DOCUMENT RESUME

ED 128 378 TM 005 500

AUTHOR	Baxter, James W.; Beaulieu, Dean E.
TITLE	Program Evaluation Project Report, 1969-1973. Chapter Nine: Evaluation of the Adult Outpatient Program, Hennepin County Mental Service.
INSTITUTION	Program Evaluation Resource Center, Minneapolis, Minn.
SPONS AGENCY	National Inst. of Mental Health (DHEW), Rockville, Md. Div. of Mental Health Services Program.
PUB DATE	Jun 74
GRANT	NIMH-5-R01-1678904
NOTE	25p.; For related documents, see TM 005 495-501
AVAILABLE FROM	Program Evaluation Project, 501 Park Ave. South, Minneapolis, Minn. 55415 ($1.50)
EDRS PRICE	MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS	Adults; *Evaluation Methods; Goal Orientation; Measurement Techniques; *Mental Health Programs; Models; *Patients (Persons); Program Effectiveness; *Program Evaluation; Scores; Systems Approach
IDENTIFIERS	*Goal Attainment Scaling

ABSTRACT

The P.E.P. Report 1969-1973 focuses on the various findings of the Program Evaluation Project. This chapter deals with the first year development of an integrated program evaluation system for the Adult Outpatient Program, Hennepin County Mental Health Service, Minneapolis, Minnesota. This evaluation system is an extension of and expansion of the research and evaluation activities conducted by the Program Evaluation Project. Progress to date is reported on evaluation of the program and evaluation of the individual client. Process and outcome feedback, data collection procedures and aids are also outlined. (Author/RC)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* producibility are often encountered and this affects the quality *
* the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED128378

CHAPTER NINE

EVALUATION OF THE ADULT OUTPATIENT PROGRAM, HENNEPIN COUNTY MENTAL HEALTH SERVICE

P.E.P. REPORT 1969-1973

A REPORT ON FOUR YEARS OF STAFF EFFORT AT THE PROGRAM EVALUATION PROJECT.

IM005 500

CHAPTER NINE

Program Evaluation Project Report, 1969-1973

EVALUATION OF THE ADULT OUTPATIENT PROGRAM, HENNEPIN COUNTY MENTAL HEALTH SERVICE

James W. Baxter

Dean E. Beaulieu, Ph.D.

June, 1974
Reissued, June, 1975

Thomas J. Kiresuk, Ph.D., Director
Program Evaluation Project
501 Park Avenue South
Minneapolis, Minnesota 55415
(612) 348-7811

Developed under Grant #5 R01 1678904, National Institute of Mental Health, Department of Health, Education, and Welfare

---

Acknowledgements: The design and implementation of this evaluation system was a cooperative undertaking of the Adult Outpatient Program, Hennepin County Mental Health Service and the Program Evaluation Project. Special acknowledgements are extended to Dr. Thomas Kiresuk, Dr. William Jepson, Director, Hennepin County Mental Health service, and Robert Reinkober, Assistant Administrator, Hennepin County General Hospital for their support throughout the project; Robert Walker, President, Walker and Associates, for his invaluable assistance in the model development stage of the project; the staff members of the Adult Outpatient Program for their cooperation and support; and the staff members of the Program Evaluation Project, especially Robert Sherman, Ph.D., Donna Audette, and Michael Saunders.

TABLE OF CONTENTS

For further information, please contact Ms. Joan Brintnall, Program Evaluation Project, 501 Park Avenue South, Minneapolis, Minnesota 55415.

GENERAL INTRODUCTION TO THE P.E.P. REPORT 1969-1973

The P.E.P. Report 1969-1973 focuses on the various findings and activities of the Program Evaluation Project. It is being published in pamphlet form, with one pamphlet for each chapter.

As of January, 1974, the Program Evaluation Project is funded by a three year collaborative grant with the Mental Health Services Division of the National Institute of Mental Health. The purpose of the grant is to emphasize the coordination and dissemination of information on a variety of program evaluation methodologies. Currently, it is expected that the title of the organization will be changed to the Program Evaluation Resource Center during 1974.

Further information on the Goal Attainment Scaling methodology and program evaluation is available in other written and recorded materials from the Program Evaluation Project office. Currently, Chapter One on the "Basic Goal Attainment Scaling Procedures" and Chapter Three on "An Introduction to Reliability and the Goal Attainment Scaling Methodology" are available.

[illegible] the first year development of an integrated, program evaluation system for he Adult Outpatient Program, Hennepin County Mental Health Service, Minneapolis, Minnesota. This evalu- tion system is an extension of and expansion of the research and evaluation activities conducted by the rogram Evaluation Project.

rogress to date is reported on evaluation of the program and evaluation of the individual client Pro- ess and outcome feedback, data collection procedures and aids are also outlined.

AJOR FINDINGS: The tasks accomplished in stage one of the Adult Outpatient Program Evaluation System de- elopment included determining the scope and specifications for the evaluation system and piloting the de- gn in one of the Program's three program components.

e evaluation strategy that was conceptualized encompasses all of the Program's activities. Using a stems analysis approach, the program components are treated as an integrated set of sub-systems. In- rmation specifications require the use of both process and outcome variables.

e direct clinical services component was selected for testing of the methodology. A goal statement was rmulated, and both process and outcome objectives were derived from it. Evaluation criteria were stated measurable terms for all objectives using the Goal Attainment Scaling method. Information require- nts were determined, instruments assembled and/or developed, and pilot data collected.

eliminary analysis of this method of administrative goal setting and monitoring suggests it is feasible d yields useful insights into program performance. Use of the Goal Attainment Scaling score has been und to provide the program manager with a useful frame of reference which facilitates analysis of pro- ammatic performance. An adaptation of the Goal Attainment Scaling procedure allows the manager to nerate an index score for various combinations of objectives established for the program.

addition to the administrative application, the Adult Outpatient Program has retained Goal Attainment aling for evaluation of the individual client. Procedures are employed for the routine review of inical goal attainment by both the clinician and the program manager.

III: Goal Attainment Scores for Individual and Group Psychotherapy Modalities

Outpatient Program during the first year of the

This chapter presents the evaluation theory, methodology, and strategies that have been developed and applied by the staff members of the Adult Outpatient Program of the Hennepin County Mental Health Service since termination of the data collection phase of the Program Evaluation Project in October, 1972. These new procedures are referred to, for the sake of brevity, as the "Re-design".

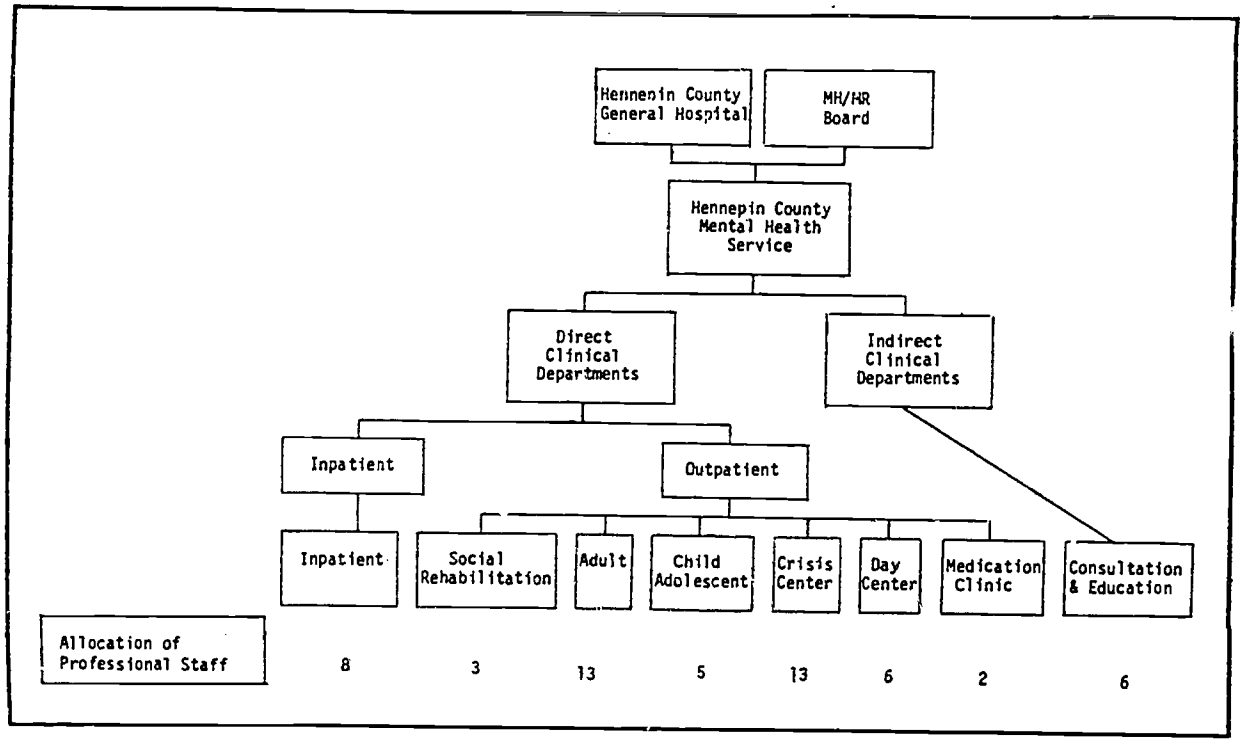
The Re-design, which is staffed and financially underwritten by the Adult Outpatient Program, is a multi-dimensional evaluation system characterized by goal-oriented process and outcome measures; it encompasses evaluation of both the program itself and client progress in therapy; and it has been integrated into ongoing activities of the program.

