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A Study of an Intensive Outpatient Treatment Program for High Risk Psychiatric Patients within a Network IPA Model Health Maintenance Organization

Elizabeth A. Ross¹, M.D., Janice Harrington², Ph.D., J. Harold Berberick^{3*}, Ed.D.

¹Tufts Health Plan, USA

²Beacon Health Options, USA

³Behavioral Health Strategies, USA

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***Corresponding author:** J Harold Berberick, Behavioral Health Strategies, USA, Email: jhberberick@bhstrategies.org

Abstract

Objectives

This study reports the efficacy of an intensive outpatient program using dialectical behavior therapy (DBT) and cognitive behavior therapy for high-risk personality disordered patients served in a health maintenance organization (HMO).

Methods

In a one-year clinical trial 40 members of an HMO who suffered from a personality disorder (primarily borderline personality disorder), had failed in previous treatment attempts and had high rates of hospital recidivism were treated in an intensive outpatient staff model program operated by a nationally recognized health maintenance organization. The emphasis was on immediate access, dialectical and cognitive behavior therapy and crisis management.

Results

The rate of hospital admission per 1000 member days was reduced from 11.8 to 3.9. The rate of hospital admissions for all HMO members declined but was much more dramatic for study participants. A member satisfaction survey was also conducted and members expressed high levels of satisfaction with the clinic's services.

Conclusions

The clinical program of the intensive outpatient clinic of this HMO successfully targeted high-risk patients with repeated hospitalizations. The dialectical and cognitive behavior model of treatment is effective in treating patients with personality disorders and poor self-regulation skills. The flexibility of the program and its integration with the HMO provider network are additional strengths.

Abbreviations: DBT: Dialectical Behavior Therapy; HMO: Health Maintenance Organization; PBHC: Pilgrim Behavioral Health Center; IPA: Independent Practice Association; IOPT: Intensive Outpatient Treatment; BPD: Borderline Personality Disorder; BHS: Beck Hopelessness Scale; BDI: Beck Depression Inventory

Introduction

Hospital recidivism, particularly among high-risk psychiatric patients, including those with Borderline Personality Disorder, is one of the biggest challenges facing a Health Maintenance Organization (HMO), where the emphasis is on prevention and reduction of expensive patient care. To this end the Pilgrim Behavioral Health Center (PBHC) in Massachusetts was established as a corporate affiliate of Pilgrim Health Care, a nationally acclaimed non-profit health maintenance organization. The founding principle of PBHC was to establish an intensive clinical outpatient program to treat and stabilize

individual members of the HMO who continued to be at risk despite recent treatment in a hospital setting and despite follow-up in outpatient treatment. Follow-up was provided by psychiatrists, psychologists, and clinical social workers in the Independent Practice Association (IPA) network. IPAs are an essential part of the HMO concept and are essentially business entities organized by physicians and other practitioners to provide high quality care realized by efficiencies in best practice and enhanced ability to negotiate favorable cost reimbursement or capitation contracts.

The Pilgrim Behavioral Health Center was not intended to replace the IPA but to enhance it. Unlike the provider network, PBHC offered same day or next day appointments, 24-hour crisis intervention, intensive case management, and utilization management. The goal is to work collaboratively with IPA resources to maximize member's return to full functioning as soon as possible. The Center picks up where the network leaves off, providing time-limited intensive follow-up in a group setting for those in crisis or requiring more than once-a-week traditional therapy.

Intensive Outpatient Treatment

The conceptual model chosen for the PBHC was Intensive Outpatient Treatment (IOPT). Originally a day hospital program was considered, but it was decided that a day hospital would be more costly, less flexible, and would not produce better outcomes. IOPT is more responsive, enables members to maintain employment, and delivering from two to twelve hours of treatment per week is easily manageable for a smaller interdisciplinary staff that can also provide case management and triage crisis calls. The cost of treatment for two to twelve hours per week is considerably less than a 25-30 hour per week day hospital. The literature has documented the effectiveness of Intensive Outpatient Treatment [1-3].

