8-1992

The Effect of Public Posting and Supervisor Recognition on Treatment Team Performance in a Mental Health Institution

Susan Mencarelli

Western Michigan University

Follow this and additional works at: https://scholarworks.wmich.edu/masters_theses

Part of the Industrial and Organizational Psychology Commons

Recommended Citation

https://scholarworks.wmich.edu/masters_theses/857

This Masters Thesis-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Master's Theses by an authorized administrator of ScholarWorks at WMU. For more information, please contact maira.bundza@wmich.edu.
THE EFFECT OF PUBLIC POSTING AND SUPERVISOR RECOGNITION ON TREATMENT TEAM PERFORMANCE IN A MENTAL HEALTH INSTITUTION

by

Susan Mencarelli

A Thesis
Submitted to the Faculty of The Graduate College
in partial fulfillment of the requirements for the Degree of Master of Arts
Department of Psychology

Western Michigan University
Kalamazoo, Michigan
August 1992
THE EFFECT OF PUBLIC POSTING AND SUPERVISOR RECOGNITION ON TREATMENT TEAM PERFORMANCE IN A MENTAL HEALTH INSTITUTION

Susan Mencarelli, M.A.
Western Michigan University, 1992

This study compared the effects of public posting and supervisor recognition on the performance of professional staff in a mental health institution. Eleven indicators of successful performance in the writing of patient treatment plans were established after an analysis of existing standards. Seven treatment teams comprised the subjects of the study and included psychiatrists, psychologists, social workers, nurses, activity therapists, and residential care aides. Group performance data were used. The measurement and scoring systems which were developed proved to be highly reliable.

Neither form of performance feedback resulted in consistent improvement in performance on any of the eleven indicators. This is explained in terms of discrepancies between the feedback delivery system used and characteristics of an effective feedback system previously identified in the literature. Unique patterns of change are explained by characteristics of the eleven indicators. Suggestions for later training, feedback, and research are made.
ACKNOWLEDGEMENTS

I would like to dedicate this thesis to those individuals who are labeled the chronically mentally ill—their problems challenge us to seek solutions; to my husband, John, who has always been supportive of my endeavors; and to my friend, Dr. Helen Pratt, who inspires me.

Thank you, especially, Dr. William K. Redmon, my thesis advisor, for your endless patience and careful editing. Your suggestions have helped me separate the trees from the forest on several occasions. Thank you, Dr. M. Michele Burnette and Dr. Galen Alessi, members of my thesis committee, for suggestions and encouragement.

Thank you Dr. James Coleman, Mr. Kerry Bloom, and Ms. Donna Jones for your assistance in the implementation of this study and for your enthusiasm and dedication. Also, thank you Ms. Nancy Elmer, Ms. Connie Handler, Mr. Jon Johnston, Mr. Kane Loukas, Ms. Joell Morrill, and Ms. Kelly Wysocki for your faithful and meticulous work on crucial aspects of the project.

Thank you Mr. Steve Enge and Ms. Susan Janes for explaining to me the finer points of using computers to construct graphs.

Thank you Ms. Julie Scrivener for detailed explanations of the requirements for manuscript preparation. Thank you Ms. Kathleen Coolman for your superb work on the
Acknowledgements--Continued

final manuscript.

And to my parents, Richard and Shirley Hall, thank you for believing in me.

Susan Mencarelli
INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.
The effect of public posting and supervisor recognition on treatment team performance in a mental health institution

Mencarelli, Susan, M.A.

Western Michigan University, 1992
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>ACKNOWLEDGEMENTS</th>
<th>ii</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
</tbody>
</table>

## CHAPTER

### I. INTRODUCTION

1. The Need for Effective Staff Management
2. Performance Feedback
3. Effective Feedback
4. Feedback Studies in Mental Health Settings
   - Feedback as a Single Component
   - Feedback Compared with Instructions
   - Feedback Used Alone
   - Different Forms of Feedback Compared
5. The Present Study

### II. METHOD

1. Setting
2. Subjects
3. Treatment Plans
   - Treatment Plan Contents
   - Treatment Plan Schedule
<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Plan Copies</td>
<td>18</td>
</tr>
<tr>
<td>Standards</td>
<td>19</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>19</td>
</tr>
<tr>
<td>Experimental Design</td>
<td>20</td>
</tr>
<tr>
<td>Indicators of Successful Performance</td>
<td>23</td>
</tr>
<tr>
<td>Percentage of Successful Performance Calculation</td>
<td>24</td>
</tr>
<tr>
<td>Observation System</td>
<td>25</td>
</tr>
<tr>
<td>Observer Selection and Training</td>
<td>25</td>
</tr>
<tr>
<td>Training Manual</td>
<td>26</td>
</tr>
<tr>
<td>Scoring of Treatment Plans</td>
<td>27</td>
</tr>
<tr>
<td>Determination of Reliability</td>
<td>27</td>
</tr>
<tr>
<td>Procedures</td>
<td>28</td>
</tr>
<tr>
<td>Baseline</td>
<td>28</td>
</tr>
<tr>
<td>Public Posting</td>
<td>30</td>
</tr>
<tr>
<td>Supervisor Recognition</td>
<td>31</td>
</tr>
<tr>
<td>Control</td>
<td>31</td>
</tr>
<tr>
<td>Social Validation Survey</td>
<td>32</td>
</tr>
<tr>
<td>III. RESULTS</td>
<td>33</td>
</tr>
<tr>
<td>Workshop</td>
<td>33</td>
</tr>
<tr>
<td>Pretest and Posttest</td>
<td>33</td>
</tr>
<tr>
<td>Workshop Evaluation Results</td>
<td>34</td>
</tr>
<tr>
<td>Percentage of Successful Performance</td>
<td>34</td>
</tr>
</tbody>
</table>
### Table of Contents—Continued

**CHAPTER**

Breakdown by Indicator .......................... 41

- Indicator 1: Contained as Observable Verb in Goal Section .................. 41
- Indicator 2: Referred to Client Behavior in Goal Section .................. 42
- Indicator 3: Frequency of Occurrence of Client Behavior Given in Goal Section .................. 42
- Indicator 4: Duration of a Single Occurrence of Client Behavior Given in Goal Section .................. 49
- Indicator 5: Duration of a Complete Task of Client Behavior Given in Goal Section .................. 49
- Indicator 6: The Month and Year Included in Goal Section .................. 54
- Indicator 7: Contained an Observable Verb in Plan Section .................. 54
- Indicator 8: Referred to Staff Behavior in Plan Section .................. 54
- Indicator 9: Frequency of Occurrence of Staff Behavior Given in Plan Section .................. 61
- Indicator 10: Duration of Single Occurrence of Staff Behavior Given in Plan Section .................. 61
- Indicator 11: Time of Occurrence of Staff Behavior Given in Plan Section .................. 61

Analysis of Percentage of Successful Performance .................. 68

Reliability .................................. 70

Social Validation Survey .......................... 71

vi
# Table of Contents—Continued

## CHAPTER

**IV. DISCUSSION** ..................................... 74

- Intended Contribution. .......................... 74
- Prestest and Posttest Scores
  from Workshop. .................................. 74
- Workshop Evaluation. ............................ 75
- Percentage of Successful Performance ....... 76
  - Characteristics of Feedback System ...... 76
  - Characteristics of the Indicators ...... 80
- Social Validation Survey ....................... 82

**V. CONCLUSION AND RECOMMENDATIONS** ............... 83

- Conclusion ...................................... 83
- Major Accomplishments ....................... 83
- Recommendations for Future Training
  and Feedback. .................................. 84
- Recommendations for Further Research ..... 85

## APPENDICES

- A. Michigan Department of Mental Health
  Administrative Rule R330.7199 .................. 88
- B. Kalamazoo Regional Psychiatric
  Hospital Policy No. C-27. ...................... 92
- C. Kalamazoo Regional Psychiatric Hospital
  Protocol for Developing the Multi-
  disciplinary Treatment Plan ................. 95
- D. Sample Graph for Public Posting Condition .. 100
- E. Sample Memo for Supervisor Recognition
  Condition ...................................... 103
- F. Examples of Numbering System for Statements .. 105
Table of Contents--Continued

APPENDICES

G. Treatment Plan Score Sheet ......................... 109
H. Successful Performance Score Sheet .................. 111
I. Reliability Score Sheet ........................ 113
J. Pretest (Form A) and Posttest (Form B) .......... 115
K. Workshop Evaluation Form ......................... 120
L. First Memo From Hospital Director ............... 122
M. Second Memo From Hospital Director .......... 124
N. Social Validation Survey ............................ 128
O. Suggestions Regarding Training and Feedback ................................. 130
N. Human Subjects Institutional Review Board Approval Letter .......... 135

BIBLIOGRAPHY ............................................ 137
LIST OF TABLES

1. Distribution of Responses on Workshop Evaluation Form ........................................ 35
2. Mean Percentages of Successful Performance for the Eleven Indicators .................. 36
3. Standard Deviations for the Mean Percentages of Successful Performance ............ 39
4. Reliability of Scoring Treatment Plans ............................................................... 70
5. Distribution of Responses on Social Validation Survey .......................................... 72
LIST OF FIGURES

1. Experimental Design. ............................... 21

2. Percentage of Statements Which Contained an Observable Verb in Goal Section Across Weeks During Baseline and Feedback Conditions. .............................. 43

3. Percentage of Statements Which Contained an Observable Verb in Goal Section Across Weeks During Baseline Conditions Only. .............................. 44

4. Percentage of Statements Which Referred to Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions. .............................. 45

5. Percentage of Statements Which Referred to Client Behavior in Goal Section Across Weeks During Baseline Conditions Only. .............................. 46

6. Percentage of Statements Which Gave the Frequency of Occurrence of Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions. .............................. 47

7. Percentage of Statements Which Gave the Frequency of Occurrence of Client Behavior in Goal Section Across Weeks During Baseline Conditions Only. .............................. 48

8. Percentage of Statements Which Gave the Duration of a Single Occurrence of Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions. .............................. 50

9. Percentage of Statements Which Gave the Duration of a Single Occurrence of Client Behavior in Goal Section Across Weeks During Baseline Conditions Only. .............................. 51

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Percentage of Statements Which Gave the Duration of a Complete Task of Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions</td>
<td>52</td>
</tr>
<tr>
<td>11</td>
<td>Percentage of Statements Which Gave the Duration of a Complete Task of Client Behavior in Goal Section Across Weeks During Baseline Conditions Only</td>
<td>53</td>
</tr>
<tr>
<td>12</td>
<td>Percentage of Statements Which Included the Month and Year in Goal Section Across Weeks During Baseline and Feedback Conditions</td>
<td>55</td>
</tr>
<tr>
<td>13</td>
<td>Percentage of Statements Which Included the Month and Year in Goal Section Across Weeks During Baseline Conditions Only</td>
<td>56</td>
</tr>
<tr>
<td>14</td>
<td>Percentage of Statements Which Contained an Observable Verb in Plan Section Across Weeks During Baseline and Feedback Conditions</td>
<td>57</td>
</tr>
<tr>
<td>15</td>
<td>Percentage of Statements Which Contained an Observable Verb in Plan Section Across Weeks During Baseline Conditions Only</td>
<td>58</td>
</tr>
<tr>
<td>16</td>
<td>Percentage of Statements Which Referred to Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions</td>
<td>59</td>
</tr>
<tr>
<td>17</td>
<td>Percentage of Statements Which Referred to Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only</td>
<td>60</td>
</tr>
<tr>
<td>18</td>
<td>Percentage of Statements Which Gave the Frequency of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions</td>
<td>62</td>
</tr>
<tr>
<td>19</td>
<td>Percentage of Statements Which Gave the Frequency of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only</td>
<td>63</td>
</tr>
</tbody>
</table>
List of Figures—Continued

20. Percentage of Statements Which Gave the Duration of a Single Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions. ................. 64

21. Percentage of Statements Which Gave the Duration of a Single Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only. .................. 65

22. Percentage of Statements Which Gave the Time of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions .................. 66

23. Percentage of Statements Which Gave the Time of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only .................. 67
CHAPTER I

INTRODUCTION

The Need for Effective Staff Management

As the United States enters the 1990s, one of the most crucial challenges for the approximately 4750 mental health organizations in the United States (Manderscheid & Sonnenschein, 1990) is the management of human resources. According to Redmon and Wilk (1990), effective management of staff has become a major concern in the mental health field for several reasons: (a) decreases in financial resources, (b) increases in consumer demands for quality services, and (c) increases in federal regulations. One approach to developing an effective staff management system within an organization is to assess the value of the accomplishments completed by each individual employee in terms of the overall mission of the organization (Gilbert, 1978). This approach requires mental health organizations to consider three key issues: (1) the mission of the organization, (2) the relationship between the mission and individual accomplishments, and (3) procedures to increase the value of individual accomplishments.

Decreases in financial resources directly impact not only tangible items such as buildings and equipment, but
also the quantity and quality of accomplishments by available staff. In 1986 there were approximately 500,000 full-time equivalent (FTE) staff persons responding to 7.9 million patient care episodes throughout the United States. Assuming subsequent years yield similar figures, the mental health needs of roughly 8 million people are met each year by only 500,000 workers. Shortages of trained personnel exist in the areas of psychiatry, psychology, social work, and nursing. Shortages of mental health personnel exist for children with serious emotional disturbances, the chronically mentally ill, and the elderly. The current mental health system is inadequately prepared to provide services to these persons (Manderscheid & Sonnenschein, 1990). Therefore, it is imperative that the performance of staff persons who currently provide such services is well-managed.

Performance Feedback

Although numerous approaches to staff management have been applied, one which has become increasingly utilized both in industry and in human services is performance feedback. Performance feedback has been defined most often as information provided to individuals about the quantity or quality of their past performance (Prue & Fairbank, 1981). In other words, performance feedback is letting the individual staff person know about the value of his or her accomplishments. Both researchers and managers have found performance feedback to be a simple, inexpensive method to
improve performance (Stoerzinger, Johnston, Pisor, & Monroe, 1978). Performance feedback has been studied and applied in a variety of settings including educational environments, human service delivery systems, and business organizations. In order for both researchers and managers to analyze and apply the results of these studies, some type of classification system has become necessary. Several different types have been proposed.

Ford (1980) suggests a classification system that defines a number of dimensions along which feedback may be analyzed functionally including: (a) individual vs. group, (b) private vs. public, (c) personal vs. mechanical, (d) immediate vs. delayed, and (e) schedules of delivery.

Duncan and Bruwelheide (1986) propose that feedback research should be conducted within the context of behavioral functions. In order to do this, they recommend that the parameters of feedback be identified. They offer a few key parameters: (a) source, (b) mode of transmission, and (c) aspects of the message. These suggestions offer a point of departure for researchers and are being integrated into both applied and theoretical work.

Effective Feedback

Balcazar, Hopkins, and Suarez (1986) integrated aspects of these classification systems and used their results in reviewing a total of 69 articles on feedback in four major journals. The review led to several conclusions about feedback effectiveness:
1. The combination of feedback with goal setting and/or behavioral consequences was much more consistently effective than feedback alone.

2. Supervisors and managers were associated with more consistent effects than were other sources of feedback such as co-workers or clients.

3. Graphs of performance data produced the most consistent effects compared to other methods of communication such as videos or memos.

4. Feedback delivered daily or weekly was more consistently effective than that given monthly. Daily and weekly feedback were equivalent in terms of effectiveness.

5. Public posting of data and privately received information regarding performance yielded similar effects. Thus, these five characteristics are the ones managers might utilize in developing an effective staff management system. Furthermore, these five characteristics merit investigation by researchers in order to discover the variables responsible for their effectiveness.

Feedback Studies in Mental Health Settings

Several studies have been conducted in mental health settings investigating some of the characteristics of feedback cataloged by Balcazar et al. (1986). These studies fall into four groups: (1) feedback as a single component, (2) feedback compared with instructions, (3) feedback used alone, and (4) different forms of feedback compared. The settings include mental health clinics, psychiatric
hospitals, residential centers, and classrooms for students with various disabilities. Both paraprofessional and professional staff persons served as subjects; however, the majority of the studies focused on paraprofessional work performance.

