Recent research suggests that family attitudes may be significant determinants of relapse and hospital readmission among both schizophrenics and hospitalized depressives. To assess the incremental effectiveness of inpatient family intervention within the context of treatment for schizophrenic disorder and major affective disorder patients, a 6-month community follow-up assessment was conducted with 71 of 130 patients participating in such an intervention program. Patients, who were divided into three diagnostic groups ("good" prehospital functioning schizophrenic, "poor" prehospital functioning schizophrenic, and major affective disorder), were subsequently assigned to two treatment conditions (multimodal hospital treatment or multimodal hospital treatment with inpatient family intervention--IFI). Patients and families assigned to IFI received a minimum of six family sessions focusing on communication, acceptance, and adaptation. The Global Assessment Scale and the Family Attitude Scale were administered to all participants at admission, discharge, and 6 months post-hospitalization. A preliminary analysis of the results showed a significantly better outcome for schizophrenic and major affective disorder patients treated with IFI than for those treated with the equivalent multimodal hospital treatment without IFI. A similar, though nonsignificant, trend was observed for patients in the other two diagnostic groups. (The appendices include a list of the criteria for inpatient family intervention and an outline of the treatment programs.) (BL)
Inpatient Family Intervention:  
A Preliminary Report on Six-Month Outcome

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This is the first report of a long-term, controlled study designed to assess the relative effectiveness of Inpatient Family Intervention (IFI) as measured by six- and 18-month community follow-up assessment. Results of a repeated measures analysis of variance, using measures of global functioning (the Global Assessment Scale) at admission, discharge and six-month follow-up revealed a significantly better outcome for schizophrenic and major affective disorder patients treated with IFI than for those treated with the equivalent multimodal hospital treatment without IFI, F(2) = 4.05, p < .02. Implications for family involvement in treatment of these two diagnostic groups are discussed.
Introduction

Recent research on the role of the family in psychiatric disorder suggests that family attitudes may be significant determinants of relapse and hospital readmission among both schizophrenics (Alvisotos & Lyketsos, 1964; Bentinck, 1967; Bachelor, Schooler, Ulrich et al. 1979) and hospitalized depressives (Vaughn & Leff, 1967). A study by Herz, Endicott and Spitzer (1976) reveals a significant correlation between the perception of the discharged patient as a "burden" to family members, promoting family stress, and increasing the frequency of relapse and rehospitalization.

Additional evidence comes from studies using an interview schedule which quantifies family members' emotionality and attitudes toward the identified patient. These studies reveal a correlation between these dimensions of family attitude and relapse and readmission for previously hospitalized schizophrenics (Brown, Birley & Wing, 1972; Vaughn and Leff, 1976).

Based on evidence that the long-term outcome of short-term hospital treatment for the schizophrenic or major affective disorder patient is related to affective and attitudinal characteristics of the family, it is hypothesized that inpatient treatment which includes a primary focus on family intervention can be particularly effective in treating such patients. A form of family intervention which aims to modify maladaptive family attitudes and coping patterns in relation to the identified patient, may be particularly beneficial at a time of crisis (e.g. the acute onset or exacerbation of a major psychiatric disorder) when the family is most "open" to change. This study is designed to assess the incremental effectiveness of including inpatient family intervention within the context of multimodal inpatient treatment for schizophrenic disorder and major affective disorder patients.
Method

Subjects

Subjects are 80 Schizophrenic/Schizophreniform Disorder patients (between the ages of 15 and 35) and 50 Major Affective Disorder patients (between the ages of 15 and 45) who are consecutively admitted to an inpatient psychiatric unit of a university medical center. Patients are selected for admission to the study on the basis of the following criteria:

(a) recent admission (within two days of admission to the unit);
(b) age between 15 and 35 (for Schizophrenic/Schizophreniform Disorder patients) and between 15 and 45 (for Major Affective Disorder patients);
(c) an admission diagnosis of Schizophrenic Disorder, Schizophreniform Disorder or Major Affective Disorder, based on DSM III criteria;
(d) indication for family intervention (refer to Appendix A).

Patients without available family or significant others or for whom a full course of Inpatient Family Intervention (a minimum of six sessions) is impracticable are excluded from the study.

Procedure

Patients with the DSM-III diagnosis of Schizophrenic, or Schizophreniform, Disorder are stratified into two groups based on measures of pre-hospital role functioning (in job/school, family, social and leisure-time roles), using the Role Performance Scale (Good-Ellis, 1982). Within each of the three diagnostic groups (i.e., "good" prehospital functioning schizophrenic, "poor" prehospital functioning schizophrenic, and major affective disorder), patients are randomly assigned to two treatment conditions: (a) multimodal hospital treatment (including a full range of diagnostic and treatment services, such as milieu, group, individual and somatic therapies); and (b) multimodal hospital treatment
In addition to the above, includes Inpatient Family Intervention (IFI). Both treatments are delivered on the same inpatient unit. Patients in both treatment groups participate together in the same daily activities on the unit, and with the exception of the family intervention, are treated by the same staff.