At the time of this report, the Re-design is being applied only to the direct clinical services component of the program. Additionally, evaluation procedures are to be integrated into the other two components of the program, specifically, training activities and research/evaluation activities. Ultimately, the entire evaluation approach will be assessed to determine its practicality and usefulness.

I. Overview: Hennepin County Mental Health Service.

The Hennepin County Mental Health Service is a community mental health center located within Hennepin County General Hospital in downtown Minneapolis. Organizationally, the Mental Health Service is comprised of eight programs each of which delivers a variety of services. Service categories include: direct clinical services, training activities, community consultation and education services, and evaluation and research activities. Figure I summarizes the Mental Health Service organizational structure and the allocation of professional staff to each program.

FIGURE I: Organizational Structure of the Hennepin County Mental Health Service.



A. Adult Outpatient Program: Staffing Pattern, Mission Statement, and Program Components.

Within the Mental Health Service, the Adult Outpatient Program is the largest outpatient program.

1. Staffing Pattern.

The staff is multidisciplinary, including psychiatrists, psychologists, psychiatric social workers, and psychiatric nurses. There is the equivalent of 13 full-time positions: approximately 10.5 positions are allocated to the direct clinical services component, 2 positions are apportioned to the training component, and .5 of a position is dedicated to the evaluation and research component.

2. Mission Statement.

It is the general mission of the Adult Outpatient Program to achieve the following:

First, to arrest the progression of mental illness of residents who are identified as suffering from mental illness, to reintegrate residents into their psycho-social milieu, and to establish productive, independent living patterns, by offering mental health services to Hennepin County residents;

Second, to augment mental health manpower, by offering practicum experiences to students preparing for professional and paraprofessional mental health roles;

Third, to program optimally for the delivery of mental health services and practicum experiences, by using the results of disciplined inquiry.

3. Program Components.

The Adult Outpatient Program considers each major activity domain, such as direct clinical services, a program component. A brief functional analysis of each program component follows:

Direct Clinical Services Component. The Adult Outpatient Program makes services available to all residents of Hennepin County, regardless of presenting problem, degree of dysfunction, history of prior psychiatric treatment, socioeconomic status, ability to pay, geographic location, or lastly, the availability of other service-providers, if a client states a strong preference for receiving services from the program. As a result, the program staff may respond to all major diagnostic groups and all life dilemmas, and they may render both diagnostic and treatment services. Diagnostic services include: telephone screening and referral, individual and group intake, psychological testing, and medical-psychiatric consultation. The treatment modalities include: individual and group psychotherapy, marital and family counseling, behavior therapy, and chemotherapy. The scope of the direct clinical services component is detailed by Table I, which reports the actual service transactions for the first year of the Re-design.

TABLE I: Direct Clinical Services' Transactions Provided During the First Year of the Re-Design.

TYPE OF TRANSACTION	MONTHLY AVERAGE	FIRST YEAR TOTAL
Telephone Screening and Referral	211	2,535
Intake Interviews	143	1,719
Psychological Testing	93	1,120
Treatment Interviews	864	10,369
Totals	1,311	15,743

Training Component. Clinical training is provided for students of the traditional mental health disciplines and for practitioners in newly emerging fields, such as paraprofessionals. To this end, the Adult Outpatient Program has liaisons with the University of Minnesota and several other colleges and junior colleges. Undergraduate students in social work, sociology, and psychology, psychiatric residents, and graduate students in psychology, social work, public health nursing, family life, and vocational counseling are integrated into and rotate through the Adult Outpatient Program. Approximately 50 students participate in the program each year.

Evaluation and Research Component. All professional staff and all students participate in the program evaluation activities which will be outlined in the remainder of this chapter. In addition, specialized evaluations have been conducted and are being conducted by some staff. Although no time is formally allocated to research, some staff have researched and are researching concerns of special interest to them.

II. Antecedents of the Re-Design.

The original Program Evaluation Project research was sponsored by a grant from the National Institute of Mental Health. Its purpose was to assess by means of Goal Attainment Scaling[1] the relative efficacy of four psychotherapy modes in a community mental health center setting. During the course of this study, much of the data collected for research purposes was also made available to the Mental Health Service, and especially to the Adult Outpatient Program, for program evaluation needs.

In June, 1972, the Program Evaluation Project announced it would terminate its data collection procedures in the Mental Health Service during October, 1972. At this time, the staff of the Adult Outpatient Program began to assume responsibility for its own program evaluation system. The reality of steadily increasing demands from funding sources for program justification and accountability was a further stimulus for developing and upgrading the evaluation system innovated by the Program Evaluation Project. The first phase of the Re-design was implemented in November, 1972.

The Re-design draws very heavily upon precedents established by the Program Evaluation Project, including use of Goal Attainment Scaling for administrative goal setting and as a clinical outcome measure. The purpose of the Re-design is twofold: to evaluate the effectiveness and efficiency of the Adult Outpatient Program relative to its stated goals; to demonstrate that program performance can be maintained or improved on effectiveness and efficiency measures through the use of evaluative data. Primary audiences for the information produced from the Re-design are: (1) the professional staff of the Program, (2) the administrators of the Mental Health Service, and (3) the funding sources. Clients from the population at risk, as well as the aforementioned groups, should benefit from improved program performance.

[1]Goal Attainment Scaling provides a goal-setting format which essentially consists of setting a criterion level for treatment outcome, administrative outcome, etc. (i.e., depending on the application) and attainment levels above and below the "expected" criterion. Five attainment levels are scaled for each treatment goal. Where more than one goal exists they may be relatively weighted. The uniqueness of the Goal Attainment Scaling technique is the setting of attainment levels and the calculation of an outcome score which has been developed with the technique. The outcome score has the statistical properties of a mean of 50 and a standard deviation of 10.

III. Evaluation of the Program.

A. Model Construction.

In conceptualizing an evaluation model, program evaluation in terms of process variables alone was recognized as inadequate. Such a process-variable evaluation model can generate only statements of this type: "18,000 services were rendered to 2,000 clients during 1973." This process model can address the question of how many services were provided but not the impact of services upon clients and is, therefore, severely limited as an evaluation approach.

Program evaluation based exclusively upon outcome variables is also inadequate. Such an outcome-variable evaluation model can produce only "evaluative" declarations of this type: "65 percent of the treatment goals negotiated by the staff with clients were achieved." This evaluation model can address the question of the impact of services upon clients but not how many services were provided.

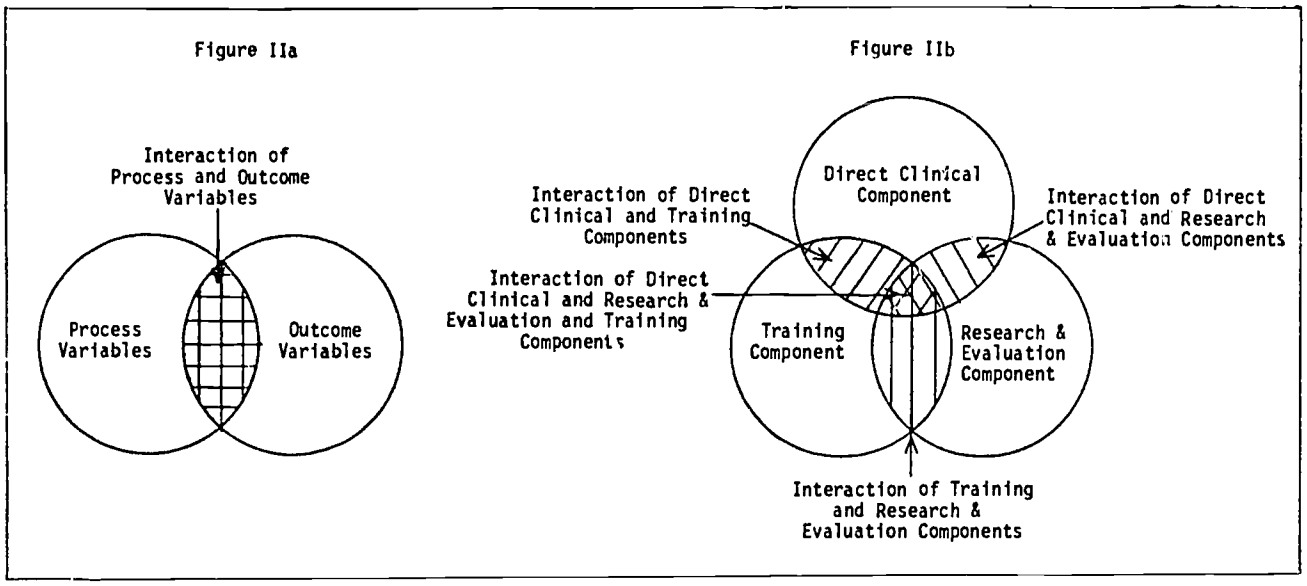
Both process and outcome information are necessary for program evaluation. It should also be concluded that considering process and outcome variables as unrelated events ignores the relationship between them. It is reasonable to assume, however, that there is an optimal volume of clients with which a professional staff can achieve optimal treatment success. To the extent such a relationship does exist, knowledge of it is critical for efficient and effective programming. The evaluation model discussed in this chapter is based on the premise that there is an interactive relationship between process and outcome variables. The theoretical model is outlined below.

