
Dialectical Behavior Therapy at

Rose Hill Center ...

***Adaptation of an evidence-based practice
to a residential rehabilitation program***



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SPEC Associates is a 501(c)3 non-profit organization dedicated to enhancing the effectiveness of non-profit and governmental agencies through research, evaluation, advice, and training.

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Executive Summary

Dialectical Behavior Therapy (DBT) has been cited by the National Registry of Evidence-Based Programs and Practices as a promising evidence-based inpatient, outpatient and community based practice for people with emotional dysregulation and self-harming behaviors. This study presents the first known evidence of how DBT was adapted to fit within a residential rehabilitation program and its effectiveness in this setting.

DBT in a residential setting could have benefits beyond shorter-term inpatient and long term community settings because of the capacity to deliver this treatment with more intensity and consistency. With the growing number of DBT providers in the community, patients receiving treatment in a residential setting can be linked to DBT providers at discharge where they can continue practicing the techniques that were taught, emphasized and modeled while in the residential program.

Rose Hill Center is a comprehensive psychiatric treatment and rehabilitation program for adults with mental illness that teaches them to manage their symptoms so that they can achieve their highest level of independence. In 2009, with a grant from the Ethel and James Flinn Foundation, Rose Hill Center began offering DBT to residents, with or without the DSM Axis II diagnosis of Borderline Personality Disorder, who showed behavioral indicators of self-harm, aggression and emotional dysregulation.

Over a two year period, interviews were conducted with Rose Hill Center staff and management by SPEC Associates (SPEC), a third-party evaluator, to document how DBT was adapted to fit this residential setting. Rose Hill Center's clinical databases enabled SPEC to compare treatment outcomes for residents in DBT with those of similar residents who were at Rose Hill Center before DBT began.

Evaluation findings revealed that all five components of DBT were implemented at Rose Hill Center:

- (1) Enhancing behavioral capability of the resident through skill-building group sessions,
- (2) Enhancing motivation to change through individual therapy and behavioral treatment plans,
- (3) Generalizing the new behaviors to natural environments through access to a therapist outside of the clinical setting,
- (4) Providing a structured environment to support the resident through programmatic emphasis on reinforcing the adaptive behaviors in the residential setting, and
- (5) Enhancing the capability and motivation of therapists through weekly team consultation groups.

The major adaptation made to DBT at Rose Hill Center revolved around the need to continually train support staff who have day-to-day contact with residents. These staff need a training program that is more basic than the in-depth clinical training provided to DBT therapists. They need constant reminders about how to use DBT terminology when crisis situations arise, and need practical examples of DBT's use. The use of DBT also required an organizational culture change for these staff toward using DBT to deescalate crises and away from a norm of immediately referring them to psychiatric ER or hospitalization. Staff training needs are exacerbated because of high turnover rates which are typical of this level of staffing in residential treatment programs.

The case management record data compared the initial to discharge changes of DBT residents versus the comparison group on:

- Overall functioning as measured by the Global Assessment of Functioning (GAF) rating
- Successful discharge
- Length of stay
- Number of psychiatric hospital visits
- Progression through the standard Rose Hill Center stage program

Results from this evaluation suggest that DBT can be an effective treatment modality for a residential treatment setting. Those residents of Rose Hill Center who received DBT treatment were more likely to graduate at discharge than those at the Center prior to DBT. Compared to their counterparts, evaluation data suggests that DTB residents had a longer, successful length of stay and fewer psychiatric hospital visits. There was a significant overall improvement in functioning among DBT residents compared with their counterparts. Proportionately more DBT residents progressed to the highest functional stage within the Rose Hill Center behavioral rating system and to the Center's Transitional Living Program. Rose Hill Center staff report that they were able to place their graduates into DBT services in their communities.

Interviews with Rose Hill Center staff and management revealed that DBT appears to be a sustainable program for a residential facility. Providing on-going and appropriate training for clinician and support staff is seen as a prevailing need in order to sustain DBT's effectiveness. Through the institution of this treatment method, the staff have been able to identify resident characteristics for whom the DBT program works well, and the limits of their staff and Center environment to successfully deliver this treatment. The general staff enthusiasm for DBT principles, the integration of an extra daily fee for residents to cover marginal costs for additional staff and on-going training, and the notion that not doing DBT would cost more in terms of having more treatment crises or disruption all lead to the prediction that DBT will be the treatment modality of choice for residents with emotional dysregulation and self-harming behaviors.

Introduction

Dialectical Behavior Therapy

Dialectical Behavior Therapy (DBT) is a cognitive-behavioral therapy for individuals with borderline personality disorder (BPD) and others with emotional dysregulation and self-harming behaviors. DBT's key theoretical underpinning is helping people manage the dialectic between validation and acceptance of oneself as they are, and the need to change self-harming and other dysfunctional behaviors.¹ In DBT therapists help residents to learn how to accept themselves on the one hand, and how to change on the other.