The IFI treatment is conducted by two social workers trained and supervised in the methods and techniques of IFI as specified in the IFI Training Manual (Clarkin, Newman, DeMane, Haas, Spencer & Glick, 1982). Supervision is conducted by a clinical psychologist using videotaped samples of family sessions monitored for adherence to the procedural guidelines specified in the treatment manual.

Patients (and families) assigned to the IFI Treatment group receive a minimum of six family sessions in addition to the other forms of treatment. Patients assigned to the Comparison Treatment group receive the same multimodal inpatient treatment exclusive of IFI. For patients in the Comparison Group, the family is interviewed on admission in order to gather historical information regarding the patient and to answer questions concerning the hospital treatment program and/or the patient's disorder; the family is told that they can call the social worker if they have further questions. If such calls occur, they are dealt with carefully, in accordance with guidelines which permit information exchange while minimizing intervention in the family system.

A systematic monitoring of the frequency and length of patient(family)/therapist contacts serves to control the total treatment exposure time for patients in the two groups. The total treatment exposure time per patient for the two groups is kept roughly equal by decreasing the amount of individual psychotherapy for subjects in the Family Intervention Group and moderately increasing it in the Comparison Group.

The use of medication in the two groups is balanced according to the procedure used by Glick, Hargreaves, Raskin & Kutner (1975) in controlled
clinical trials with an inpatient population.

Description of Inpatient Family Intervention. Inpatient Family Intervention (IFI) is a broad-based form of family work, including interventions designed to: (a) facilitate communication of thoughts and feelings among family members; (b) modify maladaptive family patterns associated with the problems of the identified patient; and (c) promote more adaptive family role-functioning and attitudes toward the identified patient. Interventions are directed toward the following specific goals, based largely on those of Goldstein and Kopeikin (1981) for family treatment with families of schizophrenic patients, and drawing on the work of Anderson, Hogarty and Reiss (1980) with schizophrenic patients and their families in both inpatient and outpatient settings. These goals have been modified appropriately for family intervention in an inpatient setting. They include:

(a) patient/family acceptance of the reality of the illness and understanding of the current episode;
(b) identification of possible precipitating stresses relevant to the current episode;
(c) identification of likely future stresses both within, and outside of, the family;
(d) elucidation of the interaction sequences within the family that produce stress on the identified patient;
(e) planning strategies for managing and/or minimizing future stresses; and
(f) acceptance of the need for continued treatment following discharge from the hospital.

Both the IFI and the Comparison treatments are aimed at symptom reduction and effective integration of the patient into a post-hospital treatment program which will minimize the likelihood of rehospitalization.
The specific objectives and intervention techniques of Inpatient Family Intervention are specified in the Training Manual for Inpatient Family Intervention (Clarkin et al., 1982).

Description of Comparison Treatment. The comparison treatment is the same multimodal treatment received by all patients in the study (i.e., including general psychiatric nursing care, pharmacotherapy, occupational and recreational therapies, and individual and group therapies) with an increased emphasis on (frequency of) individual therapy sessions as a counterbalance to the emphasis on family therapy in the experimental group. The major components of the treatment program are described in Appendix B.

Assessment procedures. The areas of change targeted for study include: symptom severity and role functioning in the identified patient and family attitude toward the patient and toward mental health services. Multidimensional measures are obtained from the identified patient and the designated significant other at each of four assessment times: admission, discharge, and six- and 18-months post-admission. Admission and discharge measures are obtained by psychiatric nurses trained in the use of semi-structured interview rating scales. Follow-up measures are obtained by a clinical psychologist who is blind to the assignment of patients to the two treatment groups. Inter-rater reliabilities are maintained in an acceptable .60 to .90 range by means of regular monitoring and in-service training in the use of the scales.

Patient Measures. The specific areas of identified patient change targeted for study include: global (overall) functioning, symptom severity, work/primary role-functioning, social/leisure role-functioning, family role-functioning, and pre- and post-hospital treatment compliance. The following standard rating instruments are used to assess change in the designated areas: the Psychiatric Evaluation Form (PEF), developed by Endicott and Spitzer (1972), the Global Assessment Scale (GAS) (Endicott, Spitzer, Fleiss and Cohen, 1976), the Role
Performan ce Treatment Scale (RPTS), developed by Good-Ellis (1932), the Social Adjustment Scale—Self Report (SAS-SR) (Weissman & Bothwell, 1976), the Patient Self-evaluation of Current Status (PSECS) (Glick & Hargreaves, 1979), the Family Member's Evaluation of Current Status (FMECS) (Glick & Hargreaves, 1979), and the Treatment and Medication Compliance Data Scale (TMCDs) (Chen, 1981). 