1. Theoretical Model.

Knowledge of the interaction of process and outcome variables is postulated to provide the best possible information for evaluative decision making. Similarly, it is assumed there are critical interactions among program components. These interactions should be especially significant in the Adult Outpatient Program because all staff members participate in all program components.

The theoretical evaluation model is based upon the assumption that the interaction between process and outcome and the interaction among program components can be observed. For example, if we attempt to increase use of clinical time for screening interviews by abbreviating the Officer of the Day (telephone) contacts, but then note a decline in the rate of successful referrals accomplished during these contacts, we will construe this as a possible interaction. That is, objectives can be established, the attainment level of each can be monitored, and the degree to which accomplishing one objective affects the others can be recognized. The postulated interaction of process and outcome variables is represented by the Venn Diagram in Figure II(a). The relationship among program components is depicted by the

FIGURE II: Venn Diagrams illustrating the relationship between Process and Outcome variables and the relationship among the Adult Outpatient Program Re-design components which are assumed in the theoretical model.



Venn Diagram in Figure II(b). The theoretical evaluation model is based upon the integration of the interactions shown in Figures II(a) and II(b) above.

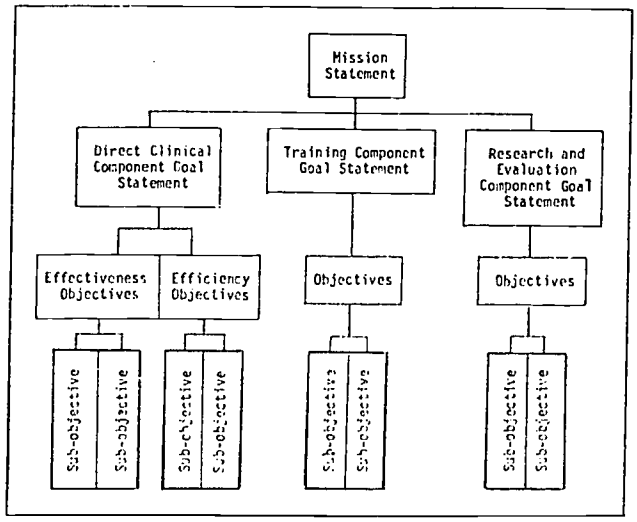
Performance of each program component is a function of process, outcome, and the interaction between process and outcome. Overall program performance is the result of the performance in each program component and the interactions among components.

2. Applied Model.

Development of the applied model began with a critical review of the Adult Outpatient Program's purposes. A mission statement and goal statements for the program components were articulated. Objectives and sub-objectives were then deduced from the goal statements and specified in measurable terms. The relationship shown in Figure III illustrates the deductive framework within which the sub-objectives were derived from the mission statement.

The mission statement was derived from the enabling legislation for community mental health centers. Goal statements for the program components reflect the director's interpretation of the activity domains which the Program must participate in and be accountable for. These goal statements also pinpoint the critical evaluative concerns. Decisions regarding which concerns were 'critical' were made by the professional staff and doubtlessly incorporate their aggregate values and priorities. Specific guidelines which might have dictated the critical evaluative concerns were not available.

FIGURE III: Hierarchical relationship among mission, goal, objective, and sub-objective statements which is the logical framework of the applied model.



The Goal Attainment Scaling format is employed to accommodate the objectives and sub-objectives, stated in measurable terms. An expected level is established for each objective or sub-objective. Figure IV shows the Goal Attainment Scaling format. As may be observed in Figure IV, scale values range from +2 for the "most favorable outcome thought likely" to -2 for the "most unfavorable outcome thought likely."

FIGURE IV: Goal Attainment Scaling Format.

GOAL ATTAINMENT LEVELS	SCALE 1: (w_1 =)	SCALE 2: (w_2 =)
MOST UNFAVORABLE OUTCOME THOUGHT LIKELY (-2)		
LESS THAN EXPECTED SUCCESS (-1)		
EXPECTED LEVEL OF SUCCESS (0)		
MORE THAN EXPECTED SUCCESS (+1)		
MOST FAVORABLE OUTCOME THOUGHT LIKELY (+2)		

Using the computational formula developed by Kiresuk and Sherman (1968),

$$Tj = 50 + \frac{10\Sigma w_j x_j}{\sqrt{(1-\rho)\Sigma w_j^2 + \rho(\Sigma w_j)^2}}$$

where it is recommended that ρ be taken as about .30.

a Goal Attainment score can be computed for each objective. Goal Attainment scores for each of several objectives can then be aggregated utilizing a modified formula derived by Sherman (1973).

$$T' = 50 + \frac{\Sigma w_j(T_j-50)}{\sqrt{(1-\rho)\Sigma w_j^2 + \rho(\Sigma w_j)^2}}$$

where it may be necessary to select a value for ρ commensurate with the intercorrelations of the sub-objective scores, T_j.

Through this process of Goal Attainment score aggregation, as outlined above, a Program Performance Index Score can be generated. As with the Goal Attainment Score, the statistical characteristics of the Index Score are a predicted mean of 50 and a standard deviation of 10 where a mean of 50 indexes programmatic performance (goal achievement) at the "expected level." Administratively, the Index Score provides a useful frame of reference for analyzing overall programmatic performance.

B. Progress to Date.

At this time, the first phase of implementation is nearly complete. The remainder of this section will focus on evaluation of the direct clinical services component.

The goal statement for the direct clinical services component is: to insure that an optimum volume of identified clients are efficiently provided with appropriate and acceptable referral, diagnostic, and treatment services which assist them in achieving client-relevant, quality goals and with which they are reasonably satisfied. Those referents underlined in the goal statement were used to derive effectiveness and efficiency objectives.

The effectiveness objectives include:

I. To insure that referral services offered to persons who seek services are:

A. Appropriate
B. Acceptable

II. To insure that diagnostic services provided to clients are:

A. Appropriate
B. Acceptable

III. To insure that treatment services provided to clients are:

A. Appropriate
B. Acceptable

IV. To insure that treatment goals set for individual clients are:

A. Personally relevant
B. Clinically relevant
C. Clinically realistic

V. To insure that treatment goals are being achieved.

VI. To insure that services rendered to clients are satisfactory in terms of:

A. Waiting time for services
B. Scheduling
C. Fees
D. Outcome
E. Services received
F. Overall evaluation

Efficiency objectives include:

I. To insure that clients receive services in the shortest possible time.

A. Screening interval
B. Diagnostic interval
C. Treatment interval

II. To insure that an optimum volume of identified clients are served

A. Screening services
B. Diagnostic services
C. Treatment services

Examples of an effectiveness and an efficiency sub-objective are shown in Figures V(a) and V(b).

The evaluation concern which is the focus of Figure V(a) is: to insure that the treatment goals of clients receiving individual psychotherapy are being attained. An asterisk indicates the level of achievement of all individual psychotherapy clients in a particular month. The administrative criterion is that between 65 and 80 percent of these clients attain a clinical Goal Attainment score of at least 50. (A clinical Goal Attainment score of 50 represents the accomplishment of treatment goals at the "expected level.") During five of the eight months sampled, this administrative criterion was satisfied; during three months it was not.

FIGURE V: Example Effectiveness and Efficiency Sub-objectives.

V(a). Effectiveness Sub-objective Dealing with Achievement of Treatment Goals.