Focus on Borderline Personality Disorder

Patients identified by case management and hospital recidivism data included those with the highest risk for relapse, have repeated self-injurious behaviors, have over-used crisis services and were frequent drop-outs of traditional outpatient treatment. As a result, those most often selected for the Intensive Outpatient Treatment Program at the PBHC were diagnosed as having a personality disorder, especially Borderline Personality Disorder. According to the Association for Behavioral and Cognitive Therapies, Borderline Personality Disorder (BPD) affects about 1 to 2% of the population and is more prevalent in women than men [4]. However, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) estimates that the mean prevalence rate in the population is 1.6% but may be as high as 5.9%. It further estimates that this disorder accounts for about 10% of all individuals seen in outpatient clinics and 20% of psychiatric inpatients [5].

Borderline Personality Disorder is characterized by a serious, persistent and pervasive pattern of instability in personality and relationships, and is also accompanied by impulsivity, emotional dysregulation, repeated self-injury, and recurrent suicidal behavior and threats. There is often difficulty controlling anger and feelings of abandonment [6,7].

Causal factors are essentially unknown, but genetics may play a part, as well as physical and sexual abuse, especially during childhood. As mentioned above, individuals with Borderline Personality Disorder are frequently hospitalized due to frequent suicidal or self-mutilating behavior.

Dialectical Behavior Therapy and Cognitive Behavior Therapy

Dialectical Behavior Therapy (DBT) is a cognitive behavioral treatment developed by Marsha Linehan. It is very often the treatment of choice for Borderline Personality Disorder. The basic treatment strategies of DBT are organized as follows: focus on helping the clients develop skills and habits that enable them to tolerate and accept their intense negative emotions of anger, of wanting to hurt themselves, and of rejecting and threatening the people they love. The emphasis is on establishing healthy ways of coping and on restructuring thoughts and diverting attention from negative emotions by substituting positive feelings and behaviors. Both individual psychotherapy and group skills training classes are emphasized. Five components make up the standard DBT program. These consist of the skills training, individual therapy, coaching, case management and use of the DBT consultation team [8,9]. The method and techniques are very much psychoeducational.

Effectiveness of Dialectical Behavior Therapy

A number of studies have demonstrated the efficacy of DBT with patients diagnosed with Borderline Personality Disorder. In a 1998 study conducted by McQuillan et al. at the University of Geneva, 87 women who had recent suicidal or para-suicidal behavior were treated in an intensive three-week DBT program. The program emphasized skills training in groups and included four DBT modules. Seventy-one patients completed the program and showed significant pre-post improvement on the Beck Depression Inventory (BDI), the Beck Hopelessness Scale (BHS) and a Social Adaptation Scale [10].

One of the first studies of DBT was done by Linehan and associates. This study compared women who met the diagnostic criteria for Borderline Personality Disorder in two types of treatment programs: the first consisted of one year of standard comprehensive DBT and the second consisted of "treatment as usual," i.e., a substance abuse mental health program in the community, including individual psychotherapy. Following one year the DBT group reported less anger and better global social adjustment than the treatment as usual group. Even more positive results were shown after six months of follow-up. Those receiving DBT exhibited fewer para-suicidal episodes, continues to show less anger, had fewer days of hospitalization and better employment performance [11,12].

A subsequent study by Linehan and associates in 1999 focused on women with concurring substance abuse and Borderline Personality Disorder. The standard DBT program was modified to accommodate targets and strategies relevant to drug abuse. Again a treatment as usual comparison group was employed. As measured by both structured interviews and drug testing, the DBT group had significantly less drug abuse and was more likely to remain in treatment than participants in the comparison group [13].

At a Veterans Affairs' outpatient clinic, Koons et al. studied female veterans who met the criteria for Borderline Personality Disorder but did not have a history of para-suicidal behavior or suicide attempts. A six-month course of comprehensive DBT was compared with usual treatment approaches. At the end of six months, it was found that while both groups benefited, the DBT group exhibited less anger, depression, and suicidal ideation [14].

In addition to the above studies which were largely randomized, other studies support the clinical efficacy of both the standardized use of DBT and other modified versions with different populations, such as the elderly and adolescents [15,16].