DBT has five functions, with a specific set of services attached to each:

- (1) Enhancing behavioral capability of residents (via skills training)
- (2) Improving their motivation to change (via individual behavioral treatment plans)
- (3) Assuring new behaviors generalize to natural environments (via access to the therapist outside of the clinical setting, homework, and inclusion of family in treatment)
- (4) Structuring the environment to support both resident and therapist capabilities (via programmatic emphasis on reinforcement of adaptive behaviors)
- (5) Enhancing the capability and motivation of therapists (via therapist team consultation group)²

DBT has been recognized as effective for BPD patients who are suicidal, parasuicidal and/or drug dependent. DBT is listed among the promising evidence-based inpatient, outpatient and community-based practices by the National Registry of Evidence-Based Programs and Practices, a service of the National Institute of Health's Substance Abuse and Mental Health Services Administration (SAMHSA). DBT has been adapted for other difficult-to-treat disorders that involve emotional dysregulation including suicidal adolescents, individuals with eating disorders, developmentally delayed individuals, individuals with schizophrenia, and older adults with depression. However, to our knowledge, there is no published literature on the adaptation of DBT to residential rehabilitation settings. Rose Hill Center and SPEC Associates began to fill this gap through the implementation and evaluation of DBT at Rose Hill Center, a residential rehabilitation program in southeastern Michigan for adults struggling with mental illness.

¹ Dimeff, L. and Linehan, M.M. (2001). Dialectical Behavior Therapy in a Nutshell. *The California Psychologist*, 34, 10-13.

² Taken from SAMHSA's National Registry of Evidence-Based Programs and Practices Web site <http://nrepp.samhsa.gov/ViewIntervention.aspx?id=36> cited on 06-24-2011.

DBT at Rose Hill Center

In 2009, with a grant from the Ethel and James Flinn Foundation, Rose Hill Center began offering DBT. Prior to receiving the grant, Rose Hill Center had identified a subset of residents for whom it believed DBT might improve clinical outcomes. These were adults, with or without the DSM Axis II diagnosis of BPD, who showed behavioral indicators of self-harm, aggression, and emotional dysregulation.

The Flinn Foundation grant to Rose Hill Center was for the purpose of:

1. Demonstrating the benefits of DBT in a residential treatment setting, and
2. Determining the sustainability of DBT as part of the therapeutic programming at Rose Hill Center.

Rose Hill Center believed that the intensity and consistency of the 24-hour residential program would provide added benefits for DBT beyond what it can provide in shorter-term inpatient settings and in community-based outpatient settings. Further, with the increased availability of local outpatient mental health providers with DBT programming, Rose Hill Center could make aftercare plans for residents that allow them to continue to receive DBT upon discharge, and thus to continue practicing the techniques that would be taught, emphasized and modeled while in the residential program.

The Flinn Foundation grant funded Rose Hill Center to:

- a) Provide two levels of training and education about the principles and practices of DBT: (i) intensive skills training to enable clinical staff to deliver DBT, and (ii) basic skills training to enable key support staff to reinforce DBT practice “on the spot.”
- b) Provide the clinical tools that staff would need to be effective in DBT.
- c) Implement all elements of the DBT model within its residential program³ to those residents who fit the diagnostic and behavioral criteria.

Rose Hill Center anticipated that residents who received DBT would improve in their coping and communication skills which would, in turn, reduce homicidal, aggressive, self-harming and/or suicidal thoughts. If DBT residents experience these outcomes, their satisfaction with Rose Hill Center was expected to improve and their rates of psychiatric hospitalization and emergency room use were expected to decline.

³ In addition to its residential treatment program, Rose Hill Center also provides transitional living and community support programs.

Evaluation Methodology

Evaluation Questions

Rose Hill Center viewed evaluation as an essential component of the grant activities in order to learn about the best ways to institutionalize DBT into ongoing treatment for patients with BPD and those with similar behavioral treatment objectives. The evaluation's goals were to provide information about how the DBT model works within a residential treatment setting, and to provide evidence of treatment effectiveness relative to treatment as usual.

The evaluation had two goals and seven specific questions:

Goal #1: To describe the process of implementing DBT within the residential setting of Rose Hill Center by answering the following questions:

1. Are a sufficient number and types of staff adequately trained and confident in their ability to implement DBT at Rose Hill Center with fidelity to the model?
2. What are the staff, client, management and institutional issues involved in implementing DBT within a residential setting?
3. Who does the program work well for?
4. Who is not served well by DBT?
5. Are modifications necessary to DBT because of the nature of the treatment setting at Rose Hill Center and, if so, can fidelity to the model be maintained and sustained long term?

Goal #2: To determine whether the use of DBT with the appropriate population at Rose Hill Center results in better outcomes for patients by answering the following questions:

6. Can DBT have an impact on residents with BPD and those with similar treatment objectives within the constraints imposed by the Rose Hill Center program?
7. Are residents with BPD and those with similar treatment objectives who participate in DBT at Rose Hill Center any better off than similar residents who were at Rose Hill Center when DBT was not available?

Evaluation Methods⁴

The evaluation used a mixed method design which combined information collected from staff and management interviews with data obtained from the clinical records and electronic case management record system at Rose Hill Center.