	SCALE ATTAINMENT LEVELS	(1973) Jan.	Feb.	Mar.	MONTH OF EVALUATION FOLLOW-UP Apr.	May	Jun.	Jly.	Aug.	Sep.
-2	Less than 50 percent of patients followed-up during the month achieve a GAS of at least 50.0.									
-1	Between 50-65 percent of patients followed-up during the month achieve a GAS of at least 50.0	-	*	*				*		
0	Between 65-80 percent of patients followed-up during the month achieve a GAS of at least 50.0.				*	*	*		*	*
+1	Between 80-90 percent of patients followed-up during the month achieve a GAS of at least 50.0.									
+2	More than 90 percent of patients followed-up during the month achieve a GAS of at least 50.0.									
	This Month's Index Score	No Data	40	40	50	50	50	40	50	50

Minimizing the time interval between a client's request for service and his first scheduled appointment is the evaluation concern represented in Figure V(b). The administrative criterion is that the time interval, measured using median number of days, falls between four and seven days. Using an asterisk to indicate the outcome for a particular month, the administrative criterion was met during four months and surpassed during three months across the data collection period.

For the direct clinical services component, the Program Performance Index Score for the first year of the Re-design was 54.0 This has been aggregated from the outcome scores of eight objectives and 21 sub-objectives of the direct clinical services component. Figure VI on the following page overviews the process of generating the Index Score.

FIGURE V: Example Effectiveness and Efficiency Sub-objectives.

V(b). Efficiency Sub-objective Dealing with Client Waiting Time Between First Contact (Service Request) and Scheduled Intake Appointment.

	SCALE ATTAINMENT LEVELS	(1973) Jan.	Feb.	Mar.	Apr.	May	Jun.	Jly.	Aug.	Sep.
		MONTH OF EVALUATION FOLLOW-UP								
-2	Median number of days between first contact and scheduled intake is greater than 12 days.									
-1	Median number of days between first contact and scheduled intake is between 8 and 12 days.									
0	Median number of days between first contact and scheduled intake is between 5 and 7 days.	-	-	*				*	*	*
+1	Median number of days between first contact and scheduled intake is between 3 and 4 days.				*		*			
+2	Median number of days between first contact and scheduled intake is 2 days.					*				
	This Month's Index Score	No Data	No Data	50	60	70	60	50	50	50

FIGURE VI: Overview of Program Performance Index Score Generation Process Using Cumulative Data from the First Year of the Adult Outpatient Program Re-Design.

Steps used in calculating the Index Score:

The Original GAS formula is applied to the sub-objective or lowest objective level which yields a sub-objective attainment score.

The sub-objective attainment scores are aggregated using the Modified GAS formula yielding [illegible] objective index score.

The index scores at the objective level are aggregated using the Modified GAS formula yielding Effectiveness and Efficiency index scores.

The Effectiveness and Efficiency index scores are again aggregated using the Modified GAS formula yielding the Program Performance Index Score for the Direct Clinical Services Component.

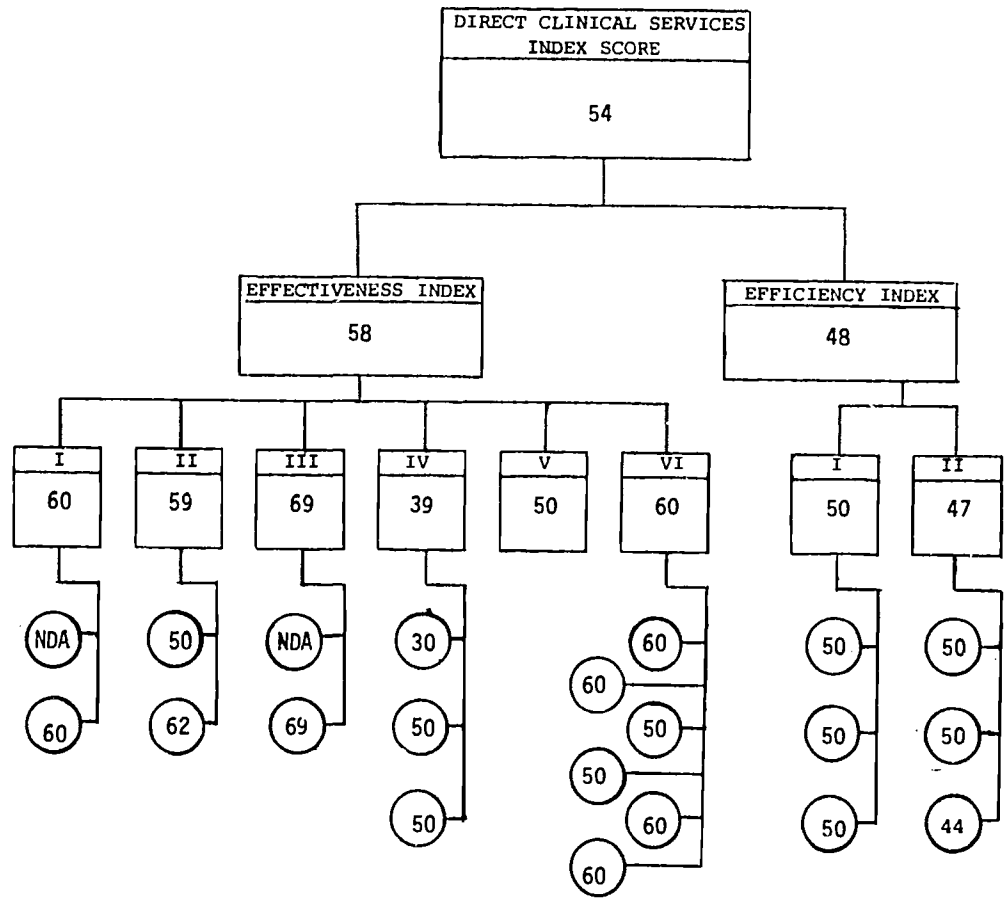
ORIGINAL GOAL ATTAINMENT FORMULA:

$$T_j = 50 + \frac{10\Sigma w_i x_i}{\sqrt{(1-\rho)\Sigma w_i^2 + \rho(\Sigma w_i)^2}}$$

MODIFIED GOAL ATTAINMENT FORMULA:

$$T' = 50 + \frac{\Sigma w_j (T_j - 50)}{\sqrt{(1-\rho)\Sigma w_j^2 + \rho(\Sigma w_j)^2}}$$

NOTE: NDA in figure indicates that no data is avaliable; data collection procedures are being developed for monitoring these sub-objectives.



IV. Evaluation of the Individual Client.

A. Model Construction.

The model employed for evaluation of the clinical case is based upon a modification of the "Four Mode" Goal Attainment Scaling procedure developed during the Program Evaluation Project. Greater emphasis is being placed on client participation in the goal-setting procedure.

1. Theoretical Model.

Goal Attainment Scaling allows idiographic goal setting for the individual client. The first assumption made is that a value can be associated with a client's position on a goal dimension. It is also assumed that in using such values an index score can be derived which reflects a client's overall status on any number of goal dimensions.

2. Applied Model.

All clients assigned to ongoing, individual and group psychotherapy are being evaluated. Since these two modalities account for more than 50 percent of all treatment provided, evaluation of the clients receiving these services was undertaken first. Goal Attainment Follow-up Guides are constructed by an intake worker at the close of the intake interview(s). Consumer participation in goal setting is being emphasized in the applied model. All goals are set with a three month follow-up date.

The therapist assesses the clinical relevancy and realism of goal setting done during the intake interview(s). This critique of follow-up guide content is accomplished within two weeks after the client is assigned to the therapist for ongoing therapy. Results of the critique provide data for evaluation of the program, specifically in terms of quality control of goal setting. Follow-up is conducted and outcome evaluated by the therapist after three months of therapy. Utilization of the therapist as the follow-up evaluator is being explored in the program, given the constraints of a very limited budget for independent (or contractual) follow-up. But because the feasibility and reliability of this alternative to independent follow-up has not been previously established at the Mental Health Service, outcome scores generated by therapists are being verified through the use of corroborative interviews.