The different characteristics of feedback investigated in these studies varied along the dimensions of source, privacy, participants, and mechanism. The content of the feedback consisted of information regarding changes in client behavior, changes in staff behavior, or changes in the accomplishments of staff such as written reports or completed graphs. Whereas participants and frequency were not variables which received much attention, source and privacy were variables of interest in quite a few of the studies. The source of the feedback included staff persons themselves, the researchers, or a supervisor. Level of privacy was either public posting of the data or communication of the performance information to an individual through written or spoken format. Feedback was generally found to be effective in improving work performance in all of the studies, suggesting that feedback may be a particularly useful technique for managing productivity in mental health settings.

Feedback as a Single Component

Frederiksen (1978) included feedback as one of three components of a reorganization procedure within an outpatient mental health clinic. The other two components were
(1) rescheduling workloads, and (2) increasing the responsibility each staff member had for specific patients. The feedback consisted of placing a chart with appointments scheduled for the day in a location accessible to all therapists, thus providing a public display of the number of clients who had dropped out of therapy as well as the disposition of ongoing cases. The results of the reorganization procedure were relevant to the feedback component: (a) the median time from referral to first appointment decreased by three weeks, (b) the drop-out rate decreased from approximately 52% to 26%, and (c) the average number of days between appointments dropped from 25 days to about 11 days. It is clear that feedback had a definite impact on improving staff performance as measured by therapeutic outcomes.

In an effort to increase staff adherence to a policy regarding unexcused resident behavior in a forensic psychiatric setting, Andrasik and McNamara (1978) utilized feedback as part of a policy change procedure. The procedure also included an instructional component delineating which of three types of responses staff were to perform when an unexcused absence by a resident occurred. The feedback involved sending a copy of a weekly unexcused absence report to the superintendent and several administrators at the institution. This type of feedback is a form of self-monitoring because staff members observe and record their own performance. There was a marked improvement in staff adherence to the unexcused absence policy after the policy
revision occurred as compared to baseline levels when no reports were required.

Burgio, Whitman, and Reid (1983) used a participative management approach to increasing the frequency of interactions between institutional staff and severely retarded residents in a state developmental disabilities center. The approach consisted of four components: (1) setting daily goals, (2) providing instructions on self-monitoring using a wrist-counter, (3) graphing the number of resident and staff interactions, and (4) encouraging staff in use of wrist-counters and graphs by the supervisor or experimenter. Thus the feedback consisted of self-monitoring, using wrist-counters and graphs, and supervisor recognition of the self-monitoring behavior. This participative management program resulted in significant increases in the percentage of interactions on all three modules. This program was rated as a highly desirable method of change by staff.

Parsons, Schepis, Reid, McCarn, and Green (1987) applied a staff management program to improve the functional utility of educational services in four schools for severely handicapped persons. The program consisted of three components: (1) an instructional inservice, (2) supervisory prompting, and (3) feedback from the principal. The feedback concerned the number of functionally useful tasks in which the students were engaged. There was a 62% increase in the number of functional tasks in which the students engaged across the four schools.
Page, Christian, Iwata, Reid, Crow, and Dorsey (1981) conducted a workshop to improve written goals and objectives on client programs at a residential facility for developmentally-disabled persons. The workshop included handouts, discussions, written exercises, and unit mastery quizzes. Feedback was an implicit component of the workshop since staff received information regarding their performance through discussion and correction of their written work. All of the 20 professional staff improved the quality of goals and objectives following the workshop. High levels of performance were maintained for at least three months after the workshop.

Several aspects of the feedback utilized in the above studies may merit consideration in the future: (a) amount of responsibility staff had for their accomplishments, (b) whether staff monitored their own performance, (c) the level of participation in the development of the feedback system undertaken by staff, and (d) the time delay between the performance and the feedback. Although these aspects were not delineated by Balcazar et al. (1986), they may have played a role in the effectiveness of the feedback.

The above studies also indicated staff performance can be improved with interventions which include feedback as one component. Another component frequently used in these interventions was some form of instructions such as an instructional memo or training. The next group of studies reviewed below compared the effectiveness of feedback with instructions.
Feedback Compared with Instructions

An early study conducted by Quilitch (1975) at a state mental health institute, compared the effectiveness of three methods of intervention in terms of the daily number of active residents. The methods were: (1) sending memos which instructed staff to lead daily recreational activities, (2) providing workshops to teach staff how to lead recreational activities, and (3) publicly posting the daily average number of active residents on each ward. Whereas the first two methods constituted instructions, the third is a frequently used form of performance feedback. Only the third condition produced significant increases in the daily number of active residents.

Shook, Johnson, and Uhlman (1978) compared instructions, group feedback, individual feedback, and social approval on staff performance at a center for multihandicapped students. The effectiveness of each method was measured in terms of the number of graphs maintained by paraprofessional staff. Although the two feedback methods which utilized publicly posted data were both more effective than the instructions, the addition of social praise to these two feedback methods resulted in the greatest improvement over baseline conditions. Also, individual feedback was found to be more effective than group feedback.

The studies by Quilitch (1975) and Shook et al. (1978) suggested that instructions plus feedback may be more effective than instructions alone in improving staff performance. Additionally, research showed that the
results of these efforts can be improved with systematic recognition of improvements in performance. This is the same as the finding by Balcazar et al. (1986) that supervisors were associated with more consistent effects than other sources. A third group of studies reviewed below examined the use of feedback without instructions under a variety of conditions.

Feedback Used Alone

Kreitner, Reif, and Morris (1977) studied the effectiveness of feedback on the work performance of mental health technicians in an adult psychiatric treatment unit of a hospital. The targeted work performance items included: (a) conducting and completing group therapy sessions, (b) conducting and completing individual therapy sessions, and (c) completing assigned daily tasks. Feedback consisted of publicly posting a memo which gave the frequency of each of three work performance items for each technician the previous week. There was no formal announcement regarding the posting of the performance data. Results indicated that there were marked improvements for all eight technicians across all three of the targeted items. Additionally, there also was less conflict among staff regarding job assignments, and complaints directed toward the shift supervisor decreased after the feedback component was in place.

In a residential program for the mentally retarded, Quilitch (1978) used feedback to increase the number of
employee suggestions to solve organizational problems submitted in writing. The feedback consisted of publicly posting each suggestion along with the supervisor's reply. The intervention resulted in an increase in the rate of written suggestions submitted by staff. A staff satisfaction survey indicated that 98% of the staff recommended the procedure be continued.

Hutchinson, Jarman, and Bailey (1980) used a feedback system to improve staff performance during habilitation team meetings in a state residential institution for handicapped clients. Three measures of staff performance were publicly posted on a weekly basis: (1) the number of staff members in attendance at meetings, (2) the number of agenda items completed, and (3) the percentage of agenda items completed. Thus, except in the case in which only one staff member was present during a meeting, all three performance measures consisted of group data. There was a significant increase in performance on all three variables as a result of the public posting of the performance data.

Used alone, feedback was shown to be an effective method of improving staff performance in a variety of areas: (a) facilitation of group therapy sessions, (b) submission of suggestions, (c) attendance at meetings, and (d) completion of meeting agenda items. In addition, feedback was shown to be effective with both individual and group data. The next group of studies reviewed below investigated the role of the supervisor in the recognition process.
Different Forms of Feedback Compared

Some studies have investigated more closely the role of supervisor recognition or praise in feedback procedures. One of these, conducted by Prue, Krapfl, Noah, Cannon, and Maley (1980) in a state psychiatric hospital, utilized three different methods of presenting group data: (1) computer printouts of previous week and year-to-date summaries on 13 indices of treatment activity given to the team coordinator of each unit, (2) a formal meeting between the clinical director of the hospital and the coordinator of each unit, and (3) a public display of three of the 13 indices of treatment activity for each unit. The indices displayed were (a) number of hours of staff time devoted to treatment, (b) number of hours of client participation in treatment, and (c) number of programs meeting stated criteria. These three measures were the dependent variables of the study. Overall, there were large increases in each dependent measure during all three feedback conditions. Although some differential effects were suggested, it was not clear which of the three forms of feedback was the most effective.

Frederiksen, Richter, Johnson, and Solomon (1982) used feedback to decrease four types of charting errors made by therapists in a training facility for graduate students. The four types of errors were: (1) status, (2) completeness, (3) format, and (4) signature. Feedback consisted of the facility supervisor stating the name of each therapist and the number of each type of charting error.
made during the week at a staff meeting. Essentially, this type of feedback involved supervisor recognition. Results showed that only the types of errors commented on at the weekly staff meetings decreased, thus suggesting feedback specificity. In other words, feedback changed only the behaviors for which it was provided; it did not have an effect on other similar behaviors.

Brown, Willis, and Reid (1981) sought to decrease off-task activities of direct care staff and to increase the amount of staff-client interaction in a residential facility for multihandicapped persons. Two forms of feedback were employed: (1) information consisting of a description of the behavior observed by the supervisor provided immediately to the staff person engaged in the behavior, and (2) the same information stated to the staff along with approval statements. Although there was a consistent decrease in off-task behaviors for both feedback conditions, the amount of interaction between staff and clients did not increase significantly until approval statements were added to the information. This suggests that not only is the recognition of appropriate performance by a supervisor important for creating improvement, but some form of praise may be important as well.

Richman, Riordan, Reis, Pyles, and Bailey (1988) studied the effectiveness of self-monitoring and supervisor feedback in improving performance of direct care staff at a residential setting for the developmentally disabled. Performance was defined by (a) the number of times staff
were on schedule, and (b) the number of times staff were on task. The self-monitoring consisted of each staff initial­ing a card with their schedule and commenting briefly if they were unable to follow it. Supervisor feedback in­volved a supervisor commenting to staff if on-schedule and on-task behavior were observed. The supervisor also pro­vided either corrective remarks or praise depending on the staff person’s adherence to the scheduled activities for the day. When used alone, the self-monitoring procedure did not consistently improve performance for five of the ten subjects; however, the addition of supervisor recognition resulted in greater consistency in increases in the target behaviors.

Although the studies by Prue et al. (1980) and Frederiksen et al. (1982) utilized supervisor recognition, neither study provided clear evidence that the addition of supervisor recognition increased the effectiveness of feedback. The studies by Brown et al. (1981) and Richman et al. (1988) however suggested that the effectiveness of feedback on improving staff performance was increased with the addition of supervisor recognition.

The Present Study

The present study investigated the effectiveness of two frequently used forms of feedback in improving the work performance of professional staff: (1) public posting of performance data, and (2) supervisor recognition of performance. The study was conducted on seven continuing care
units of a state psychiatric hospital. Professional staff performance was targeted for change. The performance of interest was compliance with state and hospital standards for written patient treatment plans. Compliance was measured in terms of the percentage of successful performance on 11 indices of treatment plan quality.

Since treatment plans were written by treatment teams rather than individual staff, both the target behavior and the content of the feedback consisted of group performance data. Graphs were used along with a list of the performance levels depicted in the public posting condition, while only a list of the performance levels with comments about improved performance were used in the supervisor recognition condition.

The present study contributes to the research literature in two ways: (1) it extends existing technology to professional staff performance, and (2) compares the effects on performance of two frequently used forms of feedback.
CHAPTER II

METHOD

Setting

A large regional psychiatric hospital serving approximately 560 patients at the time of the study was the setting. There were twelve continuing care units at the hospital, seven of which were selected for this study by the Program Development Director, who served as the liaison between the hospital administration and the researcher. The seven units were chosen on the basis of three criteria: (1) treatment team members would be available for training, (2) other research studies were not being conducted at the same time, and (3) a significant percentage of the treatment plans written by staff on these units had been found to be out of compliance with hospital and state standards. At the time of the study, the hospital was under court order to improve several existing conditions including (a) staff training, (b) patient treatment plans, and (c) patient progress notes.

Subjects

The professional staff on each of seven treatment teams assigned to seven continuing care units of a large regional psychiatric hospital served as subjects.
During the time of the study, each team included a psychiatrist, a general physician, a nursing supervisor, three to five nurses, one or two social workers, a psychologist, two or three activity therapists, and a residential care aide. These staff all wrote treatment plans, with the exception of the psychiatrist who served as the team supervisor, the general physician who attended to the medical needs of the patients, and the residential care aide. Although a single treatment plan was written by only one of the staff during meetings, everyone on the treatment team contributed to its development and shared in its implementation. Thus, each of the seven teams was considered a single entity for purposes of the study. All data were group data and individual performance was not recorded.

Treatment Plans

The focus of this study was on the patient treatment plans. At the time of the study it was reported that the standards for writing the treatment plans were not being followed closely. Furthermore, lack of observable and measurable descriptions of patient behavior in the treatment plans frequently led to confusion among the residential care aides, whose job it was to carry out many of the treatment activities. Also, according to professional staff, little or no feedback regarding the manner in which treatment plans were written was provided to them by supervisors.
Treatment Plan Contents

During the period in which the study was conducted, every treatment plan contained: (a) background information on the patient, (b) the patient's condition upon admission, (c) the reason for admission, (c) the patient's strengths, (d) the patient's clinical needs, (e) goals to address the clinical needs, (f) plans to meet the goals, (g) names of staff members contributing to the development of the treatment plan, and (h) the date the plan was developed. Although the format for the treatment plans often varied among units, all plans contained the same general information. Some plans also included a prognosis and the rationale for the treatment chosen.

Treatment Plan Schedule

At the time of the study, treatment plans were written every two weeks for the initial two months of hospitalization. Then, for the next 90 days, plans were written once each month. After the 90-day period, plans were written every 90 days. Although the policy was to rewrite the plans, they were usually only slightly modified. The original plans were kept in the Medical Records Department, while copies of the plans were kept in casebooks located on each unit and accessible to all staff members on that unit.

Treatment Plan Copies

For the purpose of this study, a second copy of each
treatment plan was made by the Medical Records Department and delivered to the Program Development Director. A graduate assistant working in the Program Development Department deleted all identifying information such as names of units, names of patients, and names of staff members. The assistant then numerically coded each treatment plan before giving it to the researcher. The seven units were numbered 1 to 7 for the purpose of the study. Plans written on unit 1 were then labeled 101, 102, 103, and so forth. Plans written on the other units were labeled in a similar fashion.

Standards

Four sources of standards for writing treatment plans were used at the hospital at the time of the study: (1) Michigan Department of Mental Health Administrative Rule R330.7199 (Appendix A), (2) a hospital policy which interpreted and explained R330.7199 (Appendix B), (3) a hospital protocol for developing a multidisciplinary treatment plan (Appendix C), and (4) a manual on writing goals and objectives (Coleman, 1988). The four sources had been given to employees during orientation when they were first hired.

Independent Variable

The independent variable consisted of two forms of performance feedback: (1) public posting, and (2) supervisor recognition. The public posting condition, described in detail in the procedures section, consisted of posting a
graph in public view on a unit depicting performance on 11 indicators derived from the four sources of standards for a single week. The performance depicted in the graph was called the Percentage of Successful Performance. A new graph was posted each week. The Percentage of Successful Performance for the current week was depicted on the graph along with that of the previous week (Appendix D). The supervisor recognition condition consisted of presentation of the same information without a graph to staff in the form of a weekly memo. Additionally, the memo described changes in Percentage of Successful Performance, and improvement in performance was circled in red ink and labeled as “good,” “great,” or “excellent” depending on the degree of improvement (Appendix E).

Experimental Design

A multiple baseline design across treatment units was used. The order and time of introduction of the conditions varied. Two of the four units received the public posting condition, while the other two received the supervisor recognition condition. The remaining three units served as controls and did not receive either type of feedback. Treatment plans were scored every week for all seven units involved in the study for a period of 24 weeks. The sequence of introduction of the conditions is depicted in Figure 1.
Figure 1. Experimental Design.
Figure 1—Continued

Unit 5

Unit 6

Unit 7

PERCENTAGE OF SUCCESSFUL PERFORMANCE ON INDICATOR

WEEKS

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Indicators of Successful Performance

The study focused on the goal and plan statements of the treatment plans. These were identified as important by the Program Development Director. Eleven indicators of successful performance were developed using the four sources of standards previously mentioned. Six of the indicators applied to the goal statements, whereas five applied to the plan statements. The indicators included:

1. contained an observable verb in goal section,
2. referred to client behavior in goal section,
3. frequency of occurrence given in goal section,
4. duration of a single occurrence given in goal section,
5. duration of a complete task given in goal section,
6. the month and year included in goal section,
7. contained an observable verb in plan section,
8. statement referred to staff behavior in plan section,
9. frequency of occurrence given in plan section,
10. duration of a single occurrence given in plan section,
11. time of occurrence given in plan section.