To be sure, additional studies have demonstrated that DBT is not the only effective treatment for Borderline Personality Disorder. In a study published in the American Journal of Psychiatry patients were randomly assigned to receive either DBT or general psychiatric management. The results indicated that both groups showed similar and statistically significant improvement in the areas of reduced suicidal behaviors, anger, depression, and improvements in quality of life [17].

Finally, in a meta analysis conducted by Drs. Leichsenring and Leibling, studies conducted between 1974 and 2001 of psychodynamic therapy and cognitive behavior therapy were reviewed. Only studies using standardized diagnostic methods and reliable and valid instruments were included. Fourteen studies of psychodynamic therapy and eleven studies of cognitive behavior therapy were included in the analysis. The authors stated that although the conclusions are preliminary, both psychodynamic therapy and cognitive behavior therapy are effective in the treatment of personality disorders [18].

Selection of Patients for Pilgrim Behavioral Health

Potential patients/members are first identified in a hospital setting by the hospital treatment team or a utilization reviewer/case manager. (Individuals who receive their health care through a Health Maintenance Organization (HMO) are commonly referred to as members. Since this paper is describing a particular clinical program, the terms "members" and "patients" will be used interchangeably.)

Often, the inpatient treatment team knows the referral well from previous admissions and has come to a realization that hospitalization has little more to offer the patient who has been thoroughly worked up, diagnosed and treated. In spite of multiple workups and hospitalizations, the patient remains chronically suicidal or para-suicidal. Often times prolonged hospital care or another admission is thought to be detrimental to the member who regresses and becomes dependent on the protective setting due to a lack of self-regulation skills.

Sometimes, patients are identified by contracted crisis evaluation teams and referred for intensive outpatient

treatment as a way to avoid overuse of hospital care which has proven ineffective in the past. More and more, patients are being identified on the crisis pre-hospital end rather than post hospital discharge. Patients are also referred by IPA providers who feel their patient can be stabilized by additional support by way of intensive outpatient treatment which they can't accommodate in busy practice schedules or with cognitive behavioral or dialectical behavior therapy which they do not practice. Finally many patients are identified as recidivists through the HMO claims system.

Clinical Program Description

Each patient referred for treatment at the Behavioral Health Center has been identified as a person at high risk for relapse, self-injury, or overuse of costly hospital and crisis services. The patient is then assigned a Pilgrim case manager if he or she does not have one. The case manager reviews the full history of treatment, summarizes the case and drafts an outline of active problems that will be addressed by the Center. Prior to starting treatment, the member meets with a Center clinician who is assigned to follow the member through his or her course of treatment. The clinician conducts a thorough clinical evaluation and with the member identifies short- and long-term treatment goals. Together they construct an individual treatment plan focused on brief effective treatment that will help the member meet his or her identified goals. The treatment plan is reviewed by the multidisciplinary treatment team which is responsible for implementation.

The treatment plan is shared with the network IPA clinician and relevant state agency such as the Department of Mental Health if the patient is also receiving treatment there. The group (Dialectical) program is a mainstay of treatment, but individual therapy based on DBT techniques will also be provided if indicated. Therapy is commenced immediately.

The group program uses a psychoeducational approach combining dialectical behavior therapy and cognitive behavioral therapy techniques. The approach focuses on teaching self-regulation skills in order to change mood, behavior and thoughts which have become self-harmful or maladaptive. Targeted behaviors include self-injurious behavior and behavior which leads to dissatisfying relationships. The participant is asked to use case presentations, group discussion, handouts and exercises to first learn the coping skills with a facilitator, then to draw on personal experience for implementation and skills practice. From the first day, members are encouraged to use daily stressful encounters as new opportunities for learning. Prepared worksheets and diary cards are reviewed each day in a morning session to build on patient strengths and identify obstacles to new learning.