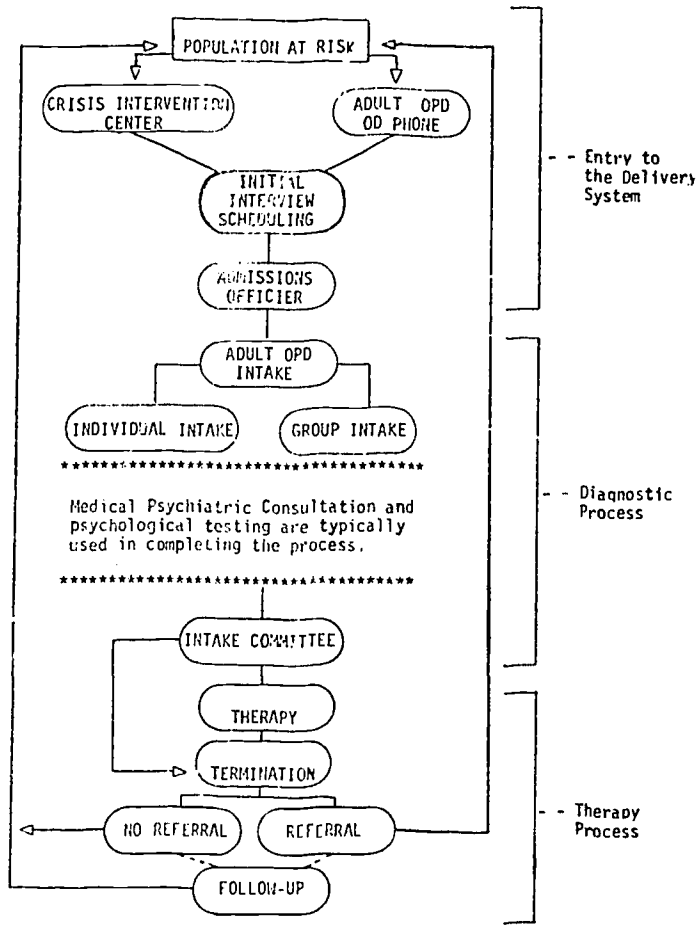
B. Progress to Date.

In discussing progress to date, reference should be made to Figure VII which offers a schematic overview of the direct clinical services delivery system.

1. Entry to the Delivery System.

Clients enter the delivery system via either the Crisis Intervention Center or the Adult Outpatient Program telephone screening and referral service (Office of the Day phone). (A report on the activities of the Crisis Intervention Center may be found in the Crisis Intervention Center chapter of the P.E.P. Report 1969-1973.) Once clients who may require ongoing treatment services are identified from either of these two sources, intake interviews are scheduled. Approximately 33 percent of the clients scheduled for intake interviews are referred from the Crisis Intervention Center, with the remaining 67 percent identified by the Office of the Day telephone service.

FIGURE VII: Schematic Overview of the Adult Outpatient Program Direct Clinical Services Delivery System.



2. Diagnostic or Intake Interview Process.

Depending upon the client's preference, intake interviews may take place individually or in a group. All professional disciplines perform intake functions. Table II gives the relative percentages of intake activities by professional discipline for the first year of the Re-design. In

TABLE II: Distribution of Intake Activities by Professional Discipline and Type of Intake During the First Year of the Re-Design.

INTAKE CLINICIAN DISCIPLINE	INTAKE TYPE		TOTAL PERCENT OF ALL INTAKES
	INDIVIDUAL	GROUP	
	Percent	Percent	
Psychiatry*			
Staff	2%	--	2%
Students	6%	--	6%
Psychology			
Staff	18%	--	18%
Students	6%	--	6%
Social Work			
Staff	23%	25%	48%
Students	5%	1%	6%
Psych. Nurse			
Staff	14%	--	14%
TOTAL	74%	26%	100%

*Psychiatry staff and students are available for medical psychiatric consultation during the intake process.

intake, 1,168 new clients were seen and on the average received 1.4 intake interviews.

Both medical-psychiatric consultation and psychological testing are available to the intake worker during the intake process. Use of these services is summarized as follows: 85 percent of the new clients completed routine, psychological testing; 33 percent of the new clients were provided with a medical-psychiatric consultation.

The intake process culminates with an intake summary. This summary includes the client's presenting complaints, the stresses he is confronted with, his independent efforts to accommodate, any history of previous treatment, his personal (education, vocational, social, etc.) history, the results of medical-psychiatric consultation and psychological testing, the diagnostic impressions, and a consensual treatment plan.

Intake summaries and follow-up guides are forwarded to the Intake Committee, comprised of senior staff, who review all cases recommended for treatment. In addition to reviewing clinical judgment, this committee implements treatment assignments according to the following procedures. A record of therapy openings, listing which therapists on the Adult Outpatient Program staff are available for specific treatment modes, is updated each week by [illegible] earch clerk. This information is used by [illegible] ommittee to assign new clients to therapy modes and therapists.

A randomized assignment procedure is available to the committee for a client if individual or group therapy is recommended. This randomization procedure consists of two operations. The first, employed if it is the intake worker's clinical judgment that the client may benefit equally from either individual or group treatment, involves random assignment between these modes; this is accomplished by drawing the first card from a randomly shuffled deck of available therapy mode cards.

The second operation is used to select a therapist. A deck of randomly shuffled "available therapist" cards is prepared for individual therapy and a second is prepared for group therapy. The first card of the appropriate deck is drawn, and it specifies the therapist who will receive the case assignment. All of these assignment procedures can be aborted if an obviously unworkable assignment, in the judgment of the committee, results.

Experience to date has revealed that approximately 85-90 percent of all intake worker treatment recommendations are implemented without change. Table III summarizes the dispositions implemented by the Intake Committee and reflects the intake workers' utilization of the various randomization alternatives.

TABLE III: Intake Committee Case Assignment Summary for First Year of Re-Design.

THERAPY MODE	RANDOM MODE ASSIGNMENT PROCEDURE RANDOM THERAPIST	RANDOM MODE ASSIGNMENT PROCEDURE NON-RANDOM THERAPIST	NON-RANDOM MODE ASSIGNMENT PROCEDURE RANDOM THERAPIST	NON-RANDOM MODE ASSIGNMENT PROCEDURE NON-RANDOM THERAPIST	TOTAL ASSIGNMENTS
Individual*	24	7	81	17	289
Group*	16	12	21	73	122
Crisis Group	--	--	--	67	67
Medication Therapies**	--	--	--	116	116
Marriage/Family Counseling	--	--	--	81	81
Assignment to Another MHS Treatment Program	--	--	--	79	79
Termination After Intake Only	--	--	--	204	204
Assignment Disposition Not Yet Completed	--	--	--	219	210
TOTAL NEW CASES	40	19	102	797	1168

*Random assignment options are only applicable to individual and group psychotherapy modes
**Includes brief psychotherapy contact with a psychiatrist

As indicated in Table III, shown above, 478 cases were assigned to the individual and group psychotherapy programs during the first year of the Re-design (includes crisis group). Ideally, a follow-up guide should have been received on each of these cases. About 77 percent of the follow-up guides for guide-eligible cases were retrieved. The loss rate of 23 percent was attributable to a combination of administrative and implementation factors.

Analysis of individual client data begins with content classification of the goals on the client's follow-up guide. The average number of scales per follow-up guide is three. Table IV provides the distribution of scales classified by content types for the Re-design evaluation sample, using problem classification guidelines prepared by Garwick and Lampman (1972). Interpersonal and work problems are the most frequently occurring in this sample. However, even these account for only 22 percent of all problems identified by intake workers and their clients. This suggests that the problems which bring clients to a mental health center are quite varied in terms of content areas.

TABLE IV: Classification of Treatment Goals Set During the First Year of the Re-Design

Classification	Percent of All Scales
Aggression	3%
Alcohol Use	3%
Anxiety	6%
Decisions	4%
Depression	9%
Drug Use	0%*
Education	2%
Family/Marital	7%
Financial	0%*
Interpersonal Relationships	11%
Legal	2%
Living Arrangement	3%
Physical Complaints	8%
Psychopathological Symptoms	4%
Self References	6%
Sexuality	6%
Suicide	4%
Treatment	7%
Work	11%
Miscellaneous	4
Total	100%

* Less than 1 percent.

3. Treatment Process.

In an effort to control the quality of goal setting and to stimulate dialogue between intake workers and therapists, follow-up guide critiques are requested from therapists two weeks after case assignment. This follow-up guide critique process involves the therapist in appraising the relevancy and realism of goals and expected levels of attainment established by the intake worker and the client during the intake interview(s). Data obtained indicate that 92 percent of the scales are judged relevant and 76 percent of these relevant scales are deemed to have realistic attainment levels, assuming a three month follow-up date. At the time of the critique, the therapist also has the option of adding new scales in negotiation with his client. Such therapist initiated goals are also being evaluated at the three month follow-up. The scores yielded are being analyzed separately from scores yielded by intake worker/client goals, and are not included in the analyses reported below.

With the return of the follow-up guide critique, no specific evaluation activities are conducted until the three month follow-up. At the designated follow-up date, the therapist receives a follow-up packet, in which he is asked to complete a therapy transaction summary, that is, a visit count, and outcome ratings, including the scoring of the follow-up guide. These follow-up materials are to be completed for all clients who have attended a minimum of two therapy sessions.