Implementation Evaluation Methods

To learn about how DBT was implemented, who it works for, and how it was modified, SPEC Associates, the third party evaluator, conducted a series of telephone interviews with Rose Hill Center staff, and periodic in-person meetings with Rose Hill Center management. Two types of staff were interviewed by telephone:

- Clinical staff who were intensively trained in the use of DBT and who provided individual therapy and group skills training to residents. These staff included a psychiatrist, case managers, a registered nurse who was previously a case manager, and a DBT skills group leader/therapist.
- Support staff who have day-to-day contact with residents at Rose Hill Center and who were expected to reinforce the newly acquired behaviors of DBT residents within the outside-of-therapy residential environment. The support staff who were interviewed included a work team/crew leader, a supervisor, a medical nurse, and staff who supervise residents in their residences.

Four rounds of telephone interviews were conducted with staff (see Table 1).

**Table 1:
Number of Staff Interviewed by Telephone at Three Time Periods**

Date of Interviews	# Clinical Staff	# Support Staff
August 24 th – September 17 th , 2009	5	5
May 10 th – May 17 th , 2010	0	6
July 14 th – July 21 st , 2010	5	0
March 5 th – March 28 th , 2012	5	8

Questions were asked during one or more of these interviews about:

- What staff learned and valued from DBT training
- Their perceptions of their own understanding of the proper way to use DBT and its tools
- Opportunities to use and confidence in using DBT

⁴ This evaluation had the approval of the federally authorized Institutional Review Board (IRB), Ethical & Independent Review Services (IRB study approval #: 09084-02A).

- Issues affecting implementation of DBT at Rose Hill Center
- For whom DBT works and does not work
- Other training needs or areas that staff could benefit from
- Modifications made to DBT at Rose Hill Center and implications for the fidelity of the model
- Satisfaction with and suggestions for improving DBT
- Perceptions of DBT's effect on other therapy used at Rose Hill Center

Findings from the first three telephone interviews were provided to Rose Hill Center management during an in-person meeting with SPEC Associates. During these meetings, Rose Hill Center management provided additional information regarding interpretation of the results, follow-up actions that would or were taken in response to staff concerns, and changes to how DBT was being implemented.

Outcome Evaluation Methods

Rose Hill Center staff hypothesized that relative to the comparison group, at discharge residents receiving DBT would show on standardized outcomes:

- Greater improvements in overall functioning as measured by GAF score
- Higher frequency of successful discharge
- Longer length of stay because more would be discharged successfully
- Fewer psychiatric emergency room visits

Data to test these hypotheses came from Rose Hill Center's clinical files. Some of the data were available through Rose Hill Center's electronic case management system. Hospitalization data were abstracted from Rose Hill Center staff directly from hard copies of the files, because these data are not recorded consistently in the same places within the electronic files. Similarly, initial and final GAF scores were provided by Rose Hill Center staff from a separate file which is kept by the administration for its own reporting purposes, and stage data were abstracted from Case Manager reports from the day before discharge. The accuracy of the data could not be validated by SPEC Associates, per the human subjects protection protocols set out by this evaluation's Institutional Review Board.

Description of DBT and Comparison Group Residents

Between April 2009 and July 2010 a total of 17 residents started DBT at Rose Hill Center. Twenty-nine percent of them were male; 71% were female. All but one (94%) were Caucasian. Their ages at admission ranged from 19 to 57, with a median age of 26.

A total of 14 comparison group residents were identified by Rose Hill Center staff as having behavioral indicators which would have placed them into DBT had the treatment been available. These comparison group residents resided at Rose Hill Center between 2007 and 2009. Sixty-three percent of them were male; 57% were female. All (100%) were Caucasian. Their ages at admission to Rose Hill Center ranged from 21 to 41, with a median age of 27.

Findings

Implementing DBT at Rose Hill Center

Rose Hill Center implemented all of the five components of DBT described in SAMHSA's National Registry of Evidence-Based Programs and Practices: skills training, individual behavioral treatment plans, access to a therapist outside of the clinical setting, reinforcement of adaptive behaviors in the natural environment, and motivational enhancement of therapists through weekly team consultation groups. Upon entering Rose Hill Center, appropriate residents are invited to voluntarily participate in DBT. Interested residents are asked to sign a treatment contract promising to comply with all aspects of the program. Consenting residents created behavioral treatment plans, and received one hour of individual therapy and two hours of group skill-building training each week.

Outside of treatment and training sessions, residents were supported in the use of their newly learned DBT adaptive skills by the support staff with whom they had day-to-day contact. If there was a crisis situation requiring DBT treatment, the support staff were trained to use a *DBT Coaching Sheet* to help the resident in crisis to avoid parasuicidal, suicidal and other impulsive behaviors. If the support staff could not reduce the crisis behaviors on their own, they had access to an on-call DBT-trained clinical staff who coached the resident via telephone.

Below we present the answers to the evaluation questions about implementation of DBT at Rose Hill Center that came from the telephone interviews with the clinical and support staff, and follow up discussions with management.

Are a sufficient number and types of staff adequately trained and confident in their ability to implement DBT at Rose Hill Center with fidelity to the model?

Using DBT at Rose Hill Center required training of both clinical and support staff. While the clinical staff needed to learn DBT therapeutic techniques, the support staff needed to have at least basic DBT intervention skills because they must be able to handle resident crises at unpredictable times in ways that

are aligned with DBT principles. Rose Hill Center offered two types of DBT training to staff: (1) intensive training for clinical staff, and (2) basic DBT skills training for support staff.