Each statement written in the treatment plan was considered a separate unit of patient or staff behavior. Each statement was labeled by the observers as they scored the treatment plans. Statements contained in the first sentence of a treatment plan were labeled as 1a, 1b, and 1c. Statements contained in the second sentence of a treatment plan were labeled 2a, 2b, and 2c. If a sentence in the treatment plan contained more than three separate units of patient or staff behavior, observers disregarded the 4th, 5th, etc. units (Appendix F). Up to seven sentences
concerning client behavior and seven sentences concerning
staff behavior were scored.

Two forms were used in the scoring of the treatment plans. The Treatment Plan Score Sheet was used by the observers to record their answers to the 11 indicators (Appendix G). The summary data from the Treatment Plan Score Sheets were transferred to the Successful Performance Score Sheet for each unit every week (Appendix H).

Percentage of Successful Performance Calculation

The Percentage of Successful Performance was computed every week for each of the seven units for all 11 indicators using the following formula:

\[
\text{Percentage of Successful Performance} = \frac{\text{# of yes responses}}{\text{# yes responses} + \text{# no responses}} \times 100
\]

The number of yes responses was the number of yes responses for an indicator on all treatment plans written on a unit during a specific week and scored by the observers. Thus the sum of yes responses and no responses produced the total number of responses for an indicator on all treatment plans written on a unit during a specific week and scored by the observers. For each of the seven units participating in the study, the Percentage of Successful Performance for all 11 indicators was computed each week for 24 weeks.
Observation System

There were four components of the observation system: (1) observer selection and training, (2) training manual development, (3) scoring of the treatment plans, and (4) determination of reliability. Throughout the observation and scoring process, confidentiality of both patients described in the treatment plans and staff participating in the study was protected by the Program Development Director who insured all identifying information was deleted from the treatment plans before they were given to the researcher or the observers. Furthermore, the posting of information and sending of memos was undertaken by a staff member in the Education and Training Department so that the researcher would not have access to the names of the units or the staff members.

Observer Selection and Training

Four undergraduate psychology students paid through a college work-study program were selected as the main observers while two staff from the Education and Training Department were selected as the reliability observers. All observers were trained using an early version of the manual which was later revised and used for the staff training (Mencarelli, 1988). Observers were required to score at least five sample treatment plans with 100% accuracy before scoring plans used in the study.
The training manual and scoring system were developed over a six month period by the researcher with assistance from the hospital staff. Three psychology instructors with a background in treatment documentation served as expert judges. Supervisors from the Psychiatry, Psychology, Nursing, and Social Work Departments at the hospital were consulted and provided valuable assistance during the development process which occurred in eight main steps:

1. A list of sample statements from actual treatment plans was given to the three judges to score as either "in compliance" or "not in compliance" with the eleven indicators listed previously.

2. Statements scored the same by all three judges were selected as being representative of either examples or nonexamples of the indicators.

3. The judges then scored actual treatment plans according to the examples and nonexamples of the eleven indicators.

4. Differences in scoring were discussed with the instructors until agreement could be reached. The researcher recorded the criteria used.

5. Further examples and nonexamples of each indicator were developed by the researcher using the criteria and samples from actual treatment plans.

6. The additional examples and nonexamples, along with an explanation of each indicator, were incorporated into the first draft of a training manual.
7. The first draft of the training manual was given to the supervisors at the hospital for additional comments and suggestions.

8. A second draft of the training manual was written. This was edited by the Director of Program Development. A final draft was written and printed by the hospital's Printing Department to use in training staff in the study.

Scoring of Treatment Plans

Observers began scoring treatment plans after working through the training manual as well as some additional material developed by the researcher which explained how to divide sentences on the treatment plan into statements expressing a single client or staff behavior (Appendix F). For each of the 11 indicators, observers marked either (+) for yes or (-) for no on the Treatment Plan Score Sheet (Appendix G). The total number of yes responses and the total number of yes and no responses were written on the score sheet. These two totals were used to compute the Percentage of Successful Performance for each indicator every week.

Determination of Reliability

The two staff persons from the Education and Training Department who served as reliability observers scored a minimum of 25% of all the treatment plans scored by the main observers. Reliability was computed for every unit on a weekly basis throughout all phases of the study. Point-
by-point agreement ratio was the method used to compute reliability (Kazdin, 1982). The formula used consisted of:

\[
\text{Percentage Agreement} = \frac{\text{# of agreements}}{\text{# of agreements} + \text{# of disagreements}} \times 100
\]

An agreement was defined as the same response (yes or no) to each individual indicator for a single statement by both observers. The Reliability Score Sheet (Appendix J) was used to record agreements and disagreements. The percentage of agreement was computed for each pair of treatment plans scored by both a main observer and a reliability observer. An average percentage of agreement was then computed for each unit every week.

Procedures

The intervention included three components: (1) baseline, (2) public posting, and (3) supervisor recognition. Units 1 and 3 received the public posting condition, units 2 and 4 the supervisor recognition condition, and units 5, 6, and 7 served as controls and were exposed only to baseline (not feedback) conditions.

Baseline

The baseline condition was initiated when 164 staff persons throughout the hospital attended a day long workshop. The workshop included: (a) a talk by the Hospital Director on upcoming changes, (b) reports by various com-
mittees at the hospital, (c) short talks by invited speakers, and (d) a two-hour session covering the writing of treatment plans in observable and measurable terms. The training manual developed by the researcher was used at this time (Mencarelli, 1988).

There were six components of the two-hour training session: (1) an overview of the issue of observability and measurability given by the Program Development Director, (2) a pretest over the material to be covered (Appendix J), (3) a brief explanation of a topic in the training manual, (4) time for staff to work through the exercises in the manual, (5) a question and answer period, and (6) a posttest over the material (Appendix J). The pretest (Form A) and posttest (Form B) were alternate forms of the same test and similar in syntax, grammar, and clinical problems.

At the end of the day, evaluation forms of the workshop were distributed to participants (Appendix K). Three of the questions on the form pertained to the two-hour session: (1) Was the manual helpful?, (2) Was the presentation helpful?, and (3) Do you plan to use the material in your work?

Two months after the workshop, observers began scoring the treatment plans. At the same time, each staff person on the seven units in the study received a written memorandum from the Hospital Director (Appendix L). The memorandum stated that the treatment plans needed to be written according to hospital guidelines. Several items were included: (a) a copy of the hospital policy regarding
treatment plans (Appendix B), (b) a copy of the hospital protocol for the development the multidisciplinary treatment plan (Appendix C), (c) an acknowledgement form for staff to sign and return stating that the memorandum and the two documents had been received, and (d) a form for staff members to write down any questions they had regarding the standards, training manual, hospital policy, or hospital protocol. These forms were returned to the Program Development Director who later answered any questions during treatment team meetings.

Public Posting

Staff members received another memorandum from the Hospital Director stating that graphs depicting their performance would be posted on their units along with a sample graph and the 11 indicators of successful performance (Appendix M). Shortly thereafter, graphs along with a list of the Percentages of Successful Performance for each of the 11 indicators were posted on units 1 and 3 in accord with the multiple baseline design. Additionally, the Percentage of Successful Performance from the previous week and the differences between the two weeks for the 11 indicators were also posted. The graphs and lists were posted on the units in a location frequently viewed by staff members.

In accord with the multiple baseline design, there was lag of five weeks between the introduction of the public posting condition on units 1 and 3. The public posting
condition was introduced to unit 1 after 14 weeks of baseline and to unit 3 after 19 weeks of baseline. The public posting condition lasted 10 weeks on the first unit and 5 on the second.

Supervisor Recognition

Each staff person received a list of the Percentage of Successful Performance for the 11 indicators for the week, for the previous week, and the differences between the two weeks. This list was sent in the form of a memorandum from the Hospital Director (Appendix E). Unique to the supervisor recognition condition were comments regarding the differences that indicated improvement in performance from the previous week. Differences over 10% were circled in red ink and labeled "good" if between 10% and 20%, "great" if between 21% and 30%, and "excellent" if 31% or greater.

Units 2 and 4 received the supervisor recognition condition. The intervention began after 14 weeks of baseline on unit 2 and lasted 10 weeks. It began after 19 weeks of baseline on unit 4 and lasted 5 weeks.

Control

Units 5, 6, and 7 served as control units. Staff on these units had attended the workshop and received the first memorandum from the Hospital Director instructing them to write the treatment plans according to hospital guidelines along with the hospital policy, the hospital protocol, the acknowledgement form, and the question form.
The Program Development Director answered questions during treatment team meetings in the same manner as was done for units 1, 2, 3, and 4. No further instructions were given. No feedback regarding performance on the 11 indicators was given. However, observers scored treatment plans every week for the same 24-week period. This condition is simply referred to as baseline in the study.

Social Validation Survey

At the conclusion of the study, approximately 100 staff members on the seven units were asked to complete a Social Validation Survey (Appendix N). The first four questions on the survey concerned whether or not staff came into contact with the feedback. The second four questions regarded several key issues: (a) helpfulness of feedback, (b) continuation of feedback, (c) discussion of feedback among treatment team members, and (d) need for additional feedback. A final question asked for comments and suggestions regarding the feedback delivery system. Staff were requested to return the survey to the Director of Program Development.
CHAPTER III

RESULTS

Workshop

The workshop was given on two consecutive days in order to accommodate 164 staff persons. Pretest and posttest data were obtained for 122 staff persons rather than 164 since not all staff returned both the pretest and the posttest answer sheets. Evaluations of the workshop experience were returned by 133 staff.

Pretest and Posttest

All staff participating in the two-hour training session on writing statements in observable and measurable terms were given alternate forms of a test (Appendix K). Form A was used as the pretest and Form B was used as the posttest. Five skills were tested: (1) identification of observable verbs, (2) identification of clear expectations, (3) identification of frequency terms, (4) identification of duration terms, and (5) writing statements using observable verbs, measurable terms, and an achievement date. Only questions covering the first, third, and fourth skill areas were scored. The highest possible score for both the pretest and posttest was twenty. The mean score for the pretest was 7.65 with a standard deviation of 4.16. The
mean score for the posttest was 14.76 with a standard deviation of 3.07. A correlated t test for dependent observations was computed; a one-tailed t test was used since it was assumed that posttest scores would be higher than pretest scores (Hopkins & Glass, 1978). The posttest mean was significantly greater than the pretest mean (t=14.22, df=111, p < .025).

Workshop Evaluation Results

There were three items on the evaluation form pertaining to the training: (1) helpfulness of the manual, (2) helpfulness of the presentation, and (3) plan to use material in work. Staff were instructed to rate the first two items on a 5-point scale from 1=very helpful to 6=not helpful. For the third item, the choice of responses was yes or no. The results given in Table 1 indicate that near two-thirds of staff responded with 1 or 2 on the 6-point scale to both the manual and the presentation. Furthermore, 90% of staff indicated that they planned to use the material in their work.

Percentage of Successful Performance

Percentage of Successful Performance was computed every week for each of the seven units for a period of 24 weeks. The means for each of the seven units for each condition are presented in Table 2. Also included are the differences between baseline and feedback means. An improvement in performance from baseline to feedback is indicated by a positive
(+ ) difference. Deterioration in performance from baseline to feedback is indicated by a negative (-) difference. Average means for each condition were also computed across the 11 indicators. Using these averages, overall differences between baseline and feedback conditions for each of the 11 indicators were determined.

Table 1
Distribution of Responses on Workshop Evaluation Form

<table>
<thead>
<tr>
<th></th>
<th>Very Helpful</th>
<th>Not Helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Manual Helpful</td>
<td>28%</td>
<td>40%</td>
</tr>
<tr>
<td>Presentation Helpful</td>
<td>21%</td>
<td>44%</td>
</tr>
<tr>
<td>Plan to Use in work</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>90%</td>
<td>10%</td>
</tr>
</tbody>
</table>

As shown in Table 2, there was considerable difference among the indicators in mean Percentage of Successful Performance scores. The lowest mean (2.00) occurred for indicator 4 (duration of a single occurrence given in goal section) on unit 2 during baseline. The highest mean (100.00) occurred for indicator 2 (referred to client behavior in goal section) on unit 1 during public posting as well as for indicator 8 (referred to staff behavior in plan section) on unit 4 during supervisor recognition. Average
Table 2

Mean Percentage of Successful Performance for Indicators for Baseline (BL), Public Posting (PP) and Supervisor Recognition (SR) Phases

<table>
<thead>
<tr>
<th>Statements in the Goal Section</th>
<th>1 Observe Verb</th>
<th>2 Client Behavior</th>
<th>Frequency</th>
<th>3 Duration Single</th>
<th>4 Duration Complete</th>
<th>5 Month Year</th>
<th>6</th>
<th>7 Observe Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>47.64</td>
<td>98.43</td>
<td>21.71</td>
<td>3.64</td>
<td>10.93</td>
<td>27.20</td>
<td></td>
<td>3.1</td>
</tr>
<tr>
<td>PP</td>
<td>42.70</td>
<td>100.00</td>
<td>38.60</td>
<td>3.00</td>
<td>4.60</td>
<td>71.40</td>
<td></td>
<td>5.4</td>
</tr>
<tr>
<td>Diff</td>
<td>-4.90</td>
<td>+1.57</td>
<td>+16.89</td>
<td>-0.64</td>
<td>-6.33</td>
<td>+44.20</td>
<td></td>
<td>+2.2</td>
</tr>
<tr>
<td>Unit 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>29.14</td>
<td>95.93</td>
<td>12.78</td>
<td>2.00</td>
<td>6.93</td>
<td>46.21</td>
<td></td>
<td>13.73</td>
</tr>
<tr>
<td>SR</td>
<td>35.67</td>
<td>99.00</td>
<td>22.78</td>
<td>4.11</td>
<td>10.33</td>
<td>73.78</td>
<td></td>
<td>14.41</td>
</tr>
<tr>
<td>Diff</td>
<td>+6.53</td>
<td>+3.07</td>
<td>+10.00</td>
<td>+2.11</td>
<td>+3.40</td>
<td>+27.57</td>
<td></td>
<td>+0.60</td>
</tr>
<tr>
<td>Unit 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>37.47</td>
<td>97.95</td>
<td>21.89</td>
<td>5.33</td>
<td>8.95</td>
<td>69.63</td>
<td></td>
<td>15.73</td>
</tr>
<tr>
<td>PP</td>
<td>35.40</td>
<td>99.20</td>
<td>39.60</td>
<td>3.80</td>
<td>2.20</td>
<td>68.60</td>
<td></td>
<td>17.60</td>
</tr>
<tr>
<td>Diff</td>
<td>-2.07</td>
<td>+1.25</td>
<td>+17.71</td>
<td>-1.73</td>
<td>-6.75</td>
<td>-1.03</td>
<td></td>
<td>+1.86</td>
</tr>
<tr>
<td>Unit 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>32.89</td>
<td>96.21</td>
<td>23.16</td>
<td>4.10</td>
<td>6.73</td>
<td>78.16</td>
<td></td>
<td>20.58</td>
</tr>
<tr>
<td>SR</td>
<td>33.50</td>
<td>100.00</td>
<td>34.00</td>
<td>5.75</td>
<td>9.25</td>
<td>94.75</td>
<td></td>
<td>19.25</td>
</tr>
<tr>
<td>Diff</td>
<td>+0.64</td>
<td>+3.79</td>
<td>+10.84</td>
<td>+1.65</td>
<td>+2.88</td>
<td>+16.59</td>
<td></td>
<td>-1.33</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 2 of Successful Performance for the Eleven
or Baseline (BL), Public Posting (PP),
ervisor Recognition (SR) Phases