Nine months of outcome data have been collected at the time of this report, and 253 clients have reached their follow-up date. Seventy-five percent of 190 clients have satisfied the follow-up criterion of attending at least two treatment sessions. Of this follow-up sample, 173 clients, or 92 percent, were successfully followed-up.

4. Characteristics of the Outcome Score.

This section deals with the outcome results obtained from the sample of 173 clients successfully followed-up. The process of analyzing the outcome results begins with an examination of the score distribution. Figure VIII shows the Goal Attainment score distribution of the Re-design sample. This distribution is characterized by a mean of 52.5 and a standard deviation of 11.9, which closely approximates the statistics of the theoretical distribution (a mean of 50 and a standard deviation of 10) described by Kiresuk and Sherman (1968).

More critical analysis of the outcome scores required review of the Goal Attainment score's dependency upon other variables. Of first concern are guide construction variables, that is, mode of intake and intake worker. As regards mode of intake as a possible source of prediction bias in follow-up guide construction, the data shown in Table V on page 17 indicate no difference in the mean outcome score of follow-up guides developed in individual and group intake; this suggests that the mode of the intake interview has no significant effect on the Goal Attainment score.

FIGURE VIII: Histogram of Goal Attainment Score Distribution for Therapist Conducted Follow-ups During the First Year of Re-Design.

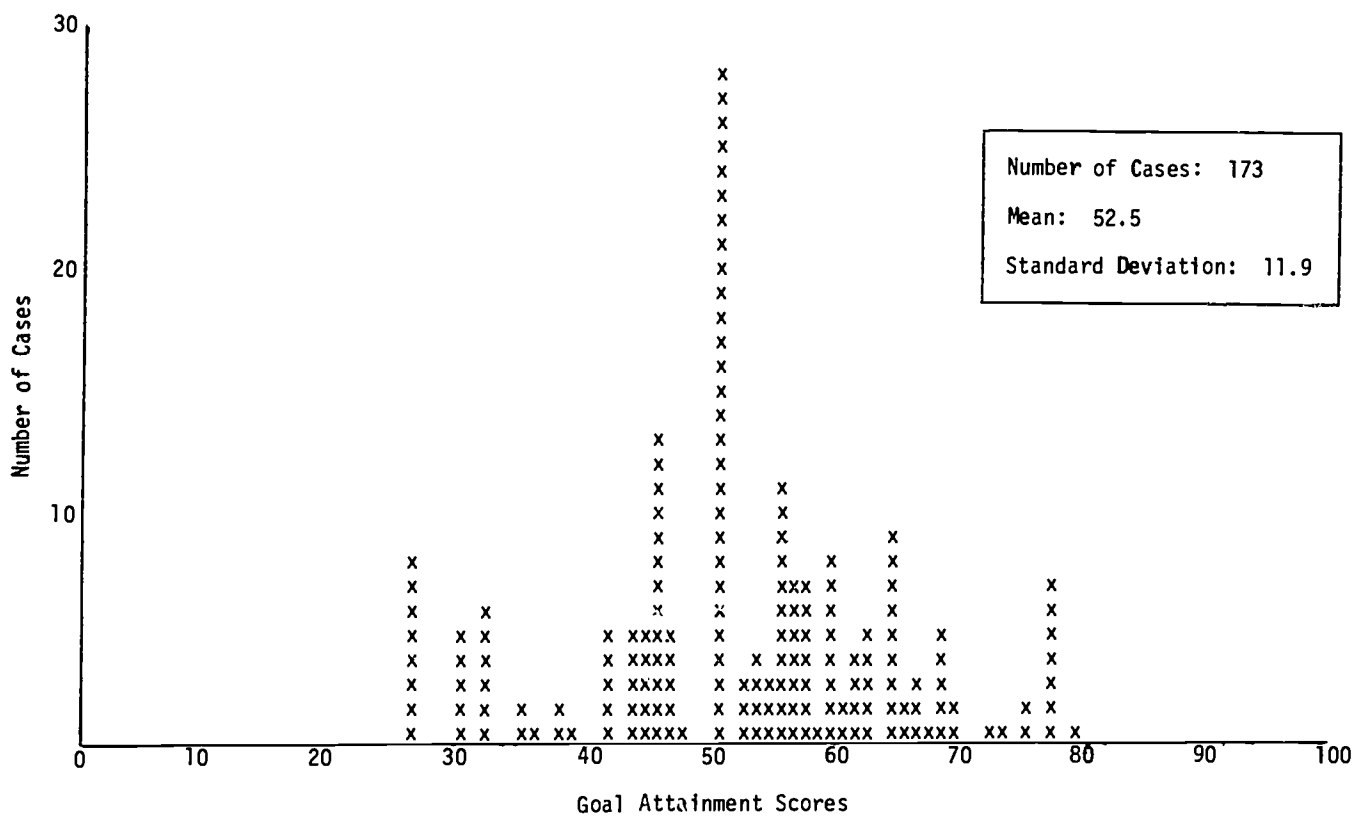


TABLE V: Goal Attainment Outcome Statistics by Mode of Intake for the First Year of Re-Design.

Intake Type	Number of Cases	Mean Goal Attainment Score	Standard Deviation
Group	55	52.8	11.5
Individual	118	52.5	12.2
TOTAL	173	52.6	11.9

Theoretically, outcome scores on follow-up guides produced by each intake worker should demonstrate a mean of 50 and a standard deviation of 10. The statistical characteristics of the outcome score distribution of intake workers with five or more cases are entered on Table VI. Preliminary analysis reveals no statistical differences among the mean outcome scores of intake workers shown in Table VI. However, there is an indication that several of the intake workers may be pessimistic in their goal setting. At present, a procedure which will allow for adjustment of intake worker "bias" is being developed by the Program Evaluation Project staff which, when completed, will be adapted for use in the Re-design.

TABLE VI: Goal Attainment Scores for Adult Outpatient Intake Workers with More than Five Intake Cases that Have Been Followed Up.

Intake Worker	Number of Cases	Mean Goal Attainment Score	Standard Deviation
A	24	52.16	10.96
B	10	52.10	12.95
C	16	57.50	16.03
D	8	53.75	7.00
E	14	54.69	12.55
F	16	57.06	14.21
G	14	55.78	10.34
H	14	49.42	10.98
I	9	51.11	13.27

Because the Re-design utilizes therapists as follow-up evaluators of their own treatment cases, the distribution of their outcome scores is of particular interest -- the specific concern being that therapists in a self-evaluation system might inflate outcome scores. However, the statistical characteristics of therapist outcome score distributions are presented in Table VII, and although the sample sizes are small, the preliminary results show, with one exception, all scores in the "expected level" goal attainment range.

TABLE VII: Goal Attainment Scores for Adult Outpatient Therapists Who Have Completed More than Five Therapist Follow-ups.

Therapist	Number of Cases	Mean Goal Attainment Score	Standard Deviation
A	11	53.18	8.98
B	7	66.57	10.96
C	8	56.25	8.15
D	7	46.71	9.79
E	27	47.88	9.64
F	10	50.98	10.58
G	10	50.00	8.43
H	21	53.19	14.61
I	16	54.75	9.65

Score verification is accomplished through corroborative interviews conducted by mental health professionals not affiliated with the Adult Outpatient Program. These corroborative interviews are conducted via telephone on a random sample of cases followed up by therapists; this independent contact by the corroborative interviewer permits scoring the follow-up guide and completing a consumer satisfaction inventory. The mean of the corroborative interviewers' outcome score distribution is 52.5 and the standard deviation is 12.18, as compared to a mean of 54.2 and a standard deviation of 10.55 for the therapist distribution. The mean of the distribution of outcome scores generated by the corroborative interviewers is not significantly different than that of the therapist distribution.

This demonstration of credibility for the therapist-generated outcome scores justifies their use in analysis of program variables. For example, the relative efficacy of treatment modes might be contrasted. The means and standard deviations of the outcome scores for individual and group psychotherapy modalities are shown in Table VIII. Because the sample sizes are modest, no attempt has been made to analyze separately for randomly-assigned versus nonrandomly-assigned cases. Aggregate analysis demonstrates no significant difference between individual and group psychotherapy at this moment. (Table VIII appears on the following page.)

TABLE VIII: Goal Attainment Scores for Individual and Group Psychotherapy Modalities During the First Year of the Re-Design

Treatment Mode	Number of Cases	Mean Goal Attainment Score	Standard Deviation
Individual	101	54.20	12.38
Group	72	50.31	11.20
TOTAL:	173	52.60	11.90

V. Feedback.

Fundamentally, the purpose of the Re-design is to assist in improving the performance of the overall program relative to its stated goals and the performance of professional staff members in the delivery of clinical services. To have the desired impact, feedback of evaluative information is imperative.