Intensive DBT training for Clinical Staff

Over the two year period, a total of five clinical staff were offered intensive training from Behavioral Tech, the training and consulting organization established by Marsha Linehan, the original creator of DBT. For all but two staff, this was a two-week long orientation training, followed by a second, shorter training six months later. One clinical staff reported that he/she did not participate in any of the training provided by Behavioral Tech. One staff reported that he/she participated in the orientation training, but not in the follow-up training. In between the orientation training and six month follow-up sessions, staff documented their use of DBT with residents and brought case studies of their experiences to discuss with Behavioral Tech during the follow-up training.

In addition to the intensive training, clinical staff also participated in the formal on-line training developed by Behavioral Tech. Over time, the on-line training was replaced by customized training created by the Rose Hill Center Vice President of Programs, who has more than 20 years of experience in community mental health and a certificate of completion in DBT from Behavioral Tech.

During the telephone interviews, clinical staff reported that DBT training enhanced what they already knew more than giving them new knowledge. Some noted that DBT principles are basic, good therapeutic technique, with one staff explaining:

I was pleased to see a lot of the stuff is what we've been doing all along, like accentuate the positive, non-judgmental, open-minded, gentle redirection, mutual respect. All of those things have been the main focus in our program anyway, so it was just a change of terminology.

The kinds of treatment enhancements staff reported receiving from DBT training include:

- Adding more mindfulness exercises to the therapeutic repertoire
- Gaining greater clarity on the role of co-leaders and how to run a skills training group session
- Learning how to “listen – really listen – to residents without being judgmental”
- Understanding the biosocial theory and philosophy that underscores DBT
- Validating that people with borderline disorders are in emotional pain, that the pain should be recognized by the therapist as authentic, and then they should be helped to move through it

During the telephone interviews, two staff voiced disappointment with the follow-up training they received from Behavioral Tech. Rose Hill Center management concurred. The follow up training was said to be redundant and not as in-depth or advanced as they had expected. One reason the training may not have been satisfying was that, according to Rose Hill Center staff and management, the group being trained included both experienced and less experienced people.

Confidence of Clinical Staff in using DBT skills

The five DBT-trained clinical staff who participated in the July 2010 telephone interviews were asked to rate their confidence in using DBT on a scale ranging from 1 (not at all confident) to 5 (very confident). These same staff were asked to rate their confidence in using DBT again, about two years later in March 2012. Table 2 shows their pre and post ratings of confidence. As Table 2 shows, four of the five clinical staff's confidence level in using DBT was the same or improved between the first and second interview. Three clinical staff rated themselves at the highest level possible at baseline. Of these, two remained at

Table 2
Change in Clinical Staff's Ratings of their
Confidence Using DBT
(1=not at all confident; 5=very confident)

ID#	Baseline	2012	Change
a	5	5	Remained at highest level
b	5	5	Remained at highest level
c	4	5	Improved
d	3	3	Same
e	5	4	Declined

the highest possible rating of confidence in 2012. One staff reported an improved rating from a score of 4 to the highest score of 5. One staff remained at a moderate level (3) of confidence.

For the three clinical staff who reported the highest level of confidence in 2012, experience was

cited as the key factor in their having confidence in the use of DBT. The staff who improved thought to be more effective at using DBT because the entire team of Rose Hill Center clinical staff were more experienced and therefore better able to “pick up on it, and support it.” Familiarity with the DBT terminology was very important to two of the clinical staff who reported being very confident.

Of the two clinical staff who did not report the highest level of confidence in 2012, one's confidence level stayed the same and the other's declined. For both, the length of time since their last training negatively impacted their confidence levels. Both expressed a need for more training. The clinical staff, who rated him/herself mid-way on the scale (3) at both times weighted increased experience in using DBT against the fact that “it gets farther and farther from the training.” This staff noted the need to keep refreshing his/her knowledge. The clinical staff who reported a reduced confidence level, from a “very confident” (5) at baseline to a rating of 4 in 2012 explained, “I'm a bit rusty...could use some follow up training.”

One clinical staff reported a training did occur since the initial DBT training, this staff was disappointed that the scope was narrowed to training residents about DBT in group sessions.

Table 2 also shows that at both baseline and 2012, four of the five interviewed clinical staff gave themselves ratings of 4 or 5, leaving little room for improvement two years hence. Increased experience was the primary reason for stronger or maintained high confidence levels.

When asked for any comments, recommendations or thoughts on implementing DBT at Rose Hill Center, the clinical staff brought up a few thoughts. All clinical staff (100%) had positive reports for DBT. The majority explained it is a useful tool for working with borderline patients, indicating a desire and commitment in the clinical settings of Rose Hill Center to continue using DBT.

Four of the five clinical staff also expressed some concerns about the use of DBT at Rose Hill Center. Three were concerned with Rose Hill Center's fidelity to the DBT model, because of Rose Hill Center's limited staff capacity to provide DBT services and the types of residents admitted into the DBT group. Interviewed clinical staff noted there is a waiting list for residents to get on DBT; all stressed Rose Hill Center's need to accept its limits, and not include waiting residents in a "watered down version" of DBT. Additionally, clinical staff stressed that DBT is expected to be used for Borderline Personality Disorder, and not more severe cases. One clinical staff reported, "We do admit people who are beyond just having Borderline Personality Disorder, for which the treatment was devised."