<table>
<thead>
<tr>
<th></th>
<th>5 Duration Complete</th>
<th>6 Month Year</th>
<th>7 Observe Verb</th>
<th>8 Staff Behavior</th>
<th>9 Frequency</th>
<th>10 Duration Complete</th>
<th>11 Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe</td>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.93</td>
<td>27.20</td>
<td>3.14</td>
<td>98.20</td>
<td>26.78</td>
<td>14.07</td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>4.60</td>
<td>71.40</td>
<td>5.40</td>
<td>94.70</td>
<td>34.10</td>
<td>20.00</td>
<td>6.60</td>
<td></td>
</tr>
<tr>
<td>-6.33</td>
<td>+44.20</td>
<td>+2.26</td>
<td>-3.58</td>
<td>+7.32</td>
<td>+5.93</td>
<td>+3.82</td>
<td></td>
</tr>
<tr>
<td>6.93</td>
<td>46.21</td>
<td>13.78</td>
<td>91.71</td>
<td>38.07</td>
<td>16.28</td>
<td>7.43</td>
<td></td>
</tr>
<tr>
<td>10.33</td>
<td>73.78</td>
<td>14.44</td>
<td>98.11</td>
<td>34.55</td>
<td>18.00</td>
<td>6.55</td>
<td></td>
</tr>
<tr>
<td>+3.40</td>
<td>+27.57</td>
<td>+0.66</td>
<td>+6.40</td>
<td>-3.52</td>
<td>+1.72</td>
<td>-0.88</td>
<td></td>
</tr>
<tr>
<td>8.95</td>
<td>69.63</td>
<td>15.74</td>
<td>98.58</td>
<td>51.26</td>
<td>27.89</td>
<td>8.42</td>
<td></td>
</tr>
<tr>
<td>2.20</td>
<td>68.60</td>
<td>17.60</td>
<td>99.40</td>
<td>49.40</td>
<td>25.40</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>-6.75</td>
<td>-1.03</td>
<td>+1.86</td>
<td>+0.82</td>
<td>-1.86</td>
<td>-2.49</td>
<td>-0.42</td>
<td></td>
</tr>
<tr>
<td>6.73</td>
<td>78.16</td>
<td>20.58</td>
<td>98.89</td>
<td>37.16</td>
<td>19.53</td>
<td>7.95</td>
<td></td>
</tr>
<tr>
<td>9.25</td>
<td>94.75</td>
<td>19.25</td>
<td>100.00</td>
<td>41.25</td>
<td>20.25</td>
<td>8.50</td>
<td></td>
</tr>
<tr>
<td>+2.88</td>
<td>+16.59</td>
<td>-1.33</td>
<td>+1.11</td>
<td>+4.09</td>
<td>+0.72</td>
<td>+0.55</td>
<td></td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 2--Continued

<table>
<thead>
<tr>
<th></th>
<th>1 Observe Verb</th>
<th>2 Client Behavior</th>
<th>3 Frequency</th>
<th>4 Duration Single</th>
<th>5 Duration Complete</th>
<th>6 Month Year</th>
<th>7 Observe Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>41.46</td>
<td>99.54</td>
<td>31.21</td>
<td>5.87</td>
<td>6.92</td>
<td>73.62</td>
<td>17.87</td>
</tr>
<tr>
<td><strong>Unit 6</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>38.24</td>
<td>97.90</td>
<td>30.28</td>
<td>4.09</td>
<td>38.71</td>
<td>21.43</td>
<td>20.00</td>
</tr>
<tr>
<td><strong>Unit 7</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>19.09</td>
<td>97.67</td>
<td>24.14</td>
<td>2.43</td>
<td>6.90</td>
<td>66.09</td>
<td>22.38</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>35.15</td>
<td>97.66</td>
<td>23.59</td>
<td>3.95</td>
<td>12.24</td>
<td>54.62</td>
<td>16.21</td>
</tr>
<tr>
<td>PP</td>
<td>39.05</td>
<td>99.60</td>
<td>39.10</td>
<td>3.40</td>
<td>3.40</td>
<td>70.00</td>
<td>11.50</td>
</tr>
<tr>
<td>SR</td>
<td>34.58</td>
<td>99.50</td>
<td>28.39</td>
<td>4.93</td>
<td>9.79</td>
<td>84.26</td>
<td>16.84</td>
</tr>
<tr>
<td><strong>Diff</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PP-BL</td>
<td>+3.90</td>
<td>+1.94</td>
<td>+5.51</td>
<td>-0.55</td>
<td>-8.84</td>
<td>+15.38</td>
<td>-4.71</td>
</tr>
<tr>
<td>SR-BL</td>
<td>-0.57</td>
<td>+1.84</td>
<td>+4.80</td>
<td>+0.98</td>
<td>-2.54</td>
<td>+29.64</td>
<td>+0.63</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>Ion</th>
<th>5 Duration Complete</th>
<th>6 Month Year</th>
<th>7 Observe Verb</th>
<th>8 Staff Behavior</th>
<th>9 Frequency</th>
<th>10 Duration Complete</th>
<th>11 Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.92</td>
<td>73.62</td>
<td>17.87</td>
<td>96.75</td>
<td>47.21</td>
<td>28.71</td>
<td>8.50</td>
<td></td>
</tr>
<tr>
<td>38.71</td>
<td>21.43</td>
<td>20.00</td>
<td>96.81</td>
<td>43.09</td>
<td>28.62</td>
<td>8.71</td>
<td></td>
</tr>
<tr>
<td>6.90</td>
<td>66.09</td>
<td>22.38</td>
<td>98.81</td>
<td>25.43</td>
<td>10.86</td>
<td>6.71</td>
<td></td>
</tr>
<tr>
<td>12.24</td>
<td>54.62</td>
<td>16.21</td>
<td>97.12</td>
<td>38.43</td>
<td>20.85</td>
<td>7.21</td>
<td></td>
</tr>
<tr>
<td>3.40</td>
<td>70.00</td>
<td>11.50</td>
<td>97.05</td>
<td>41.75</td>
<td>22.70</td>
<td>7.30</td>
<td></td>
</tr>
<tr>
<td>9.79</td>
<td>84.26</td>
<td>16.84</td>
<td>99.05</td>
<td>37.90</td>
<td>19.12</td>
<td>7.52</td>
<td></td>
</tr>
<tr>
<td>-8.84</td>
<td>+15.38</td>
<td>-4.71</td>
<td>-0.07</td>
<td>+3.32</td>
<td>+1.85</td>
<td>+0.09</td>
<td></td>
</tr>
<tr>
<td>-2.54</td>
<td>+29.64</td>
<td>+0.63</td>
<td>+1.93</td>
<td>-0.53</td>
<td>+1.73</td>
<td>+0.31</td>
<td></td>
</tr>
</tbody>
</table>
mean scores for baseline ranged from 3.95 for indicator 4 (duration of a single occurrence given in goal section) to 97.66 for indicator 2 (referred to client behavior in goal section). Average mean scores for public posting ranged from 3.40 for indicator 4 (duration of a single occurrence given in goal section) and indicator 5 (duration of a complete task given in goal section) to 99.60 for indicator 2 (referred to client behavior in goal section). Average mean scores for supervisor recognition ranged from 4.93 for indicator 4 (duration of a single occurrence given in goal section) to 99.50 for indicator 2 (referred to client behavior in goal section).

There also was a great deal of variation among the indicators in differences between average baseline and feedback means. The smallest difference (-0.07) occurred between baseline and public posting for indicator 8 (referred to staff behavior in plan section). The largest difference (+29.64) occurred between baseline and supervisor recognition for indicator 6 (the month and year included in goal section). A breakdown of the results by indicator follows in the next section after the standard deviation scores are briefly discussed.

Standard deviation scores corresponding to the means are presented in Table 3. Average standard deviations during each condition were also computed. As with the means, considerable differences occurred across the indicators. The least amount of variability (0.00) occurred for indicator 8 (referred to staff behavior in plan section) during
Table 3

Standard Deviations for Mean Percentage of Performance for Baseline (BL), Public Post and Supervisor Recognition (SR) Phases

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Observe Verb</th>
<th>Client Behavior</th>
<th>Frequency</th>
<th>Duration Single</th>
<th>Duration Complete</th>
<th>6 Month</th>
<th>7 Observed Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL</td>
<td>8.83</td>
<td>1.92</td>
<td>8.74</td>
<td>2.38</td>
<td>21.48</td>
<td>22.85</td>
<td>2.69</td>
</tr>
<tr>
<td>PP</td>
<td>8.77</td>
<td>1.32</td>
<td>9.69</td>
<td>3.63</td>
<td>8.76</td>
<td>29.64</td>
<td>4.61</td>
</tr>
<tr>
<td>Unit 2</td>
<td>Observe Verb</td>
<td>Client Behavior</td>
<td>Frequency</td>
<td>Duration Single</td>
<td>Duration Complete</td>
<td>6 Month</td>
<td>7 Observed Verb</td>
</tr>
<tr>
<td>BL</td>
<td>12.11</td>
<td>6.33</td>
<td>7.96</td>
<td>1.89</td>
<td>11.97</td>
<td>31.87</td>
<td>3.84</td>
</tr>
<tr>
<td>SR</td>
<td>7.19</td>
<td>1.70</td>
<td>8.48</td>
<td>3.60</td>
<td>8.77</td>
<td>34.60</td>
<td>2.50</td>
</tr>
<tr>
<td>Unit 3</td>
<td>Observe Verb</td>
<td>Client Behavior</td>
<td>Frequency</td>
<td>Duration Single</td>
<td>Duration Complete</td>
<td>6 Month</td>
<td>7 Observed Verb</td>
</tr>
<tr>
<td>BL</td>
<td>9.71</td>
<td>4.84</td>
<td>12.25</td>
<td>5.31</td>
<td>9.48</td>
<td>22.74</td>
<td>5.30</td>
</tr>
<tr>
<td>PP</td>
<td>6.65</td>
<td>1.60</td>
<td>14.26</td>
<td>3.19</td>
<td>2.23</td>
<td>18.59</td>
<td>4.32</td>
</tr>
<tr>
<td>Unit 4</td>
<td>Observe Verb</td>
<td>Client Behavior</td>
<td>Frequency</td>
<td>Duration Single</td>
<td>Duration Complete</td>
<td>6 Month</td>
<td>7 Observed Verb</td>
</tr>
<tr>
<td>BL</td>
<td>13.41</td>
<td>14.10</td>
<td>19.70</td>
<td>6.08</td>
<td>18.12</td>
<td>23.56</td>
<td>7.42</td>
</tr>
<tr>
<td>SR</td>
<td>4.03</td>
<td>0.00</td>
<td>7.80</td>
<td>1.64</td>
<td>6.10</td>
<td>3.96</td>
<td>2.28</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 3

Table for Mean Percentage of Successful Baseline (BL), Public Posting (PP), and Supervisor Recognition (SR) Phases

<table>
<thead>
<tr>
<th>11 Section Statements in the Plan Section</th>
<th>5 Duration Complete</th>
<th>6 Month Year</th>
<th>7 Observe Verb</th>
<th>8 Staff Behavior</th>
<th>9 Frequency</th>
<th>10 Duration Complete</th>
<th>11 Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21.48</td>
<td>22.85</td>
<td>2.69</td>
<td>2.22</td>
<td>5.09</td>
<td>5.32</td>
<td>2.57</td>
</tr>
<tr>
<td></td>
<td>8.76</td>
<td>29.64</td>
<td>4.61</td>
<td>4.60</td>
<td>9.08</td>
<td>9.55</td>
<td>3.44</td>
</tr>
<tr>
<td></td>
<td>11.97</td>
<td>31.87</td>
<td>3.84</td>
<td>20.96</td>
<td>5.73</td>
<td>5.40</td>
<td>3.66</td>
</tr>
<tr>
<td></td>
<td>8.77</td>
<td>34.60</td>
<td>2.50</td>
<td>2.18</td>
<td>6.48</td>
<td>2.64</td>
<td>3.27</td>
</tr>
<tr>
<td></td>
<td>9.48</td>
<td>22.74</td>
<td>5.30</td>
<td>1.76</td>
<td>11.61</td>
<td>6.92</td>
<td>3.36</td>
</tr>
<tr>
<td></td>
<td>2.23</td>
<td>18.59</td>
<td>4.32</td>
<td>1.20</td>
<td>10.87</td>
<td>3.44</td>
<td>2.76</td>
</tr>
<tr>
<td></td>
<td>18.12</td>
<td>23.56</td>
<td>7.42</td>
<td>1.83</td>
<td>9.50</td>
<td>5.50</td>
<td>3.30</td>
</tr>
<tr>
<td></td>
<td>6.10</td>
<td>3.96</td>
<td>2.28</td>
<td>0.00</td>
<td>8.95</td>
<td>4.66</td>
<td>2.29</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 3—Continued

<table>
<thead>
<tr>
<th>Statements in the Goal Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Observe Verb</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Unit 5</strong></td>
</tr>
<tr>
<td>BL</td>
</tr>
<tr>
<td><strong>Unit 6</strong></td>
</tr>
<tr>
<td>BL</td>
</tr>
<tr>
<td><strong>Unit 7</strong></td>
</tr>
<tr>
<td>BL</td>
</tr>
<tr>
<td><strong>Average</strong></td>
</tr>
<tr>
<td>BL</td>
</tr>
<tr>
<td>PP</td>
</tr>
<tr>
<td>SR</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>Duration Complete</th>
<th>Month</th>
<th>Year</th>
<th>Observe Verb</th>
<th>Staff Behavior</th>
<th>Frequency</th>
<th>Duration Complete</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.69</td>
<td>20.34</td>
<td>4.59</td>
<td>4.00</td>
<td>7.13</td>
<td>6.36</td>
<td>2.68</td>
<td></td>
</tr>
<tr>
<td>36.29</td>
<td>29.82</td>
<td>12.94</td>
<td>4.83</td>
<td>15.84</td>
<td>12.71</td>
<td>7.51</td>
<td></td>
</tr>
<tr>
<td>8.59</td>
<td>28.72</td>
<td>7.01</td>
<td>1.94</td>
<td>10.26</td>
<td>7.33</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td>16.66</td>
<td>25.70</td>
<td>6.25</td>
<td>5.36</td>
<td>9.31</td>
<td>7.08</td>
<td>3.68</td>
<td></td>
</tr>
<tr>
<td>5.49</td>
<td>24.11</td>
<td>4.46</td>
<td>2.90</td>
<td>9.97</td>
<td>6.49</td>
<td>3.10</td>
<td></td>
</tr>
<tr>
<td>7.43</td>
<td>19.28</td>
<td>2.39</td>
<td>1.09</td>
<td>7.71</td>
<td>3.65</td>
<td>2.78</td>
<td></td>
</tr>
</tbody>
</table>
the supervisor recognition condition. The greatest amount of variability (34.60) occurred for indicator 6 (the month and year included in goal section) during the supervisor recognition condition. Average standard deviations for baseline ranged from 3.68 for indicator 11 (time of occurrence given in plan section) to 25.70 for indicator 6 (the month and year included in goal section). Average standard deviations for public posting ranged from 1.46 for indicator 2 (referred to client behavior in goal section) to 24.11 for indicator 6 (the month and year included in goal section). Average standard deviations for supervisor recognition ranged from 0.85 for indicator 2 (referred to client behavior) to 19.28 for indicator 6 (the month and year included in goal section). Standard deviations are included in next section which is a breakdown of the results by indicator.

Breakdown by Indicator

Because of the considerable differences among the indicators for Percentage of Successful Performance means and corresponding standard deviations, results are broken down by indicator. Data for the 24 weeks are also presented graphically in Figures 2 through 23. Following this breakdown is a further analysis of the Percentage of Successful Performance results.

Indicator 1: Contained an Observable Verbin Goal Section

As depicted in Figure 2, there were no noticeable changes in the low performance levels from baseline to
feedback conditions. Figure 3 shows similar low performance levels for the control units. While variability is moderate for baseline, it appears only slight for the two feedback conditions. The ranges of means were 19.09 to 47.64 for baseline, 35.40 to 42.70 for public posting, and 33.50 to 35.67 for supervisor recognition with average means for each condition of 35.15, 39.05, 34.58 respectively.

Indicator 2: Referred to Client Behavior in Goal Section

Data shown in Figures 4 and 5 indicate a possible ceiling effect occurred. For most of the 24 weeks, performance was at or near to 100% for baseline and both feedback conditions as well as for the control units. Variability was only slight for all conditions. The ranges of means were 95.93 to 99.54 for baseline, 99.20 to 100.00 for public posting, and 99.00 to 100.00 for supervisor recognition. Average means for each condition were 97.66, 99.60, and 99.50, respectively.