Evaluative data on programmatic performance has been monitored by the director of the Adult Outpatient Program during the first year of the Re-design. Management decisions have been facilitated through the use of this data. For example, as a reflection of the established fail rate ratio, over-scheduling is now being used to maximize professional staff time devoted to intake interviewing. Parallel investigation on "fail" rate problems is currently in progress. Much of this information has been shared with the professional staff through a series of informal progress reports and discussions at routine administrative meetings. During the next year, feedback of evaluative data on programmatic performance will be compiled and routinely disseminated to the professional staff.

Using therapists as follow-up evaluators on their own treatment cases insures clinical feedback. With completion of the follow-up packet, the therapist is presented with the course and outcome of treatment.

More rigorous and systematic feedback procedures are being developed for information sharing with the professional staff on both the overall program and the individual client. When possible, data will be presented to the individual staff member on his own performance. Aggregate information on the performance of professional colleagues will also be provided and should facilitate evaluative data interpretation by the individual staff member.

The first phase of such a system has been implemented. A sample process feedback report dealing with intake caseload is displayed in Figure IX.

FIGURE IX: Sample Adult Outpatient Program Process Feedback Report Which is Generated for the Individual Intake Clinician.

HENNEPIN COUNTY MENTAL HEALTH SERVICE ******** INTAKE COMMITTEE ASSIGNMENT SUMMARY
INDIVIDUAL INTAKE CLINICIAN REPORT

PERIOD: 11/08/73 TO 11/08/73

CLINICIAN: MS. J. X.
POSITION: INTAKE CLINICIAN

	YOUR CASES AS THERAPIST	YOUR CASES AS COTHERAPIST	ALL OPO INTAKE THERAPISTS THERAPIST	ALL OPO INTAKE THERAPISTS COTHERAPIST	OTHER MHS INTAKE SOURCES CIC	OTP	INPT	OTHER
NUMBER OF INTAKE CASES PRESENTED WITH TREATMENT ASSIGN RECOMMENDED	2	0	13	4	2	0	0	0
FIRST INTAKE TO INTAKE COMMITTEE ASSIGNMENT INTERVAL FOR CASES RECOMMENDED FOR TREATMENT (AVG NO DAYS)	12.5	0	9.2	8.3	-	-	-	-
NUMBER OF INTAKE CASES PRESENTED FOR TERMINATION (NO TREATMENT REC)	0	0	0	0	0	0	0	0
TOTAL NO. INTAKE CASES PRESENTED	2	0	13	4	2	0	0	0

INTAKE COMMITTEE CASE ASSIGNMENT DISPOSITION SUMMARY:

CLIENT NAME	HOSP NUMBER	DATE 1ST INTAKE	YOUR INTAKE FUNCTION	RECOMMENDED ASSIGN MODE	DATE OF IC ASSIGNMENT	MODE OF ASSIGNMENT	INTAKE COMMITTEE ASSIGNED THERPIST(S)	INTAKE TO ASSIGNMENT
JOHN DOE	Z00000	10/31/73	THERAPIST	OTP	11/08/73	OTP	MS. J. X.	9 DAYS
MARY DOE	Z11111	10/23/73	THERAPIST	RANDOMIZED	11/08/73	GRP. THERAPY	MS. J. X.	16 DAYS

CURRENT NUMBER OF AVAILABLE THERAPY OPENINGS AT THE INTAKE COMMITTEE:

THERAPY MODE	INDIVIDUAL	GROUP	MARRIAGE COUNS.
AVAILABLE OPENINGS	30	28	17

The report summarizes the intake activities of November 8, 1973. Aggregate information indicates that a total of 13 cases were presented for ongoing treatment assignment with an average delay of 9.2 days from initial interview until case assignment by the Intake Committee. Information addressed to the specific intake worker includes a summary of the number of cases forwarded to the Intake Committee, average delay in doing so, and a client specific disposition summary. Also included is information on the status of the therapy openings within the program.

VI. Data Collection and Processing.

Data needed for evaluation of the program and for evaluation of the individual client are collected routinely. Installation of a computerized reporting facility, which will replace the previous "hand tally" methods and minimize the amount of clerical time involved in report generation, is under way. The basic data processing system which was developed during the Program Evaluation Project was adopted for the Re-design. However, several new reporting options have been implemented, such as feedback reports on process variables.

The system was developed for use on an IBM 360/370 computer for processing of data stored on magnetic tape. All processing routines are written in Fortran IV and are currently run in batch mode. Some features of the system include: client-oriented file structure; editing, updating, correcting and analyzing routines which are constructed for use by non-technical staff; flexible file structure content and file expansion capability; and security checks which protect against unauthorized access and/or the alteration or destruction of information by users of the system.

In addition to the automated routines available through the computer system, other computer outines have been built to assist in specific program evaluation and/or research data processing. These include the Minnesota Multiphasic Personality Inventory and the Shipley-Hartford processing routines, cross-tabulation routines, and various statistical analysis routines. Using this modified Program Evaluation Project processing system, a single data file is maintained which serves both evaluation and research purposes.

The evaluation data base currently contains items which permit monitoring the attainment levels of both effectiveness and efficiency objectives established for the direct clinical services component. This data base allows monthly scoring of the attainment levels of both effectiveness and efficiency objectives. The attainment levels are then used in the calculation of the Program Performance Index Score. The evaluation data base also contains items which pertain to the individual client, such as demographic information, transaction or visit information, psychological testing results, follow-up guide content and follow-up results, and termination information. These data can be used to evaluate the individual client and can be aggregated across clients to provide a characterization of the client population.

SUMMARY.

The evaluation system of the Adult Outpatient Program is called the Re-design to denote that it assimilates the four year's experience of the clinical and research staff members who participated in the Program Evaluation Project. The Re-design, which utilizes Goal Attainment Scaling, undertakes evaluation of overall program and the clinical case.

With respect to overall evaluation of the Program, development of the applied evaluation model began with a critical review of the Program's purposes. A mission statement and program component goal statements were drafted. Lastly, objectives and sub-objectives were deduced from the goal statements and specified in measurable terms. Goal Attainment Scaling was used to scale achievement levels for these objectives and sub-objectives. Using this method, Goal Attainment scores can be generated which reflect the level of attainment of each objective and sub-objective. A Program Performance Index is derived through aggregation of these Goal Attainment scores. Progress to date has consisted of model development and pilot installation. Objectives and sub-objectives related to the direct clinical services program component have been monitored and monthly Index Scores have been generated. Data derived from the pilot project will be utilized by the professional staff as base-rate information for assessing the utility of each objective and sub-objective as program monitoring measures. In addition, the base-rate data may be used in revision of the criterion levels of inappropriately scaled objectives and sub-objectives.

Regarding evaluation of the individual patient, modifications have been effected in the procedures used during the data collection phase of the Program Evaluation Project. The design now hopefully fosters greater clinician and patient involvement. Treatment goal-setting through negotiation between intake workers and patients is being emphasized. Therapists are not only made aware of treatment goals, but they are asked to critique the goal-setting done at the time of the intake interview and are encouraged to add treatment goals as dictated by further observation, again in consultation with the clients. Lastly, the design now utilizes the therapists as primary "follow-up worker" which insures they are presented with treatment outcome. Corroborative follow-ups, conducted by independent interviewers, provide data which is used to validate the outcome scores derived by therapists.

For both overall program evaluation and evaluation of the individual patient, data collection, data processing, and feedback systems are being developed. Progress to date has included adaptation

of the computerized data storage and retrieval system developed by the Program Evaluation Project. In addition, several Re-design specific computer programs have been written to facilitate the processing of evaluation data. Various types of process and outcome feedback are currently being provided to the professional staff. Integration of several feedback reports has been undertaken.

At this moment, conclusions about the merits and shortcomings of the Re-design cannot be definitively stated. Experience to date promotes the professional staff's belief that the Re-design does represent an approach to evaluation which is comprehensive and facilitates regular, systematic review of both the Program and the clinical case. The Adult Outpatient Evaluation System is an endeavor designed to enlarge understanding of the Program, in terms of what makes it effective and efficient, and of the clinical case, in terms of what treatment works and how well.

Goal Attainment Scaling, used in either evaluation of a program or an individual client, is extremely flexible. In evaluation of a program, the manager selects those goals which are appropriate for his program. He can set goals according to his value system and performance criterion levels which are desirable and realistic. Use of the Program Performance Index Score permits him to compare actual programmatic performance with desired performance. Similarly, in evaluation of an individual client, the clinician using any theoretical framework, can develop idiographic goals with his client. At follow-up, a Goal Attainment score can be computed which summarizes his client's status across all treatment goals.

