery mentor program has promise as an effective adjunctive component in a multifaceted approach to engaging and treating persons with serious and relapsing psychiatric illness, in which treatment adherence and involvement in a social network have been demonstrated to exert a protective effect against recurrent hospitalization (7,14).

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