Three of the five clinical staff (60%) think that support staff need more DBT training at Rose Hill Center. Due to high turnover, one believes at least 10 current support staff have no DBT training. Another clinical staff noted that currently support staff think of clinical staff as weak because DBT residents do not get punished for negative actions. Greater training in DBT would help support staff understand the importance of teaching positive behaviors rather than deterring negative behaviors through punishment. Finally, one clinical staff recommends quarterly DBT interventions and classes for support staff, with a comprehensive test of knowledge, as well as providing all support staff with a booklet upon hire that thoroughly explains DBT.

Confidence of Support Staff in using DBT skills

Eight support staff were also interviewed in March 2012 on their level of confidence in using DBT on a scale ranging from 1 (not at all confident) to 5 (very confident). Four had initially participated in the September 2009 interview, and the other four had participated in the May 2010 interviews. The baseline interviews vary from two to three years before the final interview. Table 3 shows their pre and post

ratings of confidence in using DBT. As Table 3 shows, between baseline and 2012 the majority of support staff reported greater confidence in the use of DBT. Five of the eight supportive staff (63%) rated themselves higher in 2012. Most of the support staff attributed their increased confidence to having more

Table 3
Change in Support Staff's Ratings of
Confidence Using DBT
(1=not at all confident; 5=very confident)

ID#	Baseline (2009 or 2010)	2012	Change
a	2	5	Improved
b	3	4	Improved
c	3	4	Improved
d	2	3	Improved
e	1	3	Improved
f	3	3	Same
g	4	3	Declined
h	1	1	Same

experience with the DBT residents and/or DBT terms. One support staff, whose scores jumped from a confidence level of 2 to being “very confident” (5) thought this increase was “because I’ve been trained to know how to support the skills of DBT in residents.” Two of the support staff who reported an increase noted that they still had a way to go before they would feel very confident.

Of the three support staff who did not report an improved level of confidence, two reported the same level of confidence. Both stated they have little interaction with DBT residents and rely on other Rose Hill Center staff to have the DBT skills. The one support staff who reported a decreased level of confidence explained it was due to a lack of opportunity to practice DBT as none of this staff’s current residents are in the DBT group.

Table 3 shows that in 2012 the greatest number of support staff (50%) gave themselves a mid-range confidence rating of 3. This suggests that despite increased confidence levels, there is more room for improvement. In fact, two of the interviewed support staff who reported an improved score qualified that they still do not feel very confident with DBT. When asked if they had received more DBT trainings since their baseline interview, all support staff reported there was an annual, one hour, refresher training.

During the 2012 interviews, seven of the eight support staff recommended that more DBT trainings be implemented at Rose Hill Center. The number of suggested DBT trainings per year varied from twice a year to monthly. One supportive staff stressed the need for new staff to receive DBT training.

Basic DBT skills training for support staff

Rose Hill Center initially trained the support staff on DBT using the formal, on-line training program delivered by Behavioral Tech. According to Rose Hill Center management, soon after support staff began the on-line training it became apparent that the program was too technical and advanced for the needs of

those who have day-to-day contact with DBT residents. To be effective, DBT training for support staff had to be practical, provided in small doses, interactive, and on-going.

To accommodate these needs, Rose Hill Center management created its own version of DBT training for support staff. Basic level training was provided through two DBT orientation sessions each year delivered by the Rose Hill Center Vice President of Programs. This basic DBT training includes practice using DBT terminology through the discussion of case examples. In addition to the orientation training, the Vice President of Programs attends other staff meetings on an ad hoc basis and spends about 20 minutes during each meeting talking about ways to interact with residents currently in DBT.

Challenges to DBT Training for Staff

While staff are asking for more training, Rose Hill Center management noted that keeping staff trained in DBT is challenging. Clinical staff must be trained in DBT through the orientation and follow-up sessions provided by Behavioral Tech. Behavioral Tech requires at least four staff from an agency be trained simultaneously. This creates complication for Rose Hill Center when it wants to hire one or two new clinical staff.

According to Rose Hill Center management, one challenge in keeping support staff trained is related to high staff turnover. In addition, support staff typically have high school educations. Some have little or no mental health experience. New staff must learn many things about working with residents at Rose Hill Center. DBT training must fit within a long list of other training that is required by Rose Hill Center's credentialing and licensing agencies.

Another challenge in keeping staff trained is that the opportunity for support staff to use DBT is episodic, unpredictable and infrequent. Without regular use, it is difficult to remember the DBT terminology and crisis de-escalation strategies.

To keep the terminology, principles and practices of DBT uppermost in support staff's minds, Rose Hill Center instituted a DBT reminder section to the staff newsletter. Rose Hill Center management is considering other ideas for continual refresher training including adding prompts about DBT on computer screen savers, and giving staff the opportunity to view the DVDs that Behavioral Tech produced about DBT.

Beyond the more structured training, Rose Hill Center management stressed the importance of the clinical staff seeing themselves as role models for DBT implementation. Management noted the need to remind

clinical staff to view themselves as role models. When a crisis occurs with a DBT resident that is handled on site by clinical staff, the clinical staff should hold a debrief with the support staff who were present during the crisis. The debrief should discuss how DBT was used to manage the situation.