The aforementioned assets prompt optimism about the Re-design. However, potential liabilities exist in applications at both the program and clinical case level. At the program level, realistic scaling is necessary to minimize random fluctuations of the Program Performance Index score. Also, one must exercise caution in reacting to this and any index score. More experience with the index score concept is necessary before it can be utilized for major management decisions. Development of decision rules and guidelines is a must. At the individual client level, reliability of Goal Attainment scores is a major concern. In the Re-design, in which therapists function as primary follow-up workers, the reliability of outcome scores may be affected by factors which are not operative in follow-ups conducted by independent interviewers. As a result, provision for independent verification of therapist generated outcome scores and feedback of these corroborative scores to the therapists appears to be necessary.

Given the merits and potential shortcomings, the critical demonstration of the Re-design's utility will be whether it provides evaluation data which result in either maintenance or improvement of performance. This utility will hopefully be demonstrated at both the program and individual client level and will be assessed relative to the cost of the evaluation program.

The next phase of Re-design activity will consist of: (1) reassessment of the direct clinical service goals and criterion levels for each objective and sub-objective; (2) establishment of pilot-stage goals and scaling criterion levels for objectives and sub-objectives on the training and research/evaluation program components; and (3) completion of a cost-effectiveness analysis of the entire evaluation package. Interim reports on progress will be issued throughout this phase and feedback solicited from interested colleagues.

Specific References.

Garwick, G. & Lampman, S. Expectations and goals for clients at a community mental health service. Unpublished Project Report, July, 1972.

Kiresuk, T.J. & Sherman, R.E. Goal attainment scaling: a general method for evaluating comprehensive community mental health programs. Community Mental Health Journal, 1968, 4(6), 443-453.

Suggested Readings.

Kiresuk, T.J. Goal attainment scaling at a county mental health service. Evaluation, 1973, Special Monograph Number 1, 12-18.

Schulberg, H.C., Sheldon, A. & Baker, F. (Eds.) Program Evaluation in the Health Fields. New York, New York: Behavioral Publications, 1969.

Suchman, E.A. Evaluative Research. New York: Russell Sage Foundation, 1967.

Walker, R.A. The ninth panacea: program evaluation. Evaluation, Fall, 1972, Vol. 1, No. 1, 45-53.

Weiss, C. (Ed.) Evaluating action programs: readings in social action and education. Boston: Allyn and Bacon, Inc., 1972.

Worthen, B. & Sanders, J.R. Educational evaluation: theory and practice. Worthington, Ohio: Jones Publishing Company, 1973

ADULT OUTPATIENT PROGRAM PROFESSIONAL STAFF MEMBERS

HENNEPIN COUNTY MENTAL HEALTH SERVICE

June, 1974

PSYCHIATRY STAFF

Steven Greenwald, M.D.

S. Won Kim, M.D.

Anthony Pollock, M.D.

PSYCHOLOGY STAFF

William Backus, Ph.D.

Dean Beaulieu, Ph.D.
Program Director

Zigfrids Stelmachers, Ph.D.

PSYCHIATRIC NURSING STAFF

Carol Nordgaard, R.N., M.S.N.

SOCIAL WORK STAFF

Ronald Bourdaghs, A.C.S.W.

Joan Calof, A.C.S.W.

Ida Davies, A.C.S.W.

David Lucking, A.C.S.W.

Roberta Meier, A.C.S.W.

Perry Roth, A.C.S.W.

Ann Russell, A.C.S.W.

Carol Schreier, A.C.S.W.

Ruth Winter, A.C.S.W.

PROGRAM EVALUATION PROJECT STAFF LISTING

CURRENT STAFF MEMBERS

Thomas J. Kiresuk, Ph.D.
Principal Investigator 1969-1974

Donna M. Audette
Research Assistant 1970
Follow-up Assistant 1971
Follow-up Supervisor 1972-1973
Utilization Consultant 1974

James Baxter
Research Assistant 1970
Operations Manager 1971
Assistant Coordinator 1972-1973
Re-design Coordinator 1974

Diane Berg
Editorial Secretary 1973-1974

Janis Bibee, M.A.
Editorial Secretary 1972
Editorial Assistant 1973
Assistant to the Editor 1974

Joan Brintnall
Student Assistant 1971
Secretary-Receptionist 1972
Administrative Assistant 1973
Dissemination, Consultation,
and Utilization Supervisor 1974

Joan Dreyer
Research Clerk 1972
Research Assistant 1973
Research/Administrative Clerk 1974

Geoffrey Garwick, M.A.
Research Applications Consultant 1970
Program Evaluation Coordinator 1971
Deputy Assistant Director 1972
Assistant Director 1973
Dissemination, Consultation,
and Utilization Consultant 1974

Carolyn Jasperson
Student Assistant 1973-1974

Susan Jones
Research Assistant 1971
Research Associate 1972-1974

Laurence Kivens, M.A.
Applications Analyst 1971
Editorial Supervisor 1971
Editor 1972-1974

Mary Knepper
Appointment Interviewer 1970-1973
Administrative Assistant 1974

Judy Long
Administrative Secretary 1974

Sander Lund
Management Applications Supervisor 1971
Assistant Coordinator 1971-1972
Coordinator for Administration 1973
Assistant Director 1974

Nancy Petersen
Secretary 1973
Research Assistant 1974

Michael Saunders
Programmer Analyst 1971-1972
Programmer Supervisor 1973-1974

Robert Sherman, Ph.D.
Associate Investigator 1969-1974

Roger Twedt
Student Assistant 1974

Mary Ellen Whalen
Student Assistant 1973-1974

PREVIOUS STAFF MEMBERS

Anita Bjornson
Research Assistant 1970

Barbara Blazick
Student Assistant 1970

Mary Duroche
Editorial Secretary 1972

David Feigal
Research Assistant 1970-1971

Thomas Griffin
Student Assistant 1970

Marilee Grygelko
Student Assistant 1971-1972
Research Assistant 1973

Edward Gubman
Student Assistant 1971

Colleen Halley
Student Assistant 1971-1973

Robert Kearney
Editorial Assistant 1972

Karen Kohout, M.A.
Research Analyst 1969
Research Supervisor 1970-1971

Sherry Lampman
Administrative Assistant 1970
Linguistic Analysis Consultant 1971
Content Analysis Supervisor 1972

William Makela, M.A.
Follow-up Supervisor 1970-1972

Charles Meade
Research Assistant 1970-1972

Deirdre Meade
Secretary-Receptionist 1971
Administrative Assistant 1972

Sylvia Muilenberg
Administrative Assistant 1969
Administrative Supervisor 1970

Nils Olsson
Student Assistant 1971
Research Assistant 1972-1973

Carol Pollock
Research Clerk 1972

William Prock
Community Applications Supervisor 1971-1972

Peter Ree
Student Assistant 1970

Martha Rosen
Secretary-Receptionist 1970
Editorial Assistant 1971-1972

Susan Salasin
Coordinator 1969-1970
Assistant Director 1971-1972
Research Applications Consultant 1973

Richard Tripp
Programming Supervisor 1970
Design and Analysis Supervisor 1971-1972

Mary Trone
Editorial Secretary 1973

Carol Vanderpool
Secretary-Receptionist 1971-1972
Administrative Assistant 1973

Cynthia Wetterland
Secretary-Receptionist 1970

Allen Wichelman
Medical Records Clerk 1970
Management Applications Supervisor 1971

Sue Wright
Clinical Applications 1971

Carole Zimbrolt
Research Analyst 1969-1971

FOLLOW-UP INTERVIEWERS - CURRENT

Kathleen Bergum, M.S.W.

Charles Besnett, M.S.W.

Carol Dethmers, B.A.

Marcia Frankenberg, B.A.

George Meirick, M.S.W.

FOLLOW-UP INTERVIEWERS - PREVIOUS

Mary Ann Anzelc, R.N.

James Bergum, M.S.W.

Roanne Borkon, R.N.

Larry Bultena, M.S.W.

Scott Craven

Jeanine Emmons, R.N.

Barbara Gusek, R.N.

Mary Keturakat, R.N.

Steve Lapinsky

Betty Metz, B.A.

Madiline Sachs, R.N.

James Snope, M.S.W.

Milt Somerfleck, M.S.W.

CONSULTANTS

Dean Beaulieu, Ph.D.
Clinical Coordinator 1971-1974

James Boen, Ph.D.
Statistical Consultant 1969-1973

Byron Brown, Ph.D.
Statistical Consultant 1969-1973

Arthur Funke, Ph.D.
Dissemination Consultant 1969-1974

Stephen Greenwald, M.D.
Medications Consultant 1969-1973

Ann Russell
Clinical Consultant 1970

Robert Spano, A.C.S.W.
Patient Follow-up Coordinator 1969-1973

Wyman Spano
Editorial Consultant 1972-1973

Cathy J. Turner
Programming Consultant 1973

Robert Walker, M.A.
Data Applications Coordinator 1973