Family measures. Measures of family attitudes toward: (a) the patient and his/her disorder; and (b) the hospital treatment experience, are included in the assessment battery in order to provide an index of the emotional climate of the family prior to, during, and following the hospitalization. The Family Attitude Scale (FAS) (Levitt, 1982) is a multi-dimensional, self-report measure, intended to tap the following: (a) family attitudes toward the target disorder; (b) family attitudes toward the hospital treatment; (c) the "expressed emotion" (Brown & Harris, 1978) of family members, based on a modified version of the Camberwell Family Interview (Brown, Birley & King, 1972); and (d) the impact of the patient on the family, as assessed using items selected from the Family Evaluation Form of Herz, Endicott and Spitzer (1971).

Results

A preliminary analysis has been conducted based on data for the first 71 patients for whom six-month follow-up evaluations have been completed. Results of a repeated measures analysis of variance, using measures of global functioning (the Global Assessment Scale) at admission, discharge and six-month follow-up reveal a significant Treatment Effect, \( F(2) = 4.05, p < .02 \), favoring IIF, for all patients combined, and a significantly better outcome for the "good" prehospital functioning schizophrenics treated with IIF than for those treated with the Comparison treatment, \( F(1) = 4.48, p < .02 \). A similar, although non-significant trend, favoring outcome of IIF, was observed for patients in the other two diagnostic groups ("poor" prehospital functioning schizophrenic patients, \( F(1) = 1.21, p < .3 \), and major affective disorder patients, \( F(1) = 0.73, p < .5 \).
Discussion

Preliminary results of analysis of six-month follow-up data on the first 71 patients reveal evidence of a significant treatment effect, favoring IFI, in terms of maximizing global functioning of hospitalized Schizophrenic/Schizophreniform Disorder and Major Affective Disorder patients at six-months post-admission follow-up. This trend is observed for subjects within each of the diagnostic groups ("good" prehospital functioning schizophrenic/schizophreniform disorder patients, and major affective disorder patients), although achieving the conventional .05 level of significance for the "good" prehospital functioning schizophrenic/schizophreniform disorder patients alone. A scatter plot of six-month outcome scores, plotted as a function of level of functioning on admission, reveals essentially two clusters, with IFI patients clustering at the "upper" (higher functioning) end of the distribution.

In contrast, the outcome scores for the patients in the "poor" prehospital functioning group show greater variance for patients in the IFI treatment group than for those in the Comparison Treatment group, $F(1) = 4.23, p < .05$. The range of outcome scores being significantly greater for the IFI treatment group suggests a more "powerful" treatment effect for the IFI patients in both directions (better and worse) as compared with patients given the Comparison treatment. Patient self-report indicates that, in some cases, family intervention made family members more aware of sources of intrafamilial conflict but that with insufficient resolution of such conflict and/or modification of established family patterns, increased "insight" or awareness alone tended to exacerbate intrafamilial tension. This may account for the poor outcome of some IFI patients relative to Comparison treatment patients at six-month follow-up.

In contrast, several patients in the IFI group had a better outcome.
than any other patients, suggesting that there may be a subgroup of "poor" functioning schizophrenics who respond well to family work. Further analysis of these within-treatment group differences on a larger sample is required in order to identify characteristics of "optimal responders" and "non-responders" within this diagnostic group.

The overall results indicate that IFI patients show greater positive change over the course of six months than do patients receiving the same multimodal hospital treatment without inpatient family intervention. These results support and extend the notion that the family environment is a significant factor influencing the post-hospital course of schizophrenic, and major affective, disorders. Previous authors and investigators, such as Falloon, Boyd, McGill, Strang & Moss (1981), in long-term outpatient family work, and Goldstein (1981) in brief outpatient family work have presented evidence illustrating the positive impact of family intervention on the course of schizophrenic disorders. Results reported in the current study extend these findings, showing that significant effects can be achieved through brief (i.e., six-session) family intervention done during the inpatient phases of treatment, conceivably due to the family's increased "openness" to therapeutic intervention during this "critical period" of treatment.
References


Reference Notes


Appendix A

Criteria for Inpatient Family Intervention

1. There is evidence of a current intra-family conflict or other family problem in which the patient appears to play some part or which appears to have an impact on the patient. (The family may include parent(s), spouse or children.)

2. Patient is an adolescent, significantly involved with his family.

3. Patient is a young adult who is in the process or has recently separated from his family, and this major shift is judged relevant to his current psychopathology or other problems.

4. Patient is past the usual age of separation, but is still living with his original family or is living away from home but still much involved with family, and these interactions are judged to be contributing to current psychopathology or other problems.