What are the staff, client, management and institutional issues involved in implementing DBT within a residential setting?

As was described by Rose Hill Center management:

DBT is a different world with its own jargon. It's not something so easy as prompting people to take their meds. This is when someone is stating that they are going to hurt themselves. You have to know what to do and ignore certain behaviors and not others. Knowing which behaviors can be ignored is very difficult.

For DBT to be effective, all of the staff must have the same mindset regarding how to respond to residents. At a minimum, at a residential setting like Rose Hill Center, all staff must at least have basic knowledge of DBT principles, know who is getting DBT treatment, and know when to get help from a trained therapist. According to management, implementing DBT at Rose Hill Center also means changing a culture among the support staff whose first inclination regarding the way to handle self-harming crises is to hospitalize residents.

DBT is staff intensive. Case managers hold two-hour group sessions weekly plus one-hour individual sessions with each DBT resident. This is above and beyond their regular duties at Rose Hill Center. Management estimates that doing DBT adds six to eight hours of extra work per week for clinical staff.

The staff most likely to encounter a DBT crisis in a residential setting such as Rose Hill Center are support staff who are with residents day in and day out. As noted above, these are typically the least trained and have the highest turnover rates. In order to help support staff to manage DBT crises, the Vice President of Programs tailored the *DBT Coaching Sheet* for use by Rose Hill staff, and trained staff in its use. This coaching tool is an adaptation of similar tools that other trained DBT providers have used with DBT residents, in order to use it face-to-face versus over the phone. When a therapist is not available during a DBT crisis, support staff are trained to take the coaching form and use it with residents. Residents, too, use the *DBT Coaching Sheet* so the process is familiar to them. The coaching form walks the staff and resident through a series of questions that help to diffuse the crisis.

One issue noted during the staff interviews was concern among case managers that they are delivering DBT treatment that they are not licensed to provide. They were concerned that this would jeopardize their

own accreditation and that they would be legally liable should something negative or traumatic happen to a resident. Rose Hill management clarified that there is no license for delivering DBT; it only requires training to use the protocols. In addition, from another lens, Rose Hill Center management discussed this issue with their corporate attorney. They concluded that the case managers' concern is unfounded because they are providing DBT within Rose Hill Center's residential rehabilitation program and are not billing third party payers for this as a distinct treatment. Rather, they are providing DBT as a component of a larger and more comprehensive set of services. Furthermore, the case managers are receiving clinical supervision from the Vice President of Programs who is, herself, a Licensed Social Worker with a DBT instructor certification from Behavioral Tech.

The final issue regarding DBT implementation at Rose Hill Center was related to behavior contagion. During the telephone interviews, staff talked about copycat behaviors that they see among other residents when one resident is having a DBT crisis. Rose Hill Center management reported trying to minimize this behavior contagion by limiting the number of DBT residents at the Center to no more than 25% of the total resident population.

Who does the program work well for and who is not served well by DBT?

Over the course of the staff interviews, a number of resident characteristics were cited as amenable to DBT. Staff reported that DBT seems to work particularly well for residents:

- With borderline personality disorder
- Who have not had encouragement, engagement or support in the past
- Who are self harming
- With aggression, emotional dysregulation, or social troubles
- Who are motivated and committed to treatment
- With higher intellectual functioning who can learn the terminology and can do their written homework assignments

Rose Hill Center management agreed that DBT works well with these types of residents. Management also noted that some residents with lower intellectual functioning or lower cognition because of their illness can still benefit from some pieces of DBT. Management noted, however, that people with BPD are very difficult to serve, stating that diagnosing someone with BPD is a "kiss of death" as many providers will not accept them into their treatment programs.

Are modifications necessary to DBT because of the nature of the treatment setting at Rose Hill Center and, if so, can fidelity of the model be maintained and sustained long term?

Interviews with Rose Hill Center staff and management revealed that DBT appears to be a sustainable program for a residential facility. They indicated that DBT provides a welcomed structure for handling residents with BPD. Presently, management reports a waiting list for DBT treatment at Rose Hill Center.

Several cautions were voiced regarding using DBT within a residential setting. Among the cautionary notes offered during the interviews with staff and/or management were:

- DBT is meant to be a long term treatment implemented in a community setting. Residents at Rose Hill Center have an average length of stay of only about nine months.
- DBT is more stressful and labor intensive to implement than “treatment as usual” at Rose Hill Center.
- There is potential for confusion among staff when more than one treatment modality is happening simultaneously in the same setting. At Rose Hill Center there are a variety of treatment modalities to meet the needs of the varied resident population including anger management training and motivational interviewing, with some DBT residents being also appropriate for additional treatment modalities.
- DBT has facility requirements, in particular there is need for private spaces for DBT individual therapy to occur.
- At Rose Hill Center, the entire “village” provides DBT rather than a single individual as is more typical in a community setting. As such, doing DBT at Rose Hill Center requires excellent communications among staff.
- DBT residents should be no more than 25% of the treatment population. A higher mix of DBT in the treatment population may make the cost of serving this population too high in terms of the intensity of high level professional staff needed and the degree of disruption that would occur.
- Staff can burnout quickly when providing DBT, and it is very time consuming. Management recommends that with a caseload of 12 residents, clinicians should have no more than 25% to 50% of their caseload with DBT, depending on the skill level of the clinician.
- A group size of about eight residents seems to be about right for DBT implementation.