Indicator 3: Frequency of Occurrence of Client Behavior Given in Goal Section

Figure 6 shows a small improvement occurred for the public posting condition but not for the supervisor recognition condition. Figure 7 shows lower levels of performance for the baseline condition on unit 5 through 7 than on units 1 through 4. Variability appears moderate for unit 1 through 4 and only slight for units 5 through 7. Means ranged from 12.78 to 31.21 for baseline, 38.60 to 39.60 for
Figure 2. Percentage of Statements Which Contained an Observable Verb in Goal Section Across Weeks During Baseline and Feedback Conditions.

* indicates missing data
Figure 3. Percentage of Statements Which Contained an Observable Verb in Goal Section Across Weeks During Baseline Conditions Only.

* indicates missing data
* indicates missing data

Figure 4. Percentage of Statements Which Referred to Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions.
* indicates missing data

Figure 5. Percentage of Statements Which Referred to Client Behavior in Goal Section Across Weeks During Baseline Conditions Only.
Figure 6. Percentage of Statements Which Gave the Frequency of Occurrence of Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions.
Figure 7. Percentage of Statements Which Gave the Frequency of Occurrence of Client Behavior in Goal Section Across Weeks During Baseline Conditions Only.

* indicates missing data
public posting, and 22.78 to 34.00 for supervisor recognition with respective average means of 23.59, 39.10, and 28.39.

**Indicator 4: Duration of Single Occurrence of Client Behavior Given in Goal Section**

Performance remained at very low levels for baseline and both feedback conditions as Figure 8 depicts. Performance however appears to be at low levels for the baseline condition on all three control units as shown in Figure 9. Variability appears slight for units 1 through 4 and moderate for units 5 through 7. The range of means were 2.00 to 5.87 for baseline, 3.00 to 3.80 for public posting, and 4.11 to 5.75 for supervisor recognition with average means of 3.95, 3.40, and 4.93 respectively.

**Indicator 5: Duration of a Complete Task of Client Behavior Given in Goal Section**

Figure 10 shows no changes in the low performance levels between baseline and both feedback conditions. Control units 5 and 7 have similar low performance levels, however unit 6 has performance levels ranging from 0.00 to 100.00 with a substantial amount of variability. Means ranged from 6.37 to 38.71 for baseline, 2.20 to 4.60 for public posting, and 9.25 to 10.33 for supervisor recognition. The average means were 12.24 for baseline, 3.40 for public posting, and 9.79 for supervisor recognition.
Figure 8. Percentage of Statements Which Gave the Duration of a Single Occurrence of Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions.
PERCENTAGE OF SUCCESSFUL PERFORMANCE ON INDICATOR 4

Unit 5

Unit 6

Unit 7

WEEKS

* indicates missing data

Figure 9. Percentage of Statements Which Gave the Duration of a Single Occurrence of Client Behavior in Goal Section Across Weeks During Baseline Conditions Only.
Figure 10. Percentage of Statements Which Gave the Duration of a Complete Task of Client Behavior in Goal Section Across Weeks During Baseline and Feedback Conditions.

* indicates missing data
* indicates missing data

Figure 11. Percentage of Statements Which Gave the Duration of a Complete Task of Client Behavior in Goal Section Across Weeks During Baseline Conditions Only.
Indicator 6: The Month and Year Included in Goal Section

Substantial variability in performance levels for baseline and both feedback conditions with no clear improvement between conditions is shown in Figure 12. Substantial variability is also found for all three control units as is shown in Figure 13. The range of means were 21.43 to 78.16 for baseline, 68.60 to 71.40 for public posting, and 73.78 to 94.75 for supervisor recognition. Average means were 54.62 for baseline, 70.00 for public posting, and 84.26 for supervisor recognition.

Indicator 7: Contained an Observable Verb in Plan Section

Figure 14 depicts low performance levels for baseline and both feedback conditions with only slight variability. Performance levels appear similarly low for baseline on control units 5 through 7 as Figure 15 depicts. Means ranged from 3.14 to 22.38 during baseline, from 5.40 to 17.60 during public posting, and from 14.44 to 19.25 during supervisor recognition. Average means for each condition were 16.21, 11.50, and 18.84 respectively.

Indicator 8: Referred to Staff Behavior in Plan Section

A possible ceiling effect with only slight variability is shown in Figures 16 and 17 for baseline and both feedback conditions on units 1 through 4 as well as for baseline on units 5 through 7. The range for means during baseline was 91.71 to 98.89, during public posting it was 94.70 to 99.40.
PERCENTAGE OF SUCCESSFUL PERFORMANCE ON INDICATOR 6

Figure 12. Percentage of Statements Which Included the Month and Year in Goal Section Across Weeks During Baseline and Feedback Conditions.

* indicates missing data
* indicates missing data

Figure 13. Percentage of Statements Which Included the Month and Year in Goal Section Across Weeks During Baseline Conditions Only.
Figure 14. Percentage of Statements Which Contained an Observable Verb in Plan Section Across Weeks During Baseline and Feedback Conditions.
* indicates missing data

Figure 15. Percentage of Statements Which Contained an Observable Verb in Plan Section Across Weeks During Baseline Conditions Only.
Figure 16. Percentage of Statements Which Referred to Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions.
Figure 17. Percentage of Statements Which Referred to Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only.

* indicates missing data
and for supervisor recognition it was 98.11 to 100.00. Average means were 97.12 for baseline, 97.05 for public posting, and 99.05 for supervisor recognition.

**Indicator 9: Frequency of Occurrence of Staff Behavior Given in Plan Section**

Figure 18 shows medium levels of performance across all conditions with no evidence of change between baseline and feedback. Likewise, performance was at medium levels for baseline on the control units as shown in Figure 19. The range of means for baseline was 25.43 to 51.26, for public posting 34.10 to 49.40, and for supervisor recognition was 34.55 to 41.25 with average mean scores of 38.43, 41.75, and 37.90 respectively.

**Indicator 10: Duration of a Single Occurrence of Staff Behavior Given in Plan Section**

Figures 20 and 21 show low levels of performance and only moderate variability on all seven units across baseline and both feedback conditions. The range of means for baseline was 10.86 to 28.71, 20.00 to 25.40, for public posting and 18.00 to 20.25 for supervisor recognition. Average means were 20.85, 22.70, and 19.12 respectively.

**Indicator 11: Time of Occurrence of Staff Behavior Given in Plan Section**

Very low levels of performance and very slight variability with no changes between baseline and either feedback condition are depicted in Figure 22. Similarly, very low
Figure 18. Percentage of Statements Which Gave the Frequency of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions.

* indicates missing data

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Figure 19. Percentage of Statements Which Gave the Frequency of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only.

* indicates missing data
Figure 20. Percentage of Statements Which Gave the Duration of a Single Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions.

* indicates missing data

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Figure 21. Percentage of Statements Which Gave the Duration of a Single Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only.

* indicates missing data
Figure 22. Percentage of Statements Which Gave the Time of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline and Feedback Conditions.
Figure 23. Percentage of Statements Which Gave the Time of Occurrence of Staff Behavior in Plan Section Across Weeks During Baseline Conditions Only.
performance levels and very slight variability occurred for the three control units as depicted in Figure 23. The range of means were 2.78 to 8.71 for baseline, 6.60 to 8.00 for public posting, and 6.55 to 8.50 for supervisor recognition. The average means were 7.21 for baseline, 7.30 for public posting, and 7.52 for supervisor recognition.

Analysis of Percentage of Successful Performance Results

Further analysis of the Percentage of Successful Performance results yielded several broad findings. This analysis was done on three dimensions of the data: (1) the Percentage of Successful Performance levels for units 1 through 7, (2) the difference in the Percentage of Successful Performance levels from baseline to feedback conditions for units 1, 2, 3, and 4, and (3) variability indicated by the standard deviation scores. There were three main levels of Percentage of Successful Performance: (1) low (0% to 49%), (2) medium (50% to 79%), and (3) high (80% to 100%). Differences between baseline and feedback conditions fell into several groups: (a) negative or zero (-10.00 to 0.00), (b) small (0.01 to 9.99), (c) moderate (10.00 to 19.99), and (d) large (20.00 to 40.00). Variability was either slight (0.00 to 9.00), moderate (10.00 to 19.99), or substantial (20.00 to 40.00). Using these three dimensions, further analysis yields the following:

1. The Percentage of Successful Performance was at high levels for baseline and both feedback conditions on all units for indicators 2 (referred to client behavior in
goal section) and 8 (referred to staff behavior in plan section).

2. The Percentage of Successful Performance was at medium or high levels for both baseline and feedback conditions for indicator 6 (month and year included in goal section) on units 3, 4, 5, and 7.

3. The Percentage of Successful Performance was usually at low levels for all other indicators.

4. Negative differences occurred most often from baseline to public posting. This occurred once for indicators 6, 8, 9, 10, and 11. It occurred twice for indicators 1, 4, and 5.

5. Moderate differences occurred on units 1 (+16.89), 2 (+10.00), 3 (+17.71), and 4 (+10.84) for indicator 3 (frequency of occurrence of client behavior given in goal section).

6. A moderate difference (+16.59) was found on unit 4 and large differences on unit 1 (+44.20) and 2 (+27.57) for indicator 6 (month and year included in the goal section).

7. Substantial variability occurred on all units for indicator 6 (month and year included in goal section).

8. Variability was slight on all units for indicator 4 (duration of a single occurrence of client behavior given in goal section) and indicator 11 (time of occurrence of staff behavior given in plan section).

9. Variability was mixed for the other indicators.
<table>
<thead>
<tr>
<th>Week</th>
<th>Number of Plans Scored by Primary Observer</th>
<th>Percentage of Plans Scored by Reliability Observer</th>
<th>Mean Reliability for Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23</td>
<td>65%</td>
<td>93%</td>
</tr>
<tr>
<td>2</td>
<td>52</td>
<td>52%</td>
<td>96%</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
<td>30%</td>
<td>94%</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
<td>47%</td>
<td>91%</td>
</tr>
<tr>
<td>5</td>
<td>25</td>
<td>40%</td>
<td>95%</td>
</tr>
<tr>
<td>6</td>
<td>30</td>
<td>33%</td>
<td>94%</td>
</tr>
<tr>
<td>7</td>
<td>31</td>
<td>29%</td>
<td>97%</td>
</tr>
<tr>
<td>8</td>
<td>28</td>
<td>36%</td>
<td>95%</td>
</tr>
<tr>
<td>9</td>
<td>43</td>
<td>37%</td>
<td>94%</td>
</tr>
<tr>
<td>10</td>
<td>39</td>
<td>38%</td>
<td>96%</td>
</tr>
<tr>
<td>11</td>
<td>43</td>
<td>28%</td>
<td>93%</td>
</tr>
<tr>
<td>12</td>
<td>45</td>
<td>33%</td>
<td>95%</td>
</tr>
<tr>
<td>13</td>
<td>45</td>
<td>35%</td>
<td>94%</td>
</tr>
<tr>
<td>14</td>
<td>38</td>
<td>34%</td>
<td>97%</td>
</tr>
<tr>
<td>15</td>
<td>29</td>
<td>38%</td>
<td>98%</td>
</tr>
<tr>
<td>16</td>
<td>17</td>
<td>41%</td>
<td>95%</td>
</tr>
<tr>
<td>17</td>
<td>22</td>
<td>45%</td>
<td>96%</td>
</tr>
<tr>
<td>18</td>
<td>42</td>
<td>26%</td>
<td>94%</td>
</tr>
<tr>
<td>19</td>
<td>26</td>
<td>46%</td>
<td>92%</td>
</tr>
<tr>
<td>20</td>
<td>36</td>
<td>33%</td>
<td>94%</td>
</tr>
</tbody>
</table>
Table 4—Continued

<table>
<thead>
<tr>
<th>Week</th>
<th>Number of Plans Scored by Primary Observer</th>
<th>Percentage of Plans Scored by Reliability Observer</th>
<th>Mean Reliability for Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>38</td>
<td>37%</td>
<td>94%</td>
</tr>
<tr>
<td>22</td>
<td>32</td>
<td>37%</td>
<td>93%</td>
</tr>
<tr>
<td>23</td>
<td>43</td>
<td>42%</td>
<td>91%</td>
</tr>
<tr>
<td>24</td>
<td>40</td>
<td>0%</td>
<td>not done</td>
</tr>
</tbody>
</table>

Average 35 35% 94%

Reliability

Reliability data are presented in Table 4. On the average, 35% of the treatment plans were scored each week for every unit by a second observer with the exception of week 24. The percentage of plans scored by a reliability observer ranged from 21% to 65%. The mean reliability for the 23 weeks ranged from 91% to 98% with an average of 94%.

Social Validation Survey

Of the approximately 100 staff members on units 1, 2, 3, and 4 who were asked to complete the survey, 46 staff returned them (46%). The distributions of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 5
Distribution of Responses on Social Validation Survey (N=46)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was there a graph posted on your unit?</td>
<td>49%</td>
<td>42%</td>
<td>9%</td>
</tr>
<tr>
<td>2. If yes, did you read the graph?</td>
<td>38%</td>
<td>19%</td>
<td>43%</td>
</tr>
<tr>
<td>3. Did you receive a letter each week?</td>
<td>45%</td>
<td>53%</td>
<td>2%</td>
</tr>
<tr>
<td>4. If yes, did you read the letter?</td>
<td>45%</td>
<td>15%</td>
<td>40%</td>
</tr>
<tr>
<td>5. Was the feedback you received regarding the treatment plan helpful to you?</td>
<td>30%</td>
<td>47%</td>
<td>23%</td>
</tr>
<tr>
<td>6. Should this type of feedback continue?</td>
<td>30%</td>
<td>34%</td>
<td>36%</td>
</tr>
<tr>
<td>7. Did your treatment team discuss the feedback together as a group?</td>
<td>36%</td>
<td>38%</td>
<td>26%</td>
</tr>
<tr>
<td>8. Do you think you need additional training on writing statements in observable and measurable terms?</td>
<td>45%</td>
<td>38%</td>
<td>17%</td>
</tr>
</tbody>
</table>
responses to all but the last question from the Social Validation Survey are presented in Table 5. Responses to questions 2 and 4 indicate 38% of the staff on units 1 and 3 and 45% of the staff on units 2 and 4 who returned the survey actually came into contact with the feedback. Responses to questions 1 and 3 reflect that fact each unit only received one of the feedback conditions. Responses to questions 5 and 6 suggest only 30% of those who returned the survey found the feedback to be helpful and believed the specific type of feedback they were exposed to should continue. Furthermore, responses to question 7 indicate 36% of those who responded discussed the feedback as a group. Responses to the last question, “How should additional training and feedback be designed to better meet your professional needs?” are given in Appendix O. These responses fell into several categories: (a) individualize feedback, (b) make feedback more specific, (c) use job aids, (d) involvement of the residential care aides, (e) integrate with daily work, (f) train treatment team members together, (g) offer further training and feedback, and (h) address shortcomings of the feedback delivery system itself.
CHAPTER IV

DISCUSSION

Intended Contribution

The study is related to existing research literature in two ways: (1) professional staff performance was targeted for change, and (2) two frequently used forms of feedback were compared. Although both forms of feedback resulted in some improvements in performance, neither improved performance to the extent expected based on previous studies in similar settings. Workshop results suggest staff learned the basic skills needed to write treatment plans in accordance with the 11 indicators of successful performance. The lack of consistent improvement can be partially understood in terms of the difference between the feedback delivery system used and characteristics of effective feedback previously identified. Also, the characteristics of the eleven indicators of successful performance may in part be responsible. Furthermore, results of the Social Validation Survey suggest other possible explanations for the overall results. These factors are considered below.

Pretest and Posttest Scores from Workshop

Because the average posttest mean was significantly
greater than the average pretest mean \(t=14.22, df=111, p<.025\), it is likely the training was effective in teaching the three skills scored: (1) identification of observable verbs, (2) identification of frequency terms, and (3) identification of duration terms. Although the possibility exists that the difference between means was due to a higher degree of difficulty for the pretest (Form A) than for the posttest (Form B), this seems unlikely because of the high degree of similarity between the two forms in terms of sentence structure, syntax, and type of clinical problems (Appendix K). Thus, the training data suggest that at least half of the staff were able to recognize the essential components of observable and measurable statements at the end of the workshop.