5. There is evidence of physical danger from the patient to one or more family members.

6. Family is judged to be a necessary but failing or variable support system for the patient.

7. Family is judged to be a necessary support in carrying out an in-patient treatment plan (e.g. in dealing with attempts to leave the hospital against medical advice).

8. Family is necessary for concrete help in disposition, e.g., finding nursing home, helping patient to obtain out-patient medicaid, etc.

9. It is judged that previous out-patient treatment has failed (e.g., failure to take prescribed medication) and family support might avoid such failure in the future.

10. Family is involved with patient and does not recognize the existence or degree of patient's illness, seems unusually upset by patient's illness, or supports patient's denial of illness.

11. Family appears to be obtaining secondary gain from having patient remain sick (e.g., a legal or economic advantage).

12. Patient's illness is judged to be a necessary part of the family's dynamic equilibrium.

13. There is history or present evidence that family may interfere with treatment.
Appendix B

Description of Psychosocial Treatment Program for
for Inpatient Family Intervention (IFI) and Comparison Groups
## Description of Psychosocial Treatment Program for Inpatient Family Intervention (IFI) and Comparison Groups

<table>
<thead>
<tr>
<th>Type of Treatment</th>
<th>Description of Treatment</th>
<th>IFI</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Intervention</strong></td>
<td></td>
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<tr>
<td>(a) History-gathering</td>
<td>Includes all patients</td>
<td>Conducted by primary therapist (resident, psychology intern or medical student)</td>
<td>Integrated into family sessions with primary therapist and social worker</td>
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<tr>
<td>(b) Disposition-planning</td>
<td>Includes all patients</td>
<td>Conducted by staff social worker and primary therapist</td>
<td>Integrated into family sessions with primary therapist and social worker</td>
</tr>
<tr>
<td>(c) Family sessions</td>
<td>Includes IFI patients only</td>
<td>Conducted by staff social workers with co-therapist (resident psychology intern or medical student)</td>
<td>Included</td>
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**Frequency:** 1-2 times per week for minimum of 6 sessions (45-60 minutes per session)
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<thead>
<tr>
<th>Type of Treatment</th>
<th>Description of Treatment</th>
<th>IFI</th>
<th>Comparison</th>
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<tbody>
<tr>
<td>Individual psychotherapy</td>
<td>Includes all patients&lt;br&gt;Conducted by primary therapists (mostly psychiatric residents) but occasionally psychology interns or medical students)</td>
<td>1-3 times per week</td>
<td>3-5 times per week</td>
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<td>Frequency: 1-5 times per week for 5 to 45 minutes</td>
<td>Frequency: two times per week</td>
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<tr>
<td>Group therapy</td>
<td>Includes all patients&lt;br&gt;Conducted by staff nurses and supervised by attending psychologist</td>
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<tr>
<td>Type of Treatment</td>
<td>Description of Treatment</td>
<td>Factors Specific to Treatment Modality</td>
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<tr>
<td>Mileu therapy</td>
<td>Includes all patients</td>
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<td></td>
<td>Adapted to meet the patient's specific need for:</td>
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<td></td>
<td>(1) environmental structure;</td>
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<td></td>
<td>(2) modification of external stimulation</td>
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<td>(3) support for expression of feelings;</td>
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<td>(4) confrontation and limit setting</td>
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<td></td>
<td>(5) problem-solving/conflict resolution</td>
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<td></td>
<td>(6) social skills learning</td>
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<tr>
<td></td>
<td>Frequency: ongoing throughout the patient's stay on unit</td>
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<tr>
<td>Therapeutic activities</td>
<td>Includes all patients</td>
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<td></td>
<td>Conducted by members of the therapeutic activities department (occupational, vocational and recreational therapists)</td>
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<tr>
<td></td>
<td>Frequency: approximately 2 hours per day</td>
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SCHIZOPHRENIC DISORDER I
("Good" Prehospital Functioning)

Figure 1. Mean Scores for JFI and Comparison Group "Good" Prehospital Functioning Schizophrenic Disorder Patient on two global measures of functioning and symptoms: (a) the Global Assessment Scale (GAS); and (b) "overall severity" item of the Psychiatric Evaluation Form (PEF).
SCHIZOPHRENIC DISORDER II
("Poor" Prehospital Functioning)

Mean scores for IFI and Comparison Group "Poor" Prehospital Functioning Schizophrenic Disorder Patients on: (a) the Global Assessment Scale (GAS); and (b) the "overall severity" item of the Psychiatric Evaluation Form (PEF).

Figure 2.
MAJOR AFFECTIVE DISORDER

Figure 3. Mean Scores for IFI and Comparison Group Major Affective Disorder patients on two global measures of functioning and symptoms: (a) the Global Assessment Scale (GAS); and (b) the "overall severity" item of the Psychiatric Evaluation Form (PEF).