The goal of each member is to participate actively in each "class," and to begin to look at how one's own emotions and behaviors can be modified in order to achieve more satisfying

work and personal relationships. Through the DBT model, the member receives instruction on how to broaden current coping mechanisms and implement healthier coping techniques when feeling suicidal, anxious or angry. Members learn strategies on how to tolerate stress, and techniques for regulating one's emotions and behaviors using empathy and feedback and grounding techniques to manage extreme emotions, thoughts and behaviors. The program is rounded out by classes which use cognitive behavioral therapy to address all-or-none thinking, negative thinking, self-fulfilling prophecies and misperceptions and distortions which can lead to impulsivity. A segment on behavioral analysis helps the member to identify triggers and vulnerabilities to maladaptive behavior along with positive reinforcers and negative consequences of the behavior identified as needing change leading up to alternative solutions. How to devise a plan for a more balanced lifestyle and make decisions using an evaluation of risks and benefits is also built into a four-week program in the "healthy living" segment. Finally, definitive "crisis control" is incorporated into the program which stresses using the newly learned self-regulation skills, and non-professional supports before turning to professional services. How best to use professional services is also included in crisis control.

Complementing the more formal psychoeducational format is a group which explores job readiness through self-assessment and the help of a licensed trained mental health rehabilitation counselor. Members are taught how to identify areas of strength and transfer them to a work setting. Time management is introduced and the group focuses on return to work or volunteerism as a way to improve self-esteem, structure time and develop a support system to positively affect mental health.

The weekly cognitive behavioral group for adolescents aims to address issues relevant to all teens but also allows for individualized treatment interventions to help participants reach identified goals. The group strives to educate and provides a constructive behavioral model so that teens feel heard without needing self-injury or misconduct. Emotional regulation, conflict resolution and how to cope with illness during adolescent

years are discussed often using vignettes and role playing. A commitment to changing maladaptive behavior is fostered using the DBT format. Finally school-related issues (truancy, conflicts with teachers and peers, and academic pressure) are addressed and alcohol and drug education takes place. Adolescents enrolled in the program are all included in active case management, attend voluntarily, have given individual consent for treatment if age 16 or over and have obtained parental consent.

Results

A primary goal for the establishment of the BHC Clinic group program was to decrease inpatient utilization among certain high-risk, high-utilizing members. One way to determine if the BHC Clinic groups have been effective in reaching this goal is to examine the rates of inpatient admissions for members both before and after their attendance at the BHC groups. Because this analysis examines the rates of hospitalization before and after the BHC group treatment, it is limited to those members who had had at least one prior inpatient admission.

In the current study, forty members with one or more inpatient admissions attended the BHC groups. To standardize the numbers of admissions before and after group attendance, the number of admissions was converted into the rate of admissions per 1000 member days. The data indicate a substantial decrease in inpatient hospitalization following the BHC groups: prior to attending the groups, members were hospitalized at the rate of 11.8 admissions per 1000 member days, whereas, after attending the BHC groups, member were hospitalized at the rate of only 3.9 admissions per 1000 member days (Table 1).

Table 1: Decrease in inpatient utilization following BHC Groups.

	Number of Admissions	Member Days	Rate Admissions/ 1000 member days
Before BHC Groups	143	12,096	11.8
After BHC Groups	23	5,853	3.9

The dramatic impact of this decline can be clearly seen in Table 2, which illustrates this group treatment effect member by member.

Table 2: Mental health or Substance abuse hospital admissions for members before and after groups at pilgrim behavioral health center.

Member #	Before	After
1	9	0
2	9	0
3	8	0
4	8	0
5	7	0
6	7	0
7	6	7
8	6	5
9	6	0
10	5	0

11	4	6
12	4	2
13	4	2
14	4	1
15	4	0
16	4	0
17	3	0
18	3	0
19	2	0
20	2	0
21	2	0
22	2	0
23	2	0
24	2	0
25	2	0
26	2	0
27	2	0
28	2	0
29	2	0
30	2	0
31	2	0
32	2	0
33	2	0
34	2	0
35	2	0
36	2	0
37	2	0
38	2	0
39	1	0
40	1	0

This decrease in the rate of hospitalization for this group of members has resulted in significant cost savings. Based on these data, it is estimated that over 46 admissions were avoided following attendance at the BHC groups. At an average cost of \$6,427 per admission, the cost savings is \$296,893. It is important to emphasize that these estimated cost savings are an underestimate of the total possible savings produced by the PBHC groups since these estimates are based on a subsample of all members who attended the groups.