Workshop Evaluation

Since nearly two-thirds of staff who returned the Workshop Evaluation Form responded with a 1 or 2 on the 6-point scale rating helpfulness \(1=\text{very helpful to} 6=\text{not helpful}\) to both the manual and the presentation, it seems that the workshop was both meaningful and valuable for the staff. Because 90% of the staff who returned the survey indicated they planned to use the material in their work, it is highly likely these staff left the workshop with the intention of writing treatment plan statements in observable and measurable terms.
Overall, there was less improvement in the Percentage of Successful Performance than was expected based on the results of previous studies utilizing a feedback system. Also, performance seemed to actually deteriorate for several indicators as suggested by negative differences between baseline and public posting and occasionally between baseline and supervisor recognition. Interestingly, there was consistent improvement in performance for indicator 3 (frequency of occurrence given in goal section). This suggests the possibility that the nature of the task may influence that amount of improvement. In a similar vein, the greatest amount of variability was associated with indicator 6 (the month and year included in goal section). In addition, the variability was consistently slight for indicator 4 (duration of a single occurrence given in goal section) and indicator 11 (time of occurrence given in plan section). Changes or lack of changes in performance and the amount of variability can be understood in terms of two main groups of variables: (1) characteristics of the feedback system and (2) characteristics of the indicators of successful performance.

Characteristics of the Feedback System

Although some of the characteristics of effective feedback identified in previous studies were present in the feedback system used, there were several discrepancies
between an ideal feedback system and the one utilized in the present study. The lack of improvement in performance or deterioration in performance may have been due to several key aspects of the feedback system including: (a) the lack of behavioral consequences, (b) the relationship between supervisors and supervisees, (c) the use of graphs to display data, (d) the schedule of feedback delivery, and (e) the specificity of the feedback.

Balacazar et al. (1986) found combining feedback with either goal setting or behavioral consequences was more consistently effective than feedback used alone. In the present study, neither goal setting nor behavioral consequences were added to the feedback. Both public posting and supervisor recognition supplied the staff with information about their performance. Staff were not asked to set any type of goals for themselves, nor were they given any additional consequences when performance changed.

Feedback delivered by supervisors and managers was associated with greater consistency than that delivered by co-workers or clients according to Balcazar et al. (1986). One of the purposes of the present study was to compare public posting with supervisor recognition. It would be predicted based on Balcazar's findings that more consistent effects would occur in the supervisor recognition condition than in the public posting condition, since the source information in the supervisor recognition condition was the Hospital Director, a supervisor, whereas the source of the information in the public posting condition
was the Education and Training Department. This prediction is supported to some extent by one aspect of the results: negative differences between feedback and baseline occurred most often for public posting. However, the lack of an overall improvement in performance from baseline to supervisor recognition indicates several possible features of this condition are not the same as those examined of Balcazar et al. (1986) in terms of source of information. Perhaps a key difference is the nature of the civil service system at the hospital: although the Hospital Director serves in a supervisor capacity, he exerts little direct control over aspects of staff member's employment such as promotion or raises.

Another purpose of the present study was the comparison of giving staff performance data using a memo format (as in supervisor recognition) with using a memo along with a graph (as in public posting). The results of the present study are not consistent with the finding by Balcazar et al. (1986) that graphs produce more consistent effects than other methods of communication. One of the reasons for this may have been that staff were given only minimal instructions regarding reading the graph. Thus, staff in the supervisor recognition condition may have relied primarily on the memo which accompanied the graph for information. Since this memo was very similar to the memo used in the public posting condition, staff essentially were exposed to the same type of feedback. Furthermore, since the memo in the public posting condition was mailed
individually to each staff person, it may have been perceived as more important by the staff than the memo and graph posted on each unit. This perceived importance may have canceled out the possible differential effects of using a graph.

Both feedback conditions in the present study involved the delivery of feedback on a weekly basis. However, another important variable in the effectiveness of a feedback system is the time-delay between performance and feedback delivery. Although a question still remains regarding the role of verbal behavior in influencing the effectiveness of remote consequences, it is a generally accepted fact in the research literature that the effectiveness of a consequence is increased when delivered close in time following performance. Thus, a possible reason for the lack of overall consistent improvement in performance may have been the time delay between the point when staff wrote the treatment plans and when they received feedback. The time delay on the average was approximately two weeks.

Although the eleven indicators were specific, the manner in which the feedback was delivered was nonspecific. A specific delivery of feedback would need to include an identification of which statements on the treatment plan were written effectively. This is closely related to the concept of individual performance data. There was no way for staff to know if the statements they wrote were written in terms of the indicators. They only received
group performance data that was itself an average of the group’s weekly performance.

Characteristics of the Indicators

As mentioned earlier, indicators 3, 6, 4, and 11 were associated with special outcomes. It is thus likely that these indicators have unique features responsible in part for the effects observed.

Indicator 3 (frequency of occurrence given in goal section) was associated with moderate differences (10.00 to 19.99) in changes of levels of Percentge of Successful Performance from baseline to feedback conditions for all units which received feedback (units 1 though 4). This was a key concept given considerable attention during the workshop. Examples include the number of times a patient attends a group session each week, the number of times a patient hits another patient, and the number of times a patient interacts with a staff member each day. Also, the number of times a behavior occurs was not a new concept to staff. Once staff came into contact with the feedback, they were able to increase the number of frequency terms used with minimal effort.

Indicator 4 (duration of a single occurrence given for client behavior in goal section) was associated with slight variability (0.00 to 9.99). In other words, performance did not change much from week to week within a single condition. Indicator 4 was also associated with low levels of Percentage of Successful Performance (0.00 to
49.99) during both baseline and feedback conditions. This type of duration involves the time period a behavior lasts. For example, the amount of time a group therapy session takes or the amount of time used to take a shower. This was a new concept to the staff, and was only minimally covered in the workshop. This also may not be a variable easily observed on the units.

Indicator 6 (the month and year included in goal section) was associated with large differences for unit 1 and (+44.20) and unit 2 (+27.57) and moderate differences for unit 4 (+16.59). In order to improve performance on this indicator, staff simply needed to add the month and year for the patient to achieve or reach a goal described by a statement in the goal section. Staff were already accustomed to the notion of monitoring when a patient behavior is achieved or discontinues.

Indicator 11 (time of occurrence of staff behavior given in plan section) was associated with only slight variability (0.00 to 9.99) and low levels of Percentage of Successful Performance (0.00 to 49.99). Little mention of this indicator was given during the workshop, so staff may have perceived it to be unimportant. Also, for some staff activities, it may not be possible to predict time of occurrence in advance. For example, what time a social worker will make contact with a patient's family is not easily predetermined; what is relevant is that contact is made. The small amount of variability suggests staff did not differ from week to week in their approach to time of
occurrence of staff behavior when they wrote of the treatment plans.

Social Validation Survey

The results of the social validation survey suggest they may have been some shortcomings in the implementation of the feedback delivery system: (a) some staff did not understand the performance information because they could not read the graph, (b) not all staff came into contact with the performance information because they did not read the graphs or memo, and (c) staff were still not clear on what was expected. These shortcomings may in part be the cause of lack of consistent improvement in performance.

Interestingly, many of the suggestions for improving the training and feedback are similar to the discrepancies between an ideal feedback system and the one implemented. These include individualized feedback, more specific feedback, and integration of feedback with daily work so it occurs closer in time to the performance. Furthermore, some suggested that the team be trained together and that residential care aids should be included. Perhaps these group dynamics merit more careful consideration.
CHAPTER V

CONCLUSION AND RECOMMENDATIONS

Conclusion

In addition to the intended contributions, there were several major accomplishments of the study. Furthermore, the results of the study suggest areas to address in the development of future training and feedback efforts at the hospital as well as in future research.

Major Accomplishments

The four major accomplishments of the study were:

1. A measurement system was developed for assessing compliance with state and hospital standards for writing the individualized treatment plan. It was developed through a careful analysis of actual treatment plans, of the four key sources of standards used at the hospital, and with the assistance of both experts from the academic world and hospital administrators.

2. A training manual was developed which successfully taught staff the main components of writing statements in observable and measurable terms. Staff found both the manual and the presentation of the material helpful and planned to use the material in their work.

3. A scoring system was implemented which proved to
be highly reliable in assessing performance on the eleven indicators derived from the standards.

4. Suggestions for further training and feedback were obtained from the staff which were consistent with findings in the research literature concerning performance feedback. The suggestions indicate staff are open to additional training and feedback provided it is more individualized, specific, clear, and timely.

Recommendations for Future Training and Feedback

Based on the results of the study, several recommendations can be made:

1. Both training and feedback need to be done with the entire treatment team on a single unit at the same time. This is especially true in an inpatient mental health setting where the cohesiveness of the treatment team is vital. The treatment plan as well as progress notes and treatment itself are group efforts. Training and feedback must address the needs of the group and allow the group to process new information together in order for meaningful change to occur.

2. Feedback needs to be delivered in a more individualized, specific, clear and timely manner. Each staff person needs information regarding the statements they write. Further, the information needs to be as specific and as closely in time to the actual performance as possible. Although the directive to provide individual feedback and to address the team as a group seem
contradictory, they do not have to be. A trainer can spend
time with a treatment team and provide information to in-
dividual staff persons. This information can be discussed
with the entire team until a consensus is reached.

3. Residential care aides need to be included in the
treatment planning process. Not only are they vital to the
implementation of the treatment plan, they are in a unique
position to provide input to the group regarding the pa-
tient's behavior so that plans can indeed become individu-
alized. Additionally, residential care aides will be
among the first members of a team to recognize when goal
and plan statements are vague, unobservable, and unmeasur-
able. If it is unclear to a residential care aide what is
expected in implementing a statement on a treatment plan,
chances are that the statement is unobservable and unmea-
surable.

4. Professional staff, including residential care
aides, need to be part of further efforts at improving
staff performance. These individuals usually entered
their professions with the hope of making changes in the
lives of the chronically mentally ill. They should be
among those who develop systems intended to bring these
changes about.

Recommendations for Further Research

Based on the results of this study, several questions
for further research are apparent:

1. Aspects of the relationship between a supervisor
and supervisee which impact the effectiveness of supervisor recognition on performance merit further investigation including: (a) the power a supervisor has within an organization, (b) the mechanisms by which promotion, raises, bonuses, and opportunities are distributed, (c) the length of time an employee has worked under a supervisor, and (d) the rapport between a supervisor and supervisee.

2. Crucial features of performance goals which lead to an improvement in performance also need more study. In general, researchers have found specific, objective goals to be better than general, subjective ones in improving performance. Other features of interest include: (a) the part an individual's performance goal plays in the overall mission of an organization, (b) the relationship of performance goals to accomplishments which lead to promotions, raises, and opportunities within an organization, and (c) whether performance goals are set by the supervisor or by the supervisee.

3. A need exists to explore possible behavioral consequences to use in addition to feedback to improve performance in an organizational setting like the state mental health system where salaries and promotions are not always tied to performance. This type of organization is also more susceptible to employee frustration related to lack of tangible results in patient progress after considerable energy expenditure by staff. In addition, limited financial resources may create undesirable staff to patient ratios. Understanding ways to manage staff
performance so that the staff are productive, creative, and satisfied with their work requires a closer look at the consequences available in these types of settings.

These are only a few of the many areas which need to be addressed in the performance management field in the state mental health system. Although careful research is costly and sometimes resisted initially by staff and patient advocacy groups, further changes are on the horizon, and it is through careful research that these changes can occur in a manner that is beneficial to the patients and the professionals who have chosen to serve them.
Appendix A

Michigan Department of Mental Health
Administrative Rule R330.7199
R 330.7199 Plan of service.

Rule 7199. (1) A plan of service shall be developed by an interdisciplinary team of mental health professionals for each resident and shall be included in the record of the resident.

(2) Mental health professionals involved in the care of a resident shall work together to develop an integrated plan of service.

(3) One mental health professional who is a member of the treatment or habilitation team shall be responsible for the development, coordination, and implementation of an individual plan of service, record progress and changes, initiate changes or reviews, when necessary, and incorporate into the plan provisions or limitations of rights placed on the resident. The first plan of service shall be approved, signed, and recorded in the medical record by the mental health professional responsible for the plan within 5 working days after admission or after completion of the comprehensive examination, whichever occurs first.

(4) An individualized plan of service shall contain, when applicable, all of the following:

(a) A statement of the nature of specific problems or disabilities and specific needs.

(b) Evaluation of strengths as well as weaknesses.

(c) Evaluation of the degree of physical disability and the plan for remedial or restorative measures.

(d) Evaluation of the degree of mental disability and the service plan for appropriate measures to be taken to relieve treatable conditions and distress and to compensate for nonreversible impairment.

(e) Evaluation of capacity for social interaction and a plan for appropriate measures to increase adaptive capacity.

(f) Evaluation of environmental and physical limits required to safeguard health and safety.

(g) Determination of the least restrictive treatment or habilitation setting necessary to achieve the purposes of admission.

(h) A statement of, and rationale for, intermediate and long-range goals, specifying the manner in which the facility can improve the resident's condition with a projected timetable for attainment.

(i) Proposed staff involvement with the resident in order to attain goals, including a minimum number of individual contacts and consultations planned between the resident and professional staff and the expected minimum number of hours of the consultations in each 30-day period.

(j) The frequency and extent of physical examination.

(k) Criteria to be met for release or discharge, and the prognosis for placement.

(l) Notation of therapeutic tasks, labor, personal housekeeping, recreation, or other scheduled activities to be performed, including those as a condition of residence in a small group living arrangement and a rationale for these in relation to goals.

(m) An estimated date for release or discharge, with a proposed date for development of a plan of service needed after release or discharge, including participation of community mental health services.

(n) Drug regimens by type, dosage, and frequency, changes in medication or dosages, and notation of effects and behavior changes.
(a) Dates for reviews at intervals of at least every 90 days, and by whom the review shall be done, including provision for a written assessment of progress toward goals and reasons for progress or lack of progress.

(p) Documentation of a restriction or limitation of rights and any restraint or seclusion.

(q) Record of surgery; electro-convulsive therapy; other procedures intended to produce convulsions or coma; experimental procedures; family planning services, including sterilization and abortion; and guardianships, legal, and other protective services.

(5) A plan of service of a resident through the age of 25 shall consider the chronological, maturational, and developmental level of the resident and provide for developmental, educational, and training needs and for contact with family members.

(6) A written plan of service and subsequent reviews shall be easily identifiable as distinct and separate written entries into a case record or separate forms which become part of the record.

(7) Progress notes in a resident's record which indicate that a plan of service is being implemented and which document that a program plan is being carried out shall include both of the following:

(a) Notes recorded by mental health professionals involved in the treatment or habilitation of the resident.

(b) Notes recorded at intervals appropriate to the type of treatment, but not less often than once a week.

(8) A treatment or habilitation team shall include all of the following persons:

(a) One or more physicians.

(b) Two or more of the following:

(i) Registered nurses.

(ii) Certified social workers.

(iii) Psychologists.

(iv) Vocational, occupational, or recreational therapists.

(v) Mental health counselors.

(vi) Other members of the facility staff, including nonprofessional staff who work directly with the resident.

(9) Residents shall be informed, either verbally or in writing, of their clinical status and progress.

(10) A plan of service shall specify either the intervals for informing a resident in a manner appropriate to the resident's clinical condition or that this is a responsibility of the person in charge of the plan.

(11) A resident shall be given the required information not less than once a month, and more frequently if a short-term resident, unless waived by the facility director. The waiver and statement of the reasons for a waiver shall be placed in the record of the recipient.

(12) The record of the resident shall include the date and time the resident was informed, a brief summary of the information given, and a note of the resident's response.

(13) A facility shall allow a resident to request a report, and a requested report shall be given to the resident or a person chosen by the resident within 10 days. A requested report to the resident shall satisfy the current obligation of the facility to inform the resident. A report may be given to a relative, guardian, or other person when not requested by a resident only in a manner consistent with the disclosure of confidential information as specified in sections 748 and 750 of the act and R 330.7051.
A clinical status and progress report shall include, unless in the judgment of the person in charge of implementing a plan of service disclosure would be detrimental to the resident, all of the following:

(a) Current diagnosis and evaluation of physical and mental condition.