In general, the basic tenants of DBT are sustainable since, as staff noted, they are plain, good treatment principles. Other factors that suggest that DBT will be sustained at Rose Hill Center are:

- General staff enthusiasm for DBT principles, particularly the Vice President of Programs who is a certified DBT therapist
- Rose Hill Center has integrated a \$30/day extra fee for residents in residential, which covers marginal costs for additional professional staff and on-going training
- The cost of not doing DBT is perceived to be worse in terms of having more crises or disruption to the residential treatment milieu

Relative Effectiveness of DBT at Rose Hill Center

Can DBT have an impact on residents with BPD and those with similar treatment objectives within the constraints imposed by the Rose Hill Center program? Are residents with BPD and those with similar treatment objectives who participate in DBT at Rose Hill Center any better off than similar residents who were at Rose Hill Center when DBT was not available?

Successful discharge/ Length of stay

Staff indicate that DBT is considered to be most effective for those residents who participate in the program for at least one year. Evaluation data revealed that a higher percentage of DBT residents stayed in treatment for at least a year (53%) than residents in the comparison group (21%). Nine of the 17 DBT residents (53%) remained in the program for at least one year, and all (100%) nine DBT residents had a discharge status of “graduated.”⁵ In contrast, three of the 14 comparison group residents (21%) remained in treatment at Rose Hill Center for at least one year. These three also had a discharge status of “graduated.”

Rose Hill Center considers the discharge reasons of planned discharge and graduated to be successes for residents, although “graduated” is deemed the most desirable discharge status. More DBT residents graduated or had planned discharges as compared with the comparison group. The DBT group had fewer emergency discharges or discharges against medical advice. Table 4 shows that 94% of DBT residents graduated or had a planned discharge as compared to 79% of those in the comparison group. This difference was significant at the $p < 0.2$ level, which could be considered a trend given the small sample sizes.⁶

⁵ This includes three DBT residents who graduated and who were discharged to other programs.

⁶ $X^2 = 1.651$, $df = 1$, $p = 0.199$.

Table 4
Discharge Reason Summarized by Group

Discharge Reason	DBT Group (N=17)		Comparison Group (N=14)	
	#	%	#	%
Graduated or Planned Discharge	16	94%	11	79%
Emergency discharge or discharged against medical advice	1	6%	3	21%

When considering the most desirable discharge category, “graduated,” compared to the other discharge categories for all DBT and comparison group residents, a significant number of DBT residents (65%) versus comparison group residents (29%) had the discharge status of “graduated.” This difference was significant at the $p < 0.05$ level.⁷

Number of psychiatric hospital visits

DBT residents had fewer psychiatric hospitalizations than those in the comparison group. This difference was significant at the $p < 0.11$ level, which could be considered a trend given the small sample sizes.⁸ Table 5 shows that two of the 17 (12%) of DBT residents had psychiatric hospital visits compared with 4 (28%) of the comparison group residents.

Table 5
Number of Hospitalization- Psychiatric Visits

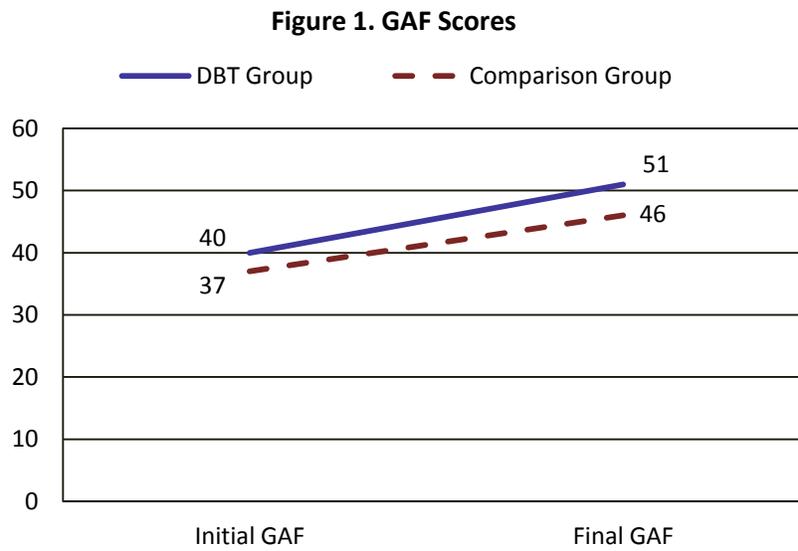
# visits	DBT Group (N=17)		Comparison Group (N=14)	
	# residents	% residents	# residents	% residents
0	15	88%	10	71%
1	2	12%	2	14%
2	0	0%	0	0%
3	0	0%	2	14%

⁷ Pearson Chi-Square, $X=4.014$, $df=1$, $p=0.045$.

⁸ T-test, $t= -1.633$, $df=29$, $p < 0.113$.