It may be difficult to attribute this decrease in inpatient

admissions – and the accompanying decrease in inpatient costs – exclusively to the BHC Clinic group programs. It may be that this decrease is simply a reflection of a general decline in admissions following any outpatient group therapy. To rule out this hypothesis, we performed a similar analysis on the entire group of Pilgrim Legacy members hospitalized during the study period who received non-BHC group therapy. As can be seen in Table 3, those members attending any (non-BHC) outpatient groups did show an overall decline in inpatient admissions, from a rate of 6.1 to 4.5 admissions per 1000 member days.

Table 3: Decrease in inpatient utilization following any outpatient groups.

	Number of Admissions	Member Days	Rate Admissions/1000 Member Days
Before OP Groups	151	24,549	6.1
After OP Groups	44	9,867	4.5

It is apparent that the members attending the BHC groups utilize inpatient services at a much higher rate than the general membership. This information verifies that the BHC groups have reached the target population of high-utilizers which these groups were designed to serve. But, more importantly, the decline in the rate of inpatient admissions for the general membership is much less dramatic and substantial than the decline in inpatient admissions following attendance at the BHC Clinic groups: those members attending general outpatient groups showed a 26% decline in their rate of hospitalization, whereas those members attending BHC groups showed a 66% decline (see Table 4).

Table 4: Comparison of BHC groups vs. other Groups.

	Before Groups Admissions/1000 members days	After Groups Admissions/1000 members days	Percent Change
BHC GROUPS	11.8	3.9	66%
OTHER GROUPS	6.1	4.5	26%

These data argue very strongly that the BHC Clinic groups are particularly effective at decreasing inpatient admissions.

Table 5: Demographic Data

Age	Number of Members
19 or under	1
20 to 29	4
30 to 39	13
40 to 49	10
50 to 59	3
60 or older	1
Sex	
Female	25
Male	8
Ethnicity	
Caucasian	28
African American	2
Other	2

Member Satisfaction Survey

We conducted a member satisfaction survey of those members who received treatment at the Behavioral Health Center during the study period. This survey is a pilot study, but it has allowed us to refine our instrument and data collection procedures.

Method

All members who received services at the BHC during the study time frame were asked to complete a short satisfaction survey. These surveys were completed by patients who had been in treatment at the Center for at least one week. The members were assured that their responses are strictly confidential and that their treatment at the Center would in no way be affected by their willingness to participate in the survey or by their responses. Once the members completed the questionnaires, they sealed them in envelopes to assure the confidentiality of the responses. These surveys are kept confidential within the Quality Improvement Team and results are reported in aggregate form only.

This survey includes 10 questions pertaining to: promptness and courtesy of the staff; appropriateness of services; treatment effectiveness; and overall satisfaction with the services. These questions are rated on a Likert-type scale from "strongly agree" to "strongly disagree." Members are also given an opportunity to write open-ended comments. In addition, basic demographic information is included on the questionnaire.

Results

We collected data from 32 members of the 40 members. Basic demographic information is displayed in Table 5. The vast majority of these members is female and most are in their 30's or 40's. Most of these members are white; 2 are African-American and 2 classified their ethnic group as "Other."

Table 6: Survey results.