(b) Assessment of progress, including whether an involuntary resident continues to meet the criteria for admission, whether treatment goals are being met, and, if the goals are not being met, the reasons for failing to meet the goals.

(c) The length of time residence is expected to continue.

(d) Information about medication, including the type, dosage, and effects.

(e) Scheduled court proceedings which concern admission or discharge.

(f) Restrictions or limitations currently imposed, an explanation of reasons, the duration of restrictions or limitations, and when they shall be reviewed.

(g) Interim results or effects, when appropriate, relating to experimental procedures in which the resident is participating.

(h) Other information requested by a resident or deemed advisable by the resident's physician or person in charge of implementing the plan of service.

Information which remains unchanged since a previous report need not be repeated unless it appears likely the resident does not recall prior disclosure and would benefit by the repetition.

When information is withheld, the reason it is considered detrimental to a recipient shall be placed in the record of the recipient. A resident who inquires about information being withheld, or about whether information is being withheld, shall be told if a determination has been made. Procedures of the facility shall allow a resident to obtain a review of this determination by the director.

A plan of service shall not contain privileged information or communications.

Copies of a current plan of service, or portions thereof, may be given to the following entities:

(a) Individuals not on the staff of the provider who are involved in release planning for the resident, if the resident, or a person empowered on the resident's behalf, consents or if required by statute.

(b) A probate court in connection with a hearing in civil admission or discharge.

(c) A probate court in connection with admission or transfer of a prisoner.

(d) A criminal court in connection with a determination of incompetency to stand trial if pursuant to court order or subpoena or if the resident, or a person empowered on the resident's behalf, consents.

Appendix B

Kalamazoo Regional Psychiatric Hospital
Policy No. C-27
KRPH POLICY NO. C-27
(Revised September 6, 1985 -
Replaces Original Policy
Issued 1/8/76 and Revised
7/13/81, 8/31/81 and 6/4/84)
FORMERLY KRPH POLICY NO. 37

TO: KRPH Employees

FROM: William A. Decker, M.D., Medical Superintendent

SUBJECT: INDIVIDUALIZED PATIENT TREATMENT PLAN

It is the intent of the Department of Mental Health, as stated in
Administrative Rule R330.7199, that an integrated plan of service be
developed by an interdisciplinary team of Mental Health Professionals
for each patient and included in the record of the patient.

In order to comply with the above, the following are to be followed:

1. Each patient shall have a comprehensive physical, mental and
behavioral status examination performed within two working days
after each admission, except that this shall not be done prior to
adjudication if the patient objects.

2. Each patient shall have an individualized treatment plan de­
developed by qualified Mental Health Professionals and other appro­
priate staff under the direction of a psychiatrist who shall be
responsible for its implementation. This is to include initia­
tion for changes or reviews as needed, the recording of progress
and changes, and incorporation in the plan of restrictions or
limitations of rights placed on the patient.

The initial treatment plan is to be approved and signed
within five working days after admission, or completion
of the comprehensive examination, and recorded in the
case record.

3. The treatment plan shall contain, but not be limited to:

a. The diagnosis of the mental disorder as listed in the Inter­
national Classification of Diseases-9th Revision-Clinical
Modification, or the Diagnostic and Statistical Manual of
Mental Disorders, Third Edition of the American Psychiatric
Association. The diagnosis of any physical disorders are
listed in the International Classification of Diseases-9th Revision-Clinical Modification.

b. A list of needs that the patient presents, together with plans for dealing with those needs.

c. A description of treatment goals along with a statement of approximate time period for goals to be achieved.

d. The unit director shall assign staff responsibility. The plan shall indicate the responsibility each assigned staff member shall have for implementing the various parts of the plan.

e. A statement of the least restrictive treatment conditions necessary to achieve the purposes of the admission.

f. A statement setting forth the criteria for release to less restrictive treatment conditions within the institution.

g. A statement of conditions for discharge, and a prognosis for placement.

h. A notation of any therapeutic tasks and/or labor to be performed by the patient.

4. PRIOR TO DISCHARGE, each patient shall have an individualized post-hospitalization plan which shall be forwarded to the appropriate community aftercare service requesting its implementation.

Permission to include this document given by James J. Coleman, Ed.D., Kalamazoo Regional Psychiatric Hospital, May 7, 1992.
Appendix C

Kalamazoo Regional Psychiatric Hospital Protocol for Developing the Multidisciplinary Treatment Plan
KALAMAZOO REGIONAL PSYCHIATRIC HOSPITAL

PROTOCOL FOR DEVELOPING THE
MULTIDISCIPLINARY TREATMENT PLAN

A multidisciplinary assessment of the patient is done and a master multidisciplinary treatment plan is formulated within 5 days following admission, excluding Sundays and holidays.

This plan should reflect the hospital philosophy of treatment and participation by staff. It should be based on consideration of the patient's clinical needs and specify goals to achieve emotional/physical health based on assessments of the patient and family when appropriate. Specific objectives should be stated related to goals in measurable terms with expected achievement dates. It should describe the services, activities, programs, and the staff assigned, and frequency of treatment. The criteria for achieving treatment goals should be cited. The patient's participation in developing the plan is to be stated.

The plan should include the following and be recorded in the clinical course section of the casebook.

I. IDENTIFICATION OF CLINICAL NEEDS AND TREATMENT ASSIGNMENTS:

A. Psychological Needs - Psychiatric and Psychological Staff

Categorize the thoughts, feelings and behavior that need modification to maintain or improve the patient's level of functioning and the treatment modes to be used in meeting the needs.

State the Goals of Treatment as defined in Section IV.

Indicate who is assigned, (the Unit Director and Psychologist) to execute the treatment mode.

E. Physical/Neurological Needs

Identify the clinical needs including nutritional needs and the measures to meet them.

State the Goals of Treatment as defined in Section IV.

State who is assigned to implement the treatment plan (Unit Director).
C. Activities of Daily Living Needs

Identify the activities of daily living needs the patient requires and the measures needed to meet them.

State the Goals of Treatment as defined in Section IV.

Identify the Nursing Clinical staff to implement the treatment plan.

D. Recreational, Diversional, Vocational Needs.

Identify the recreational, diversional and vocational needs the patient requires and a treatment plan to meet them.

State the Goals of Treatment as defined in Section IV.

Identify the Clinical staff member assigned to execute the plan. (Activity Therapist).

E. Social, Cultural, and Educational Needs.

Identify the social, cultural, and educational needs of the patient and measures to meet them.

State the Goals of Treatment as defined in Section IV.

Identify the Clinical staff member assigned to execute the plan. (Social Worker).

F. Legal Needs.

Identify any significant legal issues that may be significant in the management of the patient during the hospital stay which would affect the treatment plan.

The plan should state what measures should be done and by whom to clarify these issues.

II. PROVISIONAL PSYCHIATRIC AND PHYSICAL DIAGNOSES ASSIGNED BY UNIT DIRECTOR.

III. PSYCHOCHEMOTHERAPEUTIC DRUG THERAPY.

Correlate the presenting symptoms expected to be alleviated and the time expected to achieve.
IV. TREATMENT GOALS.

A. List specific goals for the patient in measurable terms and the time estimated to achieve them. The goals should state what the patient must achieve to manifest emotional, behavioral and/or physical health which will enable the patient to return to aftercare in the community.

B. State the criteria for termination of treatment. The specific criteria are (1) the alleviation of the mental illness which prompted admission to the hospital, and (2) that the mental illness no longer would lead to future conduct that may result in likelihood to injure self, injure others, inability to attend to basic physical needs, or inability to understand the need for treatment.

V. IDENTIFY THE PATIENT'S PSYCHOLOGICAL AND PHYSICAL STRENGTHS.

VI. IDENTIFICATION OF THE MINIMUM RESTRICTIONS NECESSARY FOR TREATMENT AND IDENTIFICATION OF CHANGES NECESSARY FOR THE PATIENT TO BE ON LESS RESTRICTION.

List such items as: closed unit, confinement to the unit, phone, visits, LOA's, etc.

VII. FORMULATION OF INITIAL RELEASE PLANS.

Include criteria for discharge and aftercare services. Indicate estimated date of release, to independent or dependent living, vocational plans, etc., aftercare agency and services, etc.

VIII. INDICATE PARTICIPATION OF THE PATIENT IN THE DEVELOPMENT OF THE PLAN.

Include the patient to the greatest extent possible; if not possible, state reasons.

IX. INDICATE DATE FOR FIRST REVIEW OF PLAN.

A. For Admission Units, Continuing Treatment Units, Infirmary-Gerontology and Acute Medical, review is done every 2 weeks for the first 3 months, then every 60 days for the rest of the first year. Reviews will be done every 90 days after the first year of treatment.
B. After transfer to another treatment unit, the treatment plan is to be reviewed within 7 days, excluding Saturday, Sunday and holidays.

X. DESIGNATION OF PERSON RESPONSIBLE FOR THE TREATMENT PLAN (IMPLEMENTOR).

A professional staff member is designated to document the plan and follow its implementation.

Permission to include this document given by James J. Coleman, Ed.D., Kalamazoo Regional Psychiatric Hospital, May 7, 1992.
Appendix D

Sample Graph for Public Posting Condition
Treatment Plan Feedback

% Successful Performance

Guidelines

GOV GCB GF GDSO GDCT GMY POV PSB PF PDSO PT

Series 1

June 11, 1989 through June 17, 1989
A review of the treatment plans written on your unit from June 4, 1989 to June 17, 1989 indicates the following performance:

<table>
<thead>
<tr>
<th>GUIDELINE</th>
<th>SUCCESSFUL PERFORMANCE 6/4/89 to 6/10/89</th>
<th>SUCCESSFUL PERFORMANCE 6/11/89 to 6/17/89</th>
<th>CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL SECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>observable verbs (GOV)</td>
<td>44%</td>
<td>25%</td>
<td>- 19%</td>
</tr>
<tr>
<td>refers to client (GCB)</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>frequency (GP)</td>
<td>66%</td>
<td>43%</td>
<td>- 23%</td>
</tr>
<tr>
<td>duration of a (GDSO)</td>
<td>0%</td>
<td>7%</td>
<td>+ 7%</td>
</tr>
<tr>
<td>single occurrence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>duration of a (GDCT)</td>
<td>2%</td>
<td>0%</td>
<td>- 2%</td>
</tr>
<tr>
<td>complete task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>month and year (GMY)</td>
<td>75%</td>
<td>64%</td>
<td>- 11%</td>
</tr>
<tr>
<td>PLAN SECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>observable verbs (POV)</td>
<td>18%</td>
<td>25%</td>
<td>+ 7%</td>
</tr>
<tr>
<td>refers to staff (PSB)</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>frequency (PF)</td>
<td>39%</td>
<td>52%</td>
<td>+ 13%</td>
</tr>
<tr>
<td>duration of a (PDSO)</td>
<td>22%</td>
<td>24%</td>
<td>+ 2%</td>
</tr>
<tr>
<td>single occurrence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>time of occurrence (PT)</td>
<td>12%</td>
<td>9%</td>
<td>- 3%</td>
</tr>
</tbody>
</table>

Total # of statements in section written according to guideline for all treatment plans written by treatment team that week

% Successful Performance =

Total # of statements in section for all treatment plans written by treatment team that week
Appendix E

Sample Memo for Supervisor Recognition Condition
TO:  *First Name* *Last Name*, *Title*
FROM: James J. Coleman, Ed.D, Hospital Director
RE: Successful Performance in Writing Treatment Plans
DATE: June 6, 1989

A review of the treatment plans written on your unit from April 16, 1989 to April 29, 1989 indicates:

<table>
<thead>
<tr>
<th>GUIDELINE</th>
<th>SUCCESSFUL PERFORMANCE 4/16/89 to 4/22/89</th>
<th>SUCCESSFUL PERFORMANCE 4/23/89 to 4/29/89</th>
<th>CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOAL SECTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>observable verbs</td>
<td>50%</td>
<td>61%</td>
<td>+ 11%</td>
</tr>
<tr>
<td>refers to client</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>frequency</td>
<td>0%</td>
<td>39%</td>
<td>+ 39%</td>
</tr>
<tr>
<td>duration of a single occurrence</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>duration of a complete task</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>month and year</td>
<td>75%</td>
<td>100%</td>
<td>+ 25%</td>
</tr>
<tr>
<td><strong>PLAN SECTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>observable verbs</td>
<td>10%</td>
<td>15%</td>
<td>+ 5%</td>
</tr>
<tr>
<td>refers to staff</td>
<td>100%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>frequency</td>
<td>40%</td>
<td>35%</td>
<td>- 5%</td>
</tr>
<tr>
<td>duration of a single occurrence</td>
<td>30%</td>
<td>18%</td>
<td>- 12%</td>
</tr>
<tr>
<td>time of occurrence</td>
<td>10%</td>
<td>12%</td>
<td>+ 2%</td>
</tr>
</tbody>
</table>

Total # of statements in section written according to guidelines for all treatment plans written by treatment team that week

% Successful Performance = \( \frac{\text{Total # of statements in section written according to guidelines for all treatment plans written by treatment team that week}}{\text{Total # of statements in section for all treatment plans written by treatment team that week}} \)
Appendix F

Examples of Numbering System for Statements
EXAMPLES OF SENTENCES APPEARING ON KRPH TREATMENT PLANS

Sentence in goal section:

1. He will acknowledge the harmful effect alcohol and drug abuse has had on him and agree to abstain in the future.

How to divide into statements expressing a single behavior and identify the MAIN VERB:

1. (a) He will ACKNOWLEDGE the harmful effect alcohol and drug abuse has had on him and

   (b) AGREE to abstain in the future.

Sentence in goal section:

2. Patient will interact with others more appropriately and will cooperate with his treatment plan that includes counseling and chemotherapy.

How to divide into statements expressing a single behavior and identify the MAIN VERB:

2. (a) Patient will INTERACT with others more appropriately and

   (b) will COOPERATE with his treatment plan that includes counseling and chemotherapy.

Sentence in goal section:

3. Ceases responding to internal voices within two to three weeks and increase appropriate interaction with others.

How to divide into statements expressing a single behavior and identify the MAIN VERB:

3. (a) Ceases RESPONDING to internal voices within two to three weeks.

   (b) and INCREASE appropriate interaction with others.

Sentence in goal section:

4. Accept his need for treatment and will voice knowledge of illness and treatment plan.

How to divide into statements expressing a single behavior and identify the MAIN VERB:

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
4. (a) ACCEPT his need for treatment and
   (b) will VOICE knowledge of illness and treatment plan.

Sentence in plan section:

5. Nursing staff will teach patient about her illness, treatment, medication, and how to recognize warning signs and will monitor patient participation.

How to divide into statements expressing a single behavior and identify the MAIN VERB:

5. (a) Nursing staff will TEACH patient about her illness, treatment, medication, and how to recognize warning signs and
   (b) will MONITOR patient participation.

Sentence in plan section:

6. Psychologist will see patient in group therapy twice weekly for one hour and help patient to work on developing trusting relationships.

How to divide sentence into statements expressing a single behavior and identify MAIN VERB:

6. (a) Psychologist will SEE patient in group therapy twice weekly for one hour and
   (b) HELP patient to work on developing trusting relationships.

Sentence in plan section:

7. OTR/AT/RCA will include patient in activities as behavior warrants and will provide supervised group activity to address need for appropriate socialization.

How to divide sentence into statements expressing a single and identify MAIN VERB:

7. (a) OTR/AT/RCA will INCLUDE patient in activities as behavior warrants and
   (b) will PROVIDE supervised group activity to address need for appropriate socialization.
Sentence in plan section:

8. Unit physician will evaluate her mental and physical condition and prescribe medications, treatments, make referrals and monitor progress.

How to divide sentence into statements expressing a single behavior and identify MAIN VERB:

8. (a) Unit physician will EVALUATE her mental and physical condition
(b) and PRESCRIBE medications, treatments,
(c) MAKE referrals and monitor progress.

Sentence in plan section:

9. Current medications are Dilantin 200 mg. at 8 a.m. and 8 p.m. and Sustacal one b.i.d. Medications are reviewed every 30 days. Patient is seen on ward rounds by physician 30 minutes and is on escape precautions.