Overall functioning - GAF rating

GAF scores improved significantly for the DBT group, as well as for the comparison group. Figure 1 shows that those residents in the DBT group improved in GAF scores from an average of 40 points at intake to an average of 51 points at discharge. This was significant at the $p < 0.0$ level.⁹ Similarly, those residents in the comparison group improved on their GAF scores from an average of 37 points at intake to an average of 46 points at discharge. This was significant at the $p < 0.0$ level.¹⁰



While there was no statistically significant difference in GAF score change between the DBT and comparison group, more DBT residents improved more than 10 GAF points as compared with the comparison group. Table 6 shows that 47% of DBT residents improved more than 10 points, as compared with 29% of the comparison group.

Table 6
GAF Score Improvement by Category

Improvement Level Category	DBT Group (N=17)		Comparison group (N=14)	
	#	%	#	%
No improvement	4	24%	3	21%
1-10 points improvement	5	29%	7	50%
Over 10 point improvement (11-28 points)	8	47%	4	29%

⁹ T-test, $t = -5.358$, $df = 16$, $p < 0.000$.

¹⁰ T-test, $t = -5.372$, $df = 13$, $p < 0.000$.

Rose Hill Center has a Stage system that assesses residents' ability to function in the community. By Stage 3, residents are expected to assume some community involvement such as school, work or volunteering. Rose Hill Center has a Transitional Living Program, an unlicensed apartment-like setting that helps bridge the gap to community living for those residents who achieve Stage 3 and have a demonstrated psychiatric stability for six months. Those enrolled in TLP participate in the community through work, school or a volunteer program, and are capable of living in an environment with supports but do not need 24 hour residential services.

Table 7 compares the number and percent of DBT and comparison group residents who moved through to Stage 3. As Table 7 shows, a significantly higher percent of DBT residents progressed to Stage 3 by the time of discharge (59% vs. 29%), and all DBT residents progressed beyond Stage 1, unlike over a third of comparison group residents.¹³ Similarly, a significantly higher percent of DBT residents progressed, after achieving Stage 3, to Rose Hill Center's Transitional Living Program (TLP).¹⁴ In total, forty-one percent (41%) of DBT residents progressed to TLP compared to 7% of comparison group residents.

Table 7
Progress through Stages and to TLP

	DBT group		Comparison group	
	#	%	#	%
Progress through Stages				
Stayed at Stage 1	0	0%	5	36%
Progressed to Stage 2	7	41%	5	36%
Progressed to Stage 3	10	59%	4	29%
Progress to the Transitional Living Program				
Progressed to TLP	7	41%	1	7%
Did <u>not</u> progress to TLP	10	59%	13	93%

¹³ $X^2 = 7.686$, $df=2$, $p < .05$.

¹⁴ $X^2 = 4.644$, $df=1$, $p < .05$.

Conclusions

This study provided objective evidence that DBT can be an effective treatment modality for a residential treatment setting. Those residents of Rose Hill Center who received DBT treatment were more likely to graduate at discharge than those at the Center prior to DBT. Compared to their counterparts, evaluation data suggests that DTB residents had a longer, successful length of stay and fewer psychiatric hospital visits. While the small number of residents in the study likely precluded these differences from reaching statistical significance at the generally acceptable $p \leq .05$ level, the data did show trends in the right direction.

Other outcome data revealed that there was a significant overall improvement in functioning among DBT residents compared with their counterparts. A greater percent of DBT residents had improvements of 10 points or more on their GAF scores. Proportionately more DBT residents progressed to the highest functional stage within the Rose Hill Center behavioral rating system and to the Center's Transitional Living Program.

A stronger test of the impact of DBT would be to follow up on discharged clients into the community. Rose Hill Center staff report that they were able to place their graduates into DBT services in their communities.

This study also set out to determine the sustainability at DBT as part of the regular therapeutic programming at Rose Hill Center. Interviews with Rose Hill Center staff and management revealed that DBT appears to be a sustainable program for a residential facility. DBT provides a welcomed structure for handling clients with BPD, for which many other treatment facilities will not treat. Presently there is a waiting list for DBT treatment at Rose Hill Center.

The Center staff identified a number of cautionary notes on what it takes to do DBT well in a residential setting, including maximum ratio of DBT clients to the treatment population and a maximum percent of DBT clients in a clinician's caseload.

Providing on-going and appropriate training for clinician and support staff is seen as a prevailing need in order to sustain DBT's effectiveness. Rose Hill Center management has been attending to this need in very direct and frequent ways, but it is a challenging situation with, for example, the nature of support staff being a high turnover position, the episodic in-frequent nature of support staff's use of DBT, and the

complication of hiring one or two clinicians at a time when four is the required number for attendance at the intensive DBT training.

Through the institution of this treatment method, the staff have been able to identify resident characteristics for whom the DBT program works well, and the limits of their staff and Center environment to successfully deliver this treatment. These lessons learned will serve the Center well in the continuation of this treatment method.

Staff noted that DBT includes plain, good treatment principles, which lend to its sustainability. Other factors also suggest that DBT will be sustainable at Rose Hill Center. The general staff enthusiasm for DBT principles, the integration of an extra daily fee for residents to cover marginal costs for additional staff and on-going training, and the notion that not doing DBT would cost more in terms of having more treatment crises or disruption. All lead to the prediction that DBT will be the treatment modality of choice for residents with emotional dysregulation and self-harming behaviors.