Question	N	Percent Strongly Agree	Percent Agree	Percent Neutral	Percent Disagree	Percent Strongly Disagree	Mean Score
1.When I first called the clinic, my request for services was handled sensitively	31	45%	48%	6%	0%	0%	1.61
2. When I first called the clinic, the information I was asked to provide was appropriate to the reason I called	31	42%	51%	6%	0%	0%	1.65
3. The services were provided to me in a timely manner.	31	55%	35%	6%	3%	0%	1.58
4. The reception staff has been helpful and courteous to me.	32	50%	34%	16%	0%	0%	1.66
5. I can confide in my therapists at Pilgrim Behavioral Health	29	45%	48%	7%	0%	0%	1.62
6. My Pilgrim therapists and I both agree about what problems need to be addressed.	29	27%	59%	10%	3%	0%	1.90
7. I feel my therapists are capable of helping me with these problems.	29	38%	45%	17%	0%	0%	1.79
8.The services received at the clinic have helped me lead my life more effectively.	31	35%	45%	19%	0%	0%	1.84
9. Overall, I have been satisfied with the services I've received at the clinic.	32	37%	53%	9%	0%	0%	1.77
10. If I were to seek services again, I would return to the clinic.	31	48%	45%	6%	0%	0%	1.53

Overall, members expressed very high and consistent levels of satisfaction with the services of the Behavioral Health Center Clinic. The vast majority of members agreed or strongly agreed with the statements in the survey. Specifically, they indicated satisfaction with access to the clinic and the intake procedures: 93% agreed or strongly agreed that their requests for services were handled sensitively; 93% agreed or strongly agreed that the intake questions were appropriate; 90% agreed or strongly agreed that they were seen in a timely manner; and 84% agreed or strongly agreed that the reception staff were helpful and courteous. Likewise, most members expressed satisfaction with the clinicians at the Center; 93% agreed or strongly agreed that they could confide in their therapists; 86% agreed or strongly agreed that their therapists understood their problems; and 83% agreed or strongly agreed that their therapists could help them. Finally, members expressed high levels of overall satisfaction with the Clinic's services; 80% agreed or strongly agreed that the clinic helped them; 90% agreed or strongly agreed that they were satisfied with the clinic services, and 93% agreed or strongly agreed that they would return to the Clinic again if needed.

Members frequently chose to add comments at the end of the survey. Most of these were highly positive. Some examples of these comments are:

"I think this is an excellent program! I have been in therapy through the years, and this program seems to make more sense . . . I believe anyone could benefit from such a program. I'm very thankful."

"All I can say is that these groups and therapists have saved my life on several occasions . . . I have learned many helpful skills to manage my everyday stressors and problems."

"All the group leaders are great. They go out of their way to help . . . I've learned a great deal about myself and my emotions. I hope to continue using these skills."

"Helped me to know I was not alone. Kept me on a structured schedule. Understand the medications better. Learned from others in group."

"Satisfied in every way in the staff and the program."

"I have gotten a lot of help here and am glad that I have."

"The services are good. I like the therapists."

Although the members participating in this survey were for the most part very satisfied with the services which they received, there were a few neutral and negative scores. These were examined to see if any pattern of dissatisfaction could be determined. However, there was no discernible pattern in these scores, and an examination of the written comments shows that most of these neutral/negative scores were peculiar to the individual's circumstances. There were some comments which were actionable:

"Some therapists let one or two people dominate the group. This leaves others with little or no time."

"I wish the homework groups were more in depth . . . "

"Some evening groups would be helpful."

"I wish there was some one-on-one therapy."

Discussion and Conclusion

The mission of the BHC clinic in Taunton, Massachusetts, USA, is to provide intensive outpatient treatment to high-risk members with mental illness and to augment services provided by the Independent Practice Association. The clinical program is geared towards those members who have a history of repeated hospitalization secondary to suicidal gestures and attempts stemming from poor self-regulation skills.

Therefore, the clinical program targets this high-risk population and addresses their specific needs through self-regulation skills training. The clinical program uses cognitive behavioral and dialectical behavior treatment strategies. The fluid nature of the program, i.e., providing only the treatment which is needed to support the patient in their natural environment from one to three hours per day, suggests a more cost-effective model of care rather than a fixed day treatment program which operates daily from 9 am to 5 pm. The program is a unique one which is not replicated by any service which can be contracted for presently in the network. One more strength of the program is that the total care of the member which includes outpatient treatment by the network IPA provider, community services, and Center treatment is coordinated by a BHC case manager who ensures that services complement rather than duplicate each other. The case manager also follows the member to ensure compliance.

The data reflects two outcomes: decreased recidivism for protective hospital care and high member satisfaction.

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