How to divide sentences into statements expressing a single behavior and identify the MAIN VERB:

9. (a) Current medications are Dilantin 200 mg. at 8 a.m. and and Sustacal one b.i.d. Medications are REVIEWED every 30 days.
(b) Patient is SEEN on ward rounds by physician 30 minutes per week and is on escape precautions.

Sentence in plan section:

10. Individual counseling to address clinical needs by MSW who will work with patient and family in developing appropriate aftercare and will help patient understand and accept his need for a structured home environment.

How to divide sentence into statements expressing a single behavior and identify the MAIN VERB:

10. (a) Individual counseling to ADDRESS clinical needs by MSW who
(b) will help patient and family in DEVELOPING appropriate aftercare
(c) and will HELP patient understand and accept his need for a structured home environment.
Appendix G

Treatment Plan Score Sheet
<table>
<thead>
<tr>
<th>K-PLAN #</th>
<th>S-PLAN</th>
<th>TX PLAN DATE</th>
<th>MAIN OBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCORING DATE</td>
<td>T. B.</td>
<td>T. E.</td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

**GOAL/Achievement Date Section**

What is the main verb?  
Is the main verb observable?  
Refer to client behavior?  
Frequency given for main verb?  
Duration of a single occurrence?  
Duration of a complete task?  
Include month and year?  

**Plan/Frequency/Responsible**

What is the main verb?  
Is the main verb observable?  
Refer to staff behavior?  
Frequency given for main verb?  
Duration of a single occurrence?  
Time of occurrence?  

**Final**

NEW VERBS AND OTHER COMMENTS:  
TOTAL
Appendix H
Successful Performance Score Sheet
|-------------------------------|-----------------------|-----------------------------|---------------------------|-------------------------------|--------------------------------|-----------------------------|-------------------------|------------------------|-----------------------|-----------------------------|---------------------------|-------------------------------|--------------------------------|-------------------|-------|-------|
Appendix I

Reliability Score Sheet
| GOAL/ACHIEVEMENT DATE SECTION | 1a | 1b | 1c | 2a | 2b | 2c | 3a | 3b | 3c | 4a | 4b | 4c | 5a | 5b | 5c | 6a | 6b | 6c | 7a | 7b | 7c | TOTAL |
|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----| TOTAL |
| What is the main verb?        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Is the main verb observable?  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Refer to client behavior?    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Frequency given for main verb?|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Duration of a single occurrence?|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Duration of a complete task?  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Include month and year?      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| ---                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| PLAN/FREQUENCY/RESPONSIBLE    | 1a | 1b | 1c | 2a | 2b | 2c | 3a | 3b | 3c | 4a | 4b | 4c | 5a | 5b | 5c | 6a | 6b | 6c | 7a | 7b | 7c | TOTAL |
| What is the main verb?        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Is the main verb observable?  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Refer to staff behavior?     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Frequency given for main verb?|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Duration of a single occurrence?|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Time of occurrence?          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| ---                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| FINAL                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| TOTAL                         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
Appendix J

Pretest (Form A) and Posttest (Form B)
PART I: For each statement given below, circle the behavior (just the verb or action words) and label either OB (observable) or NOB (not observable).

1. Patient will explain her angry feelings to Psychologist.
2. Patient will understand the purpose of his medication.
3. Patient will not urinate in his bed.
4. Patient will participate twice a week in Art Therapy.
5. Patient will brush her teeth each morning after eating.
6. Patient will initiate daily discussion with Social Worker.
7. Patient will follow morning routine of the unit.
8. Patient will exhibit control over her anger.
9. Patient will join daily exercise group.
10. Patient will communicate meaningfully with others.

PART II: For each statement given below, circle the expectation and label as CE (clear expectation) or NCE (not clear expectation). The expectation refers to how the behavior is to be performed by the patient; in other words the standards or criteria to be met by the patient.

1. Patient will communicate meaningfully with others.
2. Patient will dress appropriately.
3. Patient will eat dinner with at least one other person each day.
4. Patient will state two reasons why he needs to take medication.
5. Patient will do the exercises as prescribed by Physician.
6. Patient will attend scheduled appointment with Social Worker.
7. Patient will voice his needs in a nonthreatening way.
8. Patient will explain to Psychologist why she is afraid at night.
9. Patient will get out of bed in the morning when alarm goes off.
10. Patient will ask Nursing staff for help with grooming routine.
PART III: For each statement, circle the frequency if given. If not given, write N/A at the end of the statement. Frequency is the number of times an event occurs in a unit of time.

1. Patient will join group three times a week.
2. Patient will swallow two tablets of medication.
3. Patient will state one thing she likes about herself.
4. Patient will meet with Psychologist for 30 minutes twice a week.
5. Patient will shower each day.

PART IV: For each statement, circle the duration if given. If not given, write N/A at the end of the statement. Duration is the amount of time a behavior continues or lasts.

1. Patient will participate in exercise group for one hour.
2. Patient will meet with Social Worker 15 minutes twice a week.
3. Patient will take a shower every morning.
4. Patient will finish eating each meal within 45 minutes.
5. Patient will initiate a discussion with at least one other person.

PART V: Write 5 original statements which include the patient's behavior written in observable terms, a clear expectation for the patient's behavior, and an achievement date.

1. 
2. 
3. 
4. 
5. 

Thank you for completing this assessment. Please sign your name below before returning form to workshop coordinators.
SKILL ASSESSMENT FORM B

PART I: For each statement given below, circle the behavior (just the verb or action words) and label either OB (observable) or NOB (not observable).

1. Patient will no longer believe that staff is poisoning her. OB
2. Patient will take a shower each morning. OB
3. Patient will participate in afternoon exercise group. OB
4. Patient will complete GED application form. OB
5. Patient will interact with others in a calm manner. OB
6. Patient will drink no more than two cups of coffee daily. OB
7. Patient will cease having delusions. OB
8. Patient will not spit food out while eating meals. OB
9. Patient will comply with Physician's instructions. OB
10. Patient will meet with Social Worker once a week. OB

PART II: For each statement given below, circle the expectation and label as CE (clear expectation) or (not clear expectation). The expectation refers to how the behavior is to be performed by the patient; in other words the standard or criteria to be met by the patient.

1. Patient will write a letter to her sister each week. CE
2. Patient will initiate discussions in a nonthreatening manner. CE
3. Patient will use time more productively. CE
4. Patient will state two reasons why he needs to take medication. CE
5. Patient will dress appropriately every day. CE
6. Patient will establish trust with Psychologist. CE
7. Patient will limit her intake of coffee to one cup each day. CE
8. Patient will keep scheduled appointment with Physician. CE
9. Patient will discuss family problems with Social Worker. CE
10. Patient will list all the things he would like to improve on. CE

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
PART III: For each statement, circle the frequency if given. If not given, write N/A at the end of each statement. Frequency is the number of times an event occurs in a unit of time.

1. Patient will meet with Psychologist for 20 minutes once a week.
2. Patient will apply lotion to her feet at bedtime.
3. Patient will participate in group 5 times a week.
4. Patient will use profanity less than 3 times a day.
5. Patient will not smoke more than 10 cigarettes.

PART IV: For each statement, circle the duration if given. If not given, write N/A at the end of each statement. Duration is the amount of time a behavior continues or lasts.

1. Patient will remain seated for at least 20 minutes during group.
2. Patient will meet with Social Worker 10 minutes 3 times weekly.
3. Patient will drink 2 glasses of water every afternoon.
4. Patient will sleep at least six hours every night.
5. Patient will limit outbursts of anger to twice a day.

PART V: Write 5 original statements which include the patient's behavior written in observable terms, a clear expectation for the patient's behavior, and an achievement date.

1.
2.
3.
4.
5.

Thank you for completing this assessment. Please sign your name below before returning form to workshop coordinators.
Appendix K

Workshop Evaluation Form
EVALUATION FORM

1. How to write statements booklet.
   1  2  3  4  5
   Very helpful Not helpful

2. Presentation on writing statements
   1  2  3  4  5
   Very helpful Not helpful

3. Will the workshop help you in your daily work?
   Yes ___   No ___
   Explain: ___________________________________________

4. Medical Records Committee
   1  2  3  4  5
   Very informative Not informative
   1  2  3  4  5

5. Treatment Team Ad Hoc Committee
   1  2  3  4  5
   Very informative Not informative
   1  2  3  4  5

Comments: ___________________________________________

_________________________________________________________________

_________________________________________________________________

Treatment Plan and Documentation Workshop, Phase II
November 3, 1988 ___
November 4, 1988 ___

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Appendix L

First Memo From Hospital Director
M E N O

TO:

FROM: James Coleman, Ed.D., Facility Director

RE: Treatment Plan Guidelines

DATE: January 20, 1989

Thank you for participating in the Treatment Planning and Documentation workshop on November 3 or 4. If you did not receive the Training Manual distributed during the workshop, please contact the Education and Training Department (385-1348).

Beginning February 1, 1989, you are asked to start writing statements on the Individualized Plans of Service in observable and measurable terms. All professional staff members should be aware of the guidelines for writing treatment plans and should have completed the one day training on either November 3 or 4. If you did not receive training on one of these days, please call the Education and Training Department to view the videotapes of the session.

As part of our overall efforts to comply with the laws and guidelines set forth by the Michigan Department of Mental Health (which are found in Administrative Rule R330.7199) for writing individualized treatment plans, we are implementing this monitoring project. A copy of the administrative rule and the recommendations made by the Quality Care Task Force are also included for your consideration. Please refer to KRPH Policy No. C-27 and the KRPH protocol, for developing the interdisciplinary treatment plan, to obtain more specific details. Updated, revised, or rewritten treatment plans should reflect adherence to these guidelines.

Mr. Kane Loukas, a graduate assistant in the Education and Training Department, will attend one of your team meetings to answer any questions.

Thank you for your cooperation.
Appendix M

Second Memo From Hospital Director
TO: Name of Staff Person  
FROM: Hospital Director  
RE: Successful Performance in Writing Treatment Plans  
DATE: date memo is signed by Hospital Director

Beginning February 15, 1989, graphs depicting your treatment team’s successful performance in writing treatment plans according to the guidelines will be posted on your unit every week. The percentage of successful performance will be calculated for all treatment plans written by your team on a weekly basis as follows:

\[ \text{PSP} = \frac{\text{Total # of statements written according to a specific guideline for all treatment plans written during the week by members of your treatment team}}{\text{Total # of statements in the section corresponding to a specific guideline for all treatment plans written during week by members of your treatment team}} \]

Eleven specific areas will be covered. These were discussed during the November 3 and 4 training and are as follows:

1. Are the verbs in the Goal/Achievement Date Section observable?
2. Do the verbs refer to client behavior?
3. Is the frequency for client behavior given?
4. Is the duration of a single occurrence of client behavior given?
5. Is the duration of a complete task of client behavior given?
6. Are the month and year included for each client behavior described in the Goal/Achievement Date Section?
7. Are the verbs in the Plan/Frequency/Responsible Person Section observable?
8. Do the verbs refer to staff behavior?

9. Is the frequency for staff behavior given?

10. Is the duration of a single occurrence of staff behavior given?

11. Is the time of occurrence of staff behavior included?

Included is a sample graph depicting PSP for the eleven areas.
The graph below depicts the following PSP for the eleven areas:

1. Observable verbs used in goal section (GOV) 38%
2. Verbs in goal section refer to client behavior (GCB) 100%
3. Frequency given for client behavior (GF) 21%
4. Duration of a single occurrence given (GDSO) 0%
5. Duration of a complete task given (GDCT) 0%
6. Month and Year included in goal section (GMY) 35%
7. Observable verbs used in plan section (POV) 6%
8. Verbs in plan section refer to staff behavior (PSB) 100%
9. Frequency of staff behavior given (PF) 24%
10. Duration of a single occurrence given (PDSO) 12%
11. Time of occurrence included for staff behavior (PT) 4%

---

Treatment Plan Feedback

% Successful Performance

<table>
<thead>
<tr>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOV</td>
</tr>
<tr>
<td>100</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Appendix N

Social Validation Survey
# Treatment Plan Feedback Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was there a graph posted on your unit?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>2. If yes, did you read the graph?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>3. Did you receive a letter each week?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>4. If yes, did you read the letter?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5. Was the feedback you received regarding the treatment plan helpful to you?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>6. Should this type of feedback continue?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>7. Did your treatment team discuss the feedback together as a group?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>8. Do you think you need additional training on writing statements in observable and measurable terms?</td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

9. Comments and suggestions:

Please return this survey to the Program Development Director. Thank you for your participation.
Appendix O

Suggestions Regarding Training and Feedback
Suggestions Regarding Training and Feedback

Individualize Feedback

Individualize it. Don't provide feedback to people who don't write TX plans.

If individual feedback is given (something I prefer) I should like to see how my performance has improved in comparison to others and my own past performance.

Make Feedback More Specific

It would be nice if we could take a patient case and actually prepare a care plan to assure that we are doing it as per policy. To give us practice doing it the correct way.

We need to know which TX plans are being evaluated. Why not send a copy of them along with the sheet of statistics you send us.

I have received no specific feedback on treatment plans. Most plans are well written although a significant amount remain vague and not measurable.

The graphs are not specific enough to improvements needed. Perhaps if examples of each factor were printed on the back for reminders and reference it would help.

First, if someone had just sat down and explained exactly what we were supposed to be doing and given a few examples of just what was wanted I'd be OK.

Use Job Aids

Just give us a list of twenty or thirty statements as you folks want them to be, and we will use them with minor modifications as necessary. Then we will not have to waste so much time re-inventing the wheel every week, and you will get a closer approximation of what you want.

Present situations and then good and bad ways to document them. Present realistic situations and when and when not to document them.
Use Job Aids

I feel having a list of needed charting goals posted on each patient's chart in front of nursing notes would aid everyone in charting more pertinent information.

Place all problems encountered in the psychiatric setting in a computer with goals and plans for each one. Then make the computer available on each unit. We could punch the problems and ta da - have measurable goals and plans available.

There is a book on case plans for behaviors, objectives, and plans. It would be most helpful if every unit had one. I don't have the book - just a couple of chapters were given to me. These books would be helpful.

Involvement of the Residential Care Aides

R.C.A.'s are not really involved in treatment planning. Much resentment between professionals and R.C.A.'s who deal with reality not paper work.

I haven't been to class. Night people just don't seem to exist as far as administration is concerned.

Most R.C.A.'s joked about the wasted paper in sending evaluations to them but I appreciated the idea that they should be included in treatment team meetings. However, why send these to night shifts?

To treatment team members only. R.C.A.'s and L.P.N.'s do not write goals.

I feel R.C.A.'s should be involved in treatment teams.

There is no point in sending feedback forms to R.C.A.'s until they are more involved with writing TX forms.

Integrate With Daily Work

Start using it immediately after training and not 3 months.

Spread out training - use as you are being trained so that you can improve as you learn.
Integrate With Daily Work

Ongoing inservices, not necessarily intense training like the one you gave at the beginning of the year.

Train Treatment Team Members Together

All treatment team members receive training at the same time.

Have instructors come to a treatment team meeting to instruct the team as a group to focus on the needs of the individual team.

Teach treatment team together so there is consistency in the group.

Treatment team to treatment team so specific questions can be addressed on site.

Offer Further Training and Feedback

Continue workshops for all new employees the same way as before.

Any feedback would be an improvement.

I need further training on writing plans.

I would like periodic review sessions with Education and Training Department.

Address Shortcomings of Feedback Delivery System

Be consistent. It seems that different trainers and evaluators have different ideas about semantics - very frustrating.

Received training manual and one class. No other feedback or material was supplied.

I don’t believe that people started putting things together and understanding the data until late in the survey.
Address Shortcomings of Feedback Delivery System

I had no idea what the graph represented when it arrived so I called Education and Training. The visit by one of the trainers was very helpful for the entire team.

I was not told anything about the graphs that were posted.
Appendix P

Human Subjects Institutional Review Board Approval Letter
TO: Susan Mencarelli
FROM: Ellen Page-Robin, Chair
RE: Research Protocol
DATE: July 19, 1988

This letter will serve as confirmation that your research protocol, "The Effect of Public Posting and Supervisor Recognition on Treatment Team Performance in a Mental Health Institution" is now complete and has been signed off by the HSIRB.

If you have any further questions, please contact me at 387-2647,
BIBLIOGRAPHY


137


